

U.S.

**NATIONAL INSTITUTES
OF HEALTH.**

Division of Research Grants.

Research Grants

Fiscal Year 1977



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1977-78

Prepared by
NATIONAL INSTITUTES OF HEALTH
DIVISION OF RESEARCH GRANTS
Statistics and Analysis Branch

PREFACE

The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the research contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents a listing of the research grants (including the research career development awards) awarded by NIH from fiscal year 1977 funds. Research grants awarded by other constituent agencies of the Public Health Service are not included in this volume.

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TECHNICAL NOTE

Organization Identification

In the presentation of grants made from fiscal year 1977 funds, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the principal investigator lies. Study of the structure of grantee organizations in the United States (primarily universities and colleges, and State Departments of Mental Health or their equivalents) has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education is comprised of two or more campuses reporting directly to the central administration, each campus is listed separately.
2. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and the organization is listed as many times within a given city as there are components of the organization receiving grants.
3. If a foundation has been established for the purpose of receiving and administering funds for grants, the name and location of the organization having professional responsibility for the grant are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
4. If an association receiving a grant has a fixed national headquarters, the grants are listed at the headquarters location. If however, the association does not have a fixed headquarters, the grants are listed in the city shown for this organization in either the Encyclopedia of Associations (1) or the Research Centers Directory (2).

These qualifications do not apply to foreign institutions or to some domestic organizations, because a systematic study of their organizational structure has not been made. Organizations which require a clarifying comment, or which appear in more than one geographical location are listed alphabetically in the Appendix.

Supplemental Awards

In this publication, supplemental awards are combined with the parent grant, or with other supplements, when both awards are made from the same fiscal year funds. Supplemental grants awarded in fiscal year 1977 to parent grants awarded in a previous fiscal year are

shown separately; if two or more such supplements were made during fiscal year 1977, these supplements are combined.

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- (1) Fiske, M. (Ed.): Encyclopedia of Associations. Gale Research Co., Detroit, Mich., 11 ed., Vol. 1, 1977.
 - (2) Palmer, A.M. (Ed.): Research Centers Directory. Gale Research Co., Detroit, Mich., 6 ed., 1977.

ABBREVIATIONS

The NIH component supporting a grant is indicated by the code letters in the left-hand column. These code letters form part of the identification of the grant number.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, M and Digestive Diseases.....	NIAMDD
CA	National Cancer Institute.....	NCI
DE	National Institute of Dental	NIDR
ES	National Institute of Envir Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences.....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RR	Division of Research Resources.....	DRR
TW	Fogarty International Center.....	FIC
LM	National Library of Medicine.....	NLM
	National Institutes of Health.....	NIH



TABLE 1.--SUMMARY OF NATIONAL INSTITUTES OF HEALTH RESEARCH GRANTS AND AWARDS, BY SUPPORTING COMPONENT, FISCAL YEAR 1977

Supporting component	All research grants		Research projects, program centers, and general support		Research career program awards	
	Number	Dollars	Number	Dollars	Number	Dollars
Total National Institutes of Health.....	15,563	1,435,716,014	14,505	1,402,955,039	1,058	32,760,975
Institutes and Research Divisions.....	15,502	1,433,690,569	14,447	1,401,038,497	1,055	32,652,072
Division of Research Resources.....	783	132,136,861	782	132,113,236	1	23,625
National Cancer Institute.....	3,139	357,254,420	3,027	353,727,597	112	3,526,823
National Eye Institute.....	784	45,802,726	722	43,945,473	62	1,857,253
National Heart, Lung, and Blood Institute.....	2,314	240,503,558	2,106	234,075,623	208	6,427,935
National Institute of Allergy and Infectious Diseases.....	1,146	82,085,278	1,043	78,800,882	103	3,284,396
National Institute of Arthritis, Metabolism, and Digestive Diseases.....	2,120	158,199,689	1,936	152,310,218	184	5,889,471
National Institute of Child Health and Human Development.....	1,083	91,728,426	1,025	89,950,638	58	1,777,788
National Institute of Dental Research.....	389	30,000,204	359	29,141,749	30	858,455
National Institute of Environmental Health Sciences.....	256	27,266,802	246	26,964,567	10	302,235
National Institute of General Medical Sciences.....	2,066	152,124,955	1,889	146,732,745	177	5,392,210
National Institute of Neurological and Communicative Disorders and Stroke.....	1,204	99,102,155	1,099	95,923,756	105	3,178,399
National Institute on Aging.....	218	17,485,495	213	17,352,013	5	133,482
Total National Library of Medicine.....	61	2,025,445	58	1,916,542	3	108,903

NOTE: For information as to how this table was prepared, see Technical Note, p. vii



Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977

Principal investigator	Project title	Grant number	Dollars
GRAND TOTAL, 14,505 GRANTS.....			1,402,955,039
UNITED STATES,* 14,357 GRANTS.....			1,396,485,025
OTHER COUNTRIES, 148 GRANTS.....			6,470,014

UNITED STATES

ALABAMA

BIRMINGHAM

EYE FOUNDATION HOSPITAL ZIP CODE 35233

PFISTER, ROSWELL R.....	ASCORBIC ACID IN THE TREATMENT OF CORNEAL DISEASE.....	1R01 EY02018-01	101,618
ORGANIZATION TOTAL	1	101,618	

SOUTHERN RESEARCH INSTITUTE ZIP CODE 35205

BENNETT, L LEE, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR05676-01	19,617
BROCKMAN, ROBERT W.....	BIOCHEMICAL STUDY OF ANTICANCER AGENTS IN COLON TUMORS.....	5R26 CA20070-02	81,172
GRISWOLD, DANIEL P, JR.....	BIOLOGY AND TREATMENT OF MURINE COLON CARCINOMA.....	5R26 CA17303-03	182,665
SANI, BRAHMA P.....	STUDIES ON RETINOIC ACID AND BINDING PROTEIN.....	5R01 CA18263-02	59,704
SANI, BRAHMA P.....	BIOCHEMICAL MARKERS IN COLON TUMORIGENESIS.....	1R26 CA22924-01	43,523
ORGANIZATION TOTAL	5	386,681	

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294

ACTON, RONALD T.....	MEMBRANE SPECIFICITIES RELATED TO NEOPLASIA.....	3R01 CA15338-03S2	12,315
ACTON, RONALD T.....	MEMBRANE SPECIFICITIES RELATED TO NEOPLASIA.....	2R01 CA15338-04	53,460
ACTON, RONALD T.....	BIOLOGICAL ROLE OF ALLOANTIGENS.....	2R01 CA18609-02	71,254
ALFORD, CHARLES A, JR.....	PATHOGENESIS OF INFECTION IN HUMAN MALDEVELOPMENT.....	2R01 HD01687-12	34,936
ALFORD, CHARLES A, JR.....	PERINATAL INFECTIONS, IMMUNITY AND MALDEVELOPMENT.....	1P01 HD10699-01	409,446
ANDREOLI, THOMAS E.....	TRANSPORT PROCESSES IN LIPID MEMBRANES AND RENAL TUBULES.....	5R01 AM14873-08	92,063
ARNOLD, ROLAND R.....	SALIVARY LACTOFERRIN AND REGULATION OF THE ORAL FLORA.....	1R01 DE04801-01	48,646
BAKER, HENRY J, JR.....	AN ANIMAL MODEL OF HUMAN GANGLIOSIDOSIS.....	5R01 NS10967-05	114,322
BAKER, HENRY J, JR.....	LABORATORY ANIMAL RESOURCE FOR BIOMEDICAL RESEARCH.....	5P40 RR00463-09	143,736
BASTIA, DEEPAK.....	ORIGINS AND TERMINI OF REPLICATION OF COLE1 AND RGK.....	1R01 GM24357-01	65,809
BENNETT, J CLAUDE.....	STUDIES ON GAMMA GLOBULIN STRUCTURE.....	5R01 AI09153-12	71,447
BENNETT, J CLAUDE.....	COORDINATED STUDIES IN RHEUMATIC DISEASES.....	5P01 AM03555-18	179,874
BENNETT, J CLAUDE.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20614-01	213,060
BISHOP, DAVID H.....	TRANSCRIPTION AND REPLICATION OF ANIMAL RNA VIRUSES.....	5R01 AI13402-02	87,726
BRASCHO, DONN J.....	CANCER EDUCATION GRANT.....	5R25 CA17965-03	123,474
BUGG, CHARLES E.....	CRYSTAL STRUCTURES OF PURINE AND PYRIMIDINE ANALOGS.....	5R01 CA12159-06	43,737
BUTTERWORTH, C E, JR.....	NUTRITIONAL SUPPORT & REHABILITATION FOR CANCER PATIENTS.....	5R18 CA17928-02	87,189
CAIN, STEPHEN M.....	SURVIVAL VALUE OF PHYSIOLOGIC RESPONSES TO HYPOXIA.....	5R01 HL14693-06	57,584
CASSELL, GAIL H.....	MURINE CRD: A MODEL OF CHRONIC PULMONARY INFLAMMATION.....	5R01 HL19741-02	59,550
CASSELL, GAIL H.....	CONTROL OF RESPIRATORY MYCOPLASMOSIS.....	5R01 RR00959-03	57,537

*Includes Puerto Rico.

NOTE.—Grants are listed according to the State and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CLEMENTS, REX S, JR.....	PHOSPHATIDYLINOSITOL METABOLISM AND INSULIN SECRETION.....	1R01 AM21065-01	51,672
COMPANS, RICHARD W.....	INFLUENZA VIRUS STRUCTURE, BIOSYNTHESIS AND ASSEMBLY.....	5R01 AI12680-03	65,652
COMPANS, RICHARD W.....	RNA TUMOR VIRUS STRUCTURE AND BIOGENESIS.....	5R01 CA18611-03	59,851
CONRAD, MARCEL E.....	LEAD ABSORPTION, EXCRETION, AND METABOLISM.....	1R01 ES01306-01A1	56,074
CONRAD, MARCEL E.....	PLATELET TRANSFUSIONS: USAGE AND COMPLICATIONS.....	1R01 HL20856-01	71,352
COOPER, MAX D.....	CELL DIFFERENTIATION STUDIES IN CANCER IMMUNOBIOLOGY.....	5P01 CA16673-03	368,968
CURTISS, ROY, III.....	EXTRACHROMOSOMAL ELEMENTS IN GRAM NEGATIVE BACTERIA.....	5R01 AI11456-05	54,833
DILLON, HUGH C, JR.....	DIPLOCOCCUS PNEUMONIAE: INFECTION AND IMMUNITY.....	5R01 HD09732-02	41,715
DURANT, JOHN R.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA13148-06	1,622,854
DURANT, JOHN R.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	3R18 CA16409-02S1	276,805
DURANT, JOHN R.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA19657-01S2	50,561
DURANT, JOHN R.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA19657-02	310,223
DURANT, JOHN R.....	DEVELOPMENT OF CENTRALIZED CANCER PATIENT DATA SYSTEM.....	1R10 CA21182-01	85,121
EGAN, MARIANNE L.....	CHARACTERIZATION OF GASTROINTESTINAL GLYCOPROTEINS.....	7R26 CA22318-01	51,703
FEAGIN, FREDERICK F.....	EFFECTS OF CO2 AND H2CO3-HCO3 VS F- ON TOOTH ENAMEL.....	5R01 DE04379-02	49,060
FISCHER, THEODORE E.....	RESEARCH OF POLYURETHANES FOR MAXILLOFACIAL USE.....	5R01 DE04138-03	68,498
FLETCHER, SAMUEL G.....	PHYSIOLOGY OF SPEECH ARTICULATION PROCESSES & DISORDERS.....	5P50 NS11852-03	109,274
FULLMER, HAROLD M.....	INSTITUTE OF DENTAL RESEARCH.....	5P50 DE02670-11	1,955,708
GOODALL, MARCUS C.....	ION CHANNELS AND NEUROTRANSMITTERS.....	5R01 NS12279-06	35,256
HALSEY, JAMES H, JR.....	SUPPORT FOR CEREBROVASCULAR DISEASE RESEARCH CENTER.....	5P50 NS08802-08	391,712
HICKEY, TERRY L.....	DEVELOPMENT OF THE RETINOGENICULATE SYSTEM.....	3R01 EY01338-02S1	6,458
HICKEY, TERRY L.....	DEVELOPMENT OF THE RETINOGENICULATE SYSTEM.....	2R01 EY01338-03	59,986
HIRAMOTO, RAYMOND N.....	THE CELLULAR IMMUNE RESPONSE AND MECHANISMS OF AGING.....	5R01 AG00234-03	61,294
HIRAMOTO, RAYMOND N.....	A MATHEMATICAL MODEL FOR QUANTITATION OF CANCER CELLS.....	3R01 CA14125-03S1	9,946
HIRSCHOWITZ, BASIL I.....	VAGAL CONTROL OF GASTRIC SECRETION.....	3R01 AM09260-11S1	32,668
HUNT, CHARLES.....	ATHEROSCLEROSIS IN NEW MODELS OF DIABETES MELLITUS.....	1R01 HL21416-01	58,908
JACKSON, RAYMOND J.....	ADENOSINE METABOLISM IN LYMPHOCYTES.....	5R01 CA17057-03	58,656
JAMES, THOMAS N.....	MECHANISMS OF CARDIOVASCULAR DISEASE.....	2P01 HL11310-11	1,524,052
KIELY, DONALD E.....	CHEMICAL STUDIES RELATED TO CYCLITOL BIOSYNTHESIS.....	5R01 GM19252-09	36,939
KOCHAKIAN, CHARLES D.....	STEROID DEHYDROGENASES OF MAMMALIAN TISSUES.....	5R01 AM16729-03	37,562
LAMON, EDDIE W.....	THE IMMUNE RESPONSE TO VIRALLY DETERMINED TUMOR ANTIGENS.....	5R01 CA17273-03	60,115
LAWTON, ALEXANDER R, III.....	DIFFERENTIATION OF B LYMPHOCYTES.....	5R01 AI11502-05	63,145
LEBOWITZ, JACOB.....	CIRCULAR DNA—IMPLICATIONS FOR CANCER & DRUG RESISTANCE.....	5R01 CA17077-03	57,231
LEVENE, RALPH Z.....	PATHOGENESIS OF PRIMARY OPEN ANGLE GLAUCOMA.....	5R01 EY01536-04	91,169
MARTINEZ, MARIO G.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	2R25 CA17934-03	62,394
MC CALLUM, CHARLES A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05300-16	88,051
MC GHEE, JERRY R.....	STUDIES ON EFFECTIVE CARIES IMMUNITY.....	5R01 DE04217-03	75,972
MC GHEE, JERRY R.....	THE SECRETORY IMMUNE SYSTEM AND CARIES IMMUNITY.....	1R13 DE04673-01	31,000
MESTECKY, JIRI F.....	J CHAIN OF HUMAN PATHOLOGIC IMMUNOGLOBULINS.....	5R01 AI10854-06	69,716
MIHAS, ANASTASIOS.....	ONCOFETAL ANTIGEN(S) AND CARCINOMA OF THE PANCREAS.....	5R26 CA19196-02	29,633
MOLE, JOHN E.....	STRUCTURE OF MURINE HISTOCOMPATIBILITY ALLOANTIGENS.....	1R01 CA20690-01	73,012
NAVAR, LUIS G.....	REGULATION OF RENAL HEMODYNAMICS.....	5R01 HL18426-03	68,268
NIEDERMEIER, WILLIAM.....	ROLE OF GLYCOPROTEINS IN MAMMARY TUMOR METASTASIS.....	5R01 CA19933-02	82,661
OBERMAN, ALBERT.....	THE IMPACT OF HYPERTENSION INFORMATION.....	1R01 HL20248-01	250,222
OMURA, GEORGE A.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA03013-20S1	25,377
OMURA, GEORGE A.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA03013-21	282,078
OPARIL, SUZANNE.....	MECHANISMS OF RENIN RELEASE AND ANGIOTENSIN METABOLISM.....	7R01 HL22544-01	67,967
OYSTER, CLYDE W.....	NEUROPHYSIOLOGY OF OPTOKINETIC NYSTAGMUS.....	5R01 EY00771-06	29,345
PITTMAN, JAMES A, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00032-17	532,891
PITTMAN, JAMES A, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05349-16	203,494
RACKLEY, CHARLES E.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17667-03	1,447,557
REDDY, WILLIAM J.....	MECHANISM OF ACTION OF INSULIN.....	5R01 AM15235-07	68,222
REHM, WARREN S.....	FLUID AND ELECTROLYTE TRANSPORT IN THE CORNEA.....	2R01 EY00456-09	48,609
REYNOLDS, DAVID W.....	HERPES VIRUS INFECTIONS IN HIGH RISK CANCER GROUPS.....	5R01 CA16424-03	65,399
SACHS, GEORGE.....	ENZYMIC BASIS OF ACID SECRETION.....	5R01 AM15878-05	48,485
SACHS, GEORGE.....	CHARACTERISTICS OF COLONIC CANCER MEMBRANES.....	5R26 CA16722-03	49,195
SACHS, GEORGE.....	TRANSPORT CHANGES IN NEOPLASIA.....	5R01 CA16877-03	39,727
SCHNEYER, CHARLOTTE A.....	STUDY OF SALIVARY GLAND STRUCTURE AND FUNCTION.....	2R01 DE02110-13	52,133
SCHROENLOHER, RALPH E.....	STRUCTURE AND FUNCTION OF IMMUNOGLOBULINS.....	5R01 AI10664-12	44,669
SCHUTZBACH, JOHN S.....	THE BIOSYNTHESIS OF CELL ENVELOPE GLYCOPROTEINS.....	2R01 CA16777-04	82,469

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ALABAMA—Continued			
SEGREST, JERE P.....	LIPID INTERACTIONS OF A CELL SURFACE GLYCOPROTEIN.....	5R01 GM23177-02	52,445
SHINGLETON, HUGH M.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12484-07	90,959
SHIOTA, TETSUO.....	THE BIOSYNTHESIS AND REGULATION OF PTERIDINE COENZYMES.....	5R01 CA16976-03	55,567
SHIOTA, TETSUO.....	SIXTH INTERNATIONAL SYMPOSIUM ON PTERIDINE CHEMOTHERAPY.....	1R13 CA22918-01	13,000
SPARKS, DAVID L.....	EYE MOVEMENT CONTROL: THE ROLE OF BRAIN STEM NEURONS.....	3R01 EY01189-04S1	632
SPARKS, DAVID L.....	EYE MOVEMENT CONTROL: THE ROLE OF BRAIN STEM NEURONS.....	5R01 EY01189-05	38,393
TAYLOR, KENNETH B.....	HEART LACTATE DEHYDROGENASE: THE COMPLEX WITH NADH.....	1R01 HL20116-01	31,764
TOMANA, MILAN.....	BIOCHEMISTRY OF CARBOHYDRATES IN CELL SURFACE COMPONENTS.....	5R01 CA19918-02	52,665
WHITE, WILLIAM E, JR.....	CARCINOGENESIS, MUTAGENESIS, AND PHOTO-LABELING OF DNA.....	5R01 CA17394-03	31,670
YIELDING, K LEMONE.....	DNA REPAIR AND COLON CANCER.....	5R26 CA16376-03	50,215
YIELDING, K LEMONE.....	DNA REPAIR MECHANISMS: REGULATION AND CANCER RELEVANCE.....	5R01 CA17629-03	66,586
ORGANIZATION TOTAL	91	14,364,628	
HUNTSVILLE			
OAKWOOD COLLEGE ZIP CODE 35806			
COOPER, EMERSON A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S06 RR08048-06	17,511
ORGANIZATION TOTAL	1	17,511	
MOBILE			
UNIVERSITY OF SOUTH ALABAMA ZIP CODE 36688			
BAUGH, CHARLES M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05774-03	33,700
CHANG, FREDERIC C.....	CHEMICAL STUDY OF PLANTS OF PHARMACOLOGICAL INTEREST.....	5R01 CA21657-02	56,051
COGGIN, JOSEPH H, JR.....	CHARACTERIZATION OF FETAL ANTIGENS IN TUMORS.....	1R01 CA22674-01	85,934
FUNKHOUSER, JANE D.....	LUNG DEVELOPMENT AND DIFFERENTIATION IN ORGAN CULTURE.....	5R01 HD10314-02	42,859
GORDON, ALLEN R.....	REGULATION OF TENSION IN SMOOTH MUSCLE.....	5R01 AM18415-03	42,824
GREENBERG, STANLEY.....	MECHANISMS OF CONTROL OF PULMONARY SMOOTH MUSCLE.....	1R01 HL22177-01	34,066
GREENBERG, STANLEY.....	VASCULAR MECHANISMS IN RENAL HYPERTENSION.....	1R01 HL22216-01	47,260
HUGGINS, CLYDE G.....	CARDIOVASCULAR PHOSPHOINOSITIDE METABOLISM.....	5R01 HL15567-05	24,119
LONGENECKER, H E, JR.....	ACTIONS OF NEUROTOXINS FROM C. SCULPTURATUS VENOM.....	1R01 ES01321-01	58,248
MORTILLARO, NICHOLAS A.....	INTERACTIONS OF THE INTESTINAL STARLING FORCES.....	3R01 AM17616-03S1	5,786
MUSTAFA, SYED J.....	ADENOSINE, PROSTAGLANDINS IN RELATION TO CORONARY FLOW.....	5R01 HL19202-02	39,911
PETERSON, RAYMOND D.....	ROLE OF THE PITUITARY IN EXPERIMENTAL LEUKEMOGENESIS.....	5R01 CA17819-03	48,797
TAYLOR, AUBREY E.....	TRANSPORT ACROSS ALVEOLAR CAPILLARY MEMBRANE.....	1R01 HL22549-01	50,334
TAYLOR, AUBREY E.....	INTESTINAL SECRETION: CAPILLARY AND TISSUE FORCES.....	7R01 HL22569-01	44,948
TOREN, E CLIFFORD, JR.....	LIQUID CHROMATOGRAPHY AUTOMATION FOR ISOZYME ANALYSES.....	7R01 GM24452-01	49,792
TOREN, E CLIFFORD, JR.....	MICROCOMPUTERIZED AUTOMATION FOR CLINICAL CHEMISTRY.....	7R01 GM24453-01	63,010
ORGANIZATION TOTAL	16	727,639	
NORMAL			
ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 35762			
GRAYSON, GEORGE W.....	SUPPORT FOR SOMATOTROPHIN AND PESTICIDE STUDY.....	5S06 RR08149-02	104,785
ORGANIZATION TOTAL	1	104,785	
TALLADEGA			
TALLADEGA COLLEGE ZIP CODE 35160			
BACON, ARTHUR L.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08105-04	82,151
ORGANIZATION TOTAL	1	82,151	
TUSCALOOSA			
STILLMAN COLLEGE ZIP CODE 35401			
SINGH, JARNAIL.....	DEVELOPMENT OF BIOMEDICAL RESEARCH CAPABILITIES.....	5S06 RR08021-05	33,747
ORGANIZATION TOTAL	1	33,747	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ALABAMA—Continued			
TUSKEGEE INSTITUTE			
TUSKEGEE INSTITUTE ZIP CODE 36088			
HENDERSON, JAMES H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05572-10	20,368
HENDERSON, JAMES H.....	SUPPORT FOR BIOMEDICAL SCIENCES—MULTIDISCIPLINARY.....	5S06 RR08091-05	135,130
SETTLER, SHERIDAN H, JR.....	CULTURE OF SUSPECTED VIRUSES IN HUMAN OCULAR DISEASE.....	5R01 EY01173-03	27,670
ORGANIZATION TOTAL	3 183,168		
UNIVERSITY			
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN UNIVERSITY ZIP CODE 35486			
BRAY, NORMAN W.....	MEMORY SKILLS IN RETARDED AND NORMAL CHILDREN.....	7R01 HD11920-01	25,851
ELLIS, NORMAN R.....	SCIENTIFIC CONFERENCE ON MENTAL RETARDATION.....	5R13 HD09211-03	6,821
HARDMAN, JOHN K.....	STUDY OF PROPERTIES OF TRYPTOPHAN SYNTHETASES.....	5R01 GM20547-05	37,140
MEGO, JOHN L.....	PROTEIN CATABOLISM IN SUBCELLULAR ORGANELLES.....	5R01 GM21829-03	43,725
ORGANIZATION TOTAL	4 113,537		
STATE TOTAL	124 16,115,465		
ALASKA			
COLLEGE			
UNIVERSITY OF ALASKA AT COLLEGE ZIP CODE 99701			
MYERS, WAYNE W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07001-11	41,864
WEST, GEORGE C.....	RESEARCH IN ZOOLOGY IN ALASKA.....	5P01 GM10402-14	414,344
ORGANIZATION TOTAL	2 456,208		
STATE TOTAL	2 456,208		
ARIZONA			
PHOENIX			
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER ZIP CODE 85013			
SCHWARTZ, ARTHUR S.....	NEUROLOGICAL MECHANISMS OF SENSORY DEFICIT.....	5R01 NS05715-11	22,288
ORGANIZATION TOTAL	1 22,288		
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 85012			
WESTENBERG, IRWIN S.....	THE ALBINO GENE'S EFFECT ON RETINOGENICULATE AXONS.....	1R01 EY01888-01	17,551
ORGANIZATION TOTAL	1 17,551		
TEMPE			
ARIZONA STATE UNIVERSITY ZIP CODE 85281			
BIEBER, ALLAN L.....	STRUCTURE AND ACTIVITY OF GUANINE AMINOHYDROLASES.....	5R01 GM22388-02	20,383
DAVIDSON, ELIZABETH W.....	INSECTICIDAL ACTION OF BACILLUS SPHAERICUS.....	1R01 AI14306-01	18,609
GOLDSTEIN, ELLIOTT S.....	CONTROL OF MRNA USAGE DURING DROSOPHILA DEVELOPMENT.....	5R01 HD09157-02	33,272
LESHOWITZ, BARRY H.....	FREQUENCY SELECTIVITY IN NORMAL AND IMPAIRED EARS.....	5R01 NS09874-04	72,807
MC GAUGHEY, ROBERT W.....	ANALYSIS OF MAMMALIAN OVARIAN FOLLICULAR FLUIDS.....	3R01 HD06532-03S1	8,177
MUNK, MORTON E.....	COMPUTER-AIDED STRUCTURE ELUCIDATION.....	5R01 GM21703-03	42,573
OKUN, MORRIS A.....	RISK-TAKING ACROSS THE ADULT LIFESPAN.....	1R23 AG00781-01	14,892
PETTIT, GEORGE R.....	NATURALLY OCCURRING ANTINEOPLASTIC AGENTS.....	5R01 CA16049-04	75,063
WOOLF, CHARLES M.....	BEHAVIOR GENETICS—PHOTOTAXIS—GEOTAXIS IN DROSOPHILA.....	5R01 GM19583-04	25,541
WOOLF, CHARLES M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07112-10	33,125

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ARIZONA—Continued			
ORGANIZATION TOTAL	10	344,442	
TUCSON			
UNIVERSITY OF ARIZONA ZIP CODE 85721			
BARRETT, HARRISON H.....	CODED-APERTURE SYSTEMS FOR NUCLEAR DOSE REDUCTION.....	5R01 CA17731-02	64,503
BLITT, CASEY D.....	INHALATION ANESTHETICS: PULMONARY BIOTRANSFORMATION.....	1R01 GM24456-01	17,111
BOONE, MAX L.....	ANALOG TISSUE DENSITOMETER FOR CANCER RADIOTHERAPY.....	1R01 CA19477-01A1	78,075
BOURQUE, DON P.....	BIOCHEMISTRY AND GENETICS OF CHLOROPLAST RIBOSOMES.....	5R01 GM21242-03	30,303
BOYER, JOHN T.....	SOUTHWEST ARTHRITIS CENTER.....	1P60 AM20597-01	141,500
BRENDEL, KLAUS.....	STUDY OF DRUGS IN CARBOHYDRATE-LIPID INTERRELATION.....	5R01 AM14977-08	50,130
BRENDEL, KLAUS.....	PLACENTAL BASEMENT MEMBRANES IN HEALTH AND DISEASE.....	1R01 HD10781-01	57,758
BRESSLER, RUBIN.....	EFFECT OF PHARMACOLOGIC AGENTS ON METABOLISM OF HEART.....	5R01 HL13636-07	53,599
BROWN, BURNELL R, JR.....	ANESTHETIC-DRUG INTERACTIONS WITH THE LIVER.....	5R01 AM16715-06	57,472
BURROWS, BENJAMIN.....	PULMONARY SCOR: AIRWAYS OBSTRUCTIVE DISEASES.....	2P50 HL14136-06	983,873
CARTER, DEAN E.....	APPROACHES TO TREATMENTS OF METHYL MERCURY TOXICITY.....	5R01 ES01005-03	37,526
CHVAPIL, MILOS.....	LYSYL OXIDASE IN HEALTH AND DISEASE.....	5R01 AM18706-02	108,286
CHVAPIL, MILOS.....	PATHOGENESIS AND PHARMACOLOGY OF LUNG FIBROSIS.....	5R01 HL19633-02	87,615
CORRIGAN, JAMES J, JR.....	FACTOR II ANTIGEN AND COAGULANT ACTIVITY.....	1R01 HL21431-01	31,115
CROSS, HAROLD E.....	ABNORMALITY IN COLLAGEN PACKING: CROSS-LINKING.....	5R01 EY01633-02	47,022
CUSANOVICH, MICHAEL A.....	REGENERATION OF THE VISUAL PIGMENT RHODOPSIN.....	5R01 EY01113-03	21,578
DANTZLER, WILLIAM H.....	REGULATION OF INDIVIDUAL NEPHRON FILTRATION RATES.....	5R01 AM16294-05	31,110
ENEMARK, JOHN H.....	STRUCTURAL MODELS FOR MOLYBDO-ENZYMES.....	5R01 ES00966-03	31,861
FELTHAM, ROBERT D.....	CONTROL OF REACTIONS OF COORDINATED LIGANDS.....	3R01 HL16205-03S1	3,910
FENTON, LAWRENCE J.....	GROUP B STREPTOCOCCAL INFECTIONS IN THE NEWBORN.....	5R01 HD09588-02	61,845
FORSTER, LESLIE S.....	ELECTRONIC PROPERTIES OF COMPLEX MOLECULES.....	5R01 GM19921-11	33,908
GERNER, EUGENE W.....	HEAT AND RADIATION IN CANCER THERAPY AND DIAGNOSIS.....	5P01 CA17343-03	265,692
GERNER, EUGENE W.....	RADIATION INDUCED DEFECTS IN CELL KINETICS.....	5R01 CA18273-03	28,640
GLASS, RICHARD S.....	A MECHANISM FOR OXIDATIVE PHOSPHORYLATION.....	2R01 HL15104-06	57,050
GOLL, DARREL E.....	STUDIES ON MYOFIBRILLAR PROTEINS.....	5R01 AM19864-02	43,969
GORE, ROBERT W.....	PHYSICAL & MECHANICAL PARAMETERS IN THE MICROCIRCULATION.....	5R01 HL13437-08	37,543
GRIMES, WILLIAM J.....	CELL SURFACES AND CELLS TRANSFORMED BY ONCOGENIC VIRUSES.....	5R01 CA12753-07	37,469
HADLEY, MAC E.....	HYPOTHALAMIC REGULATION OF PARS INTERMEDIA FUNCTION.....	5R01 AM16282-05	55,881
HADLEY, MAC E.....	ENDOCRINE CONTROL OF MELANOMA CELL DIFFERENTIATION.....	1R01 CA20547-01	59,043
HALL, JENNIFER D.....	HOST CELL FUNCTIONS INVOLVED IN SV40 TRANSFORMATION.....	1R01 CA20429-01	74,246
HAUSSLER, MARK R.....	FUNCTION OF VITAMIN D METABOLITES AND BONE DISEASE.....	5R01 AM15781-06	49,775
HEWLETT, MARTINEZ J.....	VIRUS-CELL INTERACTIONS AND POLIOVIRUS RNA STRUCTURE.....	1R01 AI13670-01A1	62,868
HRUBY, VICTOR J.....	PEPTIDE HORMONE STRUCTURE AND FUNCTION.....	2R01 AM17420-04	51,525
HRUBY, VICTOR J.....	GLUCAGON STRUCTURE-FUNCTION STUDIES.....	1R01 AM21085-01	41,830
HUXTABLE, RYAN J.....	BIOCHEMISTRY AND REGULATION OF TAURINE IN THE HEART.....	5R01 HL19394-02	59,442
HUXTABLE, RYAN J.....	DEVELOPMENTAL PROCESSES IN PULMONARY HYPERTENSION.....	1R01 HL20087-01	53,525
JOHNSON, PAUL C.....	REGULATION OF BLOOD FLOW IN THE MICROCIRCULATION.....	5R01 HL15390-11	75,392
JOHNSON, PAUL C.....	REGULATION AND EXCHANGE IN THE MICROCIRCULATION.....	3P01 HL17421-03S1	129,620
JOHNSON, PAUL C.....	REGULATION AND EXCHANGE IN THE MICROCIRCULATION.....	5P01 HL17421-04	278,150
JONES, STEPHEN E.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA13612-04	109,119
KASSANDER, A RICHARD, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07002-12	73,920
KETTEL, LOUIS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05675-09	147,286
KIM, HYUN D.....	MEMBRANE-LIMITED METABOLISM IN MAMMALIAN RED CELLS.....	3R01 AM17723-02S1	1,177
KIM, HYUN D.....	MEMBRANE-LIMITED METABOLISM IN MAMMALIAN RED CELLS.....	2R01 AM17723-03	51,484
LA LONE, BRIAN J.....	PULSATILE REGULATION OF FLOW IN THE MICROCIRCULATION.....	1R23 HL21332-01	41,055
LINDELL, THOMAS J.....	ROLE OF PHOSPHORYLATION IN EUKARYOTIC TRANSCRIPTION.....	5R01 GM22897-02	70,333
MAGUN, BRUCE E.....	NUCLEAR PROTEIN CHANGES IN TRANSFORMATION.....	5R01 CA20913-02	43,666
MATHEWS, CHRISTOPHER K.....	ENZYMOLGY OF NORMAL AND VIRUS-INFECTED BACTERIA.....	3R01 AI08230-10S1	14,199
MATHEWS, CHRISTOPHER K.....	DNA PRECURSOR DYNAMICS IN ANIMAL CELLS.....	1R01 CA20402-01A1	26,435
MEEZAN, ELIAS.....	GLYCOPROTEIN STRUCTURE AND METABOLISM IN DIABETES.....	5R01 AM15394-07	54,844
MEEZAN, ELIAS.....	BASEMENT MEMBRANES OF THE EYE IN DIABETIC RETINOPATHY.....	1R01 EY01868-01	76,945
MEEZAN, ELIAS.....	DIABETIC HUMAN BRAIN MICROVASCULAR BASEMENT MEMBRANE.....	1R01 HL20500-01A1	65,528
MEINKE, WILLIAM J.....	DETECTION OF HUMAN WART VIRAL DNA IN MALIGNANT TISSUE.....	1R01 CA23675-01	63,646
MENDELSON, NEIL H.....	CONTROL OF GROWTH AND DIVISION.....	5R01 GM18735-07	52,155

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ARIZONA—Continued			
MOORE, WESLEY S.....	HEALING COMPLICATIONS IN VASCULAR GRAFTING.....	1R01 HL22110-01	68,500
MORKIN, EUGENE.....	CELLULAR MECHANISMS IN CARDIAC HYPERTROPHY.....	2R01 HL17971-03	76,917
MORKIN, EUGENE.....	CELLULAR MECHANISMS IN CARDIAC HYPERTROPHY.....	1P01 HL20984-01	445,917
MOUNT, DAVID W.....	BIOCHEMICAL ANALYSIS OF THE E. COLI LEXA GENE PRODUCT.....	1R01 GM24178-01	59,730
OLSON, GEORGE B.....	COMPUTER ANALYSIS OF LYMPHOCYTES FROM LEUKEMIC MICE.....	5R01 CA15641-03	58,135
PEACOCK, ERLE E, JR.....	BIOLOGICAL CONTROL OF SCAR TISSUE.....	5R01 AM14047-09	25,753
PEACOCK, ERLE E, JR.....	CLINICAL RESEARCH CENTER IN SURGERY.....	5M01 RR00714-05	199,162
REMERS, WILLIAM A.....	ANTITUMOR AGENTS. SYNTHESIS OF MITOMYCIN ANALOGS.....	5R01 CA21430-02	45,396
ROESKE, WILLIAM R.....	MYOCARDIAL RECEPTORS IN GROWTH AND HYPERTROPHY.....	1R01 HL21486-01	9,672
RUPLEY, JOHN A.....	STUDIES ON HEMOPROTEINS, LYSOZYME AND INSULIN.....	3R01 GM09410-14S1	16,372
RUPLEY, JOHN A.....	STUDIES ON DEHYDROGENASES.....	5R01 GM22373-02	41,743
RUSSELL, DIANE H.....	POLYAMINE METABOLISM IN CANCER AND CANCER CHEMOTHERAPY.....	5R01 CA14783-05	85,121
SALEMME, FRANCIS R.....	CYTOCHROME STRUCTURE AND INTERACTION.....	2R01 GM21534-04	69,411
SALMON, SYDNEY E.....	KINETICS OF MONOCLONAL PLASMA CELL NEOPLASIA OF MAN.....	5R01 CA14102-06	61,441
SALMON, SYDNEY E.....	MEDICAL ONCOLOGY PROGRAM PROJECT.....	5P01 CA17094-03	1,039,915
SALMON, SYDNEY E.....	ADJUVANT THERAPY OF CANCER.....	1R13 CA21134-01	17,340
SALMON, SYDNEY E.....	BIOASSAY AND CHEMOTHERAPY OF HUMAN TUMOR STEM CELLS.....	1R01 CA21839-01	131,079
SHELTON, RALPH L.....	PREDICTING ARTICULATION FROM CINEFLUOROGRAPHIC MEASURES.....	5R01 DE03350-07	51,317
SHIMIZU, NOBUYOSHI.....	GENETIC CONTROL OF MAMMALIAN CELL SURFACE FUNCTIONS.....	1R01 GM24375-01	75,209
SIPES, I GLENN.....	ACTIVATION AND BINDING OF ORGANOHALOGEN CARCINOGENS.....	1R01 CA21820-01	85,733
STRUNK, ROBERT C.....	FUNCTION & SPECIFICITY OF TERMINAL COMPLEMENT ENZYMES.....	5R01 AI12970-02	26,167
TOLLIN, GORDON.....	FLAVIN-PROTEIN INTERACTIONS IN FLAVOENZYME CATALYSIS.....	5R01 AM15057-07	42,311
WELLS, MICHAEL A.....	UTILIZATION OF ESSENTIAL FATTY ACIDS BY SUCKLING RATS.....	1R01 HD10954-01	68,645
WITTE, MARLYS H.....	ISCHEMIC THERAPY IN EXPERIMENTAL HYPERSPLENISM.....	5R01 HL18997-02	42,304
WITTE, MARLYS H.....	CIRCULATORY CONTROL OF SPLENIC FUNCTION.....	1R01 HL20086-01	48,888
WYCKOFF, RALPH W.....	PEPTIDES FROM DENTAL AND OSSEOUS COLLAGENS.....	1R01 DE04635-01	49,028
YOUNG, GUY P.....	ACQUIRED IMMUNITY IN TUBERCULOSIS.....	7R22 AI14108-01	94,782
ZUKOSKI, CHARLES F.....	CONTROL OF TISSUE REJECTION BY ZINC.....	5R01 AM16489-05	57,266
ORGANIZATION TOTAL	82 7,476,906		
STATE TOTAL	94 7,861,187		

ARKANSAS

FAYETTEVILLE

UNIVERSITY OF ARKANSAS ZIP CODE 72701

GEREN, COLLIS R.....	VENOM COMPONENTS: ISOLATION, CHARACTERIZATION AND USE.....	1R01 GM24173-01	57,445
MILLET, FRANCIS S.....	NMR STUDIES OF MEMBRANE BOUND PROTEINS.....	5R01 GM20488-05	44,723
ORGANIZATION TOTAL	2 102,168		

LITTLE ROCK

UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201

BARRON, ALMEN L.....	CHLAMYDIAL GENITAL INFECTION: AN ANIMAL MODEL SYSTEM.....	2R01 AI13069-03	48,645
BERRY, DAISILEE H.....	SOUTHWEST ONCOLOGY GROUP (PEDIATRICS).....	5R10 CA15995-04	32,325
BRUCE, THOMAS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05350-16	71,603
BURNS, E ROBERT.....	INDUCED CIRCADIAN PHASE DIFFERENCES IN TUMOR AND HOST.....	1R01 CA20623-01	34,328
CAVE, MAC D.....	MODES OF DNA AMPLIFICATION EXPRESSED BY OOCYTES.....	2R01 GM21446-04	48,782
CHANG, LOUIS W.....	EFFECT OF LEAD ON THE DEVELOPING NERVOUS SYSTEM.....	7R01 ES01631-01	28,724
CHRIST, DARYL D.....	EFFECTS OF GENERAL ANESTHETICS ON SYMPATHETIC GANGLIA.....	5R01 NS10393-06	36,781
DYKMAN, ROSCOE A.....	CHILD FRONTAL & TEMPORAL MINIMAL BRAIN DYSFUNCTION STUDY.....	2R01 HD09119-03	43,519
ELDERS, MINNIE J.....	THE METABOLIC ACTIVITY OF THYMIC HORMONE.....	5R01 AM15901-06	48,316
ELDERS, MINNIE J.....	GROWTH HORMONE AND SULFATION FACTOR IN ACUTE LEUKEMIA.....	5R01 CA13907-06	41,395
FISER, ROBERT H, JR.....	STUDIES OF INSULIN RESISTANCE IN ADOLESCENT OBESITY.....	5R01 HD09944-03	53,271
GILMORE, SHIRLEY A.....	RADIATION-INDUCED CHANGES IN THE NEONATAL NERVOUS SYSTEM.....	2R01 NS04761-14	48,019
HAUT, ARTHUR.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA19980-02	126,239
HILLER, F CHARLES.....	THERAPEUTIC AEROSOLS: CHARACTERISTICS AND RETENTION.....	5R01 HL20024-02	54,374

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ARKANSAS—Continued			
KALDERON, ALBERT E.....	CANCER OF THE THYROID AND CYCLIC AMP.....	5R01 CA19413-02	25,516
KOHLER, PETER O.....	HORMONE PRODUCTION IN CULTURED ENDOCRINE CELLS.....	7R01 AM21458-01	42,025
MANSOURI, ALI.....	STRUCTURE-FUNCTION RELATIONSHIP OF HEMOGLOBIN A.....	1R01 AM20181-01	32,825
MOSS, A J, JR.....	EFFECTS OF EAST NEUTRONS ON CULTURED MAMMALIAN CELLS.....	2R01 CA13270-04	42,286
NAGLE, WILLIAM A.....	HYPERTHERMIA AND RADIATION: X-RAYS VS FAST NEUTRONS.....	5R01 CA19018-02	86,685
REMMEL, RONALD S.....	INPUTS TO PONTINE RF PROJECTIONS TO THE MLF.....	5R01 EY01794-02	27,005
RHINELANDER, FREDERIC W.....	MICROCIRCULATION AND HISTOLOGY OF HEALING BONE.....	5R01 AM19157-03	126,816
SCHEVING, LAWRENCE E.....	CHRONOBIOLOGICAL APPROACH TO CANCER CHEMOTHERAPY.....	5R01 CA14388-05	69,869
SOULSBY, MICHAEL E.....	VASCULAR MUSCLE CONTRACTILITY IN CIRCULATORY SHOCK.....	7R01 HL22144-01	29,793
STRAUB, KARL D.....	THE EFFECTS OF INSULIN ON THE MEMBRANE NA-K ATP'ASE.....	5R01 AM17973-03	21,510
WESTBROOK, KENT C.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA21358-01	143,713
YEH, YUN-CHI.....	BIOCHEMICAL AND GENETIC STUDIES OF DNA SYNTHESIS.....	5R01 GM18012-05	27,651
YORK, J LYNDAL.....	FIBRIN METABOLISM IN THE ATHEROSCLEROTIC.....	5R01 HL18421-02	21,582
ORGANIZATION TOTAL	27	1,413,597	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 72206			
WAGH, PREMANAND V.....	CHEMISTRY AND BIOLOGY OF PORCINE INTIMAL LIPOLIPIN.....	5R01 HL20549-02	33,169
ORGANIZATION TOTAL	1	33,169	
STATE TOTAL	30	1,548,934	
CALIFORNIA			
ARCATA			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—HUMBOLDT STATE UNIVERSITY ZIP CODE 95521			
HANDWERKER, W PENN.....	ECONOMIC NICHE, FAMILY PATTERN AND FERTILITY.....	1R01 HD10591-01	58,248
ORGANIZATION TOTAL	1	58,248	
BAKERSFIELD			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE COLLEGE AT BAKERSFIELD ZIP CODE 93306			
SILVERMAN, PHILIP.....	A CROSS-CULTURAL STUDY OF THE AGED.....	2R01 AG00482-03	75,544
ORGANIZATION TOTAL	1	75,544	
BERKELEY			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY—DEPARTMENT OF HEALTH ZIP CODE 94704			
AUSTIN, DONALD F.....	NEW METHODS OF CANCER REGISTRY DATA ANALYSES.....	1R01 CA21448-01	162,054
LENNETTE, EDWIN H.....	IMMUNOLOGY AND EPIDEMIOLOGY OF CERTAIN VIRAL DISEASES.....	5R01 AI01475-20	196,749
LENNETTE, EDWIN H.....	ELECTRON MICROSCOPIC STUDIES OF SELECTED VIRAL AGENTS.....	5R01 AI08200-10	51,423
MC EWEN, WILLIAM J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05549-15	47,576
STROUD, FLORENCE M.....	ALAMEDA COUNTY HIGH BLOOD PRESSURE CONTROL PROGRAM.....	1R01 HL22212-01	192,690
ORGANIZATION TOTAL	5	650,492	
INSTITUTE FOR RESEARCH IN SOCIAL BEHAVIOR ZIP CODE 94705			
MELLINGER, GLEN D.....	MOTIVATIONAL CONFLICT & COUPLE FERTILITY DECISIONS.....	3R01 HD09246-01A1S1	17,158
MELLINGER, GLEN D.....	MOTIVATIONAL CONFLICT & COUPLE FERTILITY DECISIONS.....	5R01 HD09246-02	57,560
MELLINGER, GLEN D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05719-06	46,861
ORGANIZATION TOTAL	3	121,579	
SOCIETY FOR EPIDEMIOLOGIC RESEARCH ZIP CODE 94720			
JANERICH, DWIGHT T.....	NCI STUDENT WORKSHOP ON EPIDEMIOLOGIC STUDIES.....	1R13 CA22283-01	13,069
ORGANIZATION TOTAL	1	13,069	
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
AMES, BRUCE N.....	REGULATION OF GENE FUNCTION AND PROTEIN SYNTHESIS.....	5R01 GM19993-10	94,769

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
AMES, GIOVANNA F.....	MEMBRANES AND ACTIVE TRANSPORT OF AMINO ACIDS.....	2R01 AM12121-10	76,198
BALLOU, CLINTON E.....	COMPLEX POLYSACCHARIDES IN MYCOBACTERIUM SPECIES.....	5R01 AI12522-23	117,405
BARKER, HORACE A.....	INTERMEDIARY METABOLISM OF BACTERIA.....	5R01 AI00563-30	77,594
BARTLETT, PAUL A.....	SYNTHESIS OF MACROCYCLIC NATURAL PRODUCTS.....	2R01 CA16616-04	70,805
BARTLETT, PAUL A.....	PHOSPHATE-DERIVED PHOTOAFFINITY LABELS.....	5R01 GM21612-03	38,868
BENTLEY, DAVID R.....	FUNCTIONAL DEVELOPMENT OF IDENTIFIED NEURAL NETWORKS.....	5R01 NS09074-08	35,118
BORSOOK, HENRY.....	BIOLOGICAL SYNTHESIS OF PROTEIN.....	5R01 HL12236-09	46,452
BRIGGS, GEORGE M.....	REVISION OF THE NUTRIENT REQUIREMENTS FOR RATS.....	1R01 RR01029-01A1	26,599
BROOKS, GEORGE A.....	TRACER STUDIES ON LACTATE METABOLISM DURING EXERCISE.....	1R01 AM19577-01	41,922
BUDINGER, THOMAS F.....	POSITRON EMISSION CAMERA/TRANSVERSE SECTION TOMOGRAPHY.....	5R01 CA17566-03	75,643
BURKI, HENRY J.....	IN VITRO STUDY OF MAMMALIAN CELLS DAMAGED BY TRITIUM.....	5R01 CA14310-05	56,587
BURLINGAME, A L.....	BIOMEDICAL, CLINICAL MASS SPECTROMETRY RESOURCE.....	3P41 RR00719-03S2	150,853
BURNSIDE, MARY B.....	MICROTUBULE AND MICROFILAMENT STRUCTURE AND FUNCTION.....	2R01 GM23539-02	49,362
CALENDAR, RICHARD.....	MOLECULAR STUDIES ON PHAGE P2 AND ITS SATELLITE, P4.....	2R01 AI08722-09	82,482
CANDE, WILLIAM Z.....	FUNCTIONAL MODEL FOR MITOSIS IN CELL LINES.....	5R01 GM23238-02	38,467
CARPENTER, FREDERICK H.....	STRUCTURE AND ACTIVITY OF INSULIN.....	5R01 AM00608-24	50,503
CARPENTER, FREDERICK H.....	MECHANISM OF LEUCINE AMINOPEPTIDASE.....	5R01 EY00813-07	59,065
CASIDA, JOHN E.....	MODE OF ACTION AND METABOLISM OF ORGANIC TOXICANTS.....	5P01 ES00049-13	282,175
CASTRO, JOSEPH R.....	TREATMENT OF CANCER WITH HELIUM AND HEAVY IONS.....	5P01 CA19138-02	1,094,236
CHAMBERLIN, MICHAEL J.....	SELECTIVITY OF BACTERIAL TRANSCRIPTION.....	2R01 GM12010-14	132,818
CLARK, ALVIN J.....	PHYSIOLOGY OF BACTERIAL CONJUGATION AND RECOMBINATION.....	5R01 AI05371-15	129,737
COHN, THEODORE E.....	THE DETECTION OF VISUAL SIGNALS.....	5R23 EY01481-03	9,364
COLE, R DAVIO.....	HISTONE BIOCHEMISTRY AND THE INFLUENCE OF HORMONES.....	5R01 GM20338-10	95,490
CURTIS, STANLEY B.....	THE RESPONSE OF A RAT RHABDOMYOSARCOMA TO HEAVY IONS.....	5R01 CA17411-03	99,814
DANIELL, ELLEN.....	CELL TRANSFORMATION BY DEFECTIVE VIRUS PARTICLES.....	5R01 CA19058-02	71,976
DAUBEN, WILLIAM G.....	ULTRAVIOLET IRRADIATION OF NATURAL PRODUCTS.....	5R01 AM00709-24	56,045
DAUBEN, WILLIAM G.....	MODIFIED STEROID AND SESQUITERPENE ANTITUMOR AGENTS.....	5R01 CA04284-18	53,065
DE VALOIS, RUSSELL L.....	ELECTROPHYSIOLOGY OF COLOR VISION.....	5R01 EY00014-10	67,457
OEKKER, CHARLES A.....	HUMAN SERUM RIBONUCLEASES IN HEALTH AND DISEASE.....	5R01 CA19606-02	43,571
DIXON, JONATHAN S.....	PURIFICATION OF ERYTHROPOIETIN.....	1R01 HL21686-01	88,540
DUESBERG, PETER H.....	STRUCTURE AND REPLICATION OF ROUS SARCOMA AND INFLUENZA.....	3R01 CA11426-08S1	7,503
DUESBERG, PETER H.....	MOLECULAR AND GENETIC ANALYSES OF RNA TUMOR VIRUSES.....	2R01 CA11426-09	261,584
EAKIN, RICHARD M.....	STRUCTURE AND FUNCTION OF PHOTORECEPTORS.....	9R01 EY02229-16	52,664
EBBE, SHIRLEY N.....	GENETICS OF MEGAKARYOCYTE AND PLATELET TURNOVER.....	7R01 AM21355-01	87,461
ECHOLS, G HARRISON, JR.....	GENETIC & CHEMICAL STUDIES OF PHAGE LAMBDA DEVELOPMENT.....	5R01 GM17078-09	112,944
EICHORN, DOROTHY H.....	INTERGENERATIONAL STUDIES OF DEVELOPMENT AND AGING, II.....	5P01 AG00365-08	170,444
ELBERG, SANFORD S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07006-12	213,709
EVERHART, THOMAS E.....	SCANNING ELECTRON MICROSCOPY.....	5R01 GM17523-06	67,000
FLOM, MERTON C.....	SENSORY AND MOTOR MECHANISMS IN FUNCTIONAL AMBLYOPIA.....	1R01 EY02125-01	66,139
FOGEL, SEYMOUR.....	RECOMBINATION-DNA SYNTHESIS AND DEVELOPMENT IN YEAST.....	2R01 GM17317-08	60,090
FORTE, JOHN G.....	MECHANISM OF HO AND CL- TRANSPORT BY GASTRIC MUCOSA.....	5R01 AM10141-13	68,801
FRAENKEL-CONRAT, BEATRICE.....	ALKYLATION OF POLYNUCLEOTIDES IN VITRO AND IN VIVO.....	2R01 CA12316-07	87,298
FRAENKEL-CONRAT, HEINZ L.....	THE MECHANISM OF THE NEUROTOXICITY OF VENOMS.....	3R01 ES00700-03S1	3,372
FRAENKEL-CONRAT, HEINZ L.....	THE MECHANISM OF THE NEUROTOXICITY OF VENOMS.....	2R01 ES00700-04	50,417
FREELING, MICHAEL.....	DEVELOPMENTAL GENETICS WITH AN INDUCIBLE GENE SYSTEM.....	5R01 GM21734-03	28,372
FREEMAN, RALPH D.....	PARTIAL VISUAL DEPRIVATION IN HUMANS AND VISUAL CORTEX.....	5R01 EY01175-05	60,955
FRISTROM, JAMES W.....	GENIC/MOLECULAR BASIS OF IMAGINAL DISC MORPHOGENESIS.....	5R01 GM19937-05	67,444
FUERSTENAU, DOUGLAS W.....	INTERFACIAL PROPERTIES OF APATITE AND TOOTH MATERIALS.....	5R01 OE03708-05	45,767
GERHART, JOHN C.....	STUDIES OF CELLULAR REGULATORY MECHANISMS.....	5R01 GM19363-14	88,493
GLAESER, ROBERT M.....	BIOLOGICAL STRUCTURE ANALYSIS BY ELECTRON MICROSCOPY.....	5R01 GM23325-02	162,692
GLASER, DONALD A.....	FACILITY FOR AUTOMATED EXPERIMENTS IN CELL BIOLOGY.....	5R01 CA18686-03	12,687
GLASER, DONALD A.....	MICROBIAL AND SOMATIC CELL GENETICS AND PHYSIOLOGY.....	5R01 GM22021-03	132,468
GLASER, DONALD A.....	FACILITY FOR AUTOMATED EXPERIMENTS IN CELL BIOLOGY.....	5P41 RR00961-03	1,160,439
GOLDSMITH, WERNER.....	HEAD-NECK SYSTEM MOTION AND STRESS DUE TO IMPACT.....	5R01 AM18384-03	44,871
HAFTER, ERVIN R.....	PSYCHOPHYSIOLOGICAL STUDIES OF BINAURAL INTERACTION.....	2R01 NS07787-10	43,510
HARRIS, MORGAN.....	CYTOPLASMIC INHERITANCE IN NORMAL AND TUMOR CELLS.....	5R01 CA12130-07	75,017
HEARST, JOHN E.....	STRUCTURE OF DNA IN EUKARYOTIC CELLS AND VIRUSES.....	5R01 GM11180-14	96,596
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF ISOPRENOID ANTITUMOR COMPOUNDS.....	5R01 CA12617-06	58,696
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF BRUCEANTIN.....	1R01 CA21163-01	21,220
HOSODA, JUNKO.....	ROLE OF LIGASE AND OTHER ENZYMES IN DNA REPLICATION.....	5R01 GM16841-06	67,516

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
HOSODA, JUNKO.....	STRUCTURE OF DNA-UNWINDING PROTEIN.....	1R01 GM23563-01	47,988
HUBBELL, WAYNE L.....	MOLECULAR BASIS OF MEMBRANE EXCITATION.....	2R01 EY00729-06	98,365
JENSEN, FREDERICK R.....	DEMETALLATION, ALKYLATION AND BIOCHEMICAL PROCESSES.....	5R01 GM15373-10	78,099
KELLER, EDWARD L.....	STUDIES ON THE OCULOMOTOR SYSTEM OF ALERT PRIMATES.....	5R01 EY00955-06	36,063
KING, JANET C.....	ZINC REQUIREMENTS OF PREGNANT WOMEN.....	1R01 HD11272-01	72,373
KNIGHT, C ARTHUR.....	CHEMISTRY OF VIRUS MUTATION.....	3R01 AI00634-23S1	5,904
KNIGHT, C ARTHUR.....	CHEMISTRY OF VIRUS MUTATION.....	2R01 AI00634-24A1	85,776
KNIGHT, C ARTHUR.....	CANCER RESEARCH PROGRAM: VIRUSES; CONTROL MECHANISMS.....	5P30 CA14097-05	171,128
KOSHLAND, DANIEL E, JR.....	REGULATORY PROCESSES IN BIOLOGICAL SYSTEMS.....	5R01 AM09765-12	158,734
KOSHLAND, MARIAN E.....	MECHANISM OF ANTIBODY SPECIFICITY AND BIOSYNTHESIS.....	5R01 AI07079-12	124,682
LAZARUS, RICHARD S.....	COPING AND CANCER: A PROCESS-ORIENTED APPROACH.....	1R18 CA19362-01A1	235,419
LEIGHTON, TERRANCE J.....	REGULATION OF BACTERIAL CELL DEVELOPMENT.....	2R01 GM22053-03	60,272
LEPKOVSKY, SAMUEL.....	OBESITY, ATHEROSCLEROSIS AND ISCHEMIC HEART DISEASE.....	3R01 HL17937-02S1	2,273
LEWIS, EDWIN R.....	MORPHOLOGY AND PHYSIOLOGY OF THE INNER EAR.....	5R01 NS12359-03	42,046
LINDGREN, FRANK T.....	LIPOPROTEIN METHODOLOGY AND BIOMEDICAL APPLICATIONS.....	5P01 HL18574-02	603,785
LINN, STUART M.....	IN VITRO RESTRICTION AND MODIFICATION OF PHAGE DNA.....	2R01 GM19020-09	81,929
LOHER, WERNER J.....	CIRCADIAN AND HORMONAL CONTROL OF SEXUAL BEHAVIOR.....	5R01 HD03619-09	42,674
MACEY, ROBERT I.....	CA AND MG IN MAINTENANCE OF MEMBRANE TRANSPORT.....	5R01 GM18819-05	45,661
MACHEN, TERRY E.....	TRANSITIONS AND TRANSPORT IN GASTRIC MUCOSA.....	1R01 AM19520-01	25,354
MAESTRE, MARCOS F.....	PHYSICAL STRUCTURE-VIRUSES, CHROMOSOMES & CELL NUCLEI.....	5R01 AI08427-09	73,986
MALKIN, RICHARD.....	IRON-SULFUR PROTEINS AS BOUND ELECTRON CARRIERS.....	2R01 GM20571-04	34,533
MARGEN, SHELDON.....	STUDIES IN HUMAN NUTRITION.....	3P01 AM10202-11S1	26,510
MARGEN, SHELDON.....	STUDIES IN HUMAN NUTRITION.....	5P01 AM10202-12	307,506
MARTIN, G STEVEN.....	GENETICS OF RNA TUMOR VIRUSES.....	5R01 CA17542-02	40,233
MATHIES, RICHARD A.....	RAMAN INVESTIGATIONS OF THE MOLECULAR BASIS OF VISION.....	1R01 EY02051-01	41,101
MATWYOFF, NICHOLAS A.....	A NATIONAL, STABLE ISOTOPES RESOURCE AT LOS ALAMOS.....	5P41 RR00962-02	170,699
MAZIA, DANIEL.....	TRANSFORMATION, DIVISION, AND MOTION OF CELLS.....	5P01 GM13882-12	227,103
MENDELSON, MORTIMER L.....	RADIOBIOLOGICAL TECHNIQUES IN HUMAN CANCER THERAPY.....	2R01 CA14533-06	286,349
MISHELL, ROBERT I.....	REGULATION OF CELLS OF THE IMMUNE SYSTEM.....	5R01 AI08817-09	82,203
MISHELL, ROBERT I.....	ANALYTIC STUDIES OF CELLULAR ASPECTS OF IMMUNE MEMORY.....	5R01 CA17919-03	58,274
NANDI, SATYABRATA.....	BIOLOGY OF MAMMARY NEOPLASIA.....	5P01 CA05388-18	877,570
NEILANDS, JOHN B.....	IRON METABOLISM OF MICROORGANISMS.....	5R01 AI04156-16	41,239
NEILANDS, JOHN B.....	CHELATES FOR COOLEY'S ANEMIA AND IRON STORAGE DISEASE.....	5R01 AM17146-04	51,421
NEYMAN, JERZY.....	STATISTICAL STUDIES OF PROBLEMS OF HEALTH AND BIOLOGY.....	5R01 ES01299-15	81,391
NIKAIKO, HIROSHI.....	BIOCHEMISTRY OF BACTERIAL CELL MEMBRANES.....	5R01 AI09644-08	84,259
O'KONSKI, CHESTER T.....	DYNAMICS OF NUCLEIC ACID MACROMOLECULES AND COMPLEXES.....	5R01 CA12540-06	46,670
O'KONSKI, CHESTER T.....	ELECTRO-OPTIC STUDIES OF ENZYMICALLY MODIFIED DNA.....	5R01 GM22810-02	19,429
OACE, SUSAN M.....	DIETARY FIBER AND BIOAVAILABILITY OF MICRONUTRIENTS.....	1R01 AM19970-01	56,525
OSTWALD, ROSEMARIE.....	EFFECT OF DIETARY CHOLESTEROL IN MAMMALS.....	3R01 AM08480-13S1	7,425
OSTWALD, ROSEMARIE.....	EFFECT OF DIETARY CHOLESTEROL IN MAMMALS.....	5R01 AM08480-14	95,006
PACKER, LESTER.....	NEUROLATHYRISM.....	5R01 NS11321-03	38,350
PAFFENBARGER, RALPH S, JR.....	FACTORS IN YOUTH PREDISPOSING TO CHRONIC DISEASE.....	9R01 HL19839-08	129,376
PENHOET, EDWARD E.....	CONTROL OF RNA SYNTHESIS IN EUKARYOTIC CELLS.....	5R01 CA20357-02	41,647
PENHOET, EDWARD E.....	STRUCTURE AND MODIFICATION OF MAMMALIAN TRANSFER RNA.....	1R01 CA21245-01	45,739
POLSE, KENNETH A.....	CONTACT LENS EFFECTS ON REFRACTIVE ERROR.....	3R01 EY01755-01S1	35,756
RABINOWITZ, JESSE C.....	PURINE AND PTERIDINE METABOLISM IN MICROORGANISMS.....	5R01 AM02109-20	94,974
RAPOPORT, HENRY.....	TOXIC ALGAE IN MARINE AND FRESH-WATER ENVIRONMENTS.....	1R01 ES01547-01	162,132
RAYMOND, KENNETH N.....	COORDINATION ISOMERS IN BIOLOGICAL IRON TRANSPORT.....	5R01 AI11744-04	80,639
REEVES, WILLIAM C.....	ECOLOGY AND CONTROL OF ARBOVIRUSES.....	5R01 AI03028-19	274,400
ROHWER, WILLIAM D, JR.....	ELABORATION AND MEMORY DEVELOPMENT IN ADOLESCENCE.....	5R01 HD03869-09	55,443
RUBIN, HARRY.....	PRIMARY EVENTS IN REGULATING CELL MULTIPLICATION.....	5R01 CA15744-04	151,316
SATIR, PETER.....	STRUCTURE AND MOTION OF CILIA.....	2R01 HL13849-10	62,585
SCHACHMAN, HOWARD K.....	STRUCTURES AND INTERACTIONS OF BIOLOGICAL MACROMOLECULES.....	5R01 GM12159-14	104,833
SINGER, JEROME R.....	NEW BIOPHYSICAL STUDIES OF CERVICAL MUCUS.....	5R01 HD10316-02	67,917
STEINHARDT, RICHARD A.....	HORMONAL REGULATION OF ION TRANSPORT IN TUMORIGENESIS.....	1R01 CA21711-01	44,616
STENT, GUNTHER S.....	BEHAVIOR AND DEVELOPMENT OF A SIMPLE NERVOUS SYSTEM.....	5R01 NS12818-24	64,060
STOKSTAD, E L.....	METABOLISM OF FOLIC ACID AND VITAMIN B12.....	5R01 AM08171-14	71,867
STOKSTAD, E L.....	NUTRITIONAL REQUIREMENTS OF FREE-LIVING SYSTEMS.....	5R01 AM12625-08	30,668
STREITWIESER, ANDREW, JR.....	CARBON ACIDITY.....	5R01 GM12855-13	80,673
TARTER, MICHAEL E.....	GRAPHICAL BIOMETRY.....	5R01 GM18987-03	31,472

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
THORNER, JEREMY W.....	CELL-CELL INTERACTIONS OF A SIMPLE EUKARYOTE	5R01 GM21841-03	49,259
TINOCO, IGNACIO, JR	STRUCTURE AND FUNCTION OF NUCLEIC ACIDS	2R01 GM10840-19	141,526
TOBIAS, CORNELIUS A	PRETHERAPEUTIC USE OF ACCELERATED HEAVY IONS	2P01 CA15184-04	923,497
VAN DEN BERG, BARBARA J.....	CHILD HEALTH AND DEVELOPMENT STUDIES.....	2P01 HD07256-06	174,578
VAN DEN BERG, BARBARA J.....	CONSEQUENCES OF CHILDBEARING & CHILDSPACING PATTERNS.....	3R01 HD10108-01S1	4,420
VAN DEN BERG, BARBARA J.....	EPIDEMIOLOGICAL STUDIES, PRECURSORS OF HYPERTENSION.....	5R01 HL19859-02	148,381
VOLLHARDT, K PETER	ACTIVATED MUTAGENIC AND CARCINOGENIC HYDROCARBONS.....	1R01 CA20713-01	41,108
VOLLHARDT, K PETER	ROUTES TO PHYSIOLOGICALLY ACTIVE COMPOUNDS.....	5R01 GM22479-02	31,004
WASHBURN, WILLIAM N	SQUALENE SYNTHETASE: MECHANISM AND INTERMEDIATES.....	5R01 GM21518-03	27,114
WERBLIN, FRANK S.....	MEMBRANE MECHANISMS FOR CELL FUNCTION IN RETINA	5R01 EY00561-08	63,063
WESTHEIMER, GERALD.....	STUDY OF RETINAL AND CENTRAL VISUAL FUNCTION	5R01 EY00220-16	50,032
WESTHEIMER, GERALD.....	OCULOMOTOR CONTROL.....	2R01 EY00592-09	101,731
WILLIAMS, MARY A.....	CHARACTERIZATION AND ISOLATION OF LECITHINS.....	5R01 AM10166-12	63,169
WILLIAMS, MARY A.....	ESSENTIAL FATTY ACID INTAKE AND FATTY ACID SYNTHESIS.....	5R01 AM12024-10	72,251
WILSON, ALLAN C.....	REGULATION AS A BASIS FOR ORGANISMAL DIFFERENCES.....	5R01 GM21509-03	50,629
WINKELSTEIN, WARREN, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05441-16	64,680
WOFSY, LEON.....	RECEPTOR FUNCTION IN LYMPHOCYTE DIFFERENTIATION.....	5R01 AI06610-13	108,487
YOUNG, JANIS D.....	BIOLOGICAL ACTIVITY OF MYELIN BASIC PROTEIN	1R01 NS12548-01A2	56,018
YUND, MARY A.....	HORMONAL REGULATION OF GENE ACTIVITY IN DROSOPHILA.....	1R01 GM23349-01A1	34,046
ZUCKER, IRVING.....	BEHAVIOR, HORMONES AND NEURAL BIOLOGICAL CLOCKS	5R01 HD02982-11	68,560
ZUSMAN, DAVID R.....	STUDY OF CELL DIVISION AND MORPHOGENESIS IN BACTERIA	5R01 GM20509-05	42,889
ORGANIZATION TOTAL	142 15,602,011		
BURBANK			
ST. JOSEPH MEDICAL CENTER ZIP CODE 91505			
LANCHANTIN, GERARD F.....	CHEMISTRY OF HUMAN BLOOD COAGULATION.....	5R01 HL17690-04	26,878
LANCHANTIN, GERARD F.....	SUBUNITS FORMED DURING HUMAN PROTHROMBIN ACTIVATION.....	5R01 HL17718-04	20,089
ORGANIZATION TOTAL	2 46,967		
CLAREMONT			
CLAREMONT COLLEGES SYSTEM—CLAREMONT GRADUATE SCHOOL ZIP CODE 91711			
OSKAMP, STUART.....	LONG-TERM STUDY OF SUCCESS IN CONTRACEPTIVE PLANNING.....	5R01 HD08074-04	79,200
ORGANIZATION TOTAL	1 79,200		
CLAREMONT COLLEGES SYSTEM—PITZER COLLEGE ZIP CODE 91711			
ATWELL, CONSTANCE W.....	CONSEQUENCES OF VESTIBULAR SELF-STIMULATION IN INFANTS.....	5R01 HD09644-02	50,015
ORGANIZATION TOTAL	1 50,015		
CLAREMONT COLLEGES SYSTEM—POMONA COLLEGE ZIP CODE 91711			
HANSCH, CORWIN H.....	CORRELATION OF BIOLOGICAL ACTIVITY AND STRUCTURE.....	5R01 CA11110-17	67,942
HANSCH, CORWIN H.....	CORRELATION OF BIOLOGICAL ACTIVITY AND STRUCTURE.....	2R01 CA11110-18	121,888
LONG, GEORGE L.....	SUBUNIT INTERACTIONS OF D-LACTATE DEHYDROGENASES.....	5R01 GM22868-02	26,936
ORGANIZATION TOTAL	3 216,766		
CULVER CITY			
MEMORIAL CANCER RESEARCH FOUNDATION OF SOUTHERN CALIFORNIA ZIP CODE 90230			
PLOTKIN, DAVID.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20146-01	13,073
ORGANIZATION TOTAL	1 13,073		
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
ABILDGAARD, CHARLES F.....	SERIAL COMPARATIVE STUDY OF VON WILLEBRAND'S DISEASE.....	1R01 HL19267-01A1	32,328
BEAMAN, BLAINE L.....	MECHANISMS CONTROLLING NOCARDIAL PATHOGENESIS.....	5R01 AI13167-03	41,263
BENISEK, WILLIAM F.....	STEROID BINDING SITES OF STEROID BINDING PROTEINS.....	5R01 AM14729-07	54,577
BERGSTROM, DONALD E.....	SYNTHESIS OF C-5 SUBSTITUTED PYRIMIDINE NUCLEOSIDES.....	1R01 CA21493-01	49,614

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BOYD, JAMES B.....	POLYTENE CHROMOSOMES—STRUCTURE AND FUNCTION.....	5R01 GM16298-09	37,711
BRADY, F PAUL.....	NEUTRON-INDUCED REACTIONS IN TISSUE RESIDUE ELEMENTS.....	5R01 CA16261-03	147,461
BROOKS, GEORGE F, JR.....	HUMAN IMMUNE RESPONSES TO N. GONORRHOEAL INFECTIONS.....	5R01 AI13927-02	42,268
BRUENING, GEORGE E.....	MECHANISMS OF IMMUNITY TO VIRUS INFECTION.....	1R01 AI13708-01A1	51,048
CARDIFF, ROBERT D.....	MTV GENE AMPLIFICATION AND EXPRESSION.....	1R01 CA21454-01	92,288
CHAYKIN, STERLING.....	BIOLOGICAL OXIOATION REOUCTION MECHANISMS.....	5R01 GM19563-14	39,794
CHUANG, RONALD Y.....	RNA POLYMERASE FROM CHICKEN ANO HUMAN LEUKEMIC CELLS.....	7R01 CA21982-01	38,291
CLIFFORD, ANDREW J.....	OIET AND PURINE METABOLISM IN GOUT.....	5R01 AM16726-05	40,472
CONN, ERIC E.....	METABOLISM OF AROMATIC COMPOUNDS.....	2R01 GM05301-20	73,520
CRAMER, JAMES C.....	FERTILITY ANO FAMILY INCOME IN THE UNITED STATES.....	5R01 HD10233-02	12,308
CROSS, CARROLL E.....	OXYGEN TOXICITY: BASIC ANO CLINICAL STUDIES.....	5R01 HL17957-03	19,960
DOI, ROY H.....	ROLE OF RNA POLYMERASE IN BACTERIAL OIFFERENTIATION.....	5R01 GM19673-06	50,846
DUNGWORTH, DONALD L.....	PULMONARY EFFECTS OF ENVIRONMENTAL OXIDANT POLLUTANTS.....	5P01 ES00628-07	315,170
ENDERS, ALLEN C.....	MECHANISMS OF IMPLANTATION OF THE BLASTOCYST.....	2R01 HD10342-02	73,173
ENDERS, ALLEN C.....	CYTOLOGY OF PLACENTAL FUNCTION.....	5R01 HD10344-02	30,320
ETZLER, MARILYNN E.....	THE OEOVELOPMENT OF CELL SURFACE COMPONENTS.....	5R01 GM17744-06	50,486
ETZLER, MARILYNN E.....	STRUCTURE, OEOVELOPMENT, ANO MOOIFICATIONS OF LECTINS.....	5R01 GM21882-03	48,870
FEENEY, ROBERT E.....	INHIBITORS OF PROTEOLYTIC ENZYMES.....	5R01 AM13686-09	35,799
FEENEY, ROBERT E.....	COMPARATIVE BIOCHEMISTRY OF PROTEINS.....	9R01 GM23817-13	57,507
FEENEY, ROBERT E.....	TRANSFERRIN IRON BINDING ANO TRANSPORT PROPERTIES.....	5R01 HL18619-02	34,546
FOWLER, WILLIAM M, JR.....	PATHOPHYSIOLOGICAL BASES OF MUSCLE OISEASES.....	5P01 AM16716-04	424,212
FREEDLAND, RICHARD A.....	INFLUENCE OF NUTRITION ON ENZYME SYSTEMS.....	5R01 AM04732-17	48,525
GABOR, ANDREW J.....	NEURONAL INTERACTION OF EPILEPTOGENIC FOCUS.....	5R01 NS10332-05	40,203
GARDNER, ERNEST D.....	OEOVELOPMENTAL NEUROBIOLOGY IN PRIMATES.....	2P01 HD08658-04	362,631
GEEL, STANLEY E.....	BIOCHEMISTRY OF CNS DEVELOPMENT IN THYROID INSUFFICIENCY.....	5R01 NS10118-06	59,706
GEOKAS, MICHAEL C.....	EARLY OIAGNOSIS OF PANCREATIC CANCER.....	1R26 CA19188-01A1	33,706
GERSHWIN, M ERIC.....	THE PATHOGENESIS OF AUTOIMMUNITY IN NEW ZEALANO MICE.....	5R01 CA20816-02	64,901
GESCHWIND, IRVING I.....	PITUITARY AND HYPOTHALAMIC PROTEINS AND PEPTIDES.....	2R01 H000394-17	112,379
GIRI, SHRI N.....	EVALUATION OF ANTIFIBROTIC AGENTS IN PULMONARY FIBROSIS.....	5R01 HL19720-02	90,388
GOLDSTEIN, ELLIOT.....	EFFECT OF ATMOSPHERIC POLLUTANTS ON PULMONARY DEFENSES.....	1R01 ES01327-01	42,593
GREEN, JERRY F.....	INTRAVASCULAR REDISTRIBUTION OF BLOOD VOLUME.....	1R01 HL20371-01	58,193
GREEN, MELVIN M.....	GENETIC ANO EVOLUTIONARY STUOIES WITH OROSOPHILA.....	5P01 GM22221-03	288,581
GRUENWEDEL, OIETER W.....	TOXICOLOGY OF MERCURY AT CELLULAR-SUBCELLULAR LEVELS.....	5R01 ES01115-03	35,012
GULYASSY, PAUL F.....	ABNORMAL PROTEIN BINOING IN UREMIA.....	1R01 AM19833-01	84,120
HALSTED, CHARLES H.....	INTESTINAL ABSORPTION OF FOLATES IN HEALTH ANO OISEASE.....	5R01 AM18330-03	55,202
HAMILTON, WILLIAM J, III.....	PRIMATE SOCIOECOLOGY: A NUTRITIONAL APPROACH.....	1R01 RR01078-01	53,916
HANSEN, ROBERT J.....	INSULIN ANO PROTEIN TURNOVER IN ANIMAL TISSUES.....	2R01 AM15059-07	74,126
HANSEN, ROBERT J.....	HORMONAL CONTROL OF MUSCLE PROTEIN OEOGRADATION.....	3R01 AM16648-03S2	4,839
HARRIS, DANIEL C.....	BIOCHEMICAL APPROACHES TO MANAGEMENT OF IRON OVERLOAD.....	1R01 HL20141-01	40,013
HEDRICK, JERRY L.....	A MOLECULAR APPROACH TO FERTILIZATION.....	5R01 H004906-08	80,216
HERSHEY, JOHN W.....	MECHANISM OF INITIATION OF PROTEIN BIOSYNTHESIS.....	5R01 GM22135-03	63,920
HSIEH, DENNIS P.....	TOXIC FUNGAL POLYKETIDES.....	2R01 ES00612-07	56,986
HURLEY, LUCILLE S.....	NUTRITIONAL FACTORS IN MAMMALIAN DEVELOPMENT.....	2R01 HD01743-13	76,815
HURLEY, LUCILLE S.....	GENETIC ANO NUTRITIONAL INTERACTIONS IN DEVELOPMENT.....	2R01 HD02355-12	80,237
INGRAHAM, JOHN L.....	PHYSIOLOGY OF BACTERIA AT LOW TEMPERATURE.....	5R01 AI05526-15	68,802
KADO, CLARENCE I.....	TUMOR-INOUCING SUBSTANCE OF AGROBACTERIUM TUMEFACIENS.....	5R01 CA11526-09	57,397
KELTNER, JOHN L.....	PHOTOGRAMMETRIC QUANTIFICATION OF THE OPTIC CUP.....	5R01 EY01841-02	74,703
KILGORE, WENDELL W.....	ENVIRONMENTAL IMPACT OF CHLORINATED HYDROCARBONS.....	5P01 ES00054-13	241,683
KILGORE, WENDELL W.....	STUDY OF PARATHION AS A PUBLIC HEALTH HAZARO.....	5P01 ES00735-04	253,569
KILLAM, KEITH F, JR.....	STUDIES OF PHOTOMYOCLONIC EPILEPSY.....	3R01 NS08935-06S1	6,450
KING, BARRY F.....	FUNCTIONAL CYTOLOGY OF THE PLACENTA ANO FETAL MEMBRANES.....	7R01 H011658-01	23,866
KRAUS, JESS F.....	THE IMPACT OF HYPERTENSION INFORMATION.....	1R01 HL20247-01	200,061
KREBS, EDWIN G.....	THE REGULATORY ENZYMES OF GLYCOGEN METABOLISM.....	3R01 AM12842-09S1	37,195
KUSTU, SYDNEY G.....	GENETIC STUDIES OF GLUTAMINE SYNTHETASE IN BACTERIA.....	2R01 GM21307-04	39,346
LA MAR, GERD N.....	STRUCTURAL AND DYNAMIC STUDY OF MODEL HEME COMPLEXES.....	2R01 HL16087-04	57,729
LENN, NICHOLAS J.....	CYTOLOGICAL STUDIES OF BRAIN SYNAPSES.....	5R01 NS12265-03	55,048
LORENZ, FREDERICK W.....	SPERM PHYSIOLOGY IN INDUCTION OF ABNORMAL DEVELOPMENT.....	2R01 HD08753-03	28,690
MACKENZIE, MALCOLM R.....	HUMAN MULTIPLE MYELOMA CELL ANTIGENS.....	5R01 CA17192-03	64,643
MACY, JOAN M.....	INFLUENCE OF OIETARY FIBER ON RAT INTESTINAL BACTERIA.....	1R01 AM20872-01	60,991
MAKI, AUGUST H.....	BINDING OF CH3HG0, AN ENVIRONMENTAL HAZARO, WITH ONA.....	2R01 ES01268-03	51,995

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
MARR, ALLEN G	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07007-12	144,911
MASON, WILLIAM A	PSYCHOSOCIAL DEVELOPMENT	2R01 HD06367-06	108,165
MC NAMEE, MARK G	DYNAMIC INTERACTIONS OF THE ACETYLCHOLINE RECEPTOR	5R01 NS13050-02	37,139
MEARES, CLAUDE F	BIFUNCTIONAL CHELATING AGENTS IN TUMOR LOCALIZATION	5R01 CA16861-03	50,756
MEIZEL, STANLEY	BIOCHEMICAL STUDIES OF IN VITRO SPERM CAPACITATION	2R01 HD06698-04	50,504
MEIZEL, STANLEY	STUDIES OF AN INACTIVE TESTIS AND SPERM TRYPSIN	2R01 HD07893-03	70,304
MULLONEY, BRIAN	PHYSIOLOGICAL MECHANISMS PRODUCING ORDERED MOVEMENT	5R01 NS12295-03	42,743
PAPPAGIANIS, DEMOSTHEMES	INDUCED ACTIVE IMMUNITY TO COCCIDIODOMYCOSIS	5R01 AI13336-02	67,943
PHAFF, H J	GENOME COMPARISON AS A BASIS FOR YEAST SYSTEMATICS	5R01 GM16370-08	62,214
PREISS, JACK	REGULATION OF POLYSACCHARIDE SYNTHESIS	5R01 AI05520-15	114,376
PRITCHARD, WILLIAM R	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER	5P40 RR00169-16	1,870,782
PRITCHARD, WILLIAM R	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05457-15	92,238
RABINOWITZ, LAWRENCE	RENAL EXCRETION OF ORGANIC NONELECTROLYTES	5R01 AM12367-10	56,817
RENKIN, EUGENE M	REGULATORY MECHANISMS IN BLOOD CIRCULATION	5R01 HL17998-03	49,440
RENKIN, EUGENE M	CAPILLARY TRANSPORT OF LARGE MOLECULES	5R01 HL18010-03	79,374
RIGGINS, RICHARD S	STUDY OF SCOLIOSIS	5R01 AM15278-04	79,916
ROGERS, QUINTON R	THE ROLE OF NUTRITION IN FOOD INTAKE REGULATION	5R01 AM13252-08	93,576
RUCKER, ROBERT B	EXPERIMENTAL ATHEROSCLEROSIS AND ELASTIN METABOLISM	5R01 HL15965-05	25,806
RUCKER, ROBERT B	CHARACTERIZATION OF LUNG ELASTINS	5R01 HL18918-02	41,027
RUEBNER, BORIS H	PERINATAL BILE PIGMENTS IN INFANTS AND MONKEYS	2R01 HD07331-04	101,433
SCHMID, CARL W, JR	REPETITIVE DNA SEQUENCES IN THE HUMAN GENOME	2R01 GM21346-04	51,364
SCHNEEMAN, BARBARA O	NUTRITIONAL EFFECTS OF PLANT FIBER ON DIGESTION	1R01 AM20446-01	40,589
SCHNEIDER, ROBERT	SUPPORT FOR REGISTRY OF ANIMAL NEOPLASMS	5R01 CA14916-05	211,632
SCHWABE, CALVIN W	HOST-PARASITE RELATIONSHIPS IN PARASITIC ZOOZOSES	5R01 AI07857-11	41,366
SCOBAY, ROBERT P	DETECTION OF VISUAL IMAGE DISPLACEMENTS	5R01 EY01495-03	39,889
SILLMAN, ARNOLD J	THE CHEMICAL ENVIRONMENT AND PHOTORECEPTOR FUNCTION	1R01 EY01839-01	33,845
STARR, MORTIMER P	THE PHYTOPATHOGENIC BACTERIA	5R01 AI08426-21	47,429
STERN, JUDITH S	PHYSICAL ACTIVITY, PANCREATIC FUNCTION AND OBESITY	2R01 AM18899-03	66,131
STOWELL, ROBERT E	EFFECTS OF SEX ON COLON CARCINOGENESIS	5R26 CA15962-04	32,812
STUMPF, PAUL K	MECHANISMS OF DESATURATION OF FATTY ACIDS	5R01 GM19213-06	49,580
TAPPEL, ALOYS L	NUTRITIONAL FUNCTION OF SELENIUM	5R01 AM06424-15	49,026
TAPPEL, ALOYS L	FREE RADICAL LIPID PEROXIDATION DAMAGE	5R01 AM09933-21	48,721
THEILEN, GORDON H	SARCOMA VIRUS (FESV) INDUCED TUMORS	3R01 CA16869-03S1	13,296
TRAUT, ROBERT R	RIBOSOME STRUCTURE AND FUNCTION	5R01 GM17924-07	106,954
TROY, FREDERIC A	CHEMISTRY AND BIOSYNTHESIS OF CELL-SURFACE POLYMERS	5R01 AI09352-08	56,576
TROY, FREDERIC A	MEMBRANE-BOUND ENZYME INTERACTIONS AND GROWTH CONTROL	5R01 CA17327-02	60,503
TUPPER, C JOHN	MEDICAL SCHOOL ANIMAL RESOURCE IMPROVEMENT	1P40 RR01068-01	116,615
TUPPER, C JOHN	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05684-09	147,159
VACQUIER, VICTOR D	BIOCHEMISTRY OF SPERM-EGG BINDING AND FERTILIZATION	2R01 HD08645-03	63,727
VILLAREJO, MERNA R	ISOLATION OF THE LACTOSE PERMEASE PROTEIN	5R01 GM23189-02	39,948
WALSH, DONAL A	REGULATION OF CELL FUNCTION BY PHOSPHORYLATION	2R01 AM13613-09	116,852
WALSH, DONAL A	A PROTEIN INHIBITOR OF PROTEIN KINASES	1R01 AM21019-01	63,508
WELLINGS, SEFTON R	PRENEOPLASTIC POTENTIAL OF HUMAN BREAST LESIONS	1R01 CA21366-01	71,474
WELLINGS, SEFTON R	QUANTITATIVE STUDIES OF HUMAN BREAST PATHOLOGY	1R01 CA21523-01	80,461
WILSON, BARRY W	TOXICANTS AND AVIAN CELL GROWTH AND METABOLISM	5R01 ES00202-09	48,222
ZEMAN, FRANCES J	THYROID AXIS DEVELOPMENT IN FETAL PROTEIN DEPRIVATION	5R01 HD06499-03	56,813
ORGANIZATION TOTAL	110	10,117,164	

DOMINGUEZ HILLS

CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT DOMINGUEZ HILLS		ZIP CODE 90247	
CHI, LOIS W	IMMUNE RESPONSE IN MICE TO NTG CERCARIAE OF S. JAPONICUM	1S06 RR08156-01	66,252
ORGANIZATION TOTAL	1	66,252	

DOWNEY

LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—RANCHO LOS AMIGOS HOSPITAL		ZIP CODE 90242	
BRODY, GARRY S	IN VIVO RHEOLOGY OF MATURING HUMAN SKIN AND BURN SCAR	5R01 GM21603-03	47,315
SELVESTER, RONALD H	MYOCARDIAL ASSESSMENT BY INVERSE ELECTROCARDIOGRAPHY	3R01 HL14688-04S1	32,720

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SELVESTER, RONALD H.....	MYOCARDIAL ASSESSMENT BY INVERSE ELECTROCARDIOGRAPHY.....	2R01 HL14688-05	41,276
SELVESTER, RONALD H.....	INFARCT SIZE: ECG, ANGIO, AND PATHOLOGY CORRELATIONS.....	5R01 HL17532-03	80,737
WAGNER, F WILLIAM, JR.....	MICRO/MACROVASCULATURE IN HEALING OF FOOT LESIONS.....	1R01 HL22113-01	92,351
WEBB, ALAN T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05542-15	47,878
ORGANIZATION TOTAL	6	342,277	
DUARTE			
CITY OF HOPE NATIONAL MEDICAL CENTER ZIP CODE 91010			
BEUTLER, ERNEST.....	DIAGNOSIS AND THERAPY OF GAUCHER'S DISEASE.....	5R01 AM14755-07	81,951
BEUTLER, ERNEST.....	THE FORMATION AND SURVIVAL OF RED BLOOD CELLS.....	2R01 HL07449-16	154,414
BURTON, JOHN E.....	CEREBELLAR CORRELATES OF MOTOR PERFORMANCE.....	3R01 NS11798-03S1	4,361
COMINGS, DAVID E.....	PHYSIOLOGY AND BIOCHEMISTRY OF HUMAN CHROMOSOMES.....	5R01 GM15886-11	95,417
COMINGS, DAVID E.....	DNA BINDING PROTEINS AND CHROMOSOME STRUCTURE.....	5R01 GM23199-02	62,249
DUBUC, PAUL U.....	CNS REGULATION OF GLUCOSE METABOLISM.....	5R01 AM17683-03	32,373
DUBUC, PAUL U.....	THE EARLY DEVELOPMENT OF OBESE-HYPERGLYCEMIC MICE.....	1R01 AM19627-01	44,329
HOLDEN, JOSEPH T.....	FACTORS AFFECTING BACTERIAL TRANSPORT SYSTEM ACTIVITY.....	5R01 GM20395-05	55,926
IKEDA, KAZUO.....	PHYSIOLOGY OF SYNAPSES IN NORMAL AND MUTANT ANIMALS.....	3R01 NS07442-10S1	14,731
IKEDA, KAZUO.....	NEURAL MECHANISM OF MUTANT PHENOTYPES.....	5R01 NS11513-04	24,843
KAPLAN, WILLIAM D.....	GENETICS AND BEHAVIOR OF NEUROLOGICAL MUTANTS.....	5R01 NS08014-10	89,070
KLEVECZ, ROBERT R.....	TEMPORAL ORDER AND AGING IN CULTURED SOMATIC CELLS.....	2R01 AG00434-07	85,491
LEVINE, RACHMIEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05471-15	132,072
MITTMAN, CHARLES.....	GENETIC AND ENVIRONMENTAL INFLUENCES ON LUNG DISEASES.....	5R01 HL12833-09	79,007
OHNO, SUSUMU.....	SEX AND AGING STUDIES OF MUTANT MICE.....	5R01 AG00042-03	50,980
OHNO, SUSUMU.....	SEX CHROMOSOMES OF CELLS.....	5R01 CA16952-16	33,569
RAPPAPORT, HENRY.....	PATHOLOGY CENTER FOR LYMPHOMA CLINICAL STUDIES.....	5R10 CA18044-03	193,680
RIGGS, ARTHUR D.....	REGULATORY PROTEINS IN E. COLI AND EUKARYOTIC CELLS.....	5R01 HD04420-08	89,729
ROBERTS, EUGENE.....	NITROGEN METABOLISM OF NERVOUS TISSUE.....	3R01 NS01615-19S1	30,509
ROBERTS, EUGENE.....	NITROGEN METABOLISM OF NERVOUS TISSUE.....	2R01 NS01615-20	89,671
ROBERTS, EUGENE.....	NEUROTRANSMISSION AND NEUROLOGICAL DISEASE.....	5P01 NS12116-03	273,400
RUOSLAHTI, ERKKI I.....	ALPHA-FETOPROTEIN: STRUCTURE AND FUNCTION.....	5R01 CA19894-02	81,665
RUOSLAHTI, ERKKI I.....	FIBROBLAST SURFACE ANTIGEN.....	1R01 CA22108-01	53,378
TEPLITZ, RAYMOND L.....	GENETIC REGULATION IN LEUKEMIA.....	5R01 CA17223-03	50,439
TODD, CHARLES W.....	CORE GRANT: TUMOR IMMUNOLOGY AND CHEMISTRY.....	5P01 CA16434-03	281,672
TODD, CHARLES W.....	ASSAY AND STRUCTURE OF CARCINOEMBRYONIC ANTIGENS.....	5R26 CA19163-02	159,722
VAUGHN, JAMES E.....	SPINAL CORD DEVELOPMENT.....	2R01 NS09578-08	50,175
WIMER, RICHARD E.....	GENETIC MANIPULATIONS OF AMMON'S HORN.....	5R01 NS10284-05	55,748
YOSHIDA, AKIRA Y.....	MOLECULAR PATHOLOGY OF GENETIC DISORDERS IN MAN.....	2R01 HL15125-06	169,960
YOSHIDA, AKIRA Y.....	GENETICS OF GLYCOSYLTRANSFERASES IN HUMAN BLOOD.....	1R01 HL20301-01	71,485
ORGANIZATION TOTAL	30	2,692,016	
EL SEGUNDO			
AEROSPACE CORPORATION ZIP CODE 90245			
JANZ, RONALD F.....	ANALYSIS OF MECHANICAL BEHAVIOR OF THE LEFT VENTRICLE.....	5R01 HL14651-05	111,571
ORGANIZATION TOTAL	1	111,571	
EUREKA			
MUMBOLDT-DEL NORTE MEDICAL SOCIETY ZIP CODE 95501			
CHRISTENSEN, NORMAN M.....	EXPLORATORY RESEARCH IN A COMMUNITY.....	1R18 CA20159-01	26,940
ORGANIZATION TOTAL	1	26,940	
FRESNO			
AMERICAN MOSQUITO CONTROL ASSOCIATION ZIP CODE 93727			
SOLLERS-RIEDEL, HELEN.....	SYNTHESIS OF LITERATURE ON MOSQUITOES.....	2R01 LM01786-05	19,720
ORGANIZATION TOTAL	1	19,720	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
ARQUILLA, EDWARD R.....	IMMUNOLOGY STRUCTURE SITE AND ACTION OF INSULIN.....	5R01 AM13441-09	95,957
BALDWIN, KENNETH.....	CO ₂ -SENSITIVE RECEPTORS IN THE MAMMALIAN LUNG.....	5R01 HL18685-02	38,717
BARTLETT, ROBERT H.....	PROLONGED EXTRACORPOREAL CARDIOPULMONARY SUPPORT.....	5R01 HL15593-04	98,415
BERNS, MICHAEL W.....	DIRECTED CHROMOSOME DELETIONS BY LASER.....	5R01 GM22754-02	36,135
BERNS, MICHAEL W.....	CELL DIVISION STUDIED BY LASER.....	1R01 GM23445-01	35,240
BERNS, MICHAEL W.....	IN VITRO STUDIES ON HEART CELL FUNCTION.....	2R01 HL15740-05	78,729
BODE, HANS R.....	REGULATION OF MULTIPOTENT CELL DIFFERENTIATION.....	2R01 HD08086-04	46,737
BORER, PHILIP N.....	BASIC NUCLEIC ACID STRUCTURES: FORM AND INTERACTION.....	1R01 GM24494-01	55,707
CAMPBELL, RICHARD D.....	EFFECT OF EXPERIMENTAL NERVE DEPLETION ON DEVELOPMENT.....	2R01 NS12446-03	57,030
CASERIO, MARJORIE C.....	ALKYLATION OF DISULFIDES-SULFENYL SALTS.....	5R01 CA19944-02	45,785
CLARK, JEFFREY L.....	POLYAMINES AND GROWTH CONTROL IN 3T3 CELLS.....	5R01 GM21854-03	30,468
COTMAN, CARL W.....	BEHAVIORAL AND NEURAL PLASTICITY IN THE AGED RAT.....	1P01 AG00538-01	256,931
COTMAN, CARL W.....	SYNAPTIC MEMBRANE STRUCTURE AND FUNCTION.....	5R01 NS08597-09	110,159
CROCKER, T TIMOTHY.....	NEOPLASIA AND DIFFERENTIATION IN TRACHEAL EPITHELIUM.....	5R01 CA15079-03	70,091
CUNNINGHAM, DENNIS D.....	INITIATION OF FIBROBLAST DIVISION BY GLUCOCORTICOIDS.....	5R01 CA12306-07	68,220
DAVIS, ROWLAND H.....	ARGININE METABOLISM AND CELL COMPARTMENTATION.....	1R01 AM20083-01	62,116
GIOLLI, ROLAND A.....	VISUAL AND NONVISUAL CORTICAL EFFERENTS.....	3R01 EY00607-10S1	7,259
GRANGER, GALE A.....	LYMPHOCYTE RELEASED CELL TOXIN.....	5R01 AI09460-08	87,889
HALL, PETER F.....	ADRENAL TUMOR CELLS: REGULATION AND STEROID SYNTHESIS.....	5R01 CA14638-05	75,828
HAMKALO, BARBARA A.....	STRUCTURE AND FUNCTION OF EUKARYOTIC CHROMOSOMES.....	5R01 GM23241-02	50,855
HATFIELD, G WESLEY.....	CONTROL OF GENE EXPRESSION AND THE ROLES OF TRNA.....	1R01 GM24330-01	78,544
HAYES, SIDNEY J.....	ROLE OF LAMBDA OOP RNA IN DNA REPLICATION.....	5R01 GM21958-03	41,943
IBSEN, KENNETH H.....	METABOLIC INTERRELATIONSHIPS.....	3R01 CA07883-12S1	3,140
ISERI, LLOYD T.....	EMERGENCY PACING IN PRE-HOSPITAL CARDIAC ARREST.....	5R01 HL18773-02	20,979
LANDFIELD, PHILIP W.....	NEUROPHYSIOLOGICAL STUDIES ON BRAIN AGING.....	1R01 AG00341-01	35,794
MANNING, JERRY E.....	GENE SEQUENCE ORGANIZATION IN DROSOPHILA MELANOGASTER.....	5R01 GM22207-03	45,216
MC GAUGH, JAMES L.....	PSYCHOPHYSIOLOGY OF MEMORY AND AGING.....	5R01 AG00469-03	47,635
MC IVER, ROBERT T, JR.....	MASS SPECTROMETRY OF ULTRA-LOW VAPOR PRESSURE COMPOUNDS.....	5R01 GM23416-02	30,332
MC LAUGHLIN, CALVIN S.....	COMPARATIVE STRUCTURE AND FUNCTION OF RIBOSOMES.....	5R01 CA10628-10	96,917
MOLDAVE, KIVIE.....	MECHANISM OF PROTEIN BIOSYNTHESIS.....	5R01 AM15156-08	103,505
MOORE, HAROLD W.....	SYNTHESIS OF MITOMYCIN AND RELATED COMPOUNDS.....	5R01 CA11890-08	82,029
MOSIER, H DAVID, JR.....	MECHANISMS CONTROLLING GROWTH RATE.....	5R01 HD07074-04	64,627
NICOLSON, GARTH L.....	CELL SURFACE STUDIES OF METASTATIC MELANOMA.....	2R01 CA15122-03	168,148
NUNN, WILLIAM D.....	CONTROL OF LIPID METABOLISM IN ESCHERICHIA COLI.....	5R01 GM22466-02	39,746
OVERMAN, LARRY E.....	REDUCTIVE CLEAVAGE OF REACTIVE DISULFIDES—MODEL STUDIES.....	5R01 GM20674-03	18,694
OVERMAN, LARRY E.....	CHOLINERGIC AGENTS—HISTRIONICOTOXIN SYNTHESIS.....	5R01 NS12389-03	44,638
PISZKIEWICZ, DENNIS.....	STRUCTURES OF AMINOACYL-TRNA SYNTHETASES.....	5R01 GM19508-06	39,581
ROBERTSON, RICHARD T.....	STRUCTURE AND FUNCTION OF ASCENDING RETICULAR SYSTEMS.....	7R01 NS14267-01	23,687
SCHNEIDERMAN, HOWARD A.....	METABOLISM AND HORMONES IN ARTHROPODS.....	5R01 AI10527-08	80,737
SCHNEIDERMAN, HOWARD A.....	GENETICALLY-CONTROLLED MALIGNANT NEOPLASMS.....	5R01 CA12643-07	51,120
SCHNEIDERMAN, HOWARD A.....	GENETIC ANALYSIS OF BASIC DEVELOPMENTAL MECHANISMS.....	5R01 HD06082-07	90,241
SCHNEIDERMAN, HOWARD A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07008-12	126,955
SHEA, KENNETH J.....	TEMPLATE SYNTHESIS OF MACROMOLECULES.....	5R01 GM22995-02	34,281
SKLANSKY, JACK.....	COMPUTER-AIDED IMAGE RECOGNITION.....	2R01 GM17632-06	222,438
SPERLING, DONALD R.....	HYPOTHERMIA—HE-O ₂ SURFACE-INHALATE TEMPERATURE CONTROL.....	5R01 HL18201-02	42,195
STANBRIDGE, ERIC J.....	GENETIC ANALYSIS OF HUMAN MALIGNANCY.....	5R01 CA19401-02	66,288
STARR, ARNOLD.....	AUDITORY EVOKED BRAIN POTENTIALS IN NEUROLOGICAL DISEASE.....	2R01 NS11876-04	117,449
SYPERD, PAUL S.....	GENETIC CONTROL OF RIBOSOME ASSEMBLY.....	5R01 GM18293-07	55,660
SYPERD, PAUL S.....	DEVELOPMENTAL CHANGES IN THE PROTEIN-SYNTHETIC APPARATUS.....	1R01 GM23999-01	59,045
TAFT, ROBERT W.....	HYDROGEN BONDING AND IONIC SOLVATION BY FNMR AND ICR.....	5R01 GM14078-12	61,723
THOMPSON, RICHARD F.....	CENTRAL NEURAL MECHANISMS OF HEARING.....	5R01 NS12268-03	39,521
VAN DEN NOORT, STANLEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05351-16	111,467
WAGNER, EDWARD X.....	VIRAL RNA SYNTHESIS CONTROL IN HERPES VIRUS INFECTION.....	5R01 CA11861-08	51,120
WARNER, ROBERT C.....	STUDIES OF POLYNUCLEOTIDES AND NUCLEIC ACIDS.....	5R01 CA12627-08	105,040
WATSON, JAMES D.....	THE INDUCTION OF ANTIBODY SYNTHESIS.....	5R01 AI13383-03	54,074
WHALEN, RICHARD E.....	HORMONAL CONTROL OF BEHAVIOR.....	2R01 HD00893-14	68,939

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
WHITE, STEPHEN H.....	MODEL STUDIES OF MYELIN STABILITY.....	5R01 NS10837-03	40,163
WILSON, ARCHIE F.....	AEROSOL THERAPY.....	5R01 HL19704-02	115,237
WOOLFOLK, CLIFFORD A.....	BIOCHEMISTRY OF PURINE OXIDIZING ENZYMES.....	5R01 GM22815-02	30,881
ORGANIZATION TOTAL	59 4,017,997		
LA JOLLA			
LA JOLLA CANCER RESEARCH FOUNDATION ZIP CODE 92037			
FISHMAN, WILLIAM H.....	FUNDAMENTAL ENZYMOLOGIC STUDIES APPLIED TO ONCOLOGY.....	7R01 CA21967-01	144,388
MANES, COLE.....	STUDIES IN MAMMALIAN EMBRYOGENESIS.....	7R01 HD11654-01	84,586
ORGANIZATION TOTAL	2 228,974		
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
BELLUGI-KLIMA, URSULA.....	THE ACQUISITION OF SIGN LANGUAGE AND ITS STRUCTURE.....	5R01 NS09811-07	124,084
BOURGEOIS-COHN, SUZANNE.....	STUDIES OF REGULATION IN E. COLI EXTENDED TO LYMPHOMAS.....	5R01 GM20868-04	135,938
COHN, MELVIN.....	ANTIBODY SYNTHESIS.....	2R01 AI05875-13	182,166
COHN, MELVIN.....	IMMUNOSELECTION AND CANCER: A PROBLEM IN EVOLUTION.....	5R01 CA19754-02	257,244
DENNERT, GUNTHER.....	IMMUNE RESPONSE TO TUMOR CELL SURFACE ANTIGENS.....	2R01 CA15581-03	59,570
DENNERT, GUNTHER.....	THE ANTIGEN RECEPTOR OF A CONTINUOUS T KILLER CELL LINE.....	5R01 CA19334-02	75,810
ECKHART, WALTER.....	VIRAL GENE FUNCTIONS AND REGULATION OF CELL GROWTH.....	5R01 CA13884-06	123,690
ECKHART, WALTER.....	CORE GRANT—REGULATION, THE CELL MEMBRANE AND CANCER.....	5P30 CA14195-04	464,068
ECKHART, WALTER.....	TRANSCRIPTION IN POLYOMA-TRANSFORMED CELLS.....	1R01 CA21896-01	35,638
FAN, HUNG Y.....	EXPRESSION AND LOCALIZATION OF C-TYPE VIRUS GENES.....	2R01 CA15747-04	113,052
FARRON-FURSTENTHAL, F.....	THE ROLE OF ALTERED GENE EXPRESSION IN NEOPLASMS.....	5R01 CA17497-03	70,935
FRANCKE, BERTOLD R.....	GENE FUNCTIONS OF HERPES SIMPLEX VIRUS.....	2R01 CA15058-04	101,637
GIBBS, DON E.....	POLY-5'-AZANUCLEOTIDES IN NUCLEIC ACID SYNTHESIS.....	5R01 GM22542-02	62,525
GUILLEMIN, ROGER C.....	BRAIN PEPTIDES ON PITUITARY FUNCTIONS & IN DIABETES.....	5P01 AM18811-03	309,047
GUILLEMIN, ROGER C.....	NEUROENDOCRINOLOGY OF REPRODUCTION AND GROWTH.....	5P50 HD09690-03	713,578
HAMILTON, RICHARD T.....	COMPARISON OF TRANSPORT IN NORMAL AND TRANSFORMED CELLS.....	5R01 CA19523-02	90,704
HEINEMANN, STEPHEN F.....	SYNAPSE FORMATION IN CLONED CELL LINES.....	2R01 NS11549-04	138,018
HOLLEY, ROBERT W.....	FACTORS REQUIRED FOR MAMMALIAN CELL DIVISION.....	5R01 CA11176-09	122,082
HUNTER, ANTHONY R.....	MACROMOLECULAR SYNTHESIS AND CELL GROWTH CONTROL.....	5R01 CA17096-03	66,829
HYMAN, ROBERT A.....	GENETIC BASIS OF ANTIGENIC VARIATION.....	5R01 CA13287-06	44,660
HYMAN, ROBERT A.....	GENETIC ANALYSIS OF GROSS LEUKEMIA ANTIGENS.....	5R01 CA17020-02	58,788
KIDOKORO, YOSHIKI.....	MUSCLE DIFFERENTIATION AND SYNAPSE FORMATION IN VITRO.....	5R01 NS11918-03	7,132
LEFFERT, HYAM L.....	HEPATOCELLULAR GROWTH: IN VITRO SYSTEM.....	3R01 CA14312-03S1	3,336
LENNON, VANDA A.....	EXPERIMENTAL NEUROIMMUNOLOGY.....	2R01 NS11719-04	128,486
LINDSTROM, JON M.....	STUDIES USING PURIFIED ACETYLCHOLINE RECEPTOR.....	3R01 NS11323-04S1	71,329
LINDSTROM, JON M.....	STUDIES USING PURIFIED ACETYLCHOLINE RECEPTOR.....	5R01 NS11323-05	150,059
ORGEI, LESLIE E.....	EVOLUTION OF GENETIC SPECIFICITY.....	5R01 GM13435-12	88,077
PATRICK, JAMES W.....	TROPHIC INTERACTIONS OF NERVE AND MUSCLE.....	5R01 NS13546-02	67,080
PAUL, DIETRICH.....	GROWTH CONTROL OF SV40 VIRUS TRANSFORMED 3T3 CELLS.....	3R01 CA15087-03S1	6,967
PFAHL, MAGNUS.....	GENETIC ANALYSIS OF LAC REPRESSOR AND OPERATOR.....	1R01 GM23671-01	74,167
RASCHKE, WILLIAM C.....	CHARACTERIZATION OF THE ABELSON LEUKEMIA VIRUS.....	1R01 CA21531-01	62,935
SALK, JONAS E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05595-13	156,180
SCHUBERT, DAVID R.....	PHYSIOLOGY OF NERVE, GLIAL, AND MUSCLE CELL LINES.....	5R01 NS09658-07	121,122
SEFTON, BARTHOLOMEW M.....	VIRAL MEMBRANES: STRUCTURE AND BIOSYNTHESIS.....	5R01 CA17289-03	62,674
SHIER, W THOMAS.....	ESTERASES AND AMIDASES IN ONCOGENIC TRANSFORMATION.....	3R01 CA16123-03S1	4,999
SHIER, W THOMAS.....	ROLE OF SIALIC ACID IN ONCOGENIC TRANSFORMATION.....	1R01 CA20636-01	47,420
STALLCUP, WILLIAM B.....	SURFACE ANTIGENS OF NEURAL CELLS.....	1R01 CA21791-01A1	42,714
TROWBRIDGE, IAN S.....	CELL SURFACE PROTEINS OF T AND B LYMPHOCYTES.....	5R01 CA17733-03	75,395
TROWBRIDGE, IAN S.....	IDENTIFICATION OF HUMAN LYMPHOCYTE SURFACE ANTIGENS.....	1R01 CA20272-01	47,688
VALE, WYLIE W.....	SOMATOSTATIN: PHYSIOLOGY AND APPLICATION TO DIABETES.....	1R01 AM20917-01	166,158
VERMA, INDER M.....	REVERSE TRANSCRIPTASE FROM RNA TUMOR VIRUSES.....	2R01 CA16561-04	52,365
VERMA, INDER M.....	GENETIC ORGANIZATION OF RNA TUMOR VIRUSES.....	1R01 CA21408-01	82,292
WALTER, GERNOT F.....	EARLY PROTEINS OF SIMIAN VIRUS 40.....	2R01 CA15365-04	110,087
WESTALL, FREDERICK C.....	CHEMICAL REQUIREMENTS FOR HYPERACUTE ENCEPHALOMYELITIS.....	5R01 NS12391-03	94,901
YOGESWARAN, GANESA.....	GLYCOLIPIDS, SURFACE GLYCOPROTEINS AND TUMOR METASTASIS.....	5R01 CA19312-02	72,361
ORGANIZATION TOTAL	45 5,145,987		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
CARSON, DENNIS A.....	ADENOSINE DEAMINASE DEFICIENCY: GENETICS AND IMMUNOLOGY.....	5R01 GM23200-02	59,560
CHISARI, FRANCIS V.....	IMMUNOBIOLOGY AND PATHOGENESIS OF HEPATITIS B.....	5R01 AI13393-02	41,428
COOPER, NEIL R.....	CANCER CELL SURVIVAL AND MECHANISMS OF CYTOTOXICITY.....	5R01 CA14692-05	107,257
CRAWFORD, IRVING P.....	MUTATIONAL PERTURBATION OF SUBUNIT INTERACTIONS.....	5R01 GM21810-03	59,821
CROSBY, WILLIAM H.....	STUDY OF IRON METABOLISM.....	2R01 AM16452-04A1	52,294
DAVID, GARY S.....	ENHANCEMENT AND CELLULAR IMMUNITY IN TUMOR SYSTEMS.....	3R01 CA15586-03S1	13,034
DAWSON, ARTHUR D.....	REGIONAL LUNG FUNCTION IN MAN.....	5R01 HL10009-12	46,010
DIXON, FRANK J.....	IMMUNOPATHOLOGIC STUDIES.....	5P01 AI07007-12	1,893,398
DIXON, FRANK J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05514-15	203,822
EDGINGTON, THOMAS S.....	IMMUNOGENESIS OF AUTOIMMUNE HEMOLYTIC ANEMIA.....	5R01 AM18163-03	111,699
EDGINGTON, THOMAS S.....	HUMAN TUMOR-ASSOCIATED MOLECULAR EXPRESSIONS.....	5R01 CA14346-05	99,797
EDWARDS, DAVID L.....	MOLECULAR GENETICS OF MEMBRANE ASSEMBLY IN NEUROSPORA.....	7R01 GM24991-01	61,924
ESSER, ALFRED F.....	INTERACTION OF COMPLEMENT PROTEINS WITH MEMBRANES.....	5R01 AI14099-02	36,918
FERRONE, SOLDANO.....	ALLOGRAFTS AND SENSITIZATION DETECTED BY LYMPHOBLASTS.....	5R01 AI13154-03	74,431
FERRONE, SOLDANO.....	ANTIGENS AND ANTIBODIES IN HUMAN MELANOMA.....	5R01 CA16069-03	77,846
GRIFFIN, JOHN H.....	PROTEINS OF COAGULATION AND HAGEMAN FACTOR PATHWAYS.....	1R01 HL21544-01	76,092
HANSTEIN, WALTER G.....	PHOTOAFFINITY-LABELING OF MITOCHONDRIAL COMPONENTS.....	5R01 GM19734-06	53,451
HASPEL, MARTIN V.....	TS MUTANTS AND SLOW VIRUS DISEASE.....	1R23 AI14290-01	41,037
HATEFI, YOUSSEF.....	ENERGY CONSERVATION AND TRANSFER IN MITOCHONDRIA.....	2R01 AM08126-14	137,649
HDCH, JAMES A.....	GENETIC CONTROL OF DEVELOPMENT.....	2R01 GM19416-06	68,340
HOCH, SALLIE O.....	DNA-BINDING PROTEINS IN HUMAN SERUM.....	5R01 CA17563-03	52,654
HUENNEKENS, FRANK M.....	FOLATE COENZYMES: MECHANISM OF ACTION & TRANSPORT.....	5R01 CA06522-16	186,852
HUENNEKENS, FRANK M.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA16600-02	158,573
HUGLI, TONY E.....	ANAPHYLATOXINS AS INFLAMMATORY AND CHEMOTACTIC AGENTS.....	5R01 HL20220-02	96,868
KATZ, DAVID H.....	GENETIC CONTROL OF IMMUNOCOMPETENT DIFFERENTIATION.....	1R01 AI13781-01	129,120
KATZ, DAVID H.....	CELL COOPERATION IN IMMUNE RESPONSES.....	5R01 AI13874-02	124,032
LERNER, RICHARD A.....	THE CELLULAR SLIME MOLD AS A MODEL FOR HUMAN DEVELOPMENT.....	5R01 GM22500-02	71,962
LEWIS, URBAN J.....	CONVERSION PRODUCTS OF GROWTH HORMONE AND PROLACTIN.....	5R01 AM09537-12	106,423
LEWIS, URBAN J.....	PRIMARY STRUCTURES OF GROWTH HORMONES AND PROLACTINS.....	5R01 AM16065-06	39,996
LEWIS, URBAN J.....	MEMBRANE & METABOLIC STUDIES OF DIABETOGENIC FACTORS.....	1R01 AM21290-01	113,495
MC MILLAN, ROBERT.....	PATHOGENESIS OF THE IMMUNE THROMBOCYTOPENIAS.....	5R01 AM16125-06	86,112
MEINKE, WILLIAM J.....	DETECTION OF HUMAN WART VIRAL DNA IN MALIGNANT TISSUE.....	3R01 CA17244-02S1	3,088
MORGAN, WILLIAM T.....	SERUM PROTEIN FUNCTION IN ORGANIC ANION TRANSPORT.....	5R01 HD09252-03	34,245
MORRISON, DAVID C.....	BIOCHEMICAL PARAMETERS OF LPS-INITIATED HOST RESPONSE.....	5R01 AI13187-02	65,942
MULLER-EBERHARD, HANS J.....	BLOOD SYSTEMS IN COAGULATION AND VESSEL DISEASE.....	5P01 HL16411-03	525,983
MULLER-EBERHARD, URSULA.....	HEMOGLOBIN METABOLISM—CLINICAL AND BASIC APPROACH.....	5R01 AM16737-15	61,750
MULLER-EBERHARD, URSULA.....	DISTRIBUTION OF IRON AND HEME BY PROTEINS.....	5R01 AM18329-03	131,657
MULLER-EBERHARD, URSULA.....	CARCINOGEN METABOLIZING ENZYMES IN RAT LIVER.....	3R01 CA17735-02S1	10,381
MULLER-EBERHARD, URSULA.....	PERINATAL DETOXIFICATION MECHANISMS.....	5R01 HD04445-08	141,024
OLDSTONE, MICHAEL B.....	PATHOGENESIS DISEASE CAUSED BY PERSISTENT INFECTION.....	3R01 AI09484-08S1	14,741
OLDSTONE, MICHAEL B.....	PATHOGENESIS CAUSED BY PERSISTENT VIRAL INFECTION.....	2R01 AI09484-09	106,907
OLDSTONE, MICHAEL B.....	PATHOGENESIS OF M. SCLEROSIS & A.L. SCLEROSIS.....	5P50 NS12428-03	421,553
PELLEGRINO, MICHELE A.....	URINE AS SOURCE OF HUMAN CELL SURFACE MARKERS.....	2R01 CA16071-04	134,261
PLOW, EDWARD F.....	THE ALTERNATIVE PATHWAY FOR FIBRINOLYSIS.....	5R01 HL17964-03	64,510
REISFELD, RALPH A.....	MOLECULAR APPROACHES TO CELL SURFACE ANTIGENS.....	5R01 AI10180-07	163,797
REISFELD, RALPH A.....	NEOPLASIA AND HISTOCOMPATIBILITY ANTIGENS IN SERUM.....	5R01 CA19108-02	72,365
RUSSELL, STEPHEN W.....	CELL MEDIATED INJURY CAUSING TUMOR REGRESSION.....	5R01 CA17720-02	67,809
SILVER, JACK.....	STRUCTURE STUDIES OF IA ALLOANTIGENS.....	1R01 CA23030-01	84,441
SINHA, YAGYA N.....	ROLE OF PROLACTIN IN MOUSE MAMMARY TUMORIGENESIS.....	5R01 CA18664-02	71,721
SPIEGELBERG, HANS L.....	STUDIES OF LYMPHOCYTE RECEPTORS AND OF IGD.....	2R01 AI10734-06	145,966
SPIZIZEN, JOHN.....	COMPETENCE FOR GENETIC TRANSFER OF DNA.....	5R01 AI12452-03	64,877
SPIZIZEN, JOHN.....	CONTROL OF THE TRANSPORT OF BIOLOGICALLY ACTIVE DNA.....	5R01 GM20145-03	50,926
STUGHTON, RICHARD B.....	PERCUTANEOUS ABSORPTION AND EFFECTS OF ANTIMETABOLITES.....	5R01 AM11649-10	90,373
STRUM, WILLIAMSON B.....	BIOCHEMICAL BASIS FOR INTESTINAL ANTIFOLATE TOXICITY.....	3R01 CA17809-02S1	11,166
STRUM, WILLIAMSON B.....	BIOCHEMICAL BASIS FOR INTESTINAL ANTIFOLATE TOXICITY.....	2R01 CA17809-03	47,497
TAN, ENG M.....	NUCLEAR ANTIGENS IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	5R01 AM12198-11	64,285
VANDER LAAN, WILLARD P.....	GH AND PROLACTIN IN GROWTH AND TUMORIGENESIS.....	5R01 CA14025-05	128,650
VANDER LAAN, WILLARD P.....	DIABETES, SOMATOTROPIN, FACTOR VIII & ATHEROSCLEROSIS.....	5R01 HL20517-02	140,698

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
VAUGHAN, JOHN H.....	MECHANISMS OF BRONCHIAL ASTHMA AND OTHER ALLERGIES.....	5P50 AI10386-07	151,852
VAUGHAN, JOHN H.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00833-03	370,341
WEIGLE, WILLIAM O.....	REGULATION OF THE IMMUNE RESPONSE.....	5R01 AI12449-03	37,271
WELSH, RAYMOND M, JR.....	THE ROLE OF DEFECTIVE VIRUS IN CHRONIC VIRUS DISEASE.....	5R01 AI12438-03	48,150
WHITELEY, JOHN M.....	CHEMISTRY OF FOLATE AND PTERIDINE COENZYMES.....	5R01 CA11778-08	96,532
WHITELEY, JOHN M.....	PTERIDINE-DEPENDENT HYDROXYLASES FROM LIVER AND BRAIN.....	5R01 GM22125-03	28,053
WILSON, CURTIS B.....	METABOLISM OF RENAL BASEMENT MEMBRANES AND TUBULAR CELLS.....	5R01 AM18626-02	61,858
WILSON, CURTIS B.....	IMMUNOPATHOLOGY OF RENAL DISEASE IN MAN.....	1R01 AM20043-01	221,345
ZIMMERMAN, THEODORE S.....	BLOOD COAGULATION: PLATELET-PLASMA PROTEIN INTERACTION.....	5R01 HL15491-05	112,507
ZINKERNAGEL, ROLF M.....	SPECIFICITY OF VIRUS-IMMUNE T CELLS IN VITRO AND IN VIVO.....	1R01 AI13779-01	115,615
ORGANIZATION TOTAL	68	8,646,032	
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
ABELSON, JOHN N.....	STRUCTURE AND FUNCTION OF RIBONUCLEIC ACIDS.....	2R01 CA10984-09	136,347
AKESON, WAYNE H.....	CONNECTIVE TISSUE RESPONSE TO IMMOBILITY.....	5R01 AM14918-06	86,949
AKESON, WAYNE H.....	INTERNAL FIXATION DEVICES FOR FRACTURE HEALING.....	2R01 AM15478-07	85,024
AKESON, WAYNE H.....	PATHOPHYSIOLOGY OF THE COMPARTMENT SYNDROME.....	5R01 AM18824-02	94,641
AKESON, WAYNE H.....	EXERCISE EFFECTS ON TENDON REPAIR.....	1R01 GM24900-01	86,409
ALEXANDER, NICHOLAS M.....	IODINE METABOLISM AND THYROXINE BIOSYNTHESIS.....	5R01 AM15778-06	41,702
ALHADEFF, JACK A.....	HUMAN LIVER ALPHA-L-FUCOSIDASE AND FUCOSIDOSIS.....	1R01 AM20409-01	34,131
ALLISON, WILLIAM S.....	STRUCTURAL STUDIES ON THE ENERGY TRANSDUCING ATPASE.....	5R01 GM16974-08	60,543
ASHRAF, MUHAMMAD.....	ISCHEMIC HEART ULTRASTRUCTURE: MODIFICATION BY THERAPY.....	5R01 HL18122-03	35,938
BADA, JEFFREY L.....	ASPARTIC ACID RACEMIZATION: RELATIONSHIP TO AGING.....	1R01 AG00638-01	38,381
BAILY, NORMAN A.....	TUMOR LOCALIZATION AND TREATMENT PLANNING.....	5R01 CA14535-03	41,573
BAKER, BRUCE S.....	GENETICS OF MEIOSIS AND DEVELOPMENT IN DROSOPHILA.....	3R01 GM23345-01S1	7,666
BAKER, BRUCE S.....	GENETICS OF MEIOSIS AND DEVELOPMENT IN DROSOPHILA.....	5R01 GM23345-02	60,455
BAXT, WILLIAM G.....	ROLE OF RNA TUMOR VIRUSES IN HUMAN LEUKEMIA.....	5R01 CA15376-02	51,478
BECKER, MICHAEL A.....	REGULATION OF PURINE NUCLEOTIDE SYNTHESIS IN MAN.....	5R01 AM18197-03	71,223
BERG, DARWIN K.....	NEURONAL DEVELOPMENT AND SYNAPSE FORMATION IN VITRO.....	5R01 NS12601-02	34,867
BERK, ROBERT N.....	BILIARY RADIOGRAPHIC CONTRAST MATERIALS.....	7R01 AM21620-01	99,535
BERNSTEIN, EUGENE F.....	PULSELESS FLOW AND CIRCULATORY ASSISTANCE.....	5R01 HL18948-02	114,141
BICKFORD, REGINALD G.....	AUTOMATIC PATTERN RECOGNITION ON ELECTROENCEPHALOGRAM.....	5R01 NS08962-09	142,500
BLANTZ, ROLAND C.....	THE AUTOREGULATION OF GLOMERULAR FILTRATION RATE.....	3R01 HL14914-05S1	884
BLANTZ, ROLAND C.....	THE AUTOREGULATION OF GLOMERULAR FILTRATION RATE.....	5R01 HL14914-06	79,927
BLOOR, COLIN M.....	PATHOGENESIS OF CARDIAC HYPERTROPHY.....	1R01 HL20190-01	126,023
BLUESTEIN, HARRY G.....	IMMUNE RESPONSIVENESS AND HISTOCOMPATIBILITY TYPE.....	5R01 AI10931-06	70,992
BOND, CLIFFORD W.....	MOLECULAR CHARACTERIZATION OF A NEUROTROPIC CORONAVIRUS.....	1R01 NS13898-01	48,491
BOOKSTEIN, JOSEPH J.....	ANGIOGRAPHY OF NONOCCLUSIVE INTESTINAL ISCHEMIA.....	5R01 GM22396-02	24,256
BOOKSTEIN, JOSEPH J.....	CORONARY PHARMACOANGIOGRAPHY.....	1R01 HL19675-01	53,125
BOYNTON, ROBERT M.....	PSYCHOPHYSIOLOGICAL AND OPTICAL STUDIES OF VISION.....	5R01 EY01541-04	56,118
BRAUDE, ABRAHAM I.....	LETHAL BACTEREMIA.....	5R01 AI10108-07	91,368
BRAUDE, ABRAHAM I.....	GONOCOCCAL INFECTION.....	2R01 AI11643-04	69,802
BRAUDE, ABRAHAM I.....	EXPERIMENTAL PYELONEPHRITIS.....	5R01 AI12476-09	88,482
BRODY, STUART.....	MEMBRANE MUTANTS OF NEUROSPORA.....	5R01 GM19308-05	32,526
BRODY, STUART.....	BIOCHEMISTRY OF CIRCADIAN RHYTHMS IN NEUROSPORA.....	5R01 GM21842-03	22,801
BROWN, WILLIE C.....	THIRD COLLEGE RESEARCH PROGRAM.....	5S06 RR08135-03	136,238
BULLOCK, THEODORE H.....	STUDIES IN COMPARATIVE NEUROPHYSIOLOGY.....	3R01 NS00021-29S1	65,648
BULLOCK, THEODORE H.....	STUDIES IN COMPARATIVE NEUROPHYSIOLOGY.....	5R01 NS00021-30	130,264
BUONASSISI, VINCENZO.....	CELLULAR SYNTHESIS AND RELEASE OF MUCOPOLYSACCHARIDES.....	5R01 HL17995-03	73,074
BUTLER, WARREN L.....	PHOTORECEPTOR PIGMENTS IN PHOTORESPONSIVE ORGANISMS.....	2R01 GM20648-04	51,600
CARPENTER, ADELAIDE T.....	EM OF RECOMBINATION MUTANTS IN DROSOPHILA.....	3R01 GM23338-01S1	14,347
CARPENTER, ADELAIDE T.....	EM OF RECOMBINATION MUTANTS IN DROSOPHILA.....	2R01 GM23338-02	150,447
CHARTERS, ALEXANDER C.....	STUDIES ON THE HUMORAL CONTROL OF LIVER REGENERATION.....	3R01 AM17103-03S1	36,774
DEFTOS, LEONARD J.....	THE CALCITROPIC HORMONES.....	5R01 AM15888-05	105,227
DENNIS, EDWARD A.....	ACTION OF LIPOLYTIC ENZYMES.....	2R01 GM20501-03	58,640
DOOLITTLE, RUSSELL F.....	THROMBOSIS RESEARCH PROGRAM PROJECT.....	5P01 HL18576-02	516,238
DUTTON, RICHARD W.....	CELLULAR EVENTS IN THE IMMUNE RESPONSE.....	5R01 AI08795-10	123,170
ENNS, THEODORE.....	CO2 DIFFUSION IN LUNG TISSUE AND IN MUSCLE TISSUE.....	1R01 HL19008-01A1	40,985
FAHEY, ROBERT C.....	PHYSIOLOGIC ROLE OF SH/SS REACTIONS IN CELL DORMANCY.....	5R01 GM22122-03	51,928
FANESTIL, DARRELL D.....	ALDOSTERONE STIMULATION OF ION TRANSPORT.....	5R01 AM14915-08	116,389

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
FAULKNER, DAVID J.....	ANTIBIOTICS FROM MARINE ORGANISMS.....	2R01 AI11969-04	55,650
FEHER, GEORGE.....	SPECTROSCOPIC INVESTIGATIONS OF BIOLOGICAL SYSTEMS.....	5R01 GM13191-13	100,870
FIRTEL, RICHARD A.....	GENE STRUCTURE AND TRANSCRIPTIONAL REGULATION.....	1R01 GM24279-01	101,570
FORTES, P A.....	CARDIAC GLYCOSIDES AND THE MECHANISM OF THE NA-K PUMP.....	1R01 HL20262-01	49,561
FRANCKE, UTA.....	INTRACHROMOSOMAL GENE MAPPING IN MAN.....	2R01 GM21110-04	75,730
FRIEDKIN, MORRIS E.....	NEW ANTAGONISTS OF AMETHOPTERIN-RESISTANT LEUKEMIA.....	2R01 CA11449-09	99,460
FRIEDMAN, WILLIAM F.....	CARDIOVASCULAR EVALUATION OF INFANTS AND CHILDREN.....	5R01 HL17334-03	65,748
FRONEK, ARNOST.....	SYSTEMIC AND LOCAL VASCULAR ADJUSTMENT IN SHOCK.....	5R01 HL12690-08	59,694
FRONEK, ARNOST.....	NONINVASIVE DIAGNOSIS OF PERIPHERAL ARTERIAL DISEASE.....	5R01 HL18977-02	37,160
FRONEK, KITTY.....	THE SYMPATHETIC NERVOUS SYSTEM AND THE ARTERIAL WALL.....	5R01 HL16768-03	51,116
FRONEK, KITTY.....	PATHOGENESIS OF PERIPHERAL ARTERIAL DISEASE.....	1R01 HL20564-01	71,243
FUNG, YUAN-CHENG B.....	CONTINUUM MECHANICS IN BIOPHYSICS.....	5R01 HL12494-09	45,708
GALAMBOS, ROBERT.....	BRAIN STEM AUDIOMETRY IN INFANTS AND CHILDREN.....	5R01 NS11707-03	36,642
GARST, MICHAEL E.....	SYNTHESIS OF MITOMYCIN C VIA PYRROLIZIDINE ALKALOIDS.....	1R01 CA22238-01	36,207
GEIDUSCHEK, E PETER.....	STUDIES ON NUCLEIC ACIDS AND NUCLEOPROTEINS.....	5R01 GM18386-08	147,438
GILL, GORDON N.....	HORMONAL REGULATION OF CONTROL MECHANISMS.....	2R01 AM13149-10	94,145
GLUCK, LOUIS L.....	BIOCHEMICAL DEVELOPMENT OF SURFACE ACTIVITY OF LUNG.....	3R01 HD04380-06S1	45,879
GLUCK, LOUIS L.....	SURFACTANT: BIOCHEMICAL DEVELOPMENT AND STABILIZATION.....	1R01 HD10622-01A1	158,362
GOODMAN, MURRAY.....	SYNTHESIS AND STRUCTURE/FUNCTION OF PEPTIDE HORMONES.....	5R01 AM15410-08	68,424
GOODMAN, MURRAY.....	BIOLOGY AND CHEMISTRY OF PEPTIDES.....	1R13 GM23983-01	10,000
GOULIAN, MEHRAN.....	STUDIES ON DNA SYNTHESIS.....	5R01 CA11705-08	105,051
GROSS, STEPHEN R.....	BIOCHEMISTRY OF INHERITED VARIATIONS IN DRUG RESPONSE.....	5R01 GM20412-05	59,409
GRUNDY, SCOTT M.....	RESEARCHES ON CAUSES AND TREATMENT OF GALLSTONES.....	2R01 AM16667-04	59,247
HALASZ, NICHOLAS A.....	STUDIES IN KIDNEY PRESERVATION.....	1R01 AM20193-01	76,831
HALASZ, NICHOLAS A.....	STUDIES IN LUNG PRESERVATION.....	5R01 HL17944-03	49,766
HAMBURGER, ROBERT N.....	DEVELOPMENT AND GENETICS OF IGE AND ALLERGY.....	3R01 HD06634-03S1	12,900
HARPER, ELVIN.....	INVASIVE TUMOR CELL COLLAGENASE.....	5R01 CA18377-02	45,463
HARRISON, WALTER K.....	CARDIOVASCULAR AGING IN YOUNG MEN AND WOMEN.....	5R01 HL20373-02	34,774
HARRISON, WALTER K.....	MYOCARDIAL FUNCTION RISK FACTORS, AND FUTURE CHD.....	5R01 HL20374-02	65,997
HARTLINE, DANIEL K.....	QUANTITATIVE STIMULATION OF SIMPLE NEURONAL NETS.....	5R01 NS13138-02	63,192
HAYASHI, MASAKI.....	SYNTHESIS OF INFECTIOUS BACTERIOPHAGE PARTICLES.....	5R01 GM12934-13	81,636
HELINSKI, DONALD R.....	STRUCTURE AND GENETIC CONTROL OF COLICINES.....	5R01 AI07194-12	87,429
HEMMINGSSEN, EDVARD A.....	STUDIES OF CAVITATION IN BIOLOGICAL SYSTEMS.....	2R01 HL16855-02	61,899
HOLLAND, JOHN J.....	SYNTHESIS IN NORMAL, VIRUS-INFECTED, AND TUMOR CELLS.....	5R01 CA10802-10	123,305
HOUGIE, CECIL.....	MOLECULAR BASIS OF V. WILLEBRAND'S DISEASE & HEMOPHILIA.....	2R01 HL15230-04	66,401
HOUGIE, CECIL.....	STUDIES ON THE PASSOVOY FACTOR.....	5R01 HL19272-02	33,659
HOWELL, STEPHEN H.....	INHIBITORY AGENT AND MUTANT EFFECTS ON THE CELL CYCLE.....	5R01 GM21579-03	29,482
HSUEH, AARON J.....	EFFECT OF AGING ON HORMONAL CONTROL OF MAMMARY TUMORS.....	1R01 CA21867-01	67,660
IGNELZI, RONALD J.....	ELECTRICAL ANALGESIA FOR INTRACTABLE PAIN.....	5R18 CA18866-02	66,345
INTAGLIETTA, MARCOS.....	BIOENGINEERING ANALYSIS OF MICROVASCULAR FUNCTION.....	5R01 HL12493-09	83,547
ITANO, HARVEY A.....	STUDIES IN MOLECULAR HEMATOLOGY.....	5R01 AM14982-07	112,060
JONES, KENNETH L.....	GENETIC DWARFS: A STUDY OF CELLULAR GROWTH DEFECTS.....	5R01 HD10038-02	46,634
KAGNOFF, MARTIN F.....	GASTROINTESTINAL LYMPHOID CELL FUNCTIONS.....	3R01 AM17276-03S1	13,951
KAGNOFF, MARTIN F.....	INTESTINAL IMMUNE RESPONSES.....	2R01 AM17276-04	45,268
KAMEN, MARTIN D.....	MOLECULAR BASIS FOR FUNCTION OF BACTERIAL METALLOPROTEIN.....	5R01 GM18528-17	103,200
KAPLAN, NATHAN O.....	STUDIES ON COENZYMES AND NUCLEIC ACID METABOLISM.....	5R01 CA11683-08	121,988
KAPLAN, NATHAN O.....	SPECIAL RESOURCE FOR NMR AND MASS SPECTROMETRY.....	5P41 RR00708-03	90,461
KEARNS, DAVID R.....	STRUCTURAL STUDIES OF RNA.....	2R01 GM22969-02	76,095
KRAUT, JOSEPH.....	THE CRYSTAL STRUCTURE OF DIHYDROFOLATE REDUCTASE.....	5R01 CA17374-03	77,110
KRAUT, JOSEPH.....	CRYSTALLOGRAPHIC STUDY OF BIOLOGICAL MOLECULES.....	2R01 GM10928-15	161,816
KRAUT, JOSEPH.....	IMPLEMENTATION OF A LABORATORY AUTOMATION SYSTEM.....	3P41 RR00757-05S1	49,158
KUNG, FAITH H.....	ACUTE LEUKEMIA COOPERATIVE GROUP B.....	3R10 CA11789-07S1	14,411
KUNG, FAITH H.....	ACUTE LEUKEMIA COOPERATIVE GROUP B.....	2R10 CA11789-08A1	103,246
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE OUABAIN SENSITIVE ATPASE.....	3R01 HL17879-02S1	31,005
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE OUABAIN SENSITIVE ATPASE.....	5R01 HL17879-03	50,792
LAMPERT, PETER W.....	FINE STRUCTURAL PATHOLOGY OF MYELIN.....	5R01 NS09053-08	38,340
LAMPERT, PETER W.....	PATHOLOGY OF CHOROID PLEXUS.....	5R01 NS11739-03	43,379
LASSER, ELLIOTT C.....	COMPLEMENT, COAGULATION, IN CONTRAST MEDIA REACTIONS.....	5R01 GM22794-02	156,622
LOOMIS, WILLIAM F.....	GENETIC REGULATION OF DEVELOPMENT IN DICTYOSTELIUM.....	5R01 GM19543-05	50,137
MACLEOD, DONALD I.....	RETINAL MECHANISMS IN HUMAN VISION.....	5R01 EY01711-02	44,460

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
MALCOM, LAWRENCE L.....	ARTICULAR CARTILAGE SURFACE MECHANICS.....	1R01 AM20045-01	57,474
MASOUREDIS, SERAFEIM P.....	RH COMPLEX OF REO CELLS.....	3R01 HL12994-08S1	33,193
MENDELSON, JOHN.....	CONTROL OF IMMUNE AND MALIGNANT LYMPHOCYTE GROWTH.....	2R01 CA11971-07	95,344
MENDELSON, JOHN.....	SUPPORT FOR CLINICAL CANCER EDUCATION.....	5R25 CA19087-02	122,373
MENDELSON, JOHN.....	PHARMACOLOGIC CONTROL OF LEUKOCYTE CYCLIC NUCLEOTIDES.....	5R01 GM22637-02	40,324
MILLER, ARNOLD L.....	I-CELL DISEASE AND MENTAL RETARDATION.....	5R01 NS12138-03	22,985
MIYAI, KATSUMI.....	BILE ACIDS AND HEPATIC SUBCELLULAR PATHOLOGY.....	5R01 AM16110-05	56,209
MOORE, ROBERT Y.....	HISTOCHEMICAL STUDIES OF BIOGENIC AMINES IN BRAIN.....	5R01 NS12080-04	63,241
MOORE, ROBERT Y.....	CENTRAL MECHANISMS IN DIURNAL RHYTHM REGULATION.....	5R01 NS12267-04	69,192
MOXLEY, JOHN H, III.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00827-03	378,793
MOXLEY, JOHN H, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05665-10	213,709
NINNEMANN, JOHN L.....	CANCER ASSOCIATED IMMUNOSUPPRESSIVE SERUM PROTEINS.....	5R01 CA19320-02	38,424
NINNEMANN, JOHN L.....	IMMUNE CONSEQUENCES OF THERMAL INJURY.....	5R01 GM23128-02	59,483
NYHAN, WILLIAM L.....	AMINO ACID INTERRELATIONS IN HUMAN METABOLIC DISEASE.....	5R01 HD04608-09	96,538
O'BRIEN, JOHN S.....	MOLECULAR BASIS OF CEREBRAL DEGENERATION.....	5R01 NS08682-09	92,388
ORLOFF, MARSHALL J.....	STUDIES OF PANCREAS TRANSPLANTATION.....	3R01 AM17581-03S1	43,349
ORLOFF, MARSHALL J.....	STUDIES OF PANCREAS TRANSPLANTATION IN DIABETES.....	1R01 AM20745-01	157,762
PASTORE, EDWARD J.....	ANTIFOLATE MECHANISMS STUDIED BY NMR SPECTROSCOPY.....	5R01 CA19094-02	35,294
PETERS, RICHARD M.....	AUTOMATED INFORMATION SYSTEM FOR THE CRITICALLY ILL.....	2R01 GM17284-09	222,530
PETERS, RICHARD M.....	INTERSTITIAL TISSUE AND ONCOTIC PRESSURE IN TRAUMA.....	1R01 GM24901-01	103,184
PETERS, RICHARD M.....	POST-TRAUMA LUNG MECHANICS AND FLUID EXCHANGE.....	5R01 HL13172-09	72,395
PILCH, YOSEF H.....	PRIMARY BREAST CANCER THERAPY GROUP.....	3R10 CA12240-05S2	18,328
PILCH, YOSEF H.....	PRIMARY BREAST CANCER THERAPY GROUP.....	2R10 CA12240-06	13,096
PILCH, YOSEF H.....	IMMUNOTHERAPY OF COLORECTAL CANCER WITH IMMUNE RNA.....	5R26 CA21664-02	171,934
PINTO, JOHN G.....	MECHANICS OF THE PAPILLARY MUSCLE AND THE LEFT VENTRICLE.....	5R01 HL19450-02	44,232
PRICE, PAUL A.....	CHEMICAL STUDIES ON PANCREATIC DEOXYRIBONUCLEASE.....	5R01 GM16603-09	67,190
PRINTZ, MORTON P.....	ROLE OF ANGIOTENSINOGEN IN HYPERTENSION AND STROKE.....	3R01 HL15808-04S1	14,495
PRINTZ, MORTON P.....	ROLE OF ANGIOTENSINOGEN IN HYPERTENSION AND STROKE.....	2R01 HL15808-05	104,773
PRINTZ, MORTON P.....	CONTROLLED INTRATISSUE RELEASE OF PROSTAGLANDINS.....	5R01 HL18259-03	42,446
RANGANATHAN, RAMACHANDRAN.....	NUCLEIC ACID ANALOGS: SYNTHESIS AND CHEMOTHERAPY.....	7R01 CA22447-01	59,069
RANNEY, HELEN M.....	STUDIES OF THE PROPERTIES OF HEMOGLOBIN.....	5R01 AM17348-05	119,171
ROBB, JAMES A.....	MOLECULAR MECHANISMS OF VIRAL (SV40) CARCINOGENESIS.....	5R01 CA12472-06	44,073
ROBB, JAMES A.....	MOLECULAR MECHANISMS OF NEUROTROPIC VIRUS DISEASE.....	5R01 NS12382-03	51,700
ROSENBLATT, RICHARD H.....	RATES OF BIOCHEMICAL EVOLUTION: GENETICS OF FISH.....	5R01 GM22630-02	58,050
ROSENFELD, MICHAEL G.....	CAMP AND HORMONAL REGULATION OF PROTEIN SYNTHESIS.....	2R01 AM18477-03	94,443
ROSS, JOHN, JR.....	PHYSIOLOGY AND BIOCHEMISTRY OF CARDIOVASCULAR ADAPTATION.....	5P01 HL12373-09	789,531
ROSS, JOHN, JR.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17682-03	1,126,789
ROTENBERG, MANUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07011-12	213,709
SAIER, MILTON H, JR.....	MECHANISM OF CARBOHYDRATE TRANSPORT IN BACTERIA.....	1R01 AI14176-01	36,633
SAIER, MILTON H, JR.....	CYCLIC AMP EFFLUX FROM BACTERIA AND RAT GLIOMA CELLS.....	5R01 CA16521-02	62,049
SAIK, RICHARD P.....	ANTRAL GASTRIN RELEASE AND THE G-CELL MASS.....	5R01 AM17960-03	39,944
SALTMAN, PAUL O.....	STUDIES OF BIOLOGICAL TRANSPORT MECHANISMS.....	2R01 AM12386-10	124,905
SANDERS, TOMMY M.....	CARDIOVASCULAR ADAPTATION TO STRESS.....	5R01 HL18560-02	70,566
SATO, GORDON H.....	PROSTATIC HUMAN TUMORS IN CONDITIONED ANIMALS/CULTURE.....	3R26 CA15503-03S2	23,220
SATO, GORDON H.....	ATHYMIC MICE FACILITY: USE IN HUMAN CANCER RESEARCH.....	5P30 CA18885-02	72,695
SATO, GORDON H.....	HORMONAL REQUIREMENT OF CELLS IN VITRO AND IN VIVO.....	1R01 CA19731-01A1	51,600
SATO, GORDON H.....	HORMONE DEPENDENT TUMORS AND LOSS OF GROWTH REGULATION.....	5R01 GM17019-08	96,745
SCHEFFLER, IMMO E.....	GENETICS AND BIOCHEMISTRY OF SOMATIC CELLS.....	2R01 GM18835-07	81,941
SCHMIDT, JOSEPH D.....	CHEMOTHERAPY OF ADVANCED PROSTATIC CANCER.....	1R26 CA21438-01	112,740
SCHNEIDER, JERRY A.....	IN VITRO CHARACTERIZATION OF CYSTINOTIC VARIANTS.....	5R01 AM18434-02	74,246
SCHRAUZER, GERHARD N.....	INORGANIC & NUTRITIONAL ASPECTS OF CANCER—CONFERENCE.....	1R13 CA21031-01A1	19,450
SEEGMILLER, JARVIS E.....	ARTHRITIS: INHERITED METABOLIC AND NUTRITIONAL CAUSES.....	5R01 AM13622-09	127,544
SEEGMILLER, JARVIS E.....	HUMAN BIOCHEMICAL GENETICS PROGRAM.....	5P50 GM17702-07	968,043
SELL, STEWART.....	SYPHILIS IMMUNITY.....	1R01 AI14262-01	79,744
SELL, STEWART.....	THE ROLE OF RABBIT LYMPHOID CELLS IN TUMOR IMMUNITY.....	5R01 CA16136-03	46,182
SELL, STEWART.....	LYMPHOCYTES: GENE EXPRESSION AND ACTIVATION EVENTS.....	2R01 CA16367-04	61,151
SELL, STEWART.....	EARLY EFFECTS OF A HEPATOCARCINOGEN IN VITRO.....	1R01 CA21230-01	187,267
SELL, STEWART.....	ONCO-DEVELOPMENTAL GENE CONTROL: ALPHA-FETOPROTEIN.....	1R01 CA22227-01	69,154
SELVERSTON, ALLEN I.....	USE OF AN INTERACTIVE COMPUTER GRAPHIC TECHNIQUE.....	5R01 NS10629-06	54,655
SHAPIRO, HARVEY M.....	EVALUATION OF CEREBRAL ISCHEMIA THERAPY.....	1R01 NS13679-01	90,913

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SHARMA, VIJAY S.....	MECHANISM OF REACTIONS OF HEMOGLOBIN WITH LIGANDS.....	5R01 AM18781-02	31,371
SILVERMAN, NORMAN R.....	LUNG CANCER: VIDEO-DENSITOMETRY FOR MASS SCREENING.....	5R01 CA13683-06	43,660
SIMON, MELVIN I.....	BACTERIAL MOTILITY: MECHANISM & ROLE IN INFECTION.....	5R01 AI13008-02	35,862
SINGER, S JONATHAN.....	THE STRUCTURE OF ANTIBODY MOLECULES AND CELL MEMBRANES.....	5R01 AI06659-13	87,119
SINGER, S JONATHAN.....	TRANS-MEMBRANE CONTROL IN TRANSFORMED AND NORMAL CELLS.....	1R01 CA22031-01	66,151
SINGER, S JONATHAN.....	MOLECULAR APPROACHES TO CELL ULTRASTRUCTURE.....	5R01 GM15971-10	162,271
SMITH, DOUGLAS W.....	DNA REPLICATION IN E. COLI USING FOLDED CHROMOSOMES.....	5R01 GM21978-02	64,670
SNYDER, ELAINE F.....	AGING AND EVENT-RELATED BRAIN POTENTIALS IN MAN.....	1R01 AG00712-01	27,916
SOVAK, MILOS.....	DEVELOPMENT OF NEW RADIOGRAPHIC CONTRAST MEDIA.....	5R01 GM22911-02	189,336
SPITZER, NICHOLAS C.....	THE CHEMOSENSITIVITY OF EMBRYONIC AMPHIBIAN NEURONS.....	1R01 NS13733-01	37,739
STEINBERG, DANIEL.....	SUPPORT FOR CENTER OF RESEARCH ON ARTERIOSCLEROSIS.....	2P50 HL14197-06	615,682
STEINBERG, DANIEL.....	THE DISORDERED LIPID METABOLISM OF DIABETES MELLITUS.....	1R01 HL22053-01	158,382
STEINBERG, DANIEL.....	STUDIES ON THE METABOLIC BASIS OF INHERITED LIPIDØSES.....	5R01 NS08246-09	64,423
STERN, HERBERT.....	PROGRAM FOR DEVELOPMENTAL BIOLOGY.....	5P01 HD03015-11	143,762
STONE, RICHARD A.....	HUMAN DOPAMINE-BETA-HYDROXYLASE.....	5R01 HL18095-03	30,163
STULL, JAMES T.....	ROLE OF PHOSPHOPROTEIN IN CARDIAC INOTROPIC RESPONSES.....	5R01 HL18170-03	46,686
TAYLOR, PALMER W.....	KINETIC STUDIES ON DRUG-PROTEIN COMPLEX FORMATION.....	5R01 GM18360-06	69,055
TAYLOR, PALMER W.....	PHARMACOLOGY OF MEMBRANE ASSOCIATED RECEPTORS.....	1R01 GM24337-01	47,386
TAYLOR, SUSAN S.....	PROTEIN KINASE: PRIMARY STRUCTURE AND C-AMP INTERACTION.....	5R01 GM19301-06	38,120
TAYLOR, SUSAN S.....	EVOLUTION OF LACTATE DEHYDROGENASES.....	5R01 GM22452-02	40,620
TRAYLOR, TEDDY G.....	MECHANISMS OF REACTIONS OF OXYGEN WITH HEME PROTEINS.....	5R01 HL13581-10	64,418
VARON, SILVIO S.....	HUMORAL AND CELLULAR INFLUENCES ON NEURAL CELLS.....	5R01 NS07606-09	103,797
VARON, SILVIO S.....	SEPARATION OF VIABLE NEURONS AND NEUROGLIAL CELLS.....	5R01 NS12893-02	49,460
VOLCANI, BENJAMIN E.....	BIOCHEMICAL STUDIES ON SILICEOUS SKELETAL FORMATION.....	5R01 GM08229-17	123,794
WEST, JOHN B.....	PHYSIOLOGICAL BASIS OF PULMONARY DISEASE.....	5P01 HL17731-03	424,527
WILLS, CHRISTOPHER J.....	GENETIC VARIABILITY AT THE BIOCHEMICAL LEVEL.....	5R01 GM19967-05	62,356
WILSON, DORIS B.....	CEREBROVASCULAR RESPONSE TO EMBRYONIC OVERGROWTH.....	5R01 HD09562-02	62,835
WORTHEN, DAVID M.....	STUDIES ON ARGON LASER TRABECULOTOMY.....	1R01 EY01673-01	50,225
XUONG, NGUYEN-HUU.....	A COMPUTER CONTROLLED MULTIREFLECTION DIFFRACTOMETER.....	5R01 GM20102-05	127,762
XUONG, NGUYEN-HUU.....	AUTOMATIC ANALYSIS OF 2-DIMENSIONAL ELECTROPHEROGRAMS.....	5R01 GM22940-02	49,993
YEN, SAMUEL S.....	NEUROENDOCRINE CONTROL OF THE ADENOHYPOPHYSIS.....	3R01 HD09728-01S1	6,437
YEN, SAMUEL S.....	NEUROENDOCRINE CONTROL OF THE ADENOHYPOPHYSIS.....	5R01 HD09728-02	69,158
YGUERABIDE, JUAN.....	DYNAMICS AND FUNCTION OF CHROMATIN SUBUNIT STRUCTURE.....	5R01 GM22786-02	49,557
YODIM, SAID.....	NONSPECIFIC DESTRUCTION OF TUMOR CELLS IN VITRO.....	3R01 CA17299-02S1	5,981
YODIM, SAID.....	NONSPECIFIC DESTRUCTION OF TUMOR CELLS IN VITRO.....	5R01 CA17299-03	85,451
ZIMM, BRUNO H.....	NUCLEIC ACIDS AND CHROMOSOMAL DNA.....	2R01 GM11916-14	75,616
ZVAIFLER, NATHAN J.....	SYNOVIAL TISSUES IN RHEUMATOID ARTHRITIS.....	5R01 AM14916-08	106,110
ZWEIFACH, BENJAMIN W.....	STRUCTURE AND FUNCTION OF MICROCIRCULATION.....	5R01 HL10881-12	183,985
ZWEIFACH, BENJAMIN W.....	MICROCIRCULATION OF PATIENTS WITH DIABETES MELLITUS.....	5R01 HL20420-02	72,420
ZWEIFACH, BENJAMIN W.....	MICROCIRCULATION IN PATIENTS WITH DIABETES MELLITUS.....	1R01 HL22118-01	100,877
ORGANIZATION TOTAL	207	19,407,733	

LOMA LINDA

LOMA LINDA UNIVERSITY ZIP CODE 92354

EVANS, HARRISON S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05352-16	89,098
GILBERT, RAYMOND D.....	ADAPTATIONS OF THE FETAL CARDIOVASCULAR SYSTEM.....	5R01 HD10029-02	62,866
GUSSECK, DAVID J.....	REGULATION OF PLACENTAL PROTEIN HORMONE SYNTHESIS.....	5R01 HD09440-02	91,308
HINSHAW, DAVID B.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17948-03	86,227
KISSINGER, DAVID G.....	DIET AND AGE AT MENARCHE.....	1R01 HD10572-01	100,527
KUZMA, JAN W.....	EPIDEMIOLOGY OF SDA CANCER MORTALITY, 20-YEAR FOLLOW-UP.....	5R01 CA18186-03	52,140
LONGO, LAWRENCE D.....	PLACENTAL GAS EXCHANGE AND FETAL OXYGENATION.....	5R01 HD03807-09	132,817
NEILSEN, IVAN R.....	DEVELOPMENT OF BIOMEDICAL COMPUTATION FACILITY.....	5P41 RR00276-13	143,506
PHILLIPS, ROLAND L.....	EPIDEMIOLOGY OF CANCER IN A LOW-RISK GROUP.....	5R01 CA14703-04	314,193
PHILLIPS, ROLAND L.....	FACTORS IN BLOOD PRESSURE LEVELS OF CHILDREN.....	5R01 HL20005-02	385,731
POWER, GORDON G.....	BLOOD FLOW AND GAS EXCHANGE IN THE PLACENTA AND LUNGS.....	2R01 HL15655-04	100,905
SMITH, LOUIS L.....	VASCULAR REACTIVITY IN SURGICAL CARE.....	3R01 HL04639-17S1	1,860
ORGANIZATION TOTAL	12	1,561,178	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
LONG BEACH			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LONG BEACH		ZIP CODE 90840	
MARICICH, TOM J.....	POTENTIAL CARCINOSTATIC SULFINYL DERIVATIVES.....	5R01 CA18838-03	33,390
ORGANIZATION TOTAL	1	33,390	
LOS ANGELES			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LOS ANGELES		ZIP CODE 90032	
FERGUSON, LLOYD N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07152-03	28,609
FERGUSON, LLOYD N.....	MINORITY STUDENT TRAINING FOR BIOMEDICAL RESEARCH.....	5S06 RR08101-05	282,077
GOLDWHITE, HAROLD.....	HETEROCYCLIC COMPOUNDS CONTAINING PHOSPHORUS.....	5R01 CA07182-15	37,151
ONAK, THOMAS P.....	BIOLOGICALLY ACTIVE SMALL CAGE BORON DERIVATIVES.....	5R01 CA12128-06	27,631
ORGANIZATION TOTAL	4	375,468	
CEDARS-SINAI MEDICAL CENTER		ZIP CODE 90048	
BARKLEY, DAVID S.....	IMMUNE RESPONSES IN HUNTINGTON'S DISEASE.....	1R01 NS13442-01	80,763
BRAUNSTEIN, GLENN D.....	IMMUNODIAGNOSIS OF CANCER WITH CHORIONIC GONADOTROPIN.....	5R01 CA18362-03	56,700
GATTI, RICHARD A.....	MLR LOCUS TYPING OF CANCER PATIENTS.....	5R01 CA18892-02	73,371
KATZ, JOSEPH.....	PATHWAYS OF GLUCOSE METABOLISM AND HYDROGEN TRANSPORT.....	5R01 AM12604-09	96,818
KATZ, JOSEPH.....	GLYCOGEN METABOLISM BY ISOLATED HEPATOCYTES.....	1R01 AM19576-01	61,225
KLINENBERG, JAMES R.....	URICOSURIC DRUGS: MECHANISMS OF ACTION.....	5R01 AM18261-03	85,073
LEUNG, BENJAMIN S.....	PROLACTIN-ESTROGEN INTERACTION IN BREAST CARCINOMA.....	7R01 CA21723-01	35,254
MAXWELL, MORTON H.....	EXPERIMENTAL RENAL ARTERIAL HYPERTENSION.....	7R01 HL22069-01	78,637
MURTHY, VRUDHULA K.....	COMPREHENSIVE MODELS FOR CANCER SURVIVAL AND MORTALITY.....	1R01 CA21380-01	76,617
RUBENSTEIN, PAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05468-15	78,837
SCHOENFIELD, LESLIE J.....	HEPATIC AND BILIARY ALTERATIONS IN CHOLELITHIASIS.....	3R01 AM15631-06S1	38,350
SWAMINATHAN, NARAYANASAMI.....	CHEMISTRY OF PLACENTAL AND TUMOR CHORIOGONADOTROPINS.....	5R01 CA19392-02	57,887
SWAN, HAROLD J.....	THE PHYSIOLOGIC CONSEQUENCES OF CARDIAC ISCHEMIA.....	5P01 HL15834-05	249,575
SWAN, HAROLD J.....	ISCHEMIC HEART DISEASE SPECIALIZED CENTER OF RESEARCH.....	5P50 HL17651-03	954,412
ORGANIZATION TOTAL	14	2,023,519	
CHARLES R. DREW POSTGRADUATE MEDICAL SCHOOL		ZIP CODE 90059	
ALFRED, LAWRENCE J.....	ARYL HYDROCARBON HYDROXYLASE LEVELS: HEAD-NECK CANCER.....	1R01 CA19659-01	94,520
ALFRED, LAWRENCE J.....	MULTIINSTITUTIONAL BIOMEDICAL RESEARCH AND TRAINING.....	5S06 RR08140-04	235,183
PERCY, ALAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05780-02	45,092
ORGANIZATION TOTAL	3	374,795	
CHILDREN'S HOSPITAL OF LOS ANGELES		ZIP CODE 90027	
BENEDICT, WILLIAM F.....	MECHANISM OF MALIGNANT TRANSFORMATION OF DNA INHIBITORS.....	5R01 CA14226-05	82,060
DONNELL, GEORGE N.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	2M01 RR00086-15	327,977
DUKES, PETER P.....	PURIFICATION OF HUMAN ERYTHROPOIETIN FOR RESEARCH USE.....	2R01 HL10880-12	110,619
HIGGINS, GUSSIE R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA02649-21	221,903
KOCH, RICHARD.....	STUDY OF DIET DISCONTINUATION IN PKU CHILDREN.....	5R01 HD09543-03	128,443
MC ALLISTER, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05469-15	50,402
MOMPARLER, RICHARD L.....	PHARMACOLOGY OF AN ANTILEUKEMIC AGENT 5-AZADEOXYCYTIDINE.....	5R01 CA19696-02	33,236
ORGANIZATION TOTAL	7	954,640	
ESTELLE DOHENY EYE FOUNDATION		ZIP CODE 90033	
NESBURN, ANTHONY B.....	HERPES SIMPLEX OF THE EYE: PATHOGENESIS AND TREATMENT.....	5R01 EY00858-05	176,242
OGDEN, THOMAS E.....	A STUDY OF STRUCTURE AND FUNCTION OF RETINAL NEURONES.....	3R01 EY01671-02S1	6,288
OGDEN, THOMAS E.....	NONLINEAR ANALYSIS OF RETINAL POTENTIALS.....	5R01 EY01775-02	47,490
ORGANIZATION TOTAL	3	230,020	
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY-UNIV OF SO CALIFORNIA MED CTR		ZIP CODE 90033	
BERNSTEIN, SOL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05466-11	36,600
DI SAIA, PHILIP J.....	GYNECOLOGICAL ONCOLOGY GROUP.....	5R10 CA13641-06	89,121
FRASHER, WALLACE G, JR.....	QUANTITATION OF FLOW AND SOLUTE FLUX IN MICROVESSELS.....	5R01 HL11153-11	43,381
MARTIN, CHESTER B, JR.....	FETAL PHYSIOLOGY AND METABOLISM IN PRIMATES.....	5R01 HD09686-03	86,852

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	4	255,954	
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—MARTIN LUTHER KING, JR. GENERAL HOSPITAL ZIP CODE 90059			
SATCHER, OAVIO.....	A COMPREHENSIVE HOSPITAL—COMMUNITY SICKLE CELL CENTER.....	5P60 HL15997-05	389,003
ORGANIZATION TOTAL	1	389,003	
OCCIDENTAL COLLEGE ZIP CODE 90041			
MAYS, LAURA L.....	RELATION OF TRNA TO PROTEIN ERRORS IN AGING RAT LIVER.....	2R01 AG00479-03	61,770
ORGANIZATION TOTAL	1	61,770	
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
AQINOLFI, ANTHONY M.....	ULTRASTRUCTURAL STUDIES OF DEVELOPING CAUDATE NUCLEUS.....	5R01 NS11932-03	42,618
ALFIN-SLATER, ROSLYN B.....	NUTRITIONAL STRESS ON AFLATOXIN-INDUCED CARCINOGENESIS.....	1R01 CA20938-01	73,035
AMSTUTZ, HARLAN C.....	NEW HIP PROSTHESIS AND FIXATION MODES—IN VIVO STUDY.....	1R01 AM20333-01	127,800
ARMIJO, ROLANOO.....	EPIDEMOLOGY OF STOMACH CANCER AND NITRATES IN CHILE.....	1R01 CA20236-01	137,240
ASH, LAWRENCE R.....	DEVELOPMENT OF LABORATORY MODELS IN FILARIASIS.....	5R22 AI10250-07	82,292
ASSALI, NICHOLAS S.....	FETAL AND NEONATAL CARDIOVASCULAR FUNCTIONS.....	5R01 HL01755-24	115,432
ATKINSON, DANIEL E.....	ENZYME-EFFECTOR INTERACTIONS AND METABOLIC REGULATION.....	5R01 AM09863-12	91,146
AUSTIN, GARTH E.....	PATHOGENESIS OF PRIMARY HEPATOCELLULAR CARCINOMAS.....	5R01 CA19624-02	67,453
BAKER, BRUCE L.....	PARENTS AS TEACHERS: MEDIA-ASSISTED TRAINING PROGRAMS.....	1R01 HD10962-01	88,536
BAKER, NOME.....	FACTORS CONTROLLING LIPOGENIC ACTIVATION, INACTIVATION.....	5R01 AM16673-05	28,955
BAKER, NOME.....	TRIGLYCERIDE SYNTHESIS AND TRANSPORT IN DIABETES.....	1R01 AM21072-01	99,639
BAKER, NOME.....	LIPO TRANSPORT, SYNTHESIS AND METABOLISM IN CANCERS.....	3R01 CA15813-03S1	3,122
BALUDA, MARCEL A.....	TUMOR INDUCTION BY AVIAN MYELOBLASTOSIS VIRUS.....	5R01 CA10197-11	163,872
BARNARD, R JAMES.....	EFFECTS OF EXERCISE ON THE HEART AND ITS BLOOD SUPPLY.....	1R01 HL20253-01	57,923
BARR, ALLAN R.....	CYTOPLASMIC INCOMPATIBILITY FOR FILARIASIS CONTROL.....	5R22 AI11847-10	69,363
BELKIN, JOHN N.....	MOSQUITOES OF MIDDLE AMERICA.....	5R01 AI04379-16	68,169
BELLVILLE, J WELDON.....	DYNAMIC ISOLATION STUDIES OF CONTROL OF RESPIRATION.....	2R01 HL15659-04	45,150
BEVAN, JOHN A.....	MORPHOPHARMACOLOGY OF VASCULAR ADRENERGIC TRANSMISSION.....	5R01 HL08359-13	54,006
BEVAN, JOHN A.....	CEREBRAL ARTERIAL REACTIVITY AND SPASM.....	5R01 HL15805-05	80,909
BILLING, RONALD J.....	SERUM HL-A ANTIGENS.....	5R01 AI12366-03	57,880
BLOCK, JEROME B.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18861-02	163,123
BOK, DEAN.....	ELECTRON MICROSCOPE AUTORADIOGRAPHY OF OCULAR TISSUES.....	2R01 EY00444-09	79,193
BONAVIDA, BENJAMIN.....	MIXED LEUKOCYTE TUMOR REACTION IN SYNGENEIC SYSTEMS.....	5R01 CA19753-02	49,134
BOYER, PAUL D.....	BIOLOGICAL ENERGY TRANSDUCING MECHANISMS.....	5R01 GM11094-15	117,932
BRADY, ALLAN J.....	CELLULAR & MOLECULAR MECHANISM OF MYOCARDIAL FUNCTION.....	2P01 HL11351-11	921,931
BRINKMAN, CHARLES R, III.....	RENAL HYPERTENSION IN PREGNANCY.....	5R01 HL13634-07	91,706
BROWN, JOSIAH.....	ENDOCRINE FUNCTION OF TRANSPLANTED FETAL PANCREAS.....	5R01 AM17980-03	64,705
BROWN, W JANN.....	DEVELOPMENTAL BIOLOGY IN MENTAL RETARDATION.....	5P01 HD05615-07	521,539
BROWN, W JANN.....	STRUCTURE OF SEIZURE SENSITIVE HUMAN HIPPOCAMPUS.....	5R01 NS12054-03	14,044
BRUNK, CLIFFORD F.....	MOLECULAR EVENTS LEADING TO CELLULAR DIFFERENTIATION.....	5R01 GM22883-02	50,567
BUCHWALD, JENNIFER S.....	RESPONSE PLASTICITY DURING INCREASED SYNAPTIC USE.....	5R01 NS05437-12	65,668
BUCHWALD, NATHANIEL A.....	NEUROPHYSIOLOGY & NEUROPSYCHOLOGY IN MENTAL RETARDATION.....	5P01 HO05958-07	412,973
BUCKBERG, GERALD O.....	SURGERY AND NONOBSTRUCTIVE CORONARY INSUFFICIENCY.....	5R01 HL16292-04	262,601
BUCKBERG, GERALD D.....	SURGICALLY INDUCED MYOCARDIAL EDEMA.....	1R01 HL20080-01	125,374
BUTCHER, LARRY L.....	SUBSTANTIA NIGRA, ACETYLCHOLINESTERASE, AND BEHAVIOR.....	5R01 NS10928-03	52,736
CAMPBELL, JOHN H.....	REGULATORY FUNCTION OF THE REX GENE OF PHAGE LAMBDA.....	5R01 AI13089-02	48,860
CARLISLE, EDITH M.....	STUDY OF PHYSIOLOGICAL ROLE OF SILICON.....	2R01 AM16611-05	94,259
CARNES, WILLIAM H.....	CARDIOVASCULAR STUDIES ON COPPER DEFICIENCY.....	2R01 HL12561-10	119,945
CARSTEN, MARY E.....	CHEMISTRY & FUNCTION OF SMOOTH MUSCLE (UTERUS) PROTEIN.....	3R01 HD00010-13S1	35,552
CARSTEN, MARY E.....	PARTURITION AND CELLULAR BASIS OF UTERINE CONTRACTILITY.....	2R01 HD00010-14A1	158,114
CHAPMAN, ORVILLE L.....	ORGANIC PHOTOCHEMISTRY.....	9R01 GM24427-04	93,347
CHASE, MICHAEL H.....	STATE-DEPENDENT CONTROL OF SOMATIC REFLEX ACTIVITY.....	5R01 NS09999-04	71,841
CHERRICK, HENRY M.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18724-02	61,820
CHOPRA, INDER J.....	THYROID GLAND PHYSIOLOGY IN HEALTH AND DISEASE.....	5R01 AM16155-06	81,701
CIANI, SERGIO.....	SELECTIVE ION PERMEATION IN EXCITABLE CELLS.....	1R01 NS13344-01	63,223
CLARK, VIRGINIA A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05442-16	65,749
CLARK, WILLIAM R.....	CORE GRANT FOR PARVIN CANCER RESEARCH LABORATORIES.....	5P30 CA16163-03	289,943
CLARK, WILLIAM R.....	MECHANISMS OF DIFFERENTIATION OF T LYMPHOCYTES.....	5R01 HD06071-06	60,310
CLARKE, IAN C.....	FRICTION AND WEAR OF PROSTHETIC BEARING MATERIALS.....	5R01 AM18988-02	72,653

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
CLARKE, IAN C.....	IMPROVED RADIOGRAPHIC ASSESSMENT OF TOTAL HIP JOINTS.....	1R01 AM19705-01	65,855
CLINE, MARTIN J.....	A NEW METHOD OF BONE MARROW CULTURE.....	2R01 AM18058-04	32,962
CLINE, MARTIN J.....	NORMAL AND MALIGNANT HEMATOPOIETIC CELL REPLICATION.....	2R01 CA15619-04	95,961
CLINE, MARTIN J.....	A PROGRAM IN MEDICAL ONCOLOGY.....	5P01 CA15688-04	444,670
CODE, CHARLES F.....	MOTOR AND ELECTRICAL ACTIVITY OF THE ALIMENTARY CANAL.....	2R01 AM18618-03	72,338
COLLIER, ROBERT J.....	MOLECULAR MECHANISM OF PATHOGENICITY OF DIPHTHERIA.....	5R01 AI07877-10	65,483
COOPER, EDWIN L.....	ONTOGENY AND EVOLUTION OF IMMUNOCOMPETENT CELLS.....	3R01 HD09333-02S1	2,961
COOPER, EDWIN L.....	ONTOGENY AND EVOLUTION OF IMMUNOCOMPETENT CELLS.....	5R01 HD09333-03	69,589
CRAM, DONALD J.....	HOST MOLECULES THAT COMPLEX AND CATALYZE.....	5R01 GM12640-13	63,328
CRANDALL, PAUL H.....	A CLINICAL RESEARCH PROGRAM FOR THE 'PARTIAL' EPILEPSIES.....	5P50 NS02808-17	245,898
CRESCITELLI, FREDERICK.....	COMPARATIVE STUDIES OF THE VERTEBRATE RETINA.....	5R01 EY00100-19	31,442
DAVIDSON, MAYER B.....	MECHANISMS OF INSULIN ANTAGONISM.....	2R01 AM14702-07	71,683
DAYTON, SEYMOUR.....	METABOLISM OF ARTERIAL TISSUE IN ATHEROSCLEROSIS.....	5R01 HL03734-18	42,304
DE KERNION, JEAN B.....	CHEMOTHERAPY OF METASTATIC BLADDER CANCER.....	5R26 CA18501-03	52,871
DE VELLIS, JEAN S.....	A ROUTINE DIAGNOSTIC TEST FOR MINIMAL HEART DAMAGE.....	5R01 HL18567-02	41,198
DETELS, ROGER.....	EPIDEMIOLOGIC STUDY OF CORD IN COHORTS.....	1R01 ES01473-01	432,860
DETELS, ROGER.....	EPIDEMIOLOGIC STUDIES OF IMMUNE FACTORS IN MS.....	5R01 NS10186-06	290,390
DI STEFANO, JOSEPH J, III.....	DYNAMICS OF THYROID HORMONE DISTRIBUTION AND METABOLISM.....	5R01 AM18668-03	33,954
DIAMOND, JARED M.....	WATER TRANSPORT ACROSS EPITHELIAL MEMBRANES.....	5R01 GM14772-10	56,897
DIRKS, DONALD D.....	BINAURAL HEARING.....	5R01 NS05873-12	38,827
DIRKS, DONALD D.....	SUPRATHRESHOLD AUDITORY BEHAVIOR.....	5R01 NS09713-04	48,195
DIXON, ANDREW D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05304-16	55,692
DIXON, WILFRID J.....	RESEARCH IN SOFTWARE SUPPORTS TO BIOMEDICINE.....	2P41 RR00003-16A1	387,000
ECKERT, ROGER O.....	BIOELECTRIC AND IONIC CONTROL OF CELL FUNCTION.....	5R01 NS08364-10	55,342
EDGERTON, ROBERT B.....	THE COMMUNITY CONTEXT OF NORMALIZATION.....	5R01 HD09474-02	103,621
EDGERTON, V REGGIE.....	CHARACTERIZATION OF NON-NEUROGENIC MUSCULAR ATROPHY.....	5R01 NS11950-03	68,259
EDWARDS, PETER A.....	CHOLESTEROL AND LIPOPROTEIN METABOLISM.....	5R01 HL19063-02	45,535
EISENBERG, DAVID S.....	STRUCTURE AND ACTION OF MULTISUBUNIT ENZYMES.....	5R01 GM16925-09	106,438
EISENMAN, GEORGE.....	ION PERMEATION THROUGH CHANNELS, CARRIERS AND NERVE.....	9R01 GM24749-08	71,892
EISENMAN, GEORGE.....	ION PERMEATION THROUGH CARRIERS, CHANNELS AND NERVE.....	3R01 NS09931-07S1	18,008
EISERLING, FREDERICK A.....	VIRUS MORPHOGENESIS: CONTROL OF PHAGE ASSEMBLY.....	1R01 AI14092-01	41,964
ELLISON, GAYLORD D.....	BEHAVIOR: STAGES OF RECOVERY AFTER MONOAMINE LESIONS.....	5R01 NS11846-03	30,019
ESTRIN, THELMA.....	COMPUTER SCIENCE & NEUROPHYSIOLOGY IN STUDY OF THE BRAIN.....	5R01 NS02501-16	141,537
EYMAN, RICHARD K.....	PROGRAM FOR THE DEVELOPMENT OF THE MENTALLY RETARDED.....	5P01 HD05540-06	439,851
FAHEY, JOHN L.....	IMMUNE FUNCTIONS AND CANCER.....	5P01 CA12800-06	533,932
FAHEY, JOHN L.....	BLADDER CANCER: IMMUNOLOGY, IMMUNOTHERAPY & VIROLOGY.....	3R26 CA16880-03S1	34,737
FAHEY, JOHN L.....	BLADDER CANCER: IMMUNOLOGY, IMMUNOTHERAPY & VIROLOGY.....	2R26 CA16880-04	165,036
FAIN, GORDON L.....	PHYSIOLOGY OF PHOTORECEPTORS.....	1R01 EY01844-01	74,453
FAREED, GEORGE C.....	SIMIAN VIRUS 40, DNA REPLICATION AND TRANSFORMATION.....	3R01 CA20794-01S1	25,843
FAREED, GEORGE C.....	SIMIAN VIRUS 40, DNA REPLICATION AND TRANSFORMATION.....	2R01 CA20794-02	66,697
FESSLER, JOHN H.....	MOLECULAR DEVELOPMENT OF COLLAGEN FIBERS.....	5R01 AM13748-09	73,280
FLUHARTY, ARVAN L.....	DERMATAN SULFATE CATABOLISM.....	5R01 HD08855-03	60,939
FOGELMAN, ALAN M.....	DETECTION OF FAMILIAL HYPERCHOLESTEROLEMIA.....	1R01 HL20807-01	33,735
FOOS, ROBERT Y.....	VITREORETINAL JUNCTURE.....	5R01 EY00725-06	39,702
FOOTE, CHRISTOPHER S.....	PHOTOOXIDATION IN MODEL BIOLOGICAL SYSTEMS.....	5R01 GM20080-05	52,138
FOX, CHARLES F.....	MEMBRANE FUNCTION, STRUCTURE AND BIOGENESIS.....	5R01 GM18233-07	99,653
FRANK, ROBERT G, JR.....	PHYSIOLOGY OF NERVE AND SYNAPSE IN THE 20TH CENTURY.....	1R01 LM02956-01	21,138
FROMKIN, VICTORIA A.....	QUESTIONS ON THE PRODUCTION AND PERCEPTION OF SPEECH.....	5R01 NS12303-03	40,294
FULCO, ARMAND J.....	UNSATURATED FATTY ACID BIOSYNTHESIS IN BACILLI.....	5R01 AI09829-08	39,577
FULCO, ARMAND J.....	SOLUBLE CYTOCHROME P-450 HYDROXYLASES FROM BACTERIA.....	1R01 GM23913-01	48,184
FURSTMAN, LAWRENCE L.....	FACIAL AFFERENTS WITH PARTICULAR REFERENCE TO PAIN.....	5R01 DE04249-03	47,674
GALE, ROBERT P.....	SYMPOSIUM—IMMUNOBIOLOGY BONE MARROW TRANSPLANTATION.....	1R13 CA22258-01	32,532
GARCIA, JOHN.....	BEHAVIORAL AND NEURAL EFFECTS OF TOXICOSIS AND PAIN.....	5R01 NS11618-05	78,689
GERSCHENSON, LAZARO E.....	EFFECT OF ESTROGENS AND PROGESTOGENS ON CULTURE CELLS.....	5R01 CA12136-06	76,454
GITNICK, GARY L.....	PREVENTION OF POST TRANSFUSION CHRONIC LIVER DISEASE.....	2R01 AM17984-04	24,407
GOLDBERG, LOUIS J.....	STUDIES IN ORAL PHARYNGEAL REFLEXES.....	5R01 DE04166-09	52,904
GOLDE, DAVID W.....	STUDIES OF ALVEOLAR MACROPHAGE FUNCTION IN MAN.....	1R01 HL20675-01	46,336
GOLUB, SIDNEY H.....	LYMPHOCYTE SENSITIZATION TO TUMOR ANTIGENS IN VITRO.....	5R01 CA17013-03	52,128
GORSKI, ROGER A.....	SEXUAL DIFFERENTIATION OF THE CONTROL OF FOOD INTAKE.....	5R01 AM18254-03	54,633
GORSKI, ROGER A.....	STUDIES ON THE OVARIAN-HYPOTHALAMIC-HYPOPHYSAL AXIS.....	2R01 HD01182-15	100,552

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
GRALLA, JAY.....	REGULATION OF TRANSCRIPTION BY DNA-PROTEIN COMPLEXES.....	5R01 CA19941-02	41,962
GREENFIELD, MOSES A.....	IN VIVO BONE STUDY: USING ULTRASOUND, PHOTON ABSORPTION.....	5R01 GM22338-03	29,216
GRINNELL, ALAN D.....	FORMATION AND FUNCTION OF SYNAPSES.....	5R01 NS06232-13	50,302
GROSSMAN, MORTON I.....	STUDIES ON GASTRIC PHYSIOLOGY.....	2R01 AM08354-13	31,642
GROSSMAN, MORTON I.....	PEPTIC ULCER CENTER.....	5P50 AM17328-04	1,068,797
GRUNSTEIN, MICHAEL.....	MOLECULAR BASIS FOR HISTONE GENE EXPRESSION.....	1R01 GM23674-01	124,479
GUSSEN, RUTH.....	HUMAN TEMPORAL BONE PATHOLOGY.....	5R01 NS06606-12	108,912
GUZE, LUCIEN B.....	PATHOGENESIS OF PYELONEPHRITIS.....	5R01 AI02257-19	49,324
HAGIWARA, SUSUMU.....	STUDIES IN MICRONEUROPHYSIOLOGY.....	3R01 NS09012-08S1	21,023
HAGIWARA, SUSUMU.....	STUDIES IN MICRONEUROPHYSIOLOGY.....	2R01 NS09012-09	79,367
HALL, MICHAEL O.....	THE BIOSYNTHESIS OF VISUAL PIGMENTORHODOPSINO.....	5R01 EY00046-08	83,760
HALPERN, RICHARD M.....	ACCESSIBLE METABOLIC PATHWAYS OF NEOPLASTIC CELLS.....	5R01 CA17332-03	55,061
HAYS, ESTHER F.....	DEVELOPMENT OF LYMPHOMA IN THE THYMUS.....	5R01 CA12386-05	38,147
HAYS, ESTHER F.....	STUDY OF COLONY-FORMING CELLS IN BONE MARROW.....	5R01 CA13666-05	49,486
HELLER, JORAM.....	RETINOL DELIVERY TO PIGMENT EPITHELIUM & NEURAL RETINA.....	5R01 EY00704-07	65,024
HERCULES, KATHLEEN.....	MAPPING OF SV40 TRANSCRIPTION UNITS.....	7R01 CA23057-01	38,020
HERSHMAN, JEROME M.....	PLACENTAL THYROTROPINS: BIOCHEMISTRY AND PHYSIOLOGY.....	5R01 HD07181-05	68,147
HILDEMAN, WILLIAM H.....	MECHANISMS OF IMMUNOBLOCKING VERSUS TUMOR IMMUNITY.....	5R01 CA15788-04	65,642
HILDEMAN, WILLIAM H.....	COMPARATIVE TRANSPLANTATION IMMUNOGENETICS.....	9R01 CA23025-02	119,658
HONRUBIA, VICENTE.....	EXPERIMENTAL STUDIES ON COCHLEAR MECHANISMS.....	5R01 NS08193-09	58,112
HORWITZ, JOSEPH.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF LENS PROTEINS.....	3R01 EY01622-01S1	13,975
HORWITZ, JOSEPH.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF LENS PROTEINS.....	5R01 EY01622-02	22,819
HOWARD, BRUCE D.....	BIOCHEMICAL STUDIES OF SYNAPSES.....	5R01 NS12873-02	49,897
HOWARD, DEXTER H.....	PHYSIOLOGICAL STUDIES ON HISTOPLASMA CAPSULATUM.....	5R01 AI10478-06	62,589
JORDAN, JOHN M.....	VIRAL GENE FUNCTION IN MALIGNANT TRANSFORMATION.....	5R01 CA12794-06	56,387
JUDD, HOWARD L.....	ESTROGEN AND ANDROGEN STUDIES IN ENDOMETRIAL CANCER.....	7R01 CA23093-01	72,310
JUNG, MICHAEL E.....	SYNTHESIS OF THE ANTICANCER AGENT, CROTEPOXIDE.....	5R01 CA18164-03	34,116
KALOYANIDES, GEORGE J.....	HUMORAL AND HEMODYNAMIC FACTORS IN SODIUM REGULATION.....	3R01 HL19137-01S2	10,502
KASAMATSU, HARUMI.....	POLYPEPTIDES AND THE PROTEIN-DNA COMPLEX IN SV40 VIRION.....	1R01 CA21768-01	37,722
KIHARA, HAYATO.....	STUDIES OF HUMAN ARYLSULFATASE A.....	5R01 NS09479-06	26,842
KIHARA, HAYATO.....	METACHROMATIC LEUKODYSTROPHY IN CULTURED CELL SYSTEMS.....	2R01 NS11665-04	111,641
KIRSCHENBAUM, MICHAEL A.....	SODIUM HOMEOSTASIS AND RENAL PROSTAGLANDINS.....	1R01 HL21272-01	46,154
KOLIN, ALEXANDER.....	DEVELOPMENT OF ELECTROMAGNETIC RHEOANGIOGRAPHY.....	3R01 HL17591-02S1	13,990
KORENMAN, STANLEY G.....	HORMONAL INTERACTIONS IN THE UTERUS.....	5R01 HD09285-04	48,144
KRASNE, FRANKLIN B.....	ESCAPE BEHAVIOR: INTEGRATION AND PLASTICITY.....	5R01 NS08108-10	64,692
KRASNE, SALLY J.....	PROBES OF HEART AND NERVE MEMBRANES—FLUORESCENT DYES.....	1R01 HL20254-01	82,343
KRUGER, LAWRENCE.....	VISUAL PROJECTIONS OF VERTEBRATE MIDBRAIN.....	5R01 EY00571-13	60,460
KRUGER, LAWRENCE.....	COMPARATIVE STUDIES OF SOMATIC AFFERENT PROJECTION.....	5R01 NS05685-13	85,897
KUHL, DAVID E.....	QUANTITATIVE SECTION SCANNING IN BRAIN TUMOR & STROKE.....	7R01 GM24839-01	83,102
KUROKAWA, KIYOSHI.....	CELL METABOLISM OF DEFINED SEGMENTS OF SINGLE NEPHRON.....	1R01 AM21351-01	61,459
LA RUE, ASENATH A.....	PROBLEM SOLVING IN MIDDLE-AGED AND ELDERLY ADULTS.....	1R23 AG00745-01	14,208
LADEFOGED, PETER N.....	COMPUTERIZED RECOVERY OF ARTICULATIONS.....	5R01 NS09780-06	70,150
LAGASSE, LEO D.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA13630-06	61,618
LAKE, JAMES A.....	SPATIAL ARRANGEMENT OF PROTEIN IN RIBOSOMAL SUBUNITS.....	5R01 GM24034-02	45,836
LASCELLES, JUNE.....	REGULATION OF HEME AND HEMOPROTEIN SYNTHESIS.....	5R01 AM11148-11	26,958
LATIES, GEORGE G.....	MEMBRANE PERMEABILITY AS A REGULATORY ELEMENT.....	2R01 GM19807-06	58,661
LENGYEL, JUDITH A.....	TRANSCRIPTION IN DROSOPHILA CULTURED CELLS AND EMBRYOS.....	5R01 HD09948-02	50,666
LETINSKY, MICHAEL S.....	STRUCTURE AND FUNCTION OF DEVELOPING SYNAPSES.....	1R01 NS13470-01	45,368
LEWIS, HARLAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07009-12	173,178
LIEBERMAN, JACK.....	ANTITRYPSIN AND OTHER CAUSES OF CHRONIC LUNG DISEASE.....	7R01 HL21156-01	67,722
LIEBESKIND, JOHN C.....	BEHAVIORAL AND ELECTROPHYSIOLOGICAL STUDIES OF PAIN.....	2R01 NS07628-10	95,212
LINDSLEY, DONALD B.....	BRAINSTEM-HIPPOCAMPAL SYSTEMS REGULATING BEHAVIOR.....	5R01 GM22552-03	39,023
LOLLEY, RICHARD N.....	MATURATION OF METABOLISM IN NORMAL AND DYSTROPHIC RETINA.....	5R01 EY00395-09	36,286
LUNER, STEPHEN J.....	ANTIGEN AND SURFACE CHARGE PROPERTIES OF BLOOD CELLS.....	5R01 CA13955-06	75,739
LYMAN, JOHN H.....	ELECTROCUTANEOUS FEEDBACK FOR ARTIFICIAL LIMBS.....	5R01 GM21430-04	79,550
MACINNIS, AUSTIN J.....	MOLECULAR MODE OF ANTHELMINTIC ACTION.....	5R01 AI13228-02	48,356
MARCUS, ROBERT A.....	CYCLIC NUCLEOTIDE REGULATION IN BONE.....	5R01 AM17924-03	22,643
MARKHAM, CHARLES H.....	CENTRAL VESTIBULAR MECHANISMS.....	5R01 NS06658-12	80,955
MARKOLF, KEITH L.....	LIGAMENOUS STABILITY OF THE KNEE.....	5R01 AM19043-02	84,380
MARTINEZ, RAFAEL J.....	SERUM AND LYMPH BACTERICIDINS: BIOCHEMICAL MECHANISMS.....	5R01 AI12835-03	40,982

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
MATSUYAMA, STEVEN S.....	GLIAL CELL CHROMOSOMES AND SENILE DEMENTIA.....	1R23 AG00776-01	13,367
MELLINKOFF, SHERMAN M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00865-04	562,020
MELLINKOFF, SHERMAN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05354-16	213,709
MEREDITH, PATRICIA J.....	NEONATAL THYMIC FACTOR AND IMMUNOREGULATION WITH AGE.....	1R23 AG00729-01	15,480
MERRIAM, JOHN R.....	GENETIC CHANGE IN DEVELOPING CELLS OF DROSOPHILA.....	3R01 GM17096-07S2	6,844
MEYER, JAMES H.....	STUDY OF ALIMENTARY DERANGEMENTS AFTER ULCER SURGERY.....	2R01 AM19182-02	28,233
MEYERS, ROBERTA L.....	MECHANISM OF CORNEAL INFLAMMATION IN HERPES KERATITIS.....	5R01 EY00394-10	77,990
MEYERS, ROBERTA L.....	PATHOGENESIS OF EXPERIMENTAL ALLERGIC UVEITIS.....	2R01 EY01309-04	76,311
MILLER, JAMES N.....	IMMUNE MECHANISMS IN EXPERIMENTAL AND HUMAN SYPHILIS.....	5R01 AI12601-03	104,220
MOMMAERTS, WILFRIED F.....	MOLECULAR MECHANISMS IN MYONAL DIFFERENTIATION.....	1R01 AM19996-01	111,028
MORTON, DONALD L.....	MULTIDISCIPLINARY CANCER DIAGNOSIS AND THERAPY.....	3P01 CA12582-06S1	154,222
MORTON, DONALD L.....	MULTIDISCIPLINARY CANCER DIAGNOSIS AND THERAPY.....	2P01 CA12582-07	759,124
MULLEN, YOKO S.....	IMMUNE ASPECTS IN FETAL PANCREAS ALLOGRAFTS.....	1R01 AM20827-01	40,936
NAYAK, DEBI P.....	INTERFERENCE BY DEFECTIVE INFLUENZA VIRUSES.....	5R01 AI12749-03	40,720
NAYAK, DEBI P.....	ENDOGENOUS GUINEA PIG ONCORNAVIRUSES AND CANCER.....	5R01 CA15797-03	49,128
NEWMAN, MICHAEL G.....	HOST BACTERIAL INTERACTIONS IN PERIODONTAL DISEASE.....	1R01 DE04441-01	94,722
NIERLICH, DONALD P.....	REGULATION OF RNA SYNTHESIS.....	2R01 GM15381-10	56,295
NODA, HIROHARU.....	NEURONAL BASIS OF VISUAL PERCEPTION IN EYE MOVEMENTS.....	2R01 EY01051-04	91,376
NOVIN, DONALD.....	STUDIES OF HUNGER, THIRST AND WATER METABOLISM.....	5R01 NS07687-10	51,287
O'CONNOR, JOHN D.....	METABOLISM OF ECDYSONE AND ECDYSONE-RECEPTOR PROTEINS.....	5R01 NS08990-06	49,111
O'LAGUE, PAUL H.....	ELECTROPHYSIOLOGY OF DEVELOPING NEURONS IN CULTURE.....	5R01 NS12901-02	43,351
O'NEILL, YNEZ V.....	DEVELOPMENT OF ANATOMICAL SCIENCES: GALEN TO VESALIUS.....	5R01 LM01941-05	19,144
PEARSON, CARL M.....	CLINICAL PHARMACOLOGY RHEUMATIC AND MUSCULAR DISEASES.....	5P50 GM15759-10	1,071,013
PETERSON, WILLIAM J.....	EFFECT OF AGE ON LYMPHOHEMATOPOIETIC REGENERATION.....	1R23 AG00755-01	14,232
PHELPS, DALE L.....	TOCOPHEROL PROTECTION IN OXYGEN INDUCED RETINOPATHY.....	1R01 EY01939-01	70,861
PICKETT, M. JOHN.....	THE IMMUNE RESPONSE IN EXPERIMENTAL CHOLERA.....	5R22 AI12787-03	28,272
PIERCE, JOHN G.....	PURIFICATION AND CHEMISTRY OF PROTEIN HORMONES.....	5R01 AM18005-24	110,044
POPIAK, GEORGE J.....	MOLECULAR ASPECTS OF MENTAL RETARDATION.....	5P01 HD06576-04	356,530
POPIAK, GEORGE J.....	ENZYMES AND INHIBITORS OF CHOLESTEROL BIOSYNTHESIS.....	5R01 HL12745-09	58,626
POPIAK, GEORGE J.....	CONTROL OF CHOLESTEROL METABOLISM IN MAN.....	5R01 HL18016-03	59,682
PORTER, DAVID D.....	IMMUNOLOGIC AND VIRAL STUDIES OF SLOW VIRUS INFECTIONS.....	5R01 AI09476-09	68,540
PUHVEL, S MADLI.....	STUDIES ON THE PATHOGENESIS OF INFLAMMATORY ACNE.....	2R01 AM17425-04	89,104
QUINTON, PAUL M.....	CYSTIC FIBROSIS & UREMIA; SWEAT GLAND PATHOPHYSIOLOGY.....	1R01 AM20356-01	44,034
RAND, ROBERT W.....	FERROMAGNETIC SILICONE VASCULAR OCCLUSION IN NEOPLASMS.....	5R01 CA14303-05	70,467
RAY, DAN S.....	REGULATION OF M13 VIRAL DNA REPLICATION.....	5R01 AI10752-06	27,557
REEDER, LEO G.....	PROCESSES IN HEALTH BEHAVIOR AND CANCER CONTROL.....	5R18 CA18451-02	207,571
RINDERKNECHT, HEINRICH.....	PANCREATIC SECRETORY PROTEINS IN CANCER OF THE PANCREAS.....	5R26 CA20222-02	25,632
RIVIERE, GEORGE R.....	TOOTH TRANSPLANTATION GENETICS AND IMMUNOLOGY.....	5R01 DE04489-02	42,809
ROBERTS, SIDNEY.....	REGULATION OF CEREBRAL PROTEIN SYNTHESIS.....	5R01 NS07869-13	79,789
ROBERTS, SIDNEY.....	AMINO ACID IMBALANCES AND BRAIN METABOLISM.....	1R01 NS13295-01	96,273
ROSS, GORDON.....	EFFECTS OF IONS ON VASCULAR REACTIVITY.....	5R01 HL18199-03	42,003
RUBINSTEIN, EDUARDO H.....	CARDIOVASCULAR STABILITY AND DEPTH OF ANESTHESIA.....	5R01 GM22974-02	59,583
SALSER, WINSTON A.....	DETERMINING SEQUENCES FROM HEMOGLOBIN MESSENGER RNA.....	3R01 CA15940-03S2	14,665
SALSER, WINSTON A.....	NUCLEOTIDE SEQUENCING METHODS FOR ONCOGENIC VIRUSES.....	5R01 GM18586-06	58,655
SALSER, WINSTON A.....	DETERMINING SEQUENCES FOR HEMOGLOBIN MESSENGER RNA.....	9R01 HL21831-04	70,990
SAMBHI, MOHINDER P.....	RENIN ANGIOTENSIN METABOLISM IN HYPERTENSION.....	3R01 HL15039-04S1	3,005
SARNA, GREGORY P.....	TREATED AKR LEUKEMIA: COMPARATIVE HOST-TUMOR KINETICS.....	5R01 CA19870-02	39,706
SAWYER, CHARLES H.....	RHINENCEPHALON, NEUROENDOCRINE FUNCTION AND BEHAVIOR.....	5R01 NS01162-21	88,511
SCHAIN, RICHARD J.....	FACTORS AFFECTING POSTNATAL BRAIN DEVELOPMENT.....	5R01 NS07691-09	48,815
SCHLAG, JOHN D.....	CONDITIONING OF PYRAMIDAL ACTIVITY BY SENSORY INFLOW.....	5R01 NS04955-14	41,467
SCHOTZ, MICHAEL C.....	LIPOPROTEIN LIPASE: CHEMISTRY AND FUNCTION.....	2R01 HL16577-03	110,074
SCHUMAKER, VERNE N.....	MACROMOLECULES OF CIRCULATORY AND GENETIC IMPORTANCE.....	5R01 GM13914-13	84,352
SCHWARTZ, ILSA R.....	DYNAMIC ASPECTS OF AUDITORY SYNAPTIC TERMINALS.....	7R01 NS14503-01	29,536
SCHWARZ, KLAUS.....	NEW ESSENTIAL TRACE ELEMENTS.....	3R01 AM08669-14S1	58,816
SCHWARZ, KLAUS.....	ATHEROSCLEROSIS AND SILICON.....	3R01 HL17701-02S1	15,936
SCHWARZ, KLAUS.....	ATHEROSCLEROSIS AND SILICON.....	2R01 HL17701-03	59,931
SERCARZ, ELI E.....	CLONAL ANALYSIS OF FINE SPECIFICITY OF T AND B CELLS.....	5R01 AI08198-09	66,429
SERCARZ, ELI E.....	ANTIGEN-BINDING CELLS OF MULTIPLE SPECIFICITY.....	5R01 AI11183-05	70,572
SHAPIRO, DAVID.....	HYPERTENSION: ANALYSIS OF DRUG & BEHAVIORAL THERAPIES.....	5R01 HL19568-02	73,296
SIGMAN, DAVID S.....	METAL ION CATALYSIS IN ENZYMIC REACTIONS.....	5R01 GM21199-10	56,300

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SILVERBLATT, FREDRIC J.....	ROLE OF PILI IN GENITOURINARY TRACT INFECTIONS.....	5R01 AM19809-02	41,517
SIMPSON, LARRY.....	THE FUNCTION OF THE KINETOPLAST IN THE HEMOFLAGELLATES.....	2R01 AI09102-09	62,539
SIMPSON, LARRY.....	DNA IN TRANSFORMATION OF TRYPANOSOMA BRUCEI.....	5R01 AI13027-02	22,878
SMITH, EMIL L.....	STRUCTURE AND PROPERTIES OF PROTEINS AND ENZYMES.....	5R01 GM11061-15	266,140
SMITH, JUDITH L.....	SIGNIFICANCE OF MUSCLE FIBER TYPES.....	2R01 NS10423-04	110,300
SMITH, ROBERTS A.....	GROUP TRANSFER PROCESSES IN NORMAL AND MALIGNANT CELLS.....	5R01 CA13196-06	77,114
SOLL, ANDREW H.....	PHYSIOLOGY OF THE ISOLATED MAMMALIAN PARIETAL CELL.....	1R01 AM19984-01	35,834
SOLOMON, DAVID H.....	GRAVES' DISEASE STUDIES.....	2R01 AM17251-03	72,022
SONNENSCHNEN, RALPH R.....	REGIONAL CIRCULATORY RESPONSES TO HYPOXIA.....	5R01 HL17903-02	45,670
STECKEL, RICHARD J.....	CORE CANCER CENTER SUPPORT GRANT.....	5P30 CA16042-03	730,323
STECKEL, RICHARD J.....	BOWEL RADIO-PROTECTION VIA VASOCONSTRICTOR INFUSIONS.....	5R01 CA16199-02	39,317
STELL, WILLIAM K.....	PATHWAYS FOR COLOR VISION IN RETINAS.....	5R01 EY01190-05	60,318
STEVENS, JACK G.....	LATENCY IN HERPES VIRUS INFECTION OF CELLS AND TISSUES.....	5R01 AI06246-13	101,936
STEVENS, JACK G.....	ANALYSIS OF THE SHOPE PAPILLOMA-CARCINOMA SYSTEM.....	5R01 CA18151-02	73,628
STEVENS, ROBERT V.....	TOTAL SYNTHESIS OF CHIRALLY PURE STEROIDS.....	1R01 AM20398-01	51,128
STIEHM, E RICHARD.....	CELLULAR IMMUNITY IN SICK AND MALNOURISHED INFANTS.....	5R01 HD09800-03	86,517
STRAATSMA, BRADLEY R.....	VISION RESEARCH CENTER.....	5P30 EY00331-11	192,483
SULLIVAN, STUART F.....	VENTILATORY ADJUSTMENTS FOR OPTIMAL OXYGENATION.....	2R01 HL17358-03	50,219
SWENDSEID, MARIAN E.....	AMINO ACID AND AMINE METABOLISM IN EXPERIMENTAL UREMIA.....	5R01 AM15197-05	45,826
SZEGO, CLARA M.....	HORMONAL CONTROL OF CELL GROWTH AND DIFFERENTIATION.....	2R01 HD04354-24	113,994
TARJAN, GEORGE.....	MENTAL RETARDATION RESEARCH CENTER.....	5P30 HD04612-09	561,556
TAYLOR, DERMOT B.....	MOLECULAR EVENTS AT THE CHOLINERGIC RECEPTOR.....	5R01 NS11708-03	44,188
TERASAKI, PAUL I.....	STUDY OF SIGNIFICANCE OF HL-A ANTIGENS IN DISEASE.....	2R01 AM02375-19	55,577
THOMAS, JAMES P.....	MECHANISMS OF SPATIAL PATTERN VISION.....	5R01 EY00360-11	38,260
THOMAS, WARREN D.....	CONSERVATION OF PRIMATE SPECIES AND CANCER RESEARCH.....	5P40 RR01043-02	52,967
TIERNEY, DONALD F.....	LUNG INJURY, SUBSTRATE UTILIZATION, OXYGEN TOXICITY.....	2R01 HL17719-02	65,742
TOBIN, ELAINE M.....	MESSANGER RNA AND PHYTOCHROME CONTROLLED DEVELOPMENT.....	5R01 GM23167-02	43,269
TOOHEY, JOHN I.....	SULFHYDRYL AND ALKYLTHIO COMPOUNDS IN CELL DIVISION.....	1R01 GM23915-01	44,896
TYAN, MARVIN L.....	AGE-RELATED CHANGES IN PRECURSORS OF T- AND B-CELLS.....	1R01 AG00990-01	53,048
UNGERLEIDER, J THOMAS.....	9-DELTA THC AND COMPAZINE R IN CANCER CHEMOTHERAPY.....	1R01 CA21451-01	77,400
URIST, MARSHALL R.....	INDUCTIVE SUBSTRATES FOR TOOTH AND BONE FORMATION.....	5R01 DE02103-13	207,830
VALENTINE, WILLIAM N.....	ENZYMATIC AND BIOCHEMICAL STUDIES ON BLOOD CELLS.....	5R01 HL12944-08	144,484
VAN HERLE, ANDRE J.....	CIRCULATING THYROGLOBULIN IN THYROID CARCINOMA.....	5R01 CA13447-05	51,656
VAN LANCKER, JULIEN L.....	ROLE OF REPAIR ENZYMES IN PATHOGENESIS OF LIVER CANCER.....	3R01 CA14840-03S1	25,054
VAN LANCKER, JULIEN L.....	ROLE OF REPAIR ENZYMES IN PATHOGENESIS OF LIVER CANCER.....	2R01 CA14840-04	49,205
VERITY, M ANTHONY.....	A MORPHOBIOCHEMICAL STUDY OF MERCURY ENCEPHALOPATHY.....	5R01 ES00625-06	35,044
WALFORD, ROY L.....	THE ROLE OF IMMUNE PHENOMENA IN THE AGING PROCESS.....	5R01 AG00424-16	80,809
WALFORD, ROY L.....	TRANSPLANTATION IMMUNOGENETICS AND CANCER.....	5R01 AI10088-07	120,532
WALL, RANDOLPH.....	THE PRODUCTION OF IMMUNOGLOBULIN MRNA IN MYELOMA CELLS.....	1R01 AI13410-01A1	68,183
WALSH, JOHN H.....	HORMONAL ETIOLOGY OF GASTRIC HYPERSECRETION.....	2R01 AM17294-04	102,352
WARO, PAUL H.....	COMMUNICATIVE DISORDERS CLINICAL RESEARCH CENTER.....	2P50 NS09823-07	634,115
WASTERLAIN, CLAUDE G.....	PROTEIN SYNTHESIS IN EPILEPSY, AGING AND BRAIN DISORDER.....	5R01 NS13227-03	67,287
WASTERLAIN, CLAUDE G.....	BRAIN DEVELOPMENT IN EXPERIMENTAL EPILEPSY.....	5R01 NS13515-02	61,405
WEBBER, MILO M.....	RADIOTRACERS IN THE DIAGNOSIS AND TREATMENT OF CANCER.....	5R01 CA15787-03	28,713
WEINSTOCK, ALFRED.....	ELABORATION OF GLYCOPROTEINS IN MINERALIZING TISSUES.....	2R01 DE03386-07	77,904
WEISBART, RICHARD H.....	LYMPHOCYTE MEDIATORS IN CELL MEDIATED IMMUNITY.....	5R01 AI13253-02	61,352
WENZEL, BERNICE M.....	OLFACTORY PROJECTION FIELD.....	5R01 NS10353-04	29,444
WEST, LOUIS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05756-04	166,782
WHEELER, LARRY A.....	ORAL FLORA AND CARCINOGENESIS OF DENTAL THERAPEUTICS.....	1R01 CA22249-01	61,194
WHITE, STUART C.....	STUDY OF IMMUNOPATHOLOGIC MECHANISMS OF EAS.....	2R01 DE03859-04	88,864
WICKNER, WILLIAM T.....	MEMBRANE ASSEMBLY IN VIRUS-TRANSFORMED CELLS.....	5R01 GM23377-02	49,876
WISNIESKI, BERNADINE J.....	PHYSICAL STRUCTURE OF ANIMAL CELL MEMBRANES.....	5R01 GM22240-03	39,462
WOLFGRAM, FROERICK J.....	FUNDAMENTAL STUDIES RELATING TO MULTIPLE SCLEROSIS.....	5P50 NS08711-08	295,877
WRIGHT, ERNEST M.....	MOLECULAR MECHANISM OF INTESTINAL CALCIUM TRANSPORT.....	1R01 AM19567-01	89,543
WRIGHT, ERNEST M.....	THE SECRETION OF THE CEREBROSPINAL FLUID.....	5R01 NS09666-04	70,125
YOUNG, LOWELL S.....	STUDY OF HOST-MICROBIAL FACTORS IN BACILLEMIA.....	5R01 AI11271-05	31,871
YOUNG, LOWELL S.....	IMMUNOBIOLOGY OF K ANTIGENS OF ENTEROBACTERIACEAE.....	1R01 AI13518-01A1	62,250
YOUNG, RICHARD W.....	HISTOPHYSICAL AND HISTOCHEMICAL STUDIES ON THE EYE.....	5R01 EY00095-16	95,754
YUWILER, ARTHUR.....	DEVELOPMENTAL EFFECTS OF NEONATAL CORTISOL TREATMENT.....	5R01 HD08575-03	30,391
ZABIN, IRVING.....	STUDIES OF AN INDUCIBLE BACTERIAL ENZYME.....	5R01 AI04181-16	96,976

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ZAMENHOF, STEPHEN.....	PRENATAL MALNUTRITION AND AGING.....	1R01 AG00162-01	50,991
ZAMENHOF, STEPHEN.....	CHRONIC UNDERNUTRITION AND BRAIN DEVELOPMENT.....	5R01 HD08927-03	55,018
ORGANIZATION TOTAL	291 28,933,412		
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
AHMAD, NAZIR.....	RATHKE'S POUCH-DERIVED TUMORS: A UNIQUE MODEL SYSTEM.....	1R01 CA21426-01	57,749
ALADJEM, FREDERICK.....	SERUM LIPOPROTEINS IN PATIENTS WITH BREAST CANCER.....	1R01 CA19634-01A1	50,209
ALADJEM, FREDERICK.....	STRUCTURE AND FUNCTION OF HUMAN SERUM LIPOPROTEINS.....	5R01 HL19084-02	78,772
ALEXANDER, NATALIE.....	AN INDEX OF SYMPATHETIC ACTIVITY IN HYPERTENSION.....	5R01 HL19251-02	57,505
APPLEMAN, M MICHAEL.....	CYCLIC NUCLEOTIDE PHOSPHODIESTERASE.....	2R01 AM16367-04	55,300
BAKER, ROBERT F.....	REGULATION OF GENE EXPRESSION IN DEVELOPMENT.....	5R01 HD04015-09	45,273
BARNDT, ROBERT, JR.....	ANGIOGRAPHIC ESTIMATION-ATHEROSCLEROTIC WALL THICKNESS.....	1R23 HL21279-01	36,612
BAU, ROBERT.....	STRUCTURAL STUDIES ON PLATINUM-NUCLEOTIDE COMPLEXES.....	5R01 CA17367-03	32,102
BEIERLE, JOHN W.....	WILM'S TUMOR ANTIGENS.....	5R01 CA17687-03	30,373
BEKHOR, ISAAC.....	CHROMATIN-GLUCOCORTICOID INFLUENCES IN CLEFT PALATE.....	5R01 DE04031-03	33,557
BEKHOR, ISAAC.....	DNA-CHROMOSOMAL PROTEIN IN CRANIOFACIAL DEVELOPMENT.....	5R01 DE04255-03	34,235
BENZ, WENDY C.....	EBV DNA SYNTHESIS IN TRANSFORMED LYMPHOCYTES.....	7R01 CA23070-01	36,764
BIDLACK, WAYNE R.....	HYDROPEROXIDE PEROXIDASE IN BIOLOGICAL OXIDATIONS.....	5R01 GM22181-03	39,848
BILES, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR05792-01	24,241
BIRREN, JAMES E.....	A COMPREHENSIVE RESEARCH PROGRAM IN AGING.....	1P01 AG00133-01	305,241
BISHOP, LEWIS G.....	NEUROPHYSIOLOGY OF AN OPTOMOTOR RESPONSE.....	5R01 EY01513-03	47,204
BLANKENHORN, DAVID H.....	SUPPORT FOR CENTER FOR RESEARCH ON ATHEROSCLEROSIS.....	3P50 HL14138-05S2	399,756
BRODIE, ARNOLD F.....	MECHANISMS OF OXIDATIVE ENERGY GENERATION IN BACTERIA.....	5R01 AI05637-15	99,722
CADY, LEE D.....	CARDIOVASCULAR FITNESS AND OTHER RISK FACTORS.....	5R01 HL18235-03	41,608
CRAWFORD, DONALD W.....	ARTERIAL WALL OXYGENATION.....	5R01 HL18969-02	27,999
CRAWFORD, DONALD W.....	INJURY, WALL THICKNESS, AND ARTERIAL WALL OXYGENATION.....	1R01 HL21032-01	54,078
CRAWFORD, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05303-16	40,758
DI SAIA, PHILIP J.....	GYNECOLOGIC ONCOLOGY PROGRAM.....	1R18 CA20501-01	44,565
DI SAIA, PHILIP J.....	CERVICAL NEOPLASIA TREATMENT.....	5R01 CA20795-02	42,613
DUNKERTON, LOIS V.....	TEMPLATE APPROACHES TO NEW GLYCOSYLATION REACTIONS.....	1R01 CA21162-01A1	24,070
DUNN, ARNOLD S.....	HORMONAL REGULATION OF HEPATIC GLUCOSE PRODUCTION.....	2R01 AM07215-13	44,629
FIFE, THOMAS H.....	ENZYMATIC AND NONENZYMATIC HYDROLYSIS OF ACETALS.....	5R01 GM10613-15	51,799
FIFE, THOMAS H.....	ENZYMATIC AND NONENZYMATIC REACTIONS OF ACYL PHOSPHATES.....	5R01 GM16564-09	34,759
FINCH, CALEB E.....	AGING AND BRAIN MONOAMINES IN MICE.....	5R01 AG00117-02	60,399
FINCH, CALEB E.....	AGING AND BIOSYNTHESIS IN NONDIVIDING CELLS.....	2R01 AG00446-04	55,966
FRIEDLER, ROBERT M.....	NATRIURESIS OF VOLUME EXPANSION AND CYCLIC AMP.....	5R01 AM19181-02	38,395
FRIOU, GEORGE J.....	K CELL CYTOTOXIC MECHANISMS IN RHEUMATIC DISEASES.....	5R01 AM18445-03	69,045
GOEBELSMANN, UWE T.....	PLASMA ESTRIOL: TRANSPORT, MEASUREMENT & CLINICAL USE.....	5R01 HD05932-06	46,727
GOODMAN, MYRON F.....	CARDIOTOXICITY IN CANCER TREATMENT: A MOLECULAR STUDY.....	5R01 CA17358-03	49,304
GORDON, IRVING.....	STUDIES OF MEASLES VIRUS OR OTHER VIRUS INFECTIONS.....	5R01 AI03874-17	76,560
GRODINS, FRED S.....	CARDIOPULMONARY CONTROL COUPLING IN EXERCISE.....	2R01 HL16390-04	32,684
HAMMOND, G DENMAN.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA13539-05	629,539
HAMMOND, G DENMAN.....	COMPREHENSIVE CANCER CENTER-CORE SUPPORT GRANT.....	2P30 CA14089-04	1,179,068
HARDING, BOYD W.....	STEROID HYDROXYLASES IN NORMAL AND ABNORMAL ADRENALS.....	5R01 CA07057-14	111,415
HARWIG, JOHN F.....	FIBRINOGEN LABELING WITH RADIOMETALS.....	1R01 HL21273-01	39,996
HAYWOOD, L JULIAN.....	COMPREHENSIVE SICKLE CELL CENTER.....	2P60 HL15162-06	605,020
HEIDELBERGER, CHARLES D.....	IN VITRO CHEMICAL CARCINOGENESIS.....	5R01 CA21036-02	97,949
HEIDELBERGER, CHARLES D.....	CHEMICAL TRANSFORMATION OF PROSTATE EPITHELIAL CELLS.....	1R26 CA21746-01	86,910
HENDERSON, BRIAN E.....	CANCER CENTER EPIDEMIOLOGY & BIostatISTICS SUPPORT.....	5P01 CA17054-03	857,040
HENDERSON, BRIAN E.....	EPIDEMIOLOGY & CANCER REGISTRIES IN THE PACIFIC BASIN.....	1R13 CA21549-01	59,532
HOCHSTEIN, PAUL E.....	ULTRASTRUCTURE-BIOCHEMICAL STUDIES OF AGING RED CELLS.....	5R01 AG00471-03	47,032
HOCHSTEIN, PAUL E.....	METABOLIC BASIS OF TUMOR CELL DEFORMABILITY.....	5R01 CA19615-02	64,359
HORTON, RICHARD.....	METABOLISM & CONTROL OF TESTOSTERONE (ANDROGENS) IN MAN.....	5R01 AM13710-09	44,028
HORTON, RICHARD.....	ALDOSTERONE BINDING, CLEARANCE, AND SECRETION IN MAN.....	1R01 HL21112-01	29,660
JELLIFFE, ROGER W.....	LABORATORY OF APPLIED PHARMACOKINETICS.....	1R01 GM23826-01	123,641
JONES, MARY E.....	CARBAMYL ENZYMES AND DIFFERENTIATION.....	5R01 HD06538-07	97,515
KAPRIELIAN, ZOHRA B A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07012-11	92,772
KRANTZ, DAVID S.....	CORONARY ARTERY DISEASE AND CORONARY-PRONE BEHAVIOR.....	1R23 HL21390-01	31,934
LAI, MICHAEL M.....	STRUCTURE AND ORGANIZATION OF RNA TUMOR VIRUSES.....	5R01 CA16113-03	46,064
LERNER, ROGER L.....	ROLE OF SECRETIN IN HUMAN INSULIN SECRETION.....	1R01 AM18657-01	35,122

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
LIEB, MARGARET.....	GENE INTERACTION IN BACTERIA AND PHAGE.....	5R01 AI05367-15	67,828
LIPSETT, JAMES A.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA18259-02	50,185
LUKES, ROBERT J.....	LYMPHOMA-LEUKEMIA CANCER CENTER PROGRAM.....	5P01 CA19449-02	303,533
MACK, THOMAS M.....	CASE CONTROL STUDY OF CARCINOMA OF THE PANCREAS.....	5R26 CA19171-02	66,948
MACK, THOMAS M.....	CASE-CONTROL STUDY OF CARCINOMA OF THE ESOPHAGUS.....	5R01 CA19496-02	78,560
MANNING, PHIL R.....	INDIVIDUALIZED LIBRARY SERVICES FOR OFFICE PRACTICE.....	1R01 LM02857-01	102,429
MARSH, DONALD J.....	COUNTERCURRENT PROPERTIES OF THE RENAL INNER MEDULLA.....	5R01 AM15968-06	76,831
MARSH, DONALD J.....	MECHANISM OF OSCILLATORY GLUCOSE AND INSULIN DYNAMICS.....	5R01 AM18467-03	87,744
MARTIN, SUSAN P.....	EPIDEMIOLOGY OF INTRACRANIAL NEOPLASMA.....	1R01 CA20571-01	49,396
MASSRY, SHAUL G.....	BLOOD BRAIN BARRIER AND CALCIUM.....	5R01 AM18959-02	56,729
MATHIES, ALLEN W, JR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00043-17	696,068
MATHIES, ALLEN W, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05356-16	213,709
MATIOLI, GASTONE.....	STUDY ON VIRUS INDUCED LEUKEMIC STEM CELLS IN MICE.....	5R01 CA14730-03	61,608
MC KENNA, ROBERT J.....	SUPPORT FOR REGIONAL ACTIVITIES CANCER CENTER.....	5R18 CA16419-03	770,722
MEIER, STEPHEN P.....	MATRIX-CELL INTERACTION IN CRANIOFACIAL DEVELOPMENT.....	1R01 DE04613-01	47,926
MEISELMAN, HERBERT J.....	HEMORRHEOLOGY STUDIES RELATED TO IN VIVO BLOOD FLOW.....	5R01 HL15722-05	21,327
MELROSE, RAYMOND J.....	SUPPORT FOR CLINICAL CANCER PROGRAM (DENTAL).....	5R25 CA19270-02	31,958
MONTGOMERIE, JOHN Z.....	CANDIDA ENDOPHTHALMITIS WITH IV HYPERALIMENTATION.....	1R01 EY01865-01	55,772
MOORE, GEORGE P.....	COMPUTER ANALYSIS OF MUSCLE RECEPTOR SPIKE TRAINS.....	3R01 NS11298-02S1	16,705
MOOSER, GREGORY.....	RECEPTOR FUNCTION AND RELATED STUDIES IN ORAL BIOLOGY.....	5R01 DE03739-05	59,999
MORROW, C PAUL.....	MODEL REGIONAL TROPHOBLASTIC DISEASE PROGRAM.....	1R18 CA20749-01	35,497
MOSLEY, JAMES W.....	EVALUATION OF GLUCOCORTICOID FOR FULMINANT HEPATITIS.....	5R01 AM17953-03	51,555
MOSTELLER, RAYMOND D.....	REGULATION OF PROTEIN DEGRADATION IN ESCHERICHIA COLI.....	5R01 GM23292-02	36,452
NICOLOFF, JOHN T.....	HUMAN THYROID HORMONE METABOLISM.....	2R01 AM11727-10	53,973
NIMNI, MARCEL E.....	CONTROL OF COLLAGEN METABOLISM AND CROSS-LINKING.....	5R01 AM10358-11	83,676
NIMNI, MARCEL E.....	COLLAGEN IN OSTEOARTHRITIC CARTILAGE.....	2R01 AM16404-04	97,423
OLAH, GEORGE A.....	STUDY OF THE ELECTROPHILIC NATURE OF CHEMICAL CARCINOGEN.....	7R01 CA23031-01	34,600
OLAH, GEORGE A.....	BIOALKYLATION AND ACYLATION SYSTEMS.....	7R01 GM24832-01	98,830
OLDHAM, SUSAN B.....	PARATHYROID REGULATION AND VITAMIN D ACTIVATION.....	2R01 AM16081-04	39,650
PLATT, CHRISTOPHER J.....	LOCALIZATION OF DIFFERING VESTIBULAR SENSORY INPUTS.....	1R01 NS13946-01	20,331
PUFFER, HAROLD W.....	FLOW-INDUCED FLUX CHANGES ACROSS TUMOR MICROVESSELS.....	1R01 CA22224-01	48,286
QUILLIGAN, EDWARD J.....	MECHANISMS OF FETAL CEREBRAL VASCULAR CONTROL.....	5R01 HD07377-04	38,592
RADER, ROLAND D.....	A NOVEL PULSED DOPPLER FLOWMETER.....	1R01 HL20979-01	32,768
RAJMAN, LUISA J.....	THE REGULATION OF UREA SYNTHESIS IN MAMMALS.....	5R01 AM19417-02	44,159
RHO, JOON H.....	3-D FLUOROMETRIC ANALYSIS OF HYDROCARBON METABOLITES.....	1R01 CA19974-01A1	36,923
RHO, JOON H.....	SUBCELLULAR CHANGES OF BLOOD VESSELS IN HYPERTENSION.....	1R01 HL21099-01	47,700
RUSSELL, FINDLAY E.....	PEPTIDES AND NONENZYMATIC PROTEINS OF VENOMS.....	5R01 NS11476-03	34,878
RYAN, STEPHEN J.....	AN EXPERIMENTAL APPROACH TO MACULOPATHY.....	5R01 EY01545-02	66,563
SCHAE, K WARNER.....	COGNITIVE BEHAVIOR IN MATURITY AND OLD AGE.....	2R01 AG00480-05	91,066
SCHIFFMAN, SANDRA.....	MECHANISM OF CONTACT ACTIVATION OF INTRINSIC CLOTTING.....	5R01 HL17402-03	42,969
SCHIFFMAN, SANDRA.....	BIOCHEMISTRY OF HUMAN FACTOR XI.....	5R01 HL18859-02	47,059
SCHNEIR, MICHAEL L.....	THE MOLECULAR NATURE OF GINGIVAL AND MUCOSAL COLLAGEN.....	5R01 DE03318-06	62,462
SCHNEPP, OTTO O.....	CIRCULAR DICHROISM STUDIES IN THE VACUUM ULTRAVIOLET.....	5R01 GM14471-09	53,354
SEGAL, GERALD A.....	CIRCULAR DICHROISM SPECTRA IN THE VACUUM ULTRAVIOLET.....	5R01 GM22721-02	30,410
SEITER, CHARLES H.....	SPECTROSCOPIC STUDIES OF RESPIRATORY METALLOPROTEINS.....	5R01 HL19392-02	31,113
SHIH, JEAN C.....	MULTIPLE FORMS (ISOZYMES) OF PHENYLALANINE TRANSAMINASE.....	1R01 CA21494-01	29,756
SINGER, FREDERICK R.....	PATHOGENESIS OF PSEUDOHYPERPARATHYROIDISM.....	5R01 CA17666-02	46,514
SLAVIN, BERNARD G.....	DISTRIBUTION OF ADRENERGIC NERVES IN ADIPOSE TISSUE.....	5R01 HL18283-03	28,630
SLAVKIN, HAROLD C.....	BIOLOGY OF CONNECTIVE TISSUE, BONES, AND TEETH.....	3P01 DE02848-07S1	109,481
SLAVKIN, HAROLD C.....	DERMAL-EPIDERMAL DIFFUSION IN GINGIVAL SULCUS TISSUE.....	5R01 DE03513-06	83,713
SLAVKIN, HAROLD C.....	INTERCELLULAR COMMUNICATION DURING TOOTH FORMATION.....	2R01 DE03569-06	98,266
SMITH, RONALD E.....	EXPERIMENTAL OCULAR HISTOPLASMIC CHOROITIDITIS.....	1R01 EY01883-01	86,518
SMITH, RONALD E.....	SYNTHESIS OF DESCEMET'S MEMBRANE BY CORNEAL ENDOTHELIUM.....	1R01 EY01993-01	106,950
SMITH, RONALD E.....	EFFECTS OF INTRAOCULAR LENSES ON CORNEAL ENDOTHELIUM.....	1R01 EY02043-01	45,099
SORGENTE, NINO.....	ROLE OF VASCULARIZATION DURING CRANIOFACIAL DEVELOPMENT.....	5R01 DE04074-03	45,484
STELLWAGEN, ROBERT H.....	MECHANISM OF ENZYME INDUCTION BY CYCLIC NUCLEOTIDES.....	5R01 CA12563-07	48,096
STEPHENS, PHILIP J.....	INFRARED NATURAL AND MAGNETIC CIRCULAR DICHROISM.....	5R01 GM16263-09	60,495
THOMPSON, LARRY W.....	INFORMATION PROCESSING AND AGING.....	5R01 AG00088-03	46,157
TOKES, ZOLTAN A.....	LIPOSOMES AS ARTIFICIAL VESICLES FOR DRUG DELIVERY.....	1R01 CA21271-01	42,275
TONG, MYRON J.....	HEPATITIS, HAA, AND ANTI-HAA IN MOTHERS AND INFANTS.....	3R01 AI10894-05S1	4,000

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
TONG, MYRON J.....	HEPATITIS, HAA, AND ANTI-HAA IN MOTHERS AND INFANTS.....	5R01 AI10894-06	44,266
VAN ARSDOL, MAURICE D, JR.....	THE OLDER POPULATION OF THE UNITED STATES.....	1R01 AG00631-01	21,524
VOGT, PETER K.....	INTERACTIONS BETWEEN AVIAN TUMOR VIRUSES AND THEIR HOSTS.....	5R01 CA13213-07	130,685
VOGT, PETER K.....	GENETICS OF RNA TUMOR VIRUSES.....	5R01 CA19725-02	129,923
WALSH, DAVID A.....	AGE DIFFERENCES IN VISUAL INFORMATION PROCESSING.....	5R01 AG00521-02	28,405
WALSH, DAVID A.....	AGE DIFFERENCES IN SEMANTIC MEMORY.....	1R01 AG00572-01	40,842
WARSHEL, ARIEH.....	THEORETICAL STUDIES OF THE VISION PROCESS.....	5R01 EY01766-02	21,031
WEIL, MAX H.....	AUTOMATIC DATA COLLECTION DURING CRITICAL CARE.....	5R01 GM16462-13	40,116
WEINER, LESLIE P.....	DEMYELINATING DISEASES CAUSED BY VIRUSES.....	5R01 NS12967-02	38,718
WISNER, JAMES R, JR.....	AGING AND OVARIAN-UTERINE FUNCTION.....	1R01 AG00560-01	40,132
WOLF, WALTER.....	NEW PLATINUM COMPOUNDS AS POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19076-02	49,665
WOLF, WALTER.....	RADIOPHARMACEUTICALS IN CANCER DIAGNOSIS AND MANAGEMENT.....	5P01 CA19438-02	181,749
YATES, FRANCIS E.....	CENTER FOR SYSTEMS ANALYSIS IN PATHOPHYSIOLOGY.....	1P50 GM23732-01	751,360
ORGANIZATION TOTAL	128	13,155,133	
MENLO PARK			
LINUS PAULING INSTITUTE OF SCIENCE AND MEDICINE ZIP CODE 94025			
ROBINSON, ARTHUR B.....	MEDICAL DIAGNOSIS BY MASS SPECTROMETRY.....	5R01 GM21197-04	205,570
ORGANIZATION TOTAL	1	205,570	
SRI INTERNATIONAL ZIP CODE 94025			
ACTON, EDWARD M.....	SYNTHESIS OF SEPTACIDIN ANALOGS AS ANTITUMOR DRUGS.....	3R01 CA15029-03S1	5,902
ACTON, EDWARD M.....	SYNTHETIC ANTITUMOR ANALOGS—ALPHA-DEOXYTHIOGUANOSINE.....	5R01 CA16487-03	61,109
ALMQUIST, RONALD G.....	SYNTHESIS OF POTENTIAL ANTIHYPERTENSIVE AGENTS.....	5R01 HL19538-02	86,943
BARON, WILLIAM S.....	PHOTORECEPTOR INFORMATION PROCESSING IN PRIMATES.....	5R01 EY01579-03	128,537
CHADWICK, JOSEPH H.....	BLOOD PRESSURE EDUCATION IN AN INDUSTRIAL SETTING.....	5R25 HL18424-03	127,497
COLWELL, WILLIAM T.....	SYNTHESIS AND EVALUATION OF PROSTAGLANDIN METABOLITES.....	5R01 HL19066-02	86,946
CRANE, HEWITT D.....	BINOCULAR OCULOMOTOR SYSTEMS AND INTERACTIONS.....	2R01 EY01031-04	128,777
DAVIS, EDWARD E.....	ELECTROPHYSIOLOGICAL STUDY OF MOSQUITO CHEMORECEPTORS.....	2R01 AI10954-04A2	34,644
DAVIS, EDWARD E.....	NEUROPHYSIOLOGY OF TICK PERIPHERAL RECEPTORS.....	1R01 AI13690-01	41,082
DAWSON, MARCIA I.....	POLYMERIC PROBE OF PROSTAGLANDIN-MEMBRANE INTERACTION.....	5R01 GM22672-02	97,426
EDMONDS, PETER D.....	BIOEFFECTS OF LOW INTENSITY ULTRASONIC IRRADIATION.....	5P01 GM22684-03	282,314
EVANS, MICHAEL J.....	INJURY AND TUMOR FORMATION IN THE RAT LUNG.....	1R01 CA19354-01A1	65,845
EVANS, MICHAEL J.....	PULMONARY TISSUE INJURY AND REPAIR.....	2R01 HL16330-05	55,269
FIELDSTEEL, A HOWARD.....	CULTIVATION OF M. LEPRAE IN TISSUE CULTURE.....	2R22 AI08417-08	133,365
FODGE, DOUGLAS W.....	GLUCOCORTICOIDS IN NORMAL AND TRANSFORMED CELLS.....	5R01 CA19627-02	75,151
FREEMAN, GUSTAVE.....	STUDY OF CHRONIC OBSTRUCTIVE LUNG DISEASE.....	2P01 ES00842-06	579,509
GLICK, DAVID.....	QUANTITATIVE HISTOCHEMISTRY OF GASTRIC ACID SECRETION.....	3R01 AM17772-03S1	25,229
GLICK, DAVID.....	HYALURONIDASE AND CANCER.....	3R01 CA17825-02S1	6,570
GREEN, PHILIP S.....	ULTRASONIC CAMERA FOR SOFT TISSUE IMAGING—PART A.....	5R01 GM18780-06	135,552
JENSEN, RICHARD A.....	VAGAL CONTROL OF HEART RATE: A BIOPHYSICAL MODEL.....	5R01 HL19076-02	106,406
JOHNSON, HOWARD L.....	NONMAST CELL HISTAMINE IN THE BRAIN.....	3R01 NS11053-01S1	16,144
KAPLAN, JOEL N.....	MATERNAL BEHAVIOR AND INFANT DEVELOPMENT.....	5R01 HD04905-06	98,918
KELLY, DONALD H.....	PROCESSING OF ELEMENTARY VISUAL STIMULI.....	5R01 EY01128-04	110,804
KLEID, DENNIS G.....	INHIBITION OF SEQUENCE-SPECIFIC DNA-PROTEIN REACTIONS.....	1R01 CA20603-01	65,580
KLEID, DENNIS G.....	MECHANISM OF CARCINOGEN-INDUCED FRAMESHIFT MUTATIONS.....	1R01 CA21593-01	47,156
KUHLMANN, KARL F.....	¹⁹ F NMR STUDY OF BINDING OF DRUGS TO DNA.....	5R01 CA14251-03	66,876
KUHLMANN, KARL F.....	NOVEL ACTINOMYCIN ANALOGS: SYNTHESIS AND DNA-BINDING.....	5R01 CA16486-03	66,389
LAWSON, JOHN A.....	DIAGNOSTIC AGENTS FOR PANCREATIC TUMORS.....	1R26 CA21646-01	64,736
MITCHELL, ANN D.....	DEVELOPMENT OF DNA REPAIR FOR MONITORING HUMAN HEALTH.....	5R01 ES01281-03	87,632
MOSHER, CAROL W.....	ETHIDIUM ANALOGS WITH DNA BASE-SEQUENCE SPECIFICITY.....	5R01 CA19895-02	57,917
PEPPERS, NORMAN A.....	A NEW APPROACH TO ELEMENT ANALYSIS OF SINGLE CELLS.....	1R01 GM23856-01	109,337
PETERS, JOHN H.....	STUDIES OF ANTILEPROSY DRUGS IN ANIMALS AND MAN.....	2R22 AI08214-10	80,267
PIANTANIDA, THOMAS P.....	TEMPORAL PROCESSING IN HUMAN COLOR VISION.....	7R01 EY02357-01	49,348
REBERT, CHARLES S.....	ASYMMETRY OF HUMAN EEG, PERCEPTION AND LEARNING.....	5R01 NS12591-02	72,214
REIST, ELMER J.....	SYNTHESIS OF CNS ANTITUMOR AGENTS.....	5R01 CA13911-05	60,285
REIST, ELMER J.....	NEURAMINIDASE ANTAGONISTS AS ANTIFERTILITY COMPOUNDS.....	5R01 HD07988-03	63,066
REIST, ELMER J.....	PLANT SAPONINS WITH ANTIFERTILITY ACTIVITY.....	5R01 HD09919-02	66,178

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SKINNER, WILFRED A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05522-15	159,949
TANABE, MASATO.....	BIOSYNTHETIC STUDIES WITH CARBON-13.....	5R01 AI08143-08	73,376
TANABE, MASATO.....	C-13 SUBSTITUTED STEROIDS AS ANTIFERTILITY AGENTS.....	5R01 HD09978-02	72,713
VOLD, BARBARA S.....	ROLE OF TRNA IN CELLULAR REGULATORY MECHANISMS.....	7R01 GM24842-01	130,765
WEAVER, CHARLES S.....	WEARABLE BLOOD PRESSURE AND ECG RECORDING SYSTEM.....	5R01 HL17604-03	182,844
ORGANIZATION TOTAL	42	4,066,567	
NORTHRIDGE			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE		ZIP CODE 91324	
LEFEVRE, GEORGE, JR.....	COMPARATIVE STUDIES ON INDUCED MUTATION IN DROSOPHILA.....	5R01 GM13631-12	59,098
OPPENHEIMER, STEVEN B.....	MOLECULAR BASIS OF INTERCELLULAR ADHESION.....	5R01 CA12920-06	33,764
ORGANIZATION TOTAL	2	92,862	
OAKLAND			
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA		ZIP CODE 94609	
ABRAHAM, SAMUEL.....	ALTERED GENOME EXPRESSION IN PRENEOPLASIA AND NEOPLASIA.....	5R01 CA11736-08	151,468
ABRAHAM, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05467-09	44,785
BARTLEY, JOHN C.....	STUDY OF COORDINATION OF INTRACELLULAR ACTIVITIES.....	5R01 GM19837-05	62,854
CERIANI, ROBERTO L.....	USE OF CELL MEMBRANES TO ASSESS PHENOTYPIC EXPRESSION.....	5R01 CA19455-02	63,653
FELDMAN, MARTIN K.....	REGULATION OF MAMMARY EPITHELIUM IN CELL CULTURE.....	5R01 CA15764-03	67,876
FOSTER, ROY C.....	MILK SECRETION IN MAMMARY EPITHELIUM IN VITRO.....	5R01 HD09233-03	80,112
GREEN, GARY M.....	NUTRITIONAL SIGNIFICANCE OF INTESTINAL PROTEOLYSIS.....	2R01 AM17737-04	89,759
LUBIN, BERTRAM H.....	MECHANISM OF INHIBITION OF SICKLING BY IMIDO ESTERS.....	5R01 HL17357-02	43,908
MORETTI, RICHARD L.....	MECHANISMS IN LOCAL REGULATION OF CORONARY FLOW.....	5R01 HL18979-02	14,753
MORETTI, RICHARD L.....	LOCAL REGULATION OF CORONARY FLOW BY PROSTAGLANDINS.....	5R01 HL19218-02	44,429
THOMPSON, KAREN.....	CELL SURFACE MODULATION IN MAMMARY NEOPLASIA.....	1R01 CA18946-01A1	71,157
ORGANIZATION TOTAL	11	734,754	
KAISER FOUNDATION HOSPITALS—KAISER FOUNDATION RESEARCH INSTITUTE		ZIP CODE 94612	
CUTTING, CECIL C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05521-15	41,864
FRIEDMAN, GARY D.....	SURVEILLANCE FOR DRUGS THAT MAY BE CARCINOGENIC.....	1R01 CA19939-01	105,324
GLASS, ANDREW G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20148-01	40,809
ORGANIZATION TOTAL	3	187,997	
PALO ALTO			
NORTHERN CALIFORNIA CANCER PROGRAM, INC.		ZIP CODE 94304	
CARTER, STEPHEN K.....	NORTHERN CALIFORNIA ONCOLOGY GROUP.....	1R10 CA21744-01	550,000
ROSENBERG, SAUL A.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA19408-02	467,896
ORGANIZATION TOTAL	2	1,017,896	
PALO ALTO MEDICAL RESEARCH FOUNDATION		ZIP CODE 94301	
HOFSTEE, BAREND H.....	PROTEIN FRACTIONATION ON HYDROPHOBICITY GRADIENTS.....	5R01 GM22545-02	48,577
INGELS, NEIL B, JR.....	VENTRICULAR DYNAMICS FROM SURGICALLY INSERTED MARKERS.....	5R01 HL17993-03	202,372
KRUPP, MARCUS A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05513-15	40,947
LITTLE, HUNTER L.....	ROLE OF ABNORMAL HEMORHEOLOGY IN DIABETIC RETINOPATHY.....	3R01 EY01254-02S1	34,709
REMINGTON, JACK S.....	TOXOPLASMOSIS: NATURE OF INFECTION & IMMUNE RESPONSE.....	2R01 AI04717-16	233,316
REMINGTON, JACK S.....	ROLE OF TOXOPLASMA IN CANCER PREVENTION AND THERAPY.....	5R01 CA17545-03	57,717
ORGANIZATION TOTAL	6	617,638	
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY		ZIP CODE 91125	
ALLMAN, JOHN M.....	FUNCTIONAL ORGANIZATION OF VISUAL CORTEX.....	2R01 NS12131-04	48,064
ATTARDI, GIUSEPPE.....	GENE EXPRESSION AND CONTENT IN CELL DIFFERENTIATION.....	5R01 GM11726-14	246,262
BALDESCHWIELER, JOHN D.....	STUDY OF BIOLOGICAL SYSTEMS BY NEW PHYSICAL METHODS.....	5R01 GM21111-05	94,541
BERGMAN, ROBERT G.....	METAL- AND MICELLE-CATALYZED CYCLIZATION REACTIONS.....	5R01 GM16231-09	69,054

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BOETTGER, HEINZ G.....	MASS SPECTROMETRY RESOURCE FOR BIOMEICAL APPLICATIONS.....	1P41 RR00922-01A1	42,012
BONNER, JAMES F.....	MOLECULAR BASIS OF GENETIC CONTROL.....	5R01 GM13762-12	218,963
BROKAW, CHARLES J.....	MECHANISMS OF MOVEMENT OF SIMPLE SPERM FLAGELLA.....	5R01 GM18711-06	68,732
CHAN, SUNNEY I.....	STUDIES OF LIPO-LIPO AND LIPID-PROTEIN INTERACTIONS.....	5R01 GM22432-03	135,899
DAVIDSON, ERIC H.....	STUDY OF SEQUENCE STRUCTURE OF THE EUKARYOTIC GENOME.....	5P01 GM20927-03	191,670
DAVIDSON, ERIC H.....	OOGENESIS AND GENE CONTROL IN ANIMAL REPRODUCTION.....	5R01 HD05753-08	200,137
DAVIDSON, ERIC H.....	YEAR ROUND S. PURPURATUS RESEARCH RESOURCE.....	5P40 RR00986-03	46,333
DAVIDSON, NORMAN R.....	PHYSICAL CHEMISTRY OF NUCLEIC ACIDS.....	2R01 GM10991-18	175,310
DERVAN, PETER B.....	PROTEIN-NUCLEIC ACID CROSS-LINKING REAGENTS.....	5R01 GM22909-02	38,405
DICKERSON, RICHARD E.....	STRUCTURE AND FUNCTION OF PROTEINS.....	5R01 GM12121-13	144,197
DICKERSON, RICHARD E.....	DNA SYNTHESIS AND INTERACTION WITH PROTEINS AND DRUGS.....	1R01 GM24393-01	95,602
DREYER, WILLIAM J.....	MICROSEQUENCE STUDIES OF CELL SURFACE ANTIGENS.....	1R01 AI14059-01	84,353
DREYER, WILLIAM J.....	MOLECULAR STUDIES OF NEW TUMOR ANTIGENS.....	5R01 CA15926-04	67,048
EVANS, DAVID A.....	ANTICANCER AND NEUROTOXIC ALKALOID SYNTHESIS.....	5R01 CA17904-02	72,444
EVANS, DAVID A.....	PROSTAGLANDIN SYNTHESIS.....	5R01 GM21746-03	43,521
EVANS, OAVIO A.....	SYNTHESIS OF CATION MEMBRANE CARRIER LIGANDS.....	1R01 GM23991-01	51,080
FENOER, OEREK H.....	NONLINEAR IDENTIFICATION OF RETINAL BIOPOTENTIALS.....	5R01 EY01526-03	46,406
FENOER, OEREK H.....	NEW INSTRUMENTATION FOR CLINICAL EVALUATION OF THE ERG.....	1R01 EY01774-01A1	53,985
GAGNE, ROBERT R.....	MODEL INORGANIC SYSTEMS FOR COPPER PROTEINS.....	5R01 AM18319-03	32,577
GODDARD, WILLIAM A, III.....	MECHANISM & STRUCTURE IN OXYGEN BINDING & REDOX PROTEINS.....	1R01 GM23971-01	97,150
HOOD, LEROY E.....	GENETICS OF ANTIBODY DIVERSITY, EXPRESSION AND EVOLUTION.....	5R01 AI10781-07	143,093
HOROWITZ, NORMAN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07003-12	195,895
HUDSPETH, ALBERT J.....	TRANSDUCTION MECHANISM OF HAIR CELLS.....	5R01 NS13154-02	57,609
IRELAND, ROBERT E.....	THE SYNTHESIS OF APHIDICOLIN AND TIRANDAMYCIN.....	5R01 CA18191-03	48,026
IRELAND, ROBERT E.....	POLYETHER IONOPHORES: SYNTHESIS OF X537A AND ANALOGS.....	1R01 HL21367-01	97,910
KONISHI, MASAKAZU.....	SEXUAL DIFFERENTIATION OF BRAIN AND BEHAVIOR.....	1R01 HD10501-01	47,152
KONOPKA, RONALD J.....	GENETIC AND NEURAL ORGANIZATION OF A CIRCAOIAN SYSTEM.....	5R01 GM22227-03	56,999
LEWIS, EDWARD B.....	GENETIC CONTROL OF DEVELOPMENTAL PATHWAYS.....	2R01 HD06331-06	94,363
MANIATIS, THOMAS P.....	CHROMOSOME STRUCTURE AND GENE CONTROL IN SV40.....	7R01 GM24716-01	63,775
MARSH, RICHARD E.....	CRYSTAL STRUCTURE STUDIES ON COMPOUNDS RELATED TO DNA.....	5R01 GM16966-08	66,240
MC CANN, GILBERT D.....	LIGHT TRANSDUCTION AND COLOR VISION.....	1R01 EY01822-01	57,426
MC CANN, GILBERT O.....	STUDY OF CEREBRAL AND RELATED SYSTEMS.....	3P01 NS03627-14S1	120,001
NORRIS, DAVID D.....	AN INTEGRATING ELECTRO-OPTICAL MS ION DETECTOR.....	2R01 GM20850-03	363,494
PETTIGREW, JOHN D.....	COMPARATIVE PHYSIOLOGY OF BINOCULAR VISION.....	1R01 EY01909-01	63,150
RAFTERY, MICHAEL A.....	NEUROCHEMISTRY AND KINETICS OF SYNAPTIC TRANSMISSION.....	5R01 NS10294-06	80,288
RAFTERY, MICHAEL A.....	CHEMISTRY AND KINETICS OF AXONAL CONDUCTION.....	5R01 NS12018-12	83,288
REMBBAUM, ALAN.....	IMMUNOMICROSPHERES FOR CELL MEMBRANE RECEPTORS STUDY.....	1R01 CA20668-01	69,903
REVEL, JEAN P.....	MOLECULAR BASIS OF SPECIFICITY IN CELLULAR MEMBRANES.....	5P01 GM06965-18	513,475
RICHARDS, JOHN H.....	MOLECULAR STUDIES OF THE IMMUNE RESPONSE.....	1R01 CA23028-01	62,446
RICHARDS, JOHN H.....	MECHANISM OF ENZYME ACTION.....	5R01 GM10218-15	48,249
RICHARDS, JOHN H.....	ENZYME SYSTEMS USING NUCLEAR MAGNETIC RESONANCE.....	5R01 GM16424-09	85,588
RICHARDS, JOHN H.....	HEME PROTEINS, ERYTHROCYTES, AND SICKLE CELL ANEMIA.....	5R01 HL15198-05	54,220
ROBERTS, JOHN O.....	NITROGEN-15 AND CARBON-13 NMR SPECTROSCOPY.....	2R01 GM11072-15	110,533
SCHAEFER, WILLIAM P.....	X-RAY STUDY OF OXYGEN-CARRYING COBALT COMPLEXES.....	5R01 HL12395-09	40,438
SCHROEDER, WALTER A.....	STRUCTURE-FUNCTION RELATIONSHIPS IN THE HEME PROTEINS.....	5R01 HL02558-21	121,661
STRAUSS, JAMES H.....	A GENETIC ANALYSIS OF SINDBIS VIRUS.....	5R01 AI10793-06	64,801
STRUMWASSER, FELIX.....	MECHANISMS OF INNATE AND ENTRAINEO PATTERNS IN NEURONS.....	5R01 NS07071-11	105,191
STRUMWASSER, FELIX.....	PEPTIDERGIC AND CIRCADIAN NEURONS IN TISSUE CULTURE.....	1R01 NS13896-01	79,912
VAN ESSEN, DAVID C.....	LAMINAR ORGANIZATION OF EXTRASTRIATE VISUAL CORTEX.....	1R01 EY02091-01	84,215
WAYLAND, HAROLD.....	QUANTITATION OF FLOW AND SOLUTE FLUX IN MICROVESSELS.....	5R01 HL08977-13	132,734
WOOD, WILLIAM B.....	BIOCHEMISTRY AND GENETIC CONTROL OF VIRUS ASSEMBLY.....	5R01 AI09238-09	130,863
ORGANIZATION TOTAL	55	5,706,683	
HUNTINGTON MEMORIAL HOSPITAL ZIP CODE 91105			
AGNEW, WILLIAM F.....	C.S.F. SECRETION: STRUCTURE AND FUNCTION.....	1R01 NS12906-01A1	68,844
KETENJIAN, ARA Y.....	MECHANISMS OF CALCIFICATION IN FRACTURE HEALING.....	5R01 AM19462-02	65,527
ORGANIZATION TOTAL	2	134,371	
PASADENA FOUNDATION FOR MEDICAL RESEARCH ZIP CODE 91101			
KAIGHN, M EDWARD.....	MONOLAYER CULTURES OF HUMAN PROSTATIC CARCINOMA.....	2R26 CA19826-02	90,170

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	1	90,170	
REDLANDS			
UNIVERSITY OF REDLANDS	ZIP CODE 92373		
IFFT, JAMES B.....	PHYSICAL CHEMISTRY OF PROTEINS IN SALT SOLUTIONS.....	2R01 GM18871-10	41,045
ORGANIZATION TOTAL	1	41,045	
RIVERSIDE			
UNIVERSITY OF CALIFORNIA AT RIVERSIDE	ZIP CODE 92502		
BUTLER, EDGAR W.....	SOCIAL WELL-BEING AND HEALTH OF THE AGED ACROSS TIME.....	1R01 AG00320-01	141,709
FEDERICI, BRIAN A.....	EVALUATION OF COELOMOMYCES FUNGI FOR MOSQUITO CONTROL.....	1R01 AI2772-01A2	17,763
FURLONG, CLEMENT E.....	INVESTIGATIONS OF MEMBRANE TRANSPORT SYSTEMS.....	5R01 GM18311-06	32,773
GIBIAN, MORTON J.....	STUDIES ON PROSTAGLANDIN SYNTHETASE AND LIPOXYGENASE.....	5R01 GM21903-03	41,080
HAMMOCK, BRUCE D.....	BIODEGRADABLE PESTICIDES BASED ON HORMONE METABOLISM.....	1R01 ES01260-01	35,088
HEATH, ROBERT L.....	ALTERATIONS OF CELL MEMBRANES AND METABOLISM BY OZONE.....	5R01 ES01204-03	33,391
HELMKAMP, GEORGE K.....	SYNTHESIS OF POTENTIAL NEW PSYCHOACTIVE MOLECULES.....	5R01 GM20602-03	35,685
HOLTEN, DAROLD D.....	NUTRITIONAL & HORMONAL CONTROL OF G-6-P04 DEHYDROGENASE.....	5R01 AM13324-09	64,038
LUBEN, RICHARD A.....	CHARACTERIZATION OF OSTEOCLAST ACTIVATING FACTORS.....	7R23 DE04766-01	9,830
MILLER, THOMAS A.....	MODE OF ACTION OF INSECTICIDES.....	2R01 ES00814-07A1	28,510
MUDD, JOHN B.....	BIOCHEMICAL EFFECTS OF AIR POLLUTANT OXIDANTS.....	5R01 ES00917-03	41,013
MULLA, MIR S.....	HOUSE-DUST MITES & ALLERGY, PREVENTIVE MEASURE & CONTROL.....	5R01 AI11329-03	32,517
NOLTMANN, ERNST A.....	STUDIES ON PHOSPHOHEXOSE ISOMERASES.....	5R01 AM07203-15	82,856
NOLTMANN, ERNST A.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09070-01	95,868
NORMAN, ANTHONY W.....	STUDIES ON VITAMIN D AND CALCIUM METABOLISM.....	5R01 AM09012-13	56,482
NORMAN, ANTHONY W.....	STUDIES ON VITAMIN D METABOLISM IN HUMANS.....	3R01 AM14750-06S1	35,295
OKAMURA, WILLIAM H.....	PREPARATION OF VITAMIN D ANALOGS AND METABOLITES.....	2R01 AM16595-04	78,918
OLSEN, RICHARD W.....	MOLECULAR MECHANISMS OF NEUROTRANSMITTER ACTION.....	5R01 NS12422-03	23,220
PETRINOVICH, LEWIS F.....	STUDIES OF HABITUATION.....	2R01 HD04343-06	42,095
REID, BRIAN R.....	ENZYMATIC RECOGNITION OF TRANSFER OF RNA.....	5R01 CA11697-07	44,296
RIESEN, AUSTIN H.....	SOMATOSENSORY DEPRIVATION: BRAIN-BEHAVIORAL EFFECTS.....	5R01 HD10408-14	23,709
SAWYER, DONALD T.....	MN COMPLEXES AS MODELS FOR SOD AND O2 PHOTOSYNTHESIS.....	5R01 GM22761-02	57,376
SHERMAN, IRWIN W.....	HOST-PARASITE INTERRELATIONSHIPS IN THE MALARIAS.....	5R01 AI05226-13	61,382
SHERMAN, IRWIN W.....	MEMBRANE STUDIES WITH MALARIAL PARASITES.....	5R01 AI13422-02	64,648
SHOREY, HARRY H.....	PHEROMONES AND REGULATION OF NEMATODE MATING BEHAVIOR.....	1R01 AI14194-01	63,416
THOMSOM, WILLIAM W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07010-12	72,709
TRAUGH, JOLINDA A.....	EFFECTS OF RIBOSOME PHOSPHORYLATION ON TRANSLATION.....	3R01 GM21424-02S1	1,742
TRAUGH, JOLINDA A.....	EFFECTS OF RIBOSOME PHOSPHORYLATION ON TRANSLATION.....	2R01 GM21424-03	67,098
ORGANIZATION TOTAL	28	1,384,507	
SACRAMENTO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY	ZIP CODE 95814		
DUNN, JOHN E, JR.....	INCIDENCE OF INVASIVE CERVICAL CANCER.....	5R01 CA19846-02	45,086
LENNETTE, EDWIN H.....	STUDIES ON THE PATHOGENESIS OF NAEGLERIA INFECTIONS.....	5R01 AI13345-02	61,270
PAFFENBARGER, RALPH S, JR.....	REPRODUCTIVE CAPACITY AND BREAST OR OVARY CANCER RISK.....	5R01 CA17838-03	207,954
PAFFENBARGER, RALPH S, JR.....	EPIDEMIOLOGIC STUDY OF ENDOMETRIAL CANCER.....	5R01 CA18401-02	111,079
ORGANIZATION TOTAL	4	425,389	
SAN DIEGO			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM-SAN DIEGO STATE UNIVERSITY	ZIP CODE 92115		
ABBOTT, MITCHEL T.....	ENZYMOLGY OF THE OXIDATIVE METABOLISM OF THYMIDINE.....	5R01 AM09314-13	27,392
DAHMS, A STEPHEN.....	CHEMICAL PROBES AT MEMBRANE STRUCTURE AND FUNCTION.....	5R01 GM22197-03	46,638
LEBHERZ, HERBERT G.....	REGULATION OF ALDOLASE SYNTHESIS.....	5R01 GM23045-02	58,857
SPINETTA, JOHN J.....	ADJUSTMENT AND ADAPTATION IN CHILDREN WITH CANCER.....	1R18 CA21254-01	195,305
ORGANIZATION TOTAL	4	328,192	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
CHILDREN'S HOSPITAL AND HEALTH CENTER ZIP CODE 92123			
SUTHERLAND, DAVID H.....	GAIT STUDY OF NDRMAL CHILDREN IN THEIR GRDWING YEARS.....	5R01 HD08520-02	99,045
ORGANIZATION TOTAL	1 99,045		
LABORATORY FOR COMPARATIVE BIOCHEMISTRY ZIP CODE 92109			
BARTLETT, GRANT R.....	RED CELL METABDLISM.....	5R01 HL06950-16	63,297
BARTLETT, GRANT R.....	RED CELL STORAGE AND TRANSFUSION.....	5R01 HL16931-03	94,174
ORGANIZATION TDAL	2 157,471		
MERCY HOSPITAL AND MEDICAL CENTER ZIP CODE 92103			
GELLER, JACK.....	EFFECT DF PROGESTERDNE DN PRDSTATE SIZE AND MORPHDLGY.....	5R01 CA12448-07	46,631
GELLER, JACK.....	BIOCHEMICAL STUDY DF PRDSTATE CANCER DIFFERENTIATIDN.....	5R26 CA18003-02	26,161
ORGANIZATION TOTAL	2 72,792		
ZOOLOGICAL SOCIETY OF SAN DIEGO ZIP CODE 92112			
BENIRSCHKE, KURT.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09002-01	99,868
LASLEY, BILLY L.....	STERDID LEVELS IN THE NINE-BANDED ARMADILLD.....	5R01 HD10190-02	24,340
RYDER, OLIVER A.....	CDMPARATIVE MDLECULAR CYTOGENETICS.....	5R01 GM23073-02	23,750
ORGANIZATION TDAL	3 147,958		
SAN FRANCISCO			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN FRANCISCO STATE UNIVERSITY ZIP CGDE 94132			
PLACHY, WILLIAM Z.....	MOLECULAR OXYGEN IN BIOLOGICAL FLUIDS.....	5R01 HL19065-02	27,784
ORGANIZATION TOTAL	1 27,784		
INSTITUTES OF MEDICAL SCIENCES ZIP CODE 94120			
ADELSON, JDEL W.....	CHYMODENIN: STIMULATIDN DF ENZYME-SELECTIVE SECRETIDN.....	3R01 AM19973-01S1	19,805
BACH-Y-RITA, PAUL.....	PERIPHERAL NEURDPHYSIOLOGY DF EYE MDVEMENTS.....	5R01 EY01474-02	121,842
COGAN, ALEXANDER I.....	INTEROCULAR SUPPRESSIDN IN STRABISMUS.....	5R01 EY01558-02	51,482
CDLLINS, CARTER C.....	PDRTABLE SEEING AID.....	5R01 EY00686-06	86,389
COLLINS, CARTER C.....	STUDY DF VISUAL SCIENCES.....	5P30 EY01186-05	136,653
COLLINS, CARTER C.....	HUMAN OCULOMOTOR MOTILITY.....	5R01 EY01719-02	83,913
FALLAT, ROBERT J.....	ALPHA-1-ANTITRYPSIN DEFICIENCY & PULMDNARY DISEASE.....	5R01 HL14692-06	62,673
GLASER, CHARLES B.....	COMPARISDN DF TWD INHERITED FDRMS DF ALPHA-1-ANTITRYPSIN.....	3R01 HL17194-02S1	7,463
GLASER, CHARLES B.....	CDMPARISDN DF TWD INHERITED FORMS DF ALPHA-1-ANTITRYPSIN.....	5R01 HL17194-03	62,737
JAMPOLSKY, ARTHUR.....	CLINICAL STRABISMUS CENTER GRANT.....	3P50 EY01585-02S1	39,367
KARIC, LUCIJA STANCIC.....	EXTRACDRPDREAL CIRCULATIDN AND PRTEIN DENATURATIDN.....	1R23 HL21271-01	35,335
LEVY, JDSEPH V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05566-14	85,519
NAKAYAMA, KEN.....	THREE-DIMENSIDNAL EYE RDATIDN MEASUREMENTS: STRABISMUS.....	5R01 EY01582-03	46,153
PERSIDSKY, MAXIM D.....	GRANULDCYTES BANKING TECHNIQUES.....	2R01 CA12754-06A1	69,136
PERSIDSKY, MAXIM D.....	PRESERVATIDN DF HUMAN PLATELETS FDR TRANSFUSIDN 76-1.....	1R01 HL20788-01	46,245
RODVLEN, RDBERT.....	SURFACE-INDUCED THRDMBDSIS—ALBUMIN VARIANT MDDIFICATIDN.....	1R01 HL20313-01	54,986
TYLER, CHRISTOPHER W.....	ETIOLOGY AND DIAGNDSIS DF RETINAL AND CDRITICAL DISDRDERS.....	1R01 EY02124-01	53,003
WILLIAMS, GEORGE Z.....	NORMAL HEALTH PRDFILE STUDY.....	5R01 GM17369-08	624,046
ORGANIZATION TOTAL	18 1,686,747		
MOUNT ZION HOSPITAL AND MEDICAL CENTER ZIP CODE 94115			
BEADNER, SOL A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05472-15	22,176
CASTRO, JDSEPH R.....	EXPLDRATDRY STUDIES FOR CANCER PATIENT REHABILITATION.....	3R18 CA16873-02S1	60,132
FRIEDMAN, MEYER.....	BEHAVIORAL CHANGES IN PDST INFARCTIDN PATIENTS.....	1R01 HL21427-01	195,012
LEEDS, SANFORD E.....	RELATIDN DF LYMPHATICS TD CARDIDPULMDNARY FUNCTIDN.....	5R01 HL03180-20	75,088
RDSENMAN, RAY H.....	CENTRAL NERVDUS SYSTEM AND CDRDNARY HEART DISEASE.....	5R01 HL03429-18	55,337
DRGANIZATION TOTAL	5 407,745		
SCIENTIFIC ANALYSIS CORPORATION ZIP CODE 94123			
MILLER, DORDTHY L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05782-02	38,673
ORGANIZATION TDAL	1 38,673		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE-PHS HOSPITAL ZIP CODE 94118			
SMITH, WILLIAM M.....	COOPERATIVE STUDY OF TREATMENT OF HYPERTENSION.....	5R01 HL10711-12	157,906
WELCH, THEODOSIA M.....	PHARMACOLOGY AND BIOLOGY OF EXPERIMENTAL LEPROSY.....	5R22 AI07801-11	79,776
ORGANIZATION TOTAL	2 237,682		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143			
ABLIN, ARTHUR R.....	CHILDREN'S CANCER STUDY GROUP.....	3R10 CA17829-01S2	63,189
ALBERTS, BRUCE M.....	BIOCHEMISTRY OF GENE REGULATION IN HIGHER EUKARYOTES.....	1R01 GM23928-01	106,539
ALBERTS, BRUCE M.....	DNA-PROTEIN INTERACTIONS IN DNA-REPLICATION CONTROL.....	5R01 GM24020-02	92,892
ALVARADO, JORGE A.....	PATHOGENESIS OF MACULAR DEGENERATION.....	5R01 EY00799-06	57,035
ALVARADO, JORGE A.....	TISSUE CHANGES IN AGING AND IN GLAUCOMATOUS EYES.....	1R01 EY02068-01	83,856
ALY, RAZA.....	SURVIVAL OF PATHOGENIC MICROORGANISMS ON HUMAN SKIN.....	5R01 AI10856-05	43,835
ARIEFF, ALLEN I.....	BLOOD BRAIN BARRIER AND CARBOHYDRATE METABOLISM.....	5R01 AM18350-04	51,449
ARNAUD, CLAUDE D.....	PARATHYROID HORMONE AND CALCITONIN.....	7R01 AM21614-01	59,300
ARNAUD, SARA B.....	25 HYDROXYVITAMIN D METABOLISM IN GI DISEASE.....	7R01 AM21595-01	35,106
BAINTON, DOROTHY F.....	MATURATION AND FUNCTION OF WBC AND MEGAKARYOCYTES.....	5R01 AM10486-12	55,180
BAINTON, DOROTHY F.....	PATHOLOGY OF CELL DIFFERENTIATION IN LEUKEMIA.....	5R01 CA14264-05	44,768
BARRETT, SONDR A.....	MYELOID CELL SURFACE RECEPTORS: NORMAL & LEUKEMIC.....	1R01 CA20575-01	60,152
BAUMRIND, SHELDON.....	DENTOFACIAL EFFECTS OF FORCES TO RETRACT THE MAXILLA.....	5R01 DE03598-05	58,560
BAUMRIND, SHELDON.....	INTEGRATED THREE-DIMENSIONAL CRANIOFACIAL MEASUREMENT.....	2R01 DE03703-02	62,894
BAXTER, JOHN D.....	MECHANISM OF THYROID HORMONE ACTION.....	5R01 AM18878-02	45,614
BAXTER, JOHN D.....	GROWTH HORMONE GENE: PURIFICATION AND REGULATION.....	1R01 AM19997-01	87,425
BAXTER, JOHN D.....	MECHANISM OF HORMONE HYPERRESPONSIVENESS IN GLAUCOMA.....	5R01 EY01785-02	58,707
BAXTER, JOHN D.....	ROLE OF STEROIDS IN HYPERTENSION.....	2R01 HL16918-04	78,583
BHATNAGAR, RAJENDRA S.....	BIOCHEMISTRY OF LUNG CONNECTIVE TISSUES.....	5R01 HL19668-02	85,819
BIGLIERI, EDWARD G.....	SECRETORY STEROID MIXTURES OF ADRENAL CORTEX.....	2R01 AM06415-16	101,745
BISHOP, J MICHAEL.....	ROUS SARCOMA VIRUS: REPLICATION AND CELL TRANSFORMATION.....	5R01 CA12705-07	432,850
BLAISDELL, F WILLIAM.....	TRAUMA RESEARCH PROGRAM.....	3P50 GM18470-05S2	88,489
BLAISDELL, F WILLIAM.....	TRAUMA RESEARCH PROGRAM.....	2P50 GM18470-06A1	436,624
BLAISDELL, F WILLIAM.....	INTRAVASCULAR COAGULATION IN THE BURN PATIENT.....	5R01 GM24033-02	94,888
BLOIS, MARSDEN S, JR.....	STUDIES ON THE BIOPHYSICS AND BIOCHEMISTRY OF MELANINS.....	1R01 AM19994-01	70,613
BLOIS, MARSDEN S, JR.....	STUDIES ON THE PATHOBIOLOGICAL CHEMISTRY OF MELANOMA.....	1R01 CA20423-01	67,165
BOLDREY, EDWIN B.....	ACUTE TREATMENT OF RUPTURED INTRACRANIAL ANEURYSMS.....	5R01 NS12497-03	15,413
BRADLEY, THOMAS B, JR.....	STUDIES OF ABNORMAL HEMOGLOBINS AND FIBRINOGENS.....	3R01 HL15329-05S1	4,302
BRADLEY, THOMAS B, JR.....	STUDIES OF ABNORMAL HEMOGLOBINS AND FIBRINOGENS.....	5R01 HL15329-06	57,719
BRECHER, GEORGE.....	HEMOPOIETIC DIFFERENTIATION. MACROCYTIC ANEMIA.....	5R01 CA14679-05	67,130
BROWN, KENNETH T.....	NEUROPHYSIOLOGY OF THE VERTEBRATE RETINA.....	5R01 EY00468-18	160,202
BYERS, VERA S.....	IN VITRO STUDIES ON POISON OAK IMMUNITY IN HUMANS.....	1R01 AI12947-01A2	59,405
BYERS, VERA S.....	HUMAN TRANSFER FACTOR, IN VITRO PRODUCTION & ASSAY.....	5R01 AI13157-02	103,072
CALARCO, PATRICIA G.....	INTRACISTERIAL A PARTICLES IN MOUSE DEVELOPMENT.....	5R01 CA16493-03	49,697
CASEY, WILLIAM J.....	APPLICATION OF EXPERIMENTAL ANIMAL MODELS TO GLAUCOMA.....	5R01 EY00418-09	76,412
CHAR, DEVRON H.....	EYE TUMORS: IN VITRO IMMUNODIAGNOSIS AND MONITORING.....	1R01 EY01441-01A2	53,453
CHAR, DEVRON H.....	UVEITIS: SPECIFIC AND NONSPECIFIC CELLULAR REACTIVITY.....	5R01 EY01759-02	72,937
CHAR, DEVRON H.....	EYE DISEASE HISTOCOMPATIBILITY ANTIGENS.....	1R01 EY02072-01	44,920
CHARLTON, VALERIE E.....	FETAL NUTRITION VIA THE GASTROINTESTINAL TRACT.....	1R01 HD11109-01	84,459
CLYMAN, RONALD I.....	PERINATAL CONTROL OF THE DUCTUS ARTERIOSUS.....	1R23 HL21409-01	38,829
COHEN, FRANCES.....	CHILDHOOD EMOTION AND ADULT CANCER AND HEART DISEASE.....	1R01 CA22909-01	26,276
CONNELL, CAROLYN J.....	THE EFFECT OF HCG ON SERTOLI CELLS.....	2R01 HD10033-03	57,157
COPENHAGEN, DAVID R.....	SYNAPTIC INTERACTION IN THE VERTEBRATE RETINA.....	1R01 EY01869-01	83,730
CORREIA, MARIA A.....	COLONIC CYTOCHROME P-450: CHEMICAL CARCINOGENESIS ROLE.....	1R26 CA22369-01	52,791
CREASY, ROBERT K.....	RESPONSES OF THE GROWTH RETARDED FETUS TO ACUTE STRESS.....	5R01 HD06619-05	86,101
DAENTL, DONNA L.....	POLYAMINES AND MAMMALIAN REPRODUCTION.....	1R01 HD10531-01	38,700
DALLMAN, PETER R.....	CELLULAR ADAPTATIONS TO IRON DEFICIENCY.....	5R01 AM13897-08	86,335
DAUPHINEE, MICHAEL J.....	THYMOSIN DEFICIENCY IN CANCER, AGING AND AUTOIMMUNITY.....	1R01 AG00991-01	43,335
DAUPHINEE, MICHAEL J.....	SUPPRESSOR DEFECT, AUTOIMMUNITY AND NEOPLASIA.....	1R01 CA22518-01	30,634
DAVIS, BRIAN.....	REGULATION OF AIRWAY MUCOUS GLANDS AND ION TRANSPORT.....	1R23 HL21150-01	36,175
DAWSON, CHANDLER R.....	ANALYSIS OF PROBLEMS IN OCULAR INFLAMMATORY DISEASES.....	5R01 EY00427-08	161,416
DAWSON, CHANDLER R.....	PATHOGENESIS AND EARLY DIAGNOSIS OF EYE INFLAMMATIONS.....	3R01 EY01198-03S1	60,824
DENNIS, MICHAEL J.....	PHYSIOLOGY OF SYNAPSES DEVELOPING IN VIVO.....	5R01 NS10792-05	62,272

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
DRUMMOND, WILLA H.....	MECHANISMS OF FETAL AND NEONATAL ASPHYXIC SYNDROMES.....	5R01 HD10682-02	38,568
DURBIN, RICHARD P.....	SURFACE ENZYMES OF INTACT GASTRIC MUCOSA.....	5R01 AM18395-02	64,149
EBERT, PAUL A.....	EVALUATION OF REJECTION OF CARDIAC TRANSPLANTS.....	3R01 HL18837-02S1	2,478
EDELMAN, ISIDORE S.....	CELL MEMBRANE DETERMINANTS OF NAC1 TRANSPORT IN SKIN.....	2R01 AM13659-07	37,509
ELIAS, HANS.....	GROWTH OF INTRAHEPATIC BILE DUCTS (CHOLANGIOGENESIS).....	5R01 AM19171-02	35,542
ELIAS, PETER M.....	NATURE OF THE MAMMALIAN CUTANEOUS PERMEABILITY BARRIER.....	5R01 AM19098-02	73,963
ELIAS, PETER M.....	NORMAL AND MALIGNANT KERATINOCYTE SURFACE STRUCTURE.....	1R01 CA19522-01A1	31,340
ENGLEMAN, EPHRAIM P.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20684-01	257,826
EPSTEIN, CHARLES J.....	STUDY OF HUMAN GENETICS.....	3P50 GM19527-05S1	193,500
EPSTEIN, CHARLES J.....	MOLECULAR EFFECTS OF CHROMOSOMAL ANEUPLOIDY.....	1R01 GM24309-01	58,050
EPSTEIN, CHARLES J.....	BIOCHEMISTRY OF EARLY MAMMALIAN DEVELOPMENT.....	5R01 HD03132-10	68,284
EPSTEIN, ERVIN H, JR.....	GLUCOCORTICOID INTERACTION WITH HUMAN SKIN.....	5R01 AM18495-03	52,388
EPSTEIN, JOHN H.....	CHEMOTHERAPEUTIC AGENTS AND ULTRAVIOLET CARCINOGENESIS.....	2R01 CA15605-04	42,570
EPSTEIN, LOIS B.....	INTERFERON AS A MEDIATOR OF CELLULAR IMMUNITY.....	5R01 AI12481-03	89,997
EPSTEIN, WILLIAM L.....	STUDIES OF GRANULOMATOUS HYPERSENSITIVITY.....	5R01 AM07939-15	105,698
FAIRLEY, H B.....	ACUTE PULMONARY FAILURE: MECHANISMS MANAGEMENT.....	5R01 GM24023-02	43,206
FIELDING, CHRISTOPHER J.....	REGULATION OF PLASMA TRIGLYCERIDE METABOLISM.....	5R01 HL18705-02	49,379
FISKE, MARJORIE E.....	PROGRAM PROJECT IN HUMAN DEVELOPMENT AND AGING.....	3P01 AG00002-05S1	138,467
FISKE, MARJORIE E.....	PROGRAM PROJECT IN HUMAN DEVELOPMENT AND AGING.....	5P01 AG00002-06	333,306
FLACH, ALLAN J.....	SYMPATHETIC NERVE TERMINAL DEGENERATION POST EPINEPHRINE.....	1R01 EY02141-01	36,183
FORSHAM, PETER H.....	STUDIES IN PANCREATIC ISLET FUNCTION IN DIABETES.....	5R01 AM12763-08	79,961
FORSHAM, PETER H.....	GENERAL CLINICAL RESEARCH CENTER FOR ADULTS.....	2M01 RR00079-15	1,109,711
FORSYTH, RALPH P.....	ENVIRONMENTAL FACTORS IN HYPERTENSION.....	5R01 HL19204-02	62,783
FRICK, OSCAR L.....	ALLERGIC DISEASES CENTER.....	5P50 AI11010-05	68,816
FRICK, OSCAR L.....	A STUDY OF PATHOGENESIS OF ATOPIC DERMATITIS.....	5R01 AI13156-03	38,444
FRIEND, DANIEL S.....	REVERSIBLE INFERTILITY AND SPERM MEMBRANE STRUCTURE.....	1R01 HD10445-01	58,496
FUKUYAMA, KIMIE.....	CYTOCHEMICAL STUDIES ON THE KERATINIZATION PROCESS.....	5R01 AM12433-10	114,130
GALLO, ROBERT V.....	BRAIN REGULATION OF THE ANTERIOR PITUITARY.....	5R01 HD05577-06	76,204
GANONG, WILLIAM F.....	NEURAL AND HUMORAL CONTROL OF ENDOCRINE FUNCTION.....	5P01 AM06704-15	313,430
GOLBUS, MITCHELL S.....	MEIOTIC NON-DISJUNCTION IN MOUSE AND HUMAN OVA.....	5R01 HD09412-03	62,904
GOLDBERG, MELVIN L.....	CYCLIC NUCLEOTIDE BINDING AND CONTENT IN MALIGNANCY.....	5R01 CA17242-03	78,187
GOLDFINE, IRA D.....	BINDING OF INSULIN TO NUCLEI.....	1R01 AM19415-01A1	43,214
GOLDSMITH, PAUL C.....	IMPROVED METHOD OF EM IMMUNOCYTOCHEMISTRY.....	1R01 HD10907-01	60,486
GOLDSTEIN, GARY W.....	METABOLIC ACTIVITY OF CAPILLARIES.....	5R01 ES01164-03	57,610
GOLDSTEIN, GARY W.....	METABOLIC BASIS FOR DIABETIC MICROANGIOPATHY.....	1R01 HL22088-01	71,404
GOLDSTONE, JERRY.....	IN VIVO STUDIES OF THE GASTRIC MICROCIRCULATION.....	5R01 AM19248-02	41,807
GONDOS, BERNARD.....	GONADAL DIFFERENTIATION IN THE HUMAN FETUS.....	5R01 HD08202-05	41,901
GOODMAN, HOWARD M.....	TUMOR VIRUS, PLASMID & CELL ANALYSIS.....	5R01 CA14026-06	206,040
GOODMAN, JOEL W.....	STRUCTURE OF IMMUNOLOGIC DETERMINANTS OF PROTEINS.....	2R01 AI05664-14	158,676
GOSPODAROWICZ, DENIS J.....	CONTROL OF OVARIAN CELL PROLIFERATION.....	1R01 HD11082-01	79,198
GOSPODAROWICZ, DENIS J.....	MAINTENANCE AND REPAIR OF VASCULAR ENDOTHELIUM.....	1R01 HL20197-01	60,846
GOYAN, JERE E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05453-15	63,815
GRODSKY, GEROLD M.....	INSULIN AND GLUCAGON SYNTHESIS AND SECRETION IN VITRO.....	5R01 AM01410-19	124,308
GRUMBACH, MELVIN M.....	HORMONAL EFFECTS ON GROWTH AND MATURATION.....	2R01 HD02335-12	137,880
GUTHRIE, CHRISTINE.....	BIOSYNTHESIS OF BACTERIOPHAGE T4 TRANSFER RNAS.....	2R01 GM21119-04	59,305
HAASE, ASHLEY T.....	REPLICATION OF THE SLOW VIRUS VISNA.....	5R01 NS11782-03	52,784
HALL, JOAN M.....	THE NATURE AND SEQUENCE OF OCULAR IMMUNE RESPONSE.....	2R01 EY01182-03	56,640
HALL, ZACH W.....	POSTSYNAPTIC PROTEINS AT THE NEUROMUSCULAR JUNCTION.....	2R01 NS13521-02	74,786
HAMILTON, WILLIAM K.....	ANESTHESIA RESEARCH CENTER.....	5P50 GM15571-09	591,923
HARVOLD, EGIL P.....	EXPERIMENTAL STUDY ON THE ETIOLOGY OF MALOCCLUSION.....	5R01 DE02739-09	164,811
HARVOLD, EGIL P.....	CLINICAL EVALUATION OF THE ANDRESEN ACTIVATOR.....	2R01 DE03503-08A1	48,183
HATTNER, ROBERT S.....	BRAIN TUMOR IMAGING USING A NOVEL POSITRON CAMERA.....	5R01 CA19020-02	43,452
HAVEL, RICHARD J.....	CARDIOVASCULAR-RESPIRATORY PHYSIOLOGY AND BIOCHEMISTRY.....	5P01 HL06285-17	3,840,042
HAVEL, RICHARD J.....	SUPPORT FOR ARTERIOSCLEROSIS CENTER.....	2P50 HL14237-06	905,657
HEUSER, JOHN E.....	MORPHOLOGY OF SYNAPTIC VESICLE DISCHARGE AND RETRIEVAL.....	5R01 NS11979-03	42,355
HEYNEMAN, DONALD.....	INTERACTIONS OF LARVAL TREMATODES IN VECTOR SNAILS.....	5R22 AI07054-12	92,356
HINMAN, FRANK, JR.....	FUNCTION AND DEFENSES OF URETHRAL EPITHELIUM.....	5R01 AM10045-11	49,333
HOROWITZ, MARDI J.....	THE IMPACT OF STRESS ON CORONARY HEART DISEASE.....	5R01 HL17580-03	32,587
HOSHINO, TAKAO.....	UNPERTURBED AND PERTURBED CELL KINETICS OF BRAIN TUMORS.....	5R01 CA19992-02	45,969
HOSKINS, H DUNBAR, JR.....	CONGENITAL GLAUCOMA: CLASSIFICATION, ETIOLOGY, THERAPY.....	5R01 EY01559-02	46,528

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
HOWES, EDWARD L, JR.....	PATHOGENESIS OF ALTERED OCULAR VASCULAR PERMEABILITY.....	5R01 EY00056-08	35,515
HUNT, THOMAS K.....	A STUDY OF WOUND HEALING AND WOUND INFECTION.....	5R01 GM12829-13	117,240
HUSSAIN, M ZAMIRUL.....	MECHANICAL MECHANISMS OF PERIOOONTAL DISEASE.....	1R23 OE04752-01	28,045
JAFFE, ROBERT B.....	REGULATION OF THE HUMAN HYPOTHALAMIC-PITUITARY SYSTEM.....	3R01 HD08035-03S1	15,526
JAFFE, ROBERT B.....	PRIMATE ENDOCRINE REGULATION IN THE PERINATAL PERIOD.....	5R01 H008478-03	81,235
JAMES, THOMAS L.....	MAGNETIC RESONANCE STUDIES OF SICKLE CELL DISEASE.....	5R01 AM19047-02	25,272
JAMES, THOMAS L.....	NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY RESOURCE.....	5P41 RR00892-02	57,313
JAWETZ, ERNEST.....	VIRAL KERATOCONJUNCTIVITIS AND RELATED DISORDERS.....	5R01 EY00186-23	133,844
JEWETT, DON L.....	SPECIFIC EFFECTS ON AUDITORY FAR FIELDS IN ANIMALS.....	5R01 H007991-04	61,769
JEWETT, DON L.....	FAR FIELD AUDITORY DEVELOPMENT IN PREMATURE INFANTS.....	5R01 NS12352-03	54,866
JOHNSON, KENNETH P.....	VIRUS EFFECTS ON THE FETAL NERVOUS SYSTEM.....	5R01 H009276-03	34,145
JOHNSON, KENNETH P.....	BIOLOGY OF LATENT MEASLES VIRUS INFECTION IN THE CNS.....	5R01 NS12064-04	55,447
JONES, ALBERT L.....	HYPOLIPIDEMIC DRUG STUDY: ULTRASTRUCTURE AND CHEMISTRY.....	3R01 HL16363-02S1	8,224
JORGENSEN, EUGENE C.....	THYROID HORMONE ANALOGS.....	5R01 AM17576-03	55,938
KALTREIDER, H BENFER.....	IMMUNE FUNCTIONS OF THE LUNG.....	5R01 AI12296-03	52,425
KAN, YUET W.....	STUDY OF ABNORMAL HEMOGLOBIN SYNTHESIS.....	5R01 AM16666-05	109,035
KATZUNG, BERTRAM G.....	DEPOLARIZATION INDUCED CARDIAC AUTOMATICITY.....	5R01 HL17452-03	27,807
KELLY, REGIS B.....	BIOCHEMISTRY OF SYNAPTIC TRANSMISSION.....	5R01 NS09878-07	77,758
KENYON, GEORGE L.....	THE ACTIVE SITE OF CREATINE KINASE FROM MUSCLE.....	5R01 AM17323-05	54,417
KIM, YOUNG S.....	INTESTINAL PEPTIDE HYDROLASES AND PEPTIDE TRANSPORT.....	3R01 AM17938-03S1	13,690
KIM, YOUNG S.....	INTESTINAL PEPTIDE HYDROLASES AND PEPTIDE TRANSPORT.....	2R01 AM17938-04	41,071
KIM, YOUNG S.....	STUDY OF GLYCONJUGATES IN COLONIC NEOPLASIA.....	5R26 CA14905-05	118,502
KORENBROT, JUAN I.....	RHODOPSIN AND TRANSDUCTION IN ROD PHOTORECEPTORS.....	5R01 EY01586-03	58,673
KRAMER, STEVEN G.....	INTRA-OCULAR USE OF 6-OH-DOPAMINE IN GLAUCOMA THERAPY.....	5R23 EY01353-03	5,447
KRAMER, STEVEN G.....	RETINAL DOPAMINE AND ERG FLICKER SUPPRESSION.....	3R01 EY01373-01S1	6,609
KREIVANS, JULIUS R.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00083-15	559,793
KREIVANS, JULIUS R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR00535-16	213,709
KUHN, ROBERT W.....	STRUCTURE AND FUNCTION OF STEROID-BINDING PROTEINS.....	5R01 HD10328-02	53,698
KUN, ERNEST.....	TRICARBOXYLATE CARRIER OF CARDIAC MITOCHONDRIA.....	5R01 GM20552-03	31,025
KUNTZ, IRWIN D, JR.....	HYDRATION OF MACROMOLECULES.....	5R01 GM19267-06	46,629
LA VAIL, JENNIFER H.....	RETROGRADE AXONAL TRANSPORT IN THE VISUAL SYSTEM.....	5R01 NS13533-02	61,533
LA VAIL, MATTHEW M.....	CELLULAR MECHANISMS OF INHERITED RETINAL DEGENERATION.....	5R01 EY01919-02	62,423
LANGRIDGE, ROBERT.....	SPECIAL RESEARCH RESOURCE FOR BIOMOLECULAR GRAPHICS.....	5P41 RR01081-02	195,491
LEBOWITZ, EDWARD A.....	CONTRACTILITY OF HUMAN BLOOD PLATELET ACTOMYOSIN.....	1R23 HL21378-01	40,848
LEMANSKI, LARRY F.....	GENETIC CARDIOMYOPATHIES.....	5R01 HL18480-02	21,033
LEVY, JAY A.....	C-TYPE VIRUSES IN AUTOIMMUNE DISEASE AND NEOPLASIA.....	5R01 CA13086-06	81,932
LI, CHOH H.....	PITUITARY LACTOGENIC AND GONADOTROPIC HORMONES.....	5R01 AM06097-24	104,979
LI, CHOH H.....	HCS(HPL): STRUCTURE-FUNCTION RELATIONSHIPS.....	5R01 AM18677-02	63,769
LI, CHOH H.....	ACTH AND RELATED PEPTIDES.....	3R01 GM02907-25S1	18,919
LI, CHOH H.....	ACTH AND RELATED PEPTIDES.....	2R01 GM02907-26	110,752
LIBET, BENJAMIN.....	SYNAPTIC TRANSMISSION IN AUTONOMIC GANGLIA.....	5R01 NS00884-21	70,130
LIE-INO, LUAN E.....	BLOOD GENETICS IN CALIFORNIA, MALAYSIA AND INDONESIA.....	3R01 HL10486-09S1	2,745
LIE, KIAN J.....	BIOLOGICAL CONTROL OF SCHISTOSOMES.....	5R22 AI08520-10	73,871
MADDOX, DAVID A.....	FACTORS REGULATING SALT EXCRETION IN THE RAT.....	5R01 AM19396-02	48,970
MARGULIS, ALEXANDER R.....	NON-CONTRACTILE TRANSPORT OF RADIOPAQUE POWDER IN COLON.....	5R01 AM15937-05	57,777
MARGULIS, ALEXANDER R.....	STUDY OF DIAGNOSTIC RADIOLOGY.....	2P01 GM21017-04	236,325
MARTON, LAURENCE J.....	POLYAMINES AND BRAIN TUMOR CHEMOTHERAPY.....	5R01 CA15515-03	48,589
MC CARTHY, BRIAN J.....	TRANSCRIPTION OF HISTONE GENES FROM CHROMATIN.....	5R01 GM20287-05	63,384
MC DONAGH, ANTONY F.....	MECHANISMS OF HEME AND BILIRUBIN DEGRADATION.....	5R01 AM18220-03	63,285
MC KEAN, CHARLES M.....	EFFECT OF AMINO ACIDS ON METABOLISM, EEG, AND BEHAVIOR.....	3R01 H001823-13S1	63,933
MC NUTT, NEIL S.....	CANCER CELL PERIPHERY: ULTRASTRUCTURE AND FUNCTION.....	5R01 CA16482-03	34,898
MELMON, KENNETH L.....	CLINICAL PHARMACOLOGY AND PHARMACOKINETICS.....	5P01 GM16496-09	457,243
MERZENICH, MICHAEL M.....	FUNCTIONAL ORGANIZATION OF THE AUDITORY SYSTEM.....	5R01 NS10414-06	53,601
MERZENICH, MICHAEL M.....	DEVELOPMENT OF AN ACOUSTIC PROSTHESIS.....	3R01 NS11804-03S1	6,618
MERZENICH, MICHAEL M.....	DEVELOPMENT OF AN ACOUSTIC PROSTHESIS.....	2R01 NS11804-04	218,153
MICHAELI, DOV.....	THE MOLECULAR BASIS OF COLLAGEN-PLATELET INTERACTION.....	5R01 HL17525-03	92,491
MILLER, ARTHUR J.....	ASPECTS OF RESPIRATORY CONTROL IN THE DEVELOPING ANIMAL.....	5R01 HD09841-03	18,432
MINES, ALLAN H.....	RESPIRATION DURING ALTITUDE ACCLIMATIZATION.....	5R01 HL13841-16	72,401
MORALES, MANUEL F.....	FUNCTION AND GROWTH OF CARDIAC AND SKELETAL MUSCLE.....	5P01 HL16683-03	225,916
MORRIS, R CURTIS, JR.....	DISORDERS OF RENAL ACIDIFICATION.....	3P01 AM16764-04S1	89,816

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
NICHOLS, BARBARA A.....	ROLE OF MONONUCLEAR PHAGOCYTES IN PATHOLOGIC STATES.....	2R01 AI11639-04	63,482
NICOLL, ROGER A.....	EFFECT OF BARBITURATES ON SYNAPTIC TRANSMISSION.....	1R01 GM23478-01	49,648
O'CONNOR, G RICHARD.....	STUDY OF OCULAR TOXOPLASMOSIS.....	2R01 EY01204-04	128,382
O'CONNOR, G RICHARD.....	INFLAMMATORY DISEASES OF THE EYE: CORE SUPPORT.....	5P30 EY01597-03	95,019
O'DONNELL, JAMES J.....	RETINITIS PIGMENTOSA—INBORN ERROR OF RPE PHAGOCYTOSIS.....	5R01 EY01786-02	81,124
OCKNER, ROBERT K.....	LIPID METABOLISM IN INTESTINE AND LIVER.....	2R01 AM13328-08	103,703
OH, JANG O.....	RECURRENT HERPES SIMPLEX UVEITIS.....	2R01 EY00964-03	87,288
OH, JANG O.....	EYE INFECTIONS BY TYPE 2 HERPES SIMPLEX VIRUS.....	3R01 EY01578-01S1	6,240
OH, JANG O.....	EYE INFECTIONS BY TYPE 2 HERPES SIMPLEX VIRUS.....	5R01 EY01578-02	39,806
OPPENHEIMER, NORMAN J.....	STRUCTURE-FUNCTION RELATIONS IN PYRIDINE COENZYMES.....	5R01 GM22982-02	35,150
ORTIZ DE MONTELLANO, PAUL.....	MECHANISM AND CONTROL OF STEROL BIOSYNTHESIS.....	2R01 HL15476-04A1	57,635
OSTLER, H BRUCE.....	OCULAR ZOOZOSES: THE CHLAMYDIAL INFECTIONS.....	5R01 EY01205-03	46,432
OSTLER, H BRUCE.....	DIAGNOSIS OF BACTERIAL ENDOPHTHALMITIS.....	1R01 EY01922-01	72,064
OWENS, ELMER.....	HEARING AIDS AND REHABILITATION FOR HEARING LOSS.....	5R01 NS12998-02	82,730
PAPKOFF, HAROLD.....	STUDIES ON PREGNANT MARE SERUM GONADOTROPIN.....	5R01 HD05722-05	61,985
PARER, JULIAN T.....	FETAL HEART RATE PATTERNS AND FETAL OXYGENATION.....	5R01 HD09980-02	71,376
PARMLEY, WILLIAM W.....	FUNCTIONAL INFARCT SIZE BY GATED RADIOANGIOGRAPHY.....	1R01 HL21793-01	136,494
PAVONE, BEN W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05305-16	37,994
PETRAKIS, NICHOLAS L.....	GENETIC EPIDEMIOLOGY AND NATURAL HISTORY OF CANCER.....	3P01 CA13556-05S1	102,311
PETRAKIS, NICHOLAS L.....	GENETIC EPIDEMIOLOGY AND NATURAL HISTORY OF CANCER.....	2P01 CA13556-06	497,731
PHILLIPS, THEODORE L.....	THE THERAPEUTIC RATIO AND EXPERIMENTAL RADIOTHERAPY.....	5R01 CA17227-03	145,534
PHILLIPS, THEODORE L.....	EXPERIMENTAL COMBINED RADIOTHERAPY-CHEMOTHERAPY.....	5R01 CA20529-02	211,245
PHILLIPS, THEODORE L.....	RADIATION THERAPY ONCOLOGY GROUP.....	1R10 CA21439-01	28,274
PHILLIPS, THEODORE L.....	DEVELOPMENT OF A CT SCANNER FOR RADIATION THERAPY.....	1R01 CA21842-01	81,114
PHILLIPS, THEODORE L.....	EXTENDED RADIOTHERAPY FOR PROSTATIC NEOPLASM.....	1R26 CA22389-01	64,210
PIPER, WALTER N.....	LEAD TOXICITY RELATED TO HEME BIOSYNTHESIS.....	5R01 ES01343-03	29,755
PRUSINER, STANLEY B.....	SLOW BRAIN DISEASE: ASSAY AND PURIFICATION OF SCRAPIE.....	5R01 NS11917-03	65,912
PRUSINER, STANLEY B.....	REGULATION/FUNCTION—BRAIN GAMMA-GLUTAMYL TRANSPEPTIDASE.....	5R01 NS12100-03	40,394
RALSTON, HENRY J, III.....	SYNAPTIC ORGANIZATION IN SPINAL CORD AND THALAMUS.....	5R01 NS11614-04	80,461
RAMACHANDRAN, JANAKIRAMAN.....	PITUITARY HORMONES IN NORMAL AND NEOPLASTIC GROWTH.....	5R01 CA16417-03	77,762
RAMSAY, DAVID J.....	THIRST AND ITS CONTRIBUTION TO EDEMA.....	1R01 HL18862-01A1	82,155
RAPOPORT, BASIL.....	THYROID STIMULATORS IN HEALTH AND DISEASE.....	5R01 AM19289-02	57,021
REBER, HOWARD A.....	PANCREATIC SECRETION IN PANCREATIC CANCER.....	5R26 CA20121-02	39,696
ROSEN, STEVEN D.....	CELL ADHESION IN SLIME MOLDS AND HIGHER CELLS.....	1R01 GM23547-01	48,870
ROSENAU, WERNER.....	LYMPHOTOXIN IN CELL-MEDIATED TUMOR IMMUNITY.....	5R01 CA07191-14	101,390
ROTHMAN, STEPHEN S.....	SECRETION OF PROTEINS AND IONS BY THE PANCREAS.....	3R01 AM16990-03S1	14,397
ROTHMAN, STEPHEN S.....	SECRETION OF PROTEINS AND IONS BY THE PANCREAS.....	2R01 AM16990-04	78,829
RUDNICK, ALBERT.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10051-17	702,283
RUDNICK, ALBERT.....	STUDY OF ECOLOGY OF DENGUE VIRUSES IN MALAYSIA.....	5R22 AI11540-05	91,968
RUTTER, WILLIAM J.....	DIFFERENTIATION IN THE ENDOCRINE AND EXOCRINE PANCREAS.....	1R01 AM21344-01	115,329
RUTTER, WILLIAM J.....	GENE EXPRESSION AND REPLICATION IN EUKARYOTIC ORGANISMS.....	5R01 GM21830-03	167,317
SALAMY, ALBERT.....	FAR-FIELD POTENTIALS IN BRAINSTEM MALDEVELOPMENT.....	5R01 NS12424-03	53,161
SANTI, DANIEL V.....	CHEMOTHERAPY WITH INHIBITORS OF PROTEIN SYNTHESIS.....	2R01 CA14266-05	88,724
SANTI, DANIEL V.....	MECHANISM OF THYMIDYLATE SYNTHETASE.....	5R01 CA14394-06	52,503
SCHACHTER, JULIUS.....	EPIDEMIOLOGY OF CERVICAL CANCER: CHLAMYDIAE & HERPES.....	5R01 CA14427-05	133,027
SCHAMBELAN, MORRIS.....	RENIN, ANGIOTENSIN, STEROIDS, IONS AND BLOOD PRESSURE.....	2R01 HL11046-11	89,900
SCH EINMAN, MELVIN M.....	PROSPECTIVE BUNDLE BRANCH BLOCK STUDY.....	1R01 HL20238-01	97,839
SCHMID, RUDI.....	STUDIES OF BILE PIGMENT METABOLISM.....	3R01 AM11275-11S1	54,593
SCHMID, RUDI.....	STUDIES OF BILE PIGMENT METABOLISM.....	2R01 AM11275-12	109,650
SCHMID, RUDI.....	INTERDISCIPLINARY LIVER RESEARCH PROGRAM.....	5P50 AM18520-03	534,557
SCHMUCKER, DOUGLAS L.....	AGING EFFECTS ON HEPATIC STRUCTURE AND FUNCTION.....	1R01 AG00357-01A1	50,515
SHAFAER, RICHARD H.....	VISCOELASTIC ANALYSIS OF BRAIN AND TUMOR DNA.....	5R01 CA19658-02	18,931
SHAH, SHANTILAL N.....	DEVELOPMENTAL REGULATION OF BRAIN STEROL SYNTHESIS.....	2R01 NS11670-04	49,017
SHAMES, DAVID M.....	RENAL HYPERTENSION DETECTION USING THE GAMMA VARIATE.....	5R01 HL18367-03	36,034
SHETLAR, MARTIN D.....	PHOTO INDUCED DNA-PROTEIN CROSS-LINKING IN CHROMATIN.....	1R01 GM23526-01	54,479
SHOHET, STEPHEN B.....	MEMBRANE LIPID METABOLISM IN BLOOD CELLS.....	3R01 AM16095-05S1	18,735
SHOHET, STEPHEN B.....	MEMBRANE LIPID AND PROTEIN METABOLISM IN BLOOD CELLS.....	2R01 AM16095-06	74,404
SHUMAN, MARC A.....	BLOOD CLOTTING KINETICS STUDIED BY RADIOIMMUNOASSAY.....	1R01 HL21403-01	60,435
SIEGEL, ROBERT C.....	LYSYL OXIDASE MEDIATED COLLAGEN CROSS-LINKING.....	5R01 AM16424-05	45,970
SIEGEL, ROBERT C.....	PATHOGENESIS OF GENETIC COLLAGEN DISEASES.....	5R01 AM18237-03	47,566

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SITTERI, PENTTI K.....	DYNAMICS OF ESTROGEN BIOSYNTHESIS.....	5R01 HD08692-04	127,859
SILVERMAN, SOL, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17914-03	54,339
SINGER, THOMAS P.....	MEMBRANE-BOUND ENZYMES IN HEART AND OTHER TISSUES.....	5P01 HL16251-05	277,238
SIPERSTEIN, MARVIN D.....	CHOLESTEROL METABOLISM IN NORMAL AND MALIGNANT LIVER.....	2R01 CA15979-04	130,315
SMOLIN, GILBERT.....	ALTERATIONS OF CORNEAL IMMUNOLOGIC REACTIONS.....	2R01 EY01121-05	57,789
SMUCKLER, EDWARD A.....	CYTOCHEMICAL STUDIES IN LIVER INJURY.....	2R01 AM19843-02	90,733
SOKOLOW, MAURICE.....	CLINICAL APPLICATION OF AMBULATORY BLOOD PRESSURES.....	5R01 HL18076-02	80,589
SPENCER, E MARTIN.....	THE REGULATION OF SOMATOMEDIN SYNTHESIS BY INSULIN.....	1R01 AM21301-01	91,035
SPUDICH, JAMES A.....	PROTEINS IN CELL MOVEMENTS AND CHANGES OF CELL SHAPE.....	1R01 GM23633-01	79,739
STEINBERG, ROY H.....	PIGMENT EPITHELIUM INTERACTIONS WITH NEURAL RETINA.....	2R01 EY01429-04	136,942
STITES, DANIEL P.....	STUDY OF HUMAN FETO-PLACENTAL-MATERNAL INTERACTION.....	5R01 HD03939-09	59,580
STITES, DANIEL P.....	CELLULAR AND HUMORAL IMMUNITY WITH MURINE SPERMATOZOA.....	5R01 HD08257-03	43,411
STOECKENIUS, WALTHER.....	PHOTOENERGY TRANSDUCTION IN HALOBACTERIUM.....	1R01 GM23651-01	92,396
STROUD, ROBERT M.....	STRUCTURE AND FUNCTION OF PROTEINS AT MOLECULAR LEVEL.....	7R01 GM24485-01	76,403
TALAL, NORMAN.....	SIGNIFICANCE OF ANTINUCLEIC ACID ANTIBODIES IN LUPUS.....	5R01 AM16140-06	65,577
THALER, M MICHAEL.....	DEVELOPMENTAL ASPECTS OF HEPATOBILIARY METABOLISM.....	5R01 HD03148-10	107,976
VARMUS, HAROLD E.....	MOLECULAR BIOLOGY OF MOUSE MAMMARY TUMOR VIRUS.....	5R01 CA19287-02	86,723
VESSEY, DONALD A.....	CHARACTERIZATION OF MICROSOMAL BILE ACID CONJUGATION.....	5R01 AM19212-02	34,804
VORE, MARY E.....	METABOLIC ACTIVATION OF CARCINOGENIC NITRO COMPOUNDS.....	5R01 CA18435-02	22,542
WALLERSTEIN, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05755-04	80,450
WARNOCK, DAVID G.....	URINARY ACIDIFICATION BY ISOLATED RENAL TUBULES.....	5R01 AM19407-02	59,194
WATSON, JOHN A.....	EFFECTORS OF CHOLESTEROL SYNTHESIS.....	3R01 HL16294-03S2	6,165
WEINER, RICHARD I.....	ROLE OF BRAIN MONOAMINES IN GONADOTROPIN RELEASE.....	3R01 HD08924-03S1	7,633
WEINMAN, DAVID, II.....	THE PRIMATE TRYPAANSOSMIASES OF ASIA.....	7R01 AI14711-01	42,960
WILSON, CHARLES B.....	CORRELATED STUDY OF METABOLIC REGULATION IN NEOPLASIA.....	5P01 CA13525-06	506,072
WILSON, CHARLES B.....	BROOK LODGE CONFERENCE ON BRAIN TUMOR THERAPY.....	1R13 CA21526-01	9,325
WISSIG, STEVEN L.....	ULTRASTRUCTURAL STUDIES OF CAPILLARY PERMEABILITY.....	5R01 HL04512-18	60,464
WOLFF, MANFRED E.....	STUDIES ON RECEPTORS WITH SITE SPECIFIC STEROIDS.....	5R01 AM14824-06	50,096
WONG-RILEY, MARGARET T.....	ORGANIZATION AND CONNECTIONS OF VISUAL CORTEX.....	5R01 NS12995-02	49,970
YAMAMOTO, KEITH R.....	GENE REGULATION BY STEROID RECEPTOR PROTEINS.....	1R01 CA20535-01	79,596
YANG, JEN T.....	OPTICAL ROTATORY POWER OF BIOPOLYMERS.....	5R01 GM10880-18	63,942
YANG, JEN T.....	STEREOCHEMICAL MECHANISM OF SICKLING OF HEMOGLOBIN S.....	5R01 HL18818-03	52,750
YEAGER, CHARLES L.....	SMALL COMPUTER FACILITY FOR AUTOMATED EEG ANALYSIS.....	5R01 NS10471-06	92,560
ORGANIZATION TOTAL	266 29,068,979		
UNIVERSITY OF THE PACIFIC ZIP CODE 94115			
INESI, GIUSEPPE.....	CALCIUM ION AND CONTROL OF CARDIOVASCULAR FUNCTION.....	2P01 HL16607-04	261,907
NEWMAN, NANCY M.....	EVALUATION OF THE RETINAL NERVE FIBER LAYER.....	3R01 EY01249-03S1	36,995
ROBERTS, W EUGENE.....	CELL KINETICS OF ORTHODONTICALLY INDUCED OSTEOGENESIS.....	5R23 DE04241-03	13,276
RYGE, GUNNAR.....	CORROSION AND CLINICAL BEHAVIOR OF DENTAL AMALGAM.....	1R01 DE04516-01	81,073
ORGANIZATION TOTAL	4 393,251		
WEST COAST CANCER FOUNDATION ZIP CODE 94133			
ENELOW, ALLEN J.....	RESEARCH INTO THE PSYCHOSOCIAL ASPECTS OF CANCER CARE.....	5R18 CA17903-03	203,314
ORGANIZATION TOTAL	1 203,314		
SAN JOSE			
SANTA CLARA VALLEY MEDICAL CENTER ZIP CODE 95128			
O'REILLY, ROBERT A.....	ANALYTIC DEVELOPMENT OF PHARMACOKINETIC TOOLS.....	5R01 GM22860-02	73,612
O'REILLY, ROBERT A.....	METABOLISM OF COUMARIN ANTICOAGULANT DRUGS IN MAN.....	5R01 HL08058-14	40,738
ORGANIZATION TOTAL	2 114,350		
SANTA BARBARA			
SANTA BARBARA BOTANIC GARDEN ZIP CODE 93105			
WALTERS, MARTA S.....	MEIOSIS: A REVISED SEQUENCE OF EVENTS IN PROPHASE.....	5R01 GM19272-04	33,979
ORGANIZATION TOTAL	1 33,979		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SPEECH COMMUNICATIONS RESEARCH LABORATORY ZIP CODE 93109			
SHOUP, JUNE E.....	STUDY OF CONSONANTS BY USE OF DYNAMIC PALATOGRAPHY.....	1R01 NS13961-01	55,733
ORGANIZATION TOTAL	1	55,733	
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106			
ANDERSON, DON H.....	RELATIONSHIP OF MAMMALIAN CONES TO PIGMENT EPITHELIUM.....	1R01 EY02082-01	53,483
BRUCE, THOMAS C.....	BIOCHEMICAL MECHANISMS—ENZYMES, CANCER AND MODELS.....	5R01 AM09171-14	134,893
CARBON, JOHN A.....	STUDIES ON GENE ORGANIZATION AND EXPRESSION.....	2R01 CA11034-09	153,448
CARLISLE, HARRY J.....	EFFECT OF OVARIAN STEROIDS ON THERMOREGULATION.....	1R01 HD10473-01	56,514
ENGLESBERG, ELLIS.....	THE HUMAN LYMPHOCYTE AND LYMPHOBLAST.....	5R01 CA18644-02	16,647
FISHER, STEVEN K.....	STUDIES ON THE DEVELOPING AND ADULT VISUAL SYSTEM.....	5R01 EY00888-06	65,967
GERIG, JOHN T.....	MAPPING OF ACTIVE SITES AND EFFECTIVE CHEMOTHERAPY.....	5R01 CA11220-09	48,838
GOTTSDANKER, ROBERT M.....	AGING AND PREPARATION FOR RAPID RESPONSE.....	1R01 AG00011-01	36,159
HOOKE, THOMAS M, JR.....	CONFORMATIONS OF BIOLOGICALLY IMPORTANT MOLECULES.....	5R01 GM18092-05	33,828
HORVATH, STEVEN M.....	OZONE: PHYSIOLOGICAL AND PSYCHOPHYSIOLOGICAL EFFECTS.....	5R01 ES01143-03	115,592
HUBBARD, ARTHUR T.....	ELECTROANALYSIS OF CENTRAL CATECHOLAMINE NEURONS.....	5R01 NS13556-02	34,487
JACOBS, GERALD H.....	STUDIES OF ALL-CONE VISUAL SYSTEMS.....	3R01 EY00105-07S1	5,285
JACOBS, GERALD H.....	CONE-DOMINATED AND ROD-DOMINATED VISUAL SYSTEMS.....	2R01 EY00105-08	91,837
JACOBS, GERALD H.....	WITHIN-SPECIES VARIATIONS IN VISUAL CAPACITY.....	1R01 EY02052-01	50,774
LARIS, PHILIP C.....	EXTRINSIC FLUORESCENCE AND MEMBRANE POTENTIALS.....	5R01 CA19234-04	47,430
LEE, NANCY L.....	GENETIC CONTROL OF PROTEIN SYNTHESIS IN E. COLI.....	5R01 GM14652-11	55,178
LITTLE, R DANIEL.....	1,3-DIYL TRAPPING REACTIONS IN ORGANIC SYNTHESIS.....	1R01 CA21144-01	30,798
ORIAS, EDUARDO.....	CONDITIONAL LETHAL MUTANTS OF TETRAHYMENA.....	5R01 GM19290-06	71,380
ORIAS, EDUARDO.....	GENETIC DISSECTION OF PHAGOCYTOSIS IN TETRAHYMENA.....	5R01 GM21067-03	34,884
PARSONS, STANLEY M.....	BIOCHEMISTRY OF HISTIDINE REPRESSION.....	5R01 GM23031-02	89,188
PURICH, DANIEL L.....	PHOSPHOTRANSFERASE CATALYSIS AND REGULATION.....	1R01 GM24039-01	39,893
SAMUEL, CHARLES E.....	MECHANISM OF INTERFERON ACTION.....	5R01 AI12520-03	46,916
TABORSKY, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07099-11	77,909
WILSON, LESLIE.....	DRUG INTERACTIONS WITH BRAIN MICROTUBULE PROTEINS.....	5R01 NS13560-02	35,319
ORGANIZATION TOTAL	24	1,426,647	
SANTA CRUZ			
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ ZIP CODE 95064			
BERGER, RALPH J.....	THERMOREGULATION DURING SLEEP AND TORPOR IN MAMMALS.....	5R01 GM23694-02	38,269
BRIDGEMAN, BRUCE.....	TEMPORAL CODING AND PROCESSING IN MONKEY VISUAL CORTEX.....	5R01 EY01482-03	30,721
DANIEL, CHARLES W.....	STUDIES ON HORMONE-DEPENDENT MOUSE MAMMARY TUMORS.....	5R01 CA18464-02	51,935
DAVIS, WILLIAM J.....	NEURAL BASIS OF BEHAVIORAL HIERARCHIES AND PLASTICITY.....	5R01 NS09050-08	98,614
DICE, JAMES F, JR.....	PROTEIN DEGRADATION IN DIABETES AND STARVATION.....	1R01 AM21104-01	108,362
DORFAN, DAVID.....	ANIMAL RESOURCE IMPROVEMENT.....	3P40 RR01027-01S1	8,100
DRATZ, EDWARD A.....	STRUCTURE AND FUNCTION OF VISUAL PHOTORECEPTORS.....	5R01 EY00175-08	56,341
DRATZ, EDWARD A.....	STUDIES OF THE PREVENTION OF RETINAL ROD DEGENERATION.....	5R01 EY01521-03	82,379
FELDMAN, JERRY F.....	GENETIC ANALYSIS OF BIOLOGICAL CLOCK MECHANISMS.....	5R01 GM22144-03	64,495
FINK, ANTHONY L.....	ENZYME-CATALYZED REACTIONS AT SUB-ZERO TEMPERATURES.....	5R01 GM20555-03	42,814
KLIGER, DAVID S.....	INVESTIGATION OF THE BLEACHING STAGES OF RHODOPSIN.....	2R01 EY00983-05	55,662
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF APHIDICOLIN.....	1R01 AI14127-01	34,921
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF CARDIAC AGLYCONES.....	5R01 HL18118-03	66,344
NOLLER, HARRY F, JR.....	RIBOSOME STRUCTURE AND FUNCTION.....	2R01 GM17129-07	66,308
NOLLER, HARRY F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07135-07	60,997
POODRY, CLIFTON A.....	GENETIC CONTROL OF DEVELOPMENT USING DROSOPHILA.....	5R01 GM20401-05	40,848
ROCHA, VICTOR.....	BASIC RESEARCH PROGRAM.....	5S06 RR08132-03	150,289
WANG, HOWARD H.....	ROLE OF MEMBRANE PROTEINS IN LOCAL ANESTHETIC ACTION.....	5R01 GM22242-03	29,891
WIPKE, W TODD.....	BIOGENETIC-LIKE CYCLIZATIONS OF MACROCYCLIC POLYENES.....	5R01 GM22990-02	25,185
WIPKE, W TODD.....	RESOURCE-RELATED RESEARCH: BIOMOLECULAR SYNTHESIS.....	1R24 RR01059-01	109,759
ORGANIZATION TOTAL	20	1,222,234	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SANTA MONICA			
RAND CORPORATION	ZIP CODE 90406		
KING, WILLIAM S.....	MATHEMATICAL MODELS FOR STUDYING SICKLE CELL DISEASE.....	5R01 HL16580-03	74,248
LINCOLN, THOMAS L.....	CELL KINETICS COMPUTER MODEL FOR LEUKEMIA THERAPY.....	5R01 CA12369-05	136,416
MORRISON, PAUL F.....	PREDICTIVE PHARMACOKINETIC MODEL OF ANTIFOLATE RESCUE.....	5R01 CA19663-02	89,623
NEWHOUSE, JOSEPH P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05710-07	55,170
ORGANIZATION TOTAL	4 355,457		
ST. JOHN'S HOSPITAL AND HEALTH CENTER	ZIP CODE 90404		
WILSON, WILLIAM L.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12295-05S3	6,443
ORGANIZATION TOTAL	1 6,443		
STANFORD			
INDIVIDUAL AWARD—RATHER, LELLAND J.	ZIP CODE 94305		
RATHER, LELLAND J.....	A STUDY OF MUELLER AND FALLOPIO ON TUMORS.....	1R01 LM02852-01	9,200
ORGANIZATION TOTAL	1 9,200		
STANFORD UNIVERSITY	ZIP CODE 94305		
ANDERSEN, HANS C.....	STATISTICAL MECHANICS OF LIPID BILAYER MEMBRANES.....	5R01 GM23085-02	32,388
ANGELL, JAMES B.....	RESOURCE FOR SILICON BIOMEDICAL TRANSDUCERS.....	1P41 RR01086-01	278,874
BAGSHAW, MALCOLM A.....	STUDY OF EXTENDED RADIOTHERAPY FOR PROSTATIC NEOPLASMS.....	5R26 CA15455-04	108,769
BAGSHAW, MALCOLM A.....	HOSPITAL-BASED MULTIPOINT PION RADIOTHERAPY OF CANCER.....	5P01 CA19653-02	649,432
BALDWIN, ROBERT L.....	PHYSICAL STUDIES OF NUCLEIC ACIDS AND PROTEINS.....	5R01 GM19988-17	114,638
BAUM, DAVID.....	HYPOXIA, METABOLISM AND NEONATAL THERMOREGULATION.....	5R01 HD06775-05	97,498
BAUM, DAVID.....	CONGENITAL HEART DISEASE AND ORGAN DEVELOPMENT.....	5R01 HD08814-03	60,511
BAUR, SONIA.....	GASTROINTESTINAL HORMONE-RECEPTOR INTERACTIONS.....	5R01 AM18497-02	73,666
BAYLOR, DENIS A.....	NEURAL SIGNALLING IN THE RETINA.....	2R01 EY01543-04	142,352
BERG, PAUL.....	BASIC MECHANISMS IN VIRAL CARCINOGENESIS.....	2R01 CA15513-04	106,150
BERG, PAUL.....	MECHANISMS AND REGULATION OF GENE EXPRESSION.....	5R01 GM13235-13	226,836
BERNFELD, MERTON R.....	EXTRACELLULAR MATERIALS AND EMBRYONIC ORGAN FORMATION.....	5R01 HD06763-06	149,756
BLASCHKE, TERRENCE F.....	KINETICS OF DRUG-DRUG AND DRUG-DISEASE INTERACTIONS.....	5R01 GM22209-03	50,044
BROWN, J MARTIN.....	EXPERIMENTAL RADIOTHERAPY: BASIS AND MODIFICATION.....	5R01 CA15201-04	76,919
BRUTLAG, DOUGLAS L.....	ORGANIZATION OF HETEROCHROMATIC DNA SEQUENCES.....	5R01 GM21498-03	76,716
CAMPBELL, ALLAN M.....	GENETICS OF LAMBDA PROPHAGE.....	5R01 AI08573-10	116,495
CAVALLI-SFORZA, LUIGI L.....	HUMAN POPULATION GENETICS.....	5R01 GM20467-05	171,448
CHOW, KAO L.....	NEUROLOGY OF VISION AND LEARNING.....	5R01 EY00691-17	69,432
CLAYTON, DAVID A.....	MITOCHONDRIAL DNA IN MALIGNANT CELLS.....	5R01 CA12312-07	64,807
CLAYTON, RAYMOND B.....	ERYTHROCYTE DEVELOPMENT AND SPHINGOLIPIDS.....	5R01 AM18648-02	67,054
COHEN, ELLIS N.....	MECHANISM OF LOCAL ANESTHETIC CONDUCTION BLOCK.....	5R01 GM22113-02	73,750
COHEN, STANLEY N.....	GENETIC CONTROL OF NONCHROMOSOMAL DRUG RESISTANCE.....	5R01 AI08619-10	169,922
COLLMAN, JAMES P.....	MIXED-FUNCTION OXYGENASE MODELS.....	5R01 GM17880-07	59,037
CONSTANTINO, CHRISTOS E.....	PYELOURETERAL PACEMAKER SYSTEM.....	5R01 AM19366-02	95,404
COOPER, ALLEN D.....	REGULATION OF HEPATIC CHOLESTEROL SYNTHESIS.....	5R01 AM18774-03	42,425
CUTLER, ROBERT W.....	MECHANISMS OF NEUROTRANSMITTER RELEASE.....	2R01 NS12079-04	72,421
DAVIDSON, JULIAN M.....	ROLE OF THE BRAIN IN MALE AND FEMALE REPRODUCTION.....	5R01 HD00778-13	102,679
DAVIS, RONALD W.....	HIGHER CELL REGULATION: ISOLATED DNA SEGMENTS.....	5R01 GM21891-03	115,600
DE BUSK, ROBERT F.....	OBJECTIVE EVALUATION EARLY AFTER MI AND HEART SURGERY.....	5R01 HL18907-02	216,189
DEMENT, WILLIAM C.....	SUDDEN INFANT DEATH SYNDROME AND SLEEP APNEA.....	2R01 HD08339-04	199,920
DEMENT, WILLIAM C.....	SLEEP APNEA CLINICAL RESEARCH CENTER.....	5P50 NS10727-05	228,677
DEMENT, WILLIAM C.....	STUDIES OF NARCOLEPSY.....	5R01 NS13211-02	91,538
DEWSON, JAMES H, III.....	AUDITORY NEUROPSYCHOLOGY AND PRECURSORS OF LANGUAGE.....	5R01 NS12315-02	73,206
DJERASSI, CARL.....	MASS SPECTROMETRY IN ORGANIC AND BIOCHEMISTRY.....	5R01 AM04257-17	104,066
DJERASSI, CARL.....	MARINE CHEMISTRY WITH SPECIAL EMPHASIS ON STEROIDS.....	5R01 GM06840-19	194,120
DJERASSI, CARL.....	MAGNETIC CIRCULAR DICHROISM OF CYTOCHROMES P-450.....	5R01 GM20276-04	57,755
DJERASSI, CARL.....	RESOURCE-RELATED RESEARCH—COMPUTERS AND CHEMISTRY.....	2R24 RR00612-08	345,356
EPSTEIN, HENRY F.....	THE MOLECULAR BASIS OF NEUROMUSCULAR DEVELOPMENT.....	5R01 AG00448-05	97,363
EPSTEIN, HENRY F.....	DEVELOPMENTAL GENETICS OF MUSCLE STRUCTURE.....	1R01 HD10714-01	51,491

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
FARBER, EUGENE M.	BIOLOGIC EFFECTS OF PHOTOCHEMOTHERAPY IN PSORIASIS	1R01 AM18760-01A1	117,486
FARUQHAR, JOHN W.	BEHAVIORAL & EPIDEMIOLOGICAL STUDIES OF ATHEROSCLEROSIS	3P50 HL14174-05S2	665,806
FELDMAN, DAVID	THE ROLE OF RECEPTORS IN GLUCOCORTICOID ACTION	2R01 AM18156-04	52,353
FELDMAN, DAVID	STEROID RECEPTORS AND FUNCTION IN BONE CELLS	1R01 AM19675-01A1	34,286
FLAVELL, JOHN H.	MEMORY DEVELOPMENT	1R01 HD10429-01	63,689
FRIEDBERG, ERROL C.	DNA REPAIR AND ITS RELATIONSHIP TO CARCINOGENESIS	5R01 CA12428-07	45,030
FRIES, JAMES F.	COMPUTERIZED NATIONAL CHRONIC DISEASE DATA BANK SYSTEM	8R18 AM21393-03	285,324
GANESAN, ADAYAPALAM T.	DNA SYNTHESIS AND GENETIC RECOMBINATION IN B. SUBTILIS	5R01 GM14108-12	88,507
GETTING, PETER A.	COORDINATION OF REFLEX AND COMMAND BEHAVIORS	5R01 NS12529-03	32,704
GOULD, R GORDON	CHOLESTEROL METABOLISM AND HYPOCHOLESTEROLEMIC DRUGS	5R01 HL05360-18	83,468
GRAY, GARY M.	CARBOHYDRATE DIGESTION BY THE INTESTINE	5R01 AM11270-11	67,604
GRAY, GARY M.	ROLE IN DIGESTION OF SMALL INTESTINAL OLIGOPEPTIDASES	5R01 AM15802-05	115,435
GREENBERG, PETER L.	GRANULOPOIESIS IN MALIGNANT AND BENIGN HUMAN DISEASES	5R01 CA13141-06	96,090
HAHN, GEORGE M.	MODIFICATION OF RADIATION RESPONSE IN VITRO	5R01 CA04542-19	79,594
HAHN, GEORGE M.	CHEMOTHERAPY: CYTOTOXICITY, REPAIR AND ITS INHIBITION	2R01 CA15769-04	76,285
HAHN, GEORGE M.	TUMOR RADIOCHEMOTHERAPY: EFFECTS OF ULTRASOUND AND HEAT	1R01 CA19386-01	265,836
HANAWALT, PHILIP C.	REPLICATION AND TRANSCRIPTION OF GENETIC MATERIAL	5R01 GM09901-16	133,279
HANAWALT, PHILIP C.	DNA REPAIR IN ESCHERICHIA COLI AND BACILLUS SUBTILIS	5R01 GM19010-06	79,060
HARBURY, CHRISTINA B.	PLATELET MEMBRANE FUNCTION: ASSESSMENT & APPLICATION	5R01 HL17930-02	58,844
HARELL, GEORGE S.	COMPARISON OF MICROSPHERE AND RBC BEHAVIOR IN VIVO	1R01 HL20943-01	131,498
HARRISON, DONALD C.	AUTOMATIC RADIOGRAPHIC IMAGE ANALYSIS BY LV MODELLING	5R01 HL18870-02	32,875
HARRISON, DONALD C.	CLINICAL ANTIARRHYTHMIC AND PHARMACODYNAMIC STUDIES	1R01 HL21221-01	77,703
HELLER, H CRAIG	THERMOREGULATION DURING SLEEP AND TORPOR IN MAMMALS	5R01 GM23695-02	33,011
HELLER, H CRAIG	CNS REGULATION OF BODY TEMPERATURE	5R01 NS10367-06	45,398
HERZENBERG, LEONARD A.	IMMUNOGLOBULINS: GENETICS AND REGULATION	5R01 AI08917-13	96,651
HERZENBERG, LEONARD A.	GENETIC STUDIES WITH MAMMALIAN CELLS	3R01 CA04681-18S1	12,198
HERZENBERG, LEONARD A.	GENETIC STUDIES WITH MAMMALIAN CELLS	2R01 CA04681-19	149,155
HERZENBERG, LEONARD A.	CLINICAL AND BIOLOGICAL USES OF AUTOMATED CELL-SORTING	5R01 GM17367-08	489,752
HERZENBERG, LEONARD A.	FETAL-MATERNAL IMMUNOLOGICAL INTERACTIONS	5R01 HD01287-15	97,280
HILGARD, ERNEST R.	PAIN CONTROL THROUGH HYPNOSIS IN CHILDHOOD CANCER	5R18 CA18325-03	26,257
HODGSON, KEITH O.	STRUCTURE OF TUMOR REGULATORY PROTEINS	5R01 CA16748-03	46,285
HOGNESS, DAVID S.	THE ARRANGEMENT OF INFORMATION IN ANIMAL CHROMOSOMES	5R01 GM20158-05	139,631
HOLM, RICHARD H.	BIOLOGICALLY RELATED IRON-SULFUR CHEMISTRY	5R01 GM22352-03	136,050
HOLMAN, HALSTED R.	AUTOIMMUNE TISSUE DAMAGE AND ITS POTENTIAL REVERSAL	5R01 AM05425-15	70,012
HOLMAN, HALSTED R.	MULTIPURPOSE ARTHRITIS CENTER	1P60 AM20610-01	165,107
HOLTZMAN, SHERMAN D.	LEAD TOXICITY AND ENERGY METABOLISM IN IMMATURE BRAIN	5R01 ES01197-03	70,527
HUDSON, BRUCE S.	ELECTRONIC STRUCTURE OF THE VISUAL POLYENES	5R01 EY01518-03	32,600
HUDSON, BRUCE S.	ELECTRONIC AND RAMAN SPECTRAL STUDIES OF MEMBRANES	2R01 GM21149-04	72,595
HUESTIS, WRAY H.	NEUROTRANSMITTER RECEPTORS IN HUMAN ERYTHROCYTES	5R01 HL18660-02	35,268
JAMISON, REX L.	MICROPUNCTURE STUDIES OF THE MAMMALIAN RENAL MEDULLA	5R01 AM18077-07	136,896
JARDETZKY, OLEG	NMR STUDY OF THE LAC-REPRESSOR PROTEIN	5R01 GM18098-07	120,756
JARDETZKY, OLEG	HIGH-FREQUENCY NMR BIOTECHNOLOGY RESOURCE	5P41 RR00711-05	205,582
JOHNSON, WILLIAM S.	STEROID AND TERPENOID SYNTHESIS AND RELATED STUDIES	5R01 AM03787-18	128,716
KAISER, ARMIN D.	CONTROL OF MULTICELLULAR DEVELOPMENT IN MYXOBACTERIA	1R01 GM23441-01	95,507
KALLMAN, ROBERT F.	EXPERIMENTAL RADIOTHERAPY—CELLULAR RESPONSES IN VIVO	5R01 CA03353-20	81,210
KALLMAN, ROBERT F.	COMBINED MODALITIES: CELL, TUMOR AND TISSUE EFFECTS	3R01 CA20527-01S1	6,320
KALLMAN, ROBERT F.	COMBINED MODALITIES: CELL, TUMOR AND TISSUE EFFECTS	5R01 CA20527-02	142,774
KALMAN, SUMNER M.	DRUG DOSAGE IN MAN—INITIAL STUDIES WITH DIGOXIN	3R01 HL13618-06S1	2,355
KAPLAN, HENRY S.	BIOLOGICAL ASPECTS OF CARCINOGENESIS BY RADIATION	5R01 CA03352-21	143,421
KAPLAN, HENRY S.	CANCER CENTER SUPPORT GRANT (SPECIALIZED)	2P01 CA05838-16	2,020,486
KAPLAN, HENRY S.	RADIOBIOLOGY/ONCOLOGY RESEARCH PROGRAM	5P30 CA10372-11	879,509
KARASEK, MARVIN A.	METABOLIC CONTROL OF EPIDERMAL CELL GROWTH	5R01 AM14121-08	96,906
KARASEK, MARVIN A.	BIOCHEMISTRY OF SKIN BLOOD VESSEL GROWTH	1R01 AM19595-01	114,953
KARLIN, SAMUEL	STOCHASTIC MODELS IN MEDICINE AND BIOLOGY	5R01 GM10452-14	118,263
KEDES, LAURENCE H.	EMBRYONIC CHROMOSOMAL PROTEINS AND THEIR RNA TEMPLATES	5R01 GM17995-05	56,191
KEDES, LAURENCE H.	HISTONE GENE TRANSCRIPTION IN EMBRYONIC DEVELOPMENT	1R01 GM24118-01	53,616
KENDIG, JOAN J.	EXCITABLE CELL FUNCTION AT HYPERBARIC PRESSURES	5R01 NS13108-02	53,175
KORN, DAVID	DNA POLYMERASES IN NORMAL AND NEOPLASTIC HUMAN CELLS	5R01 CA14835-05	114,131
KORNBERG, ARTHUR	BIOSYNTHESIS OF DNA MEMBRANES AND VIRUSES	5R01 GM07581-17	294,629
KRISS, JOSEPH P.	STUDIES ON LONG-ACTING THYROID STIMULATOR	3R01 AM07642-13S1	11,534

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
KRISS, JOSEPH P.....	STUDIES ON LONG-ACTING THYROID STIMULATOR.....	2R01 AM07642-14	79,073
LEDERBERG, ESTHER M.....	GENE EXPRESSION AND DNA STRUCTURE OF R-PLASMIDS.....	5R01 AI11520-03	51,572
LEDERBERG, JOSHUA.....	GENETICS OF BACTERIA.....	3R01 CA16896-18S1	28,536
LEDERBERG, JOSHUA.....	GENETICS OF BACTERIA.....	2R01 CA16896-19	108,716
LEDERBERG, JOSHUA.....	GENETICS RESEARCH PROJECT.....	5P01 GM20832-03	421,207
LEDERBERG, JOSHUA.....	SUPPORT FOR COMPUTING FACILITY.....	3P41 RR00785-04S1	85,870
LEDERBERG, JOSHUA.....	SUPPORT FOR COMPUTING FACILITY.....	5P41 RR00785-05	684,080
LEHMAN, I ROBERT.....	GENETIC RECOMBINATION AND VIRAL DNA SYNTHESIS.....	5R01 GM06196-19	162,487
LEVINE, SEYMOUR.....	DEVELOPMENTAL AND BEHAVIORAL NEUROENDOCRINOLOGY.....	2P01 HD02881-11	267,793
LEVY, RONALD.....	ANTITUMOR ANTIBODIES GENERATED IN VITRO.....	1R01 CA21223-01	85,104
LUCAS, ZOLTAN J.....	ANALYSIS OF HOST RESPONSE TO TUMOR ONCOGENESIS.....	5R01 CA14777-04	105,345
LUETSCHER, JOHN A, JR.....	SECRETION AND EFFECTS OF ADRENAL HORMONES.....	5R01 HL13917-19	125,883
LUETSCHER, JOHN A, JR.....	BIG RENIN: BIOCHEMICAL AND CLINICAL STUDIES.....	2R01 HL17364-03	62,353
MACCOBY, ELEANOR E.....	BASIC PROCESSES IN COGNITIVE AND SOCIAL DEVELOPMENT.....	5P01 HD09814-03	337,026
MANSOUR, TAG E.....	CHEMICAL AGENTS AND HEART GLYCOLYTIC ENZYMES.....	5R01 HL17976-17	88,158
MARMOR, MICHAEL F.....	INTERACTION BETWEEN RETINA AND PIGMENT EPITHELIUM.....	5R01 EY01678-03	79,143
MAURICE, DAVID M.....	CONTROL OF CORNEAL HYDRATION.....	3R01 EY00431-08S1	4,600
MAURICE, DAVID M.....	CONTROL OF CORNEAL HYDRATION.....	5R01 EY00431-09	257,270
MAURICE, DAVID M.....	TRANSPORT PROCESSES ACROSS THE CORNEAL EPITHELIUM.....	5R01 EY00915-06	84,298
MAURICE, DAVID M.....	CORNEAL NEUROBIOLOGY.....	1R01 EY02108-01	41,171
MAZZE, RICHARD I.....	NEPHROTOXICITY OF FLUORINATED ANESTHETICS.....	5R01 GM22746-02	76,409
MC ALISTER, ALFRED L.....	EXPERIMENTAL SYSTEMS TO IMPROVE YOUTH HEALTH BEHAVIOR.....	1R23 HL1287-01	52,716
MC CONNELL, HARDEN M.....	SPIIN-LABEL HAPTENS, MEMBRANE FLUIDITY, IMMUNE RESPONSE.....	5R01 AI13587-02	129,209
MC DEVITT, HUGH O.....	GENETIC CONTROL OF THE IMMUNE RESPONSE.....	2R01 AI07757-11	263,689
MC DEVITT, HUGH O.....	HUMORAL, CELLULAR & GENETIC MECHANISMS IN AUTOIMMUNITY.....	5P01 AI11313-05	239,920
MC DEVITT, HUGH O.....	DEVELOPMENTAL ANALYSIS OF THE MURINE T/T ALLELE MUTANTS.....	5R01 HD09410-03	129,289
MC MAHAN, UEL J, II.....	STRUCTURE AND FUNCTION OF REGENERATING AXON TERMINALS.....	7R01 NS14506-01	20,170
MEINDL, JAMES D.....	CENTER FOR INTEGRATED ELECTRONICS IN MEDICINE.....	5P50 GM17940-08	984,227
MERIGAN, THOMAS C.....	CHEMISTRY OF THE INTERFERON MOLECULE.....	5R01 AI05629-15	106,764
MERIGAN, THOMAS C.....	EFFECT OF INTERFERON THERAPY ON NONHODGKIN'S LYMPHOMA.....	5R01 CA16857-03	53,311
MILLER, RUPERT G, JR.....	ADAPTATION OF NEW STATISTICAL IDEAS FOR MEDICINE.....	2R01 GM21215-03	123,721
MILLER, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07005-12	191,396
MOSHER, HARRY S.....	AMPHIBIAN TOXINS, CHEMISTRY AND PHARMACOLOGY.....	5R01 GM16031-16	39,469
MOSHER, HARRY S.....	CHIRAL HYDRIDE TRANSFER AGENTS.....	5R01 GM19554-05	48,927
NICHOLLS, JOHN G.....	INTEGRATION AND REGENERATION IN THE NERVOUS SYSTEM.....	5R01 NS11544-05	97,347
NORTHWAY, WILLIAM H, JR.....	PULMONARY OXYGEN TOXICITY IN THE NEWBORN LUNG.....	5R01 HL14663-06	84,179
OLEFSKY, JERROLD M.....	INSULIN RECEPTORS AND THE GLUCOSE TRANSPORT SYSTEM.....	1R01 AM19905-01	39,856
OLEFSKY, JERROLD M.....	PLASMA INSULIN LEVELS AND ADIPOCTYE METABOLISM.....	1R01 AM20993-01	48,072
PAYNE, ROSE O.....	LEUKOCYTE ANTIGENS AND ANTIBODIES.....	5R01 HL03365-20	124,613
PECORA, ROBERT.....	DYNAMIC LIGHT SCATTERING FROM BIOLOGICAL SYSTEMS.....	5R01 GM22517-02	37,362
PERKEL, DONALD H.....	STOCHASTIC MODELS OF NEURAL SYSTEMS.....	5R01 NS09744-08	108,015
PERKINS, DAVID D.....	GENETICS OF NEUROSPORA.....	2R01 AI01462-22	156,600
PITTENDRIGH, COLIN S.....	CIRCADIAN ORGANIZATION AND THE AGING PROCESS.....	5R01 AG00490-03	43,678
PIZIALI, ROBERT L.....	STRUCTURAL CHARACTERISTICS OF THE HUMAN KNEE.....	5R01 AM18181-02	56,477
PIZIALI, ROBERT L.....	STRUCTURAL CHARACTERISTICS OF THE HUMAN LUMBAR SPINE.....	1R01 AM19737-01	88,457
PRINCE, DAVID A.....	CELLULAR MECHANISMS IN FOCAL EPILEPTOGENESIS.....	5R01 NS06477-12	82,577
PRINCE, DAVID A.....	EPILEPSY RESEARCH PROGRAM.....	5P50 NS12151-03	244,285
REAVEN, GERALD M.....	LIPEMIA-CARBOHYDRATE AND GLYCERIDE METABOLISM.....	2R01 HL08506-14	108,526
REAVEN, GERALD M.....	VLDL-TG METABOLISM IN DIABETES MELLITUS.....	5R01 HL20397-02	154,579
RICH, CLAYTON.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00070-15	609,727
RICH, CLAYTON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05353-16	213,709
ROBERTSON, CHANNING R.....	STUDIES OF RENAL SOLUTE AND WATER TRANSPORT.....	5R01 AM18910-05	61,122
ROBINSON, WILLIAM S.....	THE VIRUS OF HUMAN HEPATITIS B.....	5R01 AI13526-02	165,380
ROSENBERG, SAUL A.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA21555-01	271,296
ROSENTHAL, A RALPH.....	COMPUTER MAPPING OF THE OPTIC NERVE HEAD.....	2R01 EY01248-04	84,267
RUBINSTEIN, LUCIFEN J.....	DIFFERENTIATION AND STROMA-INDUCTION IN NEURAL TUMORS.....	2R01 CA11689-06	172,611
SAKITT, BARBARA.....	PROBLEMS IN HUMAN VISION.....	3R01 EY01336-03S1	9,257
SCHIMKE, ROBERT T.....	MOLECULAR MECHANISMS IN RESISTANCE TO FOLATE ANALOGUES.....	2R01 CA16318-03	111,363
SCHIMKE, ROBERT T.....	ENZYME SYNTHESIS AND DEGRADATION IN METABOLIC CONTROL.....	5R01 GM14931-12	144,793
SCHRIER, STANLEY L.....	METABOLISM OF ERYTHROCYTE STROMA.....	5R01 AM13682-18	105,563

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SCHURMAN, DAVID J.....	JOINT INFECTIONS AND ARTICULAR CARTILAGE DESTRUCTION.....	5R01 AM17948-02	60,171
SCHWARTZ, HERBERT C.....	EXTRAUTERINE GROWTH AND ADAPTATION.....	5P01 HD02147-11	245,566
SHOOTER, ERIC M.....	NERVE GROWTH FACTOR IN NEURONAL DEVELOPMENT.....	5R01 NS04270-15	142,838
SHUMWAY, NORMAN E.....	ORTHOTOPIC HEART TRANSPLANTATION.....	5R01 HL08696-14	297,263
SIMMONS, F BLAIR.....	DEVELOPMENT OF A COCHLEAR PROSTHESIS.....	5R01 NS10532-05	164,360
SIMMONS, F BLAIR.....	FIELD TEST OF NEWBORN HEARING TESTING DEVICE.....	5R01 NS12326-03	111,221
SIMONI, ROBERT D.....	STUDIES ON MEMBRANE FUNCTION AND CELLULAR ENERGETICS.....	5R01 GM18539-07	63,197
SIMONI, ROBERT D.....	REGULATION OF CHOLESTEROL METABOLISM.....	5R01 HL18219-03	37,282
SMITH, KENDRIC C.....	REPAIR OF RADIATION-INDUCED LESIONS IN DNA.....	2R01 CA02896-21	87,987
SMITH, KENDRIC C.....	MOLECULAR BASIS OF RADIATION LETHALITY.....	5R01 CA06437-16	72,969
SMITH, MARION E.....	BIOSYNTHESIS OF LIPIDS IN EXPERIMENTAL DEMYELINATION.....	2R01 NS02785-18	84,875
SPUDICH, JAMES A.....	PROTEINS IN CELL MOVEMENTS AND CHANGES OF CELL SHAPE.....	7R01 GM25240-01	98,509
STAMEY, THOMAS A.....	ENTEROBACTERIAL ADHERENCE TO THE VAGINAL MUCOSA.....	2R01 AI09366-07A1	81,131
STARK, GEORGE R.....	ASPECTS OF CONTROL IN MAMMALIAN GENE EXPRESSION.....	5R01 CA17287-03	206,174
STARK, GEORGE R.....	NOVEL INHIBITORS OF CPS AND ATC AS ANTITUMOR DRUGS.....	1R26 CA20870-01	25,550
STEELE, CHARLES R.....	MECHANICS OF THE ORGAN OF CORTI.....	5R01 NS12086-03	46,918
STINSON, EDWARD B.....	CLINICAL HEART TRANSPLANTATION.....	5P01 HL13108-08	1,063,743
STOCKDALE, FRANK E.....	STUDIES OF CELL DIFFERENTIATION.....	5R01 AM16466-04	91,330
STOCKDALE, FRANK E.....	DNA POLYMERASE IN HUMAN LEUKEMIA.....	5R01 CA15939-03	52,816
STOCKER, BRUCE A.....	GENETICS AND PHYSIOLOGY OF SALMONELLA TYPHIMURIUM.....	5R01 AI07168-12	89,281
STROBER, SAMUEL.....	MATURATION OF B LYMPHOCYTES IN RATS.....	5R01 AI10293-07	132,290
STROBER, SAMUEL.....	ALTERATIONS OF T CELLS IN LYMPHOPROLIFERATIVE DISEASE.....	2R01 CA17004-03	110,640
STRYER, LUBERT.....	CONFORMATIONAL ASPECTS OF VISUAL EXCITATION.....	7R01 EY02005-01	66,135
STRYER, LUBERT.....	OPTICAL STUDIES OF PROTEIN STRUCTURE & FUNCTION.....	7R01 GM24032-01	128,883
SUNSHINE, PHILIP.....	REGULATION OF ENZYME ACTION DURING DEVELOPMENT.....	5R01 HD00391-19	82,823
SUNSHINE, PHILIP.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00081-15	522,013
SUSSMAN, HOWARD H.....	ECTOPIC PLACENTAL PROTEINS IN HUMAN CANCER.....	5R01 CA13533-06	94,400
TAUBE, HENRY.....	BIOCHEMICALLY SIGNIFICANT MOLECULES AS LIGANDS.....	5R01 GM13638-12	63,426
TAUBE, HENRY.....	THE REDUCTION OF DINITROGEN IN AQUEOUS SOLUTION.....	5R01 GM22045-03	51,192
TSUBOI, KENNETH K.....	CELLULAR PROLIFERATION IN COLON.....	5R26 CA14917-05	87,740
TUNE, BRUCE M.....	RENAL TRANSPORT AND METABOLIC EFFECTS OF ANTIBIOTICS.....	2R01 AM17647-04	64,692
VISTNES, LARS M.....	ENZYMATIC BURN DEBRIDEMENT.....	1R01 GM23379-01	28,007
VDSTI, KENNETH L.....	BACTERIOLOGY AND SEROLOGY OF PYELONEPHRITIS.....	5R01 AI03638-17	43,000
WALLACE, DOUGLAS C.....	MAMMALIAN MITOCHONDRIAL GENETICS & RNA TUMOR VIRUSES.....	1R01 GM24285-01	95,106
WEINER, MICHAEL W.....	EFFECTS OF DIURETICS AND SODIUM ON RENAL METABOLISM.....	5R01 AM18602-03	34,546
WEISSMAN, IRVING L.....	ROLE OF THE THYMUS IN IMMUNOLOGICAL DEVELOPMENT.....	5R01 AI09072-09	149,953
WESSELLS, NORMAN K.....	MECHANISMS OF ORGAN DEVELOPMENT.....	5R01 HD04708-08	98,777
WESSELLS, NORMAN K.....	ANALYSIS OF NEURONAL PATHWAYS.....	5R01 NS02944-17	106,151
WILKINSON, DAVID I.....	CONTROL OF EPIDERMAL CELL HOMEOSTASIS.....	5R01 AM15107-07	93,041
YANOFSKY, CHARLES.....	GENETIC/BIOCHEMICAL STUDY OF TRYPTOPHAN SYNTHETASE.....	5R01 GM09738-15	94,018
YEAGER, ANNE S.....	CYTOMEGALOVIRUS: TRANSMISSION TO NEWBORNS BY BLOOD.....	5R01 HD09872-02	63,036
ZARE, RICHARD N.....	LASER FLUORESCENCE DETECTION OF AFLATOXINS.....	7R01 CA23156-01	31,054
ORGANIZATION TOTAL	201	28,808,884	

TORRANCE

LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL		ZIP CODE 90509	
BARAJAS, LUCIANO.....	ELECTRON MICROSCOPY OF THE JUXTAGLOMERULAR APPARATUS.....	5R01 HL18340-03	54,856
BEALL, GILDON N.....	MECHANISMS OF THYROID STIMULATION IN GRAVES' DISEASE.....	5R01 AM18316-03	60,579
BENFIELD, JOHN R.....	LUNG CANCER MODEL FOR SURGICAL RESEARCH.....	5R01 CA16201-04	100,559
BLOCK, JEROME B.....	WESTERN CANCER STUDY GROUP.....	3R10 CA18290-01S3	26,653
BRAY, GEORGE A.....	CLINICAL AND EXPERIMENTAL STUDY OF OBESITY.....	5R01 AM15165-07	76,534
BRAY, GEORGE A.....	LONG-TERM CONTROL OF BODY WEIGHT.....	5R01 AM18186-03	31,004
BRAZIER, MARY A.....	ELECTROPHYSIOLOGICAL STUDIES OF THE EPILEPTIC BRAIN.....	2R01 NS11379-05	66,304
CASABURI, RICHARD.....	DYNAMIC INTERRELATIONS UNDERLYING EXERCISE HYPERPNEA.....	5R01 HL19410-02	53,109
EDWARDS, JOHN E.....	STUDY OF HEMATOGENOUS CANDIDA ALBICANS ENDOPHTHALMITIS.....	5R01 EY01066-05	56,411
EFFROS, RICHARD M.....	PATHOGENESIS AND MEASUREMENT OF PULMONARY EDEMA.....	5R01 HL18606-03	40,347
FINKLESTEIN, JERRY Z.....	CHILDREN'S CANCER STUDY GROUP A.....	2R10 CA14560-04	120,029
FIREMARK, HUGH M.....	MELATONIN TRANSPORT IN THE CENTRAL NERVOUS SYSTEM.....	5R01 NS12089-03	42,343

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
FISHER, DELBERT A.....	THYROID FUNCTION IN THE FETUS AND NEWBORN.....	5R01 HD04270-09	134,946
FISHER, DELBERT A.....	VASOPRESSIN PHYSIOLOGY IN THE FETUS AND NEWBORN.....	5R01 HD06335-05	67,685
FU, PAUL C.....	BIOGENESIS AND EFFECTS OF ETHYLENE IN ANIMALS.....	5R01 GM22796-02	18,750
GLASSOCK, RICHARD J.....	PATHOPHYSIOLOGY OF EXPERIMENTAL GLOMERULAR INJURY.....	5R01 AM16565-05	66,875
GUZE, LUCIEN B.....	MEASUREMENT OF ENDOTOXIN BY MASS SPECTROSCOPY.....	2R01 AI12343-03	52,715
HEINER, DOUGLAS C.....	PERINATAL RECOGNITION AND MANAGEMENT OF ALLERGY.....	5R01 HD09327-03	70,752
HOLLISTER, DAVID W.....	CHARACTERIZATION OF A NEW HUMAN COLLAGEN.....	1R01 AM19618-01	67,344
ISACOFF, WILLIAM H.....	HIGH DOSE METHOTREXATE IN COLORECTAL CANCER.....	1R26 CA21210-01	90,548
JOBÉ, ALAN H.....	LUNG PHOSPHOLIPID APPERANCE AND STABILITY.....	1R01 HD11932-01	68,560
JURATSCH, CRAIG E.....	PULMONARY HYPERTENSION: PATHWAYS AND PHARMACOLOGY.....	2R01 HL18371-02	52,895
LAKS, MICHAEL M.....	HEMODYNAMICS AND HEART STRUCTURE-VENTRICULAR OVERLOAD.....	5R01 HL14717-05	89,969
MILLER, MICHAEL E.....	PULMONARY COMPLICATIONS OF VIRAL INFECTIONS.....	5R01 HL20002-02	65,883
MOORE, THOMAS C.....	HEART PRESERVATION AND TRANSPLANTATION STUDIES.....	1R01 HL18936-01A1	56,954
MORIN, ROBERT J.....	PLATELET FUNCTION AND ADENINE NUCLEOTIDE METABOLISM.....	5R01 HL14344-06	52,161
RIMOIN, DAVID L.....	GENETICS AND PATHOGENESIS OF THE CHONDRODYSTROPHIES.....	5R01 HD05624-07	82,249
SAMLOFF, I MICHAEL.....	PEPSINOGEN POLYMORPHISM IN MAN.....	2R01 AM13233-09	79,706
SIEGEL, SHARON.....	DEVELOPMENT OF THE RENIN-MINERALOCORTICOID SYSTEM.....	1R01 HD10611-01	101,325
SPERLING, MARK A.....	GLUCAGON PHYSIOLOGY IN THE FETUS, NEWBORN, AND CHILD.....	5R01 HD07087-05	18,588
STATE, DAVID.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12041-06	33,596
SWANSON, WILLIAM H.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00425-09	641,763
SWANSON, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05551-15	117,492
TANAKA, KOUICHI R.....	METABOLIC AND BIOCHEMICAL STUDIES OF BLOOD CELLS.....	5R01 AM14898-15	85,042
WASSERMAN, KARLMAN.....	MECHANISMS OF PHYSIOLOGICAL RESPONSES TO EXERCISE.....	2R01 HL11907-07	129,433
WEICHEL, MORTON E, JR.....	HORMONE INTERACTION AND BRAIN PYRIMIDINE BIOSYNTHESIS.....	2R01 HD09277-03	46,057
WHIPP, BRIAN J.....	CHEMORECEPTOR FUNCTION IN DYNAMIC VENTILATORY CONTROL.....	5R01 HL14967-05	47,878
YEE, ROBERT D.....	OCULAR MOTOR SUBSYSTEMS IN CONGENITAL NYSTAGMUS.....	5R01 EY01853-02	3,088
YOUNG, RONALD F.....	ANATOMIC STUDY OF TRIGEMINAL PRIMARY AFFERENT FIBERS.....	7R01 DE05118-01	20,308
ZAMBONI, LUCIANO.....	FOLLICULOGENESIS IN FETAL AND ADULT MAMMALIAN OVARIES.....	5R01 HD09011-03	53,824
ORGANIZATION TOTAL	40	3,145,114	
STATE TOTAL	1,924	198,851,032	
COLORADO			
BOULDER			
BEHAVIORAL RESEARCH AND EVALUATION CORPORATION—BEHAVIORAL RESEARCH INSTITUTE		ZIP CODE 80302	
ELLIOTT, DELBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR05790-01	38,938
ORGANIZATION TOTAL	1	38,938	
UNIVERSITY OF COLORADO AT BOULDER		ZIP CODE 80302	
BERG, HOWARD C.....	PHOTOPHYSIOLOGY IN A BACTERIUM CONTAINING RHODOPSIN.....	5R01 EY01263-04	60,016
BONNEVILLE, MARY A.....	ISOLATION AND CHARACTERIZATION OF PLASMA MEMBRANE.....	5R01 GM18267-07	64,639
CARUTHERS, MARVIN H.....	STUDIES WITH OPERATOR/REPRESSOR OF THE LACTOSE OPERON.....	5R01 GM21644-03	22,090
CRISTOL, STANLEY J.....	SYNTHESIS AND REACTIONS OF ALKYLATING AGENTS.....	3R01 CA13199-05S1	13,118
DANNA, KATHLEEN J.....	TUMOR VIRUS DNA, A MOLECULAR VEHICLE FOR ENZYME GENES.....	5R01 CA18212-02	51,932
DE FRIES, J C.....	DETERMINANTS OF BEHAVIORAL DEVELOPMENT IN CHILDREN.....	1R01 HD10333-01A1	112,903
DUBIN, MARK W.....	RECEPTIVE FIELD ORGANIZATION IN THE VISUAL SYSTEM.....	5R01 EY00998-05	62,404
ERWIN, V GENE.....	BIOMEDICAL RESEARCH DEVELOPMENT.....	1S08 RR09065-01	99,456
FALL, R RAY.....	REGULATION OF LIPID METABOLISM.....	2R01 HL16628-04	54,732
FIFKOVA, EVA.....	VISUAL DEPRIVATION AND SYNAPSES OF VISUAL CENTERS.....	5R01 EY01500-03	51,123
GILL, STANLEY J.....	ENTROPY AND ENTHALPY CHANGES IN ABNORMAL HEMOGLOBINS.....	5R01 HL17472-03	28,222
GILL, STANLEY J.....	THERMODYNAMICS OF ALLOSTERIC EFFECTS IN HEMOGLOBINS.....	5R01 HL18684-02	23,615
GOLD, LAWRENCE M.....	REGULATION OF BACTERIOPHAGE T4 GENE EXPRESSION.....	5R01 GM19963-05	71,827
GOLDSTEIN, LESTER.....	BIOCHEMICAL INTERRELATIONS OF NUCLEUS AND CYTOPLASM.....	2R01 GM15156-10	86,827
HACKENBERG, ROBERT A.....	A LONGITUDINAL FERTILITY STUDY IN A DEVELOPING CITY.....	1R01 HD10885-01	60,700
HALLICK, RICHARD B.....	GENE EXPRESSION IN CELL ORGANELLES.....	2R01 GM21351-04	66,938
HAM, RICHARD G.....	PROGRAM PROJECT IN CELL BIOLOGY OF AGING.....	5P01 AG00310-04	242,918

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
HAM, RICHARD G.....	EFFECT OF MALIGNANCY ON CELL GROWTH REQUIREMENTS.....	5R01 CA15305-03	67,725
HIRSH, DAVID I.....	GENETIC CONTROL OF DEVELOPMENT.....	5R01 GM19851-06	87,687
JONES, RICHARD E.....	CONTROL OF SELECTIVE OVARIAN FOLLICULAR GROWTH.....	5R01 HD06233-05	29,955
KUEMPEL, PETER L.....	TERMINATION OF CHROMOSOME REPLICATION.....	5R01 GM15905-10	65,259
LIPETZ, MILTON E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07013-12	129,297
MC CLEARN, GERALD E.....	WORKSHOP ON PHARMACOGENETICS.....	1R13 GM23833-01	47,671
MC CLELLAND, GARY H.....	INDIVIDUAL FERTILITY DECISIONS AND SEX PREFERENCES.....	1R01 HD10802-01	40,186
MC CONKEY, EDWIN H.....	RIBOSOMAL PROTEIN PHOSPHORYLATION AND CELL GROWTH.....	1R01 CA22250-01	49,181
MC CONKEY, EDWIN H.....	NUCLEOLAR FUNCTIONS.....	2R01 GM21749-03	109,993
PORTER, KEITH R.....	HIGH-VOLTAGE ELECTRON MICROSCOPY OF BIOLOGICAL SYSTEMS.....	5P41 RR00592-08	296,188
PRESCOTT, DAVID M.....	THE GENETIC APPARATUS OF HYPOTRICHOUS CILIATES.....	5R01 GM19199-06	99,417
SNYDER, GREGORY K.....	OXYGEN TRANSPORT IN HYPOXIA.....	5R01 HL19235-02	27,230
SOLL, LARRY J.....	GENETIC ANALYSIS OF TRNA STRUCTURE AND FUNCTION.....	5R01 GM21596-03	34,201
SPANGENBERG, DOROTHY B.....	STATOLITH DIFFERENTIATION IN AURELIA (JELLYFISH).....	3R01 DE03796-05S1	16,822
STAEHELIN, L ANDREW.....	STRUCTURE AND FUNCTION OF FREEZE-ETCHED CELL MEMBRANES.....	2R01 GM18639-06	77,128
STAEHELIN, L ANDREW.....	STRUCTURE-FUNCTION CORRELATIONS OF CHOROPLAST MEMBRANES.....	5R01 GM22912-02	41,234
SUEOKA, NOBORU.....	PLASMA MEMBRANE PROTEINS FROM MAMMALIAN CELL TUMORS.....	5R01 CA16856-04	80,044
SUEOKA, NOBORU.....	STUDIES OF CHROMOSOME REPLICATION.....	5R01 GM20352-05	84,586
SUEOKA, NOBORU.....	TRANSCRIPTION IN BRAIN AND NEUROTUMOR CELLS.....	5R01 GM22951-02	16,400
SUH, CHUNG-HA.....	SCIENTIFIC RESEARCH ON FUNDAMENTALS OF CHIROPRACTIC.....	5P01 NS12226-02	161,234
THOMAS, DAVID R.....	INVESTIGATIONS IN THE STIMULUS CONTROL OF BEHAVIOR.....	3R01 HD03486-08S1	2,900
THOMAS, DAVID R.....	INVESTIGATIONS IN THE STIMULUS CONTROL OF BEHAVIOR.....	5R01 HD03486-09	68,892
WATT, DAVID S.....	A PARTIAL SYNTHESIS OF ALDOSTERONE.....	5R01 GM22978-02	35,453
WILSON, IRWIN B.....	ALKALINE PHOSPHATASE IN LYMPHOPROLIFERATIVE DISEASES.....	1R01 CA21950-01	17,343
WILSON, IRWIN B.....	STUDY OF ANGIOTENSIN CONVERTING ENZYME OF HUMAN SERUM.....	5R01 HL18908-02	11,359
WILSON, IRWIN B.....	ENZYME THEORY AND RELATIONSHIP TO FUNCTION.....	5R01 NS07156-12	48,260
WOOD, WILLIAM B.....	BIOCHEMISTRY AND GENETIC CONTROL OF VIRUS ASSEMBLY.....	7R01 AI14994-01	170,719
YARUS, MICHAEL J.....	INTERACTIONS OF TRNA AND AMINOACYL-TRNA SYNTHETASES.....	5R01 GM15925-10	73,332
ORGANIZATION TOTAL	45	3,163,156	
DENVER			
CHILDREN'S HOSPITAL ZIP CODE 80218			
SHARMA, BRAHMA S.....	IN VITRO IMMUNIZATION TO HUMAN TUMOR CELLS.....	5R01 CA20067-02	35,439
TUBERGEN, DAVID.....	SUPPORT FOR PEDIATRIC ONCOLOGY CENTER.....	3P01 CA12247-05S1	79,747
ZWARTJES, WILLIAM J.....	SCHOOL PROBLEMS OF CHILDREN WITH MALIGNANT NEOPLASMS.....	5R18 CA19581-02	98,294
ORGANIZATION TOTAL	3	213,480	
COLORADO REGIONAL CANCER CENTER ZIP CODE 80206			
SILVERBERG, STEVEN G.....	CANCER CENTER CORE GRANT (COMPREHENSIVE).....	3P30 CA17060-02S4	59,351
SILVERBERG, STEVEN G.....	CANCER CENTER CORE GRANT (COMPREHENSIVE).....	5P30 CA17060-03	331,831
WALKER, STROTHER H.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	1R10 CA21878-01	70,125
ORGANIZATION TOTAL	3	461,307	
DENVER HEALTH AND HOSPITALS DEPARTMENT—DENVER GENERAL HOSPITAL ZIP CODE 80204			
MOORE, GEORGE E.....	STUDIES OF HUMAN HEMATOPOIETIC AND CANCER CELLS.....	3R01 CA15018-03S1	37,555
MOORE, GEORGE E.....	STUDIES OF HUMAN HEMATOPOIETIC AND CANCER CELLS.....	2R01 CA15018-04	94,305
ORGANIZATION TOTAL	2	131,860	
NATIONAL ASTHMA CENTER ZIP CODE 80204			
HANSON, DONALD G.....	ORALLY-INDUCED IMMUNOLOGIC TOLERANCE TO PROTEINS.....	5R01 AI13474-02	61,629
KALISKER, ALBERT.....	CONTROL OF IMMUNE RESPONSES BY MAST CELL MEDIATORS.....	5R01 AI13592-02	38,948
MIKLICH, DONALD R.....	MECHANISM OF EMOTIONS' ASTHMA TRIGGERING EFFECT.....	1R01 HL21318-01	60,229
MORRILL, CALLIS G.....	CONTROL OF RESPIRATION IN CHILDREN WITH ASTHMA.....	5R01 HL18135-03	35,338
WEISER, PHILIP C.....	EXERCISE-INDUCED BRONCHOSPASM IN CHILDREN.....	1R01 HL21126-01	51,247
ORGANIZATION TOTAL	5	247,391	
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206			
CAMPBELL, PRISCILLA A.....	CELL BIOLOGY OF THE IMMUNE RESPONSE TO BACTERIA.....	5R01 AI11240-05	52,351

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
CAMPBELL, PRISCILLA A.....	ANIMAL RESOURCE IMPROVEMENT PROJECT GRANT.....	1P40 RR01091-01	82,700
CHILLER, JACQUES M.....	CELLULAR MECHANISMS OF IMMUNOREGULATION AND TOLERANCE.....	5R01 AI13131-02	61,840
GOREN, MAYER B.....	SURFACE CHEMISTRY OF MYCOBACTERIA.....	5R22 AI08401-10	72,905
GREY, HOWARD M.....	STRUCTURE-FUNCTION RELATIONSHIPS OF IMMUNOGLOBULINS.....	5R01 AI09758-08	100,572
GREY, HOWARD M.....	MEMBRANE STRUCTURE OF NEOPLASTIC AND NORMAL LYMPHOCYTES.....	5R01 CA15895-04	92,142
HARBECK, RONALD J.....	CNS INVOLVEMENT IN IMMUNE COMPLEX DISEASE.....	5R01 NS12394-03	52,138
HAROLD, FRANKLIN M.....	TRANSPORT AND METABOLISM OF INORGANIC ELECTROLYTES.....	5R01 AI03568-15	55,681
HENSON, PETER M.....	RELEASE OF INJURIOUS CONSTITUENTS FROM CELLS.....	1R01 GM24834-01	109,500
HENSON, PETER M.....	PATHOGENESIS OF INFLAMMATORY LUNG INJURY.....	7R01 HL21565-01	136,747
HOLLISTER, J ROGER.....	RECOVERY OF ANTIGENS IN ANIMAL AND HUMAN ARTHRITIS.....	5R01 AM18484-02	31,186
JOHNSTON, RICHARD B, JR.....	MECHANISMS OF RESISTANCE TO BACTERIAL INFECTION.....	1R01 AI14148-01	71,860
MC GUIRE, EDWARD J.....	CELL ADHESION OF NORMAL AND MALIGNANT LIVER CELLS.....	5R01 CA14431-05	71,203
MINDEN, PERCY.....	ANTIGEN-ANTIBODY INTERACTIONS IN NEOPLASTIC DISEASE.....	2R01 CA15446-08	106,425
PABST, MICHAEL J.....	BIOSYNTHESIS OF LEVAN BY ACTINOMYCES VISCOSUS.....	7R23 DE04871-01	29,676
PACE, NORMAN R.....	SYNTHESIS AND REGULATION OF EUKARYOTIC RIBOSOMAL RNA.....	5R01 GM20147-05	59,363
PACE, NORMAN R.....	MATURATION OF RIBOSOMAL RNA IN VITRO.....	5R01 GM22367-03	54,026
RICKENBERG, HOWARD V.....	CONTROL OF ENZYME BIOSYNTHESIS—ROLE OF CYCLIC AMP.....	5R01 AM11046-12	93,092
ROBINSON, ARTHUR.....	SEX CHROMOSOMAL ABNORMALITIES: A PROSPECTIVE STUDY.....	5R01 HD10032-02	118,412
ROBINSON, ARTHUR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05474-15	73,732
ROBINSON, KENNETH R.....	ELECTRICAL CURRENTS AND EMBRYONIC CELLS.....	1R01 HD11925-01	99,456
SANDS, HOWARD.....	CYCLIC AMP IN RELAXATION OF TRACHEOBRONCHIAL MUSCLE.....	5R01 HL14964-06	40,975
SEALE, RONALD L.....	NUCLEOSOME-DNA INTERACTIONS IN CHROMATIN REPLICATION.....	1R01 GM23808-01	53,209
SOGIN, MITCHELL L.....	THE ROLE OF REPETITIVE DNA SEQUENCES IN GENE EXPRESSION.....	1R01 GM23464-01	59,739
ORGANIZATION TOTAL	24	1,778,930	
UNIVERSITY OF COLORADO AT DENVER ZIP CODE 80202			
JOULE, JAMES.....	FITNESS MASKING OF ADH GENOTYPES IN SYNTENY WITH GOT-1.....	1R01 GM23520-01	8,232
ORGANIZATION TOTAL	1	8,232	
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
ABRAMS, ADOLPH.....	STRUCTURE AND FUNCTION OF BACTERIAL MEMBRANE ATPASE.....	5R01 GM05810-18	71,354
ALLEN, ROBERT H.....	STRUCTURE AND FUNCTION OF B12-BINDING PROTEINS.....	7R01 AM21365-01	35,942
ARROYAVE, CARLOS M.....	IMPORTANCE OF ALTERNATIVE COMPLEMENT PATHWAY IN DISEASE.....	7R01 AI14443-01	76,915
AUSTIN, JAMES H.....	STUDIES IN AGING OF THE BRAIN.....	5R01 NS09760-07	67,613
BANCHERO, NATALIO.....	OXYGEN TRANSPORT MECHANISMS IN HYPOXIA.....	5R01 HL18145-02	45,135
BATTAGLIA, FREDERICK C.....	STUDIES ON PREMATURITY.....	5P01 HD00781-14	309,328
BETZ, GEORGE.....	POPULATION CONTROL RESEARCH: ENZYME STUDIES.....	3R01 HD08309-03S1	10,385
BETZ, WILLIAM J.....	NEUROMUSCULAR SYNAPSES IN CELL CULTURE.....	5R01 NS10207-06	40,585
BOREK, ERNEST.....	PROGRAM PROJECT IN BASIC ONCOLOGY.....	3P01 CA13419-03S1	200,686
BROWN, JERRY L.....	MODIFICATION OF THE NH ₂ -TERMINAL REGION OF PROTEINS.....	3R01 CA12574-05S1	12,344
BROWN, JERRY L.....	MODIFICATION OF THE NH ₂ -TERMINAL REGION OF PROTEINS.....	2R01 CA12574-06	65,074
BROWN, WILLIAM R.....	IMMUNOGLOBULIN A AND THE HUMAN GASTROINTESTINAL TRACT.....	5R26 CA17342-03	18,948
BURKE, THOMAS J.....	SERUM CALCIUM AND RENAL AUTOREGULATORY EFFICIENCY.....	5R01 AM17646-03	69,066
CANN, JOHN R.....	PHYSICOCHEMISTRY AND IMMUNOLOGY OF MACROMOLECULES.....	5R01 HL13909-26	71,812
CHANDLER, JAMES E.....	A CARDIAC ARREST AND RESUSCITATION SCORING SYSTEM.....	5R01 HL18131-02	16,475
CISAR, JOHN O.....	IMMUNOCHEMISTRY OF ORAL ACTINOMYCES SURFACE ANTIGENS.....	5R23 DE04290-02	28,828
CLAMAN, HENRY N.....	IMMUNOLOGICAL CHANGES IN AGING.....	2R01 AG00464-04	46,395
CLAMAN, HENRY N.....	ALLERGIC DISEASE CENTER—ALLERGIC VASCULITIS.....	2P50 AI12028-04	105,075
CLAMAN, HENRY N.....	IMMUNOCOMPETENCE OF THYMUS CELLS.....	5R01 AI12685-12	93,858
COHEN, J JOHN.....	MATURATION OF LYMPHOCYTE PRECURSORS.....	2R01 AI11661-04	72,007
CONGER, JOHN D.....	PATHOGENESIS OF ACUTE RENAL FAILURE.....	5R01 HL18097-03	42,427
COTTON, ERNEST K.....	CARDIOPULMONARY ADAPTATION OF NEWBORNS TO ALTITUDE.....	5R01 HL15430-05	13,375
CROWLE, ALFRED J.....	EFFECTS OF AGING ON DELAYED HYPERSENSITIVITY IN MICE.....	1R01 AG00008-01	40,016
CUMMINGS, DONALD J.....	REPLICATION, FUNCTION AND BIOGENESIS OF MITOCHONDRIA.....	5R01 GM21948-02	56,057
EIPPER, ELIZABETH A.....	BIOCHEMISTRY AND PHYSIOLOGY OF MULTIPLE FORMS OF ACTH.....	5R01 AM18929-02	45,602
ERIKSON, RAYMOND L.....	BIOSYNTHESIS OF VIRAL RNA.....	9R01 CA21117-12	71,915
ERIKSON, RAYMOND L.....	AVIAN SARCOMA VIRUS TRANSFORMATION-SPECIFIC ANTIGENS.....	1R01 CA21326-01	15,732
FILLEY, GILES F.....	HUMAN PULMONARY SURFACTANT FUNCTION IN SITU.....	5R01 HL17544-03	54,501
FRIEDMAN, SUSAN J.....	D-GLUCOSAMINE: POTENTIATOR IN CANCER CHEMOTHERAPY.....	5R01 CA16154-03	44,160
FROST, WARREN W.....	ANIMAL RESOURCE DIAGNOSTIC LABORATORY.....	1P40 RR01090-01	104,751

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
GORDON, JULIUS A.....	STUDIES ON NORMAL AND NEOPLASTIC MEMBRANES.....	5R01 CA14313-05	43,595
GORDON, STUART G.....	MOLECULAR AND CELLULAR STUDY OF CANCER PROCOAGULANT A.....	5R01 CA14408-05	51,722
GREER, ROBERT O.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA21098-01	42,368
GROVER, ROBERT F.....	ADAPTATION TO HYPOXIA.....	2P01 HL14985-06A1	752,573
HAGERMAN, DWAIN D.....	BIOSYNTHESIS AND ACTION OF FEMALE HORMONES.....	3R01 HD05085-10S1	17,202
HAHN, WILLIAM E.....	GENETIC TRANSCRIPTION IN THE MAMMALIAN BRAIN.....	5R01 NS10813-05	49,214
HAMBIOGE, K MICHAEL.....	STUDIES OF HUMAN DEFICIENCIES OF CHROMIUM AND ZINC.....	5R01 AM12432-09	63,512
HATHAWAY, WILLIAM E.....	CLINICAL STUDIES OF FLETCHER FACTOR.....	5R01 HL18507-02	31,643
HATHAWAY, WILLIAM E.....	THROMBOEMBOLIC DISEASE STUDIES.....	1R01 HL20337-01	32,606
HENDEE, WILLIAM R.....	THERMOGRAPHY AT MICROWAVE AND MILLIMETER WAVELENGTHS.....	1R01 CA17642-01A1	122,136
HUFFER, WILLIAM E.....	PATHOLOGY OF BONE IN DIALYSIS PATIENTS.....	5R01 AM18890-02	19,098
IMADA, MASARU.....	MEMBRANE PROTEINS IN TUMORS.....	1R01 CA22096-01	38,819
JONES, CAROL.....	IMMUNOLOGIC STUDIES RELATED TO MALIGNANCY.....	5R01 CA18734-02	69,962
KERN, FRED, JR.....	BILE SALT MALABSORPTION.....	3R01 AM12626-08S1	36,100
KERN, FRED, JR.....	ESTROGEN EFFECTS ON BILIARY LIPIDS & BILE ACID KINETICS.....	1R01 AM19605-01	74,827
KERR, SYLVIA J.....	STUDY OF METHYLATIONS IN NEOPLASIA.....	5R01 CA12742-06	90,175
KING, DONALD W.....	SEMINARS AND WORKSHOPS IN TECHNIQUES OF CANCER RESEARCH.....	2R13 CA15961-04	66,904
KING, DONALD W.....	SEMINARS AND LABORATORY WORKSHOPS FOR MD/PHD CANDIDATES.....	2R13 GM23356-02	27,405
KIRSCH, WOLFF M.....	CELL SYNCHRONIZATION IN SOLID TUMORS.....	5R01 CA19137-02	34,627
KIRSCH, WOLFF M.....	PAIN CONTROL IN CANCER PATIENTS.....	1R18 CA20370-01	51,619
KOZLOFF, LLOYD M.....	CHEMISTRY OF PHAGE INVASION, STRUCTURE, AND ASSEMBLY.....	5R01 AI06336-14	76,821
LANGAN, THOMAS A.....	PROPERTIES AND FUNCTION OF NUCLEAR PHOSPHOPROTEINS.....	5R01 CA12877-07	80,835
LASHER, ROBERT S.....	DIFFERENTIATION OF GABA NEURONS IN THE CNS.....	5R01 NS13133-02	28,052
LEHMAN, JOHN M.....	PATHOLOGY OF NEOPLASTIC TRANSFORMATION.....	2R01 CA16030-03	52,076
LEHMAN, RALPH A.....	LATERALIZATION OF HANDEDNESS, ATTENTION AND LEARNING.....	5R01 NS12117-03	29,737
LUBS, HERBERT A.....	ORGANIZATION OF METAPHASE CHROMOSOMES.....	5R01 GM23121-02	36,695
MAINS, RICHARD E.....	ELECTROPHYSIOLOGICAL CORRELATES OF ACTH SECRETION.....	1R01 AM19859-01	34,237
MANES, COLE.....	STUDIES IN MAMMALIAN EMBRYOGENESIS.....	5R01 HD04274-08	66,262
MARTIN, A ROBERT.....	MECHANISMS OF SYNAPTIC TRANSMISSION.....	5R01 NS09660-08	57,168
MARTINEZ-HERNANDEZ, ANTONIO.....	STRUCTURE, FUNCTION, AND PATHOLOGY OF BASEMENT MEMBRANE.....	2R01 AM15663-06	91,176
MARTINEZ-HERNANDEZ, ANTONIO.....	THE BASEMENT MEMBRANE IN DIABETES.....	1R01 AM21215-01	25,587
MESCHIA, GIACOMO.....	PHYSIOLOGICAL STUDY OF THE PLACENTA.....	2R01 HD01866-12	130,925
MOLINOFF, PERRY B.....	REGULATION OF BETA-ADRENERGIC RECEPTORS.....	1R01 NS13289-01	52,450
MOORE, GEORGE E.....	TUMOR ALKYLATION WITH ALPHA-BETA-UNSATURATED COMPOUNDS.....	5R01 CA17835-03	43,199
MOORE, GEORGE E.....	IMMUNOTHERAPY OF CANCER PATIENTS WITH METHACRYLATES.....	5R01 CA18754-02	51,746
MOORHEAD, JOHN W.....	INTERACTION OF T-CELLS IN IMMUNITY AND TOLERANCE.....	5R01 AI12993-02	31,099
MURPHY, ROBERT C.....	STRUCTURE DETERMINATION OF MAST CELL PHOSPHOLIPIDS.....	2R01 GM19897-03	34,438
NAKANE, PAUL K.....	ENZYME-LABELED ANTIBODIES FOR IMMUNOHISTOCHEMISTRY.....	5R01 AI09109-10	51,045
NEVILLE, MARGARET C.....	MECHANISMS IN NUTRIENT TRANSPORT INTO CELLS.....	5R01 AM15807-05	53,744
NEVILLE, MARGARET C.....	NUTRIENT UPTAKE IN NORMAL AND TUMOROUS MAMMARY GLAND.....	5R01 CA19389-02	30,809
NOLTE, JOHN F.....	PINEAL PHOTORECEPTORS.....	1R01 EY02083-01	54,002
O'BRIEN, DONOUGH.....	CENTER GRANT FOR RESEARCH IN MENTAL RETARDATION.....	2P30 HD04024-09	240,664
O'BRIEN, DONOUGH.....	BIOCHEMICAL, GENETIC AND OTHER STUDIES IN RETARDATION.....	5P01 HD08315-03	297,971
PANNBACKER, RICHARD G.....	CYCLIC NUCLEOTIDE FUNCTION IN RETINAL PHOTORECEPTORS.....	5R01 EY01171-05	37,609
PATERSON, CHRISTOPHER A.....	REGULATION OF LENS CATION BALANCE AND DISTRIBUTION.....	5R01 EY00506-09	68,374
PATTERSON, DAVID.....	GENE EXPRESSION IN SOMATIC CELLS IN THE AGING PROCESS.....	5R01 AG00029-03	40,118
PERKINS, JOHN P.....	THE REGULATION OF CYCLIC AMP LEVELS IN BRAIN.....	5R01 NS10233-09	7,565
PIERCE, G BARRY.....	PROGRAM IN DEVELOPMENTAL BIOLOGY OF CANCER.....	5P01 CA15823-03	241,246
PRASAD, KEDAR N.....	HEAVY METAL-INDUCED DAMAGE TO THE NERVOUS TISSUE.....	1R01 ES01576-01	92,496
PUCK, THEODORE T.....	GENETIC BIOCHEMICAL STUDY ON SOMATIC CELLS AND CANCER.....	5R01 CA15794-03	50,686
PUCK, THEODORE T.....	SOMATIC CELL GENETICS IN CANCER.....	5P01 CA20810-02	206,823
PUCK, THEODORE T.....	THE CELL BIOLOGY OF DEVELOPMENTAL ANOMALIES.....	5P01 HD02080-12	205,548
PUTNAM, CHARLES W.....	CIBA SYMPOSIUM: STUDY OF HEPATOTROPHIC FACTORS & LIVER.....	1R13 AM19839-01	5,377
REEVE, E BASIL.....	STUDIES ON PSEUDOXANTHOMA ELASTICUM.....	3R01 AM17760-03S1	13,242
REEVE, E BASIL.....	MECHANISMS REGULATING PLASMA PROTEINS AND SOLUTES.....	5R01 HL02262-22	94,384
REEVES, JOHN T.....	STUDY OF EFFECTS OF DIABETES REACTIVITY.....	5R01 HL20429-02	42,299
ROBINSON, WILLIAM A.....	LEUKEMIA AND HUMORAL REGULATORS OF WBC PRODUCTION.....	3R01 CA11305-08S1	3,652
ROPER, STEPHEN D.....	SYNAPTIC TRANSMISSION IN AUTONOMIC GANGLION CELLS.....	2R01 NS11505-04	79,945
RUTHERFORD, R BRUCE.....	MACROPHAGE AND FIBROBLAST PROLIFERATION IN VITRO.....	5R23 DE04539-02	32,034
SAOLER, JOHN R.....	THE LACTOSE REPRESSOR-OPERATOR INTERACTION.....	5R01 GM22297-03	46,508

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
SCHALCH, DON S.....	ROLE OF SOMATOMEDIN IN GROWTH AND DIABETES MELLITUS.....	5R01 AM18617-03	81,578
SCHRIER, ROBERT W.....	SYSTEMIC HEMODYNAMICS AND RENAL WATER EXCRETION.....	1P01 AM19928-01	306,471
SCHRIER, ROBERT W.....	SYSTEMIC HEMODYNAMICS AND RENAL WATER EXCRETION.....	3R01 HL15629-04S1	23,516
SCHWARZ, MARVIN I.....	ETIOLOGIC FACTORS IN CRYPTOGENIC FIBROSING ALVEOLITIS.....	5R01 HL19018-02	24,126
SEEDS, NICHOLAS W.....	IN VITRO BIOCHEMICAL DIFFERENTIATION OF NERVE CELLS.....	5R01 NS09818-06	33,472
SIMON, FRANCIS R.....	LIVER MEMBRANE BINDING AND TURNOVER IN CHOLESTASIS.....	5R01 AM15851-06	60,827
SIMPKINS, HENRY.....	ROLE OF CHROMATIN STRUCTURE IN ERYTHROLEUKEMIA.....	1R01 CA18890-01A1	35,884
STARZL, THOMAS E.....	EFFECTS OF ORTHOTOPIC LIVER TRANSPLANTATION.....	2R01 AM07772-14	110,611
STARZL, THOMAS E.....	HEPATOTROPIC FACTORS IN SPLANCHNIC VENOUS BLOOD.....	2R01 AM17260-09	73,363
STEELE, PETER.....	PLATELET SURVIVAL AND INHIBITORS IN THROMBOEMBOLISM.....	5R01 HL16523-04	37,874
TAKEDA, YASUHIKO.....	DYNAMICS OF THROMBUS FORMATION AND DISSOLUTION.....	5R01 HL11686-09	46,187
TALMAGE, DAVID W.....	THE ROLE OF MACROPHAGES IN ALLOGRAFT IMMUNITY.....	2R01 AI03047-19	80,821
TALMAGE, DAVID W.....	THE IMMUNOGENICITY OF TUMOR-MACROPHAGE HYBRIDS.....	1R01 CA20744-01	46,355
TAN, ENG M.....	NUCLEAR ANTIGENS IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	7R01 AM21356-01	40,530
TAYLOR, AUSTIN L.....	PHAGE MU: A MODEL FOR INTEGRATION OF ANIMAL VIRUS DNA.....	1R01 AI14025-01	47,735
WALDREN, CHARLES A.....	METABOLISM, GENOME REPAIR & ENVIRONMENTAL MUTAGENS.....	1R01 ES01555-01	46,972
WARD, HARRY P.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00051-16	1,026,327
WARD, HARRY P.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	2M01 RR00069-15	514,098
WARD, HARRY P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05357-16	213,709
WEINER, NORMAN.....	SYNTHESIS, STORAGE AND RELEASE OF CATECHOLAMINES.....	5R01 NS07927-10	124,120
WEINER, NORMAN.....	BASAL GANGLIA DISORDERS AND NEUROTRANSMITTER FUNCTION.....	3P50 NS09199-07S1	195,654
WEINER, NORMAN.....	BASAL GANGLIA DISORDERS AND NEUROTRANSMITTER FUNCTION.....	5P50 NS09199-08	331,012
WENGER, DAVID A.....	SPINGOMYELINASE ACTIVITY AND SPHINGOMYELIN LIPIDOSES.....	1R01 HD10494-01	30,658
WENGER, DAVID A.....	SUBSTRATE SPECIFICITY OF HUMAN BETA-GALACTOSIDASES.....	5R01 NS10698-03	35,907
WESTON, WILLIAM L.....	MONOCYTE-MACROPHAGE FUNCTION IN MYCOSIS FUNGOIDES.....	5R01 AI13171-02	20,504
WHITLOCK, DAVID G.....	PATHWAYS SUBSERVING PROPRIOCEPTION.....	5R01 NS08453-09	86,487
WICKS, WESLEY D.....	REGULATION OF HEPATOMA ENZYME SYNTHESIS BY CYCLIC AMP.....	5R01 AM16753-06	51,007
WICKS, WESLEY D.....	CAMP ANALOGS AS GROWTH REGULATORS IN HEPATOMA CELLS.....	3R01 CA15687-03S1	6,552
WICKS, WESLEY D.....	CAMP ANALOGS AS GROWTH REGULATORS IN TUMOR CELLS.....	2R01 CA15687-04	13,834
ORGANIZATION TOTAL	119	10,327,303	
UNIVERSITY OF DENVER ZIP CODE 80210			
EATON, GARETH R.....	INTERACTION OF SPIN LABELS WITH TRANSITION METALS.....	2R01 GM21156-04	61,586
HARTER, SUSAN.....	THE DEVELOPMENT OF MOTIVE HIERARCHIES IN CHILDREN.....	5R01 HD09613-02	60,449
HORN, JOHN L.....	MEASUREMENTS OF INDIVIDUAL DIFFERENCES IN ADULTHOOD.....	1R01 AG00583-01	51,249
KEY, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07138-06	53,390
PREDECKI, PAUL K.....	BLOOD COMPATIBLE MATERIALS BY FLUID PERFUSION.....	1R01 HL20073-01	64,969
WICKSTROM, ERIC.....	OLIGONUCLEOTIDE BINDING SPECIFICITY OF E. COLI IF3.....	5R01 GM23248-02	37,663
YORK, SHELDON S.....	CHANGES IN LAC REPRESSOR STRUCTURE DURING DNA BINDING.....	5R01 GM20561-05	60,279
ORGANIZATION TOTAL	7	389,585	
FORT COLLINS			
COLORADO STATE UNIVERSITY ZIP CODE 80521			
ABEL, JOHN H, JR.....	COMPARTMENTALIZATION OF LUTEAL CELL FUNCTION.....	5R01 HD10327-02	108,220
AZARI, PARVIZ.....	BIOCHEMICAL INVESTIGATION OF A HEREDITARY CATARACT.....	3R01 EY01065-03S1	28,937
BAMBURG, JAMES R.....	REGULATION AND FUNCTION OF PROTEINS IN GROWING NERVES.....	5R01 NS10429-06	56,221
BEDFORD, JOEL S.....	DOSE AND TIME FACTORS IN CELLULAR RADIOSENSITIVITY.....	5R01 CA18023-03	102,852
BLAIR, CAROL D.....	REPLICATION OF JAPANESE ENCEPHALITIS VIRUS.....	5R01 AI12660-03	49,092
BONILLA, CARLOS A.....	CARDIOLOGY OF MDP-INDUCED LEFT VENTRICULAR FAILURE.....	5R01 HL16233-04	78,147
CAUGHEY, WINSLOW S.....	REACTIONS OF HEMEPROTEINS AND OXYGEN.....	5R01 HL15980-05	138,329
DE BRUIN, KENNETH E.....	POTENTIAL ANTITUMOR AGENTS AND ESTERASE INHIBITORS.....	5R01 CA14477-05	25,028
DE BRUIN, KENNETH E.....	STEREOSPECIFICITY IN ANTITUMOR ACTIVITY.....	5R01 CA19908-02	30,570
DEWEY, WILLIAM C.....	CELLULAR RESPONSES TO IRRADIATION.....	2R01 CA08618-12	201,694
DEWEY, WILLIAM C.....	MOLECULAR BASIS OF RADIOSENSITIZATION BY HYPERTHERMIA.....	5R01 CA18334-02	89,152
DUPONT, JACQUELINE.....	DIETARY FAT, CHOLESTEROL AND BILE ACID TURNOVER.....	1R01 HL21485-01	59,052
GILLETTE, EDWARD L.....	RADIATION REPAIR OF NORMAL MAMMALIAN TISSUES.....	5R01 CA13899-06	89,094
GILLETTE, EDWARD L.....	COMPARATIVE ONCOLOGY RESEARCH PROGRAM.....	3P01 CA15820-03S1	22,442
GILLETTE, EDWARD L.....	TUMOR & NORMAL TISSUE RESPONSE TO HEAT AND RADIATION.....	5R01 CA17831-03	62,042

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
GORTHY, WILLIS C.....	MORPHOLOGICAL AND HISTOCHEMICAL STUDIES OF THE LENS.....	3R01 EY00378-08S1	3,159
HAPP, GEORGE M.....	EXOCRINE GLANDS: MODELS OF DIFFERENTIATIVE TRANSITIONS.....	5R01 GM21711-03	33,875
HEGEDUS, LOUIS S.....	ORGANOPALLADIUM ANTITUMOR AGENTS.....	5R01 CA18680-02	34,564
HILL, GEORGE C.....	ELECTRON TRANSPORT SYSTEMS IN TRYPANOSOMES.....	2R01 AI11622-04	60,880
JORDAN, JOHN P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07127-09	77,508
KOZLOWSKI, GERALD P.....	CORRELATED IMMUNOTECHNIQUES FOR STUDY OF GN-RH & ADH.....	5R01 HD08867-03	73,456
LETT, JOHN T.....	AGING, RADIATION & DNA DAMAGE IN NONDIVIDING TISSUE.....	5R01 AG00005-05	75,952
LETT, JOHN T.....	REPAIR OF RADIATION DAMAGE IN CELLULAR DNA.....	5R01 CA10714-10	92,426
LUMB, WILLIAM V.....	PORTACAVAL SHUNT AS TREATMENT FOR HYPERLIPEMIA.....	1R01 HL20183-01	79,890
LUMB, WILLIAM V.....	SYNERGISTIC TREATMENTS OF SPINAL CORD TRAUMA.....	5R01 NS13121-02	52,415
MATHIAS, MELVIN M.....	DIETARY FAT COMPOSITION AND PROSTAGLADIN SYNTHESIS.....	5R01 HL18239-02	35,795
MEYERS, ALBERT I.....	SYNTHESIS OF MAYTANSINE AND ITS DERIVATIVES.....	5R01 CA16051-03	71,884
NATUSCH, DAVID F.....	INTERACTIONS OF TOXIC METAL SPECIES WITH BIOMOLECULES.....	3R01 ES01472-01S1	14,808
NETT, TORRANCE M.....	GN-RH-RECEPTOR INTERACTION: AFFINITY VERSUS BIOPOTENCY.....	2R01 HD07841-03	73,445
NOCKELS, CHERYL F.....	VITAMIN E IMPROVES IMMUNITY BY ALTERING CYCLIC AMP.....	1R01 AI13710-01	45,799
PAULE, MARVIN R.....	GENE SELECTION BY MULTIPLE EUKARYOTIC RNA POLYMERASES.....	5R01 GM22580-02	52,743
PAUTLER, EUGENE L.....	TRANSRETINAL POTENTIAL AND SUGAR TRANSPORT IN MAMMALS.....	5R01 EY01643-02	42,254
PHILLIPS, ROBERT W.....	DEVELOPMENT OF A SWINE MATURITY ONSET DIABETES MODEL.....	1R01 AM21206-01	74,568
RALPH, CHARLES L.....	FUNCTION OF THE PINEAL COMPLEX.....	5R01 NS12257-04	72,631
SNEIDER, THOMAS W.....	METHYLATION OF EUKARYOTIC DNA.....	1R01 CA18719-01A1	61,901
STERMITZ, FRANK R.....	ANTITUMOR COMPOUNDS FROM NORTH AMERICAN PLANTS.....	5R01 CA19243-02	27,774
STONE, HELEN B.....	RADIATION AND HYPOXIC CELL SENSITIZERS.....	5R01 CA20344-02	87,872
STORZ, JOHANNES.....	PATHOGENESIS OF CHLAMYDIAL POLYARTHRITIS-ENTERITIS.....	5R01 AI08420-10	60,126
TIETZ, WILLIAM J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05458-15	83,152
TORNABENE, THOMAS G.....	EFFECTS OF LEAD ON PROCARYOTIC AND EUKARYOTIC CELLS.....	2R01 ES01047-03	34,868
TU, ANTHONY T.....	HEMORRHAGIC AND NECROTIC TOXINS IN SNAKE VENOMS.....	5R01 GM15591-10	30,820
TU, ANTHONY T.....	SEA SNAKE VENOMS AND TOXINS.....	5R01 GM19172-06	93,707
WILL, DONALD H.....	ANIMAL MODELS OF HYPOXIC PULMONARY HYPERTENSION.....	5R01 HL18191-03	51,000
WILL, DONALD H.....	COLD INDUCED PULMONARY HYPERTENSION.....	1R01 HL20719-01	42,081
WOODY, ROBERT W.....	OPTICAL PROPERTIES OF BIOLOGICAL MACROMOLECULES.....	2R01 GM22994-02	67,166
WOODY, ROBERT W.....	SPECTROSCOPIC STUDIES OF RNA POLYMERASE MECHANISM.....	5R01 GM23697-02	45,850
ORGANIZATION TOTAL	46	2,895,241	

LAKESWOOD

AMC CANCER RESEARCH CENTER AND HOSPITAL ZIP CODE 80214

BOREK, ERNEST.....	MOLECULAR BIOLOGY OF ETHIONINE CARCINOGENESIS.....	1R01 CA23536-01	107,365
PARKS, RICHARD C.....	IMMUNOLOGICAL MECHANISMS OF ANTIGENIC TUMOR 'ESCAPE'.....	5R01 CA18923-02	25,372
ORGANIZATION TOTAL	2	132,737	

STATE TOTAL 258 19,788,160

CONNECTICUT

DANBURY

WESTERN CONNECTICUT STATE COLLEGE ZIP CODE 06810

ADLER, ALAN D.....	RARE EARTH PORPHYRIN MOLECULAR BIOLOGICAL PROBES.....	5R01 HL19005-02	22,059
ORGANIZATION TOTAL	1	22,059	

FARMINGTON

UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032

BALLOW, MARK.....	ASSOCIATION OF HISTOCOMPATIBILITY COMPLEX AND DIABETES.....	1R01 AM20975-01	31,778
BALLOW, MARK.....	MEDIATORS OF INFLAMMATION IN TEAR SECRETIONS.....	1R23 EY02036-01	12,835
BECKER, ELMER L.....	IMMUNOLOGICALLY ACTIVATED ENZYME SYSTEMS OF CELLS.....	5R01 AI09648-08	112,009
BERLIN, RICHARD D.....	EFFECT OF MICROTUBULAR PROTEINS ON CELL SURFACES.....	2R01 CA15544-04	46,901

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
BERLIN, RICHARD D.....	DYNAMIC INTERACTIONS OF MEMBRANES, ACTION & MICROTUBULES.....	5R01 GM22621-02	46,304
BRONNER, FELIX.....	MINERAL METABOLISM IN POSTMENOPAUSAL OSTEOPOROSIS.....	5R01 AM14251-06	72,125
BURSTONE, CHARLES J.....	PREDICTION OF TOOTH DISPLACEMENT.....	5R01 DE03545-05	111,277
CATALANOTTO, FRANK A.....	NEUROSENSORY DEFICITS IN CRANIOFACIAL ANOMALIES.....	5R23 DE04130-03	12,920
CHAN, LEE-NIEN L.....	CHANGES IN MEMBRANE PROPERTIES DURING ERYTHROPOIESIS.....	5R01 HL19068-02	49,560
CHAN, LEE-NIEN L.....	REGULATION OF HEMOGLOBIN SYNTHESIS IN CHICK EMBRYOS.....	1R01 HL20928-01	55,870
CHAN, TEH-SHENG.....	SOMATIC CELL GENETIC ANALYSIS OF MEMBRANE BIOGENESIS.....	5R01 CA18405-02	53,080
CHAN, TEH-SHENG.....	SOMATIC CELL HYBRIDS FOR STUDIES OF HUMAN DISEASES.....	2R01 GM21326-04	77,707
COHEN, STANLEY.....	COMPLEMENT AND CELLULAR ACTIVATION.....	2R01 AI12477-04	56,182
COHEN, STANLEY.....	ANTIBODIES TO LYMPHOCYTE-DERIVED MEDIATORS.....	5R01 AI13258-02	52,458
COOPERSTEIN, SHERWIN J.....	PHYSIOLOGY OF PANCREATIC ISLETS AND ACTION OF ALLOXAN.....	5R01 AM09059-14	58,995
COYKENDALL, ALAN L.....	MOLECULAR TOXOMOLOGY OF POTENTIAL PERIODONTAL PATHOGENS.....	1R01 DE04721-01	49,975
D'AMATO, DONALD P.....	ZINC RADIOPHARMACEUTICALS FOR OCULAR MELANOMA DETECTION.....	1R01 CA22077-01	35,487
DEUTSCHER, MURRAY P.....	ENZYMOLGY AND CONTROL OF AMINO ACID ACTIVATION.....	5R01 GM16317-10	76,466
FEINSTEIN, MAURICE B.....	STUDIES ON MECHANISM OF ACTION OF ANESTHETICS.....	5R01 GM17536-08	53,537
FEINSTEIN, MAURICE B.....	CYCLIC NUCLEOTIDES AND CALCIUM IN PLATELETS.....	5R01 HL18937-02	33,673
FERNANDEZ, SALVADOR M.....	DEVELOPMENTAL CHANGES IN THE MYOGENIC CELL SURFACE.....	1R01 GM23235-01	33,340
GAY, THOMAS J.....	ELECTROMYOGRAPHIC-CINEFLUOROGRAPHIC STUDIES OF SPEECH.....	5R01 NS10424-03	27,453
GLASEL, JAY A.....	SUPPORT FOR NMR SPECTROSCOPY FACILITY.....	5P41 RR00639-04	57,680
GOLDSCHNEIDER, IRVING.....	DEVELOPMENT OF IMMUNOLOGICALLY COMPETENT LYMPHOCYTES.....	5R01 AI09649-08	52,645
GOLDSCHNEIDER, IRVING.....	TERMINAL TRANSFERASE IN NORMAL & NEOPLASTIC LYMPHOCYTES.....	1R01 AI14743-01	101,052
GRASSO, JOSEPH A.....	STUDIES IN RBC DIFFERENTIATION.....	5R01 AM19167-03	52,204
HENDERSON, EDWARD G.....	IONIC MECHANISMS UNDERLYING RECEPTOR DESENSITIZATION.....	1R01 NS12563-01A2	47,103
HOLLAND, MICHAEL J.....	CONTROL OF TRANSCRIPTION OF ISOLATED EUKARYOTIC GENES.....	5R01 GM23109-02	45,505
HOYER, LEON W.....	STUDIES OF ANTIBODIES TO ANTIHEMOPHILIC FACTOR.....	5R01 HL16626-04	69,038
HOYER, LEON W.....	STUDIES OF ANTIHEMOPHILIC FACTOR.....	5R01 HL16872-03	112,478
JUNGAS, ROBERT L.....	ACTION OF INSULIN ON ENZYMES OF ADIPOSE TISSUE.....	2R01 AM18092-04	48,184
KAPLAN, JERRY.....	MEMBRANE DYNAMICS IN ALVEOLAR MACROPHAGES.....	1R01 HL21120-01	48,367
KATZ, ARNOLD M.....	ACTIONS OF DRUGS AND IONS ON CARDIAC MEMBRANES.....	7R01 HL21812-01	125,374
KATZ, ARNOLD M.....	CONTROL OF CALCIUM FLUXES ACROSS CARDIAC MEMBRANES.....	7R01 HL22135-01	70,964
KATZ, ELTON P.....	THE DEVELOPMENTAL BIOLOGY OF CALCIFIED TISSUES.....	2R01 DE02953-08A1	48,736
KEGELES, S STEPHEN.....	CHILDREN'S ACCEPTANCE OF CARIES PREVENTIVE PROCEDURES.....	2R01 DE03868-03	100,117
KOPPEL, DENNIS E.....	MEMBRANE DYNAMICS OF LOCOMOTING TISSUE CELLS.....	1R01 GM23585-01	64,530
LAMB, GERTRUDE.....	A SHARED PATIENT-CARE INFORMATION SYSTEM.....	1R01 LM02903-01	73,719
LANGELAND, KAARE.....	BIOCOMPATIBILITY OF ENDODONTIC MATERIALS.....	1R01 DE04096-01A1	61,993
LOE, HARALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05677-09	108,763
LURIE, ALAN G.....	LOW-LEVEL IRRADIATION-MODIFICATION OF CARCINOGENESIS.....	5R23 DE03996-03	9,701
MASSEY, ROBERT U.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05678-09	134,760
MIYAMOTO, MICHAEL D.....	PHARMACOLOGY OF QUANTAL RELEASE PARAMETERS.....	3R01 NS12270-02S1	12,600
MIYAMOTO, MICHAEL D.....	PHARMACOLOGY OF QUANTAL RELEASE PARAMETERS.....	5R01 NS12270-03	23,848
MOREST, DONALD K.....	ANATOMY OF THE AUDITORY SYSTEM.....	7R01 NS14347-01	116,441
MOREST, DONALD K.....	STUDIES ON VERTEBRATE NEUROGENESIS.....	7R01 NS14354-01	41,697
NANDA, RAVINDRA.....	ANTERIOR DISPLACEMENT OF MAXILLA BY CONTROLLED FORCES.....	5R23 DE03998-03	29,413
NUKI, KLAUS.....	BLOOD VESSEL RESPONSE IN EARLY PERIODONTAL DISEASE.....	5R01 DE04389-03	51,075
OLIVER, JANET M.....	CHEDIAK-HIGASHI AND CANCER CELLS WITH SIMILAR DEFECTS.....	5R01 CA18564-02	52,907
OLIVER, JANET M.....	ACTION OF CARBAMATE HERBICIDES IN MAMMALIAN CELLS.....	5R01 ES01106-03	26,262
OSBORN, MARY J.....	STUDIES ON BIOSYNTHESIS OF LIPOPOLYSACCHARIDES.....	5R01 AI08650-09	133,435
PAPPANO, ACHILLES J.....	PHARMACOLOGY OF DEVELOPING CARDIAC TISSUES.....	3R01 HL13339-07S1	7,013
PAPPANO, ACHILLES J.....	PHARMACOLOGY OF DEVELOPING CARDIAC TISSUES.....	5R01 HL13339-08	54,735
PATTERSON, JOHN W.....	EXPERIMENTAL CATARACTS.....	5R01 EY00902-13	29,236
PFEIFFER, STEVEN E.....	CLONAL CELL LINES OF THE NERVOUS SYSTEM.....	2R01 NS10861-04A1	56,801
POYTON, ROBERT O.....	BIOSYNTHESIS AND ASSEMBLY OF CYTOCHROME C OXIDASE.....	5R01 GM21800-03	35,813
RAISZ, LAWRENCE G.....	FACTORS INFLUENCING BONE METABOLISM.....	5R01 AM18063-04	131,822
RODAN, GIDEON A.....	PARATHYROID BIOASSAY BASED ON CAMP IN CELL SUSPENSION.....	5R01 AM17848-03	45,442
RODAN, GIDEON A.....	MECHANICAL AND ELECTRICAL EFFECTS ON OSTEOGENESIS.....	5R01 DE04327-02	50,136
ROSSOMANDO, EDWARD F.....	CELLULAR ASSEMBLY: ITS ROLE IN FACIAL MORPHOGENESIS.....	2R01 DE03715-03	35,337
ROSSOMANDO, EDWARD F.....	ABNORMAL PALATAL DEVELOPMENT INDUCED BY HADACIDIN.....	1R01 DE04657-01	40,349
RÖTH, GERALD J.....	PROSTAGLANDIN SYNTHESIS IN HUMAN PLATELETS.....	1R01 HL20794-01	52,776
ROTHFIELD, LAWRENCE I.....	BIOSYNTHESIS OF THE BACTERIAL CELL ENVELOPE.....	2R01 AM13407-10	115,510
ROTHFIELD, LAWRENCE I.....	ASSEMBLY OF NORMAL AND ONCOGENIC ENVELOPED VIRUSES.....	5R01 CA21037-02	55,149

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
ROTHFIELD, NAOMI F.....	THE ROLE OF PROPERDIN IN CONNECTIVE TISSUE DISEASES.....	5R01 AM16576-05	75,049
ROWE, DAVID W.....	BIOCHEMICAL CHARACTERIZATION OF DIABETIC FIBROBLASTS.....	1R01 AM21309-01	66,570
SETLOW, PETER.....	DEGRADATION REACTIONS IN SPORE GERMINATION.....	5R01 GM19698-06	54,681
SHASKAN, EDWARD G.....	S-ADENOSYL-L-METHIONINE METABOLISM IN AGING RAT BRAIN.....	1R01 AG00340-01A1	36,564
SHEETZ, MICHAEL P.....	ACTIN BINDING PROTEIN OF HUMAN ERYTHROCYTE MEMBRANES.....	5R01 HL18317-03	45,039
SHENK, THOMAS E.....	STRUCTURE AND FUNCTION OF DNA TUMOR VIRUS GENOMES.....	5R01 CA19151-02	51,235
SHERLINE, PETER.....	MICROTUBULES AND THE MECHANISM OF SECRETION.....	5R01 GM22497-02	44,013
SMILOWITZ, HENRY M.....	DEVELOPMENTAL AND NEURAL CONTROL OF THE CELL SURFACE.....	1R01 NS13860-01	49,084
SPENCER, RICHARD P.....	PROGRAM IN RADIOUCLIDE STUDIES OF TUMORS AND GROWTH.....	5R01 CA17802-03	202,008
SPITZNAGLE, LARRY A.....	DEVELOPMENT OF TUMOR AND ORGAN IMAGING AGENTS.....	5R01 GM22973-02	34,274
STRITTMATTER, PHILIPP.....	STUDY OF STRUCTURE AND FUNCTION OF MICROSOMAL MEMBRANES.....	5R01 GM15924-10	122,209
SUNDERMAN, F WILLIAM, JR.....	NICKEL CARCINOGENESIS.....	5R01 ES01337-02	78,348
TANZER, JASON M.....	VIRULENCE CHARACTERIZATION IN STREPTOCOCCUS MUTANS.....	2R01 DE03758-03A1	99,451
TANZER, MARVIN L.....	STRUCTURE, FUNCTION AND PROPERTIES OF COLLAGEN.....	5R01 AM12683-09	60,262
TANZER, MARVIN L.....	BIOLOGY AND CHEMISTRY OF PROCOLLAGEN IN CELL CULTURE.....	5R01 AM17220-05	46,833
TIBBETTS, CLARK J.....	ADENOVIRUS GENOME EXPRESSION—PHYSICAL MAPPING STUDIES.....	5R01 CA17130-03	37,121
TRUMMEL, CLARENCE L.....	RELATION OF INFLAMMATION TO BONE RESORPTION.....	1R01 DE04885-01	50,602
VENHAM, LARRY L.....	YOUNG CHILD'S RESPONSE TO DENTAL STRESS.....	1R01 DE04409-01A1	76,913
WARD, PETER A.....	LEUKOCYTE CHEMOTAXIS.....	5R01 AI09651-07	65,342
WARD, PETER A.....	IMMUNOPATHOLOGY AND CLINICAL IMMUNOLOGY.....	5P01 AI12225-03	209,173
WARD, PETER A.....	REGULATION OF LEUKOTACTIC MEDIATORS BY LUNG.....	5R01 AI13910-02	89,696
WARD, PETER A.....	TUMOR CELL CHEMOTAXIS AND METASTATIC DISEASE.....	5R01 CA17665-03	66,477
WEINSTEIN, SAM.....	EXTENSIBILITY CHARACTERISTICS—HUMAN BUCCINATOR MUSCLE.....	5R01 DE04047-02	34,605
WU, HENRY C.....	BIOCHEMISTRY OF CELL DIVISION IN BACTERIA.....	5R01 CA11371-09	75,023
YOSHIDA, TAKESHI.....	MIGRATION INHIBITION OF TUMOR CELLS BY LYMPHOKINES.....	5R01 CA19286-02	43,943
YOSHIDA, TAKESHI.....	LYMPHOKINES IN PULMONARY GRANULOMAS.....	5R01 HL19711-02	42,757
ZURIER, ROBERT B.....	PROSTAGLANDINS CYCLIC NUCLEOTIDES AND INFLAMMATION.....	2R01 AM17309-04	77,176
ORGANIZATION TOTAL	91	5,725,090	
HAMDEN			
QUINNIPIAC COLLEGE ZIP CODE 06518			
RTCHIE, BRENDA B.....	BIOPHYSICS OF MUSCULAR EXERCISE.....	5R01 NS09960-05	54,798
ORGANIZATION TOTAL	1	54,798	
MIDDLETOWN			
WESLEYAN UNIVERSITY ZIP CODE 06457			
ALLEWELL, NORMA M.....	THERMODYNAMIC ANALYSIS OF ASPARTATE TRANSCARBAMYLASE.....	2R01 AM17335-05	73,123
DONADY, JOHN J.....	GENETIC CONTROL OF CELL DIFFERENTIATION.....	5R01 HD08286-03	51,439
GORTNER, ROSS A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07107-10	36,799
HAAKE, PAUL C.....	PHOSPHORYLATION IN METABOLIC PROCESSES.....	5R01 AM12743-10	39,725
JACOBI, PETER A.....	A SYNTHETIC APPROACH TO THE CYTOTOXIC GERMACRONOLIDES.....	1R01 CA20483-01	27,151
KIEFER, BARRY I.....	DEVELOPMENTAL GENETICS OF SPERMATID DIFFERENTIATION.....	5R01 GM19130-05	62,680
KOHLER, BRYAN E.....	SPECTROSCOPIC STUDIES OF THE VISUAL PIGMENTS.....	5R01 EY01733-02	63,809
LYNCH, CAROL B.....	GENETIC ANALYSIS OF BEHAVIORAL THERMOREGULATION.....	5R01 GM21993-03	44,422
PRATT, REX F.....	BETA-LACTAMASES AND BACTERIAL PENICILLIN RESISTANCE.....	5R01 AI12942-02	21,864
TURNER, ROBERT S, JR.....	ALTERED CELL ADHESIVENESS IN VIVO: MEMBRANE CHANGES.....	1R01 CA20350-01A1	35,832
WOLFE, JASON S.....	REGULATION OF GENE EXPRESSION IN SYNCHRONIZED CELLS.....	5R01 GM18014-07	54,824
ORGANIZATION TOTAL	11	511,668	
NEW HAVEN			
HASKINS LABORATORIES ZIP CODE 06510			
HARRIS, KATHERINE S.....	LARYNGEAL FUNCTION IN NORMAL AND ABNORMAL SPEECH.....	1R01 NS13870-01	124,467
LIBERMAN, ALVIN M.....	NATURE AND ACQUISITION OF THE SPEECH CODE AND READING.....	5P01 HD01994-12	384,746
LIBERMAN, ALVIN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05596-13	43,475
ORGANIZATION TOTAL	3	552,688	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
JOHN B. PIERCE FOUNDATION OF CONNECTICUT ZIP CODE 06519			
BARTOSHUK, LINDA M.....	TASTE OF WATER: EFFECTS OF SOLUTES AND ADAPTATION.....	2R01 ES00880-04A1	43,263
CAIN, WILLIAM S.....	PERCEIVED INTENSITY OF ODORANTS AND IRRITANTS.....	5R01 ES00592-06	75,042
DOUGLAS, JAMES S.....	AIRWAY SMOOTH MUSCLE AND CYCLIC NUCLEOTIDES.....	1R01 HL20611-01	49,498
DOUGLAS, JAMES S.....	AIRWAY REACTIVITY: BETA-ADRENOCEPTORS & PROSTAGLANDINS.....	1R01 HL20783-01	59,028
DU BOIS, ARTHUR B.....	PERIPHERAL CIRCULATION AND FLUID BALANCE.....	5R01 HL17407-04	85,032
HARDY, JAMES D.....	SINGLE UNIT ACTIVITY AND THERMOREGULATION.....	5R01 NS04655-15	50,921
HITCHCOCK, MARGARET.....	INTERACTION OF AIR POLLUTANTS WITH LIVER FUNCTION.....	5R01 ES00711-03	33,822
STITT, JOHN T.....	TEMPERATURE REGULATION: ACTION OF PROSTAGLANDIN E1.....	2R01 NS11487-04	57,610
STOLWIJK, JAN A.....	STUDY OF HUMAN RESPONSES TO THERMAL ENVIRONMENT.....	5P01 ES00354-10	185,238
STOLWIJK, JAN A.....	PERIPHERAL VENOMOTOR CONTROL IN THERMAL STRESS.....	3R01 HL17732-02S1	3,818
STOLWIJK, JAN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05692-08	44,289
ORGANIZATION TOTAL	11 687,561		
YALE UNIVERSITY ZIP CODE 06520			
ALTMAN, SIDNEY.....	TRNA: STUDIES OF PRECURSORS, MUTANTS AND FUNCTION.....	5R01 GM19422-06	75,497
ARMITAGE, IAN M.....	STUDY OF MACROMOLECULAR STRUCTURE AND FUNCTION BY NMR.....	5R01 AM18778-02	48,822
ASKENASE, PHILIP W.....	IMMUNOLOGY OF CUTANEOUS BASOPHIL HYPERSENSITIVITY.....	2R01 AI12211-04	64,392
ATKINS, ELISHA.....	STUDIES IN THE PATHOGENESIS OF FEVER.....	5R01 AI01564-21	121,759
BARNETT, RUSSELL J.....	CELL BIOLOGY OF PLASMA MEMBRANES.....	5R01 AM03688-18	110,549
BAUE, ARTHUR E.....	SURGICAL ASPECTS OF SHOCK AND HYPOXIA.....	2R01 HL19673-02	147,372
BEHRMAN, HAROLD R.....	CONTROL OF CORPUS LUTEUM REGRESSION.....	1R01 HD10718-01	74,620
BERNARD, GARY D.....	OPTICAL INFORMATION PROCESSING IN EYES.....	5R01 EY01140-05	94,332
BERSON, JEROME A.....	DNA, PHOTOSYNTHESIS, AND THE CHEMISTRY OF TRIPLETS.....	1R01 GM23375-01	45,662
BERTINO, JOSEPH R.....	MECHANISM OF ACTION OF FOLATE ANTAGONISTS.....	5R01 CA08010-14	111,804
BERTINO, JOSEPH R.....	CLINICAL PHARMACOLOGY AND CANCER CHEMOTHERAPY.....	5P01 CA08341-12	1,024,795
BIANCANI, PIERO.....	BIOPHYSICAL PRINCIPLES OF PERISTALTIC PHENOMENA.....	5R01 AM16021-06	74,303
BINDER, HENRY J.....	INTESTINAL ELECTROLYTE TRANSPORT IN HEALTH AND DISEASE.....	5R01 AM14669-07	52,177
BINDER, HENRY J.....	MECHANISM OF POTASSIUM TRANSPORT IN INTESTINAL TISSUE.....	5R01 AM18777-02	54,337
BITENSKY, MARK W.....	COORDINATED INTERACTION OF PLASMA MEMBRANE PROTEINS.....	8R01 AM20179-05	99,292
BLOOMER, JOSEPH R.....	PROTOPORPHYRIA: STUDY WITH CULTURED SKIN FIBROBLASTS.....	5R01 AM19009-02	53,895
BOCKELMAN, CHARLES K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07015-12	174,108
BODEL, PHYLLIS T.....	CAUSE OF FEVER IN MALIGNANT DISEASES.....	5R01 CA14655-04	81,536
BOUHUYS, AREND.....	COMMUNITY STUDIES OF OBSTRUCTIVE LUNG DISEASE.....	1R01 HL21352-01	166,920
BOULPAEP, EMILE L.....	FUNCTIONAL STRUCTURE OF RENAL TUBULE.....	5R01 AM13844-08	87,563
BRAVERMAN, IRWIN M.....	ROLE OF MICROCIRCULATION IN CUTANEOUS DISORDERS.....	2R01 AM15739-06A1	97,852
BREAKEYFIELD, XANDRA O.....	DEVELOPMENTAL MECHANISMS IN ADRENERGIC SYNAPTOGENESIS.....	5R01 NS12105-03	62,748
BREG, W ROY.....	CYTOGENETIC STUDIES IN MENTAL RETARDATION.....	7R01 HD11624-01	85,888
CANELLAKIS, EVANGELO S.....	THE USE OF DOUBLE INTERCALATORS AS ANTICANCER AGENTS.....	5R01 CA15317-04	27,358
CARTER, DAVID M.....	SUSCEPTIBILITY OF CUTANEOUS CELLS TO DNA INJURY BY UV.....	3R01 CA12496-06S1	3,773
CASALS-ARIET, JORDI.....	SUPPORT FOR WORLD REFERENCE CENTER FOR ARBOVIRUSES.....	2R01 AI10984-06	82,305
CHANDLER, WILLIAM K.....	ELECTRICAL AND CONTRACTILE PROPERTIES OF MUSCLE.....	5R01 NS07474-11	184,802
COHEN, LAWRENCE B.....	OPTICAL STUDIES OF NEURON ACTIVITY AND ORGANIZATION.....	2R01 NS08437-09	154,464
COHEN, MELVIN J.....	PERIPHERAL AND CENTRAL STUDIES OF NEURONAL ORGANIZATION.....	5R01 NS08996-09	87,924
COLE, CHARLES N.....	CONTROL OF TUMOR VIRUS GENE EXPRESSION.....	1R01 CA22228-01	84,626
COLE, JACK W.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16359-03	1,227,583
COLEMAN, JOSEPH E.....	METALLOENZYME SYNTHESIS, STRUCTURE AND FUNCTION.....	5R01 AM09070-13	69,781
COLEMAN, JOSEPH E.....	STRUCTURE AND FUNCTION OF DNA BINDING PROTEINS.....	5R01 GM21919-03	45,977
COLLINS, WILLIAM F, JR.....	A CENTER FOR ACUTE SPINAL CORD INJURY.....	5P50 NS10174-06	968,614
CONE, ROBERT E.....	MOLECULAR CHARACTERISTICS OF LYMPHOCYTE MEMBRANES.....	5R01 AI12577-03	42,677
CONN, HAROLD O.....	DISTAL SPLENORENAL VS PORTAL SYSTEMIC ANASTOMOSIS.....	5R01 AM18897-03	11,379
COOPER, JACK R.....	THE ROLE OF THIAMINE IN NERVOUS TISSUE.....	5R01 NS08666-08	56,183
COOPER, JACK R.....	CHOLINERGIC NERVE ENDING PARTICLES.....	5R01 NS09836-06	52,027
CORNELIUS, EUGENE A.....	STUDIES OF IMMUNOLOGICALLY INDUCED TUMORS.....	3R01 CA15500-03S1	23,802
COTLIER, EDWARD.....	BIOCHEMICAL STUDIES IN NORMAL AND CATARACTOUS LENSES.....	3R01 EY02490-01S1	62,326
CRONAN, JOHN E, JR.....	GENETIC APPROACHES TO REGULATION OF LIPID METABOLISM.....	5R01 AI10186-07	88,791
CRONAN, JOHN E, JR.....	PROTEIN-LIPID INTERACTION.....	5R01 GM22797-02	41,796
CROTHERS, DONALD M.....	NATURAL AND ARTIFICIAL CONTROL OF DNA FUNCTION.....	2R01 CA15583-04	71,240
CROTHERS, DONALD M.....	MACROMOLECULAR STRUCTURAL DYNAMICS.....	5R01 GM21966-03	62,219

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
CROTHERS, DONALD M.....	SOUTHERN NEW ENGLAND HIGH FIELD NMR FACILITY.....	5P41 RR00798-04	56,514
DE FRONZO, RALPH A.....	GLUCOSE INTOLERANCE AND AGING.....	1R01 AG00764-01	96,820
DE LORENZO, ROBERT J.....	PROTEIN PHOSPHORYLATION, EPILEPSY, & ANTICONVULSANTS.....	1R01 NS13632-01	26,900
DOANE, WINIFRED W.....	GENETIC REGULATORY MECHANISM IN CELLULAR DIFFERENTIATION.....	5R01 GM18729-05	96,788
DONALDSON, ROBERT M, JR.....	BINDING AND TRANSPORT FUNCTIONS OF INTESTINAL MICROVILLI.....	5R01 AM17509-05	55,953
DOUGLAS, WILLIAM W.....	STIMULUS-SECRETION COUPLING: CHROMAFFIN AND OTHER CELLS.....	5R01 NS09137-08	84,345
DOWNING, S EVANS.....	CHEMOSENSITIVE SYSTEMS IN SUDDEN INFANT DEATH.....	5R01 HD07276-04	63,657
DOWNING, S EVANS.....	MYOCARDIAL PERFORMANCE AND METABOLISM IN THE NEWBORN.....	5R01 HL08659-13	97,398
DOWNING, S EVANS.....	RELATIONSHIP OF INSULIN TO CATECHOL CARDIOMYOPATHY.....	5R01 HL20401-02	83,949
DWYER, JOHN M.....	CELLULAR IMMUNITY AND HUMAN DISEASE.....	2R01 AI11785-04	69,612
EBBERT, ARTHUR, JR.....	GENERAL CLINICAL RESEARCH CENTERS-ADULT & CHILDREN.....	5M01 RR00125-14	1,013,896
EBBERT, ARTHUR, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05358-16	213,709
EISENFELD, ARNOLD J.....	STUDY OF CONTRACEPTIVE RECEPTOR MECHANISMS.....	5R01 HD08280-04	96,926
EISENSTADT, JEROME M.....	CYTOPLASMIC INHERITANCE IN CULTURED MAMMALIAN CELLS.....	5R01 GM21873-03	101,840
EISENSTADT, JEROME M.....	REGULATION OF MAMMALIAN MITOCHONDRIAL BIOGENESIS.....	5R01 GM22142-02	33,668
ENGELMAN, DONALD M.....	ORGANIZATION OF CHOLESTERYL ESTERS IN ATHEROSCLEROSIS.....	5R01 HL14111-06	42,256
EVANS, ALFRED S.....	E-B AND OTHER VIRUSES IN CANCER.....	3R01 CA12952-04S1	25,258
EVANS, ALFRED S.....	IMMUNOLOGY OF PERSISTENT INFECTIONS WITH EB VIRUS.....	2R01 CA12952-05A1	122,909
EVANS, ALFRED S.....	CHILDHOOD ENVIRONMENT AND HODGKIN'S DISEASE.....	1R01 CA19499-01	52,550
FARQUHAR, MARILYN G.....	GLOMERULAR CAPILLARIES: NORMAL AND PATHOLOGIC.....	5R01 AM17724-03	102,595
FARQUHAR, MARILYN G.....	STUDIES ON SECRETION IN PITUITARY AND OTHER CELLS.....	5R01 AM17780-04	127,746
FELIG, PHILIP.....	HORMONES, SUBSTRATES & LIVER IN GLUCOSE HOMEOSTASIS.....	5R01 AM13526-08	113,769
FISCHER, DIANA B.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21194-01A1	57,433
FISCHER, JAMES J.....	RADIATION THERAPY AND BIOLOGY RESEARCH PROGRAM.....	5P01 CA06519-15	1,282,377
FISCHER, JAMES J.....	REGIONAL RADIATION THERAPY NETWORK DEMONSTRATION.....	5R18 CA17941-02	212,806
FIXMAN, MARSHALL.....	PROBLEMS IN THEORETICAL CHEMISTRY AND POLYMERS.....	2R01 GM13556-13	81,463
FORBES, THOMAS R.....	CITY OF LONDON PARISH RECORDS.....	1R01 LM02927-01	23,776
FORGET, BERNARD G.....	MOLECULAR BIOLOGY OF HUMAN HEMOGLOBIN SYNTHESIS.....	5R01 AM19482-02	108,265
FORGET, BERNARD G.....	CONTROL OF HUMAN FETAL HEMOGLOBIN SYNTHESIS.....	1R01 HL20922-01	61,537
FRIEDLAENDER, GARY E.....	IMMUNOBIOLOGY OF BONE TUMORS AND BONE ALLOGRAFTS.....	1R01 CA22267-01	55,479
FRUTON, JOSEPH S.....	PROTEIN CONFORMATION AND ENZYME CATALYSIS.....	5R01 GM18172-07	78,441
GALL, JOSEPH G.....	THE ORGANIZATION OF ANIMAL CELL NUCLEI.....	5R01 GM12427-14	107,770
GEE, J BERNARD.....	OBSTRUCTIVE LUNG DISEASE & ALVEOLAR MACROPHAGES.....	5R01 HL19237-02	102,118
GEHA, ALEXANDER S.....	SURGICAL ASPECTS OF MYOCARDIAL HYPERTROPHY.....	5R01 HL19182-02	127,131
GENEL, MYRON.....	MONITORING FAMILIAL MEDULLARY CARCINOMA OF THE THYROID.....	5R18 CA18863-02	40,610
GERLT, JOHN A.....	ENZYMOLGY OF PHOSPHORUS METABOLISM.....	5R01 GM22350-02	33,219
GERLT, JOHN A.....	STRUCTURE AND BIOCHEMICAL ACTIVITY OF CYCLIC AMP.....	5R01 GM23026-02	25,073
GERSHON, RICHARD K.....	RESPONSE OF THYMUS-DERIVED CELLS TO ANTIGEN.....	5R01 AI10497-07	86,647
GERSHON, RICHARD K.....	IMMUNE RESPONSES TO TUMOR GRAFTS.....	5R01 CA08593-12	77,408
GERSHON, RICHARD K.....	CHARACTERIZATION OF LYMPHOID POPULATIONS IN CANCER.....	5R01 CA14216-05	111,394
GIEBISCH, GERHARD H.....	CARDIOVASCULAR, METABOLIC ASPECTS OF MEMBRANE TRANSPORT.....	5P01 AM17433-04	627,919
GILLIS, CHARLES N.....	DISPOSITION OF VASOACTIVE HORMONES IN MAMMALIAN LUNG.....	5R01 HL13315-07	76,572
GLASER, GILBERT H.....	NEUROLOGICAL RESEARCH CENTER (EPILEPSY).....	2P50 NS06208-12	227,758
GLENN, WILLIAM W.....	REMOTE STIMULATION BY RADIO-FREQUENCY TRANSMISSION.....	5R01 HL04651-18	128,622
GOLDSMITH, TIMOTHY H.....	VISUAL MECHANISMS.....	5R01 EY00222-17	55,581
GREENGARD, PAUL.....	METABOLIC BASIS OF NEURAL FUNCTION.....	5R01 NS08440-09	82,309
GREGORY, DOUGLAS S.....	MECHANISM OF CONTROL OF AQUEOUS HUMOR FORMATION.....	5R01 EY01630-02	27,949
GROSS, IAN.....	PHOSPHOLIPID SYNTHESIS BY FETAL LUNG IN ORGAN CULTURE.....	5R01 HL19752-02	84,876
HANDSCHUMACHER, ROBERT E.....	CANCER CHEMOTHERAPY PROGRAM.....	5P01 CA10748-10	817,624
HAYSLETT, JOHN P.....	CARDIOVASCULAR AND METABOLIC ASPECTS OF RENAL FUNCTION.....	5R01 AM18061-04	88,580
HIGGINS, JOAN A.....	BIOGENESIS OF CELLULAR MEMBRANES.....	2R01 GM20001-04A1	74,052
HOBBS, JOHN C.....	SYSTOLIC TIME INTERVALS IN THE HUMAN FETUS AND NEWBORN.....	5R01 HD10138-02	13,465
HODGE, LON D.....	REGULATORY PROCESSES IN SYNCHRONIZED CELLS.....	5R01 CA12229-08	84,084
HODGE, LON D.....	METABOLISM OF ADENOVIRUS RNA.....	5R01 CA18214-02	76,342
HODSON, CECIL J.....	ULTRASONIC MONITORING OF VISCERAL BLOOD VESSELS.....	1R01 HL19791-01	95,261
HOFFMAN, JOSEPH F.....	ION TRANSPORT ACROSS EPITHELIAL MEMBRANES.....	5R01 AM12028-11	65,907
HOFFMAN, JOSEPH F.....	MEMBRANE TRANSPORT PROCESSES IN RED BLOOD CELLS.....	2R01 HL09906-12	125,160
HOLFORD, THEODORE R.....	COLORRECTAL CANCER: FACTORS RELATED TO SURVIVAL.....	1R01 CA21849-01	42,378
HORSTMANN, DOROTHY M.....	CLINICAL VIROLOGY OF EPSTEIN BARR VIRUS INFECTIONS.....	5R01 AI11611-05	137,677
HORSTMANN, DOROTHY M.....	RESPONSES TO RUBELLA VIRION AND SUBUNIT VACCINES.....	5R01 AI11788-08	145,638

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
HORVATH, CSABA G.....	NOVEL HYDROPHOBIC INDEX FOR LFER OF ANTITUMOR AGENTS.....	1R01 CA21948-01	58,559
HORVATH, CSABA G.....	LIQUID CHROMATOGRAPHY OF BIOLOGICAL SUBSTANCES.....	5R01 GM20993-03	49,564
HOWARD-FLANDERS, PAUL.....	CROSS-LINKING OF NUCLEOPROTEINS BY RADIATION.....	5R01 GM11014-17	52,555
HSIUNG, GUEH-OJEN G.....	EXPERIMENTAL MODELS FOR CYTOMEGALOVIRUS INFECTIONS.....	5R01 HD10609-02	60,138
HUBBARD, ANN L.....	CELL SURFACE SIALOGLYCOPROTEINS.....	1R01 GM23669-01	64,121
HUSZAR, GABOR B.....	STRUCTURE OF MYOSIN IN NORMAL AND PREGNANT UTERUS.....	5R01 HD10235-02	65,411
HUTCHINSON, FRANKLIN.....	EFFECTS OF THE ANTITUMOR AGENT BLEOMYCIN ON DNA.....	5R01 CA17938-02	54,433
JACOBY, ROBERT O.....	TRANSMISSIBLE ATYPICAL ILEAL HYPERPLASIA.....	5R01 RR00945-03	73,283
JAMIESON, JAMES D.....	CELL SECRETION AND MEMBRANE FORMATION IN THE PANCREAS.....	2R01 AM17389-05	100,744
JANEWAY, CHARLES A, JR.....	THE SPECIFICITY OF T LYMPHOCYTE RECEPTORS.....	1R01 AI13766-01	51,460
JONAS, ALBERT M.....	STUOY OF TRANSMISSIBLE MURINE COLONIC HYPERPLASIA.....	5R26 CA15405-04	75,741
JONAS, ALBERT M.....	RESOURCE FOR STUOY OF LABORATORY ANIMAL DISEASES.....	5P40 RR00393-10	266,011
KANKEL, DOUGLAS R.....	NERVOUS SYSTEM DEVELOPMENT AND SYNAPSE FORMATION.....	2R01 NS11788-04	96,188
KANKEL, DOUGLAS R.....	ACETYLCHOLINESTERASE: GENETICS-NEUROBIOLOGY.....	5R01 NS12346-03	53,630
KANTOR, FRED S.....	CELLULAR IMMUNITY IN VIRAL DISEASES.....	5R01 AI06706-10	38,261
KANTOR, FRED S.....	INTERPLAY OF HUMORAL FACTORS IN CELLULAR IMMUNITY.....	5R01 AI11077-05	126,503
KASHGARIAN, MICHAEL.....	THE PATHOLOGY OF RECOVERY FROM ACUTE RENAL INJURY.....	1R01 AM19930-01	70,081
KELSEY, JENNIFER L.....	ESTROGENS AND GENITAL CANCERS, A CASE-CONTROL STUOY.....	1R01 CA20556-01	128,986
KIDD, KENNETH K.....	GENETICS OF HUMAN BEHAVIORAL DISORDERS: STUTTERING.....	5R01 NS11786-04	83,628
KIRCHNER, JOHN A.....	STUOY OF HEAD AND NECK CANCER BY SERIAL SECTION.....	1R01 CA22101-01	33,173
KITAHATA, LUKE M.....	NEUROPHARMACOLOGY-ANESTHESIA AND THE NERVOUS SYSTEM.....	5R01 NS09871-06	73,789
KOHORN, ERNEST I.....	CELLULAR AND IMMUNOLOGIC STUOY OF OVARIAN CANCER.....	3R01 CA16214-03S1	13,713
KONIGSBERG, WILLIAM H.....	ONCOGENIC TRANSFORMATION AND THE CELL ENVELOPE.....	5R01 CA13094-06	77,238
KONIGSBERG, WILLIAM H.....	RELATION OF PROTEIN STRUCTURE TO BIOLOGICAL FUNCTION.....	5R01 GM12607-13	143,300
LAI, YIN-LOK.....	HEREDITARY RETINAL DEGENERATION IN WAG/RIJ RATS.....	5R01 EY01769-02	70,238
LANDMESSER, LYNN T.....	DEVELOPMENTAL AND TROPHIC NEURAL INTERACTIONS.....	5R01 NS10666-06	44,503
LENGYEL, PETER.....	INTERFERON, ANIMAL VIRUSES AND PROTEIN SYNTHESIS.....	5R01 AI12320-03	88,699
LERNER, AARON B.....	BIOLOGY OF NORMAL AND MALIGNANT MELANOCYTES.....	2R01 CA04679-18	301,710
LERNER, AARON B.....	NEW APPROACHES TO THE TREATMENT OF MELANOMA.....	5R01 CA18823-02	73,572
LI VOLSI, VIRGINIA A.....	THE ORIGIN OF THE OSTEOCLAST.....	1R01 AM20363-01	53,356
MACNAB, ROBERT M.....	PRINCIPLES OF SENSORY RECEPTION AND MOTOR FUNCTION.....	2R01 AI12202-04	60,984
MALAWISTA, STEPHEN E.....	BIOPHYSICAL MECHANISMS IN LEUKOCYTES AND MELANOCYTES.....	2R01 AM10493-12	117,809
MALAWISTA, STEPHEN E.....	CONTROL OF LYSOSOMAL MOVEMENTS IN HUMAN LEUKOCYTES.....	1R01 AM19742-01	60,352
MANUELIDIS, ELIAS E.....	EXPERIMENTAL CREUTZFELDT-JAKOB DISEASE.....	5R01 NS12674-03	107,903
MANUELIDIS, LAURA M.....	PATHOGENETIC DETERMINANTS OF HUMAN CNS TUMORS.....	5R01 CA15044-04	29,391
MARCHESI, SALLY L.....	GLYCOPROTEINS OF PLATELET MEMBRANE AND PLATELET FUNCTION.....	1R01 HL20140-01	27,873
MARKERT, CLEMENT L.....	STUOY OF EMBRYONIC DEVELOPMENT.....	5R01 HD07741-04	61,906
MARSH, JOHN C.....	EASTERN COOPERATIVE ONCOLOGY GROUP-CLINICAL STUDIES.....	5R10 CA15485-04	64,690
MC COLLUM, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05443-16	70,321
MC GUIRE, JOSEPH S.....	CONTROL OF NORMAL AND PSORIATIC EPIDERMAL CELL DIVISION.....	5R01 AM13929-08	82,473
MEIGS, J WISTER.....	CANCER IN PERSONS EXPOSED TO EXOGENOUS ESTROGENS.....	3R01 CA20347-01S1	25,103
MEIGS, J WISTER.....	CANCER IN PERSONS EXPOSED TO EXOGENOUS ESTROGENS.....	5R01 CA20347-02	109,886
MICHAEL, CHARLES R.....	NEUROPHYSIOLOGY OF ALL-CONE VISION.....	2R01 EY00568-09	95,343
MILLER, I GEORGE, JR.....	STUDIES OF EPSTEIN-BARR VIRUS.....	5R01 CA12055-06	87,974
MILLER, WILLIAM H.....	STRUCTURE AND FUNCTION OF EYES.....	5R01 EY00089-13	66,069
MITCHELL, MALCOLM S.....	EFFECTS OF CHEMOTHERAPY ON TUMOR-SPECIFIC IMMUNITY.....	5R01 CA13105-06	54,129
MOORE, PETER B.....	RIBOSOME STRUCTURE AND FUNCTION.....	5R01 AI09167-09	76,286
MOTOYAMA, ETSURO K.....	PULMONARY MECHANICS DURING POSTNATAL DEVELOPMENT.....	1R01 HL21444-01	78,660
MURPHY, DONAL B.....	EXPRESSION OF IA LOC1 IN SUBCLASSES OF LYMPHOCYTES.....	1R01 AI14349-01	71,860
NEUFELD, ARTHUR H.....	MEDIATORS THAT REGULATE AQUEOUS HUMOR DYNAMICS.....	5R01 EY01470-03	22,252
OGDEN, JOHN A.....	NORMAL AND ABNORMAL POSTNATAL SKELETAL DEVELOPMENT.....	1R01 H010854-01	103,687
OSBALDISTON, GEORGE W.....	BEHAVIOR OF HUMAN SICKLE CELLS IN AN ANIMAL MODEL.....	3R01 HL16285-02S1	1,443
PALADE, GEORGE E.....	RESEARCH CENTER ON CELLULAR MEMBRANES.....	5P50 GM21714-03	562,499
PALADE, GEORGE E.....	LOCALIZATION OF PORE SYSTEMS IN CAPILLARY WALLS.....	2R01 HL17080-04	159,846
PAPERMASTER, DAVID S.....	MEMBRANE BIOSYNTHESIS IN NORMAL AND DYSTROPHIC RETINA.....	5R01 EY00845-04	40,796
PEARSON, HOWARD A.....	MANAGEMENT OF HEMOSIDEROSIS IN THALASSEMIA.....	5R01 HL19961-02	94,018
PINCUS, JONATHAN H.....	THIAMINE AND DISORDERS OF BRAIN METABOLISM.....	5R01 NS09622-06	55,255
PITLICK, FRANCES A.....	ATHEROSCLEROSIS, COAGULATION AND THROMBOSIS.....	5P01 HL16126-05	436,890
PLATT, TERRY.....	REGULATORY SEQUENCES IN TRP OPERON MRNA OF E COLI.....	5R01 GM22830-02	53,204
POULSON, DONALD F.....	STUDIES ON HEREDITARY ANDROCIDAL INFECTIONS.....	2R01 AI10467-06	88,265

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
POWELL, JEFFREY R.....	GENETICS OF NATURAL POPULATIONS OF MOSQUITOES.....	5R01 AI12016-02	36,642
POWLEY, TERRY L.....	HYPOTHALAMIC CONTROL OF BODY WEIGHT AND FEEDING.....	2R01 AM15511-07	75,003
PRESTEGARD, JAMES H.....	NMR INVESTIGATION OF VESICULAR MEMBRANES.....	5R01 GM19035-06	36,018
PRUSOFF, WILLIAM H.....	IODODEOXYURIDINE, IODO-DNA, AND BIOLOGICAL ACTIVITY.....	5R01 CA05262-17	152,196
PRUSOFF, WILLIAM H.....	POTENTIAL ANTICANCER AND ANTIVIRAL BISUBSTRATE ANALOGS.....	5R01 CA17019-03	41,274
RASMUSSEN, HOWARD.....	HORMONAL AND IONIC CONTROL OF METABOLISM.....	2R01 AM19813-02	250,182
RASMUSSEN, HOWARD.....	UROLITHIASIS CENTER.....	1P50 AM20570-01	274,847
RASMUSSEN, HOWARD.....	CELLULAR EVENTS IN BONE REMODELING OF TOOTH MIGRATION.....	1R01 DE04724-01	96,190
REID, TED W.....	ROLE OF GLUTAMINE TRANSFERASE IN THE RETINA.....	5R01 EY01656-02	51,133
RICHARDS, FRANK F.....	STUDY OF POLYFUNCTIONAL ANTIBODY-COMBINING REGIONS.....	5R01 AI08614-10	110,038
RICHARDS, FREDERIC M.....	PROGRAM IN MACROMOLECULAR STRUCTURE, MOTION, CONTROL.....	5P01 GM22778-02	502,671
RITCHIE, J MURDOCH.....	STUDY OF MAMMALIAN C FIBERS.....	5R01 NS08304-10	75,193
RITCHIE, J MURDOCH.....	DEMYELINATING DISEASE—BIOPHYSICS OF NERVE DYSFUNCTION.....	5R01 NS12327-03	58,250
ROONEY, SEAMUS A.....	EFFECT OF HORMONES ON LUNG PHOSPHOLIPID BIOSYNTHESIS.....	5R01 HD10192-02	131,759
ROONEY, SEAMUS A.....	PULMONARY SURFACTANT PRODUCTION IN NEWBORN ANIMALS.....	1R01 HD11018-01	91,210
ROSENBAUM, JOEL L.....	SYNTHESIS AND ASSEMBLY OF MICROTUBULES.....	5R01 GM14642-11	97,061
ROSENBERG, LEON E.....	TRANSPORT AND METABOLISM OF AMINO ACIDS.....	5R01 AM09527-13	107,377
ROSENBERG, LEON E.....	TISSUE CULTURE STUDIES OF INBORN METABOLIC ERRORS.....	5R01 AM12579-08	56,412
ROSENBERG, LEON E.....	TISSUE CULTURE STUDIES OF INBORN METABOLIC ERRORS.....	2R01 AM12579-09	156,808
ROSENBERG, LEON E.....	STUDY OF HUMAN GENETICS AND INHERITED DISEASE.....	5P50 GM20124-05	463,801
RUDDLE, FRANK H.....	GENETIC ANALYSIS OF SOMATIC CELL POPULATIONS.....	5R01 GM09966-16	303,583
RUDDLE, NANCY H.....	PROPAGATION OF THYMUS-DERIVED LYMPHOCYTE LINES.....	3R01 CA16885-02S1	14,050
RUDDLE, NANCY H.....	MURINE LEUKEMIA VIRUS INDUCTION AND REPLICATION.....	1R01 CA21333-01	52,579
SAHA, SUBRATA.....	A NEW METHOD TO MEASURE THE RATE OF FRACTURE HEALING.....	5R01 AM18360-03	29,349
SARTORELLI, ALAN C.....	BIOCHEMICAL PHARMACOLOGY OF ANTINEOPLASTIC AGENTS.....	5R01 CA02817-21	227,708
SASAKI, CLARENCE T.....	POSTNATAL RESPIRATORY DEVELOPMENT AS RELATED TO SIDS.....	5R01 HD09494-03	71,227
SCHENKMAN, JOHN B.....	INDUCTION AND MODE OF ACTION OF HEPATIC DRUG OXIDASE.....	3R01 GM17021-07S1	28,100
SCHENKMAN, JOHN B.....	INDUCTION AND MODE OF ACTION OF HEPATIC DRUG OXIDASE.....	5R01 GM17021-08	119,904
SCOTT, A IAN.....	BIOSYNTHESIS AND BIOGENESIS OF ANTITUMOR ALKALOIDS.....	2R01 CA11095-09	28,729
SCURLOCK, JAMES E.....	ULTRA-LONG NERVE BLOCK AND UNCONVENTIONAL ANESTHETICS.....	1R23 GM24164-01	45,832
SEARS, MARVIN L.....	PHYSIOLOGIC STUDIES OF INTRAOCULAR PRESSURE.....	2R01 EY00237-16	214,393
SEARS, MARVIN L.....	VISION RESEARCH CENTER.....	5P30 EY00785-07	231,682
SHAYWITZ, BENNETT A.....	ONTOGENY OF BRAIN CATECHOLAMINES AND HYPERACTIVITY.....	5R01 NS12384-03	78,741
SHEPHERD, GORDON M.....	INTEGRATIVE MECHANISMS OF CORTICAL NEURONS.....	2R01 NS07609-11	82,080
SHERWIN, ROBERT S.....	INSULIN GLUCAGON AND SOMATOSTATIN IN DIABETES.....	1R01 AM20495-01	76,885
SHOPE, ROBERT E.....	CONTROL OF ARBOVIRUS INFECTIONS OF MAN.....	2P01 AI1132-06	196,416
SHOPE, ROBERT E.....	ANTIGENIC PROPERTIES OF BACULOVIRUSES.....	1R01 AI13727-01	58,547
SIMMONDS, SOFIA.....	METABOLIC FUNCTIONS OF BACTERIAL PEPTIDASES.....	5R01 GM23202-02	55,980
SLAYMAN, CAROLYN W.....	GENETIC STUDY OF ION TRANSPORT IN NEUROSPORA.....	5R01 GM15761-09	88,433
SLAYMAN, CLIFFORD L, JR.....	MEMBRANE POTENTIAL AND ACTIVE TRANSPORT IN NEUROSPORA.....	5R01 GM15858-10	95,881
SOLL, DIETER G.....	STUDIES ON TRANSFER RNA.....	5R01 GM22854-02	118,612
SOLL, DIETER G.....	BIOCHEMISTRY OF EARLY DEVELOPMENT IN DROSOPHILA.....	5R01 HD09167-03	51,619
SOMAN, VUAY R.....	GLUCAGON AND INSULIN RECEPTORS IN GLUCOSE METABOLISM.....	1R01 AM21158-01	43,450
STEERE, ALLEN C.....	LYME ARTHRITIS: A NEW EPIDEMIC DISEASE.....	1R01 AM20358-01	268,325
STEITZ, JOAN A.....	CONTROL OF GENE EXPRESSION IN VIRAL INFECTION.....	5R01 AI10243-07	81,140
STEVENS, CHARLES F.....	MECHANISM OF NERVE EXCITATION.....	2R01 NS12961-02	90,740
STEVENS, CHARLES F.....	BASIC NEURAL MECHANISMS.....	2R01 NS12962-03	78,000
STURTEVANT, JULIAN M.....	PHYSICOCHEMICAL STUDIES OF BIOCHEMICAL REACTIONS.....	5R01 GM04725-21	74,096
SUMMERS, WILLIAM C.....	GENETIC STUDY OF ANIMAL VIRUSES.....	5R01 CA13515-05	69,750
TANAKA, KAY.....	BIOCHEMICAL STUDIES OF HEPATIC ENCEPHALOPATHY.....	3R01 AM17453-04S1	9,665
TANAKA, KAY.....	STUDIES OF DISEASES OF ORGANIC ACID METABOLISM.....	2R01 AM17453-05	100,204
TIGNOR, GREGORY H.....	RABIES SEROGROUP VIRUS INFECTIONS: IMMUNOPATHOLOGY.....	5R01 AI12541-03	78,099
TRINKAUS, JOHN P.....	CONTACT BEHAVIOR OF DEVELOPING AND TRANSFORMED CELLS.....	9R01 CA22451-04	82,065
TSIEN, RICHARD W.....	ELECTROPHYSIOLOGY OF HEART MUSCLE/EFFECTS OF EPINEPHRINE.....	5R01 HL13306-07	74,451
WADE, JAMES B.....	PHYSIOLOGY OF EPITHELIA AND MEMBRANE STRUCTURE.....	5R01 AM19344-02	40,364
WAKSMAN, BYRON H.....	THE BEHAVIOR OF CELL SUSPENSIONS IN VITRO AND IN VIVO.....	5R01 AI06112-14	77,757
WAKSMAN, BYRON H.....	SPECIFICITY AND INFORMATION TRANSFER IN SENSITIVITY.....	5R01 AI06455-13	75,695
WAKSMAN, BYRON H.....	IMMUNE RESPONSE IN EXPERIMENTAL TRYPANOSOMIASIS.....	1R01 AI13949-01	118,496
WALLIS, ROBERT C.....	BIOLOGY OF WEE VIRUS IN MOSQUITOES OF NORTHEAST U.S.....	5R01 AI12695-03	36,610
WASSERMAN, HARRY H.....	NEW SYNTHETIC METHODS APPLIED TO THE PENICILLIN FIELD.....	5R01 GM07874-16	61,372

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
WASSERMAN, HARRY H.....	SINGLET OXYGEN REACTIONS WITH ORGANIC SUBSTRATES.....	5R01 GM13854-11	75,188
WATERMAN, TALBOT H.....	SENSORY MECHANISMS IN VISUAL ORIENTATION.....	5R01 EY00405-10	73,144
WEISS, ROBERT M.....	AGE DEPENDENT FACTORS IN URETERAL FUNCTION.....	1R01 AG00112-01	49,912
WEISSMAN, SHERMAN M.....	PROGRAM ON THE MOLECULAR BASIS OF VIRAL TRANSFORMATION.....	5P01 CA16038-04	950,821
WHITE, COLIN.....	CANCER INCIDENCE AMONGST COSMETOLOGISTS.....	5R01 CA20890-02	38,985
WRIGHT, FRED S.....	CELLULAR MECHANISMS OF RENAL POTASSIUM EXCRETION.....	5R01 AM14423-08	60,095
WYMAN, ROBERT J.....	CENTRAL NERVOUS GENERATION OF MOTOR OUTPUT PATTERNS.....	5R01 NS07314-11	76,708
YU, ROBERT K.....	SPHINGOGLYCOLIPIDS IN NORMAL AND M. SCLEROSIS BRAINS.....	5R01 NS11853-03	44,771
ZARET, BARRY L.....	SEQUENTIAL MULTINUCLIDE STUDY OF ACUTE INFARCTION.....	1R01 HL21690-01	142,094
ZIEGLER, FREDERICK E.....	SYNTHETIC STUDIES OF CYTOTOXIC NATURAL PRODUCTS.....	2R01 CA16432-04	64,240
ZIGLER, EDWARD F.....	COGNITION AND MOTIVATION IN RETARDED INDIVIDUALS.....	5P01 HD03008-11	295,484
ORGANIZATION TOTAL	235	28,965,500	
NORWALK			
NORWALK HOSPITAL ZIP CODE 06856			
FLOCH, MARTIN H.....	COLON CARCINOMA, DIET AND THE MICROFLORA.....	5R01 CA16090-03	49,642
ORGANIZATION TOTAL	1	49,642	
STORRS			
UNIVERSITY OF CONNECTICUT ZIP CODE 06268			
ALLEN, LINDSAY H.....	DIETARY PROTEIN, OSTEOPOROSIS AND PERIODONTAL DISEASE.....	5R01 DE04295-02	50,155
AMBELLAN, ELISABETH H.....	GLUCOCORTICOID EFFECTS ON PROTEIN SYNTHESIS IN VITRO.....	1R01 AM19725-01A1	29,400
BAILEY, WILLIAM F.....	WEAR OF DENTAL RESTORATIVE MATERIALS.....	1R23 DE04708-01	16,306
BERG, CLAIRE M.....	TRANSPOSABLE ELEMENT MUTAGENESIS IN ESCHERICHIA COLI.....	1R01 AI14278-01	42,080
CHOYNICK, ARTHUR.....	GENETIC STUDIES IN DROSOPHILA MELANOGASTER.....	5R01 GM09886-16	148,716
CLARK, HUGH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07014-12	114,836
COHEN, STEVEN D.....	ORGANOPHOSPHATE ESTERASE INHIBITION & DRUG TOXICITY.....	1R01 ES01093-01A1	66,753
DENENBERG, VICTOR H.....	CONSEQUENCES OF INFANT RISK FACTORS.....	2R01 HD08195-03	81,886
FREDRICKSON, TORGNY N.....	ETIOLOGY AND PATHOBIOLOGY OF GENITAL CANCERS.....	5R01 CA19837-02	86,057
GOETINCK, PAUL F.....	MOLECULAR BASIS OF NORMAL AND MUTANT LIMB DEVELOPMENT.....	5R01 HD09174-03	86,414
GOLDMAN, BRUCE D.....	PHOTOPERICIODIC REGULATION OF MAMMALIAN REPRODUCTION.....	2R01 HD05481-07	70,187
GOLDMAN, BRUCE D.....	ENVIRONMENTAL AND HORMONAL FACTORS IN HIBERNATION.....	1R01 HD10478-01	50,185
JENSEN, ROBERT G.....	LIPID STRUCTURE OF NORMAL AND HYPERLIPOPROTEINS.....	1R01 HL16807-01A2	76,473
KEGELES, GERSON.....	RELAXATION KINETICS OF RIBOSOME SUBUNIT INTERACTION.....	1R01 GM24062-01	47,821
KNOX, JAMES R.....	A NEW APPROACH TO ENZYME-RESISTANT PENICILLINS.....	2R01 AI10925-05	62,134
LANGNER, RONALD O.....	LIPID FLUX AND COLLAGEN SYNTHESIS IN ATHEROSCLEROSIS.....	2R01 HL15478-04	50,078
LAUDER, JEAN M.....	HORMONAL AND HUMORAL INFLUENCES ON BRAIN DEVELOPMENT.....	1R01 NS13481-01	52,482
LUCAS-LENARD, JEAN M.....	TRANSLATIONAL CONTROL MECHANISMS.....	5R01 CA12144-07	79,178
MARCUS, PHILIP I.....	STUDY OF GENETICS.....	5P01 CA14733-05	267,822
MARCUS, PHILIP I.....	HOST CELL INTERACTION OF ANIMAL VIRUSES.....	5R01 CA20882-07	31,858
MAXSON, STEPHEN C.....	EARLY EXPERIENCE, GENOTYPE, ENVIRONMENT AND BEHAVIOR.....	1R01 HD11220-01	53,943
MUGNAINI, ENRICO.....	ORGANIZATION AND DEVELOPMENT OF NERVOUS TISSUES.....	3R01 NS09904-06S1	69,694
MUGNAINI, ENRICO.....	ORGANIZATION AND DEVELOPMENT OF NERVOUS TISSUES.....	5R01 NS09904-07	103,863
NORTHROP, ROBERT B.....	CAROTID OCCLUSION DIAGNOSIS BY NO-TOUCH OCULAR PULSE.....	5R01 HL19172-02	32,364
PILAR, GUILLERMO R.....	GANGLIONIC SYNAPTIC TRANSMISSION.....	5R01 NS10338-07	97,024
ROMANO, ANTONIO H.....	SUGAR TRANSPORT AND MALIGNANT TRANSFORMATION.....	2R01 CA14274-04A1	43,288
SACHS, BENJAMIN D.....	ANALYSIS OF MASCULINE BEHAVIOR.....	5R01 HD08933-03	53,055
SAMULSKI, EDWARD T.....	POLYPEPTIDE LIQUID CRYSTAL AND COLLAGEN; NMR STUDIES.....	2R01 AM17497-04	50,318
SCHUSTER, TODD M.....	MECHANISM OF LIGAND BINDING TO HEMOGLOBIN.....	5R01 HL17494-07	51,682
SOMES, RALPH G, JR.....	REGISTRY OF SPECIALIZED GENETIC STOCKS.....	5P40 RR00529-09	14,846
SPEYER, JOSEPH F.....	MOLECULAR MECHANISMS OF INFORMATION TRANSFER.....	2R01 GM15697-10	77,454
YPHANTIS, DAVID A.....	SELF-ASSOCIATION OF INSULIN.....	5R01 AM18001-04	54,214
ZEAMAN, BETTY H.....	READING-LIKE BEHAVIOR IN NONREADING RETARDED ADULTS.....	1R01 HD11158-01	42,016
ORGANIZATION TOTAL	33	2,254,582	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
WEST HARTFORD			
UNIVERSITY OF HARTFORD	ZIP CODE 06117		
BECK, ANN F.....	SCIENCE, MEDICINE AND DEVELOPMENT IN EAST AFRICA.....	2R01 LM01803-04	10,320
ORGANIZATION TOTAL	1	10,320	
STATE TOTAL	388	38,833,908	
DELAWARE			
DOVER			
DELAWARE STATE COLLEGE	ZIP CODE 19901		
FERGUSON, THOMAS.....	RESEARCH IN RADIATION PROTECTION AND DRUG ANALYSIS.....	5S06 RR08011-06	14,682
ORGANIZATION TOTAL	1	14,682	
NEWARK			
UNIVERSITY OF DELAWARE	ZIP CODE 19711		
BOORD, ROBERT L.....	LATERAL LINE PROJECTIONS.....	5R01 NS11272-04	34,843
COLMAN, ROBERTA F.....	EFFECT OF COENZYMES ON ENZYME STRUCTURE AND FUNCTION.....	5R01 AM17552-05	108,210
COLMAN, ROBERTA F.....	AFFINITY LABELS OF NUCLEOTIDE SITES IN DEHYDROGENASES.....	5R01 GM21200-04	45,451
GRANDA, ALLEN M.....	PROCESSING OF VISUAL INFORMATION.....	5R01 EY01540-09	57,981
GRANDA, ALLEN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07016-04	49,522
JAIN, MAHENDRA K.....	FACTORS GOVERNING THE ACTION OF PHOSPHOLIPASES.....	5R01 GM23122-02	25,038
MOLLOY, GEORGE R.....	STRUCTURE OF NUCLEAR RNA AND MESSENGER RNA FORMATION.....	5R01 CA19535-02	45,087
PENE, JACQUES J.....	REGULATORY MECHANISMS IN VIRUS DEVELOPMENT.....	5R01 AI11868-04	58,004
SCOTT, THOMAS R, JR.....	NEURAL CODING OF TASTE INFORMATION.....	2R01 NS10405-04A1	36,854
TRIPP, MARENES R.....	EFFECTS OF HYDROCARBONS ON DEFENSE MECHANISMS.....	1R01 ES01531-01	60,920
WAGNER, ROGER C.....	MICROPINOCYTOSIS IN ISOLATED CAPILLARY ENDOTHELIUM.....	2R01 HL16666-04	52,673
WETLAUFER, DONALD B.....	KINETICS AND MECHANISMS OF PROTEIN SELF-ASSEMBLY.....	5R01 GM23713-02	75,748
WHITE, HAROLD B, III.....	VITAMIN TRANSPORT.....	5R01 GM19620-05	45,491
WHITE, HAROLD B, III.....	GLYCEROL 3-PHOSPHATE DEHYDROGENASE SEQUENCE.....	5R01 GM22343-02	45,525
ORGANIZATION TOTAL	14	741,347	
WILMINGTON			
WILMINGTON MEDICAL CENTER	ZIP CODE 19801		
FRELICK, ROBERT W.....	COOPERATIVE CLINICAL TRIALS—CENTRAL ONCOLOGY GROUP.....	3R10 CA14678-03S3	12,740
FRELICK, ROBERT W.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20743-01	20,168
WHITNEY, LESLIE W.....	A TUMOR CONTROL CENTER PROGRAM.....	5R18 CA18940-02	135,189
WHITNEY, LESLIE W.....	CANCER CONTROL DEVELOPMENTAL AND SUPPORT GRANT.....	1R18 CA22071-01	106,896
ORGANIZATION TOTAL	4	274,993	
STATE TOTAL	19	1,031,022	
DIST OF COL			
WASHINGTON			
AMERICAN INSTITUTES FOR RESEARCH	ZIP CODE 20007		
KRUG, ROBERT E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05615-10	30,736
ORGANIZATION TOTAL	1	30,736	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
AMERICAN NATIONAL RED CROSS ZIP CODE 20006			
GREENWALT, TIBOR J.....	STUDIES OF BLOOD GROUP ANTIGENS AND ANTIBODIES.....	5R01 HL11154-11	71,030
INGHAM, KENNETH C.....	SUBUNIT INTERACTIONS IN GLYCOPROTEIN HORMONES.....	1R01 AM19719-01	63,640
JAMIESON, GRAHAM A.....	ROLE OF PLATELET MEMBRANES IN HEMOSTASIS.....	5R01 HL14697-06	66,962
JAMIESON, GRAHAM A.....	MEMBRANE GLYCOPROTEINS OF PLATELETS AND LEUKOCYTES.....	9R01 HL20971-09	77,182
JAMIESON, GRAHAM A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05737-06	38,187
KOSOW, DAVID P.....	ENZYMATIC REGULATION OF PLATELET FUNCTION.....	5R01 HL18502-02	29,940
KOSOW, DAVID P.....	REGULATION OF THE ACTIVATION OF HUMAN FACTOR X.....	5R01 HL19282-02	30,641
MAZZUR, SCOTT R.....	GENETIC AND CULTURAL STUDIES OF AUSTRALIA ANTIGEN.....	5R01 GM21736-03	6,800
MERYMAN, HAROLD T.....	PRESERVATION OF ORGANS BY FREEZING.....	5R01 GM17959-05	83,168
MERYMAN, HAROLD T.....	PRESERVATION OF HUMAN PLATELETS.....	5R01 HL16627-03	90,707
WICKERHAUSER, MILAN.....	SUPPORT FOR NATIONAL FRACTIONATION CENTER.....	5R01 HL13881-07	90,599
ORGANIZATION TOTAL	11 648,862		
AMERICAN UNIVERSITY ZIP CODE 20016			
BREYERE, EDWARD J.....	THE MATERNAL-FETAL ALLOGRAFT RELATION.....	5R01 CA05660-17	114,612
ORGANIZATION TOTAL	1 114,612		
CATHOLIC UNIVERSITY OF AMERICA ZIP CODE 20017			
ATABEK, BULENT H.....	FLOW FIELD IN AORTA AND ITS MAJOR BRANCHES.....	2R01 HL12083-10	67,313
CUTHINS, ERNEST.....	A STUDY OF DNA AND HISTONE EFFECTS ON ENZYME ACTIVITY.....	5R01 GM22152-03	30,346
LEE, CHE-FU.....	FERTILITY DYNAMICS AND SEQUENTIAL CORRELATES.....	5R01 HD09500-02	56,678
MC MANUS, FREDERICK R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07123-09	27,756
SMUTS, MARY E.....	CHARACTERIZATION OF EARLY PRIMARY PALATE FORMATION.....	1R23 DE04670-01	22,305
VAISHNAV, RAMESH N.....	LOCAL MECHANICAL PROPERTIES OF THE AORTIC TISSUE.....	5R01 HL15270-06	68,642
YOUNISS, JAMES.....	DEVELOPMENT OF IMAGERY: STRUCTURE AND PROCESS.....	1R01 HD10390-01	43,364
ZON, GERALD.....	STEREOCHEMISTRY OF CYCLOPHOSPHAMIDE METABOLISM.....	5R01 CA17421-02	27,022
ORGANIZATION TOTAL	8 343,426		
CHILDREN'S HOSPITAL NATIONAL MEDICAL CENTER ZIP CODE 20010			
BARNET, ANN B.....	SENSORY EVOKED EEG AND BEHAVIORAL RESPONSES IN CHILDREN.....	5R01 HD02296-12	102,791
GALIOTO, FRANK M, JR.....	INFANT LUNG AND HEART STUDY BY THE REBREATHING METHOD.....	1R01 HD11652-01	33,134
LEIKIN, SANFORD L.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA03888-20	119,999
LEIKIN, SANFORD L.....	HORMONAL CHANGES IN CHILDREN WITH SICKLE CELL DISEASE.....	5R01 HD08574-03	45,848
PARROTT, ROBERT H.....	NEW VIRUSES IN RELATION TO CLINICAL DISEASE.....	5R01 AI01528-21	96,353
PARROTT, ROBERT H.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00284-11	195,455
PARROTT, ROBERT H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05515-15	46,444
ORGANIZATION TOTAL	7 640,024		
GALLAUDET COLLEGE ZIP CODE 20002			
PICKETT, JAMES M.....	PERCEPTION OF COMPLEX AUDITORY STIMULI BY THE DEAF.....	2R01 NS05464-13	108,566
PICKETT, JAMES M.....	SPEECH-FEATURE DISCRIMINATION TESTING.....	5R01 NS13190-02	67,906
ORGANIZATION TOTAL	2 176,472		
GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
ALBERT, ERNEST N.....	EFFECTS OF STEROIDS AND PREGNANCY ON ARTERIES AND VEINS.....	5R01 HL12557-09	48,014
BAILEY, J MARTYN.....	PROSTAGLANDIN SYNTHESIS IN TRANSFORMED CELLS.....	5R01 CA15356-03	50,287
BAILEY, J MARTYN.....	LIPID METABOLISM IN CULTURED CELLS.....	5R01 HL05062-17	62,965
BLOOM, SHERMAN.....	STRUCTURE-FUNCTION PATHOLOGY OF ISOLATED HEART CELLS.....	7R01 HL22137-01	22,828
BRADLEY, EILEEN W.....	LATE EFFECTS OF FAST NEUTRONS ON CORD-BRAIN-LUNG.....	5R01 CA18143-03	264,621
CORNFIELD, JEROME.....	MULTIPARAMETER METHODS FOR CARDIOVASCULAR RESEARCH.....	2R01 HL15191-06	103,938
DÖBBINS, WILLIAM O, III.....	COLONIC CANCER IN ULCERATIVE COLITIS.....	5R26 CA17776-03	98,282
DRUM, BRUCE A.....	ROLES OF TONIC AND PHASIC NEURAL SYSTEMS IN VISION.....	5R01 EY01672-03	57,897
ECKELMAN, WILLIAM C.....	CLINICAL EVALUATION OF RADIOLABELED BLEOMYCIN.....	5R01 CA18674-03	60,748
ECKELMAN, WILLIAM C.....	BIOLOGIC TRACERS LABELED WITH GAMMA EMITTING ISOTOPES.....	5R01 CA18675-03	62,883
FINKELSTEIN, JAMES D.....	SULFUR AMINO ACID METABOLISM IN MAMMALS.....	5R01 AM13048-10	48,644
GALLO, LINDA L.....	MECHANISM & INHIBITION OF CHOLESTEROL ABSORPTION.....	5R01 AM17269-03	46,410
HARDER, HAROLD C.....	TEMPLATE INACTIVATION BY PLATINUM COMPOUNDS.....	1R01 CA20767-01	64,827
HOLLINSHEAD, ARIEL C.....	CMI TO BLADDER CANCER TAA IN VIVO AND IN VITRO.....	5R26 CA17444-03	65,011

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
JACKSON, MICHAEL J.....	INTESTINAL TRANSPORT OF SHORT CHAIN FATTY ACIDS.....	5R01 AM13240-09	33,639
JACKSON, MICHAEL J.....	DRUG TRANSPORT IN THE GI TRACT AND OTHER EPITHELIA.....	5R01 GM22369-02	38,905
KIND, PHYLLIS D.....	GS ANTIGEN IN PROSTATIC CANCER.....	5R26 CA17208-03	48,928
KLUBES, PHILIP.....	SYNERGISM DURING COMBINATION CANCER CHEMOTHERAPY.....	5R01 CA17601-03	74,172
LEONARD, FRED.....	MAXILLOFACIAL MATERIALS.....	2R01 DE03860-04	56,104
LEONARD, FRED.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05359-16	129,420
LOEB, MARILYN R.....	VIRUS-MEDIATED CHANGES IN THE CELL SURFACE.....	5R01 AI13411-02	56,624
MANDEL, H GEORGE.....	METHODS FOR STUDYING ACTIONS OF TUMOR-INHIBITORY DRUGS.....	5R01 CA02978-20	142,944
MANTEL, NATHAN.....	CANCER EPIDEMIOLOGY: STATISTICAL METHODS.....	2R01 CA15686-03	102,029
MC GOWAN, LARRY.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA13446-05	62,760
MUESING, RICHARD A.....	THE MECHANISM OF PLASMA CHOLESTEROL ESTERIFICATION.....	5R01 HL19250-02	28,965
ORNITZ, ROBERT D.....	MANTA NEUTRON CLINICAL TRIAL FOR LOCALIZED CANCERS.....	2P01 CA17465-03	263,976
PIPBERGER, HUBERT V.....	DIGITAL COMPUTER ANALYSIS OF THE ELECTROCARDIOGRAM.....	2R01 HL15047-05	495,232
PIPBERGER, HUBERT V.....	CLASSIFICATION CODE FOR FRANK ORTHOGONAL ECG.....	5R01 HL18850-02	60,554
REBA, RICHARD C.....	SEMISYNTHETIC BLEOMYCINS: SYNTHESIS & CHARACTERIZATION.....	5R01 CA18661-03	85,365
REBA, RICHARD C.....	INCREASED SENSITIVITY OF RADIOPHARMACEUTICALS.....	5R01 CA19383-02	35,790
REBA, RICHARD C.....	SYNTHESIS OF MOLECULES FOR MYOCARDIAL IMAGING.....	2R01 HL19127-02	69,253
SIDRANSKY, HERSCHEL.....	CHEMICAL PATHOLOGY OF AMINO ACID DEFICIENCIES.....	7R01 AM21079-01	35,156
SIDRANSKY, HERSCHEL.....	EFFECT OF NUTRITIONAL STRESS ON CARCINOGENESIS.....	7R01 CA22997-01	96,023
SMITH, JAMES C, JR.....	CHARACTERIZING ZINC BINDING PROTEINS IN HYPERZINCEMIA.....	1R01 AM20420-01	27,788
SOLOMON, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07019-12	60,114
TREADWELL, CARLETON R.....	REGULATION OF CHOLESTEROL ESTER LEVELS IN BLOOD & TISSUE.....	5R01 HL02033-22	77,224
VAHOUNY, GEORGE V.....	SYNTHESIS AND ROLE OF PROSTAGLANDINS IN ADRENAL CELLS.....	1R01 AM20014-01	46,795
VAHOUNY, GEORGE V.....	MYOCARDIAL LIPID METABOLISM AND REGULATION.....	5R01 HL09489-12	51,553
ORGANIZATION TOTAL	38	3,236,668	
GEORGETOWN UNIVERSITY ZIP CODE 20007			
BARKER, WINONA C.....	HOMOLOGOUS PHYSIOLOGICAL SYSTEMS IN HUMAN DEVELOPMENT.....	5R01 HD09547-03	74,767
BATES, RICHARD D, JR.....	MOLECULAR DYNAMICS OF HYDROGEN BONDING IN FLUIDS.....	1R01 GM23670-01	31,123
BELLANTI, JOSEPH A.....	CELLULAR AND IMMUNOLOGICAL BASIS OF PULMONARY DISEASES.....	5P01 HL16748-04	353,406
BLECHER, MELVIN.....	MECHANISMS OF ACTION OF HORMONES AND CYCLIC NUCLEOTIDES.....	5R01 AM05475-16	82,134
CHIRIKJIAN, JACK G.....	RNA MODIFYING ENZYMES IN NORMAL AND NEOPLASTIC CELLS.....	3R01 CA16914-02S1	2,146
CUTLER, SIDNEY J.....	EVALUATION & MANAGEMENT OF PATIENTS WITH BLADDER CANCER.....	1R26 CA23078-01	48,062
DE LEVIE, ROBERT.....	KINETICS OF ION TRANSPORT THROUGH MEMBRANES.....	5R01 GM22296-03	48,402
DELGADO, GREGORIO.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA16938-02	42,793
DOUKAS, HARRY M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05306-16	16,006
FELLER, WILLIAM F.....	CHARACTERIZATION OF DNA POLYMERASES IN HUMAN MILK.....	2R01 CA17623-03	54,708
GABRIEL, OTHMAR.....	METABOLISM AND FUNCTION OF DEOXSUGARS.....	5R01 AI07241-12	50,781
GABRIEL, OTHMAR.....	ACTINOMYCES: MODEL STUDIES ON DENTAL PLAQUE FORMATION.....	5R01 DE04201-03	33,114
HAMOSH, MARGIT.....	PERINATAL FAT DIGESTION, ROLE OF OROPHARYNGEAL LIPASE.....	1R01 HD10823-01	71,236
HAMOSH, MARGIT.....	BLOOD TRIGLYCERIDE AND LIPOPROTEIN LIPASE IN THE LUNG.....	5R01 HL19056-02	49,751
HARBERT, JOHN C.....	ACTA-SCAN DIAGNOSIS OF PANCREATIC CARCINOMA.....	5R26 CA19397-02	41,070
HERZBERG, DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07136-06	36,077
HORNER, WILLIAM H.....	METABOLISM OF GUANIDINOXY COMPOUNDS IN MAMMALS.....	5R01 GM21940-03	39,008
HUBSCHER, THOMAS T.....	FUNCTIONS OF THE EOSINOPHIL IN ALLERGIC REACTIONS.....	1R01 AI15001-01	61,759
IRWIN, RICHARD D.....	EFFECTS OF IRRADIATION ON THE ACTIVITIES OF TUBULIN.....	5R01 GM21637-03	24,111
KAO, CARL C.....	STUDIES OF REGENERATED AXONS IN GRAFTED SPINAL CORDS.....	7R01 NS14413-01	67,926
KATZ, EDWARD.....	BIOSYNTHESIS OF ACTINOMYCIN, AN ANTITUMOR AGENT.....	5R01 CA06926-15	65,655
KUMAR, SOMA.....	SYNTHESIS OF FATTY ACIDS IN MAMMALIAN TISSUES.....	5R01 AM16086-05	52,591
MACGREGOR, CAROLYN H.....	CELL MEMBRANE PROTEASES.....	7R01 GM25153-01	40,117
MARAK, GEORGE E, JR.....	LENS-INDUCED UVEITIS AND SYMPATHETIC OPHTHALMIA.....	5R01 EY00887-06	80,598
MC CURDY, PAUL R.....	ABNORMAL HEMOGLOBIN SYNDROMES.....	5R01 HL14131-17	24,101
MOSSMAN, KENNETH L.....	EFFECTS OF NEUTRONS ON TASTE AND SALIVA IN HUMANS.....	5R01 CA18865-02	49,328
PANCAKE, SAMUEL J.....	ANTIGENS INDUCED BY POLYOMA VIRUS TRANSFORMATION.....	1R01 CA21912-01	45,716
POPE, MICHAEL T.....	STABLE ORGANIC DERIVATIVES OF HETEROPOLY ACIDS.....	5R01 GM23263-02	79,857
POTTER, JOHN F.....	VINCENT T LOMBARDI CANCER RESEARCH CENTER SUPPORT.....	2P30 CA14626-04	346,655
POTTER, JOHN F.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19028-02	125,936
PREUSS, HARRY G.....	OXIDATIVE METABOLISM OF GLUTAMINE.....	2R01 AM15458-06	58,359
PRINCIOTTO, JOSEPH V.....	TRANSFERRIN, IRON DONATION AND ACQUISITION.....	1R01 AM19030-01A1	60,460
RAINES, ARTHUR.....	EFFECTS OF ANTICONVULSANTS ON CEREBELLAR FUNCTION.....	5R01 NS10667-03	44,205

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
RAMWELL, PETER W.....	ROLE OF ANDROGEN AS A RISK FACTOR IN ATHEROGENESIS.....	3R01 HL17516-02S1	17,143
RAMWELL, PETER W.....	ROLE OF ANDROGEN AS A RISK FACTOR IN ATHEROGENESIS.....	5R01 HL17516-03	80,595
RAMWELL, PETER W.....	PROSTAGLANDIN PRECURSORS AND VASCULAR REACTIVITY.....	5R01 HL18718-03	150,988
REcant, LILLIAN.....	PANCREATIC AND INTESTINAL GLUCAGONS IN RATS AND MAN.....	1R01 AM19610-01	42,823
SAUM, WILLIAM R.....	FUNCTIONAL CHARACTERISTICS OF ATRIAL RECEPTORS.....	1R23 HL22245-01	36,067
SAZ, ARTHUR K.....	STUDY OF ANTIBIOTIC RESISTANCE IN N. GONORRHOEAE.....	5R01 AI12388-03	47,602
SCHEIN, PHILIP S.....	PHARMACOLOGY OF NONMYELOSUPPRESSIVE ANTITUMOR AGENTS.....	5R01 CA17583-02	57,866
SINKS, LUCIUS F.....	CANCER AND LEUKEMIA GROUP B.....	1R10 CA21083-01	52,872
SLOTKOFF, LAWRENCE M.....	REGULATION OF SODIUM EXCRETION.....	5R01 HL12827-08	115,794
SMULSON, MARK E.....	MAMMALIAN RNA SYNTHESIS DURING AMINO ACID DEPRIVATION.....	5R01 CA11950-07	59,453
SMULSON, MARK E.....	HISTONE ADP-RIBOSYLATION AND HELA CELL REPLICATION.....	5R01 CA13195-05	57,393
STANDAERT, FRANK G.....	PROGRAM PROJECT IN NEUROPHARMACOLOGY.....	5P01 NS12566-02	413,810
STEINHARDT, JACINTO.....	STUDIES IN THE POLYMERIZATION OF SICKLE-CELL HEMOGLOBIN.....	5R01 HL12256-14	83,363
UTZ, JOHN P.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00060-16	257,129
UTZ, JOHN P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05360-16	120,222
WALTERS, LEROY B.....	DEVELOPING AN INFORMATION SYSTEM FOR BIOETHICS.....	2R01 LM01702-04	104,116
WOOLLEY, PAUL V.....	BINDING OF METHYL-NITROSOUREA IN PANCREATIC TISSUE.....	1R26 CA19744-01A1	46,348
ORGANIZATION TOTAL	50	4,045,535	
GORGAS MEMORIAL INSTITUTE OF TROPICAL AND PREVENTIVE MEDICINE ZIP CODE 20006			
GALINDO, PEDRO.....	ECOLOGY OF VECTOR BORNE VIRUSES IN PANAMA.....	2R01 AI02984-18	153,945
JUSTINES, GUSTAVO.....	LATENT INFECTION OF EPIZOOTIC VEE VIRUS IN EQUINES.....	5R01 AI13478-02	36,292
MILLAR, JACK W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05769-02	15,565
READ, ROBERT G.....	MICROCLIMATE AND ECOLOGY OF VECTOR BORNE DISEASE.....	2R01 AI11889-04	33,849
ORGANIZATION TOTAL	4	239,651	
HOWARD UNIVERSITY ZIP CODE 20001			
ALAM, ZAHUR.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	1R10 CA21185-01A1	67,868
ARCHER, JUANITA A.....	HUMAN FETAL ISLETS: PRESERVATION AND INSULIN RECEPTOR.....	1R01 AM21050-01	68,250
ASHE, WARREN K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05361-16	102,068
ASHE, WARREN K.....	CENTER FOR THE HEALTH SCIENCES SUPPORT.....	1S06 RR08157-01	458,959
BAROFSKY, ANNA-LISA.....	SEROTONINERGIC MECHANISMS IN OVULATION INHIBITION.....	3R01 HD10676-01S1	6,651
BROADWATER, TOMMY L.....	BIOMEDICAL INTERDISCIPLINARY PROJECT.....	2S06 RR08016-07	226,398
CALHOUN, NOAH R.....	ZINC DEFICIENCY AND DENTAL CARIES.....	1R01 DE04760-01	23,946
COSTELLO, LESLIE C.....	PROSTATE CITRATE METABOLISM.....	2R01 HD08420-03	56,600
DUNSTON, GEORGIA M.....	IN VITRO CELLULAR IMMUNITY OF REGIONAL LYMPH NODES.....	5R01 CA19520-02	69,563
FRANKLIN, RENTY B.....	THE EFFECTS OF CALCITONIN ON CITRATE REGULATION.....	5R01 AM19049-02	27,517
HAKIM, RAZIEL S.....	METAPLASIA IN A NONDIVIDING CELL SYSTEM.....	7R01 HD11918-01	8,139
HAWTHORNE, EDWARD W.....	HYPERTENSION AND LEFT VENTRICULAR HYPERTROPHY.....	5R01 HL01015-26	75,831
HAWTHORNE, EDWARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07117-05	56,801
HUDRLIK, PAUL F.....	APPROACHES TO ALPHA-METHYLENE-LACTANE TUMOR INHIBITORS.....	7R01 CA23037-01	50,757
JACKSON, MARVIN A.....	EPIDEMIOLOGIC STUDY OF PROSTATIC CARCINOMA.....	5R26 CA15448-04	159,922
LEAK, LEE V.....	THE LYMPHATIC SYSTEM IN HEALTH AND IN INFLAMMATION.....	5R01 AI10639-07	44,145
LEAK, LEE V.....	ONTOGENY, ULTRASTRUCTURE FUNCTION IN LYMPHATIC SYSTEM.....	5R01 HL13901-07	74,965
MORRIS, HAROLD P.....	INDUCTION-CHARACTERIZATION-MINIMAL DEVIATION HEPATOMAS.....	5R01 CA10729-10	264,980
RHOADS, ALLEN R.....	REGULATION OF CYCLIC 3' 5'-NUCLEOTIDE PHOSPHODIESTERASES.....	1R01 AM19364-01	25,443
SCOTT, ROLAND B.....	SUPPORT FOR CENTER FOR SICKLE CELL DISEASE.....	2P60 HL15160-06	1,069,607
SILVA, OMEGA L.....	CALCITONIN AS A MARKER FOR CANCER OF THE BREAST.....	1R01 CA22137-01	34,653
STORM, CARLYLE B.....	HYDROLYSIS AND SEQUENCING OF PROTEINS.....	5R01 GM18552-06	35,737
TANAKA, DUKE, JR.....	DEVELOPMENT OF FRONTAL LOBE CONNECTIONS.....	5R01 NS12463-03	23,633
WALRAFEN, GEORGE E.....	OPTICAL-FIBER LASER-RAMAN SPECTRA FROM PROTEINS.....	5R01 GM23329-02	43,483
WHITE, JACK E.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA14718-05	366,782
WHITE, JACK E.....	CANCER CENTER COMMUNITY OUTREACH DEVELOPMENTAL GRANT.....	1R18 CA18510-01A1	318,135
WHITE, JACK E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19376-02	137,588
ORGANIZATION TOTAL	27	3,898,421	
NATIONAL ACADEMY OF SCIENCES ZIP CODE 20418			
SPINDEL, WILLIAM.....	TRAVEL ASSISTANCE FOR SYMPOSIA PARTICIPANTS.....	1R13 CA23018-01	5,725
ORGANIZATION TOTAL	1	5,725	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
NATIONAL BIOMEDICAL RESEARCH FOUNDATION ZIP CODE 20007			
DAYHOFF, MARGARET O.....	COMPUTER STUDY OF SEQUENCES OF AMINO ACIDS IN PROTEINS.....	2R01 GM08710 17	231,364
LEDLEY, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05681 07	25,627
ORGANIZATION TOTAL	2 256,991		
PAN AMERICAN HEALTH ORGANIZATION ZIP CODE 20037			
ARROYAVE, GUILLERMO.....	AMINO ACID REQUIREMENTS OF PRESCHOOL AGE CHILDREN.....	3R22 AM17086-03S1	61,528
ORGANIZATION TOTAL	1 61,528		
TRINITY COLLEGE ZIP CODE 20017			
SANSBURY, RICHARD V.....	THE MULTIPLE-CHANNEL THEORY FOR SPATIAL VISION.....	5R01 EY01743-02	36,168
ORGANIZATION TOTAL	1 36,168		
U.S. SMITHSONIAN INSTITUTION ZIP CODE 20560			
HOROWITZ, DONALD L.....	ETHNIC POLITICS AND POPULATION COMPOSITION.....	2R01 HD07817-03	52,963
ORGANIZATION TOTAL	1 52,963		
UNIVERSITIES RESEARCH ASSOCIATION ZIP CODE 20037			
COHEN, LIONEL.....	FERMILAB NUCLEON THERAPY FACILITY.....	3P01 CA18081-02S1	26,733
COHEN, LIONEL.....	FERMILAB NUCLEON THERAPY FACILITY.....	2P01 CA18081-03	927,643
ORGANIZATION TOTAL	2 954,376		
UNIVERSITY OF THE DISTRICT OF COLUMBIA ZIP CODE 20008			
MACK, JULIUS L.....	ENVIRONMENTAL CARCINOGENS & OTHER BIOMEDICAL PROBLEMS.....	5S06 RR08005-06	25,956
MACK, JULIUS L.....	ENVIRONMENTAL CARCINOGENS & OTHER BIOMEDICAL PROBLEMS.....	2S06 RR08005-07	122,392
ORGANIZATION TOTAL	2 148,348		
WASHINGTON HOSPITAL CENTER ZIP CODE 20010			
MAUGER, ANTHONY B.....	ACTINOMYCINS: CONFORMATION AND ACTIVITY.....	5R01 CA11627-11	49,577
ORGANIZATION TOTAL	1 49,577		
STATE TOTAL	160 14,940,083		

FLORIDA

CORAL GABLES

UNIVERSITY OF MIAMI ZIP CODE 33124			
AWAD, WILLIAM M, JR.....	CHARACTERIZATION OF PRONASE ENZYMES.....	5R01 GM22468-02	68,202
CORBETT, MICHAEL D.....	APLASTIC ANEMIA AND CHLORAMPHENICOL METABOLITES.....	5R01 CA21667-02	38,349
CORBETT, MICHAEL D.....	THIAMINE MEDIATED FORMATION OF HYDROXAMIC ACIDS.....	5R01 CA21668-02	27,045
CORBETT, MICHAEL D.....	HYDROXAMIC ACID PRODUCTION BY MARINE ORGANISMS.....	1R01 CA21992-01	81,891
KURSUNOGLU, BEHRAM.....	THE KINETICS OF SOLID AND LIQUID IONIC CONDUCTORS.....	5R01 GM20284-05	73,778
MAN, EUGENE H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07022-10	16,632
WINTERS, RAY W.....	SINGLE CELL STUDIES IN OPTIC TRACT.....	5R01 EY00701-04	44,522
ORGANIZATION TOTAL	7 350,419		

DAYTONA BEACH

BETHUNE-COOKMAN COLLEGE ZIP CODE 32015			
COPELAND, RICHARD F.....	BIOMEDICAL RESEARCH AND TRAINING PROGRAM.....	5S06 RR08119-04	87,388
ORGANIZATION TOTAL	1 87,388		

GAINESVILLE

STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611			
ABRAMS, ROBERT M.....	HORMONAL CONTROL OF VAGINAL CIRCULATION.....	5R01 HD08229-04	49,353

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
ALLEN, CHARLES M, JR	BIOSYNTHESIS OF UNOECAPRENOL CARBOHYDRATE-CARRIERS	5R01 GM23193-02	48,378
ALLEN, OON L	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05728-06	19,038
AYOUB, ELIA M	HOST FACTORS IN THE PATHOGENESIS OF RHEUMATIC FEVER	5R01 HL20533-08	78,642
BAZER, FULLER W	PROGESTERONE INOUCED PROTEINS IN THE PREGNANT UTERUS	5R01 HD08560-03	38,155
BERNSTEIN, JERALD J	REGENERATION IN THE CENTRAL NERVOUS SYSTEM	5R01 NS06164-12	74,461
BESCH, EMERSON L	DEFINITION OF ENVIRONMENTAL CONDITIONS FOR LAB ANIMALS	5R01 RR00942-04	72,349
BIRDSELL, DALE C	MECHANISM OF VIRULENCE OF ACTINOMYCES VISCOSUS T14V	1R01 OE04617-01	57,995
BLEIWEIS, ARNOLD S	CELL-WALL ANTIGENS OF CARIOGENIC STREPTOCOCCI	5R01 OE02901-09	54,320
BOYCE, RICHARD P	FUNCTION OF BACTERIAL MEMBRANES IN DNA REPLICATION	5R01 GM19167-06	26,951
BRIGHT, ROBERT W	SURGICAL CORRECTION OF PARTIAL GROWTH PLATE CLOSURE	5R01 AM19219-02	68,450
BROOKBANK, JOHN W	GENE ACTIVATION IN CLEAVAGE ARRESTED EGGS	5R01 GM22290-03	34,283
BROWNELL, WILLIAM E	SINGLE-UNIT STUDIES IN THE LATERAL SUPERIOR OLIVE	5R01 NS12209-03	28,657
CASSIN, SIONEY	FETAL AND NEONATAL PULMONARY CIRCULATION	5R01 HL10834-09	41,633
CATON, DONALD	STUOY OF FETAL GROWTH AND OEVELOPMENT	5R01 HD05659-07	49,983
CERUTTI, PETER A	REPAIR OF DNA DAMAGE IN BACTERIAL AND MAMMALIAN CELLS	5R01 GM18617-07	66,431
CHIOU, C Y	TREATMENT OF GLAUCOMA WITH AUTONOMIC DRUGS	5R01 EY01624-02	44,397
CLEM, L WILLIAM	THE MOLECULAR BASIS OF IMMUNITY IN INVERTEBRATES	1R01 AI14137-01	58,027
COHEN, ROBERT J	CYCLIC NUCLEOTIDES IN THE MODEL SYSTEM PHYCOMYCES	5R01 GM19390-06	43,845
CORNELIUS, C E	BIOMEDICAL RESEARCH SUPPORT GRANT	1S07 RR05788-01	26,673
DEAL, WILLIAM B	BIOMEICAL RESEARCH SUPPORT GRANT	5S07 RR05362-16	163,918
DUCKWORTH, DONNA H	EXTRA-CHROMOSOMAL GENETIC ELEMENTS AND THE CELL SURFACE	5R01 AI12056-03	27,844
DUNN, BEN M	STRUCTURAL FACTORS IN PEPSIN-PEPSIN INHIBITOR BINDING	5R01 AM18865-03	29,793
DUNN, BEN M	QUANTITATIVE AFFINITY CHROMATOGRAPHY	5R01 GM22421-02	34,772
ENNEKING, WILLIAM F	QUANTITATION OF BONE TRANSPLANT REPAIR	2R01 AM14063-06	52,293
ENNEKING, WILLIAM F	RAOICAL LOCAL RESECTION IN MUSCULOSKELETAL SARCOMA	5R01 CA16559-04	47,345
ENOCH, JAY M	THE ETIOLOGY OF REDUCED VISUAL FUNCTION	3R01 EY01418-03S1	30,802
FELOHERR, CARL M	THE FUNCTION OF THE NUCLEAR ENVELOPE	5R01 GM21531-04	29,262
FINLAYSON, BIROWELL	A PHYSICAL APPROACH TO STONE FORMATION	5R01 AM13023-09	77,536
FINLAYSON, BIROWELL	UROLITHIASIS CENTER	1P50 AM20586-01	296,854
FISHER, WALDO R	STUDIES OF THE STRUCTURE OF LOW DENSITY LIPOPROTEIN	5R01 HL10316-12	84,781
FISHER, WALDO R	POLYDISPERSE LOL: STRUCTURE, METABOLISM AND FUNCTION	5R01 HL20391-02	103,745
FITZGERALD, CONSTANCE R	PHOTOCOAGULATION TREATMENT OF MACULOPATHY	5R01 EY01084-03	39,910
FREGLY, MELVIN J	ORAL CONTRACEPTIVES AND HYPERTENSION	5R01 HL14526-06	51,674
GABBAY, EDMONO J	STEREOSPECIFIC BINDING OF PROTEINS TO ONA	5R01 GM17503-07	34,437
GASSET, ANTONIO R	KERATOCONUS/THERMOKERATOPLASTY	2R01 EY01112-04	53,605
GEBHAROT, BRYAN M	ROLE OF THE IMMUNE SYSTEM IN PERIOOONTAL DISEASE	1R01 DE04655-01	35,939
GELATT, KIRK N	PRIMARY GLAUCOMA	3R01 EY01932-01S1	20,953
GIBBS, CHARLES H	INVESTIGATION OF FUNCTIONAL MANDIBULAR MOVEMENTS	5R01 OE04157-04	86,239
GIBBS, CHARLES H	INVESTIGATION OF TOOTH FORCES AND TOOTH MOBILITY	2R01 DE04350-02	28,344
GIFFORD, GEORGE E	INTERFERON AND CELL MEOIATEO IMMUNITY	5R01 AI10900-06	61,243
GREGG, JAMES H	CELL SLIME MOLD INTERACTION/REGULATION/DIFFERENTIATION	5R01 GM10138-15	45,898
GRONWALL, RONALO R	HEPATIC ORGANIC ANION TRANSPORT MECHANISMS	5R01 AM18923-03	32,720
GURIN, SAMUEL	HOMARINE AND PYRIDINE CARBOXYLIC ACIOS IN CRUSTACEA	5R01 GM22744-02	21,339
HALLIWELL, RICHARO E	ANIMAL RHEUMATOIO ARTHRITIS AS AN EXPERIMENTAL MOOEL	7R01 AM21590-01	52,481
HARRIS, JAMES O	STUDY OF HUMAN ALVEOLAR MACROPHAGE ELASTASE	5R01 HL18091-03	31,032
HEILMAN, KENNETH M	THE NEGLECT SYNDROME IN MAN	1R01 NS12218-01A2	20,175
HOLLIEN, HARRY	A COMMUNICATION SCIENCES RESEARCH PROGRAM	2P01 NS06459-12A1	233,188
KALLENBACH, ERNST A	TRACER AND FINE STRUCTURE STUOIES OF THE ENAMEL ORGAN	5R01 DE02241-12	14,712
KALRA, SATYA P	OVARIAN STEROIDS IN THE GONADOTROPIN RELEASE MECHANISMS	5R01 HD08634-03	65,356
KAUFMAN, HERBERT E	OCULAR HERPES SIMPLEX	5R01 EY00007-16	94,895
KAUFMAN, HERBERT E	EXTERNAL OCULAR DISEASE CENTER	5P50 EY00446-09	339,751
KLEIN, PAUL A	IMMUNOGENICITY OF MEMBRANE AND TUMOR ANTIGENS	5R01 CA13384-06	37,130
KOLTS, BYRON E	IMMUNOCHEMICAL STUDIES OF SECRETIN	5R01 AM19425-02	44,911
LAIPI, PHILIP J	ONA POLYMERASES OF SV40 INFECTEO OR TRANSFORMED CELLS	5R01 CA17662-03	44,395
LEONARD, CHRISTIANA M	NEURAL SUBSTRATE OF BEHAVIORAL OEVELOPMENT	1R01 NS13516-01	59,523
MANGOS, JOHN A	STUOIES OF EXOCRINE GLANO FUNCTION IN CYSTIC FIBROSIS	2R01 AM19200-03	96,856
MC CAREY, BERNARD E	AN IMPROVED CORNEAL EYE BANK STORAGE TECHNIQUE	5R23 EY01374-02	5,431
MC GUIGAN, JAMES E	IMMUNOLOGY AND DISEASES OF THE GASTROINTESTINAL TRACT	5R01 AM13711-08	85,219
MC KERNS, KENNETH W	CONTRACEPTIVE REGULATION OF CORPUS LUTEUM FUNCTION	3R01 H005938-05S1	9,036
MERIMEE, THOMAS J	INSULIN AND HGH SECRETION AND METABOLIC ACTIONS	2R01 AM18130-04	67,505

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
MERIMEE, THOMAS J	PITUITARY MODULATION OF MICRO- & MACRO-VASCULAR DISEASE	5R01 HL19175-02	75,398
MORELAND, ALVIN F	RESOURCE FOR INVESTIGATION OF LABORATORY ANIMAL DISEASE	5P40 RR00685-06	124,639
MOSCOVICI, CARLO	SPECIFICITY OF AVIAN MYELOBLASTOSIS VIRUS	5R01 CA10697-11	55,514
NEILSON, JOHN T	IMMUNITY AND ANTIGEN CHARACTERIZATION OF FILARIASIS	5R22 AI10803-06	33,109
NOONAN, KENNETH D	CONTROL OF LECTIN RECEPTOR MOBILITY	5R01 GM23227-02	45,309
NORMANN, SIGURD J	MONOCYTE FUNCTION IN NEOPLASIA	1R01 CA22517-01	30,580
O'BRIEN, THOMAS W	CHARACTERIZATION OF MAMMALIAN MITOCHONDRIAL RIBOSOMES	5R01 GM15438-09	40,079
O'RAND, MICHAEL G	ISOLATION OF SPERM MEMBRANE AUTOANTIGENS	1R01 HD10618-01	43,248
OTIS, ARTHUR B	POWER OUTPUT OF BREATHING	1R01 HL19829-01	30,768
PALENIK, GUS J	STRUCTURAL STUDIES OF ANTIHISTAMINES AND ANTIBIOTICS	5R01 AI11825-03	37,925
POLACK, FRANK M	CHANGES IN CORNEAL GRAFTS AND TISSUE	5R01 EY00415-09	40,608
PRESTON, JAMES F	AMANITIN-PROTEIN CONJUGATES AS POTENTIAL INHIBITORS	5R01 CA19043-02	27,300
REITH, EDWARD J	ULTRASTRUCTURE OF TOOTH DEVELOPMENT	5R01 DE04059-03	29,936
RHOTO, ALBERT L, JR	BRAIN STEM SENSORY CONNECTIONS	5R01 NS10978-04	18,606
ROBERTS, R MICHAEL	SEX STERIOD ACTION ON CULTURED UTERINE EPITHELIAL CELLS	1R01 HD10436-01	33,783
SATZ, PAUL	LATERALITY OF SENSORY AND MOTOR FUNCTION IN MAN	5R01 NS08208-12	64,583
SELMAN, KELLY	BLOCKS TO POLYSPERMY DURING MAMMALIAN FERTILIZATION	5R01 HD09604-02	25,376
SHANDS, JOSEPH W, JR	ENDOTOXIN AND PATHOGENESIS OF INFECTION	5R01 AI07257-11	54,248
SILVERMAN, DAVID N	MEMBRANE DIFFUSION OF BICARBONATE AND CARBON DIOXIDE	5R01 HL18671-03	45,514
SISLER, HARRY H	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07021-12	96,629
SMALL, PARKER A, JR	LOCAL IMMUNOLOGIC REACTIONS	5R01 AI07713-11	71,461
SMITH, RICHARD T	CELLULAR MECHANISMS IN TUMOR-SPECIFIC IMMUNITY	5R01 CA15334-05	94,772
SMITH, RICHARD T	ONTOGENY OF IMMUNE MECHANISMS	2R01 HD00384-20	126,006
STEIN, GARY S	REGULATION OF EXPRESSION OF RNA TUMOR VIRUSES	5R01 CA18874-02	47,665
STETSON, CHANDLER A	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER	5M01 RR00082-15	402,066
TSIBRIS, JOHN C	CARCINOGEN MONOOXYGENASES AND RELATED ENZYME SYSTEMS	5R01 CA17617-06	43,474
VAN RINSVELT, HENRI A	TRACE ELEMENT DETECTION BY ION INDUCED X-RAYS	5R01 GM20282-03	35,616
VIERCK, CHARLES J, JR	SPINAL SOMESTHETIC PATHWAYS	5R01 NS07261-11	47,503
WEBB, WILSE B	CHANGES OF SLEEP PATTERNS IN THE AGING	1R01 AG00805-01	73,795
WELTNER, WILLIAM, JR	BIOPHYSICAL PROPERTIES OF CELL SURFACE CARBOHYDRATES	5R01 GM21920-02	28,186
WINEFORDNER, JAMES D	MOLECULAR SPECTROMETRIC METHODS FOR DRUGS	2R01 GM11373-15	92,964
WOODWARD, EDWARD R	PHYSIOLOGY AND PATHOLOGY OF LOWER ESOPHAGEAL SPHINCTER	5R01 AM13544-07	42,575
ORGANIZATION TOTAL	93	5,834,098	
JACKSONVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF NORTH FLORIDA ZIP CODE 32216			
HUEBNER, JAY S	PHOTO-ELECTRIC MEMBRANE PROBES	5R01 GM23250-02	41,297
ORGANIZATION TOTAL	1	41,297	
MELBOURNE			
FLORIDA INSTITUTE OF TECHNOLOGY ZIP CODE 32901			
BURCHFIELD, HARRY P	METABOLISM AND CARCINOGENICITY OF ORGANOHALOGENS	1R01 ES01883-01	86,673
WEBSTER, GEORGE C	BIOMEDICAL RESEARCH DEVELOPMENT GRANT	1S08 RR09032-01	55,970
ORGANIZATION TOTAL	2	142,643	
MIAMI			
PAPANICOLAOU CANCER RESEARCH INSTITUTE ZIP CODE 33136			
ALTMAN, NORMAN H	PRODUCTION OF RATS WITH ISOLOGOUSLY TRANSPLANTED R3327	2R26 CA18625-03	44,449
KOHN, ELLI	MICROFLUOROMETRY OF CULTIVATED PANCREATIC ISLETS	1R01 AM21330-01	19,733
KOHN, ELLI	INTRACELLULAR ENZYME KINETICS AND CARCINOGENS	1R01 CA21153-01	71,651
KOHN, ELLI	REGULATION OF INTRA & INTERCELLULAR COMMUNICATION	2R01 GM20866-04	44,690
MELOCHE, H PAUL	MICROENVIRONMENTAL GEOMETRY OF C C LYASE ACTIVE SITES	1R01 GM24926-01	61,570
SCHULTZ, JULIUS	BIOCHEMICAL STUDIES IN CANCER	5R01 CA10904-09	63,328
SCHULTZ, JULIUS	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05690-07	47,559
ORGANIZATION TOTAL	7	352,980	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
UNIVERSITY OF MIAMI ZIP CODE 33152			
ADACHI, KENJI.....	STUDY OF ROLE OF CYCLIC AMP IN PATHOGENESIS OF PSORIASIS.....	3R01 AM17179-03S2	7,601
ADACHI, KENJI.....	ROLE OF CYCLIC NUCLEOTIDES IN PATHOGENESIS OF PSORIASIS.....	2R01 AM17179-04	83,613
ANDERSON, DOUGLAS R.....	EXPERIMENTAL PATHOLOGY OF THE OPTIC NERVE.....	5R01 EY00031-07	90,549
BARRETT, ELLEN F.....	NEUROTRANSMITTER RELEASE KINETICS.....	5R01 NS12404-03	21,837
BARRETT, JOHN N.....	MEMBRANE PROPERTIES OF MOTONEURONS.....	5R01 NS12207-03	56,011
BASSETT, ARTHUR L.....	EFFECT OF DRUGS ON DEVELOPMENT OF CARDIAC FAILURE.....	5R01 HL19044-02	69,835
BOUCEK, ROBERT J.....	STUDIES ON AGING: EFFECTS OF SEX HORMONES.....	5R01 HL17865-03	63,099
BOUCEK, ROBERT J.....	DRUG TREATMENT OF VASCULAR SCLEROPROTEIN DEFECTS.....	5R01 HL17909-03	106,003
BREW, KEITH.....	CHEMICAL STUDIES OF ENZYMES AND PROTEINS.....	2R01 GM21363-04	84,429
BRICKER, DIANE D.....	LANGUAGE RESEARCH WITH YOUNG RETARDED CHILDREN.....	5R01 HD09906-03	76,721
BRICKER, NEAL S.....	UREMIA: PATHOGENESIS, EFFECTS, AND POSSIBLE PREVENTION.....	5R01 AM19822-02	377,956
BRILL, EARL.....	AROMATIC AMINE N-OXIDATION IN BLADDER CANCER.....	5R26 CA16900-03	48,223
CHAMBERS, EDWARD L.....	ROLE OF IONS IN ACTIVATION OF THE EGG.....	5R01 HD07213-05	33,241
CLEARY, TIMOTHY H.....	DENGUE INFECTION AND COMMUNITY HEALTH.....	5R22 AI13380-02	71,714
COWMAN, RICHARD A.....	HUMAN SALIVA-STREPTOCOCCAL METABOLIC INTERACTIONS.....	5R01 DE04278-03	46,429
DAVID, NOBLE J.....	EXPERIMENTAL FLUORESCIN ANGIOGRAPHY.....	5R01 EY00093-11	71,958
FITZGERALD, DOROTHEA B.....	CARIOGENESIS OF PLAQUE BACTERIA IN TEST MODELS.....	5R01 DE04265-03	105,076
FLETCHER, MARY A.....	IMMUNOCHEMICAL STUDIES OF MONONUCLEOSIS ANTIBODIES.....	2R01 AM16763-06	92,983
FLYNN, JOHN T.....	RETROLENTAL FIBROPLASIA: THE EVOLUTION OF THE LESION.....	5R01 EY01236-03	71,627
FORSTER, RICHARD K.....	DIAGNOSIS AND MANAGEMENT OF FUSARIUM KERATOMYCOSES.....	5R01 EY00674-06	60,648
GANJU-KRISHAN, AWATAR.....	CELL KINETICS AND CANCER CHEMOTHERAPY.....	7R01 CA23688-01	27,819
GELBAND, HENRY.....	CENTER FOR STUDY OF ATHEROSCLEROSIS AMONG CHILDREN.....	3P50 HL14141-05S2	385,402
GELBAND, HENRY.....	A PROSPECTIVE STUDY: BLOOD PRESSURE IN NEWBORN TWINS.....	5R01 HL19930-02	156,248
GOLDBERG, STEPHEN.....	MECHANISM DETERMINING RETINAL MORPHOLOGICAL POLARITY.....	1R01 EY01982-01	35,236
GOOD, RAPHAEL S.....	THE PSYCHOSOCIAL REHABILITATION OF ONCOLOGIC PATIENTS.....	5R18 CA17869-03	326,040
HAINES, HAROLD G.....	REPRESSION OF HERPES SIMPLEX VIRUS-2 REPLICATION.....	5R01 CA17544-03	49,010
HALBERT, SEYMOUR P.....	SIGNIFICANCE OF PREGNANCY-ASSOCIATED PLASMA PROTEINS.....	3R01 HD05736-06S1	12,851
HAMASAKI, DUCO I.....	EFFECT OF VISUAL DEPRIVATION ON VISION.....	3R01 EY00376-08S1	5,251
HARKNESS, DONALD R.....	SUPPORT FOR SICKLE CELL CENTER.....	5P60 HL15999-05	446,519
HAYNES, DUNCAN H.....	MEMBRANE PHOTODAMAGE INDUCED BY ANTIDIABETIC DRUGS.....	1R01 AM20086-01	35,138
HEALEY, JOHN E, JR.....	CANCER CONTROL OUTREACH PROGRAM DEVELOPMENT GRANT.....	3R18 CA17910-02S2	90,331
HEALEY, JOHN E, JR.....	CANCER CONTROL DEVELOPMENTAL AND SUPPORT GRANT.....	2R18 CA17910-03	117,345
HOLADAY, DUNCAN A.....	METABOLISM OF VOLATILE FLUORINATED ANESTHETICS.....	2R01 GM16498-09	73,131
HOWELL, DAVID S.....	ROLE OF PHOSPHOLIPIDS IN MINERALIZATION OF OSTEOID.....	5R01 AM08662-14	97,254
HSIA, SUNG L.....	SERUM CHOLESTEROL BINDING RESERVE IN DIABETES.....	5R01 HL20418-02	61,130
HUIJING, FRANCISCUS.....	MOLECULAR BASIS AND GENETICS OF GLYCOGEN-STORAGE DISEASE.....	5R01 AM13359-09	53,236
KNIGHTON, ROBERT W.....	ELECTRICAL STIMULATION OF THE VERTEBRATE RETINA.....	5R01 EY01432-03	35,533
LEE, ERNEST Y.....	PHOSPHOPROTEIN PHOSPHATASES: PROPERTIES AND REGULATION.....	5R01 AM18512-03	67,184
LEHOTAY, DENIS.....	A UNIQUE PEPTIDE INHIBITOR OF ADENYLATE CYCLASE.....	5R01 AM19192-02	59,699
LEMAIRE, WILLIAM J.....	MECHANISM OF OVULATION.....	5R01 HD08747-03	70,311
LESSNER, HOWARD E.....	COOPERATIVE STUDY OF CANCER.....	3R10 CA05641-16S1	41,705
LESSNER, HOWARD E.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA05641-17	191,217
LEVEY, GERALD S.....	STUDIES OF MYOCARDIAL ADENYL CYCLASE.....	2R01 HL13715-07	129,117
LINN, MARGARET W.....	HUMANISTIC ONCOLOGY: THE OMEGA EXPERIENCE.....	5R18 CA19550-02	120,953
LOEWENSTEIN, WERNER R.....	A PROGRAM ON THE ETIOLOGY AND DIAGNOSIS OF CANCER.....	3R01 CA14464-03S2	57,327
LOEWENSTEIN, WERNER R.....	A PROGRAM ON THE ETIOLOGY AND DIAGNOSIS OF CANCER.....	2R01 CA14464-04A1	158,163
MACHEMER, ROBERT.....	VITRECTOMY THROUGH THE PARS PLANA.....	2R01 EY00841-06	147,178
MAGLEBY, KARL L.....	MECHANISMS OF VARIABLE SYNAPTIC EFFICACY.....	3R01 NS10277-04S1	8,884
MAGLEBY, KARL L.....	MECHANISMS OF VARIABLE SYNAPTIC EFFICACY.....	2R01 NS10277-05	90,834
MALININ, THEODORE I.....	PROSTATE CANCER TISSUE COLLECTION CENTER.....	2R26 CA15480-04	175,735
MANSELL, PETER W.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17912-03	126,060
MARSH, JOHN M.....	MECHANISMS OF GONADOTROPIN ACTION.....	5R01 HD03142-11	103,131
MASSARO, DONALD J.....	THE LUNG LINING LAYER: SYNTHESIS AND SECRETION.....	5R01 HL20366-02	103,918
MC CABE, MEAD M.....	CELL ADHERENCE OF DENTAL PLAQUE FORMING STREPTOCOCCI.....	5R01 DE04321-03	60,213
MORHART, ROBERT E.....	BACTERIOCINS AS POTENTIAL CARIES CONTROL AGENTS.....	5R23 DE04165-03	14,462
MUENCH, KARL H.....	STRUCTURE OF TRYPTOPHANYL-TRNA SYNTHETASE OF E. COLI.....	5R01 GM23188-02	109,066
MYERBURG, ROBERT J.....	STUDIES IN SURVIVORS OF LETHAL ARRHYTHMIAS.....	5R01 HL18769-03	138,153
NORTON, EDWARD W.....	CLINICAL STUDY OF MACULAR DISEASE.....	5P50 EY00338-12	112,186

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
NOVAK, MILAN.....	ADIPOSE TISSUE METABOLISM IN ABNORMAL HUMAN NEWBORNS.....	5R01 HD04946-06	141,173
PALMER, ROGER F.....	CELLULAR STUDY OF CARDIOVASCULAR FUNCTION.....	3P01 HL16117-04S1	15,226
PAPPER, EMANUEL M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00261-12	669,630
PAPPER, EMANUEL M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05363-16	213,709
PENNELL, J PHILLIP.....	EFFECT OF ISLET IMPLANTS ON DIABETIC NEPHROPATHY.....	1R01 AM20735-01	76,086
PENNEYS, NEAL S.....	CUTANEOUS INHIBITORS OF PROSTAGLANDIN SYNTHESIS.....	5R01 AM19079-02	53,947
PRESSMAN, BERTON C.....	CELLULAR STUDY OF CARDIOVASCULAR FUNCTION.....	5P01 HL16117-05	448,138
RADOMSKI, JACK L.....	MECHANISM OF BLADDER CANCER.....	3R01 CA05449-16S1	8,181
RADOMSKI, JACK L.....	ENVIRONMENTAL BLADDER CARCINOGENS.....	5R26 CA14927-04	110,629
REISS, ERIC.....	RADIOIMMUNOASSAY OF PARATHYROID HORMONE IN MAN.....	5R01 AM16768-06	91,360
ROSENTHAL, MYRON.....	IN SITU STUDIES OF DRUG ACTIONS ON CNS METABOLISM.....	7R01 NS14319-01	106,129
ROSENTHAL, MYRON.....	CEREBRAL ISCHEMIA VIABILITY AND OXIDATIVE METABOLISM.....	7R01 NS14325-01	76,036
ROSOMOFF, HUBERT L.....	CANCER REHABILITATION THROUGH PAIN CONTROL.....	5R18 CA17935-02	108,231
ROWE, MARC I.....	SHOCK IN INFANCY: METABOLIC AND HEMODYNAMIC ASPECTS.....	5R01 HD04154-09	65,059
RUBIN, ROBERT W.....	THE ROLE OF MICROTUBULES IN MALIGNANT TRANSFORMATION.....	5R01 CA19855-02	61,007
RUSSELL, LONNIE D.....	SERTOLI-SERTOLI AND SERTOLI-GERM CELL INTERRELATIONS.....	5R01 HD10266-02	11,090
RUSSELL, THOMAS R.....	PROSTAGLANDINS AND CYCLIC GMP IN DIFFERENTIATION.....	1R01 AM21575-01	52,412
RYAN, JAMES W.....	HUMORAL MEDIATORS OF PULMONARY INFLAMMATION.....	7R01 HL22087-01	102,041
RYAN, UNA A.....	CELL BIOLOGY OF THE ALVEOLAR-CAPILLARY UNIT.....	1R01 HL21568-01	110,262
SARMIENTO, AUGUSTO.....	THE FUNCTION OF THE INTEROSSEOUS MEMBRANE.....	5R01 AM19133-02	19,533
SCHEINBERG, PERITZ.....	RESEARCH CENTER FOR CEREBRAL VASCULAR DISEASE.....	5P50 NS05820-12	353,263
SCHERLAG, BENJAMIN J.....	MECHANISMS OF ISCHEMIC RHYTHM DISORDERS.....	5R01 HL19139-03	89,717
SCHWARTZMAN, ROBERT J.....	FUNCTIONAL CAPABILITIES OF THE SENSORIMOTOR CORTEX.....	5R01 NS12099-03	68,528
SCOTT, MARCIA S.....	MEMORY IN YOUNG CHILDREN.....	5R01 HD09819-02	48,583
SCOTT, WALTER A.....	ORGANIZATION OF HISTONES ON SV40 AND VARIANT DNA.....	5R01 AI12852-03	53,600
SCOTT, WALTER A.....	PANCREATIC ISLET CELL TRANSFORMATION BY SV40 MUTANTS.....	1R01 AM21213-01	53,825
SEIBERT, G BURTON, JR.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	1R10 CA21186-01A1	66,557
SELAWRY, HELENA P.....	THE IMPLANTATION OF ISLETS OF LANGERHANS.....	1R01 AM20346-01	55,835
SMITH, DAVID S.....	STUDIES ON STRUCTURE AND FUNCTION IN EXCITABLE CELLS.....	5R01 NS10447-06	54,288
SMITH, ERIC E.....	INHIBITION OF DEXTRANSUCRASES OF CARIOGENIC ORGANISMS.....	2R01 DE03118-07	57,090
SOMANI, PITAMBAR.....	CARDIOVASCULAR PHARMACOLOGY OF IONOPHORES.....	5R01 HL18599-02	75,508
THOMAS, VERA F.....	KINETICS OF UPTAKE AND EXCRETION OF VAPORS IN MAN.....	5R01 ES01029-03	28,414
VIAMONTE, MANUEL, JR.....	EVALUATION OF VASOSPASM IN CORD INJURY BY X-RAY MEDIA.....	5R01 NS12779-02	51,864
VOIGT, WALTER.....	MECHANISM OF ANDROGEN ACTION IN PROSTATIC NEOPLASIA.....	5R01 CA12990-06	77,912
WEINSTEIN, GERALD D.....	PATHOPHYSIOLOGY & CHEMOTHERAPY IN PSORIASIS & CANCER.....	5R01 AM14887-11	111,795
WHELAN, WILLIAM J.....	SYNTHESIS AND STRUCTURE OF MAMMALIAN LIVER GLYCOGEN.....	5R01 AM12532-10	134,550
WHELAN, WILLIAM J.....	THE MECHANISM OF STARCH DIGESTION IN MAMMALS.....	2R01 AM17733-03	72,530
WHITNEY, PHILIP L.....	STRUCTURE OF HUMAN ERYTHROCYTE CARBONIC ANHYDRASE.....	5R01 GM20815-03	32,614
WILSON, DAVID L.....	CONTROL OF PROTEIN SYNTHESIS IN THE NERVOUS SYSTEM.....	5R01 NS12393-03	40,058
WISE, GARY E.....	SICKLE CELL CRISIS: ROLE OF THE ERYTHROCYTE MEMBRANE.....	1R01 HL21096-01	50,080
WOESSNER, J FREDERICK, JR.....	HUMAN CARTILAGE PROTEASES IN ARTHRITIS.....	5R01 AM16940-05	69,536
WOESSNER, J FREDERICK, JR.....	TISSUE COLLAGENASE AND ITS CONTROL BY STEROIDS.....	5R01 HD06773-06	76,762
YUNIS, ADEL A.....	PATHOGENETIC MECHANISMS IN BLOOD DISEASES.....	5P01 AM09001-12	215,506
YUNIS, ADEL A.....	PANCREATIC CARCINOMA IN CONTINUOUS CULTURE.....	5R26 CA19182-02	75,463
ZIBOH, VINCENT A.....	BIOCHEMICAL BASIS OF PROSTAGLANDIN ACTION IN THE SKIN.....	5R01 AM14941-05	91,848
ZUBROD, C GORDON.....	COMPREHENSIVE CANCER CENTER FOR THE STATE OF FLORIDA.....	5P30 CA14395-05	1,089,431
ZUBROD, C GORDON.....	CYTOKINETICS AND CHEMOTHERAPY OF HUMAN SOLID TUMORS.....	5P01 CA19321-02	351,202
ORGANIZATION TOTAL	105	11,818,761	
MIAMI BEACH			
MOUNT SINAI MEDICAL CENTER ZIP CODE 33140			
SACKNER, MARVIN A.....	VOLUMES AND COMPLIANCE OF PULMONARY CIRCULATION.....	5R01 HL10622-11	44,410
SACKNER, MARVIN A.....	MUCOCILIARY TRANSPORT MECHANISMS.....	5R01 HL17816-03	90,094
SACKNER, MARVIN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05662-08	18,046
ORGANIZATION TOTAL	3	152,550	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
SAINT PETERSBURG			
LIFE SCIENCES, INC. ZIP CODE 33710			
NONOYAMA, MEIHAN.....	ONCOGENICITY OF EPSTEIN-BARR VIRUS.....	5R01 CA21665-02	87,637
ORGANIZATION TOTAL	1 87,637		
SARASOTA			
MOTE MARINE LABORATORY ZIP CODE 33561			
TAVOLGA, WILLIAM N.....	ECHOLOCATION AND ACOUSTIC ORIENTATION.....	1R01 NS13746-01	29,987
ORGANIZATION TOTAL	1 29,987		
TALLAHASSEE			
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 32307			
TERLUJKIS, LAMBROS P.....	NUCLEOSIDE ANALOGS WITH ANTITUMOR ACTIVITY.....	5S06 RR08111-05	203,442
ORGANIZATION TOTAL	1 203,442		
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306			
BAKER, HOWARD D.....	VERY EARLY DARK ADAPTATION FROM INTENSE BLEACHES.....	5R01 EY01394-03	31,636
BERKLEY, KAREN J.....	CONVERGENCE OF SOMATOSENSORY PATHWAYS IN THALAMUS.....	3R01 NS11892-03S1	6,314
BERKLEY, KAREN J.....	CONVERGENCE OF SOMATOSENSORY PATHWAYS IN THALAMUS.....	2R01 NS11892-04	51,089
BERKLEY, MARK A.....	ORIENTATION SELECTIVE MECHANISMS IN VISION.....	5R01 EY00953-06	42,115
DE BUSK, A GIB.....	CELL SURFACE FUNCTION AND CELLULAR AGING.....	2R01 AG00194-03	31,992
ELAM, JOHN S.....	STUDY OF AXONAL GLYCOPROTEINS AND GLYCOSAMINOGLYCANS.....	5R01 NS11456-05	41,039
FRIEDEN, EARL.....	AMPHIBIAN DEVELOPMENT; THYROID INDUCED METAMORPHOSIS.....	5R01 HD01236-22	108,741
GOEDKEN, VIRGIL L.....	STRUCTURAL AND REACTIVITY OF IRON AND COBALT COMPLEXES.....	1R01 HL20996-01	66,436
GREENBERG, MICHAEL J.....	PHARMACOLOGY OF MOLLUSCAN HEARTS.....	5R01 HL09283-13	51,993
HERZ, WERNER.....	ANTITUMOR LACTONES—STUDIES IN PHOTOCHEMISTRY.....	5R01 CA13121-19	71,018
HOFER, KURT G.....	CELL POPULATION KINETICS AS FACTOR IN TUMOR THERAPY.....	5R01 CA13222-06	41,405
JOHNSON, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07020-12	82,114
KENSHALO, DANIEL R.....	PSYCHOPHYSICAL AND NEURAL RESPONSE TO THERMAL STIMULI.....	5R01 NS02992-17	67,056
LIGHT, ROBLEY J.....	HYDROXY FATTY ACID METABOLISM AND FUNCTION.....	3R01 AM15150-05S1	7,690
LIGHT, ROBLEY J.....	METABOLISM OF HYDROXY FATTY ACIDS AND GLYCOLIPIDS.....	2R01 AM15150-06	41,289
LINDER, BRUNO.....	ATTRACTION OF INTERMEDIATE TO LARGE MOLECULES.....	5R01 GM23223-02	26,100
MANDELKERN, LEO.....	CONFORMATIONAL AND OPTICAL PROPERTIES OF POLYPEPTIDES.....	5R01 GM20860-03	27,056
MANN, CHARLES K.....	ELECTROCHEMICAL OXIDATION OF BIOLOGICAL AMINES.....	5R01 NS10528-15	45,180
MARZLUFF, WILLIAM F, JR.....	CONTROL OF CELL DIVISION: AN APPROACH TO AGING.....	5R01 AG00413-03	61,300
MARZLUFF, WILLIAM F, JR.....	CONTROL OF MILK PROTEIN SYNTHESIS IN MAMMARY TUMORS.....	1R01 CA20428-01A1	28,784
MASTERTON, R BRUCE.....	ANALYSIS OF SENSORY CORTEX.....	5R01 NS07726-11	57,300
RILL, RANDOLPH L.....	CHARACTERIZATION OF CHROMATIN SUBUNITS.....	5R01 GM21126-03	28,998
STEPHAN, FRIEDRICH K.....	NEURAL CONTROL OF CIRCADIAN RHYTHMS IN BEHAVIOR.....	5R01 GM21728-03	16,023
TUCKER, DON.....	RELATION OF NEURAL RESPONSES TO ODOR PROPERTIES.....	5R01 NS08814-08	35,018
VICKERS, THOMAS J.....	TRACE ELEMENT ANALYSIS IN BIOLOGICAL SAMPLES.....	5R01 GM15996-09	42,184
WALBORSKY, HARRY M.....	CHIRAL FREE RADICALS AND CHIRAL SOLVATED ELECTRONS.....	5R01 CA04065-19	43,267
WINCHESTER, JOHN W.....	TRACE ELEMENT DEPOSITION IN AMBIENT AEROSOL INHALATION.....	5R01 ES01326-02	57,104
ORGANIZATION TOTAL	27 1,210,241		
TAMPA			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF SOUTH FLORIDA ZIP CODE 33620			
BAKER, CARLETON H.....	MICROVASCULAR FLOW, VOLUME, AND REACTIVITY.....	1R01 HL18866-01A1	32,805
BOREN, HOLLIS G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05749-05	49,275
BYVOET, PAUL.....	INTERCALATING AGENTS AS PROBES OF CHROMATIN STRUCTURE.....	5R01 CA20038-02	47,443
CORY, JOSEPH G.....	CYTOTOXICITY AND RIBOSOMAL RNA MATURATION.....	5R01 CA14762-03	30,961
CORY, JOSEPH G.....	TUMOR CELL INHIBITION BY NUCLEOTIDE ALDEHYDE ANALOGS.....	2R01 CA15577-04	51,874
CORY, JOSEPH G.....	RIBONUCLEOTIDE REDUCTASE AS SITE FOR ANTITUMOR DRUGS.....	5R01 CA17246-03	32,612
EIKMAN, EDWARD A.....	OBJECTIVE INTERPRETATION OF LIVER IMAGES.....	5R01 GM22890-02	54,880
FOSSLIEN, EGIL.....	AUTOMATED HEMOGLOBIN ELECTROPHORESIS.....	5R01 HL20947-02	62,610

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
GARRETT, CARLETON T	HETEROGENEOUS RNA SEQUENCES IN LIVER NEOPLASMS	3R01 CA15647-03S1	2,460
HARTMANN, ROBERT C	CELLULAR DEFECTS IN NOCTURNAL HEMOGLOBINURIA	5R01 HL18012-03	42,767
HESSINGER, DAVID A	PHYSALIA VENOM PURIFICATION, MECHANISM, TREATMENT	5R01 ES01454-02	41,691
KELLER, RONALD K	GLYCOPROTEIN BIOSYNTHESIS IN THE OVIDUCT	5R01 GM23160-02	27,409
MARTIN, DEAN F	MANAGEMENT OF RED TIDE ENVIRONMENTAL HEALTH HAZARDS	1R01 ES01485-01	41,094
MASON, REGINALD G	ULTRASTRUCTURAL STUDY OF ENOOTHELIUM IN THROMBOSIS	7R01 HL22583-01	54,858
NESS, GENE C	HORMONE REGULATION OF CHOLESTEROL METABOLISM IN AGING	5R01 HL18094-03	30,502
PASCAL, ROBERT R	GLOMERULONEPHRITIS IN LYMPHORETICULAR CANCER	5R01 CA20884-02	55,005
POLLET, ROBERT J	INSULAR RECEPTOR CHARACTERIZATION OF HUMAN LYMPHOCYTES	5R01 AM18608-03	40,925
SCHIMMEL, STEVEN D	MEMBRANE DEVELOPMENT IN NORMAL VS DYSTROPHIC MUSCLE	5R01 NS12558-02	31,058
SCHNELLER, STEWART W	ANALOGS OF DEAZAADOENOSINE ANTINEOPLASTIC AGENTS	5R01 CA17878-03	38,524
SHANNON, ROGER	RESPIRATORY MUSCLE AFFERENTS IN RESPIRATORY CONTROL	2R01 HL17715-03	32,209
SIORANSKY, HERSCHEL	CHEMICAL PATHOLOGY OF AMINO ACID DEFICIENCIES	5R01 AM16530-05	25,493
SOLOMONSON, LARRY P	NITRATE REDUCTASE: REGULATION AND PROPERTIES	5R01 GM23407-02	33,035
STAUFFER, JOHN Q	ACQUIRED HYPEROXALURIA AND INTESTINAL DISEASE	7R01 AM21362-01	37,140
TEDESCO, THOMAS A	CHARACTERIZATION OF GALACTOSE ENZYME MUTANTS IN MAN	5R01 AM18719-02	55,151
TORCZYNSKI, ELISE	TOPOGRAPHICAL DISTRIBUTION OF THE CILIARY VESSELS	1R23 EY01928-01	7,041
ORGANIZATION TOTAL	25	958,822	
VERO BEACH			
FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES—FLORIDA MEDICAL ENTOMOLOGY LABORATORY		ZIP CODE 32960	
BIOLINGMAYER, WILLIAM L	MOSQUITO FLIGHT PATHS IN RELATION TO THE ENVIRONMENT	5R01 AI11921-03	40,680
LINLEY, JOHN R	THE BIOLOGY OF CULICOIDES	3R01 AI09354-07S1	200
LINLEY, JOHN R	THE BIOLOGY OF CULICOIDES	5R01 AI09354-08	37,088
PROVOST, MAURICE W	THE NATURAL HISTORY OF MOSQUITOES	5R01 AI06587-13	128,623
VAN HANDEL, EMILE	COMPARISONS BETWEEN ARTHROPOD AND VERTEBRATE METABOLISM	5R01 AI09363-05	41,816
ORGANIZATION TOTAL	5	248,407	
STATE TOTAL	279	21,518,672	
GEORGIA			
ALBANY			
UNIVERSITY SYSTEM OF GEORGIA—ALBANY STATE COLLEGE		ZIP CODE 31705	
BLACK, BILLY C	INTERDISCIPLINARY BIOMEDICAL SCIENCE RESEARCH	5S06 RR08023-06	32,257
SMITH, CLIFFORD L	INTERDISCIPLINARY BIOMEDICAL SCIENCE RESEARCH	2S06 RR08023-07	83,629
ORGANIZATION TOTAL	2	115,886	
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA		ZIP CODE 30601	
AGOSIN, MOISES	BIOCHEMISTRY OF THE HYDATIO ORGANISMS	5R01 AI09865-07	27,614
AGOSIN, MOISES	MICROSOMAL HEMOPROTEINS IN TRYPANOSOMATIDAE	5R01 AI12244-03	22,129
AGOSIN, MOISES	JUVENILE METABOLISM IN TRIATOMA INFESTANS AND MAMMALS	1R01 AI13633-01	60,770
CARLTON, BRUCE C	CIRCULAR DNA ELEMENTS IN BACILLUS MEGATERIUM	5R01 GM18936-06	44,707
CHAMPNEY, W SCOTT	GENETICS OF E. COLI RIBOSOMAL PROTEIN BIOSYNTHESIS	5R01 GM22450-02	46,686
COLE, RONALD S	REPAIR OF CROSS-LINKED DNA IN BACTERIA AND ANIMAL CELLS	5R01 CA14396-05	47,694
DAMIAN, RAYMOND T	SCHISTOSOME IMMUNITY MECHANISMS	5R22 AI12065-04	57,458
DE SA, RICHARD J	FLAVOPROTEIN OXIDASES: ON-LINE INSTRUMENTATION	5R01 GM16834-09	52,456
DERVARTANIAN, DANIEL V	HIGH-ENERGY INTERACTIONS IN MULTI-HEME SYSTEMS	5R01 GM18895-07	69,376
DOUGLAS, CHARLES H	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07025-12	88,392
FOSTER, JUDITH A	ELASTIN STRUCTURE, FIBROGENESIS AND DISEASE	7R01 HL22208-01	61,764
GILES, NORMAN H	GENETIC REGULATORY MECHANISMS IN NEUROSPORA	5R01 GM23051-02	136,891
HILL, RICHARD K	STEREOCHEMICAL STUDIES OF BIOSYNTHETIC REACTIONS	2R01 GM16944-07	39,434
HIMEL, CHESTER M	CHOLINERGIC NEURAL SYSTEMS	5R01 NS12471-02	45,658

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
KEY, JOE L.....	RNA METABOLISM IN DEVELOPMENT AND HORMONAL REGULATION.....	5R01 CA11624-08	78,069
KOCHERT, GARY D.....	PROGRAMMED DEVELOPMENT AND SENESCENCE IN VOLVOX.....	1R01 AG00127-01	45,725
KUSHNER, SIDNEY R.....	A BIOCHEMICAL ANALYSIS OF GENETIC RECOMBINATION.....	5R01 GM21454-03	41,194
LANE, ROBERT H.....	IRON-SULFUR PROTEIN-FLAVOPROTEIN INTERACTIONS.....	5R01 GM22592-02	27,760
LANSMAN, ROBERT A.....	MAMMALIAN MITOCHONDRIAL DNA IN BACTERIAL PLASMIDS.....	5R01 GM23246-02	54,432
LEA, ARDEN O.....	ENDOCRINOLOGY OF MOSQUITO REPRODUCTION AND BEHAVIOR.....	5R01 AI09410-08	63,174
MC RORIE, ROBERT A.....	ACROLYSIN-ACROSIN IN FERTILITY EVALUATION AND CONTROL.....	1R01 HD10791-01	63,076
MENDICINO, JOSEPH F.....	ENZYME INTERACTIONS IN METABOLIC REGULATION.....	5R01 AM13150-10	31,177
MENDICINO, JOSEPH F.....	REGULATION OF GLYCOPROTEIN BIOSYNTHESIS IN LUNG.....	1R01 HL20868-01	27,345
OWENS, WILLIAM A.....	A DEVELOPMENTAL INTEGRATIVE INVESTIGATION.....	2R01 HD04135-09	43,904
POLLACK, ROBERT H.....	SENSORY AND PERCEPTUAL PROCESSES IN THE AGED.....	5R01 AG00297-03	47,395
PROENZA, LUIS M.....	ELECTROPHYSIOLOGY OF RETINAL CELLS IN VISION.....	5R01 EY00973-05	31,487
SCHIERMAN, LOUIS W.....	IMMUNOGENETIC STUDY OF A HERPES VIRUS INDUCED LYMPHOMA.....	1R01 CA23660-01	64,634
SRIVASTAVA, PRAKASH N.....	ACROSOMAL ENZYMES AND THEIR INHIBITORS IN FERTILIZATION.....	1R01 HD10871-01	71,857
STAMMER, CHARLES H.....	DEHYDROPEPTIDE RENIN SUBSTRATES.....	5R01 HL17896-02	27,605
SUMMERS, ANNE O.....	EFFECT OF HG RESISTANT MOUSE GUT FLORA ON HG TOXICITY.....	7R01 ES01887-01	40,328
TRAVIS, JAMES.....	PROTEOLYTIC ENZYMES AND INHIBITORS IN LUNG DISEASE.....	2R01 HL14778-09	68,104
VAPNEK, DANIEL.....	TRANSCRIPTION OF PLASMID DNA IN ESCHERICHIA COLI.....	5R01 GM20160-05	37,288
WADE, ADELBERT E.....	DIET AND CHEMICAL CARCINOGENESIS.....	1R01 CA20695-01A1	37,249
ORGANIZATION TOTAL	33	1,702,832	
ATLANTA			
ATLANTA UNIVERSITY ZIP CODE 30314			
LUMB, JUDITH R.....	ALKALINE PHOSPHATASE IN MOUSE LEUKEMIA.....	5R01 CA18952-02	39,593
ORGANIZATION TOTAL	1	39,593	
ATLANTA UNIVERSITY CENTER ZIP CODE 30310			
JOHNSON, JOE, JR.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08006-06	236,370
JOHNSON, JOE, JR.....	BIOMEDICAL SCIENCES RESEARCH IMPROVEMENT SUPPORT.....	2S06 RR08006-07	997,396
SULLIVAN, WALTER W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07172-01	54,987
ORGANIZATION TOTAL	3	1,288,753	
EMORY UNIVERSITY ZIP CODE 30322			
BARTOLUCCI, ALFRED A.....	SOUTHEASTERN GROUP STATISTICAL SERVICES.....	3R10 CA11263-08S1	35,210
BARTOLUCCI, ALFRED A.....	SOUTHEASTERN GROUP STATISTICAL SERVICES.....	2R10 CA11263-09	374,163
CAMPBELL, WALLACE G, JR.....	PATHOLOGY OF HYPERTENSIVE-ASSOCIATED ARTERITIS.....	5R01 HL19539-02	70,623
CAVANAGH, H DWIGHT.....	BIOCHEMICAL CONTROL OF GROWTH IN CORNEAL EPITHELIUM.....	5R01 EY01920-02	91,365
DANNER, DEAN J.....	BRANCHED-CHAIN ALPHA KETOACID METABOLISM.....	5R01 HD08388-03	47,881
DE HAAN, ROBERT L.....	DIFFERENTIATION OF THE HEART-CELL MEMBRANE.....	5R01 HL16567-03	94,556
DE HAAN, ROBERT L.....	ELECTRICAL COUPLING AND CARDIAC FIBRILLATION.....	5R01 HL17827-03	68,022
DEBACHER, GARY A.....	BIOFEEDBACK SHAPING OF RELAXATION IN SPASTIC PATIENTS.....	5R01 NS12280-03	45,779
DEFELICE, LOUIS J.....	INTRODUCTION TO MEMBRANE NOISE.....	3R01 LM02505-02S1	4,984
DI GIROLAMO, MARIO.....	CONTROL MECHANISMS OF GLUCOSE METABOLISM IN FAT CELLS.....	2R01 AM17403-04	52,712
EGAN, ROBERT L.....	DIAGNOSTIC BREAST CANCER—HIGH RISK FACTORS.....	5R01 CA14712-04	134,383
EGAN, ROBERT L.....	DIAGNOSTIC BREAST CANCER—HIGH RISK FACTORS.....	2R01 CA14712-05	29,941
FARAJ, BAHJAT A.....	ANTIBODIES TO DOPAMINE AND NOREPINEPHRINE.....	5R01 GM22472-02	32,333
FRITZ, MICHAEL E.....	ION TRANSPORT IN SALIVARY GLANDS.....	2R01 DE02879-07A1	67,280
FRITZ, ROBERT B.....	NUCLEAR PROTEINS AND MALIGNANCY.....	5R01 CA17528-03	32,928
FRITZ, ROBERT B.....	IMMUNE FUNCTION IN EXP. ALLERGIC ENCEPHALOMYELITIS.....	5R01 NS10721-05	48,981
FULLER, ELLEN O.....	EFFECT OF TRAINING-DETRAINING ON THE RAT HEART.....	5R01 HL16420-02	64,012
GOLDSMITH, DAVID J.....	THE SYNTHESIS OF ANTIFEEDING AGENTS.....	1R01 ES01615-01	50,581
GOULD, KENNETH G.....	ALTERATION OF CERVICAL MUCUS COMPOSITION.....	1R01 HD10943-01	5,531
HARRIS, JANE E.....	REGULATION OF CATECHOLAMINE SYNTHESIS BY CYCLIC AMP.....	5R01 NS12288-03	34,128
HARTZELL, HARRISON C, JR.....	INNERVATION OF THE HEART: ACETYLCHOLINE RECEPTORS.....	1R01 HL21195-01	68,793
HERSEY, STEPHEN J.....	INTRACELLULAR REACTIONS IN GASTRIC MUCOSA.....	2R01 AM14752-07	49,542
HUGULEY, CHARLES M, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA03227-20S1	13,121
HUGULEY, CHARLES M, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA03227-21	424,118
HUGULEY, CHARLES M, JR.....	CANCER CENTER SUPPORT GRANT (MULTIDISCIPLINARY).....	3P30 CA16255-02S1	50,000

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
HUGULEY, CHARLES M, JR.....	CANCER CENTER SUPPORT GRANT (MULTIDISCIPLINARY).....	5P30 CA16255-03	399,563
HUGULEY, CHARLES M, JR.....	CLINICAL CANCER EDUCATION PROGRAM (GENERAL).....	5R25 CA17998-03	174,734
HUMPHREY, DONALD R.....	CORTICAL NEURONAL MECHANISMS OF MOTOR CONTROL.....	5R01 NS10183-06	48,446
HUNT, LINDSAY M.....	DENTAL ANESTHESIA: A PSYCHOPHYSIOLOGICAL EVALUATION.....	5R01 DE04003-03	45,591
HUNT, LINDSAY M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05308-16	39,142
KANN, HERBERT E.....	ANTINEOPLASTIC DRUGS: MOLECULAR PHARMACOLOGIC STUDIES.....	5R01 CA16620-03	42,318
KIBLER, ROBERT F.....	STUDIES IN DEMYELINATING DISEASES.....	5P50 NS11418-04	267,018
KINKADE, JOSEPH M, JR.....	QUANTITATIVE STUDIES ON GRANULOCYTE DIFFERENTIATION.....	1R01 CA22294-01	72,262
KOSTYO, JACK L.....	ANABOLIC ACTIONS OF ADENOHYPOPHYSEAL HORMONES.....	5R01 AM12782-10	25,077
KOSTYO, JACK L.....	GROWTH HORMONE: STRUCTURE-FUNCTION RELATIONSHIPS.....	5P01 HD04485-07	129,733
KUCK, JOHN F, JR.....	LENS METABOLISM IN NORMAL AND PRECATARACTOUS STATES.....	5R01 EY00260-15	78,461
KUO, JYH-FA.....	MECHANISM AND ROLE OF CYCLIC GMP IN HEART.....	5R01 HL15696-05	79,274
LA VIA, MARIANO F.....	B LYMPHOCYTE ACTIVATION IN YOUNG AND AGED MICE.....	1R01 AG00132-01A2	35,036
LERMAN, SIDNEY.....	LENS PROTEINS & FLUORESCENCE: IN VIVO & IN VITRO STUDY.....	3R01 EY01575-02S1	12,479
LERMAN, SIDNEY.....	LENS PROTEINS & FLUORESCENCE: IN VIVO & IN VITRO STUDY.....	5R01 EY01575-03	74,436
LESTER, CHARLES T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07023-12	76,653
LETBETTER, WILLIAM D.....	ANATOMICAL BASIS OF SPINAL SENSORY-MOTOR ORGANIZATION.....	3R01 NS11949-03S1	7,900
MANDELL, LEON.....	NMR SPECTROSCOPY OF BIOLOGICALLY IMPORTANT COMPOUNDS.....	5R01 GM10848-21	71,507
MANNING, JOHN W.....	INTEGRATED CONTROL OF CARDIOVASCULAR ACTIVITY.....	5R01 HL16648-15	56,214
MANOCHA, SOHAN L.....	PROTEIN MALNUTRITION AND PRENATAL ALTERATION OF BRAIN.....	5R22 HD06087-03	32,527
MARTIN, DAVID E.....	ARTIFICIAL BREEDING OF CHIMPANZEES.....	5R01 RR00992-02	27,621
MENGER, FREDRIC M.....	INVESTIGATION OF BIO-ORGANIC SYSTEMS BY DYNAMIC NMR.....	5R01 GM21457-03	37,407
MYERS, ORIE E, JR.....	SUPPORT FOR YERKES REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00165-17	1,685,780
NEILL, JIMMY D.....	THE PHYSIOLOGIC CONTROL OF PROLACTIN SECRETION.....	5R01 HD04312-09	71,018
NEILL, JIMMY D.....	GONADOTROPIN SECRETION DURING LACTATION IN THE MONKEY.....	5R01 HD07066-06	98,291
NIXON, DANIEL W.....	METABOLIC STUDY OF CANCER PATIENTS.....	1R01 CA20997-01	116,120
NOE, BRYAN D.....	ROLE OF PROGLUCAGON IN GLUCAGON BIOSYNTHESIS.....	5R01 AM16921-03	25,577
NOE, BRYAN D.....	LOCALIZATION OF CONVERSION OF PROGLUCAGON TO GLUCAGON.....	1R01 AM19890-01	31,466
POOLER, JOHN P.....	PHOTOCHEMICAL MODIFICATION OF EXCITABLE MEMBRANES.....	5R01 NS09040-08	49,822
POPOVIC, VOJIN P.....	FREEZING AND ELECTROMAGNETIC THAWING OF PLATELETS.....	1R01 HL20716-01	48,249
PREEDY, JOHN R.....	ESTROGENS AND THE FLUID RETENTION OF HEPATIC CIRRHOSIS.....	3R01 AM13468-07S2	12,658
PRIEST, JEAN H.....	DERMATOGLYPHICS AND CLINICAL DISEASE.....	5R01 GM19268-04	21,125
RAGAB, ABDELSALAM H.....	SOUTHWEST ONCOLOGY GROUP (CLINICAL).....	1R10 CA20549-01	103,761
REICHERT, LEO E, JR.....	TESTICULAR RECEPTORS OF FOLLICLE STIMULATING HORMONE.....	2R01 HD08228-04	96,076
RICHARDSON, ARTHUR P.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00039-17	610,752
RICHARDSON, ARTHUR P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05364-16	180,309
RUDMAN, DANIEL.....	PITUITARY ADIPOKINETIC SUBSTANCES.....	5R01 AM13129-11	135,098
RUDMAN, DANIEL.....	ABNORMAL METABOLISM OF CANCER PATIENTS.....	5R01 CA12646-06	86,368
RUMBAUGH, DUANE M.....	LANGUAGE FORMATION STUDIES.....	5P01 HD06016-07	199,610
SCOTT, JUNE R.....	LYSOGENY AND BACTERIOPHAGE P1.....	5R01 CA11673-08	71,215
SEERY, VIRGINIA L.....	STRUCTURE-FUNCTION STUDIES ON GLYCOGEN PHOSPHORYLASE.....	5R01 AM18527-03	31,469
SMITH, P DENNIS.....	ENVIRONMENTAL MUTAGENESIS AND DNA REPAIR.....	5R01 ES01101-03	26,932
TAKEI, YOSHIO.....	SYSTEM DEGENERATION OF CNS—EXPERIMENTAL APPROACH.....	1R01 EY01967-01	64,103
TIGGES, JOHANNES W.....	THE EFFERENT FIBERS OF THE VISUAL CORTICES.....	5R01 EY00638-06	39,023
TROWBRIDGE, CLARENCE G.....	CALORIMETRY OF ENZYME-LIGAND INTERACTIONS.....	5R01 GM21417-03	31,629
VOGLER, WILLIAM R.....	LEUKOCYTE TRANSFUSIONS AND IMMUNOTHERAPY IN LEUKEMIA.....	3R01 CA14864-02S1	10,611
WAITZMAN, MORTON B.....	METABOLIC SYSTEMS IN AQUEOUS HUMOR DYNAMICS.....	2R01 EY00243-14	77,782
WALDRON, CHARLES A.....	CLINICAL CANCER EDUCATION (DENTAL).....	5R25 CA19253-02	36,980
WARREN, W DEAN.....	CIRRHOSIS SHUNT SURGERY, AND NITROGEN METABOLISM.....	5R01 AM15736-07	146,010
WATERSON, ROBERT M.....	STRUCTURE-FUNCTION RELATIONSHIPS OF PROTEINS.....	5R01 GM22034-03	50,179
WHITE, JOHN F.....	GUT SUGAR TRANSPORT: ELECTROPHYSIOLOGY AND ENERGETICS.....	2R01 AM17361-04	46,950
WILHELMI, ALFRED E.....	STUDIES ON ANTERIOR PITUITARY HORMONES.....	5R01 HD01231-26	59,845
WILLIS, ISAAC.....	MECHANISM AND PREVENTION OF 'PHOTOAugMENTATION'.....	5R01 CA17555-03	32,667
WOODS, WENDELL D.....	BIOCHEMICAL REGULATION IN OCULAR TISSUES.....	3R01 EY00945-05S1	12,046
WOODS, WENDELL D.....	BIOCHEMICAL REGULATION IN OCULAR TISSUES.....	2R01 EY00945-06	73,733
YOUNG, LEONA G.....	MAMMALIAN SPERMATOZOAN MOTILITY.....	5R01 HD06491-05	37,199
ORGANIZATION TOTAL	81	8,244,819	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332			
BALE, WILLIAM F.....	PREPARATION OF 125I-ANTIBODY LOCALIZED IN TUMORS.....	7R01 CA22718-01	54,915

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
CRENSHAW, JOHN W, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07024-12	53,963
FELTON, RONALD H.....	PORPHYRIN IONS AND RADICALS IN METABOLIC PROCESSES.....	5R01 AM14344-08	64,903
GIDDENS, DON P.....	SIGNAL ANALYSIS OF TURBULENCE STUDY IN BLOOD.....	1R01 HL20835-01	48,320
HALL, DWIGHT H.....	ORGANIZATION AND EXPRESSION OF THE GENOME OF PHAGE T4.....	7R01 GM24455-01	62,587
HOUSE, HERBERT O.....	ENHANCING THE SPECIFICITY OF SYNTHETIC PROCEDURES.....	5R01 GM20197-07	110,015
MACKIE, PAUL E.....	LOCATION AND STRUCTURAL ROLE OF WATER IN TOOTH ENAMEL.....	5R01 DE04151-03	43,018
MAREK, MIROSLAV.....	EFFECT OF LOCALIZED CORROSION ON DENTAL AMALGAMS.....	5R01 DE03601-05	35,799
MAY, SHELDON W.....	NON-HEME IRON OXYGENASE CATALYSIS.....	1R01 GM23474-01	53,051
POWERS, JAMES C.....	SYNTHETIC PROTEASE INHIBITORS.....	5R01 HL18679-03	65,925
SLAMECKA, VLADIMIR.....	EXTENDED UTILIZATION OF BIOMEDICAL INFORMATION.....	5R01 LM02211-03	95,672
SMITH, ANDERSON D.....	INTERACTION BETWEEN HUMAN AGING AND MEMORY.....	5R01 AG00445-06	22,297
YOUNG, ROBERT A.....	TOOTH ENAMEL APATITE AT THE ATOMIC LEVEL.....	5R01 DE01912-14	98,406
YU, NAI-TENG.....	COMPARATIVE RAMAN STUDIES OF HUMAN AND ANIMAL LENSES.....	5R01 EY01746-02	22,883
YU, NAI-TENG.....	LASER-EXCITED RAMAN SPECTROSCOPY OF BIOPOLYMERS.....	5R01 GM18894-07	28,918
ZALKOW, LEON H.....	THE ANTITUMOR AGENT OF APLOPAPPUS HETEROPHYLLUS.....	5R01 CA18819-02	50,924
ZALKOW, LEON H.....	CARCINOGENIC PLANTS OF THE DEAD SEA AREA.....	5R01 CA19946-02	42,258
ORGANIZATION TOTAL	17	953,854	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA STATE UNIVERSITY ZIP CODE 30303			
BROWN, JOSEPHINE V.....	PREMATURITY, EARLY INTERACTION, AND SOCIAL COMPETENCE.....	1R01 HD11209-01	111,452
MEYER, SALLY A.....	MOLECULAR APPROACHES TO TAXONOMY OF YEASTS.....	7R01 GM24543-01	52,527
PIEPER, WALTER A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07171-01	16,461
ORGANIZATION TOTAL	3	180,440	
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
ALLEN, MARSHALL B, JR.....	ISOLATED PITUITARY RESPONSE TO LHRH AND ESTROGENS.....	5R01 HD09445-03	39,122
BHALLA, VINOD K.....	INTERACTION OF GONADOTROPIN WITH TESTIS.....	5R01 HD08910-02	55,446
BOCKMAN, DALE E.....	EXPERIMENTALLY-INDUCED PANCREATIC ADENOCARCINOMA.....	1R26 CA22063-01	40,556
BOINEAU, JOHN P.....	DELAYED & ASYMMETRIC VENTRICULAR CONDUCTION MECHANISMS.....	5R01 HL18398-03	58,866
BOND, GARY C.....	ARTERIAL BARORECEPTORS AND RENAL FUNCTION.....	7R01 HL21094-01	42,645
BURNETT, GEORGE W.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09043-01	82,974
COSTOFF, ALLEN.....	THE HYPOTHALAMO-HYPOPHYSAL-OVARIAN AXIS IN AGING.....	1R01 AG00756-01	27,844
FAIRHURST, CARL W.....	BONDING OF PORCELAIN TO SEMI- AND NON-PRECIOUS METALS.....	5R01 DE04252-03	43,344
FELDMAN, ELAINE B.....	X-IRRADIATION, BILE SALTS AND INTESTINAL TRANSPORT.....	5R01 AM18406-03	42,045
FELDMAN, ELAINE B.....	FATTY ACIDS AND CHOLESTEROL TRANSPORT.....	5R01 HL18636-02	24,333
GALLAGHER, BRIAN B.....	CLINICAL PHARMACOLOGY OF ANTICONVULSANTS.....	7R01 NS14279-01	53,178
GARVER, FREDERICK A.....	STRUCTURAL STUDIES OF UNIQUE MYELOMA IMMUNOGLOBULINS.....	2R01 CA15215-03	45,192
GELFANT, SEYMOUR.....	THE CELL CYCLE IN PSORIASIS.....	1R01 AM19735-01	67,653
GOODALE, FAIRFIELD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05365-16	110,112
GREEN, KEITH.....	ROLE OF DRUGS ON THE COMPONENTS OF AQUEOUS FORMATION.....	5R01 EY01329-02	60,371
GREEN, KEITH.....	ION AND WATER MOVEMENT IN OCULAR TISSUES.....	5R01 EY01413-04	61,221
HOWARD, EUGENE F.....	LOW MOLECULAR WEIGHT NUCLEAR RNA.....	5R01 CA13634-03	24,356
HUISMAN, TITUS H.....	INHOMOGENEITY OF HEMOGLOBIN TYPES.....	5R01 HL05168-18	113,432
HUISMAN, TITUS H.....	COMPREHENSIVE SICKLE CELL CENTER.....	5P60 HL15158-06	800,656
HULL, DAVID S.....	OPHTHALMIC MEDICATIONS AND THE CORNEAL ENDOTHELIUM.....	5R23 EY01654-02	8,280
HUMPHRIES, ARTHUR L, JR.....	STORAGE OF KIDNEY BY HYPOTHERMIA AND PERFUSION.....	5R01 GM08472-16	49,618
JELENKO, CARL, III.....	BIOCHEMICAL EFFECTS OF BURNING OF SKIN.....	5R01 GM16973-08	74,045
KAROW, ARMAND M, JR.....	CRYOPRESERVATION OF RABBIT KIDNEYS.....	5R01 AM17816-03	32,485
KAROW, ARMAND M, JR.....	PANCREAS ISLET CELLS PRESERVED TO TRANSPLANTATION.....	5R01 AM19013-02	30,257
KOLBECK, RALPH C.....	MYOCARDIAL SUBCELLULAR LOCALIZATION OF CALCIUM.....	5R01 HL16710-03	37,552
MAHESH, VIRENDRA B.....	BIOSYNTHESIS OF STEROIDS IN THE POLYCYSTIC OVARY.....	5R01 HD04626-16	55,696
MC KINNEY, RALPH V, JR.....	GROWING CAPILLARIES: BASAL LAMINA AND PERMEABILITY.....	5R01 DE03486-06	16,535
OKABE, TORU.....	AMALGAMATION KINETICS ON AG-SN (OX) ALLOYS.....	5R01 DE04262-03	53,822
OUTHWAITE, WILLIAM C.....	PIN AND SLOT RETENTION IN AMALGAM AND COMPOSITE MATERIAL.....	1R01 DE04394-01	41,115
PASHLEY, DAVID H.....	PERMEABILITY CHARACTERISTICS OF DENTIN.....	5R01 DE03780-05	24,163
PUCHTLER, HOLDE.....	HISTOCHEMISTRY OF EARLY ARTERIOSCLEROTIC LESIONS.....	3R01 HL12147-09S1	4,201
SCHUSTER, GEORGE S.....	VIRUS INFECTION OF SALIVARY GLANDS.....	5R01 DE03254-06	5,100

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
SMITH, LINDA L.....	IMMUNOGLOBULINS ASSOCIATED WITH SERUM HYPERVISCOSITY.....	5R01 HL19456-02	33,170
SOHAL, GURKIRPAL S.....	CELL DEATH AND CYTODIFFERENTIATION.....	1R01 GM23484-01	24,220
STOMING, TERRANCE A.....	METABOLISM OF 3-METHYLCHOLANTHRENE IN LIVER AND LUNG.....	1R01 CA21481-01	34,659
TYLER, JEAN M.....	STRUCTURAL REQUIREMENTS OF ISLET GLUCOSE RECEPTORS.....	1R01 AM18178-01A1	36,649
WEBSTER, PAUL D, III.....	CONTROL OF PANCREATIC DUCTAL AND ACINAR CELL FUNCTION.....	5R01 AM13131-10	81,416
WHITFORD, GARY M.....	INFLUENCE OF ACID-BASE STATUS ON FLUORIDE METABOLISM.....	5R23 DE04332-02	22,196
ORGANIZATION TOTAL	38	2,458,525	
CLAXTON			
EVANS COUNTY HEALTH DEPARTMENT ZIP CODE 30417			
HAMES, CURTIS G.....	EPIDEMIOLOGICAL STUDY OF ATHEROSCLEROSIS IN EVANS COUNTY.....	2R01 HL03341-21	48,627
ORGANIZATION TOTAL	1	48,627	
FORT VALLEY			
UNIVERSITY SYSTEM OF GEORGIA—FORT VALLEY STATE COLLEGE ZIP CODE 31030			
BLACK, DAN T.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08084-04	61,127
ORGANIZATION TOTAL	1	61,127	
SAVANNAH			
UNIVERSITY SYSTEM OF GEORGIA—SAVANNAH STATE COLLEGE ZIP CODE 31404			
EMEH, CHUKWUDI O.....	BIOMEDICAL SCIENCE SUPPORT (MULTIDISCIPLINARY).....	5S06 RR08144-03	182,735
ORGANIZATION TOTAL	1	182,735	
STATESBORO			
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA SOUTHERN COLLEGE ZIP CODE 30458			
OLIVER, JAMES H, JR.....	REPRODUCTION IN TICKS AND MITES.....	5R01 AI09556-08	39,625
ORGANIZATION TOTAL	1	39,625	
STATE TOTAL	182	15,316,816	
HAWAII			
HILO			
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT HILO ZIP CODE 96720			
SOOD, SATYA P.....	GROWTH CONTROL OF CELLS, FUNDAMENTAL BIOLOGIC STUDIES.....	5S06 RR08073-06	48,560
ORGANIZATION TOTAL	1	48,560	
HONOLULU			
BERNICE P. BISHOP MUSEUM ZIP CODE 96819			
GOFF, MADISON L.....	LARVAL TROMBICULIDAE (ACARINA) OF PAPUA, NEW GUINEA.....	1R01 AI13893-01	31,696
STEFFAN, WALLACE A.....	BIOSYSTEMATICS OF TOXORHYNCHITES.....	5R01 AI12168-02	59,452
ORGANIZATION TOTAL	2	91,148	
EAST-WEST CENTER ZIP CODE 96822			
KUNSTADTER, PETER.....	HEALTH CONSEQUENCES OF FERTILITY OF THAI URBAN POOR.....	5R01 HD09972-02	30,173
ORGANIZATION TOTAL	1	30,173	
KAPIOLANI HOSPITAL ZIP CODE 96814			
SETO, DEXTER S.....	VIRAL HYPERSENSITIVITY IN SUDDEN INFANT DEATH SYNDROME.....	7R01 HD11671-01	65,709
ORGANIZATION TOTAL	1	65,709	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
HAWAII—Continued			
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822			
ALLEN, RICHARD D.....	MICROTUBULAR SYSTEMS.....	5R01 GM17991-06	53,036
BENEDICT, ALBERT A.....	IMMUNOGLOBULINS AND IMMUNE RESPONSES.....	2R01 AI05660-14	93,272
BOYER, CARL W, JR.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	2P20 CA17675-03	63,880
BRYANT-GREENWOOD, GILLIAN.....	THE RADIOIMMUNOASSAY OF RELAXIN AND ITS APPLICATIONS.....	5R01 HD06633-05	37,901
COOKE, IAN M.....	CARDIAC PACEMAKER: BIOPHYSICAL INTEGRATIVE MECHANISMS.....	5R01 NS11808-03	41,129
CROWELL, DAVID H.....	NEONATAL NEUROPHYSIOLOGY AND METABOLIC DERANGEMENT.....	5R01 HD09981-02	104,353
FURUSAWA, EIICHI.....	STUDIES OF NARCISSUS ALKALOID WITH ANTILEUKEMIC ACTIVITY.....	2R01 CA12733-06	68,777
GIBBONS, IAN R.....	STRUCTURAL BASIS OF SPERMATOZOAN MOTILITY.....	2R01 HD06565-11	98,925
GIBBONS, IAN R.....	PROPERTIES OF DYNEIN ISOENZYMES.....	5R01 HD10002-02	48,014
GREENWOOD, FREDRICK C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08125-04	128,080
GUILLORY, RICHARD J.....	MEMBRANE INTERACTIONS IN ENERGY LINKED REACTIONS.....	5R01 GM19269-05	35,394
HADFIELD, MICHAEL G.....	DEVELOPING OPSTHOBRANCH MODELS FOR MEDICAL RESEARCH.....	1R01 RR01057-01	65,877
HALSTEAD, SCOTT B.....	INFECTION ENHANCEMENT—AN EXPERIMENTAL MODEL OF SIDS.....	5R01 HD08693-04	52,482
HELFRICH, PHILIP.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07026-12	92,190
HERZBERG, MENDEL.....	IMMUNE RESPONSES TO LIVING & KILLED VACCINES.....	5R01 AI08041-11	38,398
HUMPHREYS, TOM D.....	ISOLATION AND CHARACTERIZATION OF INDIVIDUAL GENES.....	5R01 GM22575-02	102,182
HUMPHREYS, TOM D.....	DEVELOPMENTAL REGULATION OF MACROMOLECULAR SYNTHESIS.....	5R01 HD06574-07	60,280
HUNT, JOHN A.....	CONTROL OF RNA SYNTHESIS IN ERYTHROID CELLS.....	5R01 GM22312-03	67,794
JACOBS, PATRICIA A.....	A PROGRAM OF RESEARCH IN POPULATION CYTOGENETICS.....	5R01 HD07879-04	115,511
KANE, ROBERT E.....	CELL PROTEINS IN DIVISION AND EARLY DEVELOPMENT.....	5R01 GM14363-12	30,481
KOLONEL, LAURENCE N.....	DIETARY COMPONENTS & CANCER DEVELOPMENT EPIDEMIOLOGY.....	5R01 CA20897-02	94,546
KOLONEL, LAURENCE N.....	REASONS FOR VARIATION IN CANCER PATIENT SURVIVAL BY RACE.....	1R01 CA21828-01	79,741
LIU, ROBERT S.....	NEW GEOMETRIC ISOMERS OF VITAMIN A AND CAROTENE.....	5R01 AM17806-03	76,144
MATSUMOTO, HIROMU.....	METABOLISM OF CYCASIN-RELATED COLON CARCINOGENS.....	5R26 CA18631-02	59,545
MOORE, RICHARD E.....	ANTICANCER COMPOUNDS FROM MARINE ORGANISMS.....	2R01 CA12623-05	63,201
MORISHIGE, WALTER K.....	HORMONAL REGULATION OF LUNG FUNCTION.....	5R01 HL19195-02	28,499
MORTON, NEWTON E.....	CONFERENCE ON GENETIC EPIDEMIOLOGY.....	1R13 CA23504-01	6,880
MORTON, NEWTON E.....	A RESEARCH PROGRAM IN POPULATION GENETICS.....	5R01 GM17173-08	100,897
MORTON, NEWTON E.....	CHROMOSOME MAPPING IN MAN.....	5R01 GM23021-02	17,093
MORTON, NEWTON E.....	GENETIC RISKS AS AN OUTCOME OF SEGREGATION ANALYSIS.....	1R01 GM23498-01A1	44,383
MORTON, NEWTON E.....	GENETIC EPIDEMIOLOGY OF HYPERLIPEMIA.....	2R01 HL16774-03	78,999
NAKAMURA, ROBERT M.....	SUGAR-INDUCED HEART LESIONS AND VITAMIN K DEFICIENCY.....	5R01 HL15840-02	26,340
NISHIMURA, EDWIN T.....	CATALASE ISOZYMES IN NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA10130-12	80,801
NORTON, TED R.....	EVALUATION OF HEART STIMULANTS IN SEA ANEMONES.....	2R01 HL15991-04	45,176
OISHI, NOBORU.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17984-03	97,468
PATIL, SURESH S.....	BIOCHEMISTRY OF RESISTANCE OF PSEUDOMONADS.....	5R01 AI09477-08	38,758
PIETTE, LAWRENCE H.....	ESR STUDIES OF BIOLOGICAL FREE RADICAL MECHANISMS.....	3R01 CA10977-12S1	17,846
PIETTE, LAWRENCE H.....	ESR STUDIES OF BIOLOGICAL FREE RADICAL MECHANISMS.....	2R01 CA10977-13	71,598
PIETTE, LAWRENCE H.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA15655-03	550,075
POPPER, ARTHUR N.....	PROCESSING OF ACOUSTIC INFORMATION.....	5R01 NS09374-08	53,638
PORTA, EDUARDO A.....	DIETARY FACTORS IN AGING.....	5R01 AG00143-03	77,071
ROGERS, TERENCE A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05599-11	78,441
SCHUELER, PAUL J.....	THE STRUCTURE OF THE PALYTOXINS.....	5R01 HL18253-02	38,253
SEFF, KARL.....	CRYSTALLOGRAPHY OF ORGANIC DISULFIDE-METAL COMPLEXES.....	5R01 GM18813-06	44,954
SOOD, SATYA P.....	BIOLOGICAL, BIOCHEMICAL, BIOPHYSICAL STUDIES.....	2S06 RR08073-07	79,600
YANAGIMACHI, RYUZO.....	ANALYSIS OF FERTILIZATION MECHANISMS IN MAMMALS.....	3R01 HD03402-09S1	23,613
YANAGIMACHI, RYUZO.....	EVENTS IN MAMMALIAN SPERMATOCYTES LEADING TO FERTILIZATION.....	2R01 HD03402-10	65,411
YASUNOBU, KERRY T.....	STUDIES OF CYTOCHROME P-450 & CYTOCHROME OXIDASE.....	5R01 GM22556-02	45,020
ORGANIZATION TOTAL	48 3,481,947		
STATE TOTAL	53 3,717,537		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
IDAHO			
BOISE			
ST. LUKE'S HOSPITAL ZIP CODE 83702			
SMITH, CHARLES E	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	2P30 CA15192-04	129,422
ORGANIZATION TOTAL	1	129,422	
MOSCOW			
UNIVERSITY OF IDAHO ZIP CODE 83843			
HASS, GEORGE M.....	PROTEINASE INHIBITORS IN POTATOES.....	5R01 GM22748-02	26,183
KLUETZ, MICHAEL D.....	DIAMINE OXIDASE: ITS ACTION AND ROLE IN RAPID GROWTH.....	1R01 GM23436-01	29,759
MEAD, RODNEY A.....	HORMONAL CONTROL OF DELAYED IMPLANTATION.....	5R01 HD06556-06	37,501
MILLER, LOIS K.....	GENETIC CHARACTERIZATION OF BACULOVIRUSES.....	1R01 ES01567-01	63,928
RENSHAW, HARLAND W.....	INTRANEUTROPHILIC MICROBICIDAL DEFECT STUDY.....	5R01 AI12826-02	28,022
WILLETT, JAMES D.....	HORMONES AND AGING IN NEMATODES.....	5R01 AG00293-02	52,491
WILLETT, JAMES D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07170-01	20,494
ORGANIZATION TOTAL	7	258,378	
STATE TOTAL	8	387,800	
ILLINOIS			
CARBONDALE			
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE ZIP CODE 62901			
BOLEN, DAVID W.....	ELEMENTARY STEPS IN CHYMOTRYPSIN CATALYSIS.....	5R01 GM22300-03	28,389
DINGERSON, MICHAEL R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07118-08	16,001
HARGRAVE, PAUL A.....	RHODOPSIN STRUCTURE AND FUNCTION.....	2R01 EY01275-04	99,819
PETERSON, RUDOLPH N.....	MOTILITY AND METABOLISM OF HUMAN SPERMATOOZOA.....	2R01 HD10947-02	38,798
RUSSELL, LONNIE D.....	SERTOLI-SERTOLI AND SERTOLI-GERM CELL INTERRELATIONS.....	7R01 HD11823-01	21,529
SUNG, MICHAEL T.....	HISTONE H5 AND AVIAN ERYTHROPOIESIS.....	1R01 HL20300-01	60,108
ORGANIZATION TOTAL	6	264,644	
CHAMPAIGN			
HARLAN E. MDDRE HEART RESEARCH FOUNDATION ZIP CODE 6182D			
KUMMEROW, FRED A.....	ANIMAL MODEL FOR STUDIES ON AVERTING ATHEROSCLEROSIS.....	5R01 HL15504-05	44,140
ORGANIZATION TOTAL	1	44,140	
CHARLESTON			
EASTERN ILLINOIS UNIVERSITY ZIP CODE 6192D			
FERGUSON, KAREN A.....	EFFECT OF STEROL ON MEMBRANE-BOUND ENZYMES.....	5R01 GM22915-02	18,541
ORGANIZATION TOTAL	1	18,541	
CHICAGO			
AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE ZIP CODE 6D601			
SMITH, ALFRED R.....	AAPM CHARGED PARTICLE BEAM DOSIMETRY TASK GROUP.....	1R01 CA22286-01	63,250
WOOTTON, PETER.....	AAPM FAST NEUTRON BEAM DOSIMETRY PHYSICS TASK GROUP.....	1P20 CA20826-01	25,177
ORGANIZATION TOTAL	2	88,427	
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 6D606			
KRAMER, SIMON.....	CLINICAL AND RESEARCH RADIATION THERAPY IN CANCER CARE.....	2R18 CA15978-04	1,704,418
ORGANIZATION TOTAL	1	1,704,418	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
AMERICAN COLLEGE OF SURGEONS ZIP CODE 60611			
BEAHR, OLIVER H.....	AMERICAN JOINT COMMITTEE (CANCER STAGING).....	5R01 CA11606-09	176,837
ORGANIZATION TOTAL	1 176,837		
AMERICAN DENTAL ASSOCIATION ZIP CODE 60611			
BOWEN, RAFAEL L.....	IMPROVEMENT OF PREVENTIVE AND RESTORATIVE MATERIALS.....	2R01 DE02494-11	91,900
BROWN, WALTER E.....	SOLUBILITY AND DIFFUSION OF CALCIUM PHOSPHATES.....	5R01 DE02659-11	117,411
BROWN, WALTER E.....	MECHANISM OF DENTAL CARIES.....	5R01 DE04385-02	51,295
BROWN, WALTER E.....	CRYSTAL CHEMISTRY OF CALCIUM PHOSPHATES.....	7R01 DE05030-01	144,017
BROWN, WALTER E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05689-09	38,648
MABIE, CURTIS P.....	DENTAL PORCELAIN IMPROVEMENT WITH INORGANIC POLYMERS.....	5R01 DE04058-03	20,115
RUPP, NELSON W.....	AMALGAM: IMPROVED ALLOY AND MANIPULATION TECHNIQUES.....	7R01 DE05029-01	30,678
STANFORD, JOHN W.....	STANDARD TEST METHODS FOR BIOMATERIALS & INSTRUMENTATION.....	5R01 DE03505-09	96,212
WATERSTRAT, RICHARD M.....	CONSTITUTION DIAGRAMS FOR ALLOYS OF THE NOBLE METALS.....	7R01 DE05031-01	36,722
WOZNIAK, WAYNE T.....	IMPROVED LUMINOPIHORS FOR DENTAL PORCELAIN.....	1R01 DE04709-01	37,816
ORGANIZATION TOTAL	10 664,814		
CHICAGO HEALTH DEPARTMENT ZIP CODE 60602			
WHIPPLE, IRA T.....	MYOCARDIAL FUNCTION, RISK FACTORS AND FUTURE CHD.....	5R01 HL16908-03	12,768
ORGANIZATION TOTAL	1 12,768		
CHICAGO STATE UNIVERSITY ZIP CODE 60628			
MYLROIE, AUGUSTA A.....	FACULTY AND STUDENT RESEARCH DEVELOPMENT.....	2S06 RR08043-07	103,145
SHERMAN, WARREN V.....	DEVELOPMENT OF FACULTY AND STUDENT RESEARCH COMPETENCE.....	5S06 RR08043-06	26,094
ORGANIZATION TOTAL	2 129,239		
CHILDREN'S MEMORIAL HOSPITAL ZIP CODE 60614			
HONIG, GEORGE R.....	REGULATION OF HEMOGLOBIN SYNTHESIS.....	2R01 AM19046-02	57,755
HONIG, GEORGE R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA07431-14	133,772
NADLER, HENRY L.....	ARGININE ESTERASE IN CYSTIC FIBROSIS.....	5R01 AM18462-03	89,104
NADLER, HENRY L.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	3M01 RR00199-12S2	99,632
NADLER, HENRY L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05475-15	38,015
SCHULMAN, JEROME L.....	COPING IN FAMILIES WITH A LEUKEMIC CHILD.....	5R18 CA19344-02	116,893
WESSEL, HANS U.....	EXERCISE PERFORMANCE IN CHILDREN WITH HEART DISEASE.....	5R01 HL17578-03	95,584
ORGANIZATION TOTAL	7 630,755		
DEPAUL UNIVERSITY ZIP CODE 60604			
YI, PON N.....	TUMOR HYPERTHERMIA: MEMBRANE POTENTIAL AND FLUIDITY.....	1R01 CA19758-01	30,541
ORGANIZATION TOTAL	1 30,541		
FIELD MUSEUM OF NATURAL HISTORY ZIP CODE 60605			
OSBORN, DALE J.....	THE RECENT LAND MAMMALS OF EGYPT.....	1R01 LM02765-01	20,136
ORGANIZATION TOTAL	1 20,136		
HEALTH AND HOSPITALS GOVERNING COMMISSION OF COOK COUNTY—COOK COUNTY HOSPITAL ZIP CODE 60612			
BURKE, GERALD.....	THYROID STIMULATORS AND THYROID STIMULATION.....	2R01 AM17561-04	66,223
ORGANIZATION TOTAL	1 66,223		
HEKTOEN INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 60612			
HOFFMAN, SAMUEL J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05524-15	26,956
LEV, MAURICE.....	CONGENITAL HEART DISEASE RESEARCH PROGRAM.....	2R01 HL07605-15	73,775
ORGANIZATION TOTAL	2 100,731		
HIT RESEARCH INSTITUTE ZIP CODE 60616			
EHRlich, RICHARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05744-02	24,993
KATZ, SIDNEY.....	A STUDY OF THERAPEUTIC AEROSOLS.....	5R01 HL19647-02	51,332
KROTOSZYNSKI, BOGUSLAW K.....	DEVELOPMENT OF BIOCHEMICAL MARKERS FOR DIABETES MELLITUS.....	1R01 AM21030-01	123,101
MOON, RICHARD C.....	CHEMICAL CARCINOGENESIS OF THE COLON.....	3R26 CA16370-03S1	16,893
MOON, RICHARD C.....	REPRODUCTIVE AGE AND MAMMARY CARCINOGENESIS.....	5R01 CA18968-02	72,868

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
ORGANIZATION TOTAL	5	294,187	
ILLINOIS CANCER COUNCIL ZIP CODE 60603			
STEINER, JAN W.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA18237-02	269,405
STEINER, JAN W.....	DEVELOPMENT OF COORDINATED CANCER PROGRAM.....	5R18 CA20071-02	191,268
STEINER, JAN W.....	CANCER CENTER PATIENT DATA SYSTEM PROPOSAL.....	1R10 CA21898-01	143,869
WARNECKE, RICHARD B.....	CANCER INFORMATION NEEDS IN ILLINOIS.....	1R18 CA21954-01	147,457
ORGANIZATION TOTAL	4	751,999	
ILLINOIS COLLEGE OF OPTOMETRY ZIP CODE 60616			
CHINO, YUZO M.....	STEREOPSIS IN ANIMALS.....	5R01 EY01444-03	25,110
ORGANIZATION TOTAL	1	25,110	
ILLINOIS DEPARTMENT OF MENTAL HEALTH AND DEVELOPMENTAL DISABILITIES—ILLINOIS MENTAL HLTH INST ZIP CODE 60612			
BERKSON, GERSHON.....	SOCIAL AFFILIATIONS OF THE ADULT MENTALLY RETARDED.....	5R01 HD10321-02	59,717
ORGANIZATION TOTAL	1	59,717	
ILLINOIS INSTITUTE OF TECHNOLOGY ZIP CODE 60616			
BROWN, JOE N, JR.....	ANTINEOPLASTIC THIOSEMICARBAZONE ACTIVITY.....	5R01 CA17594-03	25,880
BRUBAKER, GEORGE R.....	STEREOCHEMISTRY AND REACTIVITY OF METAL CHELATES.....	5R01 GM18600-03	48,309
GROSSWEINER, LEONARD I.....	FAST PHOTOSENSITIZED REACTIONS OF AROMATIC COMPOUNDS.....	5R01 GM20117-14	60,797
GURALNICK, SIDNEY A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07027-12	29,009
HOSKIN, FRANCIS C.....	BIOCHEMICAL BASIS OF OP PESTICIDE EFFECTS ON FUNCTION.....	5R01 NS09090-08	83,925
KOPPLE, KENNETH D.....	CONFORMATION AND PROPERTIES OF PEPTIDES.....	5R01 GM14069-12	80,283
KUSANO, KIYOSHI.....	ELECTROPHYSIOLOGY OF SYNAPTIC TRANSMISSION.....	3R01 NS12275-02S1	2,702
KUSANO, KIYOSHI.....	ELECTROPHYSIOLOGY OF SYNAPTIC TRANSMISSION.....	2R01 NS12275-03	27,621
RAJAN, KRISHNASWAMY S.....	METAL CHELATES OF L-DOPA FOR PARKINSONISM.....	5R01 NS11556-03	64,783
ROTH, ROBERT M.....	GENETIC CONTROL OF REPLICATION DURING MEIOSIS.....	5R01 GM19330-05	46,316
TIMKOVICH, RUSSELL.....	BIOLOGICAL FUNCTION OF CYTOCHROME C AND RELATED PROTEINS.....	1R01 GM23869-01	61,688
WEBSTER, DALE A.....	THE REACTION OF CYTOCHROME O WITH OXYGEN.....	5R01 GM20006-03	27,585
ORGANIZATION TOTAL	12	558,898	
LOYOLA UNIVERSITY OF CHICAGO ZIP CODE 60611			
YOST, WILLIAM A.....	TEMPORAL SEQUENCING IN BINAURAL PROCESSING.....	7R01 NS14270-01	39,687
ORGANIZATION TOTAL	1	39,687	
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
CHILCOTE, ROBERT R.....	SICKLE CELL FRAGMENTS AND MONOCYTE FUNCTION.....	1R01 HL20309-01	17,644
COE, FREDRIC L.....	SPECIALIZED CENTER OF RESEARCH IN UROLITHIASIS.....	1P50 AM20585-01	372,985
COHEN, LIONEL.....	RADIATION-INDUCED THYROID CANCER.....	1R01 CA22037-01	59,557
COHEN, SIDNEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05476-15	82,113
FROHMAN, LAWRENCE A.....	NEUROENDOCRINE CONTROL OF GROWTH HORMONE AND PROLACTIN.....	5R01 AM18722-02	111,015
GLICK, GERALD.....	RELATION OF CARDIAC LYMPH TO MYOCARDIAL INFARCTION.....	3R01 HL16615-03S1	5,047
GOLDMAN, JOHN N.....	IMMUNOLOGIC AND GENETIC CONTROL OF HUMORAL IMMUNITY.....	5R01 AI12792-03	99,730
GOTOFF, SAMUEL P.....	NEONATAL GROUP B STREPTOCOCCAL INFECTIONS.....	1R01 HD09700-01A1	69,505
HIRSCH, LEROY J.....	PHYSIOLOGICAL CONTROL OF THE SPLANCHNIC CIRCULATION.....	5R01 HL15607-05	120,521
LEVITSKY, LYNNE L.....	ENERGY METABOLISM IN THE NEONATE.....	5R01 HD08608-03	32,602
LEVITSKY, LYNNE L.....	FUNCTIONAL MATURATION OF THE ENDOCRINE PANCREAS.....	5R01 HD08948-04	26,759
LIM, VICTORIA S.....	THE EFFECT OF UREMIA ON REPRODUCTIVE BIOLOGY.....	1R01 HD10918-01	54,861
NATELSON, SAMUEL.....	GUANIDINO COMPOUND IN HEALTH AND DISEASE.....	5R01 AM09958-13	57,463
PICK, RUTH.....	ATHEROSCLEROSIS STUDIES.....	5R01 HL19112-02	118,556
ROBBINS, KENNETH C.....	PLASMINOGEN: ACTIVATION & STRUCTURE-FUNCTION RELATIONS.....	5R01 HL04366-18	120,431
SCHNEIDER, ARTHUR B.....	RADIATION-INDUCED THYROID CANCER.....	1R01 CA21518-01	67,599
SHERWOOD, LOUIS M.....	REGULATION OF THE PARATHYROID GLANDS.....	5R01 AM19236-02	76,866
STACHURA, MAXIMILLIAN E.....	SYNTHESIS STORAGE AND RELEASE OF PITUITARY GH AND PRL.....	1R01 AM19640-01	44,891
ORGANIZATION TOTAL	18	1,538,145	
MOUNT SINAI HOSPITAL MEDICAL CENTER OF CHICAGO ZIP CODE 60608			
DAVIDSOHN, ISRAEL.....	EARLY DIAGNOSIS OF CANCER AND CANCER METASTASES.....	5R01 CA17089-03	108,163
ORGANIZATION TOTAL	1	108,163	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
NATIONAL OPINION RESEARCH CENTER ZIP CODE 60637			
CLARK, TERRY N.....	POPULATION CHARACTERISTICS AND MUNICIPAL FISCAL STRAIN.....	2R01 HD08916-03	49,797
PREWITT, KENNETH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05783-02	19,418
ORGANIZATION TOTAL	2 69,215		
NEWBERRY LIBRARY ZIP CODE 60610			
JENSEN, RICHARD J.....	OLD AGE IN AMERICA, 1855-1970: A DEMOGRAPHIC HISTORY.....	5R01 AG00350-02	64,461
ORGANIZATION TOTAL	1 64,461		
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
ANDERSON, BYRON E.....	STUDY OF RHEUMATOID ARTHRITIS.....	5R01 AM16326-05	46,901
ATKINSON, ARTHUR J, JR.....	CLINICAL PHARMACOLOGY OF COMMONLY USED DRUGS.....	5R01 GM22371-02	95,268
BERLIN, NATHANIEL I.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA15145-03	394,178
BERNIK, MARIA B.....	FIBRINOLYTIC EVENTS IN HUMAN TISSUES & CELLS IN CULTURE.....	3R01 AM14018-07S2	2,944
BERNIK, MARIA B.....	FIBRINOLYTIC EVENTS IN HUMAN TISSUES & CELLS IN CULTURE.....	5R01 AM14018-08	65,907
BERRY, ROBERT W.....	REGULATION OF NEURONAL PROTEIN SYNTHESIS STUDIES.....	2R01 NS11519-04	38,376
BONDAREFF, WILLIAM.....	AGE CHANGES IN THE NEURONAL MICROENVIRONMENT.....	3R01 AG00383-03S1	5,519
BOYNE, ALAN F.....	THE MECHANISM OF CHOLINERGIC NEUROSECRETION.....	1R01 NS13043-01A1	71,696
BRAUN, THEODOR.....	SPERM ADENYL CYCLASE: DEVELOPMENT AND MOLECULAR NATURE.....	5R01 HD10006-02	39,095
BREWER, JOHN I.....	TROPHOBLASTIC DISEASE—CLINICAL & IMMUNOLOGICAL.....	5R01 CA12109-07	240,774
CARONE, FRANK A.....	TRANSPORT OF MACROMOLECULES ACROSS CELLS & MEMBRANES.....	5R01 AM14610-08	30,135
CHEN, CHIADAO.....	MODE OF ACTION OF CHEMICAL CARCINOGENESIS.....	5R01 CA15030-04	43,715
CORCORAN, JOHN W.....	SOLUBLE CYTOCHROME P-450 HYDROXYLASE FROM S. ERYTHREUS.....	5R01 GM22349-02	35,939
DAL CANTO, MAURO C.....	VIRUS-INDUCED DEMYELINATION.....	5R01 NS13011-02	31,526
DE WYS, WILLIAM D.....	CLINICAL TRIALS—EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA17145-03	163,702
DE WYS, WILLIAM D.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18004-03	85,476
DIAMOND, JACK.....	ROLE OF CAMP AND CGMP IN DRUG EFFECTS ON SMOOTH MUSCLE.....	5R01 HD05827-06	31,685
DISTERHOFT, JOHN F.....	AUDITORY NEUROPSYCHOLOGY.....	5R01 NS12317-03	34,160
DUNCAN, JAMES L.....	STREPTOLYSIN O ACTION ON MAMMALIAN CELL MEMBRANES.....	5R01 AI11644-05	39,186
ECKENHOFF, JAMES E.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00048-16	540,653
ECKENHOFF, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05370-16	168,388
EISENSTEIN, REUBEN.....	ORGANIZATION OF ARTERIAL GROUND SUBSTANCE.....	5R01 HL18625-02	47,600
FARBMAN, ALBERT I.....	CYTOLOGICAL STUDIES OF INDUCTION DURING DEVELOPMENT.....	5R01 NS06181-10	30,576
FLOURET, GEORGE R.....	SYNTHETIC ANTIOVULATORY AGENTS.....	5R01 HD08869-03	56,188
FREINKEL, NORBERT.....	CONTROL MECHANISMS IN DIABETES AND NORMAL METABOLISM.....	5R01 AM10699-13	200,730
FREINKEL, NORBERT.....	DIABETES IN PREGNANCY.....	1P50 HD11021-01	609,582
FREINKEL, RUTH K.....	INTERMEDIATE METABOLISM IN EPIDERMAL DIFFERENTIATION.....	5R01 AM16441-11	62,623
GANOTE, CHARLES E.....	IRREVERSIBLE MYOCARDIAL INJURY.....	5R01 HL19000-02	61,608
GHOSH, SANTIBRATA.....	ARTERIAL UPTAKE OF LIPOPROTEIN: KINETIC ANALYSIS.....	5R01 HL16419-02	43,998
GHOSH, SANTIBRATA.....	TRANSPORT THROUGH ARTERIAL WALL: BIOPHYSICAL ASPECTS.....	5R01 HL18004-02	33,498
GOLDSTONE, A.....	SYNTHESIS AND TURNOVER OF KIDNEY HEXOSAMINIDASES.....	5R01 AM18052-03	41,886
GRAYHACK, JOHN T.....	ENZYMES IN DIAGNOSIS AND STAGING OF PROSTATIC CANCER.....	5R26 CA16736-04	46,185
GREENER, EVAN H.....	PROPERTIES OF HIGH COPPER CONCENTRATION AMALGAMS.....	2R01 DE03637-03	54,762
HARRIS, STANLEY C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05311-16	29,060
HINKLEY, ROBERT E, JR.....	ANESTHETIC ALTERATION OF CELL STRUCTURE AND FUNCTION.....	5R01 GM19813-05	9,835
HOLLAND, JAMES M.....	HORMONE DEPENDENT UROGENITAL TUMORS IN RODENTS.....	5R01 CA10286-09	33,515
JUNGMANN, RICHARD A.....	PROTEIN KINASE AND CHOLESTEROL METABOLISM IN AORTA.....	5R01 HL18682-02	33,809
KIEFER, HELEN C.....	KINETIC STUDY OF ADENYLATE AND GUANYLATE CYCLASE.....	5R01 GM23127-02	40,229
KOENIG, HAROLD.....	SECRETORY PROCESSES IN THE RAT VENTRAL PROSTATE.....	5R01 HD09729-02	74,572
KOENIG, HAROLD.....	RELATIONSHIP OF BRAIN ARYLSULFATASE A AND B.....	5R01 NS11944-03	27,886
KURAMITSU, HOWARD K.....	SUCROSE METABOLIZING ENZYMES OF STREPTOCOCCUS MUTANS.....	2R01 DE03258-06	48,580
LEE, CHUNG.....	ESTROGEN ACTION ON DMBA-INDUCED RAT MAMMARY TUMORS.....	5R01 CA14727-04	41,106
LESCH, MICHAEL.....	MYOCARDIAL PROTEIN DEGRADATION.....	5R01 HL19648-02	103,172
LIPTON, HOWARD L.....	THEILER'S VIRUS-INDUCED DEMYELINATING DISEASE IN MICE.....	1R01 AI14139-01	49,585
LOGEMANN, JERILYN A.....	EVALUATION OF REHABILITATION OF OROPHARYNGEAL CANCER.....	5R18 CA18901-03	56,265
LOGEMANN, JERILYN A.....	PROSTHETIC REHABILITATION OF OROPHARYNGEAL CANCER.....	1R18 CA20876-01	85,882
MARSHALL, GRAYSON W, JR.....	REPLICA-SEM STUDIES OF IN VIVO DENTAL MORPHOLOGIES.....	5R23 DE04000-03	25,464
MARSHALL, SALLY J.....	X-RAY AND SEM ANALYSIS OF CU RICH DENTAL AMALGAM.....	1R23 DE04704-01	20,436
MARTIN, ALICE O.....	GENETIC INVESTIGATION OF NEOPLASIA IN A HUMAN ISOLATE.....	3R01 CA19822-01S1	20,250

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
NARAHASHI, TOSHIO.....	MODE OF ACTION OF INSECTICIDES: ELECTROPHYSIOLOGICAL.....	7R01 NS14143-01	98,478
NARAHASHI, TOSHIO.....	CELLULAR NEUROPHARMACOLOGICAL STUDY OF DRUG ACTION.....	7R01 NS14144-01	107,637
NARAHASHI, TOSHIO.....	CELLULAR PHARMACOLOGY OF NEUROMUSCULAR TRANSMISSION.....	7R01 NS14145-01	46,549
NOFFSINGER, PAUL D.....	OUTPATIENT RESEARCH CENTER FOR SENSORINEURAL DEAFNESS.....	5P50 NS07791-10	114,081
NOFFSINGER, PAUL D.....	DICHOTIC AUDITORY BEHAVIOR FOLLOWING CORTICAL LESION.....	5R01 NS11859-03	57,583
OKITA, GEORGE T.....	ROLE OF NA,K-ATPASE INHIBITION ON DIGITALIS ACTION.....	5R01 HL18598-02	32,469
ORR, MARY F.....	DEVELOPMENT AND CYTODIFFERENTIATION OF THE INNER EAR.....	5R01 NS08569-09	37,638
OYASU, RYOICHI.....	IN VIVO BLADDER CARCINOGENESIS OF NITROSOAMINES.....	5R26 CA14649-04	63,874
PATERSON, PHILIP Y.....	IMMUNE BASIS OF DISEASE—ALLERGIC ENCEPHALOMYELITIS.....	5R01 NS06262-13	128,493
PATTERSON, ROY.....	ALLERGIC DISEASES CENTERS GRANT.....	5P50 AI11403-05	118,933
PATTERSON, ROY.....	CLINICAL & LABORATORY STUDIES RELATING TO LUNG DISEASE.....	2P01 AI11759-04	87,511
PHAIR, JOHN P.....	HOST DEFENSES AND NOSOCOMIAL INFECTION.....	5R01 AI13668-02	57,569
RABINOWITZ, STANLEY G.....	PATHOGENESIS—SLOW VESICULAR STOMATITIS VIRUS INFECTION.....	5R01 NS13045-02	51,246
RAFFERTY, NANCY S.....	ETIOLOGY OF CATARACT.....	2R01 EY00698-07	43,650
RANNEY, DAVID F.....	CHALONE REGULATION OF HUMAN LYMPHOID NEOPLASMS.....	5R01 CA15673-04	40,798
REDDY, JANARDAN K.....	NUTRITIONAL AND ENVIRONMENTAL STRESS ON CARCINOGENESIS.....	5R01 CA21690-02	50,727
REDDY, JANARDAN K.....	BIOLOGIC STUDIES WITH LIVER PEROXISOME PROLIFERATORS.....	5R01 GM23750-02	43,738
RUNDELL, MARY K.....	STRUCTURAL ANALYSIS OF THE SV40 TUMOR ANTIGEN.....	1R01 CA21327-01	59,966
SCHREK, ROBERT.....	COLCHICINE-SENSITIVITY TEST FOR LEUKEMIC LYMPHOCYTES.....	5R01 CA19000-02	21,271
SILINSKY, EUGENE M.....	ADENINE NUCLEOTIDE RELEASE FROM MOTOR NERVE ENDINGS.....	5R01 NS12782-02	27,768
SLADE, HUTTON D.....	STREPTOCOCCAL SURFACE ANTIGENS AND DENTAL CRIES.....	5R01 DE03615-05	54,361
STAMLER, JEREMIAH.....	CV DISEASE EPIDEMIOLOGY—SECOND GENERATION STUDIES.....	5R01 HL15174-05	74,426
STAMLER, JEREMIAH.....	GLYCEMIA, OTHER TRAITS AND CV DEATH IN 40,000 PERSONS.....	1R01 HL21010-01	126,330
STERN, PAULA H.....	EFFECTS OF HORMONES ON BONE RESORPTION IN VITRO.....	5R01 AM11262-11	62,366
TELSER, ALVIN G.....	FLAGELLAR REGENERATION IN CHLAMYDOMONAS REINHARDII.....	5R01 HD09108-03	30,837
TEN EICK, ROBERT E.....	ELECTROPHYSIOLOGIC BASIS OF HUMAN DYSRHYTHMIAS.....	5R01 HL16721-03	30,839
VEIS, ARTHUR.....	THE STRUCTURE AND ORGANIZATION OF COLLAGEN FIBERS.....	5R01 AM13921-17	102,965
VEIS, ARTHUR.....	MATRIX COMPONENT INTERACTIONS IN CALCIFIED TISSUES.....	5R01 DE01374-17	63,653
WILBER, JOHN F.....	THYROTROPIN RELEASING FACTOR SECRETION AND ACTIONS.....	5R01 AM14997-07	88,888
ORGANIZATION TOTAL	78	6,118,749	
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER ZIP CODE 60612			
BACUS, JAMES W.....	PATTERN RECOGNITION STUDIES OF PERIPHERAL BLOOD CELLS.....	5R01 HL14492-06	95,247
BOOYSE, FRANCOIS M.....	CHARACTERIZATION OF CULTURED AORTIC ENDOTHELIAL CELLS.....	5R01 HL17973-03	67,448
BRUESCHKE, ERICH E.....	DEVELOPMENT OF A TRANSCUTANEOUS POWER TRANSFER SYSTEM.....	1R01 HL21632-01	142,296
CLASEN, RAYMOND A.....	EXPERIMENTAL CEREBRAL INJURY AND EDEMA.....	5R01 NS03677-15	31,721
COLE, EDMOND R.....	STUDY OF PLASMINOGEN ACTIVATORS FROM TISSUES.....	5R01 HL15817-05	55,006
ECONOMOU, STEVEN G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20371-01	39,498
EISENBERG, ROBERT S.....	ANALYSIS OF THE ACTION POTENTIAL OF CARDIAC MUSCLE.....	1R01 HL20230-01	67,765
FLANAGAN, MALACHI J.....	NATIONAL BLADDER CANCER COLLABORATIVE GROUP A (NBCCGA).....	2R26 CA16886-04	30,887
GALANTE, JORGE O.....	TOTAL SURGICAL REPLACEMENT OF THE HUMAN HIP JOINT.....	5R01 AM16485-06	137,369
GEWURZ, HENRY.....	STUDIES OF THE BIOLOGY OF THE C-REACTIVE PROTEINS.....	5R01 AI12870-03	139,181
HARTMANN, J FRANCIS.....	ELECTRON MICROSCOPY OF CEREBRAL TISSUE.....	5R01 NS05591-13	66,073
HEGYVARY, CSABA.....	DIGITALIS-RECEPTOR OF THE HEART.....	2R01 HL16611-03	54,922
HEJNA, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05477-15	85,743
HENDRICKSON, FRANK R.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12255-05	53,506
HENDRICKSON, FRANK R.....	CANCER SUPPORT GRANT (SPECIALIZED).....	3P30 CA17086-02S1	12,411
HENDRICKSON, FRANK R.....	CANCER SUPPORT GRANT (SPECIALIZED).....	5P30 CA17086-03	418,593
HOEPPNER, THOMAS J.....	EPILEPTOGENIC FACTORS IN ALUMINA CREAM LESIONS.....	5R01 NS11541-03	28,001
HUGHES, WILLIAM F, III.....	NEURONAL DEVELOPMENT IN THE VISUAL SYSTEM.....	5R23 EY01477-03	10,296
KNOSPE, WILLIAM H.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA12640-05S1	17,921
KNOSPE, WILLIAM H.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA12640-06	112,983
KUETTNER, KLAUS E.....	BIOCHEMISTRY OF BONE AND CONNECTIVE TISSUE.....	2R01 AM09132-12A1	104,210
KUETTNER, KLAUS E.....	ANTITUMOR INVASION FACTORS DERIVED FROM CARTILAGE.....	1R01 CA21566-01	88,940
MICHAEL, JOEL A.....	REGIONAL CEREBROVASCULAR RESPONSES TO HYPOXIA.....	5R01 NS12432-03	31,521
SCHAUF, CHARLES L.....	STUDIES OF NEUROTOXIC AGENTS IN MULTIPLE SCLEROSIS.....	5R01 NS12423-02	28,581
SCHNEIDER, ANNE S.....	AGING INTELLECT, AND CEREBRAL ATROPHY ON CT SCAN.....	1R01 AG00579-01	66,794
WILBANKS, GEORGE D, JR.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12485-07	46,994
WOLTER, JANET M.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA10948-09	171,798
ORGANIZATION TOTAL	27	2,205,705	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
UNIVERSITY OF CHICAGO ZIP CODE 60637			
AGARWAL, KAN L.....	NUCLEIC ACID-PROTEIN INTERACTIONS.....	5R01 GM22199-03	38,652
ARNASON, BARRY G.....	SIALOADENECTOMY—EPIDERMAL GROWTH FACTOR & TUMOR GROWTH.....	5R01 CA21043-02	80,801
ARNASON, BARRY G.....	MYASTHENIA GRAVIS: ROLE OF ACETYLCHOLINE RECEPTORS.....	5R01 NS13526-02	149,262
BORENSZTAJN, JAYME.....	PHYSICAL EXERCISE AND LIPOPROTEIN LIPASE ACTIVITY.....	2R01 AM16831-04	61,669
BORENSZTAJN, JAYME.....	HEART LIPOPROTEIN LIPASE AND HYPERTRIGLYCERIDEMIAS.....	5R01 HL17296-03	52,559
BOWMAN, JAMES E.....	SUPPORT FOR COMPREHENSIVE SICKLE CELL CENTER.....	5P60 HL16005-04	440,790
BOYER, JAMES L.....	MECHANISMS OF BILE SECRETION AND CHOLESTASIS.....	2R01 AM17153-04	108,270
BUTLER, ROBERT A.....	THE ROLE OF SPECTRAL CUES IN SOUND LOCALIZATION.....	5R01 NS11154-03	61,955
CHIANG, KWEN-SHENG.....	NUCLEUS-ORGANELLE INTERACTION AND DIFFERENTIATION.....	5R01 GM21955-03	40,700
CHIANG, KWEN-SHENG.....	MEIOSIS AND REPRODUCTION.....	2R01 HD05804-07	96,688
CHILCOTE, ROBERT R.....	SICKLE CELL FRAGMENTS AND MONOCYTE FUNCTION.....	7R01 HL22556-01	36,648
CIFONELLI, J ANTHONY.....	THE CHEMISTRY AND BIOLOGICAL EFFECTS OF HEPARIN.....	1R01 HL19820-01	77,291
COZZARELLI, NICHOLAS R.....	ENZYMOLOGICAL AND GENETIC STUDIES OF DNA POLYMERASES.....	2R01 GM21397-03	70,474
COZZARELLI, NICHOLAS R.....	RNA LIGASE FUNCTION AND USE IN DNA SYNTHESIS.....	5R01 GM22729-02	60,475
CREWE, ALBERT V.....	SCANNING MICROSCOPE LABORATORY FOR GENERAL FACULTY USE.....	5P41 RR00984-02	192,398
CUTILLETTA, ANTHONY F.....	A STUDY OF THE REGULATION OF MYOCARDIAL HYPERTROPHY.....	1R01 HL18886-01A1	56,865
DAWSON, GLYN.....	GLYCOSPHINGOLIPID METABOLISM AND MENTAL RETARDATION.....	5R01 HD06426-06	59,157
DE BRUYN, PETER P.....	LEUKOPOIETIC MECHANISMS.....	5R01 CA05493-17	153,195
DE GROOT, LESLIE J.....	BIOSYNTHESIS AND ACTION OF THYROID HORMONE.....	5R01 AM13377-10	124,413
DE SOMBRE, EUGENE R.....	STUDIES OF MAMMARY TUMOR PEROXIDASE.....	1R01 CA21525-01	75,252
DEBUS, ALLEN G.....	NATURPHILOSOPHIE: THE CHEMICAL BACKGROUND.....	1R01 LM03014-01	9,393
DORFMAN, ALBERT.....	BIOCHEMISTRY AND BIOLOGY OF CONNECTIVE TISSUE.....	2P01 AM05996-16	96,616
DORFMAN, ALBERT.....	CENTER GRANT FOR MENTAL RETARDATION RESEARCH CENTER.....	5P30 HD04583-09	374,731
DORFMAN, ALBERT.....	BIOLOGICAL BASIS OF MENTAL RETARDATION.....	5P01 HD09402-03	305,888
DORFMAN, ALBERT.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00305-11	475,911
EATON, PHILIP E.....	SYNTHESIS OF DODECAHEDRANE AND 16-HEXAQUINACENE.....	2R01 CA12961-05	104,926
EMMANOUEL, DIMITRIOS S.....	ENDOCRINE ABNORMALITIES IN UREMIA.....	5R01 AM19250-02	47,817
EPSTEIN, WOLFGANG.....	REGULATION OF CYCLIC AMP IN E. COLI.....	5R01 AI12924-02	44,702
EPSTEIN, WOLFGANG.....	MECHANISM OF POTASSIUM TRANSPORT IN E. COLI.....	5R01 GM22323-03	26,288
EPSTEIN, WOLFGANG.....	ISOLATION AND CHARACTERIZATION OF THE RECA PROTEIN.....	5R01 GM23016-02	41,836
ERNEST, J TERRY.....	FACTORS AFFECTING OPTIC PAPPILLA OXYGENATION.....	5R01 EY00792-06	30,239
ESPOSITO, MICHAEL S.....	GENETIC CONTROL OF MEIOTIC RECOMBINATION.....	1R01 GM23277-01A1	77,041
FIELD, MICHAEL.....	MOLECULAR MECHANISM OF ACTION OF CHOLERA TOXIN.....	7R22 AI14727-01	89,348
FIELD, MICHAEL.....	MECHANISMS REGULATING INTESTINAL FLUID TRANSPORT.....	7R01 AM21345-01	60,582
FITCH, FRANK W.....	ANTIBODY FORMATION BY LYMPHOID CELLS.....	5R01 AI04197-16	41,230
FITCH, FRANK W.....	SPECIFIC SUPPRESSION OF CELL-MEDIATED IMMUNE RESPONSE.....	2R01 AI09268-09	78,606
FOZZARD, HARRY A.....	CELL BIOLOGY OF CARDIAC AND SKELETAL MUSCLE.....	1P01 HL20592-01	607,245
FRIED, JOSEF.....	SYNTHESIS OF PROSTAGLANDINS AND PROSTAGLANDIN ANALOGS.....	5R01 AM11499-11	81,035
FRIED, JOSEF.....	TOTAL SYNTHESIS OF MAYTANSINOIDS.....	1R01 CA20905-01	87,432
FRIEDMANN, HERBERT C.....	ENZYME STUDIES ON VITAMIN B12 AND ITS CONSTITUENTS.....	5R01 AM09134-12	58,371
GARBER, BEATRICE B.....	NEURAL CELL RECOGNITION FACTORS IN BRAIN HISTOGENESIS.....	5R01 NS10714-05	63,334
GETZ, GODFREY S.....	LIPIDS AND CONTROL OF MITOCHONDRIAL BIOGENESIS.....	5R01 GM18858-06	72,045
GOLDBERG, JAY M.....	PHYSIOLOGY OF VESTIBULAR SYSTEM.....	5R01 NS01330-21	116,277
GOLDBERG, LEON I.....	CLINICAL PHARMACOLOGY CENTER.....	5P50 GM22220-02	388,798
GOLDWASSER, EUGENE.....	HEMOPOIETIC STEM CELLS AND INDUCED DIFFERENTIATION.....	5R01 CA18375-03	48,130
GOLDWASSER, EUGENE.....	PURIFICATION AND PROPERTIES OF ERYTHROPOIETIN.....	1R01 HL21676-01	87,469
GRABER, THOMAS M.....	LONG-TERM EFFECTS OF HEAVY FORCE ON THE MAXILLA.....	1R01 DE04599-01	74,082
GRIEM, MELVIN L.....	RADIATION & DRUG STUDIES IN GROWING & RESTING HAIR.....	5R01 CA20692-02	55,734
GROBSTEIN, PAUL.....	DEVELOPMENT OF CONNECTIVITY IN ANURAN VISUAL SYSTEMS.....	5R01 EY01658-02	32,571
GUILLERY, RAINER W.....	ABNORMALITIES IN VISUAL PATHWAYS.....	7R01 EY02374-01	61,480
GUILLERY, RAINER W.....	FINE STRUCTURAL ANALYSIS OF NEURONAL ORGANIZATION.....	7R01 NS14271-01	27,294
GUILLERY, RAINER W.....	ARCHITECTONIC AND SYNAPTIC ORGANIZATION IN THE BRAIN.....	7R01 NS14283-01	97,711
GUNN, ROBERT B.....	MOLECULAR MECHANISMS OF ANION TRANSPORT.....	5R01 HL20365-02	39,302
GUNN, ROBERT B.....	MECHANISMS AND CELLULAR FUNCTIONS OF ION TRANSPORT.....	1R01 HL20725-01	91,793
GURNEY, CLIFFORD W.....	PATHOPHYSIOLOGY AND THERAPY OF PANCYTOPENIA.....	1R01 CA22039-01	99,743
HALPERN, JACK.....	METAL COMPLEXES RELATED TO VITAMIN B12.....	5R01 AM13339-09	74,378
HARVEY, RONALD G.....	CHEMISTRY OF CARCINOGENIC HYDROCARBONS.....	5R01 CA11968-06	51,776
HARVEY, RONALD G.....	SYNTHESIS OF METABOLITES OF CARCINOGENIC HYDROCARBONS.....	5R01 CA19448-02	36,350

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
HASELKORN, ROBERT.....	PROTEIN SYNTHESIS IN VIRUS-INFECTED BACTERIA.....	5R01 AI09315-13	113,282
HASELKORN, ROBERT.....	DIFFERENTIATION IN NITROGEN-FIXING BLUE-GREEN ALGAE.....	5R01 GM21823-03	45,478
HELLER, ALFRED.....	ONTOGENESIS AND NEUROCHEMISTRY OF BRAIN FUNCTION.....	5P01 NS12324-03	425,753
HERBST, ARTHUR L.....	MATERNAL STILBESTROL: CARCINOGENIC EFFECT ON OFFSPRING.....	3R01 CA20084-01S1	50,768
HORWITZ, DAVID L.....	ENDOGENOUS AND EXOGENOUS INSULIN IN DIABETES MELLITUS.....	5R01 AM19206-02	41,527
HUGGINS, CHARLES B.....	HORMONAL CONTROL OF MAMMARY CANCER AND LEUKEMIA.....	5R01 CA11603-09	239,995
HUNTER, ROBERT L.....	SELECTIVE STIMULATION OF CELL-MEDIATED CANCER IMMUNITY.....	5R01 CA14364-05	73,326
HUNTER, ROBERT L.....	IMMUNOLOGIC EVALUATION AND THERAPY OF BREAST CANCER.....	5R01 CA17525-03	80,616
HUTCHISON, CLYDE A, JR.....	LOCAL STRUCTURE IN ENZYMES—A NEW APPROACH.....	5R01 GM21668-03	73,049
HUTTENLOCHER, JANELLEN.....	CONCEPTUAL DEVELOPMENT AND LANGUAGE COMPREHENSION.....	2R01 HD09283-04	65,438
HUTTENLOCHER, PETER R.....	SYNAPTIC AND DENDRITIC DEVELOPMENT AND MENTAL DEFECT.....	5R01 HD09335-03	48,471
JARABAK, JOSEPH W.....	PROSTAGLANDIN METABOLISM IN THE HUMAN PLACENTA.....	5R01 HD07045-06	67,786
JENSEN, ELWOOD V.....	STEROIDS AND GROWTH.....	2R01 CA02897-21	104,426
JOHNSON, GALE D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07029-12	102,446
KAISER, EMIL T.....	THE MECHANISM OF CARBOXYPEPTIDASE ACTION.....	2R01 AM07957-13	52,857
KAISER, EMIL T.....	SELECTIVE ALKYLATION IN BIOLOGICAL SYSTEMS.....	5R01 CA17150-03	59,959
KAPLAN, EDWIN L.....	GASTROINTESTINAL INFLUENCES ON CALCIUM HOMEOSTASIS.....	1R01 AM19942-01	48,359
KEZDY, FERENC J.....	PHYSICAL AND CATALYTIC BEHAVIOR OF HYDROLYTIC ENZYMES.....	5R01 GM13885-12	82,260
KIEFF, ELLIOTT D.....	EBV INTERACTION WITH LYMPHOBLASTS IN VITRO AND IN VIVO.....	5R01 CA17281-03	53,170
KIRSTEN, WERNER H.....	TRANSFORMATION OF HUMAN CELLS.....	5R01 CA14898-05	104,437
KLEIN, PETER D.....	BILE ACID TRANSFORMATIONS IN GALLSTONE THERAPY.....	5R01 AM17862-03	56,921
KLEIN, PETER D.....	METABOLISM OF 13C COMPOUNDS IN DIGESTIVE DISEASES.....	5R01 AM18741-02	149,627
KOHLER, HEINZ.....	ANTIGEN AND ANTIBODY IN THE IMMUNE RESPONSE.....	5R01 AI11080-05	83,992
KOHLER, HEINZ.....	STRUCTURE OF THE MAJOR RED CELL MEMBRANE POLYPEPTIDE.....	5R01 GM22722-02	76,132
LARRAMENDI, LUIS M.....	ELECTRONMICROSCOPIC STUDIES OF SYNAPTOGENESIS.....	5R01 NS10454-06	70,333
LAW, JOHN H.....	STUDY OF LIPID METABOLISM.....	5R01 GM13863-12	115,424
LEVI-SETTI, RICCARDO.....	EXPERIMENTAL 100 KEV PROTON SCANNING MICROSCOPE.....	3R01 GM20869-03S1	6,127
LEVI-SETTI, RICCARDO.....	EXPERIMENTAL 100 KEV PROTON SCANNING MICROSCOPE.....	5R01 GM20869-04	98,108
LEVIN, BERNARD.....	SURFACE ULTRASTRUCTURE OF MALIGNANT COLON EPITHELIUM.....	3R26 CA16918-02S1	14,116
LEWERT, ROBERT M.....	PHILIPPINE SCHISTOSOMIASIS JAPONICA: IMMUNE RESPONSES.....	5R22 AI07724-11	99,208
LIAO, SHUTSUNG.....	MACROMOLECULAR SYNTHESIS IN ACCESSORY GENITAL ORGANS.....	5R01 AM09461-12	46,086
LIAO, SHUTSUNG.....	MACROMOLECULAR SYNTHESIS IN ACCESSORY GENITAL ORGANS.....	2R01 AM09461-13	122,471
LIM, RAMON.....	STUDIES ON BRAIN PROTEINS.....	5R01 NS09228-04	97,174
LINDHEIMER, MARSHALL D.....	RENAL FUNCTIONAL CORRELATES OF ABNORMAL PREGNANCY.....	5R01 HD05572-06	42,786
MAKINEN, MARVIN W.....	ENZYME COMPLEXES IN CRYSTALS—A NEW APPROACH.....	5R01 GM21900-03	58,269
MANASEK, FRANCIS J.....	FACTORS REGULATING EMBRYONIC CARDIAC MORPHOGENESIS.....	3R01 HL13831-06S1	5,477
MANASEK, FRANCIS J.....	FACTORS REGULATING EMBRYONIC CARDIAC MORPHOGENESIS.....	5R01 HL13831-07	132,881
MARKOVITZ, ALVIN.....	CAPSULE SYNTHESIS, DIVISION AND RADIATION SENSITIVITY.....	5R01 AI06966-12	103,027
MARTIN, TERENCE E.....	RNA SYNTHESIS AND TRANSPORT IN MAMMALIAN CELLS.....	5R01 CA12550-06	52,770
MARTIN, WILLIAM R.....	BIOCHEMICAL ANALYSIS OF ADULT S. JAPONICUM EXO ANTIGENS.....	5R22 AI12497-03	44,285
MEIER, PAUL.....	STATISTICAL INFERENCE IN CLINICAL RESEARCH.....	5R01 GM22648-02	59,868
MEWISSEN, DIEUDONNE J.....	POTENTIAL CARCINOGENIC AND GENETIC EFFECTS OF TRITIUM.....	5R01 CA13080-06	163,997
MOLTZ, HOWARD.....	CHEMICAL CONTROL OF MATERNAL BEHAVIOR.....	2R01 HD06872-06	54,217
MOSCONA, ARON A.....	THE CELL SURFACE IN CELL RECOGNITION AND DIFFERENTIATION.....	2R01 HD01253-19	193,120
MOULDER, JAMES W.....	PHAGOCYTOSIS OF CHLAMYDIAE.....	5R01 AI13175-03	54,231
MULLAN, JOHN F.....	HEAD INJURY STUDY CENTER.....	5P50 NS07376-10	271,849
NAUNTON, RALPH F.....	SENSORY DISEASE CLINICAL RESEARCH CENTER.....	5P50 NS03358-16	468,549
NEUGARTEN, BERNICE L.....	ADULT LIVES AND PATTERNS OF AGING IN AN URBAN SETTING.....	3P01 AG00123-01S1	243,185
NEUGARTEN, BERNICE L.....	ADULT LIVES AND PATTERNS OF AGING IN AN URBAN SETTING.....	5P01 AG00123-02	360,001
NEWELL, FRANK W.....	RETINAL AND CHOROIDAL DISEASE RESEARCH CENTER.....	2P50 EY00523-16	124,324
PAGE, ERNEST.....	STUDY OF CARDIAC ULTRASTRUCTURE AND ION TRANSPORT.....	5R01 HL10503-12	140,404
PERI, BARBARA A.....	DEVELOPMENT OF IMMUNITY TO CARCINOGENIC STREP.....	1R23 DE04771-01	27,006
PETES, THOMAS D.....	YEAST CHROMOSOME STRUCTURE AND REPLICATION.....	1R01 GM24110-01	71,758
PHILIPSON, MORRIS.....	LIVING NEW WORLD MONKEYS (PLATYRRHINI).....	1R01 LMO2891-01	30,175
POKORNY, JOEL M.....	PSYCHOPHYSICAL STUDIES OF COLOR-DEFECTIVE OBSERVERS.....	2R01 EY00901-04	54,872
RABINOWITZ, MURRAY.....	MITOCHONDRIAL ASSEMBLY AND REPLICATION.....	2R01 HL04442-19	116,020
RABINOWITZ, MURRAY.....	PROTEIN AND RNA SYNTHESIS IN HEART MUSCLE.....	5R01 HL09172-14	139,332
RAHMAN, YUEH-ERH.....	ENHANCED CANCER CHEMOTHERAPY BY LIPOSOMAL CARRIERS.....	1R01 CA21556-01	48,800
RAMACHANDRAN, G N.....	THEORETICAL STUDIES ON PROTEIN STRUCTURE.....	5R01 AM11493-11	46,846
RAVIN, ARNOLD W.....	DISCRIMINATION IN THE GENETIC TRANSFORMATION OF BACTERIA.....	5R01 AI09117-09	64,366

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
RECKARD, CRAIG R.....	EFFECTS OF PANCREATIC ISLET TRANSPLANTATION.....	1R01 AM20756-01	47,737
REFETOFF, SAMUEL.....	METABOLISM OF THYROID HORMONE BY CELLS IN TISSUE CULTURE.....	5R01 AM15070-06	90,971
RESNEKOV, LEON.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17648-03	1,110,740
RICE, STUART A.....	WATER: EXPERIMENTAL AND THEORETICAL STUDIES.....	5R01 GM22728-02	55,134
RINGO, GEORGE R.....	AN ION MICROPROBE ANALYZER FOR BIOLOGY.....	5R01 GM21184-04	87,621
ROBERTSON, ANTHONY D.....	GENETIC ANALYSIS OF SLIME MOLD AGGREGATION.....	5R01 HD04722-05	112,084
ROIZMAN, BERNARD.....	MECHANISMS OF VIRAL INFECTION IN RELATION TO CANCER.....	5R01 CA08494-13	129,886
ROSENBERG, IRWIN H.....	ABSORPTION OF MONOGLUTAMYL AND POLYGLUTAMYL FOLATES.....	5R01 AM15351-07	139,070
ROSENFELD, ROBERT L.....	FREE PLASMA SEX HORMONE AND ANDROGEN ACTION.....	5R01 HD06308-06	64,690
ROTHMAN-DENES, LUCIA B.....	NOVEL TRANSCRIBING ACTIVITIES IN N-4-INFECTED E. COLI.....	5R01 AI12575-03	57,811
ROWLEY, JANET D.....	CHROMOSOME ABERRATIONS IN CANCER.....	5R01 CA16910-02	77,423
RUBENSTEIN, ARTHUR H.....	PROINSULIN AND C-PEPTIDE: SECRETION AND METABOLISM.....	5R01 AM13941-08	78,652
RUBENSTEIN, ARTHUR H.....	DIABETES RESEARCH AND TRAINING CENTER.....	1PE0 AM20595-01	1,215,181
SCANU, ANGELO M.....	LIPOPROTEINS—CELL SURFACE INTERACTIONS.....	5P01 HL18577-02	352,792
SCHWARTZ, NANCY B.....	REGULATION OF BIOSYNTHESIS OF PROTEOGLYCAN.....	1R01 AM19622-01	47,257
SIGLER, PAUL B.....	STRUCTURAL ANALYSIS OF BIOLOGICAL MACROMOLECULES.....	2R01 GM15225-09	72,254
SIGLER, PAUL B.....	MOLECULAR INTERACTIONS AT THE CELL SURFACE.....	5R01 GM22324-03	44,062
SIGLER, PAUL B.....	SPECIFIC MOLECULAR INTRATIONS AT THE CELL SURFACE.....	1R01 GM25234-01	40,938
SMITH, VIVIANNE C.....	TRICHROMACY IN PROTANOPES AND DEUTERANOPES.....	1R01 EY01876-01	34,797
SOLIN, STUART A.....	RAMAN SPECTROSCOPIC STUDIES OF THE LENS OF THE EYE.....	5R01 EY01623-02	5,409
SPARGO, BENJAMIN H.....	MEMBRANES AND PHOSPHOLIPIDS IN RENAL HYPERPLASIA.....	5R01 GM22328-03	73,973
SPARGO, BENJAMIN H.....	ZONAL RENAL CHANGE WITH POTASSIUM DEFICIENCY.....	5R01 HL02986-21	41,195
SPARGO, BENJAMIN H.....	ULTRASTRUCTURAL RENAL PATHOLOGY.....	5R01 HL10980-11	31,226
SPEAR, PATRICIA G.....	HERPES VIRUS GENE EXPRESSION IN TRANSFORMED CELLS.....	1R01 CA21776-01	63,905
SPOFFORD, JANICE B.....	MECHANISM OF POSITION-EFFECT VARIEGATION.....	5R01 GM22040-03	51,704
STECK, THEODORE L.....	MEMBRANE DIFFERENTIATION IN AGGREGATING D. DISCOIDEUM.....	5R01 GM22321-03	64,253
STEINER, DONALD F.....	STUDIES ON PANCREATIC HORMONES.....	5R01 AM13914-08	201,801
STEINER, DONALD F.....	DIABETES ENDOCRINOLOGY CENTER.....	5P30 AM17046-04	402,559
STEINER, DONALD F.....	PANCREATIC HORMONES: STRUCTURE AND FUNCTION.....	5R01 AM18392-03	22,511
STOCK, LEON M.....	FREE RADICAL REACTIONS IN CHEMICAL CARCINOGENESIS.....	1R01 CA20049-01	25,727
STRAUSS, BERNARD S.....	A STUDY OF THE MODE OF ACTION OF CHEMICAL MUTAGENS.....	5R01 GM07816-18	95,457
STUART, FRANK P.....	IMMUNOLOGICAL ENHANCEMENT OF RENAL ALLOGRAFTS.....	5R01 CA20091-10	124,947
TAGER, HOWARD S.....	BIOSYNTHESIS AND SECRETION OF PEPTIDE HORMONES.....	2R01 AM18347-04	65,979
THROCKMORTON, LYNN H.....	PROTEIN DIFFERENTIATION IN DROSOPHILA.....	5R01 GM23007-02	105,904
TOBACK, FREDERICK G.....	BIOCHEMICAL REGULATION OF CONTROLLED RENAL GROWTH.....	5R01 AM18413-03	56,447
TOSTESON, DANIEL C.....	ION TRANSPORT ACROSS LIPID BILAYER MEMBRANES.....	1R01 GM24084-01	132,268
TOSTESON, DANIEL C.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00055-16	612,657
ULINSKI, PHILIP S.....	LAMINAR STRUCTURES.....	5R01 NS12518-03	32,849
ULTMANN, JOHN E.....	CLINICAL CANCER RESEARCH.....	2P30 CA14599-04	1,196,308
ULTMANN, JOHN E.....	CANCER CONTROL CENTER SUPPORT.....	3R18 CA16401-01S1	95,130
ULTMANN, JOHN E.....	VIRAL ONCOLOGY RESEARCH CENTER PROGRAM.....	5P01 CA19264-02	474,217
ULTMANN, JOHN E.....	CANCER BIOLOGY RESEARCH CENTER SUPPORT.....	5P01 CA19265-02	745,793
ULTMANN, JOHN E.....	SUPPORT FOR CLINICAL CANCER RESEARCH.....	5P01 CA19266-02	631,911
URETZ, ROBERT B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05367-16	213,709
WADE, MICHAEL.....	THE GENETICAL CONSEQUENCES OF DISPERSAL AND EXTINCTION.....	5R01 GM22523-02	51,140
WARNOCK, MARTHA L.....	ASBESTOS AND CANCER.....	5R01 ES01122-03	26,806
WEISS, SAMUEL B.....	VIRUS DEVELOPMENT AND TRANSLATIONAL CONTROL.....	5R01 AI12479-06	56,793
WESTLEY, JOHN L.....	SULFANES IN METABOLISM.....	5R01 GM18939-06	74,283
WIED, GEORGE L.....	AUTOMATED CANCER CELL DIAGNOSIS BY THE TICAS METHOD.....	2R01 CA13271-09	337,268
WILLIAMS-ASHMAN, HOWARD G.....	BIOCHEMISTRY OF THE MALE GENITAL TRACT.....	5R01 HD04592-09	114,527
WISSLER, ROBERT W.....	STUDY OF LIPOPROTEINS, ARTERY WALL, AND ATHEROSCLEROSIS.....	3P50 HL15062-05S1	113,087
WISSLER, ROBERT W.....	STUDY OF LIPOPROTEINS, ARTERY WALL, AND ATHEROSCLEROSIS.....	2P50 HL15062-06	941,907
WITTNER, MASAKO K.....	THE CHEMISTRY AND IMMUNOLOGY OF STREPTOCOCCAL ANTIGENS.....	5R01 AI04342-16	89,291
WOOL, IRA G.....	ENDOCRINE REGULATION OF PROTEIN SYNTHESIS.....	2R01 AM04842-16	52,906
WOOL, IRA G.....	THE STRUCTURE AND FUNCTION OF EUKARYOTIC RIBOSOMES.....	5R01 GM21769-03	102,669
YANG, NIEN-CHU C.....	MOLECULAR MECHANISMS OF MUTAGENESIS AND CARCINOGENESIS.....	5R01 CA10220-09	61,501
YANG, NIEN-CHU C.....	PHOTOCHEMICAL SYNTHESIS OF ORGANIC COMPOUNDS.....	5R01 GM20329-11	94,619
ZAK, RADOVAN H.....	DEVELOPMENT AND REGRESSION OF CARDIAC HYPERTROPHY.....	2R01 HL16637-03	110,403
ZEITLER, ELMAR.....	1-MEV SCANNING TRANSMISSION ELECTRON MICROSCOPE.....	5R01 GM19079-06	178,860
ORGANIZATION TOTAL	177	24,269,554	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
UNIVERSITY OF HEALTH SCIENCES ZIP CODE 60612			
BLIVAISS, BEN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05366-16	23,923
EZDINLI, EDIZ Z.....	COOPERATIVE STUDY OF ONCOLOGY.....	5R10 CA14144-05	84,009
FREESE, UWE E.....	ESTROGEN AND PROGESTERONE RECEPTORS IN MOUSE OVIDUCT.....	5R01 HD10070-02	36,803
HANSEN, TIMOTHY R.....	VASCULAR SMOOTH MUSCLE IN HYPERTENSION.....	5R01 HL19226-02	28,064
KELLER, JOHN M.....	ANIMAL CELL SURFACE GLYCOSAMINOGLYCANS.....	7R01 CA23016-01	56,762
KEMP, ROBERT G.....	ALLOSTERIC PROPERTIES OF PHOSPHOFRUCTOKINASE.....	5R01 AM19912-02	55,483
KEMP, ROBERT G.....	METABOLIC EVENTS IN VIRUS-INDUCED LEUKEMOGENESIS.....	2R01 CA21631-02	87,241
MARCUS, FRANK.....	CONTROL OF ENZYMES OF GLUCONEOGENESIS IN DIABETIC MICE.....	1R01 AM21167-01	48,671
ORGANIZATION TOTAL	8 420,956		
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE ZIP CODE 60680			
BGUCK, GEORGE B.....	STRUCTURAL AND FUNCTIONAL ORGANELLE INTERACTIONS.....	5R01 GM19537-06	53,463
FERRO, ADOLPH J.....	THE ROLES OF SAM IN THE REGULATION OF MITOSIS.....	5R01 GM23307-02	45,246
GORENSTEIN, DAVID G.....	NMR PROBES OF ENZYMES COMPLEXES.....	5R01 GM17575-06	37,884
HULETT, F MARION.....	MEMBRANE PROTEIN-MEMBRANE REASSOCIATION STUDIES.....	5R01 GM21909-02	40,093
KHAN, M A.....	EFFECTS AND METABOLISM OF PHOTOISOMERS OF CYCLODIENES.....	1R01 ES01479-01	62,676
KOSOBUD, RICHARD F.....	POPULATION IN ECONOMIC GROWTH, TREND SOLUTION STUDY.....	2R01 HD06966-05	38,856
LEVINE, MICHAEL W.....	ROD AND CONE SYSTEMS: PROPERTIES AND INTERACTIONS.....	1R01 EY01951-01	63,498
LIEBMAN, SUSAN W.....	NONSENSE SUPPRESSION AND ANTISUPPRESSION IN YEAST.....	1R01 GM24189-01	44,410
MC CORMICK, BRUCE H.....	IMAGE PROCESSING FOR CLINICAL OPHTHALMOSCOPY.....	5R01 EY01261-03	241,857
MOCK, WILLIAM L.....	MECHANISM OF CARBOXYPEPTIDASE A.....	5R01 GM22652-02	31,586
OSCAI, LAWRENCE B.....	EFFECT OF EXERCISE ON ADIPOSE TISSUE CELLULARITY.....	3R01 AM17357-03S1	7,334
OSCAI, LAWRENCE B.....	EFFECT OF EXERCISE ON LIPID METABOLISM.....	2R01 AM17357-04	43,607
ROCEK, JAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07158-02	69,535
SCHULTZ, ALBERT B.....	BIOMECHANICAL STUDIES OF IDIOPATHIC SCOLIOSIS.....	5R01 AM15575-06	93,498
ORGANIZATION TOTAL	14 873,543		
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
ANDERSON, CONWELL H.....	HYPOTHALAMIC MATURATION PARALLELING PUBERTY.....	5R01 HD05865-05	21,333
ANDERSON, TRUMAN O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05369-16	150,769
ARSENIS, CHARALAMPOS.....	CELLULAR MECHANISMS OF CALCIFICATION.....	3R01 AM14974-06S1	8,528
BARANY, MICHAEL.....	PROTEIN PHOSPHORYLATION IN MUSCLE.....	5R01 NS12172-03	42,074
BENNETT, THOMAS O.....	HISTOCOMPATIBILITY IN ANIMAL PENETRATING KERATOPLASTY.....	1R01 EY01989-01	61,916
BURNS, ELIZABETH M.....	NEUROPATHOLOGICAL CORRELATES OF MENTAL RETARDATION.....	1R01 HD09792-01A2	46,448
COHEN, CARL.....	THE IMMUNOBIOLOGY OF THE LABORATORY RABBIT.....	5R01 GM18350-07	45,602
CORDELL, GEOFFREY A.....	ANTITUMOR PRINCIPLES OF CATHARANTHUS & RHAZYA SPECIES.....	1R01 CA20164-01	29,997
DAS GUPTA, TAPAS K.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17954-03	177,585
DI MAYORCA, GIAMPIERO.....	MOLECULAR MECHANISM OF CHEMICAL CARCINOGENESIS.....	1R01 CA21232-01	104,470
DIEFENBACH, VIRON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR05789-01	23,008
DOUGHTY, CLYDE C.....	ALDOSE REDUCTASE SUBUNITS.....	3R01 EY00449-06S1	13,980
DRAY, SHELDON.....	IMMUNOGLOBULIN ALLOTYPES.....	5R01 AI07043-13	166,619
DRAY, SHELDON.....	TUMOR IMMUNOTHERAPY WITH 'IMMUNE' RNA.....	5R01 CA18241-02	139,500
EISENMANN, DALE R.....	CELLULAR CONTROL OF MINERALIZATION.....	5R01 DE03312-06	23,055
EPSTEIN, SAMUEL S.....	CHEMICAL CARCINOGENS IN THE PANCREAS.....	5R26 CA20914-02	66,769
EPSTEIN, SAMUEL S.....	CARCINOGENICITY OF ORALLY ADMINISTERED ASBESTOS.....	1R01 CA21684-01	69,752
FRIEDENSON, BERNARD A.....	IGG ANTIBODIES WITH THE SAME HEAVY OR LIGHT CHAIN.....	5R01 AI12363-03	37,784
HANLY, W CAREY.....	REGULATION AND FUNCTION OF THE SECRETORY IGA SYSTEM.....	1R01 HD10855-01	62,567
HARVATH, LIANA.....	ALVEOLAR MACROPHAGE FUNCTION IN PSEUDOMONAS INFECTION.....	1R23 HL21212-01	29,254
JAFFE, RANDAL C.....	THYROID HORMONE REGULATION OF TADPOLE METAMORPHOSIS.....	5R01 AM18985-02	36,315
JONASSON, OLGA.....	DIABETES AND ISLET CELL STUDIES IN THE PRIMATE.....	5R01 AM18284-02	165,929
KLAVAN, BENNETT.....	INTERNATIONAL WORKSHOP—RESEARCH IN PERIODONTAL DISEASE.....	1R13 DE04532-01	22,335
KNIGHT, KATHERINE L.....	STRUCTURE AND GENETIC CONTROL OF RABBIT IGA.....	5R01 AI11234-05	86,559
LASKIN, DANIEL M.....	PSYCHOPHYSIOLOGY OF TMJ & OTHER FACIAL PAIN SYNDROMES.....	5R01 DE02899-09	77,660
LEVITSKY, SIDNEY.....	HEART TRACKING: NON-INVASIVE MEASURE OF CONTRACTILITY.....	5R01 HL14026-05	107,600
LEVITSKY, SIDNEY.....	INTRAOPERATIVE PROTECTION OF THE MYOCARDIUM.....	5R01 HL18288-03	121,080
LOIZZI, ROBERT F.....	CYCLIC NUCLEOTIDES AND THE REGULATION OF LACTATION.....	5R01 HD09035-03	40,014
LOURENCO, RUY V.....	DEFENSE MECHANISMS IN PATHOGENESIS OF EMPHYSEMA.....	3R01 HL13824-04A1S1	91,536
LOURENCO, RUY V.....	DEFENSE MECHANISMS IN PATHOGENESIS OF EMPHYSEMA.....	5R01 HL13824-05	122,461

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
MADISON, VINCENT S.....	ROLE OF PEPTIDE SOLVENT AND PEPTIDE-LIPID COMPLEXES.....	5R01 GM22514-02	13,600
MOLINARO, GIUSEPPE A.....	MONITORING IG-SECRETING CELLS.....	1R01 CA23029-01	36,304
MORRIS, PAUL W.....	EUKARYOTE RNA POLYMERASE-DNA SITE SELECTION PROCESSES.....	5R01 GM22147-03	39,284
MUHL, ZANE F.....	FUNCTIONAL PROPERTIES OF MAMMALIAN MASTICATORY MUSCLE.....	5R23 DE04164-03	36,136
OMACHI, AKIRA.....	ION TRANSPORT ACROSS MAMMALIAN CELL MEMBRANE.....	5R01 HL13567-06	37,592
PROUDFIT, HERBERT K.....	BULBOSPINAL MECHANISMS INVOLVED IN MORPHINE ANALGESIA.....	5R01 NS12649-03	39,814
PRUZANSKY, SAMUEL.....	STUDY OF CRANIOFACIAL ANOMALIES.....	2P01 DE02872-08	316,905
RABB, MAURICE F.....	SUPPORT FOR CENTER FOR SICKLE CELL DISEASE.....	2P60 HL15168-06	1,157,663
RAFFERTY, KEEN A, JR.....	CELL ANALYSIS OF SOME VIRUS-ASSOCIATED TUMORS OF MAN.....	5R01 CA13494-05	33,881
REITER, HARVARD.....	MOLECULAR MECHANISM OF ALLELIC EXCLUSION.....	5R01 CA18645-03	47,884
REYNOLDS, WYNETKA A.....	TOXICITY OF ORGANIC MERCURY FOR THE FETUS AND NEWBORN.....	3R01 ES00820-03S2	728
REYNOLDS, WYNETKA A.....	TOXICITY OF ORGANIC MERCURY FOR THE FETUS AND NEWBORN.....	2R01 ES00820-04	99,293
ROSEN, KENNETH M.....	PROSPECTIVE STUDIES OF CONDUCTION DISEASE.....	5R01 HL18794-03	67,973
ROTKIN, I D.....	EPIDEMIOLOGIC AND GENETIC STUDIES IN PROSTATIC CANCER.....	2R26 CA16925-04	107,383
SACHS, HOWARD G.....	DEVELOPMENT OF NORMAL AND MYOPATHIC MAMMALIAN HEART.....	5R01 HL18032-03	51,557
SANDERS, DONALD R.....	A BIOCHEMICAL CLASSIFICATION FOR CATARACTOUS LENSES.....	5R23 EY01446-03	10,920
SCHLISELFELD, LOUIS H.....	HEART, PLATELET, MUSCLE MYOSINS AND ACTOMYOSINS.....	5R01 HL18179-03	42,938
SHARP, JOHN T.....	RESPIRATORY MUSCLES AND VENTILATORY CONTROL IN MAN.....	5R01 HL08789-10	53,769
TAO, ROBERT V.....	BIOCHEMISTRY AND METABOLISM OF LENTICULAR CERAMIDES.....	1R01 EY01821-01	38,745
TEODORESCU, MARIUS C.....	DIFFERENTIAL COUNTING OF LYMPHOCYTE SUBPOPULATIONS.....	5R01 AM19414-02	54,075
TEODORESCU, MARIUS C.....	BINDING OF BACTERIA TO NORMAL & LEUKEMIC LYMPHOCYTES.....	1R01 CA21399-01	37,500
TICHY, ANNA M.....	POST BURN GASTRIC MICROCIRCULATION.....	1R01 GM23405-01	23,680
TISSOT, ROBERT G.....	THE MAJOR HISTOCOMPATIBILITY COMPLEX OF THE RABBIT.....	1R01 CA23026-01	36,748
TISSOT, ROBERT G.....	THE IMMUNOBIOLOGY OF THE LABORATORY RABBIT.....	5P40 RR00627-07	104,361
TSO, MARK O.....	PATHOLOGY OF RETINAL DYSFUNCTION.....	5R01 EY01903-02	90,635
TSO, MARK O.....	PATHOLOGY AND PATHOGENESIS OF EDEMA OF OPTIC DISC.....	5R01 EY01904-02	85,967
VAINISI, SAMUEL J.....	STUDIES ON OPHTHALMIC DISEASES.....	5R01 EY00874-06	76,274
VAN ALTEN, PIERSON J.....	ONTOGENY OF ADAPTIVE IMMUNITY.....	5R01 CA20172-02	50,434
VARY, JAMES C.....	MECHANISM OF BACTERIAL SPORE GERMINATION.....	5R01 AI12678-02	41,231
WALTER, RODERICH W.....	BIOFUNCTIONAL CONFORMATION OF PEPTIDE HORMONES.....	5R01 AM18399-03	158,097
WEISSMANN, BERNARD.....	ISOLATION AND STRUCTURE OF ACID MUCOPOLYSACCHARIDES.....	5R01 AM02479-19	36,638
WILENSKY, JACOB T.....	DIAGNOSIS AND THERAPY OF ANGLE-CLOSURE GLAUCOMA.....	1R01 EY01754-01	55,398
ZANEVELD, LOURENS J.....	HUMAN SPERM ENZYMES, INHIBITORS AND FERTILIZATION.....	5R01 HD09868-02	58,563
ORGANIZATION TOTAL	63	5,334,469	
DE KALB			
NORTHERN ILLINOIS UNIVERSITY		ZIP CODE 60115	
BRILES, WORTHIE E.....	ISOHEMAGGLUTININS FOR AVIAN RNA TUMOR VIRUS RECEPTORS.....	5R01 CA12796-06	43,499
ERMAN, JAMES E.....	THE MECHANISM OF CYTOCHROME C PEROXIDASE CATALYSIS.....	5R01 GM18648-06	36,785
HAMPEL, ARNOLD E.....	AMINOACYL-TRNA SYNTHETASES AND RNAS IN CHO CELLS.....	5R01 GM19506-05	41,596
KRESHECK, GORDON C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07176-01	16,594
MITCHELL, JOHN L.....	REGULATION OF ORNITHINE DECARBOXYLASE ACTIVITY.....	5R01 AM17949-03	28,099
ORGANIZATION TOTAL	5	166,573	
EDWARDSVILLE			
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT EDWARDSVILLE		ZIP CODE 62025	
BAIN, RALPH L.....	EQUILIBRIUM STUDIES WITH PLATINUM AMINE COMPLEXES.....	5R01 GM23203-02	15,065
BROWN, DAVID G.....	SALIVARY GLANDS, POLYAMINES AND CHEMOTHERAPY.....	1R23 DE04447-01A1	22,457
LEVY, MICHAEL R.....	FACTORS INFLUENCING RATES OF ENZYME DEGRADATION.....	5R01 GM23281-02	41,892
MATTA, MICHAEL S.....	POLAR EFFECTS IN MODEL SUBSTRATES OF CHYMOTRYPSIN.....	5R01 GM18652-06	13,644
WHITSON, S WILLIAM.....	HISTOCHEMISTRY OF CADMIUM AND ZINC IODIDE OSMIUM.....	5R23 DE04509-02	26,001
ORGANIZATION TOTAL	5	119,059	
EVANSTON			
AMERICAN ACADEMY OF PEDIATRICS		ZIP CODE 60201	
D'ANGIO, GIULIO J.....	NATIONAL WILMS' TUMOR STUDY.....	5R10 CA11722-05	171,694

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
ORGANIZATION TOTAL	1	171,694	
EVANSTON HOSPITAL ZIP CODE 60201			
GOLDSTICK, THOMAS K.....	ARTERIAL WALL OXYGEN TRANSPORT IN ATHEROSCLEROSIS.....	5R01 HL17517-03	35,622
SPRINGER, GEORG F.....	HUMAN BREAST CANCER-ASSOCIATED ANTIGENS AND CYTOTOXIN.....	5R01 CA19083-02	50,849
SPRINGER, GEORG F.....	STRUCTURE AND HUMAN CANCER RELATION OF BLOOD GROUP MN.....	9R01 CA22540-16	103,024
VICK, NICHOLAS A.....	FINE STRUCTURE OF VIRAL INDUCED BRAIN TUMORS.....	5R01 NS12745-03	55,327
ZUCKERMAN, LEON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05629-10	25,474
ORGANIZATION TOTAL	5	270,296	
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
BASOLO, FRED.....	SYNTHETIC OXYGEN CARRIERS.....	5R01 HL13412-16	80,374
BERGMAN, RICHARD N.....	QUANTITATIVE STUDIES OF METABOLIC ORGAN DYNAMICS.....	1R01 AM20443-01	70,432
BLAKE, R RANDOLPH.....	PSYCHOPHYSICAL STUDIES OF SPATIAL VISION.....	5R01 EY01596-02	8,628
CAMPBELL, CONSTANCE S.....	REPRODUCTIVE RHYTHMICITY: IMPACT OF THE ENVIRONMENT.....	5R01 HD10050-02	41,043
COHEN, ISAAC.....	COUPLING OF PLATELET CONTRACTILE PROTEINS TO FIBRIN.....	1R01 HL20106-01	70,113
DALLOS, PETER J.....	COCHLEAR DISTORTION AND THE ROLE OF CM IN HEARING.....	5R01 NS08635-08	72,887
DUMAS, LAWRENCE B.....	ROLE OF HOST CELL PROTEINS IN SYNTHESIS OF VIRUS DNA.....	5R01 AI09882-06	50,064
DUMAS, LAWRENCE B.....	EUKARYOTIC CELL PROTEINS THAT INITIATE DNA SYNTHESIS.....	1R01 GM23443-01	56,720
ENROTH-CUGELL, CHRISTINA A.....	RETINAL GANGLION CELL RESPONSES TO TIME-VARYING STIMULI.....	2R01 EY0206-17	74,427
EPSTEIN, MAX.....	MATERIALS AND COMPONENTS FOR MINIATURE FIBERSCOPES.....	2R01 GM21367-03	90,617
GILBERT, LAWRENCE I.....	BIOCHEMICAL ANALYSIS OF THE ACTION OF HORMONES.....	2R01 AM02818-19	105,068
GOLDBERG, ERWIN.....	REPRODUCTIVE BIOCHEMISTRY OF TESTES SPECIFIC LDH-X.....	5R01 HD05863-06	87,885
HOFFMAN, BRIAN M.....	COBOGLOBINS: COBALT SUBSTITUTED MYO- AND HEMOGLOBINS.....	5R01 HL13531-05	52,952
IBERS, JAMES A.....	MOLECULAR OXYGEN CARRIERS—SYNTHESIS, STRUCTURE, BONDING.....	5R01 HL13157-08	85,692
JACOBS, JOHN E.....	HIGH-SPEED FAR INFRARED SYSTEM FOR THERMAL IMAGING.....	5R01 GM22471-02	42,448
JACOBS, JOHN E.....	NEW METHODS OF STUDYING BLOOD COAGULATION KINETICS.....	5R01 HL17769-02	72,005
KERTESZ, ANDREW E.....	FUNCTIONAL ASPECTS OF PANUM'S FUSIONAL AREAS.....	5R01 EY01055-06	34,382
KLOTZ, IRVING M.....	STABILITY OF HYDROGEN BONDS IN PROTEINS.....	5R01 GM09280-16	90,403
KLOTZ, IRVING M.....	MOLECULAR BIOLOGY OF HEMERYTHRIN AND HEMOCYANIN.....	5R01 HL08299-15	103,949
LETSINGER, ROBERT L.....	NEW METHODS FOR THE SYNTHESIS OF POLYNUCLEOTIDES.....	3R01 GM10265-14S1	14,411
LETSINGER, ROBERT L.....	NEW METHODS FOR THE SYNTHESIS OF POLYNUCLEOTIDES.....	2R01 GM10265-15	114,084
LIPPINCOTT, JAMES A.....	SITE ATTACHMENT IN BACTERIAL INFECTION.....	2R01 AI12149-04	79,477
LOACH, PAUL A.....	STRUCTURE AND FUNCTION OF PHOTOSYNTHETIC MEMBRANES.....	2R01 GM11741-11	76,743
LORAND, LASZLO.....	COAGULATION OF BLOOD.....	5R01 HL02212-22	111,849
LORAND, LASZLO.....	ENZYME ASSAYS IN BLOOD CLOTTING.....	5R01 HL16346-08	80,848
MACDONALD, ROBERT C.....	NORMAL AND NEOPLASTICALLY TRANSFORMED CELL SURFACES.....	5R01 GM23153-02	48,850
MACK, RAYMOND W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07028-12	146,840
MARGOLIASH, EMANUEL.....	ANTIGENICITY OF GLOBULAR PROTEINS.....	2R01 AI12001-04	73,786
MARGOLIASH, EMANUEL.....	MITOCHONDRIAL MEMBRANE METABOLIC ROLE OF CYTOCHROME C.....	2R01 GM19121-06	146,092
MARGOLIASH, EMANUEL.....	AMINO ACID ANALYZER FOR BIOCHEMICAL RESEARCH.....	5R01 HL11119-16	42,513
MARSHALL, JAMES A.....	SYNTHESIS OF TUMOR INHIBITORY COMPOUNDS.....	5R01 CA11089-15	92,173
MOCKROS, LYLE F.....	ARTIFICIAL LUNGS.....	5R01 HL16582-04	97,529
NEUHAUS, FRANCIS C.....	BIOSYNTHESIS OF BACTERIAL CELL-WALL COMPONENTS.....	5R01 AI04615-16	117,243
OFFNER, FRANKLIN F.....	MEMBRANE ACTIVITY THEORY.....	5R01 NS08137-08	11,797
ROSENFELD, JOEL P.....	MORPHINE AND NOCICEPTIVE BRAIN STIMULATION.....	5R01 GM23696-02	27,120
ROUTTENBERG, ARYEH.....	SUBFORNICAL ORGAN CONTROL OF DRINKING BEHAVIOR.....	5R01 NS10768-05	29,661
SCHWARTZ, NEENA B.....	ENVIRONMENTAL AND HORMONAL INTERPLAY OF OVULATION.....	2R01 HD07504-05	97,296
SEKULER, ROBERT W.....	MOVEMENT AND CONTOUR PROCESSES IN HUMAN VISION.....	3R01 EY00321-11S1	5,731
SHEMIN, DAVID.....	PORPHYRINS: ENZYMIC MECHANISMS AND CONTROL OF SYNTHESIS.....	5R01 AM13091-10	93,114
SILVERMAN, RICHARD B.....	MECHANISM OF ACTION AND DESIGN OF ANTITUMOR AGENTS.....	1R01 CA21156-01	40,875
SPEAR, BRIAN B.....	ORGANIZATION OF GENE-SIZED DNA PIECES IN OXYTRICHA.....	1R01 GM23440-01	49,697
SRIDHARA, S.....	GENE ACTIVITY DURING INSECT METAMORPHOSIS.....	1R01 GM23855-01	61,035
TILLMAN, TOM.....	PSYCHOPHYSICAL CHARACTERISTICS OF HEARING DISORDERS.....	5R01 NS01310-20	79,795
TUREK, FRED W.....	REPRODUCTION: ROLE OF PHOTOPERIOD AND GONADAL HORMONES.....	5R01 HD09885-02	41,017
WIGHTMAN, FREDERIC L.....	AUDITORY SPECTRAL PATTERN PERCEPTION—PITCH PERCEPTION.....	2R01 NS12045-02A1	71,078
WU, TAI T.....	ATTEMPTS TO PREDICT 3-D PROTEIN BACKBONE STRUCTURES.....	5R01 GM21482-03	15,862
ORGANIZATION TOTAL	46	3,156,605	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
HINES			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 60141			
HELD, IRENE R.....	NEUROTROPHIC REGULATION OF MUSCLE PROTEIN SYNTHESIS	2R01 NS11755-04	42,642
LAWRENCE, ANN M.....	CHARACTERIZATION OF SUBMAXILLARY GLAND 'BIG' GLUCAGON.....	1R01 AM20307-01	26,076
ORGANIZATION TOTAL	2 68,718		
MAYWOOD			
LOYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153			
BALIS, JOHN U.....	ULTRASTRUCTURE OF NORMAL AND ALTERED SURFACTANT.....	5R01 HD04434-07	72,980
BLOOR, BYRON M.....	CEREBRAL HEMODYNAMICS IN SUBARACHNOID HEMORRHAGE.....	5R01 NS11169-03	39,609
CASTRO, ANTHONY J.....	NEURAL PLASTICITY IN THE MOTOR SYSTEM.....	2R01 NS13230-03	47,393
DAVIS, JOSEPH R.....	PHARMACOLOGICAL STUDIES ON THE TESTICULAR CAPSULE.....	5R01 HD09416-02	39,781
FARRAND, STEPHEN K.....	MOLECULAR GENETICS OF AGROBACTERIUM PLASMIDS.....	5R01 CA19402-02	47,189
FRANKFATER, ALLEN.....	THE BIOCHEMISTRY OF AUTONOMIC CONTROL AND SIDS.....	1R01 HD10311-01	33,571
KARCZMAR, ALEXANDER G.....	ACTION OF CHOLINERGIC AND OTHER DRUGS AT SEVERAL SITES.....	5R01 NS06455-12	83,877
NORTH, RICHARD A.....	STUDIES ON SINGLE NEURON ACTIVITY.....	2R01 NS06672-11A1	56,966
O'MORCHOE, CHARLES C.....	THE ORIGIN AND FORMATION OF RENAL LYMPH.....	5R01 AM18473-03	53,239
PEREZ-TAMAYO, RUHERI.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA19053-02	71,866
RANDALL, WALTER C.....	REGULATION OF THE CARDIOVASCULAR SYSTEM.....	5P01 HL08682-14	554,451
SAYEED, MOHAMMED M.....	CELLULAR ASPECTS OF LUNG INJURY.....	1R01 HL20878-01	54,740
SCHMIDT, ROBERT S.....	ANURAN NEUROETHOLOGY.....	5R01 NS06673-12	37,056
SCHULTZ, RICHARD M.....	THERMODYNAMIC STUDIES OF CHYMOTRYPSIN CATALYSIS.....	3R01 AM16733-03S1	1,700
SCHULTZ, RICHARD M.....	THERMODYNAMIC STUDIES OF ENZYME-SUBSTRATE ASSOCIATION.....	2R01 AM16733-04	28,128
SINHA, SACHCHIDA N.....	DEVELOPMENT OF CARDIAC AUTONOMIC CONTROL AND THE SIDS.....	5R01 HD08465-03	450
WELLS, JOSEPH A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05368-16	70,519
ORGANIZATION TOTAL	17 1,293,515		
NORMAL			
ILLINOIS STATE UNIVERSITY ZIP CODE 61761			
RICHARDSON, ARLAN G.....	EFFECT OF AGING ON RAT LIVER MESSENGER RNA.....	5R01 AG00344-02	36,011
WALSH, ROBERT H.....	ANTECEDENT VARIABLES PREDICTIVE OF FERTILITY.....	5R01 HD10687-02	723
ORGANIZATION TOTAL	2 36,734		
PEORIA			
UNIVERSITY OF ILLINOIS PEORIA SCHOOL OF MEDICINE ZIP CODE 61605			
SINHA, SACHCHIDA N.....	DEVELOPMENT OF CARDIAC AUTONOMIC CONTROL AND THE SIDS.....	7R01 HD11923-01	31,132
ORGANIZATION TOTAL	1 31,132		
URBANA			
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801			
ALGER, NELDA E.....	NOSEMA ALGERAE AS A BIOLOGICAL CONTROL OF MOSQUITOES.....	5R01 AI11123-05	68,442
BARR, LLOYD.....	ISOLATION AND ANALYSIS OF HEART NA CHANNEL.....	1R01 HL21342-01	92,318
BEAK, PETER A.....	NEW SYNTHETIC METHODS USEFUL FOR CHEMOTHERAPEUTICS.....	5R01 GM18874-06	56,458
BILGER, ROBERT C.....	UNDERLYING CONSTRUCTS IN AUDITION.....	7R01 NS14499-01	88,793
BROWN, ANN L.....	MEMORY FOR STORIES, SEQUENCES, AND ORDER IN CHILDREN.....	5R01 HD06864-06	46,489
BROWN, THEODORE L.....	METAL ION BINDING STUDIES.....	1R01 GM23395-01	55,589
BUETOW, DENNIS E.....	PROTEIN BIOSYNTHESIS IN MITOCHONDRIA.....	5R01 GM19641-04	44,260
BUETOW, DENNIS E.....	RESTRICTION AND NUCLEASE MAPPING OF ORGANELLE DNA.....	5R01 GM22431-02	52,080
CAMPIONE, JOSEPH C.....	STUDY OF COGNITION IN THE RETARDED CHILD.....	5P01 HD05951-07	384,083
CARL, PHILIP L.....	DNA REPLICATION IN E. COLI AND BACTERIOPHAGE T4.....	5R01 GM21536-03	50,769
CLARK, JOHN M, JR.....	THE MECHANISM OF MESSENGER-RNA TRANSLATION.....	2R01 GM08647-16	54,195
COATES, ROBERT M.....	THE 6-AZA-CLAISEN REARRANGEMENT IN CARCINOGENESIS.....	1R01 CA20436-01	51,451
COATES, ROBERT M.....	BIOGENESIS AND BIOSYNTHESIS OF TERPENES AND STEROLS.....	5R01 GM13956-12	60,953

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
COHEN, LESLIE B.....	HABITUATION & MEMORY DEVELOPMENT IN THE HUMAN INFANT.....	5R01 HD03858-08	51,909
CONRAD, H EDWARD.....	PROTEOGLYCANS—STRUCTURE AND BIOLOGICAL ACTIVITY.....	5R01 AI09551-08	38,919
CONRAD, H EDWARD.....	VARIABILITY OF CARBOHYDRATE STRUCTURE AND ACTIVITY.....	5R01 HD08057-14	92,420
DEBRUNNER, PETER G.....	RESONANCE SPECTROSCOPY OF ENZYMES.....	5R01 GM16406-09	88,761
DELCOMYN, FRED.....	NEURAL MECHANISMS UNDERLYING BEHAVIOR.....	5R01 NS12142-03	25,459
DICKINSON, DAVID B.....	REPRODUCTIVE PHYSIOLOGY OF RAGWEEDS.....	5R01 AI12879-02	36,549
DIERKS, RICHARD E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05460-15	22,121
DUCOFF, HOWARD S.....	SPLIT-DOSE REPAIR—DIVIDING VS. POSTMITOTIC CELLS.....	5R01 CA13779-05	36,152
DUNN, FLOYD.....	ULTRASONIC ABSORPTION BY BIOLOGICAL MATERIALS.....	5R01 GM12281-14	50,416
EBREY, THOMAS G.....	STUDIES ON THE MECHANISM OF VISUAL EXCITATION.....	5R01 EY01323-05	53,900
EVANS, CHARLES A, JR.....	MASS SPECTROMETRY OF NON-VOLATILE, ORGANIC COMPOUNDS.....	2R01 GM19749-03A1	49,528
FRAUENFELDER, HANS.....	HEME PROTEIN REACTIONS.....	2R01 GM18051-06	85,425
GABRIDGE, MICHAEL G.....	MECHANISM OF PATHOGENESIS IN MYCOPLASMA PNEUMONIAE.....	5R01 AI12559-03	44,625
GENNIS, ROBERT B.....	PROTEIN-LIPID INTERACTION.....	2R01 HL16101-04	54,107
GETZ, LOWELL L.....	DISPERSAL AS A POPULATION REGULATORY MECHANISM.....	5R01 HD09328-03	29,773
GLASER, MICHAEL.....	LIPID METABOLISM AND MEMBRANE STRUCTURE AND FUNCTION.....	5R01 GM21953-03	48,711
GRUNAU, JOHN.....	VIRUS GROWTH AND GENETICS.....	5R01 GM23747-15	47,994
GUMPORT, RICHARD I.....	FUNCTION AND MECHANISM OF DNA LIGASE.....	5R01 GM19442-06	35,821
GUNSALUS, IRWIN C.....	METABOLIC MECHANISMS.....	5R01 AM00562-25	227,601
GUNSALUS, IRWIN C.....	PROTEIN STRUCTURE MODIFICATION AND OXIDATION.....	5R01 GM21161-03	56,234
HAGER, LOWELL P.....	BIOCHEMICAL STUDIES ON T ANTIGEN AND TRANSFORMED CELLS.....	5R01 CA17619-02	62,077
HAGER, LOWELL P.....	ENZYMATIC ACTIVATION MECHANISMS.....	5R01 GM07768-18	98,018
HAIGHT, GILBERT P.....	BIOENERGY CYCLES: REDOX-INDUCED P-O-P BOND REACTIONS.....	5R01 GM22887-02	57,597
HARTLINE, PETER H.....	INTEGRATION OF VISUAL AND INFRARED NEURAL IMAGES.....	3R01 EY01539-03S1	8,259
HASKELL, BETTY E.....	HUMAN AMINO ACID REQUIREMENTS: THEIR ENZYMIC BASIS.....	5R01 AM19303-02	70,056
HELMAN, SANDY I.....	ELECTROPHYSIOLOGY OF FROG SKIN AND KIDNEY TUBULES.....	5R01 AM16663-06	29,553
HENDRICKSON, DAVID N.....	METAL SITES IN METALLOPROTEINS.....	2R01 HL13652-07	58,436
JACKSON, GARY L.....	CONTROL OF LUTEINIZING HORMONE BIOSYNTHESIS.....	5R01 HD09659-02	54,036
JONAS, ANA.....	STRUCTURE AND FUNCTION OF SERUM LIPOPROTEINS.....	5R01 HL16059-05	37,103
KAPLAN, SAMUEL.....	INDUCTION AND BIOGENESIS OF SUBCELLULAR ORGANELLES.....	5R01 GM15590-11	62,631
KATZENELLENBOGEN, BENITA S.....	ANTIESTROGENS: REPRODUCTIVE TISSUE AND TUMOR GROWTH.....	5R01 CA18119-02	71,787
KATZENELLENBOGEN, BENITA S.....	EFFECTS OF ESTROGEN ON HUMAN UTERUS TISSUE IN VITRO.....	5R01 HD06726-06	71,844
KATZENELLENBOGEN, JOHN A.....	UTERINE ESTROGEN RECEPTOR: AFFINITY LABELING.....	2R01 AM15556-07	47,023
KEMPER, BYRON W.....	BIOSYNTHESIS OF PARATHYROID HORMONE.....	5R01 AM18866-02	42,699
KICLITER, E EARL, JR.....	RETINAL PROJECTIONS FOR WAVELENGTH DISCRIMINATION.....	5R01 EY01736-02	16,348
KONISKY, JORDAN.....	MODE OF ACTION OF I-COLICINS ON ESCHERICHIA COLI.....	5R01 AI10106-07	37,630
LARSEN, JOSEPH R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07030-12	204,791
LEONARD, NELSON J.....	NUCLEOSIDES, NUCLEIC ACIDS, AND CELL DIVISION FACTORS.....	5R01 GM05829-19	120,328
MALMSTADT, HOWARD V.....	NEW CLINICAL/ANALYTICAL METHODOLOGY.....	5R01 GM21924-03	88,951
MANGEL, WALTER F.....	CONTROL OF GENE EXPRESSION BY THE DNA TUMOR VIRUSES.....	5R01 CA19084-02	50,355
MARTIN, JAMES C.....	SYNTHETIC AND PHYSICAL STUDIES OF ANTICANCER AGENTS.....	2R01 CA13963-05	66,211
MEINS, FREDERICK, JR.....	HERITABLE CHANGES IN PLANT TUMOR DEVELOPMENT.....	5R01 CA20053-02	61,634
METCALF, ROBERT L.....	NEUROTOXICITY OF HALOGENATED PHOSPHONATE ESTERS.....	1R01 ES01492-01	48,188
MILNER, JOHN A.....	ARGININE DEFICIENCY AND OROTIC ACIDURIA.....	1R01 AM19294-01A1	43,189
NALBANDOV, ANDREW V.....	ENDOCRINOLOGY OF REPRODUCTION.....	5R01 HD03043-15	68,061
NANNEY, DAVID L.....	AGING AND TEMPORAL PATTERNING IN TETRAHYMENA.....	1R01 AG00010-01	47,436
NANNEY, DAVID L.....	GENETIC STUDIES WITH TETRAHYMENA.....	5R01 GM07779-16	100,029
NISHIDA, TOSHIRO.....	ROLE OF PLASMA LIPOPROTEINS IN ATHEROSCLEROSIS.....	5R01 HL17597-04	64,959
OLDFIELD, ERIC.....	HIGH-FIELD NMR STUDIES OF RESPIRATORY PROTEINS.....	5R01 HL19481-02	29,924
ORDAL, GEORGE W.....	PHOTOTACTIC AND CHEMOTACTIC BEHAVIOR OF BACTERIA.....	2R01 GM21130-04	90,032
PAUL, IAIN C.....	X-RAY STUDIES ON BIOLOGICALLY IMPORTANT MOLECULES.....	5R01 GM19336-06	64,311
PROSSER, C LADD.....	INTESTINAL MOTILITY; MYOGENICITY, NEURAL CONTROL.....	3R01 AM12768-08S1	11,879
PROSSER, C LADD.....	MEMBRANE PROPERTIES OF GASTROINTESTINAL MUSCLES.....	2R01 AM12768-09	35,068
REICHMANN, MANFRED E.....	AUTOINTERFERENCE IN VIRUS INFECTIONS AND MALIGNANCY.....	2R01 AI12070-04	106,904
RHOTEN, WILLIAM B.....	DYNAMICS OF INSULIN SECRETION DURING DIFFERENTIATION.....	1R01 AM19538-01	29,810
RINEHART, KENNETH L, JR.....	CHEMISTRY AND BIOCHEMISTRY OF CERTAIN ANTIBIOTICS.....	5R01 AI01278-21	79,814
RINEHART, KENNETH L, JR.....	MASS SPECTRA OF ANTIBIOTICS AND RELATED COMPOUNDS.....	2R01 AI04769-16	75,306
RINEHART, KENNETH L, JR.....	HIGH RESOLUTION MASS SPECTRA OF BIOORGANIC COMPOUNDS.....	5R01 CA11388-08	77,540
SAVAGE, DWAYNE C.....	INFLUENCES OF NORMAL MICROFLORA ON GUT HISTOLOGY.....	5R01 AI11858-05	57,843
SCHMIDT, PAUL G.....	NMR STUDIES OF ASPARTATE TRANSCARBAMYLASE AND TRNA.....	2R01 GM18038-07	48,872

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
SEGRE, DIEGO.....	PARAMETERS OF THE IMMUNE RESPONSE IN AGED MICE.....	5R01 AG00451-05	66,869
SHAPIRO, DAVID J.....	CHOLESTEROL REGULATION OF HMG-COA REDUCTASE SYNTHESIS.....	5R01 HL17882-03	44,969
SHAW, PAUL D.....	MECHANISM OF ACTION OF MARINE ANTIMICROBIAL AGENTS.....	1R01 AI14048-01	47,269
SHERWOOD, ORRIN D.....	RELAXIN: STRUCTURAL AND PHYSIOLOGICAL STUDIES.....	5R01 HD08700-03	46,398
STORM, DANIEL R.....	MECHANISM OF ACTION FOR BACITRACIN, POLYMYXIN AND EM49.....	5R01 AI12821-03	36,309
SWITZER, ROBERT L.....	NOVEL CONTROL MECHANISMS IN ENDOSPORE FORMATION.....	5R01 AI11121-05	44,420
SWITZER, ROBERT L.....	REGULATION AND MECHANISM OF PRPP SYNTHETASE.....	5R01 AM13488-09	59,454
TETTELBAUM, PHILIP.....	EFFECT OF LEARNING ON LATERAL HYPOTHALAMIC RECOVERY.....	5R01 NS11671-05	97,835
TERJUNG, RONALD L.....	SKELETAL MUSCLE ADAPTATIONS INDUCED BY TRAINING.....	2R01 AM17666-04	9,757
TOMPKINS, WAYNE A.....	CELLULAR IMMUNITY TO FIBROMA VIRUS AND FIBROMA INDUCTION.....	5R01 CA12507-06	51,485
UHLENBECK, OLKE C.....	STRUCTURE AND FUNCTION OF RIBONUCLEIC ACID.....	5R01 GM19059-06	70,524
WAGNER, WILLIAM C.....	EFFECT OF ACTH OR STEROIDS ON GONADAL FUNCTION.....	7R01 HD11612-01	46,921
WEBER, GREGORIO.....	PROTEIN CONFIGURATION BY FLUORESCENCE TECHNIQUES.....	5R01 GM11223-15	147,498
WEBER, MICHAEL J.....	EARLY CELL-SURFACE CHANGES IN VIRAL ONCOGENESIS.....	5R01 CA12467-06	72,898
WEBER, MICHAEL J.....	MEMBRANE LIPIDS IN ROUS SARCOMA VIRUS INFECTION.....	1R01 CA20410-01	48,459
WILLIS, JOHN S.....	ION TRANSPORT IN CELLS OF HIBERNATING MAMMALS.....	2R01 GM11494-14	80,804
WILLIS, JUDITH H.....	ANALYSIS OF DEVELOPMENT IN INSECTS.....	5R01 AG00248-06	58,578
WOLFE, RALPH S.....	A NEW MICROBIAL VITAMIN-COENZYME RELATIONSHIP.....	5R01 AI12277-04	41,049
WONG, PAUL K.....	GENETIC STUDIES OF MURINE LEUKEMIA VIRUSES.....	5R01 CA17695-03	37,424
WONG, PAUL K.....	GENETICS OF HELPER-INDEPENDENT MOUSE SARCOMA VIRUS.....	5R01 CA19723-02	59,014
ZEHR, JOHN E.....	CENTRAL NERVOUS CONTROL OF RENIN AND BLOOD PRESSURE.....	5R01 HL15307-05	57,433
ORGANIZATION TOTAL	94 6,004,204		
STATE TOTAL	628 58,003,302		
INDIANA			
BLOOMINGTON			
INDIANA UNIVERSITY AT BLOOMINGTON ZIP CODE 47401			
ALLERHAND, ADAM.....	CARBON-13 NMR STUDIES OF SPECIFIC SITES IN PROTEINS.....	5R01 GM22620-02	58,675
BLUMENTHAL, THOMAS.....	QBETA REPLICASE AND PROTEIN SYNTHESIS FACTORS.....	2R01 GM21024-04	64,615
BRIGGS, ROBERT W.....	GENE ACTION IN OOGENESIS AND EMBRYONIC DEVELOPMENT.....	5R01 GM05850-19	59,313
CAMPAIGNE, ERNEST E.....	BIOISOSTERES OF BIOLOGICALLY ACTIVE INDLES.....	5R01 GM10366-15	72,649
CORDES, EUGENE H.....	THE CHEMISTRY OF HUMAN PLASMA LIPOPROTEINS.....	2R01 GM19631-14	63,640
CORDES, EUGENE H.....	WORKSHOP ON ISOTOPE-EFFECT CALCULATION.....	1R13 GM23725-01	5,835
CRAIG, JAMES C.....	CUTANEOUS PATTERN PERCEPTION.....	2R01 NS09783-07	92,647
ELIZONDO, REYNALDO S.....	MECHANISMS OF HEAT ACCLIMATION IN MACACA MULATTA.....	5R01 AM16703-03	36,015
GURD, FRANK R.....	STRUCTURE AND REACTIVITY OF PROTEINS AND LIPOPROTEINS.....	5R01 HL05556-18	117,771
GURD, FRANK R.....	SPECIFIC ENRICHMENT OF MYOGLOBINS FOR CARBON-13 NMR.....	2R01 HL14680-06	66,614
GURD, RUTH S.....	STRUCTURE-FUNCTION RELATIONSHIPS OF GLUCAGON.....	1R01 AM21121-01	29,128
HARMONY, JUDITH A.....	INTERACTION OF PLASMA LIPOPROTEINS WITH ERYTHROCYTES.....	1R01 HL20882-01	46,196
HAUROWITZ, FELIX.....	ALLOTYPY AND DIVERSITY OF HAPTEN-SPECIFIC ANTIBODIES.....	5R01 AI09752-28	10,662
HAYES, JOHN M.....	STABLE ISOTOPE RATIO MEASUREMENT.....	5R01 GM18979-06	63,210
HIEFTJE, GARY M.....	CYBERNATION PROCEDURES IN INSTRUMENTAL ANALYSIS.....	5R01 GM17904-05	37,463
HIRS, CHRISTOPHE H.....	STRUCTURE AND FUNCTION OF PANCREATIC ENZYMES.....	5R01 AM14307-08	115,683
JASKUNAS, S RICHARD.....	REGULATION OF RIBOSOME BIOSYNTHESIS.....	1R01 GM24347-01	82,505
KAUFMAN, THOMAS C.....	STUDIES ON THE ORGANIZATION OF THE DROSOPHILA GENOME.....	1R01 GM24299-01	41,199
KOCHI, JAY K.....	MODELS FOR BIOLOGICAL ELECTRON TRANSPORT.....	1R01 GM23535-01	20,340
MAHLER, HENRY R.....	THE BIOSYNTHESIS OF RESPIRATORY ENZYMES.....	5R01 GM12228-14	111,811
MAHLER, HENRY R.....	DYNAMICS OF NEURONAL MEMBRANE PROTEINS.....	5R01 NS08309-07	72,825
MAHOWALD, ANTHONY P.....	ULTRASTRUCTURAL STUDIES OF DROSOPHILA DEVELOPMENT.....	2R01 HD07983-04	65,795
MERRITT, LYNNE L, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07031-12	124,992
NOVOTNY, MILOS V.....	HIGH-RESOLUTION GC METABOLIC PROFILES.....	1R01 GM23668-01	60,177
PISONI, DAVID B.....	AUDITORY AND PHONETIC PROCESSES IN SPEECH PERCEPTION.....	5R01 NS12179-03	58,655
POLISKY, BARRY A.....	EUCARYOTIC DNA EXPRESSION IN BACTERIA.....	1R01 GM24212-01	72,572
PREER, JOHN R, JR.....	GENETICS AND GENERAL BIOLOGY OF PARAMECIUM.....	5R01 GM20038-04	57,464
PUTNAM, FRANK W.....	BLOOD PLASMA PROTEINS: STRUCTURE AND FUNCTION.....	5R01 AM19221-02	94,056

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
PUTNAM, FRANK W.....	ABNORMAL PROTEINS IN MULTIPLE MYELOMA.....	2R01 CA08497-13	198,000
RAFF, RUDOLF A.....	REGULATION OF PROTEIN SYNTHESIS IN EARLY DEVELOPMENT.....	5R01 HD06902-06	45,825
RANDOLPH, POLLEY A.....	PHYSIOLOGY AND GENETICS OF REPRODUCTION IN MAMMALS.....	1R01 HD11264-01	39,446
RICHARDSON, JOHN P.....	FACTORS THAT CONTROL RNA TRANSCRIPTION.....	2R01 AI10142-07	53,292
RICHMOND, ROLLIN C.....	ADAPTIVE SIGNIFICANCE OF ALLOZYME VARIATION.....	5R01 GM23706-02	53,264
SINCLAIR, JOHN H.....	COMPOSITION AND REGULATION OF THE RIBOSOMAL GENOME.....	3R01 GM20532-03S1	1,422
SONNEBORN, TRACY M.....	NORMAL AND ABNORMAL CELL GROWTH AND HEREDITY.....	2R01 GM15410-10	58,985
SURZYCKI, STEFAN J.....	ADENOVIRUS GENE EXPRESSION IN VITRO AND IN VIVO.....	2R01 AI13382-02A1	60,247
SURZYCKI, STEFAN J.....	TRANSCRIPTION OF CHLOROPLAST DNA OF C. REINHARDI.....	2R01 GM22968-02	47,200
SZABO, ATTILA.....	ELECTRONIC, THERMODYNAMIC AND KINETICS OF HEMOGLOBIN.....	1R01 HL21483-01	22,889
TAYLOR, MILTON W.....	MUTANTS OF MAMMALIAN CELL LINES.....	5R01 GM18924-06	59,062
WILSON, STEPHEN R.....	THE TOTAL SYNTHESIS OF SELECTED PYRROLIZIDINE ALKALOIDS.....	1R01 GM24438-01	36,776
ORGANIZATION TOTAL	40	2,478,915	
INDIANAPOLIS			
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS ZIP CODE 46202			
ALLMANN, DAVID W.....	EFFECT OF FLUORIDE ON CAMP AND GLUCOSE METABOLISM.....	1R01 DE04387-01A1	41,782
ARMSTRONG, WILLIAM M.....	ION TRANSPORT IN SMALL INTESTINE.....	5R01 AM12715-09	42,005
BAEHNER, ROBERT L.....	LEUKOCYTE METABOLISM RELATED TO RECURRENT INFECTION.....	5R01 AI10892-05	70,797
BAEHNER, ROBERT L.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA13809-05	154,554
BAEHNER, ROBERT L.....	BIOCHEMICAL BASIS OF OXYGEN DAMAGE TO LUNG CELLS.....	5R01 HL19779-02	66,649
BAILEY, JOHN C.....	THE ROLE OF ELECTROTONUS IN HIS-PURKINJE FUNCTION.....	5R01 HL18538-03	25,231
BEERING, STEVEN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05371-16	182,869
BENSON, MERRILL D.....	PROTEIN SAA IN NEOPLASTIC DISEASE.....	1R01 CA22141-01	25,766
BIXLER, DAVID.....	ORAL-FACIAL VARIATIONS IN RELATIVES OF CLEFT PROBANDS.....	2R01 DE03707-04	33,970
BOCKRATH, RICHARD C.....	RADIATION INDUCED CELLULAR MUTAGENESIS AND DNA REPAIR.....	5R01 GM21788-03	18,021
BOHLEN, HAROLD G.....	MICROVASCULAR RESPONSES DURING INTESTINAL ABSORPTION.....	1R01 HL20605-01	31,074
BOXER, LAURENCE A.....	THE MECHANICS OF MOVEMENT IN THE LEUKOCYTE.....	5R01 AI13586-02	64,218
BRANDT, KENNETH D.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20582-01	141,056
CAMPBELL, ROBERT L.....	FLUID RESTRICTION IN ACUTE SUBARACHNOID HEMORRHAGE.....	5R01 NS12498-03	18,568
CHRISTIAN, JOE C.....	MEDICAL SCHOOL HUMAN GENETICS CENTER.....	5P50 GM21054-03	546,948
CLARK, CHARLES M, JR.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM20542-01	659,961
DAVIS, ELDRED J.....	REGULATORY MECHANISMS IN ENERGY METABOLISM.....	2R01 AM13939-07	66,696
FINEBERG, S EDWIN.....	DECREASED INSULIN SENSITIVITY IN DIABETES MELLITUS.....	1R01 AM21353-01	93,587
FISCH, CHARLES.....	MECHANISMS AND THERAPY OF CIRCULATORY DISEASE.....	5P01 HL06308-17	411,430
FRIEDMAN, JULIUS J.....	THE DYNAMICS OF MICROCIRCULATORY FUNCTION.....	5R01 HL16094-05	27,374
FRIEDMAN, JULIUS J.....	ELECTROLYTE PERMEABILITY OF SINGLE CAPILLARIES.....	1R01 HL19674-01	46,049
GHETTI, BERNARDINO.....	STUDY OF DIFFUSE DEGENERATIVE CNS DISEASES.....	5R01 NS04607-13	68,098
GIBSON, DAVID M.....	INSULIN INDUCTION OF LIPOGENIC ENZYMES IN HEPATOCYTES.....	5R01 AM19299-02	66,113
GRIM, CLARENCE E.....	HYPERTENSION: PSYCHOPHYSIOLOGIC & GENETIC PRECURSORS.....	5R01 HL20034-02	101,717
HARRIS, ROBERT A.....	REGULATION OF LEUCINE OXIDATION.....	5R01 AM19259-02	28,869
HARRIS, ROBERT A.....	HORMONAL CONTROL OF HEPATIC GLUCOSE AND FAT SYNTHESIS.....	1R01 AM21178-01	53,363
JACKSON, ROBERT C.....	EXPERIMENTAL CHEMOTHERAPY OF HEPATOMAS BY ANTIFOLATES.....	5R01 CA18129-02	43,397
JOHNSTON, CYRUS C, JR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00750-05	483,656
KAPLAN, JEROME I.....	NUCLEAR MAGNETIC RESONANCE AND MYOCARDIAL ISCHEMIA.....	1R01 HL21706-01	82,566
LINDSETH, RICHARD E.....	A DYNAMIC ORTHOTIC DEVICE TO ASSIST PELVIC EXTENSION.....	5R01 AM18701-02	57,920
LLOYD, THOMAS C, JR.....	PULMONARY FACTORS IN CIRCULATORY REGULATION.....	5R01 HL15694-05	40,201
MC BRIDE, WILLIAM J.....	ROLE OF TAURINE IN THE CEREBELLUM.....	1R01 NS13925-01	38,548
MEALEY, JOHN, JR.....	CHEMOTHERAPY OF INTRACRANIAL NEOPLASMS.....	5R01 CA06145-16	51,904
MEISS, RICHARD A.....	SMOOTH MUSCLE STIFFNESS AND CONTRACTILE MECHANISMS.....	1R01 HD10898-01	24,436
MERRITT, A DONALD.....	GENETIC AND BIOCHEMICAL STUDIES OF HUMAN AMYLASE.....	5R01 GM19178-06	62,724
MILLER, CHRIS H.....	PLAQUE FORMATION BY ACTINOMYCES NAESLUNDII.....	1R01 DE03537-01A3	29,388
OCHS, SIDNEY.....	ANALYSIS OF AXOPLASMIC TRANSPORT.....	2R01 NS08706-09	92,426
PHILLIPS, RALPH W.....	CREEP AND EVALUATION TECHNIQS OF AMALGAM FAILURE.....	5R01 DE04367-02	31,775
QUEENER, SHERRY I.....	MEMBRANE ENZYME FUNCTION IN DIABETIC KIDNEY.....	1R01 AM21289-01	32,023
RHOADES, RODNEY A.....	NUTRITION & HORMONAL INTERACTION IN LUNG DEVELOPMENT.....	5R01 HD10670-02	45,064
RHOADES, RODNEY A.....	LACTATE METABOLISM IN THE LUNG.....	1R01 HL20566-01	57,665
ROBERTSON, GARY L.....	THIRST AND VASOPRESSIN SECRETION IN DIABETES MELLITUS.....	1R01 AM21102-01	47,437

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
ROESKE, ROGER W.....	DESIGN & DEVELOPMENT OF CHELATORS FOR LEAD & MERCURY.....	5R01 ES00942-03	53,162
ROLLEY, RONALD T.....	IMMUNOLOGICAL ANALYSES OF RENAL TRANSPLANT PATIENTS.....	7R01 AM21670-01	37,512
ROMAN, ANN.....	INTRACELLULAR CONTROL OF DNA TUMOR VIRUS REPLICATION.....	5R01 CA19708-02	36,721
ROTHER, CARL F.....	CONTROL OF CENTRAL VENOUS PRESSURE IN SHOCK.....	5R01 HL07723-14	30,009
SCHLOEMER, ROBERT H.....	GLYCOPROTEINS OF RHABDO AND ONCOGENIC VIRUSES.....	5R01 CA19292-02	38,596
SHAFER, WILLIAM G.....	CLINICAL CANCER EDUCATION (DENTAL).....	5R25 CA19194-02	40,488
SIAKOTOS, ARISTOTLE N.....	OCULAR LYSOSOMES IN HEREDIATRY RETINAL DEGENERATIONS.....	1R01 EY01806-01A1	95,350
SNODGRASS, PHILIP J.....	INDUCTION AND SUPPRESSION OF UREA CYCLE ENZYMES.....	2R01 AM17299-05	50,487
TANNER, GEORGE A.....	SINGLE NEPHRON RESPONSE TO CHRONIC OBSTRUCTION.....	5R01 HL13929-06	25,555
THOMPSON, RICHARD M.....	DETERMINATION OF GLUCURONIDES BY GAS PHASE ANALYSIS.....	5R01 AM17665-03	49,775
VINICOR, FRANK.....	MATERNAL HYPERGLYCEMIA AND NEONATAL HEPATIC FUNCTION.....	1R01 AM21235-01	39,653
WAGLE, SHREEPAD R.....	EXPERIMENTAL DIABETES STUDIES.....	5R01 AM14340-08	43,717
WATANABE, AUGUST M.....	ISCHEMIC ARRHYTHMIAS: EFFECT OF AUTONOMIC TONE.....	5R01 HL18795-03	70,395
WEBER, GEORGE.....	METABOLIC PATTERNS IN NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA05034-17	136,507
WEBER, GEORGE.....	CORRELATED STUDY OF METABOLIC REGULATION IN NEOPLASIA.....	5P01 CA13526-06	433,710
WEINBERGER, MYRON H.....	SPECIALIZED CENTER OF RESEARCH IN HYPERTENSION.....	5P50 HL14159-07	772,862
WRIGHT, PETER H.....	EXPERIMENTAL STUDIES OF GLUCAGON.....	1R01 AM18958-01	43,935
YOUNG, PETER C.....	PROGESTERONE RECEPTORS IN HUMAN ENDOMETRIAL CANCER.....	5R01 CA17235-03	29,125
ORGANIZATION TOTAL	60	6,335,454	
INDIANAPOLIS CENTER FOR ADVANCED RESEARCH ZIP CODE 46202			
KAPLAN, JEROME I.....	THE DEVELOPMENT OF A DENTAL X-RAY AIMING DEVICE.....	1R01 DE04783-01	20,185
ORGANIZATION TOTAL	1	20,185	
MUNCIE			
BALL STATE UNIVERSITY ZIP CODE 47306			
COSTILL, DAVID L.....	HYPERLIPIDEMIA IN DIABETICS DURING MUSCULAR TRAINING.....	5R01 HL20408-02	43,679
ORGANIZATION TOTAL	1	43,679	
NOTRE DAME			
UNIVERSITY OF NOTRE DAME ZIP CODE 46556			
BASU, SUBHASH C.....	GLYCOLIPID METABOLISM IN TUMOR AND TRANSFORMED CELLS.....	5R01 CA14764-03	44,933
BASU, SUBHASH C.....	METABOLISM OF GLYCOSPHINGOLIPIDS IN CELLS.....	2R01 NS09541-07	54,366
CASTELLINO, FRANCIS J.....	STRUCTURE-FUNCTION STUDIES ON PLASMINOGEN AND PLASMIN.....	5R01 HL13423-07	57,871
CASTELLINO, FRANCIS J.....	BLOOD COAGULATION PROTEIN-METAL ION-LIPID INTERACTIONS.....	1R01 HL19982-01	65,609
FUCHS, MORTON S.....	REPRODUCTIVE PHYSIOLOGY OF AEDS MOSQUITOES.....	5R01 AI10707-06	61,486
GORDON, ROBERT E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07033-12	73,552
HAYES, ROBERT G.....	X-RAY PHOTOELECTRON SPECTROSCOPY OF HEME COMPOUNDS.....	5R01 HL13651-06	43,053
NOWAK, THOMAS.....	NMR STUDIES OF METALS IN KINASES AND RELATED ENZYMES.....	5R01 AM17049-05	62,030
POLLARD, MORRIS.....	COLORECTAL CARCINOGENESIS IN GERMFREE RATS.....	5R26 CA15957-04	69,651
POLLARD, MORRIS.....	INVESTIGATIONS ON PROSTATE ADENOCARCINOMAS IN RATS.....	5R26 CA17559-03	57,556
POLLARD, MORRIS.....	DEVELOPMENT AND MAINTENANCE OF GERMFREE ANIMAL COLONIES.....	2P40 RR00294-12	134,869
SAZ, HOWARD J.....	INTERMEDIARY METABOLISM OF HELMINTHS.....	5R01 AI09483-08	88,341
SAZ, HOWARD J.....	CHEMOTHERAPY AND METABOLISM OF FILARIDS.....	2R22 AI10512-07	27,283
SCHEIDT, W ROBERT.....	X-RAY AND CHEMICAL STUDIES OF METALLOPORPHYRINS.....	5R01 HL15627-05	57,872
WEINSTEIN, PAUL P.....	DEVELOPMENT OF PARASITIC HELMINTHS IN VITRO.....	5R01 AI09625-08	82,551
WOSTMANN, BERNARD S.....	ROLE OF ENTERIC ANTIGEN IN AGE-RELATED IMMUNE CHANGES.....	5R01 AG00022-02	95,696
WOSTMANN, BERNARD S.....	ANTIBIOTICS: EFFECTS ON BILE ACIDS AND CHOLESTEROL.....	5R01 AI12593-03	52,195
WOSTMANN, BERNARD S.....	CHARACTERIZATION OF NUTRITIONALLY DEFINED GNOTOBIOTE.....	5P40 RR00640-05	85,125
ORGANIZATION TOTAL	18	1,214,039	
WEST LAFAYETTE			
PURDUE UNIVERSITY ZIP CODE 47907			
ANDREWS, FREDERICK N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07032-12	185,294
ARNOTT, STRUTHER.....	MOLECULAR GEOMETRIES OF NUCLEIC ACIDS.....	2R01 GM17371-06	74,224
ARNOTT, STRUTHER.....	STRUCTURE OF EXTRACELLULAR MATRIX POLYSACCHARIDES.....	2R01 GM20682-04	54,690

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
ARONSON, ARTHUR I.....	MORPHOGENETIC PROCESSES IN BACTERIAL SPORULATION.....	2R01 GM20606-04	98,186
ARONSON, ARTHUR I.....	MECHANISM AND FUNCTION OF NUCLEAR RNA TURNOVER.....	5R01 GM23226-02	55,519
AUNON, JORGE I.....	QUANTIFICATION OF SINGLE EVOKED RESPONSES.....	5R01 NS12298-03	39,874
AXELROD, BERNARD.....	MECHANISM OF ACTION OF GLYCOSIDASES.....	5R01 GM22189-03	45,766
BARILE, RONALD G.....	AUTOMATED DRUG DELIVERY.....	5R01 GM22861-02	35,948
BOURLAND, JOE D.....	CATHETER VENTRICULAR DEFIBRILLATION STUDIES.....	1R01 HL20629-01	52,589
BRANDT, KARL G.....	ELECTRON TRANSPORT IN PYRUVATE DEHYDROGENASE COMPLEX.....	5R01 GM19458-06	34,079
BRENCHLEY, JEAN E.....	CHARACTERIZATION OF T RNA MATURATION MUTANTS.....	7R01 GM25251-01	48,370
BROWN, HERBERT C.....	STEREOSPECIFIC SYNTHESSES VIA HYDROBORATION.....	5R01 GM10937-15	92,101
BUTLER, LARRY G.....	RELATIONSHIPS OF TWO INTESTINAL PHOSPHOHYDROLASES.....	5R01 GM23028-02	53,002
BYRN, STEPHEN R.....	STRUCTURAL STUDIES OF PHYSIOLOGICALLY ACTIVE AGENTS.....	2R01 ES00929-04	60,536
CAPALDI, EGIDIO J.....	SEQUENTIAL PROCESSES IN INSTRUMENTAL LEARNING.....	5R01 HD04379-09	49,766
CARLSON, DON M.....	CHEMISTRY AND BIOSYNTHESIS OF GLYCOPROTEINS.....	5R01 AM19175-03	61,203
CASSADY, JOHN M.....	CHEMICAL-ANTITUMOR ACTIVITY OF LACTONES AND EPOXIDES.....	5R01 CA11715-06	61,566
CLEGG, ERIC D.....	SUBCELLULAR INVESTIGATION OF PIG SPERM CAPACITATION.....	5R01 HD07013-05	70,989
COPPOC, GORDON L.....	ORNITHINE DECARBOXYLASE REGULATION IN TUMORS.....	5R01 CA15873-03	28,014
CRAMER, WILLIAM A.....	THE MECHANISM OF ACTION OF COLICIN.....	5R01 GM18457-07	52,951
CUSHMAN, MARK S.....	NEW BENZOPHENANTHRIDINE AND PROTOBERBERINE SYNTHESSES.....	5R01 CA19204-02	47,752
DAS, GOPAL D.....	EXPERIMENTAL BRAIN TUMORS: DEVELOPMENTAL STUDIES.....	3R01 CA14650-03S1	8,550
DAS, GOPAL D.....	NEUROGENESIS: NORMATIVE AND EXPERIMENTAL STUDIES.....	5R01 NS08817-07	59,560
DE WITT, DAVID P.....	OPTICAL DETECTION OF NEONATAL JAUNDICE.....	5R01 AM18871-02	54,323
DIXON, JACK E.....	THE MECHANISM OF INSULIN DEGRADATION.....	5R01 AM18024-02	31,952
DIXON, JACK E.....	THYROTROPIN RELEASING HORMONE: SYNTHESIS, DEGRADATION.....	5R01 AM18849-02	33,356
FETH, LAWRENCE L.....	FREQUENCY DISCRIMINATION AND PITCH OF COMPLEX TONES.....	5R01 NS12235-03	26,237
FETH, LAWRENCE L.....	THE ACOUSTICS OF HEARING AIDS.....	5R01 NS12526-03	17,945
FLOSS, HEINZ G.....	STUDY OF BIOLOGICALLY ACTIVE MICROBIAL METABOLITES.....	5R01 AI11728-04	88,875
FLOSS, HEINZ G.....	BIOSYNTHESIS OF ERGOT ALKALOIDS.....	5R01 CA17482-09	80,692
FLOSS, HEINZ G.....	STEREOCHEMISTRY OF ENZYME REACTIONS.....	5R01 GM18852-07	47,597
FUCHS, PHILIP L.....	TOTAL SYNTHESIS OF ALKALOIDAL ANTI-LEUKEMIA AGENTS.....	5R01 CA19689-02	61,023
GEDDES, LESLIE A.....	INDIRECT MEAN ARTERIAL PRESSURE.....	5R01 HL18947-02	110,571
GILHAM, PETER T.....	STUDIES ON THE FINE STRUCTURE OF NUCLEIC ACIDS.....	5R01 GM11518-13	55,029
GILHAM, PETER T.....	METHODS FOR THE SEQUENCE ANALYSIS OF DNA.....	2R01 GM18533-06	49,996
GILHAM, PETER T.....	SYNTHESIS OF POLYRIBONUCLEOTIDES OF DEFINED SEQUENCE.....	2R01 GM19395-06	66,804
GOLUB, EDWARD S.....	THE INDUCTION OF IMMUNOLOGICAL TOLERANCE.....	5R01 AI08800-08	76,787
GOLUB, EDWARD S.....	BRAIN ASSOCIATED HEMATOPOIETIC ANTIGENS.....	5R01 CA18641-03	51,178
GRAHAM, DALE E.....	THE EUKARYOTE GENOME: EVOLVING STRUCTURE AND FUNCTION.....	5R01 GM21954-03	59,589
HARTL, DANIEL L.....	EVOLUTION OF NEW BETA-GALACTOSIDASES IN E. COLI.....	5R01 GM21623-03	34,930
HARTL, DANIEL L.....	GENETIC AND POPULATION STUDIES OF SPERM DYSFUNCTION.....	5R01 GM21732-04	23,903
HEINSTEIN, PETER.....	BIOSYNTHESIS OF GOSSYPOL.....	5R01 GM23249-02	56,087
HERRMANN, KLAUS M.....	BIOCHEMICAL AND GENETIC STUDIES OF DAHP-SYNTHEASE.....	5R01 GM17678-06	32,009
HORNEMANN, ULFERT.....	BIOSYNTHESIS OF THE MITOMYCIN ANTIBIOTICS.....	5R01 CA14378-08	89,648
HORNEMANN, ULFERT.....	BIOSYNTHESIS OF ANTIBIOTICS CONTAINING N-N BONDS.....	5R01 CA18587-02	54,264
KAK, A C.....	DECONVOLUTION OF THE MEDICAL ULTRASOUND DATA.....	5R01 GM23116-02	61,700
KEENAN, THOMAS W.....	ENDOMEMBRANE INTERCONVERSION IN MILK FORMATION.....	1R01 GM23889-01	71,448
KENT, CLAUDIA M.....	ANALYSIS OF SURFACE MEMBRANES OF DEVELOPING MUSCLE CELLS.....	1R01 HD10580-01	43,449
KIM, KI-HAN.....	MODE OF INSULIN ACTION AND ENZYME MODIFICATION.....	5R01 AM12865-09	44,138
KIM, KI-HAN.....	NUCLEAR ACCEPTOR SITE FOR THE ESTROGEN-RECEPTOR.....	5R01 AM18464-03	40,524
KOHLHAW, GUNTER B.....	REGULATION OF LEUCINE BIOSYNTHESIS.....	2R01 GM15102-10	65,603
LASKOWSKI, MICHAEL, JR.....	PROTEIN PROTEINASE INHIBITORS.....	2R01 GM10831-19	234,933
LIGHT, ALBERT.....	INTESTINAL BOVINE ENTEROKINASE.....	5R01 GM22261-03	42,184
LOUDON, GORDON M.....	NEW METHODS OF PROTEIN SEQUENCING AND MODIFICATION.....	7R01 GM25143-01	59,427
LOW, PHILIP S.....	ANION EXCHANGE ACROSS ERYTHROCYTE MEMBRANES.....	1R01 GM24417-01	47,131
MALVEN, PAUL V.....	HYPOTHALAMIC CONTROL OF PRL, GH AND LH RELEASE.....	5R01 HD09591-02	49,480
MARGERUM, DALE W.....	METAL ION TRANSFER AND CATALYSIS IN PEPTIDE COMPLEXES.....	2R01 GM12152-13	75,429
MARGERUM, DALE W.....	ACTIVATION OF MOLECULAR OXYGEN BY METAL PEPTIDES.....	5R01 GM19775-06	47,770
MARKLEY, JOHN L.....	NMR SPECTROSCOPY IN PROTEIN CHEMISTRY.....	5R01 GM19907-05	72,801
MARKLEY, JOHN L.....	A REGIONAL NMR RESOURCE FOR BIOMOLECULAR RESEARCH.....	1P41 RR01077-01	638,634
MC MILLIN, DAVID R.....	CHEMICAL AND PHYSICAL STUDIES OF COPPER PROTEINS.....	5R01 GM22764-02	53,801
MENNEAR, JOHN H.....	STUDIES ON THE PANCREOTOXIC EFFECTS OF CADMIUM.....	5R01 ES01123-03	53,583
MORRE, D JAMES.....	CANCER DETECTION BY SERUM ANALYSIS OF HETEROGLYCANS.....	1R01 CA21958-01	30,505

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
MORTENSON, LEONARD E.....	MICROBIAL ENZYMES INVOLVED IN NITROGEN METABOLISM.....	2R01 AI04865-16	89,753
MOSKOWITZ, MERWIN.....	LOW MOLECULAR WEIGHT CELL GROWTH FACTORS IN SERUM.....	5R01 CA15076-03	89,270
NAKAJIMA, SHIGEHIRO.....	CELLULAR BIOPHYSICS OF NEUROMUSCULAR FUNCTION.....	5R01 NS08601-09	91,179
OFFENSACH, STUART I.....	DEVELOPMENT OF COLOR-FORM PREFERENCE AND PERCEPTION.....	5R01 HD09514-03	27,610
OSTROY, SANFORD E.....	RELATED MOLECULAR AND PHYSIOLOGICAL EVENTS IN VISION.....	3R01 EY00413-08S2	34,381
OSTROY, SANFORD E.....	RELATED MOLECULAR AND PHYSIOLOGICAL EVENTS IN VISION.....	2R01 EY00413-09	34,381
PAK, WILLIAM L.....	SENSORY EXCITATION AND INFORMATION FLOW IN THE RETINA.....	5R01 EY00033-08	86,718
PARDUE, HARRY L.....	INSTRUMENTATION FOR FAST CLINICAL ANALYSIS.....	5R01 GM13326-11	89,841
PEPPERBERG, DAVID R.....	VISUAL PIGMENT AND PHOTO-RECEPTOR ADAPTATION.....	1R01 EY02103-01	68,600
PINTO, LAWRENCE H.....	INTERMEDIATE PROCESSES IN PHOTORECEPTORS.....	2R01 EY01221-04	55,039
RAY, WILLIAM J, JR.....	MECHANISM OF THE GROUP TRANSFER PROCESS.....	5R01 GM08963-15	82,293
REGNIER, FRED E.....	HIGH SPEED LIQUID CHROMATOGRAPHY OF HEMOGLOBINS.....	1R01 HL20751-01	39,349
RODWELL, VICTOR W.....	CONTROL OF CHOLESTEROGENESIS IN LEUKOCYTES AND LIVER.....	5R01 HL19223-02	62,775
ROSSMANN, MICHAEL G.....	STRUCTURE OF A SMALL SPHERICAL VIRUS.....	5R01 AI11219-05	86,666
ROSSMANN, MICHAEL G.....	STRUCTURAL STUDIES OF PROTEIN SUBUNITS.....	5R01 GM10704-15	118,611
SMITH, L DENNIS.....	CYTOPLASMIC REGULATION IN EARLY CELL DIFFERENTIATION.....	2R01 HD04229-09	132,125
SOMERVILLE, RONALD L.....	REGULATORY MECHANISMS IN TRYPTOPHAN BIOSYNTHESIS.....	5R01 GM22131-03	37,964
TESSMAN, ETHEL S.....	REGULATORY MECHANISMS IN SMALL DNA PHAGES.....	5R01 AI11853-04	71,853
TESSMAN, IRWIN.....	REPAIR AND MUTAGENESIS OF DNA.....	1R01 CA22239-01	59,958
TOBIAS, R STUART.....	HEAVY METAL AND RELATED CHEMOTHERAPEUTIC AGENTS.....	5R01 AM16101-06	57,727
TYLER, VARRO E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05586-10	53,841
UMBARGER, H EDWIN.....	ENZYMIC MECHANISMS IN BIOSYNTHETIC PATHWAYS.....	2R01 GM12522-13	193,543
VAN ETEN, ROBERT L.....	THE ACTIVE SITES OF ACID PHOSPHATASES.....	5R01 CA10585-08	69,906
VAN ETEN, ROBERT L.....	AN IMPROVED CLINICAL TEST FOR PROSTATIC ACID PHOSPHATASE.....	5R01 CA19231-02	16,740
VAN ETEN, ROBERT L.....	THE ANOMALOUS KINETICS OF ARYL SULFATASE A.....	5R01 GM22933-02	59,945
WHISTLER, ROY L.....	5-THIO-D-GLUCOSE IN THE GLYCOLYTIC PATHWAY.....	5R01 AM18482-03	54,718
WILLIAMS, LUTHER S.....	REGULATION OF AMINOACYL-TRNA SYNTHETASE FORMATION.....	5R01 GM21878-04	72,858
YIM, GEORGE K.....	MECHANISM OF LOCAL ANESTHETIC SEIZURES.....	5R01 NS12077-03	31,750
ZALKIN, HOWARD.....	REGULATORY ENZYMES IN TRYPTOPHAN SYNTHESIS.....	9R01 GM24658-07A1	69,168
ORGANIZATION TOTAL	92 6,344,526		
STATE TOTAL	212 16,436,798		

IOWA

AMES

IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY ZIP CODE 50010

ANGELICI, ROBERT J.....	METAL COMPLEX CATALYSIS OF BIOLOGICAL REACTIONS.....	5R01 GM12626-13	40,903
APPLEQUIST, JON B.....	THEORY OF MOLECULAR OPTICAL PROPERTIES.....	5R01 GM13684-11	27,964
APPLEQUIST, JON B.....	CONFORMATIONAL INDUCTION IN COPOLYPEPTIDES.....	5R01 GM21585-02	21,025
COX, GEORGE S.....	MECHANISM OF ECTOPIC HORMONE SYNTHESIS BY TUMOR CELLS.....	1R01 CA21534-01	84,159
FRENCH, DEXTER.....	MECHANISM OF AMYLASE ACTION.....	2R01 GM08822-16	74,752
FROMM, HERBERT J.....	REGULATION OF BRAIN AND TUMOR PHOSPHOTRANSFERASE.....	5R01 NS10546-12	35,921
GOUGH, PATRICIA M.....	ORAL TRANSMISSION OF RABIES VIRUS IN WILDLIFE.....	1R22 AI14132-01	46,688
GRAVES, DONALD J.....	ENZYMIC INTERCONVERSION AND REGULATION.....	5R01 GM09587-16	56,949
HOROWITZ, JACK.....	STRUCTURAL BASIS OF RIBONUCLEIC ACID SPECIFICITY.....	5R01 GM09042-16	53,633
LANDO, HARRY A.....	LONG-TERM ELIMINATION OF CHRONIC SMOKING BEHAVIOR.....	1R01 CA22102-01	45,979
LAROCK, RICHARD C.....	SYNTHESIS OF BIOLOGICALLY ACTIVE LACTONES AND LACTAMS.....	1R01 GM24254-01	49,201
MASON, MILDRED.....	SPATIAL REDUNDANCY, ITEM IDENTIFICATION, AND READING.....	5R01 EY01813-02	24,444
MC GILLIARD, A DARE.....	DIET, CHOLESTEROL ABSORPTION AND ATHEROSCLEROSIS.....	3R01 HL04969-15S1	9,647
METZLER, DAVID E.....	THE ACTION OF B VITAMINS IN ENZYMIC CATALYSIS.....	5R01 AM01549-21	92,522
NORDSKOG, ARNE W.....	HISTOCOMPATIBILITY IMMUNE RESPONSE GENES IN CHICKENS.....	5R01 AI12746-03	59,063
PATTEE, PETER A.....	GENETICS OF BIOSYNTHESIS IN STAPHYLOCOCCUS AUREUS.....	5R01 AI06647-11	18,409
POLLAK, EDWARD.....	RESEARCH IN MATHEMATICAL AND STATISTICAL GENETICS.....	5R01 GM13827-11	54,851
ROBSON, RICHARD M.....	HEART & SMOOTH MUSCLE CONTRACTILE PROTEIN STUDIES.....	5R01 HL15679-06	34,132
ROBYT, JOHN F.....	BIOSYNTHETIC STUDY OF DENTAL PLAQUE POLYSACCHARIDES.....	5R01 DE03578-06	57,777
THOMAS, JAMES A.....	CONTROL OF GLYCOGEN SYNTHESIS IN HEART.....	2R01 HL13630-07	56,743

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
VERKADE, JOHN G.....	ELECTROSTEREOCHEMICAL PROPERTIES OF CYCLIC CARCINOSTATS.....	5R01 CA13968-06	38,957
YOUNG, DONALD F.....	EFFECT OF STENOTIC OBSTRUCTIONS ON FLOW IN ARTERIES.....	5R01 HL11717-09	33,608
YOUNG, JERRY W.....	GLUCONEOGENESIS IN RUMINANTS.....	5R01 AM10706-09	52,548
ZAFFARANO, DANIEL J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07034-12	51,230
ORGANIZATION TOTAL	24 1,121,105		
IOWA CITY			
UNIVERSITY OF IOWA ZIP CODE 52242			
ABBOUD, FRANCOIS M.....	REGULATION OF THE CIRCULATION IN PATHOLOGICAL STATES.....	2P01 HL14388-06	1,306,039
ANURAS, SINN.....	CONTROL MECHANISMS OF COLONIC MOTILITY.....	1R01 AM20448-01	45,519
ARNONE, ARTHUR.....	X-RAY STUDIES OF HEMOGLOBIN AND REGULATORY ENZYMES.....	5R01 AM17563-04	47,369
BENTON, ARTHUR L.....	PERFORMANCE TESTS IN CEREBRAL DISEASE.....	5R01 NS00616-24	45,618
BHALLA, RAMESH C.....	CA00 AND CYCLIC AMP IN CAUSATION OF HYPERTENSION.....	5R01 HL19027-02	34,932
BHATNAGAR, RANBIR K.....	EFFECTS OF DRUGS ON NEUROCHEMICAL MATURATION OF BRAIN.....	5R01 NS12121-03	36,746
BLAKLEY, RAYMOND L.....	ALLOSTERIC REGULATION OF MONOMERIC ENZYMES.....	5R01 CA11165-09	48,104
BLAKLEY, RAYMOND L.....	STRUCTURAL STUDIES ON DIHYDROFOLATE REDUCTASE.....	5R01 CA13840-06	94,759
BLAKLEY, RAYMOND L.....	INHIBITORS OF HUMAN RIBONUCLEOTIDE REDUCTASE.....	5R01 CA16254-03	14,530
BUCHSBAUM, HERBERT J.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA19502-01A1	99,881
BURNS, CHARLES P.....	LIPID METABOLISM OF LEUKOCYTES.....	5R01 CA17283-03	64,932
BUTLER, JOHN E.....	BAMP TUMOR ANTIGEN: DISTRIBUTION AND IMMUNOCHEMISTRY.....	5R01 CA16932-03	37,810
CAPLAN, RICHARD M.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18017-03	133,033
CHALKLEY, ROGER G.....	AGING OF THE MAMMALIAN CHROMOSOME.....	1R01 AG00753-01	63,146
CHALKLEY, ROGER G.....	STRUCTURE AND FUNCTION OF CHROMOSOMAL NUCLEOHISTONE.....	5R01 CA10871-10	93,930
CHALKLEY, ROGER G.....	ORGANIZATION OF DNA AND HISTONE IN TUMOR CELL CHROMATIN.....	5R01 CA17224-03	25,707
CHALKLEY, ROGER G.....	ESTROGENS AND BREAST CANCER.....	1R01 CA20509-01	74,510
CHRISTENSEN, JAMES.....	STUDIES OF THE SMALL INTESTINAL SLOW WAVE.....	5R01 AM08901-12	101,520
CHRISTENSEN, JAMES.....	REGULATION OF THE LOWER ESOPHAGEAL SPHINCTER.....	2R01 AM11242-11	81,413
CONWAY, THOMAS W.....	PROTEIN SYNTHESIS IN T4 BACTERIOPHAGE-INFECTED CELLS.....	5R01 AI11301-05	63,444
COX, CHARLES D.....	IN VIVO GROWTH OF PSEUDOMONAS AERUGINOSA.....	1R01 AI13120-01A1	31,995
CULP, DAVID A.....	STUDIES OF PRIMARY URINARY BLADDER NEOPLASMS (NBCCGA).....	2R26 CA15933-04	61,888
DAVIS, LEODIS.....	SERINE AND THREONINE METABOLISM.....	2R01 AM16950-04	51,852
DAWSON, DAVID C.....	ION TRANSPORT BY THE COLON AND HORMONAL CONTROL.....	5R01 AM18776-02	43,279
DE GOWIN, RICHARD L.....	HEMOPOIETIC CONTROL MECHANISMS.....	3R01 CA11472-05S1	7,334
DE GOWIN, RICHARD L.....	CANCER THERAPY AND THE HEMOPOIETIC MICROENVIRONMENT.....	5R01 CA18102-03	51,885
DI BONA, GERALD F.....	NEUROGENIC CONTROL OF RENAL SODIUM HANDLING.....	5R01 AM15843-06	59,373
DIANA, JOHN N.....	PROTECTION OF THE ISCHEMIC MYOCARDIUM.....	1R01 HL21356-01	42,643
DONELSON, JOHN E.....	DNA SEQUENCE AT REPLICATION ORIGINS OF PHIX174 AND M13.....	5R01 GM21696-03	51,752
DONHAM, KELLEY J.....	THE PATHOGENESIS OF ASBESTOS RELATED BOWEL CANCER.....	5R26 CA16762-03	77,793
DONTA, SAM T.....	CHOLERA TOXIN AND ADRENAL CELLS IN TISSUE CULTURE.....	5R22 AI11416-05	40,051
DONTA, SAM T.....	ISOLATION AND STUDY OF E COLI ENTEROTOXINS.....	5R22 AI11794-03	37,653
DRYER, ROBERT L.....	METABOLIC REGULATION IN BROWN ADIPOSE MITOCHONDRIA.....	5R01 GM22035-02	43,268
ECKSTEIN, JOHN W.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00059-16	715,505
ECKSTEIN, JOHN W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05372-16	213,709
ERENBERG, ALLEN P.....	THYROID HORMONES AND THE FETAL AND NEONATAL LUNG.....	5R01 HD09677-02	63,114
FALSETTI, HERMAN L.....	FLUID MECHANICS OF HEART VALVE PROSTHESES.....	1R01 HL20829-01	46,960
FARBER, JAY P.....	EARLY HYPOXIA AND DEVELOPMENT OF RESPIRATORY CONTROL.....	2R01 HL15311-04A1	31,763
FEISS, MICHAEL G.....	VIRUS CHROMOSOME STRUCTURE: ROLE IN DEVELOPMENT.....	5R01 AI12851-02	19,660
FELLOWS, ROBERT E, JR.....	STRUCTURE & FUNCTION OF GROWTH & LACTOGENIC HORMONES.....	5R01 AM19901-03	78,220
FELLOWS, ROBERT E, JR.....	REGULATION OF BRAIN DEVELOPMENT.....	1R01 HD11184-01	58,832
FTZ, ANNETTE E.....	ANGIOTENSIN I AND CONVERTING ENZYME IN HYPERTENSION.....	5R01 HL12684-09	66,576
FOMON, SAMUEL J.....	GROWTH AND NUTRITION OF NORMAL INFANTS.....	5P01 HD07578-03	312,546
FORKER, EDSON L.....	MECHANISMS OF BILE FORMATION.....	5R01 AM09892-12	58,558
FRANKEL, JOSEPH.....	MUTATIONAL STUDY OF CILIATE DEVELOPMENT.....	2R01 HD08485-04	69,176
GEBHART, GERALD F.....	NEUROPHYSIOLOGY/PHARMACOLOGY OF CENTRAL NOCICEPTORS.....	5R01 GM22026-03	36,266
GINSBERG, BARRY H.....	RADIOIMMUNOASSAY OF THE SOMATOMEDINS IN DIABETES.....	1R01 AM21084-01	56,184
GRIGSBY, WILLIAM R.....	ACQUIRED PELLICLE AS A COVALENT BINDING SITE.....	5R23 DE04140-03	17,165
HALMI, NICHOLAS S.....	INVESTIGATION OF THE THYROID AND PITUITARY.....	5R01 AM02463-19	56,250
HAYREH, SOHAN S.....	OCULAR VASCULAR OCCLUSIVE DISORDERS - CLINICAL STUDY.....	5R01 EY01151-03	136,494

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
HAYREH, SOHAN S.....	OCULAR VASCULAR OCCLUSIVE DISORDERS.....	5R01 EY01576-03	121,763
HEATH, EDWARD C.....	CHEMISTRY AND METABOLISM OF POLYSACCHARIDES.....	5R01 AM19850-02	135,892
HEISTAD, DONALD D.....	STUDIES ON NEUROGENIC CONTROL OF THE CIRCULATION.....	2R01 HL16066-04	50,109
HERMSMEYER, R KENT.....	MEMBRANE ELECTRICAL PROPERTIES OF VASCULAR MUSCLE.....	2R01 HL16328-05	42,276
HOGBEN, C ADRIAN.....	ACTION OF FUROSEMIDE ON CHLORIDE TRANSPORT.....	5R01 AM19020-02	31,796
HUBEL, KENNETH A.....	WATER AND ELECTROLYTE TRANSPORT BY THE INTESTINE.....	5R01 AM18769-02	49,423
JOCHIMSEN, PETER R.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12036-06	28,474
JOHNSON, WILLIAM.....	RIBOSOMAL VACCINES.....	5R01 AI10449-06	24,978
JOHNSTON, RICHARD C.....	STUDY OF BIOMECHANICS OF HIP DISEASE.....	5R01 AM14486-07	79,422
JOYNER, RONALD W.....	MECHANISM OF CARDIAC ACTION POTENTIAL PROPAGATION.....	7R01 HL22562-01	26,355
KAELBER, W W.....	EXPERIMENTAL INVESTIGATIONS OF PAIN.....	5R01 GM23336-02	44,657
KALNITSKY, GEORGE.....	PROTEASES IN NORMAL AND IMMUNOLOGICALLY INJURED LUNG.....	3R01 HL16920-01S1	3,729
KARLSSON, ULF L.....	STRUCTURE-FUNCTION CORRELATES OF INTRADENTAL NERVES.....	5R01 DE04339-02	37,885
KATER, STANLEY B.....	INTEGRATION OF INTERCELLULAR COMMUNICATION.....	1R01 AM19858-01	60,333
KATER, STANLEY B.....	NEURAL CONTROL OF DISCRETE BEHAVIORAL PROCESSES.....	5R01 NS09696-06	45,732
KELSO, J A.....	MOVEMENT CONTROL FOLLOWING FINGER JOINT REPLACEMENT.....	1R01 AM20231-01	33,433
KISKER, C THOMAS.....	COMMUNITY BASED THERAPY FOR CHILDREN WITH CANCER.....	5R18 CA18139-03	104,210
KISKER, C THOMAS.....	DETECTION AND ADHERENCE OF FIBRIN MONOMER COMPLEXES.....	5R01 HL19105-02	41,336
LACHENBRUCH, PETER A.....	ROBUSTNESS OF DISCRIMINATION IN EPIDEMIOLOGY.....	5R01 GM23496-02	50,892
LATA, GENE F.....	STEROID HORMONE TRANSPORT IN MATURE AND AGING HUMAN.....	5R01 AG00304-03	48,193
LATA, GENE F.....	MOLECULAR INTERACTIONS OF STEROID HORMONES.....	5R01 AM17867-03	28,322
LAUER, RONALD M.....	CORONARY RISK FACTORS IN CHILDREN.....	1R01 HL20124-01	91,342
LOENING, STEFAN.....	CHEMOTHERAPY OF ADVANCED PROSTATIC CANCER.....	5R26 CA15108-04	93,791
LONG, JOHN P.....	STRUCTURE ACTIVITY STUDIES OF PHARMACOLOGIC AGENTS.....	5P01 GM22365-02	173,490
LONG, JOHN P.....	STUDIES ON AUTONOMIC TRANSMISSION.....	5R01 NS04431-15	28,041
LUBAROFF, DAVID M.....	IMMUNOLOGIC ASPECTS OF PROSTATIC CANCER.....	5R26 CA18014-03	33,284
MACA, RICHARD D.....	CELLULAR SIALOGLYCOPROTEINS AND ANTICANCER DRUGS.....	5R01 CA17870-03	36,252
MACKENZIE, IAN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05313-16	78,368
MARCUS, MELVIN L.....	EFFECTS OF HYPERTROPHY ON THE CORONARY CIRCULATION.....	1R01 HL20827-01	48,287
MARKOVETZ, ALLEN J.....	INTESTINAL ANAEROBIC MICROFLORA OF AN INVERTEBRATE.....	1R01 AI13990-01	78,805
MARKOVETZ, ALLEN J.....	MICROBIAL AND INSECT METABOLISM OF ALIPHATIC COMPOUNDS.....	5R01 GM19809-06	69,389
MENNINGER, JOHN R.....	CONTROL AND MECHANISM OF PROTEIN-CHAIN TERMINATION.....	2R01 GM20626-05	77,784
MOLL, KENNETH L.....	STUDIES OF SPEECH ARTICULATION.....	2R01 NS07555-10	70,449
MORRIS, HUGHLETT L.....	DIAGNOSTIC AND PROGNOSTIC TECHNIQUES IN CLEFT PALATE.....	5P01 DE00853-20	429,994
MYERS, MARTIN G.....	PATHOPHYSIOLOGY OF MALIGNANT VARICELLA INFECTION.....	5R01 AI13627-02	36,565
NEWLON, CAROL S.....	DNA REPLICATION IN THE YEAST, SACCHAROMYCES CEREVISIAE.....	5R01 GM21510-03	49,510
OSBORNE, JAMES W.....	CONTROL OF CELL PROLIFERATION IN THE INTESTINE.....	2R01 AM15758-04A1	35,384
OSBORNE, JAMES W.....	ENZYMOLGY OF RADIATION-INDUCED INTESTINAL CARCINOMA.....	5R01 CA18327-02	63,137
PIETRZYK, DONALD J.....	SEPARATION AND DETERMINATION OF CARCINOGENS.....	5R01 CA18555-03	41,147
PITKIN, ROY M.....	CALCIUM METABOLISM IN PREGNANCY AND PERINATAL PERIOD.....	5R01 HD09373-02	40,972
RANDLES, RONALD H.....	ADAPTIVE DISCRIMINANT ANALYSIS FOR MEDICAL DECISIONS.....	5R01 GM22271-03	81,837
RICHERSON, HAL B.....	PULMONARY RESPONSES TO INHALED ANTIGEN.....	5R01 HL19873-02	69,000
ROBILLARD, JEAN E.....	MATURATION OF THE FETAL KIDNEY.....	1R01 HD11466-01	80,217
ROSAZZA, JOHN P.....	MICROBIAL TRANSFORMATIONS—NATURAL ANTITUMOR AGENTS.....	2R01 CA13786-04	30,967
ROSKOSKI, ROBERT, JR.....	NEUROTRANSMITTER BIOSYNTHESIS.....	2R01 NS11310-04	71,370
SABISTON, CHARLES B, JR.....	EVALUATION OF CLINICAL DENTAL ANAEROBIC BACTERIOLOGY.....	5R01 DE03662-06	33,303
SCHEDL, HAROLD P.....	INTESTINAL TRANSPORT MECHANISMS AND THEIR REGULATION.....	5R01 AM02534-20	126,223
SCHEDL, HAROLD P.....	DUODENAL CALCIUM BINDING PROTEIN: ACTIONS AND CONTROL.....	3R01 AM16841-03S2	19,086
SCHMID, PHILLIP G.....	MECHANISMS OF CIRCULATORY REGULATION IN HEART FAILURE.....	1R01 HL20768-01	37,900
SHERMAN, BARRY M.....	CELL BIOLOGY OF HUMAN BREAST CANCER AND MAMMARY GLAND.....	5P01 CA17649-03	221,433
SILVERSTONE, LEON M.....	REMINERALIZATION OF ENAMEL CAVES IN VITRO.....	1R01 DE04819-01	133,229
SIX, ERICH W.....	GENETIC STUDIES OF PHAGE-PROPHAGE INTERACTIONS.....	5R01 AI04043-16	74,124
SKIBBA, JOSEPH L.....	LIVER THERMO-CHEMOTHERAPY BY ISOLATED PERFUSION.....	1R01 CA20144-01A1	42,870
SPECTOR, ARTHUR A.....	A/S SCOR-LIPIDS, ATHEROSCLEROSIS AND THROMBOSIS.....	2P50 HL14230-06	798,965
SPECTOR, ARTHUR A.....	LIPID DEPOSITION IN MAMMALIAN CELLS.....	5R01 HL14781-07	100,834
SPRIESTERSBACH, DUANE C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07035-12	46,274
STEINMETZ, PHILIP R.....	REGULATION OF URINARY ACIDIFICATION IN VITRO.....	5R01 AM17568-04	67,848
STELLWAGEN, EARLE C.....	STRUCTURE-FUNCTION STUDIES OF CYTOCHROME C.....	2R01 GM13215-12	100,360
STELLWAGEN, EARLE C.....	AFFINITY CHROMATOGRAPHY FOR THE DINUCLEOTIDE FOLD.....	5R01 GM22109-03	45,879
STINSKI, MARK F.....	CYTOMEGALOVIRUS REPLICATION.....	5R01 AI13562-02	51,214

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
TEPHLY, THOMAS R.....	BIOCHEMICAL TOXICOLOGY AND PHARMACOLOGY.....	5P50 GM12675-13	874,253
TEPHLY, THOMAS R.....	STUDIES ON METHANOL POISONING.....	5R01 GM19420-06	32,946
THAMES, MARC D.....	CARDIAC RECEPTORS WITH VAGAL C-FIBER AFFERENTS.....	1R01 HL21158-01	69,723
THOMPSON, ROBERT G.....	HORMONE INTEGRATED CONCENTRATIONS IN DIABETES.....	5R01 AM18439-03	40,566
TIPTON, CHARLES M.....	INFLUENCE OF CHRONIC EXERCISE ON HYPERTENSIVES.....	1R01 HL21245-01	84,952
TOMANEK, ROBERT J.....	INFLUENCE OF AGING AND HYPERTENSION ON THE MYOCARDIUM.....	5R01 HL18629-03	39,067
VAN ALLEN, MAURICE W.....	FLUID RESTRICTION IN ACUTE SUBARACHNOID HEMORRHAGE.....	5R01 NS12496-03	168,569
VAN ORDEN, DIANNA E.....	BIOGENIC AMINES AND PROSTAGLANDINS IN UTERINE FUNCTION.....	5R01 HD06380-06	89,959
VESTLING, CARL S.....	LIVER AND HEPATOMA DEHYDROGENASES.....	5R01 CA07617-15	65,828
WALLACE, ROBERT B.....	ANOVULATION AND THE EPIDEMIOLOGY OF BREAST CANCER.....	2R01 CA15104-04	122,417
WILLIAMS, TERENCE H.....	NEUROPLASTICITY, AND PROMOTING CENTRAL REGENERATION.....	5R01 NS11650-05	54,798
YOUNOSZAI, M KABIR.....	INTESTINAL FUNCTION DURING INFANCY AND CHILDHOOD.....	3R01 HD08227-03S1	34,915
ORGANIZATION TOTAL	122	11,726,813	
MOUNT VERNON			
CORNELL COLLEGE ZIP CODE 52314			
JORDAN, TRUMAN H.....	SNF2 REACTION WITH APATITE AND OTHER CA/PO4 SYSTEMS.....	5R01 DE04192-03	14,304
ORGANIZATION TOTAL	1	14,304	
STATE TOTAL	147	12,862,222	
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
ARNOLD, WILFRED N.....	CELL ENVELOPES OF PATHOGENIC YEASTS.....	5R01 AI13177-02	48,233
AZARNOFF, DANIEL L.....	FACTORS AFFECTING THE RESPONSES TO DRUGS.....	5P50 GM15956-10	632,132
BAST, JOSEPH D.....	NEUROENDOCRINE REGULATION OF REPRODUCTION IN THE RAT.....	1R01 HD11103-01	48,254
BELMONT, JOHN M.....	DEVELOPMENT OF CHILDREN'S SELF-CONTROLLED COGNITION.....	5R01 HD08911-03	50,714
BOLINGER, ROBERT E.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00828-04	139,226
BUNAG, RUBEN D.....	HYPERTENSION PRODUCED BY SYMPATHETIC DYSFUNCTION.....	5R01 HL14560-06	56,025
BUNAG, RUBEN D.....	CONTRACEPTIVE STEROIDS AND EXPERIMENTAL HYPERTENSION.....	5R01 HL19144-02	30,358
BUTTERFIELD, EARL C.....	INFANT AUDITORY PERCEPTION AND LEARNING.....	5R01 HD04756-07	83,801
CHONKO, ARNOLD M.....	MECHANISM OF URIC ACID TRANSPORT IN THE NEPHRON.....	1R01 AM19624-01	71,870
CLANCY, JOHN, JR.....	GVHD: ROLE OF FC, C3 RECEPTORS AND LYMPHOCYTE HOMING.....	1R01 AI13029-01A1	30,763
COHN, DAVID V.....	PARATHYROID AND PROPARATHYROID HORMONE.....	5R01 AM18323-03	60,022
COOK, JAMES D.....	MUCOSAL IRON TRANSPORT.....	5R01 AM19011-02	58,352
COOKE, ALLAN R.....	MECHANISMS REGULATING GASTRIC EMPTYING AND MOTILITY.....	5R01 AM19924-02	47,933
CUPPAGE, FRANCIS E.....	REGENERATION AND BASIC RESPONSES OF THE NEPHRON.....	5R01 AM12064-11	24,293
DENTLER, WILLIAM L, JR.....	THE ROLE OF MICROTUBULES IN ORGANELLE MOTILITY.....	1R01 AM21672-01	40,918
EBNER, KURT E.....	MECHANISM OF LACTOSE SYNTHESIZING ENZYMES.....	5R01 AM18257-04	56,504
EBNER, KURT E.....	FUNCTION AND INTERACTIONS OF MAMMARY CARCINOMA CELLS.....	5R01 CA17478-03	21,603
FISHER, HARVEY F.....	STRUCTURE AND MECHANISMS OF ACTION OF ENZYMES.....	2R01 GM15188-11	62,373
FRENKEL, JACOB K.....	TOXOPLASMOSIS: ITS TRANSMISSION AND PREVENTION.....	5R01 AI07489-11	80,464
FRENKEL, JACOB K.....	NONLYMPHOID CELLS IMMUNITY TO INTRACELLULAR INFECTION.....	1R01 AI14056-01	51,978
GOLDBERG, IVAN D.....	A GENETIC APPROACH TO THE STUDY OF N. GONORRHOEA.....	5R01 AI11168-05	56,377
GRANTHAM, JARED J.....	MECHANISMS OF TRANSPORT IN ISOLATED KIDNEY TUBULES.....	5R01 AM13476-08	46,922
GREENWALD, GILBERT S.....	FOLLICULAR AND LUTEAL REGULATION IN THE MAMMALIAN OVARY.....	2R01 HD00596-15	85,346
HELMKAMP, GEORGE M, JR.....	MEMBRANE-PHOSPHOLIPID EXCHANGE PROTEIN INTERACTIONS.....	1R01 GM24035-01	52,134
HOOGSTRATEN, BARTH.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	5R10 CA12644-06	281,692
HOOGSTRATEN, BARTH.....	SOUTHWEST ONCOLOGY GROUP (OPERATIONS OFFICE).....	5R10 CA16943-03	682,466
HUDSON, BILLY G.....	STUDIES ON THE STRUCTURE OF BASEMENT MEMBRANES.....	5R01 AM18381-04	33,425
HUNG, KUEN-SHAN.....	DEVELOPMENT OF PULMONARY INNERVATION.....	5R01 HD10139-02	23,036
JEWELL, WILLIAM R.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17959-03	73,205
JOHNSON, DONALD C.....	AGING EFFECTS ON OVARIAN TUMORIGENESIS.....	1R01 AG00665-01	66,162
KIMMEL, JOE R.....	STRUCTURE-FUNCTION RELATIONSHIPS IN PROTEINS.....	5R01 AM09072-13	63,363

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
KIRCHNER, FERNANDO R.....	RADIOISOTOPE SCANNING OF THE MIDDLE EARS AND SINUSES.....	5R01 NS12521-03	26,570
KLAASSEN, CURTIS D.....	BILIARY EXCRETION IN NEONATAL TOXICOLOGY.....	5R01 AM14513-08	43,787
KLAASSEN, CURTIS D.....	CADMIUM TOXICOLOGY.....	5R01 ES01142-03	44,419
LANSKY, SHIRLEY B.....	CHILDHOOD CANCER: PSYCHOSOCIAL REHABILITATION.....	5R18 CA17806-03	134,031
LOWMAN, JAMES T.....	NATIONAL CANCER RESEARCH AND DEMONSTRATION CENTER.....	5P30 CA15080-04	337,514
MAGUIRE, M HELEN.....	PURINE NUCLEOTIDE METABOLISM IN HEMOCHORIAL PLACENTAS.....	5R01 HD08653-03	63,624
MATTIOLI, LEONE F.....	FETAL RENIN SYSTEM IN HYPOXIC AND HYPOVOLEMIC STRESS.....	5R01 HD10137-02	16,889
MELNYKOBYCH, GEORGE.....	STERIOD INDUCED CHANGES IN CULTURED MALIGNANT CELLS.....	5R01 CA08315-13	51,998
MILLS, RUSSELL C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05373-16	150,868
MORANTZ, ROBERT A.....	IMMUNOTHERAPY OF EXPERIMENTAL BRAIN TUMORS.....	1R01 CA19318-01A1	33,643
NELSON, STANLEY R.....	HEMODYNAMIC EFFECTS OF BRAIN EDEMA.....	5R01 HL16480-03	23,224
OTHMER, EKKEHARD.....	CLASSIFICATION OF SLEEP EEG BY BISECTOR ANALYSIS.....	7R01 NS14280-01	83,993
PARK, CHAN H.....	CHEMOTHERAPY OF NORMAL AND LEUKEMIC MARROW IN VITRO.....	1R01 CA20717-01	54,962
POISNER, ALAN M.....	CELLULAR MECHANISMS OF RENIN SECRETION.....	1R01 HL20278-01	54,898
REISSMANN, KURT R.....	SELECTIVE MYELOTOXIC EFFECT OF ANTITUMOR DRUGS.....	5R01 CA08736-12	44,907
ROBINSON, RALPH G.....	CLINICAL EVALUATION OF 99MTC AS A LEUKOCYTE LABEL.....	5R01 GM22814-02	58,594
SCHLOERB, PAUL R.....	KINETICS OF WATER AND ELECTROLYTES IN SHOCK.....	3R01 HL02363-18S1	406
SCHLOERB, PAUL R.....	KINETICS OF WATER AND ELECTROLYTES IN SHOCK.....	5R01 HL02363-19	78,845
SILVERSTEIN, RICHARD.....	PEP CARBOXYKINASE IN SUDDEN INFANT DEATH SYNDROME.....	1R01 HD10562-01	34,965
SULLIVAN, LAWRENCE P.....	STUDY OF FACTORS AFFECTING RENAL POTASSIUM TRANSPORT.....	5R01 AM15883-06	41,137
SVOBODA, DONALD J.....	HEPATOCELLULAR RESPONSES TO DRUGS AND CARCINOGENS.....	2R01 CA05680-16	60,952
TARR, CHARLES M.....	CONTRACTILE ACTIVITY OF SINGLE CARDIAC CELLS.....	5R01 HL18943-02	42,905
UYEKI, EDWIN M.....	TOXICITY OF BENZENE AND RELATED COMPOUNDS.....	5R01 ES01004-03	28,781
VOOGT, JAMES L.....	PITUITARY HORMONES AND BRAIN AMINES DURING REPRODUCTION.....	1R01 HD11922-01	74,041
WELLING, LARRY W.....	ANALYTIC FORMULATION OF TRANSPORT IN SINGLE NEPHRONS.....	2R01 AM16968-05	68,000
WONG, KIN-PING.....	ACQUISITION OF NATIVE CONFORMATION OF PROTEIN.....	2R01 HL18905-03	40,601
WOOD, GARY W.....	ROLE OF MACROPHAGES IN TUMOR GROWTH AND METASTASIS.....	5R01 CA19333-02	34,600
WOOD, JACKIE D.....	STUDY OF CONGENITAL MEGACOLON OF MICE.....	2R01 AM16813-04	48,475
ORGANIZATION TOTAL	59	4,937,573	
LAWRENCE			
U.S. DEPARTMENT OF THE INTERIOR—HASKELL INDIAN JUNIOR COLLEGE ZIP CODE 66044			
AHSHAPANEK, DON C.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	5S06 RR08137-02	62,338
ORGANIZATION TOTAL	1	62,338	
UNIVERSITY OF KANSAS ZIP CODE 66045			
ADAMS, RALPH N.....	ELECTROCHEMISTRY-EPR OF BIOLOGICAL ELECTRON TRANSFER.....	5R01 NS08740-12	55,110
BORCHARDT, RONALD T.....	STRUCTURAL ANALOGS OF S-ADENOSYLMETHIONINE.....	3R01 NS10198-04S1	6,202
BORCHARDT, RONALD T.....	INHIBITION OF CATECHOL-O-METHYLTRANSFERASE.....	2R01 NS10918-04	34,377
BULLER, CLARENCE S.....	VIRUS-INDUCED CHANGES IN MEMBRANE FUNCTION.....	5R01 AI12820-03	35,595
BURTON, PAUL R.....	EM STUDIES OF MICROTUBULAR ELEMENTS AND A RICKETTSIA.....	5R01 AI06448-13	28,292
DAVIS, JOHN C.....	FSH ACTIONS ON MAMMALIAN TESTIS CELLS IN CULTURE.....	5R01 HD10953-02	55,540
DIXON, LOIS S.....	CONDITIONAL STIMULUS CONTROL OVER CHOICE RESPONDING.....	1R01 HD11194-01	41,714
FAIMAN, MORRIS D.....	DISULFIRAM-OXYGEN THERAPY: OXYGEN TOXICITY CONCEPTS.....	5R01 NS07797-06	55,540
FLYNN, CYNTHIA B.....	MIGRATION OF AGED IN THE UNITED STATES.....	1R01 AG00703-01	65,596
FOX, J EUGENE.....	STUDIES ON A CYTOKININ-BINDING PROTEIN.....	5R01 GM22842-02	31,478
GIVENS, RICHARD S.....	EXPLORATORY AND SYNTHETIC PHOTOCHEMISTRY.....	5R01 GM16611-08	29,672
GIVENS, RICHARD S.....	STUDIES ON MUSCARINIC NEUROTRANSMITTER ANALOGS.....	5R01 NS12271-03	28,889
GRUNEWALD, GARY L.....	CONFORMATIONALLY DEFINED ADRENERGIC AMINES.....	5R01 GM22988-02	53,098
HANZLIK, ROBERT P.....	METABOLISM AND TOXICITY OF ORGANOMETALLIC AGENTS.....	1R01 ES01375-01	58,191
HANZLIK, ROBERT P.....	THE ROLE OF EPOXIDES IN METABOLISM AND DRUG TOXICITY.....	5R01 GM21784-03	51,215
HEFFNER, HENRY E.....	BEHAVIORAL ANALYSIS OF THE ROLE OF AUDITORY CORTEX.....	5R01 NS12992-02	29,893
HERSH, ROBERT T.....	PROPERTIES OF ALPHA CRYSTALLIN OF THE LENS.....	5R01 EY01702-02	26,552
HIGUCHI, TAKERU.....	CYTOTOXIC AND MUTAGENIC MECHANISMS.....	5R01 GM18348-06	30,320
HIMES, RICHARD H.....	FORMYLTETRAHYDROFOLATE SYNTHETASE.....	5R01 AM07140-13	33,243
HIMES, RICHARD H.....	PROPERTIES OF MICROTUBULAR PROTEIN.....	2R01 NS11360-02A1	42,396
HOLLIS, JOHN.....	USE OF NONSPEECH RESPONSES TO TEACH COMMUNICATION.....	5R01 HD07339-03	46,979
HOROWITZ, FRANCES D.....	INFANTS—INDIVIDUAL DIFFERENCES AND ENVIRONMENTS.....	1R01 HD10608-01	83,685

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
HOUSTON, L LUGENE.....	RICIN: A PLANT AGGLUTININ WITH ANTITUMOR PROPERTIES.....	2R01 CA16206-03	52,221
LEE, BYUNGKOOK.....	CRYSTALLOGRAPHIC STUDIES ON THE ENZYME L-ASPARAGINASE.....	2R01 CA16237-04	54,535
LINDENBAUM, SIEGFRIED.....	THERMODYNAMIC STUDIES OF BILE ACID MICELLAR SOLUTIONS.....	3R01 AM18084-03S1	5,274
LINDENBAUM, SIEGFRIED.....	THERMODYNAMIC STUDIES OF BILE ACID MICELLAR SOLUTIONS.....	2R01 AM18084-04	50,468
MC CHESNEY, JAMES D.....	CYTOKININ GLYCOSIDES—POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19978-02	25,435
MERTES, MATHIAS P.....	COFACTOR INHIBITION OF THYMIDYLATE SYNTHETASE.....	5R01 CA07522-13	60,058
MERTES, MATHIAS P.....	CANCER CHEMOTHERAPY: CONTROL OF GENE EXPRESSION.....	5R01 CA16423-03	40,419
MERTES, MATHIAS P.....	CENTER FOR DRUG DESIGN.....	5P01 GM22357-02	351,074
MERTES, MATHIAS P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05606-11	57,976
MITSCHER, LESTER A.....	NEW ANTIBIOTICS—ISOLATION, SYNTHESIS, AND EVALUATION.....	5R01 AI13155-03	7,728
MULDER, JOHN B.....	IMPROVEMENT OF ANIMAL CARE SERVICES AND FACILITIES.....	5P40 RR00996-02	53,041
RISLEY, TODD R.....	THE DEVELOPMENT OF CULTURALLY DEPRIVED CHILDREN.....	5P01 HD03144-10	327,981
ROBERTSON, DONALD C.....	PATHOGENICITY OF ENTEROTOXIGENIC ESCHERICHIA COLI.....	5R22 AI12357-03	33,585
RUTLEDGE, CHARLES O.....	DRUGS ON RELEASE OF BIOGENIC AMINES AND BEHAVIOR.....	5R01 NS12760-03	71,993
SCHIEFELBUSCH, RICHARD L.....	PROGRAM FOR A RESEARCH CENTER IN MENTAL RETARDATION.....	5P30 HD02528-11	483,420
SCHOWEN, RICHARD L.....	ENZYME EFFECTOR DESIGN.....	5R01 GM20198-04	59,153
SCHOWEN, RICHARD L.....	MODELS FOR BIOLOGICAL TRANSMETHYLATION.....	5R01 GM20199-03	45,177
SNYDER, HENRY L.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07037-12	130,298
SPRADLIN, JOSEPH E.....	COMMUNICATIONS RESEARCH WITH RETARDED CHILDREN.....	5P01 HD00870-14	469,749
STELLA, VALENTINO J.....	THIAMINE PRO-DRUGS IN ALCOHOLISM AND ENCEPHALOPATHIES.....	5R01 NS11998-03	34,511
STERNSON, LARRY A.....	OXIMES IN THE STUDY OF AMINE-MEDIATED CARCINOGENESIS.....	5R01 CA18615-03	32,418
STERNSON, LARRY A.....	THE ROLE OF ARYLHYDROXYLAMINES IN CARCINOGENESIS.....	5R01 CA19288-02	51,127
WEAVER, ROBERT F.....	TRANSCRIPTION CONTROL IN NUCLEAR POLYHEDROSIS VIRUS.....	5R01 GM22127-03	51,363
WENZEL, DUANE G.....	O3 LUNG MACROPHAGE-FIBROBLAST INTERACTIONS.....	1R01 ES01315-01	54,310
ZIMBRICK, JOHN D.....	EPR STUDIES ON DETECTION AND TREATMENT OF CANCER.....	5R01 CA14335-03	46,020
ZIMBRICK, JOHN D.....	STUDIES ON DNA BASE DAMAGE INDUCED BY GAMMA RADIATION.....	5R01 GM18927-06	45,733
ORGANIZATION TOTAL	48	3,683,644	

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BODE, VERNON C.....	BIOCHEMICAL STUDIES ON THE REGULATION OF DNA FUNCTION.....	5R01 GM18182-06	86,935
CONRAD, GARY W.....	FIBROBLAST DIFFERENTIATION DURING EYE DEVELOPMENT.....	5R01 EY00952-06	36,821
CONRAD, GARY W.....	MOLLUSCAN POLAR LOBES: ROLE IN EMBRYONIC DEVELOPMENT.....	2R01 HD07193-04	43,499
CONSIGLI, RICHARD A.....	STUDIES IN POLYOMA TRANSFORMED CELLS—VIRION PROTEINS.....	5R01 CA07139-14	72,313
COX, DAVID J.....	SELF-ASSOCIATION REACTIONS OF MACROMOLECULES.....	5R01 GM22243-03	36,323
DAVIS, LAWRENCE C.....	DIRECT SCANNING GEL FILTRATION ON INTERACTING SYSTEMS.....	5R01 GM23039-02	29,765
FLORA, CORNELIA B.....	PERCEIVED ADVANTAGES & DISADVANTAGES OF CHILDBEARING.....	5R01 HD10681-02	22,307
HEDGCOCH, CHARLIE, JR.....	EFFECT OF VIRUS-INDUCED TRANSFORMATION ON TRNA.....	5R01 CA12741-06	39,290
KRUH, R F.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07036-12	51,699
MARCHIN, GEORGE L.....	VIRAL MODIFICATION OF AN AMINO ACID ACTIVATING ENZYME.....	5R01 AI10858-06	34,419
MURPHY, DOUGLAS B.....	THE MOLECULAR MECHANISM OF INTRACELLULAR MOTILITY.....	1R01 GM24208-01	58,826
REECK, GERALD R.....	TUMOR-ENRICHED NONHISTONE CHROMATIN PROTEINS.....	5R01 CA17782-03	36,993
ROCHE, THOMAS E.....	REGULATION OF LIVER AND BRAIN PYRUVATE DEHYDROGENASE.....	5R01 AM18320-03	34,833
RODKEY, L SCOTT.....	AUTOREGULATION OF IMMUNE PROCESSES.....	5R01 AI12389-03	41,462
ROUFA, DONALD J.....	GENETICS OF THE MAMMALIAN 80S RIBOSOME.....	2R01 GM23013-02	57,543
SMITH, JOSEPH E.....	GLUTATHIONE DEFICIENCY IN RED CELLS.....	2R01 HL12972-08	37,645
SPOONER, BRIAN S.....	MICROFILAMENTS, MORPHOGENESIS, AND CYTODIFFERENTIATION.....	5R01 GM19289-06	65,524
WESTFALL, JANE A.....	ELECTRON MICROSCOPY OF NEURONS, AXONS AND SYNAPSES.....	5R01 NS10264-05	36,026
ORGANIZATION TOTAL	18	822,223	

TOPEKA

MENNINGER FOUNDATION ZIP CODE 66601

KOVACH, JOSEPH K.....	DEVELOPMENT OF A BEHAVIORAL PHENOTYPE.....	5R01 HD06770-05	94,004
ORGANIZATION TOTAL	1	94,004	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
WICHITA			
WICHITA STATE UNIVERSITY	ZIP CODE 67208		
NISHIMURA, ALLAN M.....	THE EXCITED TRIPLET ELECTRONIC STATE OF FLAVINS.....	5R01 GM21770-03	7,806
ORGANIZATION TOTAL	1	7,806	
STATE TOTAL	128	9,607,588	
KENTUCKY			
FRANKFORT			
KENTUCKY STATE UNIVERSITY	ZIP CODE 40601		
RIDGEL, GERTRUOE C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08124-04	52,516
ORGANIZATION TOTAL	1	52,516	
LEXINGTON			
EPHRAIM MC DOWELL COMMUNITY CANCER NETWORK	ZIP CODE 40503		
GOLOENBERG, DAVID M.....	EXPLORATORY STUDIES IN ENVIRONMENTAL CANCER.....	1P20 CA19467-01A1	112,750
GOLDENBERG, DAVID M.....	EXPLORATORY STUDY IN CANCER INREACH NETWORK.....	3R18 CA19470-01S1	10,404
GOLDENBERG, DAVID M.....	MC DOWELL COMMUNITY OUTREACH DEVELOPMENT PROGRAM.....	1R18 CA22124-01	312,240
ORGANIZATION TOTAL	3	435,394	
UNIVERSITY OF KENTUCKY	ZIP CODE 40506		
BARKLEY, MARY O.....	PHYSICAL STUDIES OF THE LAC REPRESSOR.....	5R01 GM22873-03	49,973
BONNER, PHILIP H.....	INNERVATION AND MUSCLE CELL TYPES IN EARLY MYOGENESIS.....	5R01 HD10307-02	32,204
BROOKS, WILLIAM H.....	IMMUNOBIOLOGY OF PRIMARY INTRACRANIAL TUMORS.....	5R01 CA18234-02	71,192
BROWNSTEIN, BERNARD H.....	STUDIES OF RIBOSOMES FROM HISTOPLASMA CAPSULATUM.....	1R01 AI13360-01A1	42,927
BULLOCK, WARD E.....	IN VIVO STUDIES OF DELAYED HYPERSENSITIVITY IN LEPROSY.....	2R22 AI10094-07	83,058
CHAN, SHUNG K.....	ALPHA-1-ANTITRYPSIN STRUCTURE IN RELATION TO EMPHYSEMA.....	2R01 HL16166-04	88,678
CLAWSON, D KAY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05374-16	123,927
COLE, JAMES S.....	DEVELOPMENT OF A PULSED DOPPLER VELOCITY DETECTOR.....	5R01 HL20630-02	55,119
COLEMAN, MARY S.....	TERMINAL TRANSFERASE IN MAMMALIAN HEMOPOIETIC CELLS.....	5R01 CA19492-02	44,762
CONTI, SAMUEL F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07114-09	26,076
CSAKY, T Z.....	A STUDY OF BIOLOGICAL TRANSPORT OF SUGARS.....	3R01 AM15734-14S2	10,005
DE SIMONE, PHILIP A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18107-03	70,596
DE SIMONE, PHILIP A.....	SOUTHEASTERN CANCER STUDY GROUP.....	1R10 CA20255-01A1	62,401
DICKSON, ROBERT C.....	EUCARYOTIC ENZYME INDUCTION—YEAST BETA-GALACTOSIDASE.....	5R01 GM22749-02	41,299
DIEDRICH, DONALO F.....	PHLORIZIN INHIBITION OF SUGAR TRANSPORT.....	5R01 AM06878-16	54,331
DRUMMOND, JAMES F.....	ENOOTOXINS AND ETIOLOGY OF PERIODONTITIS.....	5R01 DE04083-03	40,509
GETTES, LEONARDO S.....	EFFECT OF DRUGS ON PURKINJE AND VENTRICULAR FIBERS.....	3R01 HL13321-07S1	25,760
GETTES, LEONARD S.....	EFFECT OF DRUGS ON ISCHEMIC CARDIAC CELLS.....	5R01 HL13321-08	109,417
GOCKERMAN, JON P.....	PLATELET TRANSFUSIONS IN ALLOIMMUNIZED PATIENTS.....	5R01 CA19107-02	34,234
GOLDENBERG, DAVID M.....	A MODEL FOR COLONIC CANCER-ASSOCIATED ANTIGENS.....	3R26 CA15799-03S1	17,681
GOLDENBERG, DAVID M.....	ROLE OF IN VIVO CELL FUSION IN NEOPLASIA.....	5R01 CA17198-03	60,860
GOLDENBERG, DAVID M.....	RADIOLOGICAL LOCALIZATION OF HUMAN TUMORS.....	5R01 CA17742-03	45,297
GORDON, HELMUT A.....	PRODUCTION OF IMPROVED GERM-FREE ANIMALS.....	5R01 RR01042-02	60,343
HAKIM, RAZIEL S.....	ROLE OF METAPLASIA IN A NONDIVIDING CELL SYSTEM.....	2R01 HD07908-04	42,813
HOLLAND, PHILLIP C.....	TERMINAL TRANSFERASE AND SURFACE MARKERS IN LEUKEMIA.....	5R01 CA19842-02	72,853
HURLEY, LAURENCE H.....	BIOSYNTHESIS AND MODE OF ACTION OF ANTHRAMYCIN.....	5R01 CA17047-03	34,455
JAMES, ERIC.....	TRANSLATION IN VITRO OF MOLONEY LEUKEMIA VIRUS RNA.....	7R01 CA23061-01	55,761
KOTCHEN, JANE M.....	HIGH BLOOD PRESSURE IN THE YOUNG.....	5R01 HL19956-02	102,348
KOTCHEN, THEODORE A.....	RENIN KINETICS IN HYPERTENSIVE AND UREMIC PLASMA.....	2R01 HL15528-04	56,264
LAINE, ROGER A.....	CHEMISTRY OF CELL-SURFACE AND RELEASED GLYCOPROTEINS.....	1R01 GM23902-01	48,600
LESNAW, JUDITH A.....	REPLICATION OF NEGATIVE STRAND RNA VIRUSES.....	5R01 AI13574-02	34,491
LESTER, ROBERT L.....	THE BIOCHEMISTRY OF INOSITOL PHOSPHOLIPIDS IN FUNGI.....	5R01 AI12299-03	85,663

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KENTUCKY—Continued			
LUKE, ROBERT G.....	STUDIES ON RENAL CHLORIDE EXCRETION.....	2R01 AM13859-07	69,848
MARUYAMA, YOSH.....	STUDY OF TUMOR RADIOBIOLOGY.....	2R01 CA13849-04A1	39,670
MARUYAMA, YOSH.....	RADIATION THERAPY ONCOLOGY PROGRAM.....	2P01 CA17786-03	249,407
MEEKER, WILLIAM R, JR.....	COOPERATIVE STUDY OF ONCOLOGY.....	3R10 CA12283-05S3	9,089
MILLER, RALPH E.....	NEURAL REGULATION OF INSULIN SECRETION RATE.....	2R01 AM17082-04	59,612
OTT, COBERN E.....	RENAL REGULATION OF SALT AND WATER BALANCE.....	1R01 AM19693-01	39,459
PETT, DONALD M.....	STRUCTURAL PROTEINS OF ONCOGENIC HUMAN PAPOVAVIRUSES.....	5R01 CA20880-02	31,020
RANDALL, DAVID C.....	BEHAVIORAL INFLUENCES ON CARDIAC CONTRACTILITY.....	3R01 HL19343-01S1	15,071
RANDALL, DAVID C.....	BEHAVIORAL INFLUENCES ON CARDIAC CONTRACTILITY.....	5R01 HL19343-02	57,271
RHOADS, ROBERT E.....	REGULATION OF OVALBUMIN SYNTHESIS IN CHICK OVIDUCT.....	2R01 GM20818-04	72,828
ROSENTHAL, GERALD A.....	THE ENZYMOLOGY OF ARGININE AND CANAVANINE BIOSYNTHESIS.....	5R01 AM17322-04	7,116
SABES, WILLIAM R.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA17992-03	37,380
SAMMON, PATRICK J.....	STUDIES INTO THE METABOLISM OF PARATHYROID HORMONE.....	5R23 DE04280-02	35,964
YOUNG, ALFRED B.....	POST-TRAUMATIC EPILEPSY PROPHYLAXIS.....	1R01 NS13454-01	68,815
ZECHMAN, FRED W.....	CONTROL OF VENTILATION IN HEALTH AND DISEASE.....	5P01 HL16878-04	212,472
ZIMMER, STEPHEN G.....	MOLECULAR PATHOLOGY OF DNA ONCOGENIC VIRUSES.....	1R01 CA21339-01	40,403
ZIMMER, STEPHEN G.....	EARLY GENE TRANSCRIPTION IN ADENOVIRUS 2 INFECTED CELLS.....	1R01 CA21807-01	46,930
ORGANIZATION TOTAL	49	2,876,252	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 40507			
ANDERSON, JAMES W.....	HIGH CARBOHYDRATE, HIGH FIBER DIETS FOR DIABETICS.....	1R01 AM20889-01	42,844
ORGANIZATION TOTAL	1	42,844	
LOUISVILLE			
UNIVERSITY OF LOUISVILLE ZIP CODE 40208			
BURTON, ROBERT M.....	A RADIOIMMUNOASSAY FOR HUMAN OVARIAN CANCER.....	3R01 CA15256-03S1	1,223
BURZYNSKI, NORBERT J.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA18006-03	64,740
CARR, LAURENCE A.....	BIOCHEMISTRY OF LONG-TERM MEMORY FORMATION.....	5R01 NS12129-03	45,771
FLOWERS, NANCY C.....	RECORDING AND ANALYSIS OF LOW LEVEL CARDIAC SIGNALS.....	1R01 HL19768-01	54,446
FRIEND, JERRY P.....	ESTROGEN AND PITUITARY DEVELOPMENT.....	5R01 HD08844-03	39,561
HOFFMAN, JERALD L.....	METHIONINE ADENOSYLTRANSFERASE AND NEOPLASIA.....	1R01 CA22166-01	65,124
HOPE, GEORGE M.....	COLD LIMITS ON PHOTORECEPTOR VIABILITY AND FUNCTION.....	5R01 EY01228-03	13,675
HORAN, LEO G.....	EMF PATTERNS DECODED TO HEART GEOMETRY BY DIPOLAR PAIR.....	5R01 HL16901-04	34,902
KALSOW, CAROLYN M.....	AUTOANTIGENS OF THE GUINEA PIG RETINA AND UVEA.....	5R23 EY01516-03	9,775
KEENEY, ARTHUR H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05375-16	59,580
LIU, PINGHUI V.....	HEMOLYSINS OF STAPHYLOCOCCI AND PSEUDOMONAS AERUGINOSA.....	5R01 AI05283-15	40,393
LIU, YONG K.....	SOUTHEASTERN CANCER CHEMOTHERAPY GROUP.....	3R10 CA16389-02S1	28,270
MOORE, CONDUCT.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17985-03	114,621
MOORE, CONDUCT.....	CANCER CONTROL DEVELOPMENTAL AND SUPPORT GRANT.....	1R18 CA22091-01	281,134
POTTS, ALBERT M.....	PATHOPHYSIOLOGICAL STUDIES ON OPTIC NERVE.....	5R01 EY01704-03	76,304
POTTS, ALBERT M.....	AN EXPERIMENTAL STUDY OF ANTIGLAUCOMA SURGERY.....	1R01 EY01941-01	65,571
RAO, VENKATESWARA C.....	PROSTAGLANDIN; GONADOTROPIN RECEPTORS IN CORPORA LUTEA.....	5R01 HD09577-02	62,028
REID, KENNETH H.....	NEUROPHYSIOLOGY OF TOOTH PAIN.....	5R01 DE03644-05	26,425
STAAT, ROBERT H.....	DENTAL PLAQUE GLUCANOHYDROLASES AND CARIES FORMATION.....	5R01 DE04666-02	63,494
SWARTZ, FRANK J.....	POLYPLOIDIZATION OF NORMAL AND DIABETIC ISLETS.....	1R01 AM21120-01	25,430
SWIGART, RICHARD H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07153-02	15,867
TAYLOR, K GRANT.....	USEFUL AMINES VIA CYCLOADDITIONS OF AZA-1,3-DIENES.....	5R01 GM19212-03	53,114
WACKER, WALDON B.....	AUTO AND ISO-IMMUNE RESPONSE TO OCULAR TISSUES.....	5R01 EY00254-11	43,676
WESTPHAL, ULRICH F.....	STEROID-PROTEIN INTERACTIONS.....	5R01 AM06369-16	107,719
WILLIAMS, DONALD E.....	DERIVATION OF NONBONDED POTENTIAL PARAMETERS.....	5R01 GM16260-09	44,015
WILSON, RONALD S.....	HERITABILITY AND MENTAL DEVELOPMENT.....	2R01 HD07200-03	88,774
WONG, JOHN L.....	MOLECULAR MECHANISMS OF CHEMICAL CARCINOGENESIS.....	2R01 CA16182-04	53,440
YANKEELOV, JOHN A, JR.....	COVALENT CONTROL OF CORNEA-DAMAGING COLLAGENASE.....	5R01 EY00969-06	84,391
ORGANIZATION TOTAL	28	1,663,463	
STATE TOTAL	82	5,070,469	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA			
BATON ROUGE			
GULF SOUTH RESEARCH INSTITUTE ZIP CODE 70808			
WALSH, GERALD P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05672-07	28,862
ORGANIZATION TOTAL	1	28,862	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AT BATON ROUGE ZIP CODE 70803			
CHANG, SIMON H.....	ROLE OF TRANSFER RNA IN CELLULAR AGING.....	2R01 AG00454-04	35,740
CHANG, SIMON H.....	TRANSFER RNA IN NORMAL AND NEOPLASTIC HUMAN CELLS.....	5R01 CA16841-03	15,870
CULLEY, DUDLEY D, JR.....	CONTROL OF BREEDING AND DISEASES OF LABORATORY FROGS.....	5P40 RR00635-06	51,403
FISCHER, NIKOLAUS H.....	SESQUITERPENE LACTONES FROM MELAMPODIINAE (COMPOSITAE).....	5R01 CA19800-02	36,182
HALES, BRIAN J.....	STRUCTURE AND REACTIVITY OF PHOTOTRAP COMPLEXES.....	5R01 GM21701-03	15,535
HALES, BRIAN J.....	RADICAL INTERACTIONS IN RIGID MEDIA.....	5R01 GM23272-02	33,430
LEE, WILLIAM R.....	QUANTITATIVE GENETIC STUDY OF ENVIRONMENTAL MUTAGENS.....	3R01 ES00320-09S1	7,310
LEE, WILLIAM R.....	QUANTITATIVE GENETIC STUDY OF ENVIRONMENTAL MUTAGENS.....	5R01 ES00320-10	73,529
NEWKOME, GEORGE R.....	PYRIDINE HETEROMACROCYCLES: FUTURE BIOLOGICAL MODELS.....	5R01 GM20985-06	35,375
PRYOR, WILLIAM A.....	FREE RADICAL REACTIONS IN BIOLOGICAL SYSTEMS.....	5R01 GM11908-10	46,242
PRYOR, WILLIAM A.....	BIO-ORGANIC CHEMISTRY OF OZONE, NO2 AND TOBACCO SMOKE.....	2R01 HL16029-04	90,606
TRAYNHAM, JAMES G.....	BIOMEDICAL SCIENCES SUPPORT GRANT.....	5S07 RR07039-06	42,924
ORGANIZATION TOTAL	12	484,146	
SOUTHERN UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE BATON ROUGE ZIP CODE 70813			
CHRISTIAN, FRED A.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08025-06	51,939
CHRISTIAN, FRED A.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08025-07	283,067
ORGANIZATION TOTAL	2	335,006	
COVINGTON			
TULANE UNIVERSITY ZIP CODE 70433			
BRIZZEE, KENNETH R.....	PRENATAL LOW-DOSE IRRADIATION EFFECTS ON PRIMATE BRAIN.....	5R01 HD09942-02	71,050
LI, YU-TEH.....	GLYCOSIDASES AS RELATED TO SPHINGOLIPIDOSES.....	5R01 NS09626-07	71,779
LOWRIE, ROBERT C, JR.....	ARTHROPOD VECTORS OF FILARIAE.....	5R22 AI13555-02	18,427
MARTIN, LOUIS N.....	STUDIES OF IMMUNOGLOBULIN D IN NONHUMAN PRIMATES.....	5R01 AI12610-03	28,403
ORIHEL, THOMAS C.....	STUDY OF FILARIAE OF MAN IN PRIMATES.....	5R22 AI10269-06	55,921
ROBERTS, JAMES A.....	HOST-PARASITE INTERACTION IN PYELONEPHRITIS.....	5R01 AM14681-08	117,539
WALSH, JOHN J.....	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00164-16	1,381,917
ORGANIZATION TOTAL	7	1,745,036	
GRAMBLING			
GRAMBLING STATE UNIVERSITY ZIP CODE 71245			
HILL, FRANKLIN D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08054-05	92,571
ORGANIZATION TOTAL	1	92,571	
NEW IBERIA			
GULF SOUTH RESEARCH INSTITUTE-ATCHAFALAYA BASIN LABORATORIES ZIP CODE 70560			
STORRS, ELEANOR E.....	STUDY OF LEPROSY IN THE ARMADILLO.....	3R22 AI11532-03S1	337
STORRS, ELEANOR E.....	DEVELOPMENT OF A LABORATORY ANIMAL RESOURCE.....	5P40 RR00455-09	148,935
ORGANIZATION TOTAL	2	149,272	
NEW ORLEANS			
ALTON OCKSNER MEDICAL FOUNDATION ZIP CODE 70121			
BOWEN, JOHN C.....	GASTRIC MUCOSAL INTEGRITY: INTRACELLULAR HYPOXIA.....	1R01 AM19897-01	51,387
FROHLICH, EDWARD D.....	HEMODYNAMIC RELATIONS TO METABOLISM IN HYPERTENSION.....	5R01 HL20572-02	134,479
FROHLICH, EDWARD D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05518-15	19,911
PORTER, GEORGE H, III.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA15578-03S1	15,642

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
WALSH, GERALD M.....	REGIONAL HEMODYNAMICS IN SPONTANEOUS HYPERTENSION	5R01 HL20542-02	29,599
ORGANIZATION TOTAL	5 251,018		
DILLARD UNIVERSITY ZIP CODE 70122			
VERRETT, JOYCE M.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES	5S06 RR08064-06	21,048
VERRETT, JOYCE M.....	SUPPQRT FOR STUDY OF BIOMEDICAL SCIENCES	2S06 RR08064-07	120,344
ORGANIZATION TOTAL	2 141,392		
GULF SOUTH RESEARCH INSTITUTE—LAKE PONTCHARTRAIN LABORATORIES ZIP CODE 70146			
EHRlich, KENNETH C.....	BIOCHEMISTRY OF LUNG PROTEOGLYCANs	1R01 HL21617-01	54,063
MAY, PAUL D.....	CHLORINATED POLYETHYLENE FOR MAXILLOFACIAL PROSTHESES	5R01 DE04392-02	102,129
ORGANIZATION TOTAL	2 156,192		
LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION—CHARITY HOSPITAL OF LOUISIANA ZIP CODE 70140			
HULL, EDGAR W.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA14493-04	144,569
ORGANIZATION TOTAL	1 144,569		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119			
BERENSON, GERALD S.....	BIOCHEMISTRY OF CARDIOVASCULAR CONNECTIVE TISSUE.....	2R01 HL02942-21	119,664
BERENSON, GERALD S.....	SUPPORT FOR ARTERIOSCLEROSIS RESEARCH CENTER.....	3P50 HL15103-05S1	100,188
BERENSON, GERALD S.....	A/S SCOR—EARLY NATURAL HISTORY OF ARTERIOSCLEROSIS.....	2P50 HL15103-06	623,216
BERLIN, CHARLES I.....	PERIPHERAL AND CENTRAL AUDITORY MECHANISMS.....	2P50 NS11647-03	444,012
BICKERS, JOHN N.....	SOUTHWEST ONCOLOGY GROUP INSTITUTIONAL MEMBERSHIP.....	5R10 CA16422-03	48,040
BIUNDO, JOSEPH J, JR.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM21147-01	122,074
BOCKMAN, EMMA L.....	BLOOD FLOW REGULATION IN MUSCLE.....	5R01 HL17932-03	21,897
COHN, ISIDORE, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	3R10 CA12031-05S2	14,730
COHN, ISIDORE, JR.....	ADMINISTRATION OF NATIONAL PANCREATIC CANCER PROJECT	5R26 CA17500-03	204,409
COHN, ISIDORE, JR.....	SUPPORT FOR GERMFREE FACILITY.....	3P40 RR00272-11S2	51,177
HALPERIN, VICTOR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18703-02	37,296
HENECHAN, JAMES B.....	GASTROINTESTINAL PHYSIOLOGY IN GNOTOBIOTES.....	5R01 AM18886-02	55,152
HOWE, CALDERON.....	IMMUNOCHEMICAL STUDY OF VIRUS RECEPTORS & INFECTED CELLS.....	5R01 AI10945-06	61,675
KOSTRZEWA, RICHARD M.....	GROWTH AND DEVELOPMENT OF MONOAMINERGIC NEURONS.....	5R01 NS13412-02	25,148
LIU, MAW-SHUNG.....	METABOLISM OF DIABETIC MYOCYTES IN SHOCK.....	1R01 AM21052-01	48,130
LIU, MAW-SHUNG.....	SUBSTRATE METABOLISM IN ISOLATED MYOCYTES IN SHOCK.....	1R01 HL21223-01	47,630
LIU, MAW-SHUNG.....	HORMONE-SUBSTRATE INTERACTION IN DIABETIC MYOCYTE.....	1R01 HL22101-01	52,365
MORGAN, LEE R.....	BIOCHEMICAL MARKERS IN DISEASES OF THE LARGE BOWEL.....	5R26 CA16766-03	62,472
NANCE, FRANCIS C.....	SURGICAL PATHOPHYSIOLOGY IN GNOTOBIOTIC ANIMALS.....	5R01 AI10095-06	106,103
NARAYANAN, C H.....	NEUROEMBRYOLOGY OF JAW MUSCLE PROPRICEPTION.....	5R01 DE04258-03	30,820
O'QUINN, SILAS E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05376-16	124,528
OALMANN, MARGARET C.....	ATHEROSCLEROSIS, CORONARY HEART DISEASE, SUDDEN DEATH.....	1R01 HL21534-01	67,044
RAWLS, HENRY R.....	F-RELEASING AND ACID BARRIER-POLYMER CARRIES THERAPIES.....	1R01 DE04749-01	25,668
RAYSON, JACK H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05704-07	18,588
REEVES, RICHARD E.....	BIOCHEMISTRY OF ENTERIC AMOEBIA AND RELATED ORGANISMS.....	5R01 AI02951-16	37,529
ROHEIM, PAUL S.....	HYPERLIPOPROTEINEMIA.....	7R01 HL20954-01	112,764
SMITH, DIANE E.....	POSTNATAL DEVELOPMENT OF THE SPINOCEREBELLAR SYSTEMS.....	5R01 NS13155-02	37,059
SPITZER, JOHN J.....	STUDY OF REMOVAL AND MOBILIZATION OF LIPIDS.....	3R01 HL16850-03S1	6,332
UPDYKE, BRUCE V.....	VISUAL AND ASSOCIATION CONNECTIONS OF PULVINAR.....	1R01 EY01925-01	57,930
VILLAREJOS, VICTOR M.....	EPIDEMIOLOGY OF HEPATITIS B ANTIGEN AND VIRAL HEPATITIS.....	5R01 AI12910-02	207,188
WEBSTER, DOUGLAS B.....	CENTRAL PROJECTIONS OF RESIDUAL SPIRAL GANGLION CELLS.....	5R01 NS12510-02	36,951
ZELEDON, RODRIGO A.....	EPIDEMIOLOGY AND IMMUNITY OF LEISHMANIASIS.....	5R01 AI13572-02	66,795
ZIMMERMAN, THOMAS J.....	TIMOLOL: A NEW DRUG FOR THE TREATMENT OF GLAUCOMA.....	1R01 EY02376-01	62,528
ORGANIZATION TOTAL	33 3,137,102		
LOUISIANA STATE UNIVERSITY OF NEW ORLEANS ZIP CODE 70122			
BRYAN, SARA E.....	INDUCTION OF METALLOTHIONEIN BY CADMIUM, COPPER, MERCURY.....	5R01 ES00802-06	76,397
ELDER, S THOMAS.....	PHYSIOLOGICAL CORRELATES OF CONDITIONED BLOOD PRESSURE.....	5R01 HL18823-02	36,404
GITHENS, SHERWOOD, III.....	CARCINOGENESIS OF PANCREATIC DUCTAL TISSUE IN VITRO.....	5R26 CA19177-02	40,929
GRIFFIN, GARY W.....	SYNTHESIS, PHOTO AND THERMOCHEMISTRY OF ARENE OXIDES.....	5R01 CA18346-02	51,440
GUILBAULT, GEORGE G.....	ELECTRODE PROBES USING ENZYMES.....	5R01 GM17268-06	26,683
LASETER, JOHN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07169-01	23,505

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
ORGANIZATION TOTAL	6	255,358	
SOUTHERN UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE NEW ORLEANS ZIP CDDE 70126			
PATTERSON, THOMAS J.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08056-06	19,472
ORGANIZATION TOTAL	1	19,472	
TOURO INFIRMARY ZIP CODE 70115			
HYMAN, EDWARD S.....	A SEARCH FOR PHOSPHOLIPID CHANNELS IN NA-K-ATP-ASE.....	2R01 AM12718-07	23,745
ORGANIZATION TOTAL	1	23,745	
TULANE UNIVERSITY ZIP CDDE 70118			
AGRAWAL, KRISHNA C.....	DEVELOPMENT OF ANTITUMOR AND RADIOSENSITIZING AGENTS.....	5R01 CA21050-02	57,513
ARCOS, JOSEPH C.....	PHARMACOLOGY & BIOCHEMISTRY OF THE ONCOGEN, DIOXANE.....	5R01 CA15111-04	66,846
ARCOS, JOSEPH C.....	WRITING OF 'CHEMICAL INDUCTION OF CANCER' VOL. IIC.....	1R01 LM03036-01	34,468
ARIMURA, AKIRA.....	PHYSIOLOGY OF HYPOTHALAMIC NEUROHORMONES.....	5R01 AM09094-12	58,700
ARIMURA, AKIRA.....	PHYSIOLOGICAL STUDIES ON LH-RELEASING HORMONE.....	3R01 HD06555-03S1	6,526
AYALA, STEPHEN C.....	MALARIA PARASITES OF REPTILE POPULATIONS.....	5R01 AI12511-03	23,278
BANTA, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05444-16	55,486
BEAVER, PAUL C.....	OCCULT HELMINTHIC INFECTIONS.....	5R01 AI04919-15	35,860
BOWERS, CYRIL Y.....	STUDIES ON HYPOTHALAMIC THYROTROPHIN-RELEASING FACTOR.....	5R01 AM06164-15	88,844
BOWERS, CYRIL Y.....	HYPOTHALAMIC RELEASING AND INHIBITING HORMONES.....	5R01 AM18494-03	75,617
BURCH, GEORGE E.....	CONGESTIVE HEART FAILURE AND PERIPHERAL CIRCULATION.....	5R01 HL14789-03	53,667
CHANDRAN, KRISHNAN B.....	HEMODYNAMICS IN CURVED ARTERIES.....	5R01 HL18156-02	62,864
CHAPNICK, BARRY M.....	PROSTAGLANDIN PRECURSORS AND INTESTINAL VASCULATURE.....	1R01 HL19997-01	30,042
COY, DAVID H.....	SYNTHESIS AND BIOLOGY OF ANALOGUES OF SOMATOSTATIN.....	2R01 AM18370-03	44,161
DI LUZIO, NICHOLAS R.....	ROLE RECOGNITION FACTORS AND MACROPHAGES IN NEOPLASIA.....	5R01 CA13746-05	92,603
DOMER, JUDITH E.....	HOST RESPONSES IN EXPERIMENTAL CANDIDIASIS.....	5R01 AI12806-03	60,636
DOMINGUE, GERALD J.....	PREVENTION OF PYELONEPHRITIS.....	5R01 AI09612-06	60,920
EHRlich, MELANIE.....	5-METHYLCYTOSINE-RICH DNA: CANCER AND DEVELOPMENT.....	1R01 CA19942-01A1	32,869
ELLISON, JEFFREY P.....	REFLEXOGENIC ZONES OF THE HEART: A MORPHOLOGIC STUDY.....	5R01 HL13616-08	24,938
FISHER, JAMES W.....	PURIFICATION OF ERYTHROPOIETIN.....	1R01 HL21701-01	57,885
GEORGE, WILLIAM J.....	CYCLIC NUCLEOTIDES AND CARDIAC FUNCTION.....	3R01 HL13776-05S1	6,219
GERALL, ARNOLD A.....	HORMONAL AND NEURAL CORRELATES OF REPRODUCTIVE BEHAVIOR.....	3R01 HD00867-14S1	5,373
GERALL, ARNOLD A.....	HORMONAL BASIS OF AGING IN REPRODUCTIVE BEHAVIOR.....	2R01 HD00867-15	57,595
GOTTLIEB, A ARTHUR.....	CHARACTERIZATION OF TRANSFER FACTOR.....	5R01 AI13386-03	53,431
HAMLIN, JAMES T, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05377-16	134,220
HAMORI, EUGENE.....	KINETIC STUDIES OF CONFORMATION CHANGES OF NUCLEIC ACIDS.....	5R01 GM20008-05	31,933
HEWITT, ROBERT L.....	CARDIAC ANOXIA: PROTECTIVE EFFECT OF CARBOHYDRATE.....	5R01 HL15813-04	57,984
HOLLAND, MONTE G.....	PHYSIOLOGY AND PHARMACOLOGY OF AQUEOUS HUMOR FLOW.....	5R01 EY00207-19	30,492
HYMAN, ALBERT L.....	CARDIOVASCULAR SURGICAL RESEARCH.....	5R01 HL11802-09	126,487
JOHNSON, MARY K.....	ROLE OF MICROBIAL CYTOLYSINS IN OCULAR INFECTIONS.....	5R01 EY00424-09	51,742
KADOWITZ, PHILIP J.....	HUMORAL CONTROL OF PULMONARY AND SYSTEMIC CIRCULATION.....	5R01 HL15580-05	61,436
KADOWITZ, PHILIP J.....	REGULATION OF INTRAPULMONARY AIRWAYS AND VESSELS.....	5R01 HL18070-03	29,260
KENDRICK, MILDRED A.....	THE ROLE OF BCG VACCINATION IN PREVENTING CANCER.....	7R01 CA23183-01	22,745
KLAWITTER, JEROME J.....	A COMPARISON OF A12 O3 AND CARBON DENTAL IMPLANTS.....	1R01 DE04653-01	88,134
KREISMAN, NORMAN R.....	OXYGEN METABOLISM IN SINGLE EPILEPTIC NEURONS.....	5R01 NS12419-03	51,184
KREMENTZ, EDWARD T.....	COOPERATIVE STUDY OF ONCOLOGY.....	3R10 CA12284-05S3	10,298
KREMENTZ, EDWARD T.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18007-03	61,149
LITTLE, MAURICE D.....	HOOKWORM BEHAVIOR IN MAMMALIAN HOSTS.....	5R01 AI13452-02	36,192
LIU, YOUNG K.....	THE TRAUMATOLOGY OF THE HEAD AND SPINE.....	5R01 GM19107-05	81,883
LIU, YOUNG K.....	ACCELERATION INJURIES TO THE SPINAL CORD AND BRAINSTEM.....	5R01 NS10517-04	52,372
LUMSDEN, RICHARD D.....	CYTOLOGY OF HELMINTH PARASITE-HOST RELATIONSHIPS.....	5R01 AI08673-09	36,491
LUMSDEN, RICHARD D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07040-10	37,459
MC DONALD, JOHN C.....	THE HETEROPHILE SYSTEM IN HUMAN RENAL TRANSPLANTATION.....	5R01 AM16572-05	35,023
MIZELL, MERLE.....	PATHOLOGY OF TUMORIGENESIS IN DEVELOPING EMBRYOS.....	5R01 CA11901-07	48,656
ORIHIEL, THOMAS C.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10050-17	690,852
PEACOCK, ERLE E, JR.....	BIOLOGICAL CONTROL OF SCAR TISSUE.....	7R01 AM21457-01	80,506
SALVAGGIO, JOHN E.....	ALLERGIC DISEASE CENTER.....	5P50 AI13401-03	110,757
SCHALLY, ANDREW V.....	NEUROCHEMISTRY OF THE DIENCEPHALON.....	5R01 AM07467-14	130,540
STUCKEY, WALTER J.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	5R10 CA03389-19	73,358

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
TORNYOS, KARL	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA13249-05S1	11,787
TOU, JEN-SIE H.....	PHOSPHOLIPIDS AND PHAGOCYTOSIS BY LEUKEMIC LEUKOCYTES.....	5R01 CA16483-03	19,297
VOLPE, E PETER.....	GENETIC ASPECTS OF TISSUE TRANSPLANTATION.....	5R01 AI12667-14	36,193
WEILL, HANS.....	IMMUNE & FIBROTIC RESPONSES TO OCCUPATIONAL ENVIRONMENT.....	2P50 HL15092-06	668,855
WEINSTEIN, ALLAN M.....	A PROSPECTIVE ORTHOPEDIC IMPLANT RECOVERY ANALYSIS.....	5R01 AM19247-03	22,109
WEINSTEIN, ALLAN M.....	9TH ANNUAL BIOMATERIALS SYMPOSIUM.....	1R13 DE04737-01	6,743
WOODY, NORMAN C.....	LYSINE METABOLISM IN INFANTS AND CHILDREN.....	5R01 HD02920-11	43,120
ORGANIZATION TOTAL	56 4,125,598		
XAVIER UNIVERSITY ZIP CODE 70125			
CORRINGTON, JOYCE H.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08008-06	64,983
CORRINGTON, JOYCE H.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08008-07	185,513
ORGANIZATION TOTAL	2 250,496		
SHREVEPORT			
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT SHREVEPORT ZIP CODE 71101			
BROWN, RICHARD D.....	'LOOP' DIURETICS, COCHLEAR POTENTIALS AND ENDOLYMPH.....	5R01 GM22097-03	18,831
MC DONALD, JOHN C.....	THE HETEROPHILE SYSTEM IN HUMAN RENAL TRANSPLANTATION.....	7R01 AM21346-01	38,542
WOLF, ROBERT E.....	DEVELOPMENT OF A MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20612-01	81,600
ORGANIZATION TOTAL	3 138,973		
STATE TOTAL	137 11,478,808		
MAINE			
AUGUSTA			
MAINE DEPARTMENT OF MARINE RESOURCES ZIP CODE 04330			
SHERBURNE, STUART W.....	PISCINE ERYTHROCYTIC NECROSIS IN THE ATLANTIC COD.....	5R01 HL19163-02	26,587
ORGANIZATION TOTAL	1 26,587		
BAR HARBOR			
JACKSON LABORATORY ZIP CODE 04609			
BAILEY, DONALD W.....	NON-H-2 HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI13130-02	217,167
BAILEY, DONALD W.....	GENETIC STABILITY OF MOUSE ZYGOTES IN FROZEN STORAGE.....	5R01 GM22878-02	73,595
BEAMER, WESLEY G.....	INHERITED GROWTH DISORDERS OF ENDOCRINE SYSTEMS.....	2R01 AM17947-04	88,223
BERNSTEIN, SELDON E.....	ANALYSES AND THERAPY OF NEONATAL BLOOD DISORDERS.....	5R01 HD00254-17	49,281
CHAI, CHEN K.....	HISTOCOMPATIBILITY STUDIES IN INBRED RABBITS.....	5R01 AI09988-08	20,890
CHEN, HARRY W.....	CHOLESTEROL IN MEMBRANE FUNCTION AND CELL TRANSFORMATION.....	5R01 GM22900-02	58,892
COLEMAN, DOUGLAS L.....	HEREDITARY DIABETES IN THE MOUSE.....	5R01 AM14461-08	62,363
COLEMAN, DOUGLAS L.....	BIOCHEMISTRY OF PIGMENTATION AND INHERITED DISORDERS.....	9R01 AM20725-16	44,623
COLLINS, ROBERT L.....	LATERALIZATION OF FUNCTION: BEHAVIOR GENETIC ANALYSIS.....	1R01 GM23618-01	66,215
EICHER, EVA M.....	CYTOGENETICS OF THE MOUSE.....	2R01 GM20919-04	116,774
FOX, RICHARD R.....	HEREDITARY DISEASES.....	3R01 EY01408-03S1	37,733
HARRISON, DAVID E.....	DECLINE OF IMMUNE RESPONSE WITH AGE.....	9R01 AG00594-04	66,777
HARRISON, DAVID E.....	SPLEEN AND MARROW ALLOGRAFTS IN HEREDITARY ANEMIA.....	2R01 HL16119-04	53,075
HEINIGER, HANS-JORG.....	CHOLESTEROL IN NORMAL AND MALIGNANT LYMPHOCYTES.....	1R01 CA19305-01A1	61,033
KANDUTSCH, ANDREW A.....	STEROID METABOLISM IN TUMORS AND NORMAL TISSUES.....	5R01 CA02758-22	150,410
KOZAK, LESLIE P.....	REGULATION OF ENZYME LEVELS IN BRAIN.....	5R01 HD06712-06	55,229
KOZAK, LESLIE P.....	BIOCHEMICAL GENETICS OF OVARIAN AND TESTICULAR TERATOMAS.....	2R01 HD08431-04	61,033
LEITER, EDWARD H.....	GENETIC CONTROL OF HYPERPLASIA IN THE ENDOCRINE PANCREAS.....	2R01 AM17631-04	69,417
MEIER, HANS.....	PATHOGENESIS OF HEREDITARY NEUROLOGICAL DISORDERS.....	5R01 NS06448-11	37,159
PREHN, RICHMOND T.....	MECHANISMS OF CARCINOGENESIS.....	5R01 CA20920-02	342,873
PREHN, RICHMOND T.....	NEUROLOGICAL MUTANTS.....	5R01 NS09378-08	61,850
PREHN, RICHMOND T.....	SUPPORT FOR INBRED AND MUTANT ANIMALS RESOURCE.....	2P40 RR00251-12	91,068

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MAINE—Continued			
PREHN, RICHMOND T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05545-15	126,512
RODERICK, THOMAS H.....	STUDY OF MAMMALIAN CHROMOSOMAL INVERSIONS.....	2R01 GM19656-06	55,053
RUSSELL, ELIZABETH S.....	ANALYSIS OF GENETIC EFFECTS ON AGING.....	3P01 AG00250-06S1	4,000
RUSSELL, ELIZABETH S.....	ANALYSIS OF GENETIC EFFECTS ON AGING.....	5P01 AG00250-07	293,676
RUSSELL, ELIZABETH S.....	PHYSIOLOGICAL GENETICS OF THE MOUSE.....	5R01 CA01074-28	146,988
SHULTZ, LEONARD D.....	IMMUNODEFICIENCY AND TUMORIGENESIS.....	1R01 CA20408-01	70,821
SPROTT, RICHARD L.....	GENETIC ANALYSIS OF AVOIDANCE BEHAVIOR IN MICE.....	5R01 GM21266-03	19,335
SPROTT, RICHARD L.....	NEUROCHEMICAL CORRELATES OF AVOIDANCE BEHAVIOR.....	5R01 GM21469-03	42,327
STEVENS, LEROY C.....	INVESTIGATIONS ON TERATOCARCINOGENESIS.....	5R01 CA02662-23	134,231
TAYLOR, BENJAMIN A.....	GENETIC ANALYSIS OF COMPLEX INFIRMITIES.....	2R01 GM18684-06	55,025
WAYMOUTH, CHARITY.....	CONTROL OF CELL GROWTH, DIFFERENTIATION, AND FUNCTION.....	5R01 CA11339-08	91,895
WAYMOUTH, CHARITY.....	HORMONE AND CARCINOGEN EFFECTS ON PROSTATE IN VITRO.....	5R26 CA20226-02	26,260
WHITTEN, WESLEY K.....	MAMMALIAN EGGS AND PHEROMONES.....	5R01 HD04083-09	106,629
ORGANIZATION TOTAL	35	3,058,432	
ORONO			
UNIVERSITY OF MAINE AT ORONO ZIP CODE 04473			
BLAKE, RICHARD D.....	ASPECTS OF EUCARYOTIC CHROMOSOME STRUCTURE.....	5R01 GM22827-02	28,462
ELIAS, MERRILL F.....	INFORMATION PROCESSING: AGE AND HYPERTENSION.....	7R01 AG00868-01	89,556
JERKOFKY, MARY ANN.....	CELLULAR DNA SYNTHESIS AND HERPES VIRUS REPLICATION.....	1R01 CA23690-01	46,895
LENER, JOSEPH.....	GENETIC ASPECTS OF AMINO ACID TRANSPORT SYSTEMS.....	1R01 AM19445-01	25,961
NICHOLSON, BRUCE L.....	PISCINE ERYTHROCYTIC NECROSIS IN THE ATLANTIC COD.....	5R01 HL19164-02	20,166
ROBERTS, FRANKLIN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07161-02	18,076
ROXBY, ROBERT.....	MEASUREMENT OF LIGAND BINDING TO ASSOCIATING ENZYMES.....	5R01 AM18852-02	30,807
WOHLGEMUTH, ANDREW.....	INFORMATION FROM IMMUNOLOGICAL REACTION TABLES.....	2R01 CA20105-02	13,116
ORGANIZATION TOTAL	8	273,039	
PORTLAND			
MAINE MEDICAL CENTER ZIP CODE 04102			
RAND, PETER W.....	THE ROLE OF THE RED CELL IN DIABETIC ATHEROSCLEROSIS.....	1R01 HL22123-01	44,281
ORGANIZATION TOTAL	1	44,281	
UNIVERSITY OF MAINE AT PORTLAND-GORHAM ZIP CODE 04103			
BONNER, R ALAN.....	INFANT CARDIORESPIRATORY REFLEXES-SIDS MODEL.....	5R01 HD09368-03	83,491
HODGKIN, BRIAN C.....	DIPOLE MOMENT MEASUREMENT OF CARDIAC MASS.....	5R01 HL19486-02	74,437
ORGANIZATION TOTAL	2	157,928	
SALSBURY COVE			
MOUNT DESERT ISLAND BIOLOGICAL LABORATORY ZIP CODE 04672			
KINTER, WILLIAM B.....	PHYSIOLOGY AND MORPHOLOGY OF CELL TRANSPORT.....	2R01 AM15973-06	73,471
KINTER, WILLIAM B.....	MEMBRANE TOXICITY THEORY AND ENVIRONMENTAL POLLUTANTS.....	5R01 ES00920-05	72,879
MYERS, JACK D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05764-03	20,341
SCHMIDT-NIELSEN, BODIL M.....	BIOLOGY OF EXCRETORY AND OSMOREGULATORY MECHANISMS.....	3R01 AM15972-06S1	1,906
SCHMIDT-NIELSEN, BODIL M.....	BIOLOGY OF EXCRETORY AND OSMOREGULATORY MECHANISMS.....	5R01 AM15972-07	127,827
ORGANIZATION TOTAL	5	296,424	
WEST BOOTHBAY HARBOR			
NORTHEASTERN RESEARCH FOUNDATION ZIP CODE 04575			
YENTSCH, CLARICE M.....	ASSESSMENT OF HEALTH HAZARDS FROM TOXIC RED TIDE CYSTS.....	1R01 ES01329-01A1	40,570
ORGANIZATION TOTAL	1	40,570	
STATE TOTAL	53	3,897,261	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND			
BALTIMORE			
BALTIMORE CITY HOSPITALS ZIP CODE 21224			
LIEBSON, IRA	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05556-15	50,032
ORGANIZATION TOTAL	1 50,032		
CARNEGIE INSTITUTION OF WASHINGTON, D. C. ZIP CODE 21210			
BROWN, DONALD D.....	THE SOMATIC AND OOCYTE 5S RNA GENES IN XENOPUS.....	5R01 GM22395-03	62,019
DAWID, IGOR B.....	MITOCHONDRIAL BIOGENESIS IN ANIMAL CELLS.....	5R01 GM22413-03	65,267
PAGANO, RICHARD E.....	PHOSPHOLIPID-CHOLESTEROL DYNAMICS IN MAMMALIAN CELLS.....	5R01 GM22942-02	63,948
REEDER, RONALD H.....	ISOLATION AND STUDY OF RIBOSOMAL GENE CHROMATIN.....	5R01 GM22499-03	63,861
SUZUKI, YOSHIAKI.....	REGULATORY MECHANISMS OF SILK FIBROIN GENES.....	1R01 GM23469-01	60,234
WARD, SAMUEL.....	GENETIC SPECIFICATION OF NEURAL STRUCTURE.....	7R01 GM25243-01	101,156
ORGANIZATION TOTAL	6 416,485		
COPPIN STATE COLLEGE ZIP CODE 21216			
OGONJI, GILBERT O.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 PR08010-06	33,641
ORGANIZATION TOTAL	1 33,641		
JOHN F. KENNEDY INSTITUTE ZIP CODE 21205			
KISHIMOTO, YASUO.....	SPHINGOLIPID METABOLISM AND BRAIN DEVELOPMENT.....	2R01 NS13559-02	60,092
KISHIMOTO, YASUO.....	BRAIN 2-HYDROXY FATTY ACID METABOLISM AND MYELINATION.....	5R01 NS13569-02	62,096
ORGANIZATION TOTAL	2 122,188		
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218			
ACKERS, GARY K.....	MOLECULAR SIEVE CHROMATOGRAPHY OF INTERACTING PROTEINS.....	1R01 GM24486-01	121,323
ADKINSON, N FRANKLIN JR.....	STUDY OF ALLERGIC REACTIONS TO DRUGS.....	2R01 AI11936-04	57,370
ANDERSON, DAVID E.....	VASCULAR EFFECTS OF INHIBITORY BEHAVIORAL ADAPTATIONS.....	5R01 HL17970-03	71,405
ANDERSON, NORMAN D.....	LEUKOCYTE-ENDOTHELIAL INTERACTIONS.....	3R01 HL17596-02S1	6,756
ANDERSON, NORMAN D.....	LEUKOCYTE-ENDOTHELIAL INTERACTIONS.....	5R01 HL17596-03	60,779
ANNAU, ZOLTAN.....	TOXICITY OF PRENATAL CARBON MONOXIDE EXPOSURE.....	1R01 ES01589-01	82,474
BAKER, FRANK H.....	THALAMIC MECHANISMS IN VISUAL PROCESSING.....	5R01 EY01494-02	35,104
BANG, FREDERIK B.....	UPPER RESPIRATORY ANTIVIRAL DEFENSE IN MALNUTRITION.....	5R01 AI12458-03	54,835
BANG, FREDERIK B.....	INTRANASAL HOMEOSTASIS VIRUSES & POLLUTANT GASES.....	1R01 ES01477-01	48,100
BAYLIN, STEPHEN B.....	HISTAMINASE AND AMINES IN NEURAL CREST TUMORS.....	5R01 CA18404-03	58,166
BECKER, LEWIS C.....	VASODILATORS IN EXPERIMENTAL MYOCARDIAL INFARCTION.....	1R01 HL19937-01	52,850
BEER, MICHAEL.....	ELECTRON MICROSCOPIC STUDIES OF NUCLEIC ACID STRUCTURES.....	5R01 GM08968-16	134,812
BENBOW, ROBERT M.....	CONTROL OF DNA SYNTHESIS IN EARLY EMBRYOS OF XENOPUS.....	5R01 GM22610-02	52,915
BESSMAN, MAURICE J.....	ENZYMATIC SYNTHESIS OF NUCLEOTIDES AND DNA.....	2R01 GM18649-19	77,223
BHATNAGAR, GOPAL M.....	CONTRACTILE PROTEINS OF EPIDERMIS AND DERIVATIVES.....	7R01 AM21357-01	81,735
BLOSS, ELLIOTT M.....	THE ONTOGENY OF INGESTIVE BEHAVIOR.....	5R01 AM18560-03	28,187
BODIAN, DAVID.....	STRUCTURE AND SYNAPTIC RELATIONS OF ORGAN OF CORTI.....	5R01 NS12641-03	73,016
BRAND, LUDWIG.....	FLUORESCENCE PROBES IN STUDIES OF PROTEINS AND MEMBRANES.....	2R01 GM11632-15	143,625
BRUSILOV, SAUL W.....	UREA CYCLE ENZYMOPATHIES: GENETICS, METABOLISM & THERAPY.....	1R01 HD11134-01	128,611
BUEDING, ERNEST.....	SUPPORT FOR SCHISTOSOMIASIS RESEARCH CENTER.....	5R22 AI08022-10	139,767
BUEDING, ERNEST.....	CARCINOGENICITY OF NITROHETEROCYCLES.....	5R01 CA18251-02	72,193
CALKINS, JOSEPH L.....	HOLOGRAPHIC STRESS-TESTING OF THE SURGICAL CORNEA.....	5R01 EY01312-03	62,774
CAMERON, JOHN L.....	ACUTE PANCREATITIS: PATHOPHYSIOLOGY AND TREATMENT.....	1R01 AM19646-01	81,217
CARLSON, FRANCIS D.....	THE STRUCTURAL BASIS OF CELLULAR FUNCTION.....	2R01 AM12803-19	103,708
CARLSON, FRANCIS D.....	A STUDY OF MUSCULAR CONTRACTION.....	5R01 AM16315-22	35,844
CARVER, DAVID H.....	TISSUE CULTURE STUDIES OF HEPATITIS VIRUSES.....	3R01 AI11850-06S1	2,566
CEBRA, JOHN J.....	PRODUCT ANALYSIS TO ASSESS LYMPHOID CELL POTENTIAL.....	5R01 AI09652-08	117,804
CHARACHE, SAMUEL.....	STUDY OF ABNORMAL HEMOGLOBINS.....	5R01 HL02799-21	151,479
CHEN, CHUNG-HO.....	BIOCHEMICAL STUDIES OF PROLIFERATIVE RETINOPATHIES.....	2R01 EY01399-03	103,312
CHILDS, BARTON.....	STUDIES IN HUMAN GENETICS.....	5R01 HD00486-22	125,785
COFFEY, DONALD S.....	PROGRAMMATICAL STUDIES ON BENIGN PROSTATIC HYPERPLASIA.....	5P01 AM19300-02	433,463
COFFEY, DONALD S.....	PROSTATIC GROWTH REGULATION BY ANDROGENS & ANTIANDROGENS.....	5R01 CA13745-06	73,450
COFFEY, DONALD S.....	CHEMOTHERAPEUTIC AGENTS AND PROSTATIC DNA SYNTHESIS.....	5R26 CA15416-04	132,224
COLE, GERALD A.....	IMMUNOSUPPRESSION AND EXPERIMENTAL VIRAL INFECTION.....	5R01 NS11286-07	118,278

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
COLVIN, MICHAEL D.....	PHARMACOLOGY OF CYCLOPHOSPHAMIDE AND NITROSOUREAS.....	2R01 CA16783-04	78,144
COMSTOCK, GEORGE W.....	HEART DISEASE AND DRINKING WATER AT HOME.....	5R01 HL19073-02	38,578
CONE, RICHARD A.....	VISUAL EXCITATION ROLE OF VISUAL PIGMENT.....	5R01 EY00520-09	50,226
COYLE, JOSEPH T.....	HUNTINGTON'S CHOREA MODEL: STRIATAL LESION BY KAINATE.....	1R01 NS13584-01	36,391
CRAIG, SUSAN W.....	CELL SURFACE CONTROL OF LYMPHOCYTE PHYSIOLOGY.....	1R01 AI13700-01	49,753
DE VOE, ROBERT D.....	ANALYSIS OF FLICKER RETINAL ACTION POTENTIALS.....	5R01 EY00008-15	63,673
DRACHMAN, DANIEL B.....	NERVE-MUSCLE INTERACTIONS IN DEVELOPMENT.....	5R01 HD04817-08	91,111
DURAND, RALPH E.....	INTERCELLULAR CONTACT & CELLULAR RADIOBIOLOGY.....	1R01 CA23489-01	19,980
DURAND, RALPH E.....	SIMULATED TUMOR THERAPY WITH AN IN VITRO MODEL.....	7R01 CA23511-01	49,552
EDIDIN, MICHAEL A.....	CHEMISTRY AND DEVELOPMENT OF TRANSPLANTATION ANTIGENS.....	5R01 AM11202-11	75,566
ENGLUND, PAUL T.....	STRUCTURE AND MECHANISM OF ACTION OF DNA POLYMERASE.....	5R01 CA13602-09	101,053
FARRELL, RICHARD A.....	LIGHT SCATTERING STUDIES OF OCULAR TISSUES.....	5R01 EY01019-05	72,110
FENSELAU, ALLAN H.....	CONTROL OF TUMOR-INDUCED VASCULARIZATION.....	5R01 CA15381-03	38,384
FENSELAU, ALLAN H.....	KETONE BODY UTILIZATION BY MALIGNANT HEPATOMAS.....	5R01 CA18053-03	53,292
FENSELAU, CATHERINE C.....	NEW APPLICATIONS OF MASS SPECTROMETRY IN PHARMACOLOGY.....	2R01 GM21248-03	116,190
FINE, STUART L.....	SENILE MACULA: NATURAL COURSE: CLINICAL TRIAL (LASER).....	1R01 EY01900-01	89,984
FINKELSTEIN, DANIEL.....	EXPERIMENTAL RETINAL NEOVASCULARIZATION.....	5R01 EY01368-04	69,507
FINKELSTEIN, DANIEL.....	BRANCH VEIN OCCLUSION: NATURAL HISTORY AND TREATMENT.....	3R01 EY01780-01S1	84,466
FINKELSTEIN, DANIEL.....	PATHOGENESIS OF PRIMARY RETINITIS PIGMENTOSA.....	5R01 EY01791-02	69,447
FISCHMAN, HARVEY R.....	RABIES—PATHOGENESIS, INTERFERENCE, ABORTIVE INFECTION.....	5R22 AI2017-03	37,594
FORTUIN, NICHOLAS J.....	ECHO CHANGES IN WALL MOTION WITH MYOCARDIAL ISCHEMIA.....	5R01 HL19232-02	112,234
FREED, JOHN H.....	STRUCTURAL STUDIES OF THE PRODUCTS OF THE H-2 COMPLEX.....	5R01 CA20820-02	89,518
FREEDBERG, IRWIN M.....	STUDIES OF EPIDERMAL MACROMOLECULAR METABOLISM.....	7R01 AM21358-01	116,085
GAFFNEY, BETTY J.....	SPIN-LABELING RECEPTORS ON NORMAL AND MALIGNANT CELLS.....	2R01 CA15997-04	63,628
GANN, DONALD S.....	HEMODYNAMIC CONTROL OF PITUITARY ADRENAL FUNCTION.....	2R01 AM14952-08	150,207
GANN, DONALD S.....	HORMONAL AND CARDIOVASCULAR RESPONSE TO TRAUMA.....	1R01 GM23145-01A1	135,900
GIBSON, D WADE.....	HERPES VIRUS PROTEIN SYNTHESIS AND VIRION ASSEMBLY.....	1R01 AI13718-01	72,653
GORDIS, LEON.....	ENVIRONMENTAL EPIDEMIOLOGIC STUDY OF PANCREATIC CANCER.....	1R26 CA21642-01A1	68,224
GOTT, VINCENT L.....	PROTECTION OF THE MYOCARDIUM DURING CARDIAC SURGERY.....	5R01 HL19414-02	166,486
GRAHAM, GEORGE G.....	ROLE OF STAPLE FOODS IN INFANT NUTRITION.....	5R01 HD10111-02	124,368
GRAVES, IRVING L.....	INFLUENZA IN WILD SWANS AND GEESE.....	1R01 AI13048-01A1	82,406
GREEN, WILLIAM R.....	OCULAR CLINICO-PATHOLOGIC CORRELATION.....	5R01 EY01684-02	96,927
GREENE, HARRY L.....	ISCHEMIA-INDUCED CARDIAC ELECTRICAL INSTABILITY.....	5R01 HL18799-03	83,715
GROSSMAN, LAWRENCE.....	ENZYMATIC EXCISION - REPAIR MECHANISM STUDIES.....	5R01 GM22846-03	83,651
HANKS, JOHN H.....	ENERGETICS AND CULTIVATION OF M. LEPRAE.....	1R22 AI14442-01	102,967
HANNAWAY, CAROLINE C.....	MEDICAL CARE AND THE STATE IN 18TH CENTURY FRANCE.....	2R01 LM02497-03	19,520
HARDY, PAUL H.....	IMMUNOLOGY AND IMMUNOPATHOLOGY OF SYPHILIS.....	5R01 AI02336-18	73,495
HARRINGTON, WILLIAM F.....	BIOPHYSICAL CHEMICAL STUDIES ON MUSCLE PROTEINS.....	2R01 AM04349-18	187,880
HARRIS, ALAN H.....	CIRCULATORY EFFECTS OF OPERANT CARDIOVASCULAR CONTROL.....	5R01 HL17958-03	90,328
HARTMAN, PHILIP E.....	GENETIC MECHANISMS AND GENE ACTION.....	5R01 AI01850-20	112,575
HAYWARD, GARY S.....	STRUCTURAL ORGANIZATION OF HERPES VIRUS DNA MOLECULES.....	1R01 CA22130-01	87,671
HENNEY, CHRISTOPHER S.....	IN VITRO STUDIES OF CELL-MEDIATED IMMUNITY.....	5R01 AI10280-07	101,847
HENNEY, CHRISTOPHER S.....	IMMUNOBIOLOGY OF CYTOTOXIC LYMPHOID CELLS.....	1R01 AI13894-01	113,250
HEPTINSTALL, ROBERT H.....	RENAL CIRCULATION AND EXPERIMENTAL HYPERTENSION.....	5R01 HL07835-16	121,306
HEPTINSTALL, ROBERT H.....	GENESIS OF ATHEROSCLEROTIC LESIONS.....	5R01 HL18473-03	37,623
HOCHHEIMER, BERNARD F.....	STUDIES OF ANGIOGRAPHIC DYES.....	1R01 EY01763-01A1	71,281
HOLLIS, DONALD P.....	NMR STUDY OF ENZYME-SUBSTRATE INTERACTIONS.....	3R01 GM17172-08S1	5,000
HOLLIS, DONALD P.....	NMR STUDY OF ENZYME-SUBSTRATE INTERACTIONS.....	5R01 GM17172-09	67,605
HOOPES, JOHN E.....	METABOLIC STUDY OF SKIN FLAPS.....	5R01 AM18732-02	52,348
HSU, YU-CHIH.....	EMBRYONAL TUMORS.....	3R01 CA12336-06S1	23,766
HUANG, P C.....	GENETIC STUDIES OF HUMAN CHROMOSOMAL DISEASES.....	1R01 ES01596-01	95,765
HUANG, RU-CHIH C.....	NUCLEOCYTOPLASMIC INTERACTIONS IN DEVELOPMENT AND AGING.....	5R01 AG00472-04	83,408
HUANG, RU-CHIH C.....	CONTROL OF MYELOMA TUMOR GROWTH.....	5R01 CA13953-05	103,422
HUNT, RICHARD K.....	DEVELOPMENT AND EXPRESSION OF NEURONAL LOCUS SPECIFICITY.....	5R01 NS12606-03	55,548
ISHIZAKA, KIMISHIGE.....	RELATION OF GAMMA GLOBULIN STRUCTURE TO HYPERSENSITIVITY.....	5R01 AI10060-08	127,530
ISHIZAKA, KIMISHIGE.....	REGULATION OF REAGINIC ANTIBODY RESPONSE.....	5R01 AI11202-05	89,591
JAKAB, GEORGE J.....	BRONCHOPULMONARY RESISTANCE TO BACTERIAL INFECTION.....	1R01 HL22029-01	45,773
JOHNS, RICHARD J.....	A NEUROSENSORY INTERDISCIPLINARY RESEARCH PROGRAM.....	3P01 NS07226-08S1	133,198
JOHNSON, JOHN W.....	MATERNAL ENDOCRINE FACTORS AND PREMATURE LABOR.....	5R01 HD09243-03	47,223
KANTNER, JOHN F.....	PREADULT FERTILITY AND FAMILY FORMATION.....	5R01 HD05255-06	38,892

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
KANTNER, JOHN F.....	POPULATION STUDIES.....	5P30 HD06268-05	267,786
KANTNER, JOHN F.....	RURAL BANGLADESH-DEMOGRAPHIC STUDY.....	1R01 HD10113-01	102,636
KAZAZIAN, HAIG H, JR.....	THE GENETIC CONTROL OF HEMOGLOBIN SYNTHESIS.....	5R01 AM13983-08	86,561
KESSLER, IRVING I.....	MALE ROLE IN CERVICAL CANCER.....	5R01 CA16605-03	273,503
KESSLER, IRVING I.....	A PROSPECTIVE STUDY OF CANCER RISK IN TUBERCULOSIS.....	5R01 CA16975-02	115,636
KESSLER, IRVING I.....	A PROSPECTIVE STUDY OF LYMPHOID TISSUES IN NEOPLASIA.....	5R01 CA18121-02	50,989
KETNER, GARY W.....	TRANSFORMATION AND GENE REGULATION BY ADENOVIRUSES.....	1R01 CA21309-01	71,727
KOREEDA, MASATO.....	CHEMICAL STUDIES ON INSECT MOLTING HORMONES.....	5R01 AI12150-03	33,626
KOREEDA, MASATO.....	CHEMICAL STUDIES OF CARCINOGENIC POLYCYCLIC EPOXIDES.....	5R01 CA18580-02	57,308
KOWARSKI, AVINOAM.....	PRODUCTION RATE AND CONCENTRATION OF HORMONES.....	5R01 HD06284-06	67,811
KRAG, SHARON S.....	MUTANTS ALTERED IN GLYCOSYLATION OF MEMBRANE PROTEINS.....	1R01 CA20421-01	66,831
KWITEROVICH, PETER O.....	CELL MEMBRANES AND PLASMA LIPOPROTEINS.....	5R01 HL17898-03	79,723
LANE, M DANIEL.....	CARBOXYLASE ACTIVATION AND CONTROL OF LIPID SYNTHESIS.....	5R01 AM14574-08	74,483
LANE, M DANIEL.....	MECHANISMS OF ACTIONS OF REGULATORY ENZYMES.....	5R01 AM14575-09	111,204
LANGHAM, MAURICE E.....	ADRENERGIC PHYSIOLOGY OF THE EYE.....	5R01 EY01352-04	94,004
LARRABEE, MARTIN G.....	METABOLISM AND FUNCTION IN SYMPATHETIC NEURONS.....	5R01 NS00702-23	82,484
LEE, YUAN C.....	CHEMISTRY AND BIOCHEMISTRY OF GLYCOCONJUGATES.....	2R01 AM09970-12	83,077
LEHNINGER, ALBERT L.....	ENZYMATIC ACTIVITIES OF MITOCHONDRIA.....	5R01 GM05919-19	184,110
LENHARD, RAYMOND E, JR.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA16116-04	55,217
LENHARD, RAYMOND E, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17970-03	195,391
LENNARZ, WILLIAM J.....	LIPID CARRIERS IN MEMBRANE GLYCOPROTEIN SYNTHESIS.....	5R01 GM21451-03	62,778
LENNARZ, WILLIAM J.....	PLASMA MEMBRANE CHANGES IN FERTILIZATION AND DEVELOPMENT.....	2R01 HD08357-03	104,986
LEVENTHAL, BRIGID G.....	CANCER AND LEUKEMIA GROUP B.....	1R10 CA21971-01	48,315
LEVIN, JACK.....	BLOOD COAGULATION AND HEMORRHAGIC DISEASE.....	5R01 HL01601-29	148,145
LICHTENSTEIN, LAWRENCE M.....	IN VITRO STUDIES OF HUMAN ANAPHYLAXIS.....	5R01 AI07290-12	126,908
LICHTENSTEIN, LAWRENCE M.....	AN IN VITRO APPROACH TO PROBLEMS OF CLINICAL ALLERGY.....	5R01 AI08270-10	131,788
LICHTENSTEIN, LAWRENCE M.....	PHARMACOLOGIC CONTROL OF HYPERSENSITIVITY PHENOMENA.....	5R01 AI11334-05	90,896
LIETMAN, PAUL S.....	ADVERSE EFFECTS OF ANTIBIOTIC-HOST CELL INTERACTIONS.....	5R01 GM23716-02	86,432
LILJENFELD, ABRAHAM M.....	CANCER EPIDEMIOLOGY CORE GRANT.....	5P01 CA11489-08	342,376
LILJENFELD, ABRAHAM M.....	PROGRAM FOR STUDY OF CEREBROVASCULAR DISEASES.....	5P50 NS06229-11	341,542
LIN, SHIN.....	MOLECULAR BASIS OF ACTION OF CYTOCHALASIN B.....	5R01 GM22289-03	48,146
LITTLEFIELD, JOHN W.....	HYBRIDIZATION, DNA FUNCTION, MUTATION IN CELL CULTURE.....	5R01 CA16754-04	210,435
LOVE, WARNER E.....	X-RAY STRUCTURE ANALYSIS OF BIOLOGICAL MOLECULES.....	2R01 AM02528-19	77,466
LOVE, WARNER E.....	X-RAY CRYSTAL STRUCTURE OF SICKLE CELL HEMOGLOBIN.....	5R01 AM16446-05	74,022
MALONEY, PETER C.....	ION GRADIENTS AND ENERGY COUPLING IN BACTERIA.....	1R01 GM24195-01	51,411
MARCUS, ROBERT L.....	ANTIGEN-ANTIBODY COMPLEXES IN RHEUMATOID ARTHRITIS.....	5R01 AM15714-06	48,104
MARGOLIS, SIMEON.....	HORMONAL CONTROL OF LIPID AND LIPOPROTEIN SYNTHESIS.....	5R01 HL15930-05	83,851
MARGOLIS, SIMEON.....	LASER SPECTROSCOPY OF LIPOPROTEINS.....	5R01 HL19095-02	34,060
MARIN, OSCAR S.....	SHORT-TERM MEMORY PROCESSES IN APHASIA.....	5R01 NS12160-03	43,442
MARSH, DAVID G.....	IMMUNOCHEMICAL STUDIES OF IMMEDIATE HYPERSENSITIVITY.....	5R01 AI09565-08	81,528
MARSH, DAVID G.....	GENETICS OF IMMUNE RESPONSE IN MAN.....	5P01 AI13370-02	156,575
MARZILLI, LUIGI G.....	DNA AND RNA SEQUENCING BY CHELATE METAL COMPLEXES.....	5R01 GM20544-03	56,392
MATANOSKI, GENEVIEVE M.....	BLADDER CANCER AFTER BENZIDINE EXPOSURE.....	5R01 CA16753-03	6,762
MATTOON, JAMES R.....	GENETIC MODIFICATION OF MITOCHONDRIA.....	5R01 GM15884-12	93,708
MAUMENEE, A EDWARD.....	CORE CENTER GRANT—THE WILMER INSTITUTE.....	5P30 EY01765-02	105,219
MAUMENEE, IRENE H.....	GENETICS IN OPHTHALMOLOGY.....	5R01 EY01773-02	112,269
MAYER, MANFRED M.....	MECHANISM OF CYTOLYSIS BY COMPLEMENT.....	5R01 AI02566-19	124,205
MAYER, MANFRED M.....	PHYSICO-CHEMICAL AND BIOLOGICAL STUDIES OF LYMPHOKINES.....	5R01 AI12472-03	98,109
MC HUGH, PAUL R.....	HYPOTHALAMUS IN FEEDING BEHAVIOR.....	2R01 AM19302-03	72,946
MC KHANN, GUY M.....	BIOCHEMICAL STUDIES OF MYELINIZATION.....	5R01 NS08719-09	44,457
MC KHANN, GUY M.....	DEVELOPMENT AND REGENERATION IN THE NERVOUS SYSTEM.....	5P01 NS10920-05	796,055
MC KHANN, GUY M.....	FEASIBILITY OF SORTING SPECIFIC CELL TYPES FROM BRAIN.....	5R01 NS12491-02	55,292
MENKES, HAROLD A.....	LUNG CENTER SUPPORT—CHRONIC DISEASES OF AIRWAYS.....	2P50 HL14153-06	830,221
MIGEON, BARBARA R.....	GENETIC STUDIES OF HUMAN SOMATIC CELLS.....	5R01 HD05465-07	144,101
MIGEON, CLAUDE J.....	RELATION OF HORMONES TO GROWTH AND DEVELOPMENT.....	5R01 AM09180-26	113,374
MILMAN, GREGORY.....	ISOLATION OF ANIMAL CELLS CONTAINING SUPPRESSOR TRNAS.....	5R01 CA21650-02	92,480
MILNER, WILLIAM R.....	DYNAMICS OF PULSATILE BLOOD FLOW.....	5R01 HL12607-09	62,500
MONEY, JOHN.....	LONGITUDINAL AND RELATED PSYCHOHORMONAL STUDIES.....	5R01 HD06325-21	135,821
MONJAN, ANDREW A.....	OCULAR DISEASE OF VIRAL ETIOLOGY.....	5R01 EY00938-05	60,284
MONJAN, ANDREW A.....	MENTAL RETARDATIONS OF VIRAL ETIOLOGY.....	5R01 HD08490-03	62,201

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
MORRISON, NORMAN E.....	THYMOSIN IMMUNOTHERAPY OF CHEMICALLY INDUCED TUMORS.....	7R01 CA23383-01	30,288
MOUNTCASTLE, VERNON B.....	SENSORY AND MOTOR SYSTEMS, AND CEREBRAL CORTEX.....	5P01 NS06828-11	532,217
MOXON, E RICHARD.....	THE STUDY OF HEMOPHILUS INFLUENZAE-INDUCED CNS INJURY.....	5R01 NS12554-03	46,798
MURPHY, E A.....	STUDY OF HUMAN GENETICS.....	3P50 GM19489-05S1	169,120
MURPHY, PATRICK A.....	CHEMISTRY AND PHYSIOLOGY OF LEUKOCYTE PYROGEN.....	2R01 AI03772-17	88,797
NAGER, GEORGE T.....	A HISTOPATHOLOGIC STUDY OF HUMAN TEMPORAL BONES.....	5R01 NS02182-18	111,572
NAGER, GEORGE T.....	SUPPORT FOR NATIONAL CENTER FOR TEMPORAL BONE BANKS.....	5R01 NS11447-05	67,850
NARAYAN, OPENDRA.....	PATHOGENESIS OF VISNA. A SLOW DEMYELINATING DISEASE.....	5R01 NS12127-03	91,468
NATHANS, DANIEL.....	PROGRAM ON MOLECULAR BIOLOGY OF VIRAL TUMORIGENESIS.....	5P01 CA16519-03	713,081
NATHANSON, CONSTANCE A.....	ORGANIZATION AND PRACTICE OF ABORTION IN MARYLAND.....	5R01 HD09269-03	48,665
NATHANSON, NEAL.....	STUDY OF THE IMMUNOPATHOGENESIS OF VISNA.....	5R01 NS11451-05	132,527
NEWBALL, HAROLD H.....	KININS AND THE HUMAN LUNG.....	5R01 HL18526-02	82,194
NEWMAN, PETER K.....	MALARIA AND FERTILITY: THE CASE OF SRI LANKA.....	1R01 HD11016-01	35,403
NORMAN, PHILIP S.....	A STUDY OF ALLERGY TO RAGWEED POLLEN.....	2R01 AI04866-15	82,220
NORMAN, PHILIP S.....	CLINICAL CENTER FOR ALLERGIC DISEASES.....	5P50 AI10304-07	155,097
OWENS, ALBERT H, JR.....	REGIONAL ONCOLOGY RESEARCH CENTER.....	5P30 CA06973-15	2,110,378
OWENS, ALBERT H, JR.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21188-01	113,083
PATZ, ARNALL.....	DEVELOPMENT OF MICROANGIOPATHY IN JUVENILE DIABETES.....	1R01 AM20826-01	132,145
PATZ, ARNALL.....	STUDIES ON RETINA AND RETINAL VESSELS (RLF).....	2R01 EY00205-17	112,856
PATZ, ARNALL.....	ROLE OF SYSTEMIC HYPERTENSION OF DIABETES RETINOPATHY.....	5R01 HL20455-02	115,544
PEDERSEN, PETER L.....	CONTROL OF ENZYMIC PHOSPHATE TRANSFER IN MITOCHONDRIA.....	5R01 CA10951-10	64,092
PERMUTT, SOLBERT.....	CARDIOVASCULAR, PULMONARY, AND BEHAVIORAL STUDIES.....	5P01 HL10342-12	567,970
PIERCE, NATHANIEL F.....	STUDIES OF IMMUNIZATION AGAINST ENTERIC INFECTION.....	5R22 AI07625-11	89,439
PIGIET, VINCENT P, JR.....	STRUCTURAL BASIS FOR REGULATION OF RIBOTIDE REDUCTASE.....	5R01 GM20122-05	41,584
PITHA, PAULA M.....	ANTITUMOR EFFECT OF INTERFERON.....	5R01 CA19061-02	35,929
PLAUT, MARSHALL.....	HISTAMINE IN MODULATION OF CELL-MEDIATED IMMUNITY.....	5R01 AI12810-03	38,390
PLAUT, MARSHALL.....	CELLULAR IMMUNITY AND PULMONARY HYPERSENSITIVITY DISEASE.....	5R01 HL18514-03	32,429
POLJAK, ROBERTO J.....	STRUCTURE OF IMMUNOGLOBULINS.....	5R01 AI08202-10	160,427
POLLACK, IRVIN P.....	EXPERIMENTAL AND CLINICAL STUDIES OF LASERS IN GLAUCOMA.....	5R01 EY01554-02	89,824
POSNER, GARY H.....	TOTAL SYNTHESIS OF A POTENTIAL ANTITUMOR LACTONE.....	5R01 CA12658-06	38,893
POSNER, GARY H.....	TOTAL SYNTHESIS OF CROTEPOXIDE, AN ANTITUMOR COMPOUND.....	3R01 CA16068-03S1	5,513
PRENDERGAST, ROBERT A.....	CELLULAR SPECIFICITY IN DELAYED HYPERSENSITIVITY.....	5R01 AI06927-12	41,336
PRICE, DONALD L.....	EFFECT OF TOXINS ON NERVE CELLS AND AXONS.....	5R01 NS10580-03	45,032
PROCTOR, LEONARD R.....	STUDY OF VESTIBULAR PATHWAYS IN THE CEREBELLUM.....	7R01 NS13780-01	9,703
QUIGLEY, HARRY A.....	THE PATHOGENESIS OF GLAUCOMATOUS OPTIC NERVE DAMAGE.....	1R01 EY02120-01	123,707
REID, PHILIP R.....	CARDIAC EFFECT RELATED TO PLASMA NITRATE.....	5R01 HL18512-03	60,610
ROBINSON, CECIL H.....	SELECTIVE INHIBITORS OF STEROID-TRANSFORMING ENZYMES.....	5R01 AM15918-05	69,682
ROBINSON, CECIL H.....	STEROIDS WITH CYTOTOXIC EFFECTS ON THE PROSTATE.....	2R26 CA16418-04	81,356
ROBINSON, DAVID A.....	STUDY OF OCULOMOTOR CONTROL SYSTEM.....	5R01 EY00598-09	88,010
ROBINSON, ROBERT A.....	STUDIES ON STIMULATION OF BONE FORMATION.....	5R01 AM04993-16	27,193
ROBINSON, ROBERT A.....	A STUDY OF SKELETAL TISSUE REPAIR.....	5R01 AM18184-03	126,064
ROLLEY, RONALD T.....	IMMUNOLOGICAL ANALYSES OF RENAL TRANSPLANT PATIENTS.....	5R01 AM18267-03	10,495
ROSEMAN, SAUL.....	MEMBRANE STRUCTURE AND FUNCTION (SOLUTE TRANSPORT).....	5R01 AM09851-13	165,111
ROSEMAN, SAUL.....	BIOCHEMISTRY OF NORMAL AND MALIGNANT CELL SURFACES.....	5R01 CA15161-05	102,345
ROSEMAN, SAUL.....	STUDIES OF NORMAL AND MALIGNANT CELL MEMBRANES.....	1P01 CA21901-01	319,484
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00035-17	270,761
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00052-16	415,670
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00722-05	122,336
ROSS, RICHARD S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05378-16	213,709
ROTH, STEPHEN A.....	SURFACE ENZYMES ON MALIGNANT AND NONMALIGNANT CELLS.....	5R01 CA18827-02	43,429
ROTH, STEPHEN A.....	MORPHOGENESIS IN EMBRYONIC AND PATHOLOGICAL SYSTEMS.....	5R01 HD05297-07	69,520
RUBIN, ROBERT J.....	PROGRAM IN BIOLOGICAL EFFECTS OF ENVIRONMENTAL AGENTS.....	5P01 ES00454-09	958,695
SACHS, MURRAY B.....	STIMULUS ENCODING IN THE AUDITORY SYSTEM.....	5R01 NS12112-03	101,196
SACK, GEORGE H, JR.....	GENETICS OF SV40 VIRAL TRANSFORMATION OF HUMAN CELLS.....	1R01 CA20619-01	32,905
SACK, R BRADLEY.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10048-17	461,529
SAFFRAN, ELEANOR M.....	READING MECHANISMS IN PHONEMIC DYSLEXICS AND NORMALS.....	1R01 NS13992-01	38,199
SAGAWA, KIICHI.....	SYSTEMS ANALYSIS OF BARORECEPTOR REFLEX.....	5R01 HL14529-07	82,343
SAGAWA, KIICHI.....	A NEW INDEX OF CARDIAC CONTRACTILITY.....	5R01 HL14903-06	65,119
SAGAWA, KIICHI.....	MECHANICS OF HEART MUSCLE CONTRACTION.....	5R01 HL18912-02	52,672
SANTOS, GEORGE W.....	BONE MARROW TRANSPLANTATION IN HUMAN DISEASE.....	5P01 CA15396-05	874,647

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
SANTOS, GEORGE W.....	EFFECTS OF SEA STAR FACTOR ON TUMOR IMMUNITY AND GVHR.....	5R01 CA17184-03	98,150
SCHILLER, EVERETT L.....	EXOANTIGENS OF SCHISTOSOMA MANSONI.....	1R22 AI13449-01A1	77,846
SCHRAMM, LAWRENCE P.....	ANALYSIS OF INTERACTION BETWEEN CNS VASOMOTOR SYSTEMS.....	2R01 HL16315-04	72,239
SCOCCA, JOHN J.....	MOLECULAR MECHANISMS IN NUCLEIC ACID TRANSPORT.....	5R01 GM21890-02	51,455
SCOTT, WILLIAM W.....	CHEMOTHERAPY OF PROSTATIC CANCER.....	5R26 CA15407-04	74,435
SHAH, KEERTI V.....	INVESTIGATION OF SV40-RELATED INFECTIONS OF MAN.....	5R01 CA13478-06	87,495
SHEARN, ALLEN D.....	DETERMINATION AND TRANSDETERMINATION IN DROSOPHILA.....	2R01 GM20429-04	65,391
SHIN, HYUN S.....	STUDIES ON TUMOR IMMUNITY.....	5R01 CA14113-05	116,396
SHOUKAS, ARTIN A.....	CIRCULATION STUDIES BY ONE VERSUS TWO CIRCUIT MODEL.....	5R01 HL19039-02	25,661
SILVERSTEIN, ARTHUR M.....	STUDY OF OCULAR HYPERSENSITIVITY.....	5R01 EY00217-17	47,610
SILVERSTEIN, ARTHUR M.....	PATHOGENESIS OF UVEITIS.....	5R01 EY00279-14	65,821
SKOFF, ROBERT P.....	THE STUDY OF NORMAL AND ABNORMAL GLOGENESIS.....	1R01 NS13402-01A1	79,699
SMITH, KIRBY D.....	QUANTITATIVE GENETIC CONTROL OF PROTEIN SYNTHESIS.....	2R01 HL15026-11	72,841
SOFER, WILLIAM H.....	ENVIRONMENTAL MUTAGENS: THEIR MECHANISMS OF ACTION.....	1R01 ES01527-01	97,132
SOFER, WILLIAM H.....	A SYSTEM FOR ANALYSIS OF GENE CONTROL IN DROSOPHILA.....	2R01 GM18254-06	83,681
SOUTHWICK, CHARLES H.....	PRIMATE POPULATION STUDIES.....	3R01 RR00910-03S1	3,051
SOUTHWICK, CHARLES H.....	PRIMATE POPULATION STUDIES.....	2R01 RR00910-04	20,747
SPIVAK, JERRY L.....	ROLE OF ERYTHROPOIETIN IN TRANSCRIPTIONAL CONTROL.....	3R01 AM16702-04S1	3,775
SPIVAK, JERRY L.....	ROLE OF ERYTHROPOIETIN IN TRANSCRIPTIONAL CONTROL.....	5R01 AM16702-05	68,793
SPIVAK, JERRY L.....	PURIFICATION OF ERYTHROPOIETIN.....	1R01 HL21692-01	8,316
STEVENS, MARY B.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20558-01	153,672
STRANDBERG, JOHN D.....	ANIMAL RESOURCE SUPPORT FOR BIOMEDICAL RESEARCH.....	5P40 RR00130-14	194,792
SUSKIND, SIGMUND R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07041-12	132,254
SYKES, ZENAS M, JR.....	DYNAMICS OF POPULATIONS WITH CHANGING VITAL RATES.....	5R01 HD08959-03	44,904
SYKES, ZENAS M, JR.....	POST-PARTUM AMENORRHEA IN RURAL BANGLADESCH.....	1R01 HD11188-01	39,316
TALALAY, PAUL.....	BIOCHEMICAL PHARMACOLOGY OF STEROID HORMONES.....	5R01 AM07422-14	100,362
TALALAY, PAUL.....	DESIGN OF CHEMOTHERAPEUTIC AGENTS.....	3P01 GM16492-09S1	73,925
TALAMO, BARBARA R.....	OCTOPAMINE: ITS ROLE IN THE VERTEBRATE NERVOUS SYSTEM.....	5R01 NS12839-02	58,281
TALAMO, RICHARD C.....	THE KININ SYSTEM AND ALPHA-1-ANTITRYPSIN IN MAN.....	5R01 HL18031-03	24,745
TAYLOR, CARL E.....	INTERACTIONS BETWEEN HEALTH CARE AND FAMILY PLANNING.....	1R01 HD10180-01A1	92,648
TORGERSON, WARREN S.....	STRUCTURE OF PERCEIVED PAIN AND PAIN PATIENT TYPOLOGY.....	1R01 GM24398-01	78,851
TRACEY, DANIEL E.....	CYTOTOXIC K CELLS WITHIN MURINE TUMORS.....	3R01 CA19483-01S1	7,119
TRACEY, DANIEL E.....	CYTOTOXIC K CELLS WITHIN MURINE TUMORS.....	5R01 CA19483-02	82,079
TRPIS, MILAN.....	GENETICS OF THE AEDES SCUTELLARIS COMPLEX.....	5R01 AI13396-02	48,471
TS'O, PAUL O.....	ESR STUDY OF HYDROCARBON RADICALS AND CARCINOGENESIS.....	3R01 CA13370-04S2	13,703
TS'O, PAUL O.....	NUCLEIC ACID INVOLVEMENT IN NEOPLASTIC TRANSFORMATION.....	5P01 CA16043-03	213,328
TS'O, PAUL O.....	ESR STUDY ON HYDROCARBON RADICALS AND CARCINOGENESIS.....	9R01 ES01659-05	67,240
TS'O, PAUL O.....	NUCLEIC ACID CHEMISTRY AND ITS BIOMEDICAL APPLICATION.....	5R01 GM16066-10	179,840
TSAN, MIN-FU.....	STUDY OF NEUTROPHIL METABOLISM AND FUNCTION.....	5R01 AI13004-02	35,305
TSONG, TIAN Y.....	DYNAMICS OF ARTIFICIAL AND BIOLOGICAL MEMBRANES.....	5R01 HL18048-03	45,232
TYSON, JOHN E.....	FETAL HOMEOSTASIS: OSMOREGULATION BY PROLACTIN.....	2R01 HD08061-02	64,035
VALLE, DAVID L.....	MAMMALIAN PROLINE METABOLISM.....	1R01 AM20328-01	44,382
WAALKES, T PHILLIP.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	5R18 CA17448-03	587,473
WAALKES, T PHILLIP.....	EXPLORATORY STUDIES FOR A STATE-WIDE CANCER NETWORK.....	1R18 CA20322-01	299,924
WAGNER, HENRY N, JR.....	DISTRIBUTION AND RETENTION OF INHALED POLLUTANTS.....	1R01 ES01543-01	72,130
WAGNER, HENRY N, JR.....	NUCLEAR INSTRUMENTATION AND CHEMISTRY IN MEDICINE.....	5P01 GM10548-15	150,840
WAGNER, HENRY N, JR.....	EVALUATION OF CARDIAC FUNCTION WITH RADIOACTIVE TRACERS.....	1R01 HL20674-01	78,028
WALKER, DONALD G.....	STUDIES OF OSTEOPETROSIS AND ON ISOLATED OSTEOCLASTS.....	5R01 AM12491-09	83,263
WALKER, W GORDON.....	FACTORS REGULATING ELECTROLYTE EXCRETION BY THE KIDNEY.....	5R01 HL03303-21	94,038
WALSER, MACKENZIE.....	IONIC INTERACTIONS IN ELECTROLYTE METABOLISM.....	5R01 AM02306-19	79,648
WALSER, MACKENZIE.....	AMINO ACID ANALOGUES IN NUTRITION.....	2P01 AM18020-04	336,750
WALSH, PATRICK C.....	STUDIES OF STEROID RECEPTORS IN PROSTATIC CARCINOMA.....	2R26 CA16924-04	90,039
WANG, SHIH YI.....	IN SITU FLUORESCENT PROBES FOR DNA RADIATION DAMAGE.....	5R01 GM21146-03	41,283
WEINBERG, ERIC S.....	HISTONE GENES AND THEIR TRANSCRIPTION.....	5R01 GM22155-03	64,038
WEISFELDT, MYRON L.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17655-03	1,124,288
WHITE, EMIL H.....	THE DEAMINATION OF ALIPHATIC AMINES.....	5R01 GM21450-03	50,431
WILLOUGHBY, WILLIAM F.....	MITOGEN INDUCED INTERSTITIAL PNEUMONITIS.....	5R01 HL19819-02	113,262
WINKELSTEIN, JERRY A.....	THE ROLE OF COMPLEMENT IN ANTIBACTERIAL IMMUNITY.....	2R01 AI11637-04	35,752
YOUNG, ERIC D.....	PROPERTIES OF NEURONS IN THE INFERIOR COLLICULUS.....	5R01 NS12524-03	38,795
YOUNG, JOHN P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05445-16	213,709

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
ZEE, DAVID S.....	OCULOMOTOR DISORDERS: CLINICAL AND EXPERIMENTAL STUDY.....	5R01 EY01849-02	24,213
ZIERLER, KENNETH L.....	FLUXES ACROSS BIOMEMBRANES AND PEPTIDE HORMONE ACTION.....	5R01 AM17574-04	111,210
ZIRKIN, BARRY R.....	SPERMIOGENESIS AND FERTILIZATION IN MAMMALS.....	5R01 HD09921-02	73,179
ORGANIZATION TOTAL	277 33,542,636		
SINAI HOSPITAL OF BALTIMORE ZIP CODE 21215			
BUDDHA, PAUL D.....	DRUG DEVELOPMENT FOR PROSTATIC CARCINOMA.....	3R26 CA16077-03S1	13,738
FORMAN, SPENCER.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05478-13	21,762
SERRANO, JOSE A.....	CHEMOTHERAPY OF CANCER—EXPERIMENTAL AND CLINICAL.....	5R01 CA02478-23	132,802
ORGANIZATION TOTAL	3 168,302		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
ABZUG, CHARLES.....	SPATIAL ORGANIZATION OF THE VESTIBULAR NUCLEI.....	5R01 NS12736-02	28,911
ADAMS, ELIJAH.....	METABOLISM OF CERTAIN AMINO ACIDS.....	5R01 GM11105-15	130,266
ALBUQUERQUE, EDSON X.....	MUSCLE REINNERVATION AND NEUROTROPHIC INFLUENCE.....	5R01 NS12063-04	100,295
APOSTOLIDES, ARISTIDE Y.....	HYPERTENSION INCIDENCE PROJECT.....	5R01 HL18715-02	56,605
APOSTOLIDES, ARISTIDE Y.....	THE IMPACT OF HYPERTENSION INFORMATION.....	1R01 HL20245-01	223,340
BARRACLOUGH, CHARLES A.....	CENTRAL NERVOUS SYSTEM REGULATION OF REPRODUCTION.....	2R01 HD02138-16	119,865
BLACK, LINDSAY W.....	PHAGE T4 HEAD ASSEMBLY AND INITIATION OF INFECTION.....	2R01 AI11676-04A1	74,230
BRINLEY, FLOYD J, JR.....	ION FLUXES IN NERVE AND MUSCLE.....	5R01 NS13420-02	98,792
BUCCI, CLARA F.....	STUDY OF FOLDING OF POLYPEPTIDE CHAINS IN HEMOGLOBIN.....	2R01 HL16891-04	81,662
BUCCI, ENRICO.....	INTERACTION OF A AND B CHAINS OF HUMAN HEMOGLOBIN.....	2R01 HL13164-06	65,800
BURNETT, JOSEPH W.....	A TOXICOLOGICAL & CHEMICAL STUDY OF SEA NETTLE VENOM.....	1R01 ES01474-01	72,860
BUTERBAUGH, GARY G.....	NEONATE, ADULT SEIZURE DISCHARGE: MONOAMINE REGULATION.....	5R01 NS12383-03	25,783
BYRON, JOSEPH W.....	REGULATION OF THE HEMOPOIETIC STEM CELL.....	3R01 CA16147-03S1	14,543
BYRON, JOSEPH W.....	REGULATION OF THE HEMOPOIETIC STEM CELL.....	2R01 CA16147-04	55,552
CHANG, YUNG-FENG.....	AMINO ACIDS AND CELL WALL BIOSYNTHESIS.....	5R01 DE04116-02	32,944
CHANNING, CORNELIA P.....	THE MECHANISM OF LUTEINIZATION IN VITRO AND IN VIVO.....	5R01 HD08834-03	63,235
CHANNING, CORNELIA P.....	THE MECHANISM OF LUTEINIZATION IN VITRO AND IN VIVO.....	2R01 HD08834-04	65,403
CORNBLATH, MARVIN.....	CARBOHYDRATE METABOLISM IN THE NEONATE.....	5R01 HD03959-09	114,436
DENNIS, JOHN M.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10049-18	545,335
DENNIS, JOHN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05379-16	161,827
ELDEFRAWI, AMIRA T.....	TOXICOLOGICAL STUDIES ON INSECT ACH-RECEPTORS.....	5R01 AI13640-02	42,809
ELDEFRAWI, MOHYEE E.....	DRUG MOLECULAR INTERACTIONS WITH CHOLINERGIC RECEPTORS.....	5R01 NS13231-02	39,607
FALKLER, WILLIAM A, JR.....	INHIBITION OF F. POLYMPHUM HA BY HUMAN GAMMA GLOBULIN.....	5R01 DE04161-03	11,950
GOLDMAN, LAWRENCE.....	STUDIES ON ELECTRICAL EXCITATION.....	5R01 NS07734-09	42,202
GREISMAN, SHELDON E.....	BACTERIAL ENDOTOXINS IN INFECTION.....	2R01 AI07052-15	7,000
GUTH, LLOYD.....	REGENERATION IN THE MAMMALIAN SPINAL CORD.....	5R01 NS12847-02	44,440
HALL-CRAGGS, ERNEST C.....	SKELETAL MUSCLE REGENERATION IN ADULTS.....	1R01 NS13296-01	59,289
HANKINS, JOHN R.....	USE OF CIRCULAR MYOTOMY IN ESOPHAGEAL RECONSTRUCTION.....	5R01 AM17928-02	23,736
HARRISON, GEORGE H.....	RADIOLOGIC PROPERTIES OF HIGH ENERGY NEUTRON BEAMS.....	5R01 CA18807-02	48,847
HUANG, SHIH-WEN.....	ETIOLOGY OF DIABETES MELLITUS IN INFANCY AND CHILDHOOD.....	1R01 AM19256-01	60,547
JANOSKI, ALFONSO H.....	PHYSIOLOGIC ROLE OF 16-HYDROXYLATED STEROIDS.....	5R01 HD09598-02	68,750
JONES, RAYMOND T.....	IN VITRO PANCREATIC CARCINOGENESIS.....	5R26 CA19197-02	34,662
KAPPELMAN, MURRAY M.....	INFORMATION NEEDS OF PRACTICING PHYSICIANS.....	5R01 LM02456-03	52,529
KAUFFMAN, FREDERICK C.....	PHARMACOLOGY OF CARCINOGEN ACTIVATION IN INTACT CELLS.....	1R01 CA20807-01	41,308
KIRTLEY, MARY E.....	STUDY OF GLYCOLYTIC ENZYMES BOUND TO MEMBRANES.....	5R01 GM19394-05	51,016
KIRTLEY, MARY E.....	DEHYDROGENASE STRUCTURE AND FUNCTION.....	2R01 GM20294-04	30,966
KLIMT, CHRISTIAN R.....	THE RELATION OF TREATMENT TO DIABETIC COMPLICATIONS.....	3R01 AM06876-15S1	34,421
LAMBOOY, JOHN P.....	COVALENT BONDING OF FLAVINS IN NEOPLASTIC TISSUE.....	5R01 CA18691-02	14,367
MINAH, GLENN E.....	DEVELOPMENT OF FISSURAL DENTAL PLAQUE.....	1R23 DE04795-01	27,657
MULLINS, LORIN J.....	THE ION SELECTIVITY OF THE EXCITABLE MEMBRANE.....	2R01 NS05846-11	60,589
NELSON, ERLAND R.....	CEREBROVASCULAR CLINICAL RESEARCH CENTER.....	2P50 NS07779-09	590,539
NELSON, ERLAND R.....	ELEVENTH PRINCETON CONFERENCE ON CEREBROVASCULAR DISEASE.....	1R13 NS13647-01	7,582
OZAND, PINAR T.....	BIOCHEMISTRY OF ALANINE RELEASE FROM MUSCLE.....	5R01 AM18127-03	37,902
PINTER, GABRIEL G.....	VASCULAR DISEASE IN EXPERIMENTAL DIABETES.....	2R01 AM17093-04	96,116
PINTER, GABRIEL G.....	HYPERTENSION, KIDNEY DISEASE AND RENAL LYMPH.....	3R01 HL17781-02S1	2,207
PINTER, GABRIEL G.....	HYPERTENSION, KIDNEY DISEASE AND RENAL LYMPH.....	5R01 HL17781-03	42,643
POLAKIS, S EFTHIMIOS.....	DIFFERENTIATION OF 3T3-L1 FIBROBLASTS TO ADIPOCYTES.....	5R01 GM23057-02	53,064
PURNELL, DALLAS M.....	PRECURSORS OF HYPERPLASTIC NODULES OF MAMMARY GLAND.....	7R01 CA23659-01	40,784

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
REESE, ERROL L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05317-12	17,644
REIER, PAUL J.....	NEURON-GLIAL DYNAMICS DURING REGENERATION.....	1R01 NS13836-01	45,738
ROBINSON, J EUGENE.....	RADIATION AND HYPERTHERMIC CANCER THERAPY.....	5R01 CA18872-02	67,647
ROSEN, BARRY P.....	BIOENERGETICS OF MICROBIAL MEMBRANE FUNCTIONS.....	5R01 GM21648-03	45,739
RUCHKIN, DANIEL S.....	EMITTED POTENTIALS AND COGNITIVE ACTIVITY.....	5R01 NS11199-03	9,280
SHEAR, CHARLES R.....	POSTEMBRYONIC STRIATED MUSCLE GROWTH.....	5R01 AM20131-02	37,042
SJODIN, RAYMOND A.....	TRACER FLUXES AND NET FLUXES ACROSS CELL MEMBRANES.....	5R01 NS07626-15	46,005
STEINSCHNEIDER, ALFRED.....	BIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF SIDS.....	1P50 HD10982-01	615,625
STRUM, JUDY M.....	NEOPLASTIC MAMMARY GLAND: STRUCTURE/FUNCTION.....	5R01 CA20764-02	33,366
THOMPSON, VAN P.....	DENTAL RESINS THAT EXPAND ON POLYMERIZATION.....	5R01 DE03869-04	61,442
TILDON, J TYSON.....	KETONE METABOLISM IN DEVELOPMENTAL HOMEOSTASIS.....	5R01 HD06291-06	55,955
TRAUB, ROBERT.....	STUDIES OF CERTAIN IMPORTANT GENERA OF SIPHONAPTERA.....	2R01 AI04242-16	112,340
TRUMP, BENJAMIN F.....	SUBCELLULAR REACTION TO INJURY IN THE KIDNEY.....	5R01 AM15440-07	95,137
WAECHTER, CHARLES J.....	THE ROLE OF POLYPRENOLS IN BRAIN GLYCOPROTEIN ASSEMBLY.....	5R01 NS12296-03	34,645
WISWELL, JOHN G.....	PREPARATION OF RADIOPHARMACEUTICALS FROM DRUG ANALOGS.....	5R01 HL18744-02	46,882
ORGANIZATION TOTAL	63	5,123,700	
BETHESDA			
INDIVIDUAL AWARD—BENZINGER, THEODORE H. ZIP CODE 20034			
BENZINGER, THEODORE H.....	MEDICAL PHYSIOLOGY OF TEMPERATURE.....	5R01 LM02100-03	19,800
ORGANIZATION TOTAL	1	19,800	
MID-ATLANTIC RESEARCH INSTITUTE ZIP CODE 20014			
ZON, GERALD.....	SYNTHESIS OF POTENTIAL CNS ANTITUMOR PRODRUGS.....	3R01 CA18366-02S1	6,315
ORGANIZATION TOTAL	1	6,315	
NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS ZIP CODE 20014			
NEY, W ROGER.....	RADIATION PROTECTION AND MEASUREMENTS.....	5R01 CA18001-12	45,000
TAYLOR, LAURISTON S.....	HISTORY OF RADIATION PROTECTION STANDARDS.....	1R01 LM02676-01	3,400
ORGANIZATION TOTAL	2	48,400	
TRANSNATIONAL FAMILY RESEARCH INSTITUTE ZIP CODE 20034			
DAVID, HENRY P.....	DANISH EXPERIENCE WITH EFFECTS OF LIBERALIZED ABORTION.....	5R01 HD09739-02	98,919
DAVID, HENRY P.....	RESOLUTION OF ADOLESCENT PREGNANCY: DANISH EXPERIENCE.....	1R01 HD11068-01	88,367
ORGANIZATION TOTAL	2	187,286	
U.S. DEPARTMENT OF DEFENSE—UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES ZIP CODE 20014			
BOLLUM, FREDERICK J.....	DNA POLYMERASES IN NORMAL AND LEUKEMIC LYMPHOID CELLS.....	7R01 CA23262-01	115,391
CHANG, LUCY M.....	FUNCTION OF DNA POLYMERASES IN NORMAL AND CANCER CELLS.....	7R01 CA23365-01	49,050
HADDY, FRANCIS J.....	EFFECT OF CATIONS, ANIONS, AND WATER UPON BLOOD VESSELS.....	7R01 HL21525-01	11,343
HOLMES, RANDALL K.....	CONTROL OF BACTERIAL TOXINS BY VIRUSES AND PLASMIDS.....	5R22 AI14107-02	10,400
OVERBECK, HENRY W.....	IONS, WATER, AND HYPERTENSION.....	1R01 HL21155-01	14,102
OVERBECK, HENRY W.....	HEMODYNAMICS AND VASOACTIVITY IN RENAL HYPERTENSION.....	7R01 HL21528-01	15,978
ORGANIZATION TOTAL	6	216,264	
UNDERSEA MEDICAL SOCIETY ZIP CODE 20014			
SHILLING, CHARLES W.....	PRODUCTION OF HYPERBARIC OXYGEN THERAPY MONOGRAPH.....	3R01 LM02635-01S1	8,514
SHILLING, CHARLES W.....	ARTERIAL AIR EMBOLISM AND THE STROKE SYNDROME.....	1R01 LM02985-01	4,839
SHILLING, CHARLES W.....	EARLY DIAGNOSIS OF COMPRESSED AIR ILLNESS.....	1R01 LM03025-01	6,988
ORGANIZATION TOTAL	3	20,341	
UNIVERSITIES ASSOCIATED FOR RESEARCH AND EDUCATION IN PATHOLOGY ZIP CODE 20014			
CALI, ANN.....	BIOCONTROL OF SCHISTOSOMES BY USE OF MICROSPORIDANS.....	5R22 AI12409-03	12,795
FINE, BEN S.....	ELECTRON MICROSCOPY IN OCULAR PATHOLOGY.....	5R01 EY00133-08	37,607
FISHBEIN, WILLIAM N.....	UREASE AND DEAMINASES IN CHEMISTRY AND MEDICINE.....	2R01 AM10960-11	55,925
HARTMANN, WILLIAM H.....	ATLAS OF TUMOR PATHOLOGY.....	5R01 CA08575-12	21,534
TRUMP, BENJAMIN F.....	HISTOPATHOLOGICAL GRADING OF CARCINOMA OF PROSTATE.....	5R26 CA15798-04	56,038
WISSELER, ROBERT W.....	SUPPORT FOR REGISTRY OF COMPARATIVE PATHOLOGY.....	5R01 RR00301-12	151,585

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
ZIMMERMAN, LORENZ E	IMPROVED DIAGNOSIS AND THERAPY IN OPHTHALMOLOGY	5R01 EY01386-02	20,991
ORGANIZATION TOTAL	7 356,475		
CATONSVILLE			
FRIENDS MEDICAL SCIENCE RESEARCH CENTER ZIP CODE 21228			
BLACK, PERRY	EXPERIMENTAL STUDIES ON SPINAL CORD TRAUMA	1R01 NS13327-01	56,370
BLACK, PERRY	'SPONTANEOUS' SEIZURES AND CEREBELLAR STIMULATION	1R01 NS13499-01	49,284
BLACK, PERRY	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05546-15	30,202
ORGANIZATION TOTAL	3 135,856		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND BALTIMORE COUNTY CAMPUS ZIP CODE 21228			
BURKE, COLIN B	BIOGRAPHIES OF 19TH CENTURY AMERICAN PHYSICIANS	1R01 LM03017-01	6,141
GETHMANN, RICHARD C	GENETIC CONTROL OF THE MEIOTIC PROCESS	5R01 GM22050-03	51,020
HAYS, JOHN B	RECOMBINATION OF DNA IN A CELL-FREE SYSTEM	5R01 GM22586-02	42,934
KARPEL, RICHARD L	PHYSIOLOGICAL ROLES OF RNA UNWINDING PROTEINS	1R01 CA21374-01	50,792
LOVETT, PAUL S	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07159-02	36,802
MARCUS, ALLAN H	COMPARTMENT MODELS FOR BODY BURDEN OF POLLUTANTS	5R01 ES01236-02	24,851
ROTH, THOMAS F	SELECTIVE PROTEIN UPTAKE IN DEVELOPING OOCYTES	5R01 HD09549-03	40,678
STEINER, ROBERT F	CONFORMATIONAL TRANSITIONS OF ALLOSTERIC ENZYMES	5R01 AM16688-05	61,155
VITULLO, VICTOR P	CARBOXYLATE ION CATALYSIS AND LYSOZYME	5R01 GM21933-03	46,399
WHALEN, DALE L	NONENZYMATIC REACTIONS OF HIGHLY REACTIVE EPOXIDES	5R01 CA17278-03	31,289
ORGANIZATION TOTAL	10 392,061		
CHEVY CHASE			
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 20015			
KRAMER, SIMON	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA21661-02	425,641
LESTER, RICHARD G	WORKSHOPS ON BREAST CANCER	1R13 CA21595-01	78,300
ORGANIZATION TOTAL	2 503,941		
COLLEGE PARK			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742			
BRAUTH, STEVEN E	COMPARATIVE NEUROBIOLOGY OF THE BASAL GANGLIA	5R01 NS13018-02	26,719
BRINKLEY, HOWARD J	FUNCTIONING OF CORPORA LUTEA	5R01 HD00739-12	63,113
COLWELL, RITA R	ECOLOGY OF PATHOGENIC VIBRIOS	1R22 AI4242-01	52,546
DOETSCH, RAYMOND N	MARTEN'S NEW THEORY—ANTECEDENTS AND INFLUENCE	1R01 LM02669-01	6,142
GOODE, M DENNIS	CHANGES IN DNA SYNTHESIS WITH AGE OF THE HEART	5R01 HL18702-02	16,577
HAMLET, SANDRA L	PHYSIOLOGICAL STUDY OF SPEECH ADAPTATION	2R01 DE03631-04	53,990
HENERY-LOGAN, KENNETH R	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07042-12	55,475
HODOS, WILLIAM	A BEHAVIORAL ANALYSIS OF VISUAL SYSTEM EVOLUTION	2R01 EY00735-07	76,988
KANAL, LAVEEN N	RESOURCE RELATED RESEARCH—GRAPHIC FORMULA TRANSLATION	5R01 GM22099-02	62,160
LEVINSON, JOHN Z	SPATIAL AND TEMPORAL PROPERTIES OF HUMAN VISION	5R01 EY01640-02	65,450
PENNER, MERRILYNN J	TEMPORAL ANALYSIS OF AUDITORY STIMULI	5R01 NS13673-02	27,734
PIERCE, SIDNEY K	CELLULAR WATER BALANCE: THE INVERTEBRATE MECHANISM	1R01 GM23731-01	58,480
ROWAN, ROBERT, III	NMR STUDIES ON MYELIN BASIC PROTEIN/LIPID INTERACTIONS	1R01 NS13934-01	59,949
SISLER, HUGH D	MECHANISM OF ACTION OF FUNGICIDES	5R01 AI00225-25	48,754
SMITH-GILL, SANDRA J	MITOTIC CONTROLS IN THYROXIN-INDUCED DIFFERENTIATION	7R01 AM20518-01	18,632
SMITH-GILL, SANDRA J	MITOTIC CONTROLS IN THYROXIN-INDUCED DIFFERENTIATION	5R01 AM20518-02	39,300
STEINMAN, ROBERT M	STIMULUS VARIABLES IN MONOCULAR FIXATION	3R01 EY00325-11S1	13,282
ZAJAC, FELIX E, III	MOTOR UNIT ORGANIZATION DURING LOCOMOTION	5R01 NS11518-03	41,387
ZAJAC, FELIX E, III	EXPERIMENT & OPTIMAL CONTROL TO STUDY ANIMAL MOVEMENT	3R01 NS11971-02S1	5,294
ZAJAC, FELIX E, III	EXPERIMENTAL & ANALYTICAL STUDY OF MAMMALIAN MOVEMENT	2R01 NS11971-03	68,069
ORGANIZATION TOTAL	20 860,041		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
PRINCESS ANNE			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND EASTERN SHORE ZIP CODE 21853			
WUTOH, JOSEPH G.....	MARINE AND ESTUARINE PHARMACOLOGY.....	5S06 RR08079-04	94,091
ORGANIZATION TOTAL	1 94,091		
ROCKVILLE			
INDIVIDUAL AWARD—MORANTZ, REGINA MARKELL ZIP CODE 20852			
MORANTZ, REGINA M.....	WOMEN IN THE AMERICAN MEDICAL PROFESSION, 1830-1930.....	5R01 LM02701-02	14,910
ORGANIZATION TOTAL	1 14,910		
SILVER SPRING			
INSTITUTE FOR BEHAVIORAL RESEARCH ZIP CODE 20910			
PARSONS, H MC ILVAINE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05636-11	39,622
TAUB, EDWARD.....	FETAL ORIGINS OF PRIMATE SENSORY-MOTOR INTEGRATION.....	3R01 HD08579-03S1	7,496
TAUB, EDWARD.....	RAYNAUD'S DISEASE AND TEMPERATURE SELF-REGULATION.....	1R01 HL21323-01	94,455
ORGANIZATION TOTAL	3 141,573		
JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY ZIP CODE 20910			
HOCHHEIMER, BERNARD F.....	POLARIZED LIGHT RETINAL PHOTOGRAPHY.....	1R01 EY02054-01	14,301
KIM, BORIS F.....	HIGH RESOLUTION SPECTROSCOPY OF PORPHYRINS.....	5R01 GM21897-03	80,537
ORGANIZATION TOTAL	2 94,838		
STATE TOTAL	417 42,549,176		
MASSACHUSETTS			
AMHERST			
AMHERST COLLEGE ZIP CODE 01002			
CZAP, PETER, JR.....	RUSSIAN FERTILITY AND HOUSEHOLD STRUCTURE 1780-1897.....	1R01 HD10798-01	21,704
GEORGE, STEPHEN A.....	VISION IN TRIPLOID ANIMALS.....	3RD1 EY01662-02S1	2,412
GEORGE, STEPHEN A.....	VISION IN TRIPLOID ANIMALS.....	2R01 EY01662-03	25,098
KIDDER, GEORGE W.....	METABOLIC STUDIES ON ANIMAL MICROORGANISMS.....	5R01 AM01005-25	37,899
KROPF, ALLEN.....	PHOTOCHEMISTRY OF THE VISUAL PIGMENTS.....	5R01 EY00201-16	35,799
LEADBETTER, EDWARD R.....	GRAM-NEGATIVE BACTERIA OF DENTAL PLAQUES: PROPERTIES.....	5R01 DE04383-02	72,908
WAGGONER, ALAN S.....	EARLY MOLECULAR EVENTS IN VISUAL EXCITATION.....	5R01 EY00930-06	26,271
WAGGONER, ALAN S.....	OPTICAL PROBES OF NERVE EXCITATION.....	5R01 NS10489-06	38,582
ZIMMERMAN, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5SD7 RRD7110-10	22,657
ORGANIZATION TOTAL	9 283,330		
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE 01002			
BLACK, DONALD L.....	HORMONAL CONTROL OF OVUM TRANSPORT.....	1R01 HD11252-01	41,003
BRANDTS, JOHN F.....	FREE ENERGY OF FOLDING OF GLOBULAR PROTEINS.....	5R01 GM11071-15	75,245
BRANDTS, JOHN F.....	STRUCTURAL STUDIES OF THE HUMAN ERYTHROCYTE MEMBRANE.....	5RD1 HL17878-03	56,071
CANALE-PAROLA, ERCOLE.....	SPIROCHETES INDIGENOUS TO HUMANS.....	5R01 AI12482-03	54,172
CARPINO, LOUIS A.....	NEW AMINO-PROTECTING GROUPS.....	5R01 GM09706-12	53,375
CHIEN, JAMES C.....	METAL, LIGAND & ELECTRON BINDINGS IN HEMOPROTEINS.....	3R01 HL14270-06S1	6,624
CLIFTON, RACHEL K.....	AUDITORY COMPETENCE AND LEARNING IN HUMAN INFANTS.....	2R01 HD06753-04A1	49,217
COX, C D.....	CULTIVATION OF VIRULENT TREPONEMA PALLIDUM.....	5R01 AI10982-05	65,654
FOURNIER, MAURILLE J, JR.....	BIOSYNTHESIS OF TRANSFER RIBONUCLEIC ACID.....	5RD1 GM19351-06	53,730
FRIEDMAN, MARK I.....	ENERGY METABOLISM, HUNGER, AND FEEDING.....	1RD1 AM20022-01	37,409
HALPERN, JOEL M.....	EXTENDED FAMILY HOUSEHOLDS AND DEMOGRAPHIC TRANSITION.....	5R01 HD08883-03	3,943
HEPLER, PETER K.....	CALCIUM FLUCTUATION AND LOCALIZATION DURING MITOSIS.....	1R01 GM25120-01	86,500
HOLMES, ROBERT R.....	PHOSPHATE MODEL FOR RIBONUCLEASE ACTION.....	5R01 GM21466-03	46,158

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
HONIGBERG, BRONISLAW M.....	PATHOGENICITY IN TRICHOMONADS AND TRYPANOSOMATIDS.....	5R01 AI00742-22	86,643
LESSIE, THOMAS G.....	ALLOSTERIC MECHANISMS IN PSEUDOMONAS CATABOLISM.....	5R01 GM21198-09	33,320
LEVIN, BRUCE R.....	PROTEIN VARIATION AND SELECTION MECHANISMS IN E. COLI.....	2R01 GM19848-04	42,450
MARCUM, JAMES B.....	EXPERIMENTAL INDUCTION OF FREEMARTINISM IN THE EWE.....	5R01 HD08534-03	31,883
MASON, THOMAS L.....	A GENETIC APPROACH TO MEMBRANE ASSEMBLY.....	5R01 GM20909-05	39,429
MORTLOCK, ROBERT P.....	THE EVOLUTION OF ENZYMOLOGICAL ACTIVITIES.....	5R01 AI06848-12	34,182
MYERS, NANCY A.....	EARLY DEVELOPMENT OF REPRESENTATIONAL PROCESSES.....	5R01 HD09346-03	58,372
NORKIN, LEONARD C.....	DEFECTIVE VIRUS FROM SIMIAN VIRUS 40 CARRIER CULTURES.....	1R01 AI14049-01	41,978
PARSONS, PETER P.....	MITOCHONDRIAL PROTEIN SYNTHESIS AND AUTONOMY.....	5R01 GM19763-03	30,083
PIEDMONT, EUGENE B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07048-12	101,165
ROEPER, THOMAS W.....	COMPLEX LANGUAGE STRUCTURE ACQUISITION BY CHILDREN.....	3R01 HD09647-02S1	6,831
ROEPER, THOMAS W.....	COMPLEX LANGUAGE STRUCTURE ACQUISITION BY CHILDREN.....	5R01 HD09647-03	36,085
SEARCY, DENNIS G.....	FUNCTION OF THERMOPLASMA ACIDOPHILUM HISTONE.....	5R01 GM22838-02	30,390
SLAKEY, LINDA L.....	BIOSYNTHESIS AND MODIFICATION OF FATTY ACIDS IN AORTA.....	3R01 HL16457-02S1	3,571
SWEDLUND, ALAN C.....	FERTILITY AND MIGRATION TRENDS IN RURAL NEW ENGLAND.....	2R01 HD08979-03	44,868
WADE, GEORGE N.....	SEX HORMONES AND BEHAVIOR: EFFECTS OF DIABETES.....	1R01 AM20785-01	48,700
WADE, GEORGE N.....	HORMONES, BRAIN FUNCTION AND BEHAVIOR.....	5R01 NS10873-05	39,276
WESTHEAD, EDWARD W, JR.....	MOLECULAR BASIS OF ASPARTOKINASE FEEDBACK CONTROL.....	5R01 AM11157-11	19,808
WESTHEAD, EDWARD W, JR.....	DIVALENT CATIONS IN ENOLASE AND OTHER BIOLOGICAL SYSTEMS.....	5R01 GM14945-11	45,538
WIARDA, HOWARD J.....	POPULATION POLICY IN LATIN AMERICA: THE OUTPUT SIDE.....	5R01 HD06604-04	16,920
ZIMMERMANN, ROBERT A.....	PHOTOCHEMICAL PROBES OF RIBOSOME ARCHITECTURE.....	5R01 GM22807-02	42,585
ORGANIZATION TOTAL	34	1,463,178	
BELMONT			
MASSACHUSETTS GENERAL HOSPITAL—MCLEAN HOSPITAL DIVISION ZIP CODE 02178			
DE MARNEFFE, FRANCIS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05484-15	36,911
HAUSER, GEORGE.....	BIOCHEMISTRY OF INOSITOL AND PHOSPHOINOSITIDES.....	5R01 NS06399-09	60,453
HAUSER, GEORGE.....	GLYCOLIPID METABOLISM AND FUNCTION IN NERVOUS TISSUE.....	5R01 NS09866-06	43,416
SAKURA, J DAVID.....	CHEMICAL STUDIES ON PROTEOLIPID APOPROTEINS.....	5R01 HL18746-02	49,665
ORGANIZATION TOTAL	4	190,445	
BOSTON			
AFFILIATED HOSPITALS CENTER—BOSTON HOSPITAL FOR WOMEN ZIP CODE 02115			
GIANNPOULOS, GEORGE.....	HORMONE DEPENDENCE IN ENDOMETRIAL AND BREAST CANCER.....	1R01 CA22342-01	94,037
TAEUSCH, H WILLIAM, JR.....	PREVENTION OF RDS WITH PRENATAL GLUCOCORTICOID.....	5R01 HD09970-02	86,251
ORGANIZATION TOTAL	2	180,288	
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
ABRAMS, HERBERT L.....	CINEANGIOGRAPHIC STUDIES OF THE CARDIOVASCULAR SYSTEM.....	5R01 HL20895-02	138,805
BRAUNWALD, EUGENE.....	EFFECT OF TREATMENT ON THE HYPERTROPHIED LEFT VENTRICLE.....	1R01 HL20044-01	44,984
BRAUNWALD, EUGENE.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00888-03	691,793
BRENNER, BARRY M.....	CONTROL OF FLUID EXCHANGES IN THE MAMMALIAN KIDNEY.....	5R01 AM19467-02	227,047
BUNN, H FRANKLIN.....	HEMOGLOBIN A1C IN PATIENTS WITH DIABETES MELLITUS.....	5R01 AM18223-03	60,905
BUNN, H FRANKLIN.....	STRUCTURE AND FUNCTION OF NORMAL AND ABNORMAL HEMOGLOBIN.....	5R01 HL16927-04	95,381
CAREY, MARTIN C.....	ALIMENTARY TRACT LIPIDS IN HEALTH AND DISEASE.....	5R01 AM18559-03	56,507
CARPENTER, CHARLES B.....	NATURE & CONTROL OF LYMPHOCYTE MEDIATED CYTOTOXICITY.....	3R01 CA16937-03S1	28,848
COTRAN, RAMZI S.....	CARDIOPULMONARY AND RENAL PATHOLOGY RESEARCH CENTER.....	5P01 HL06370-16	292,406
FALCHUK, Z MYRON.....	PATHOGENESIS OF SPRUE & INFLAMMATORY BOWEL DISEASE.....	2R01 AM17684-04	57,603
GROSSMAN, WILLIAM.....	DIASTOLIC PROPERTIES OF THE LEFT VENTRICLE.....	5R01 HL19089-02	35,672
GROSSMAN, WILLIAM.....	REGRESSION OF CARDIAC HYPERTROPHY: MYOCARDIAL AND RENAL.....	5R01 HL19246-02	42,614
HASSAN, WILLIAM E, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05489-15	103,937
HOLLENBERG, NORMAN K.....	RENAL VASCULAR REACTIVITY IN THE HYPERTENSIVE PATIENT.....	5R01 HL14944-06	59,274
INGRAM, ROLAND H, JR.....	LOCALIZATION OF AIRWAYS OBSTRUCTION AND RESPONSES.....	2R01 HL16463-04	48,310
KASS, EDWARD H.....	CHRONIC INFECTIONS AND THE ORIGINS OF CHRONIC DISEASE.....	7P01 HD11924-01	229,490
KASS, EDWARD H.....	ORIGINS OF HYPERTENSION.....	7R01 HL22298-01	194,413
LARSEN, PHILIP R.....	THE PHYSIOLOGICAL ROLE OF THYROXINE-BINDING PROTEIN.....	5R01 AM18616-03	63,972
MANNICK, JOHN A.....	CLINICAL AND LABORATORY STUDIES IN CELLULAR IMMUNITY.....	5R01 CA21644-02	168,953

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MAROKO, PETER R.....	DRUG-INDUCED ALTERATIONS IN INFARCT SIZE IN THE RAT.....	1R01 HL20199-01	50,004
MATHEWS ROTH, MICHELINE M.....	CAROTENOID THERAPY OF PHOTOSENSITIVE PORPHYRIA.....	7R01 AM20904-01	55,164
MATHEWS-ROTH, MICHELINE M.....	CAROTENOIDS AS ANTITUMOR AGENTS FOR SKIN TUMORS.....	1R01 CA23053-01	34,109
MC FADDEN, EDWARD R, JR.....	PATHOPHYSIOLOGY OF EXERCISE-INDUCED ASTHMA.....	5R01 HL17873-03	21,559
MIRSKY, ISRAEL.....	A MATHEMATICAL APPROACH TO CARDIOVASCULAR MECHANICS.....	5R01 HL12711-08	66,199
NEER, EVA J.....	ADENYLATE CYCLASE AND THE PLASMA MEMBRANE.....	5R01 AM19277-02	61,042
SAUNDERS, NICHOLAS A.....	RESPIRATORY FAILURE: CONTROL AND MUSCLE DYSFUNCTION.....	1R23 HL20968-01	36,651
SHAEFFER, JOSEPH R.....	HEMOGLOBIN SYNTHESIS IN SICKLE CELL TRAIT INDIVIDUALS.....	5R01 AM19642-02	54,415
SMITH, THOMAS W.....	DIGITALIS: MECHANISM AND REVERSAL STUDIES.....	3R01 HL18003-03S1	3,348
SMITH, THOMAS W.....	DIGITALIS: MECHANISM AND REVERSAL STUDIES.....	5R01 HL18003-04	49,226
SOLOMON, HAROLD S.....	HYPERTENSION—EDUCATION MODELS TO IMPROVE ADHERENCE.....	3R25 HL18423-02S1	1,511
SOLOMON, HAROLD S.....	HYPERTENSION—EDUCATION MODELS TO IMPROVE ADHERENCE.....	5R25 HL18423-03	227,489
SGNIS, STEPHEN T.....	CELL-MEDIATED IMMUNITY IN PERIODONTAL DISEASE.....	1R01 DE04677-01	56,790
SPEIZER, FRANK E.....	A PROSPECTIVE COHORT FOR RISKS IN BREAST CANCER.....	1R01 CA23645-01	290,126
STROM, TERRY B.....	INSULIN RECEPTOR LYMPHOCYTES: NATURE & SIGNIFICANCE.....	1R01 AM21094-01	58,639
TAEGTMEYER, HEINRICH.....	AMINO ACID METABOLISM IN NORMAL AND HYPOXIC MYOCARDIUM.....	1R01 HL21381-01	38,370
TAGER, IRA B.....	EARLY RISK PREDICTORS FOR CHRONIC PULMONARY DISEASE.....	1R01 HL22528-01	68,793
TRIER, JERRY S.....	FUNCTIONAL MORPHOLOGY OF THE ALIMENTARY TRACT.....	5R01 AM17537-05	132,942
TRIER, JERRY S.....	METABOLISM AND CELL RENEWAL OF COLON PRECANCER & CANCER.....	3R26 CA17505-02S1	8,126
VATNER, STEPHEN F.....	CARDIOVASCULAR CONTROL IN NORMAL AND DISEASE STATES.....	5R01 HL15416-05	119,974
VATNER, STEPHEN F.....	MYOCARDIAL ISCHEMIA.....	3R01 HL17459-02S1	29,653
VATNER, STEPHEN F.....	MYOCARDIAL ISCHEMIA.....	5R01 HL17459-03	67,230
ORGANIZATION TOTAL	41	4,172,274	
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
AUSTEN, K FRANK.....	IN VITRO STUDIES OF THE MECHANISM OF ANAPHYLAXIS.....	5R01 AI07722-11	189,130
AUSTEN, K FRANK.....	IMMUNOLOGIC RELEASE OF CHEMICAL MEDIATORS IN MAN.....	5P50 AI10355-07	195,623
AUSTEN, K FRANK.....	CLINICAL RESEARCH UNIT IN RHEUMATIC DISEASES.....	5P01 AM05577-16	143,636
AUSTEN, K FRANK.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20580-01	131,268
AUSTEN, K FRANK.....	CHEMICAL MEDIATORS OF ACUTE PULMONARY DISORDERS.....	5P01 HL17382-04	173,239
AUSTEN, K FRANK.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05669-10	74,272
CHURCHILL, WINTHROP H, JR.....	MECHANISMS OF MACROPHAGE MEDIATED TUMOR CYTOTOXICITY.....	5R01 CA19403-02	90,844
DAVID, JOHN R.....	STUDIES ON CELLULAR HYPERSENSITIVITY.....	5R01 AI07685-12	187,061
DAVID, JOHN R.....	MACROPHAGE ACTIVATION AND CELLULAR IMMUNITY.....	2R22 AI10921-06	60,011
GOETZL, EDWARD J.....	REGULATION OF HYPERSENSITIVITY REACTIONS IN THE LUNG.....	5R01 HL19777-02	31,113
LEWIS, ROBERT A.....	LOCALIZATION OF MEDIATORS IN DISPERSED LUNG CELLS.....	1R23 HL21089-01	38,780
REMOLD, HEINZ G.....	MACROPHAGE INTERACTIONS WITH LYMPHOCYTE MEDIATORS.....	5R01 AI12110-04	76,490
ROCKLIN, ROSS E.....	MECHANISMS OF CELLULAR HYPERSENSITIVITY IN MAN.....	2R01 AI11729-04	84,841
SCHUR, PETER H.....	COMPLEMENT AND IMMUNE COMPLEXES IN RHEUMATIC DISEASES.....	5R01 AM11414-11	84,640
SCHUR, PETER H.....	CHARACTERIZATION OF B & T LYMPHOCYTES IN LYMPHOMA.....	5R01 CA17615-03	21,615
SHER, F ALAN.....	MECHANISMS OF HOST REACTION TO SCHISTOSOMULA.....	1R22 AI14185-01	81,237
SOTER, NICHOLAS A.....	MEDIATORS OF INFLAMMATION IN DERMATOLOGIC DISEASES.....	1R23 AI14292-01	41,970
STEINBERG, JAMES.....	CHONDROCYTE-MATRIX INTERACTIONS IN ARTHRITIC DISEASE.....	5R01 AM18268-03	64,129
ORGANIZATION TOTAL	18	1,769,899	
BETH ISRAEL HOSPITAL ZIP CODE 02215			
BING, OSCAR H.....	COMPUTER FEEDBACK STUDY OF CARDIAC MUSCLE MECHANICS.....	5R01 HL18338-03	32,475
DICHTER, MARC A.....	CNS CELL CULTURE PHYSIOLOGY & MECHANISMS OF EPILEPSY.....	1R01 NS12731-01A1	55,665
EPSTEIN, FRANKLIN H.....	WATER AND ELECTROLYTES IN HEALTH AND DISEASE.....	5R01 AM18078-06	115,665
EPSTEIN, FRANKLIN H.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR1032-02	641,000
FROMM, DAVID G.....	GASTRIC MUCOSAL PERMEABILITY AND ION TRANSPORT.....	2R01 AM17919-04	46,054
GOLDMAN, PETER.....	CARCINOGEN METABOLISM BY HOST INTESTINAL BACTERIA.....	2R01 CA15260-04	64,238
INGBAR, SIDNEY H.....	NORMAL AND DISORDERED THYROID HORMONE ECONOMY.....	5R01 AM18416-03	232,795
KLEIN, LESTER A.....	RENAL FUNCTION IN SHOCK, ADRENERGIC AGENT'S EFFECTS.....	5R01 GM21855-03	25,973
LANDSBERG, LEWIS.....	CATECHOL METABOLISM AND TRANSPORT IN GUT MUCOSA.....	1R01 AM20062-01	30,480
LANDSBERG, LEWIS.....	CARBOHYDRATE METABOLISM AND CATECHOLAMINES.....	1R01 AM20378-01	70,554
PAULIN, SVEN J.....	HIGH PRECISION DENSITOMETRY OF CORONARY ANGIOGRAMS.....	5R01 HL19003-02	71,220
RABKIN, MITCHELL T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05479-15	127,960
ROBINSON, STEPHEN H.....	ORIGIN AND FATE OF BILE PIGMENTS.....	5R01 AM09834-13	92,823
ROWE, JOHN W.....	PROGRAM PROJECT IN BIOMEDICAL ASPECTS OF AGING.....	1P01 AG00599-01	235,476

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
SALZMAN, EDWIN W	PROGRAM PROJECT IN THROMBOSIS AND ATHEROSCLEROSIS	5P01 HL11414-10	240,552
SALZMAN, EDWIN W	POSTOPERATIVE THROMBOEMBOLISM IN SURGICAL PATIENTS	3R01 HL13754-06S1	11,234
SALZMAN, EDWIN W	POSTOPERATIVE THROMBOEMBOLISM IN SURGICAL PATIENTS	2R01 HL13754-07	126,063
SCHNIFFER, LOWELL E	CLINICAL CANCER EDUCATION PROGRAM	5R25 CA19085-02	55,143
SILEN, WILLIAM	G. I. MUCOSAL BARRIER IN HEALTH AND SURGICAL DISEASE	2R01 AM15681-06	125,616
SIMON, MORRIS	DEVELOPMENT OF MEMORY-ALLOY-FILTERS FOR VENOUS EMBOLI	1R01 HL20554-01	74,839
SKILLMAN, JOHN J	ALBUMIN SYNTHESIS: EFFECT OF FEEDING SURGICAL PATIENTS	1R01 AM19794-01	57,932
SLACK, WARNER V	COUNSELING IN NUTRITION BY COMPUTER	5R01 LM02810-02	100,901
STEER, MICHAEL L	PATHOPHYSIOLOGY OF ACUTE PANCREATITIS	1R01 AM20302-01	38,758
STEER, MICHAEL L	EARLY EVENTS FOLLOWING STIMULATION OF HUMAN PLATELETS	1R01 HL20956-01	55,745
WEINTRAUB, RONALD M	MYOCARDIAL PROTECTION DURING CARDIOPULMONARY BYPASS	1R01 HL20720-01	59,920
ZOLL, PAUL M	EXTERNAL CARDIAC STIMULATION WITH MICROWAVE RADIATION	1R01 HL20077-01	88,804
ORGANIZATION TOTAL	26	2,877,885	
BOSTON BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 02114			
CANNON, DONALD J	COLLAGEN: MOLECULAR CHANGES WITH AGING	1R01 AG00774-01	77,212
DAVISON, PETER F	PROTEIN CATABOLISM AND ERROR THEORIES OF AGING	1R01 AG00584-01A1	67,465
DAVISON, PETER F	NEUROFILAMENT PROTEIN: CHARACTERISTICS AND FUNCTION	5R01 NS11122-04	109,050
FISHER, ROBERT J	MAMMALIAN MITOCHONDRIAL BIOGENESIS	1R01 GM23422-01	77,886
FUJIMORI, EIJI	AGE-RELATED CHANGES IN COLLAGEN AND HYALURONIC ACID	1R01 AG00296-01	60,112
FUJIMORI, EIJI	BLUE-FLUORESCENT LENS PROTEINS	5R01 EY01810-02	65,436
GERGELY, JOHN	BIOCHEMISTRY OF MUSCLE CONTRACTION	5R01 HL05949-17	145,284
IKEMOTO, NORIYAKI	STRUCTURE AND FUNCTION OF SARCOPLASMIC RETICULUM	5R01 AM16922-05	99,827
JACOBSON, BERNARD J	ROLE OF HYALOCYTES IN THE VITREOUS	2R01 EY00810-04	67,889
JULIAN, FRED J	CONTRACTILITY IN HEART AND OTHER STRIATED MUSCLES	2R01 HL16606-10	155,524
MITCHELL, DAVID H	GENETIC ANALYSIS OF AGING IN THE NEMATODE	1R23 AG00645-01	16,265
SANADI, D RAO	OXIDATIVE PHOSPHORYLATION IN HEART MITOCHONDRIA	2R01 GM13641-11A2	105,531
SANADI, D RAO	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05711-07	91,632
SARKAR, SATYAPRIYA	BIOSYNTHESIS OF CARDIAC AND SKELETAL MUSCLE PROTEINS	5R01 AM13238-09	81,389
SEIDEL, JOHN C	NUCLEOTIDE-INDUCED CHANGES OF CONFORMATION IN MYOSIN	5R01 HL15391-06	83,754
SRETER, FRANK A	BIOCHEMICAL CHANGES IN DEVELOPING AND AGING MUSCLES	5R01 AG00262-06	123,329
THOMAS, DAVID A	HEXOSE METABOLISM AS A FUNCTION OF AGING IN SLIME MOLDS	1R23 AG00649-01	15,999
WOHLRAB, HARTMUT	SUPPORT FOR BIOMEDICAL RESEARCH	1R01 AG00100-01	48,137
WRIGHT, BARBARA E	PHYSIOLOGICAL CONTROL OF DIFFERENTIATION	5R01 AG00260-10	64,373
WRIGHT, BARBARA E	COMPUTER ANALYSIS OF DIFFERENTIATION	5R01 AG00433-08	51,977
WRIGHT, BARBARA E	KINETIC MODELING OF RAT LIVER AND MORRIS TUMORS	3R01 CA15567-03S1	11,342
ORGANIZATION TOTAL	21	1,619,413	
BOSTON HEALTH AND HOSPITALS DEPARTMENT—BOSTON CITY HOSPITAL ZIP CODE 02118			
GOTTLIEB, LEONARD S	STUDIES OF A NEW COLONIC CANCER MARKER (ZGM)	5R26 CA18620-02	53,818
KUPCHIK, HERBERT Z	TUMOR MARKERS IN HUMAN ASCITES	5R26 CA18466-03	59,722
MC CABE, WILLIAM R	DEFENSE MECHANISMS IN GRAM-NEGATIVE BACTEREMIA	7R01 AI14719-01	55,654
MC CABE, WILLIAM R	BIOLOGY AND IMMUNOLOGY OF GRAM-NEGATIVE BACILLI	7R01 AI14789-01	112,783
REIF, ARNOLD E	EXPERIMENTAL STUDIES ON IMMUNITY TO CANCER CELLS	5R01 CA15952-05	75,837
ROMAN, STANFORD A, JR	A COMPREHENSIVE CENTER FOR SICKLE CELL DISEASE	2P60 HL15157-06	929,128
ROMAN, STANFORD A, JR	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05569-13	93,328
TISHLER, PETER V	GONOSOMAL ANEUPLOIDY IN CITY HOSPITAL POPULATIONS	5R01 GM22750-03	20,204
VATTUKATTIS, JUDITH L	MECHANISMS MEDIATING GONADOTROPIN ACTION	5R01 HD09358-02	67,862
ZAMCHECK, NORMAN	PATHOLOGY OF THE DIGESTIVE TRACT MUCOUS MEMBRANE	2P01 CA04486-18	221,772
ORGANIZATION TOTAL	10	1,690,108	
BOSTON UNIVERSITY ZIP CODE 02215			
ALBERT, ARTHUR E	SCREENING AND CERVICAL CANCER: A MATHEMATICAL MODEL	5R18 CA17807-03	49,357
ALEXANDER, EDWARD A	EFFECT OF AGING ON RENAL FUNCTION	1R01 AG00028-01	70,670
ALEXANDER, EDWARD A	HYPERTENSION, SHOCK AND EDEMA: RENAL ASPECTS	5R01 HL17458-03	53,383
ANAPOLLE, STEVEN E	MICROVASCULAR LESIONS OF BUCCAL AND GINGIVAL TISSUE	5R01 AM18280-06	43,880
ARMSTRONG, ROBERT B	LOCOMOTION IDLING METABOLISM & GAIT DYNAMICS	5R01 AM18123-03	60,679
BENNETT, MICHAEL	IMMUNOBIOLOGY OF VIRAL LEUKEMIA AND ITS TREATMENT	3R01 CA15369-03S1	4,066
BENNETT, MICHAEL	IMMUNOBIOLOGY OF VIRAL LEUKEMIA AND ITS TREATMENT	2R01 CA15369-04	67,035
BENNETT, MICHAEL	CARDIAC ALLOGRAFTS IN AUTOLOGOUS RADIATION CHIMERAS	5R01 HL18186-03	45,310

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BERMAN, HERBERT J.....	THROMBOEMBOLISM IN LIVING BLOOD VESSELS.....	3R01 HL00902-25S1	15,015
BERMAN, HERBERT J.....	THROMBOEMBOLISM IN LIVING BLOOD VESSELS.....	5R01 HL00902-26	117,988
BROTHMAN, SELWYN A.....	DIET MICROFLORA AND INDUCTION OF COLONIC CARCINOMA.....	5R26 CA16750-03	52,153
CERMAK, LAIRD S.....	DEVELOPMENTAL DEFICITS IN INFORMATION PROCESSING.....	5R01 HD09508-02	24,955
CERMAK, LAIRD S.....	HUMAN MEMORY CONFERENCE: INFORMATION PROCESSING LEVELS.....	1R13 HD10807-01	14,500
CHATTORAJ, SATI C.....	CORTICOSTEROIDS IN THE FETOPLACENTAL UNIT.....	3R01 HD06799-03S1	9,740
CHOBANIAN, ARAM V.....	ARTERIAL METABOLISM, DIABETES AND ATHEROGENESIS.....	5R01 HL12869-08	87,517
CHOBANIAN, ARAM V.....	PATHOGENESIS AND COMPLICATIONS OF HYPERTENSION.....	5P50 HL18318-02	828,669
CLARKE, RICHARD H.....	CARCINOGEN-DNA COMPLEXES: STRUCTURE AND INTERACTIONS.....	5R01 CA17922-02	32,070
COHEN, ALAN S.....	SYNOVIAL MEMBRANE AND RELATED CONNECTIVE TISSUES.....	5R01 AM04599-17	149,135
COHEN, ALAN S.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20613-01	182,247
COOPERBAND, SIDNEY R.....	LYMPHOCYTE PROLIFERATION INHIBITORY FACTOR.....	5R01 CA12209-06	104,876
COOPERBAND, SIDNEY R.....	A SERUM IMMUNOSUPPRESSIVE FACTOR IN CANCER.....	3R01 CA15129-03S1	15,487
COOPERBAND, SIDNEY R.....	PROGRAM PROJECT IN NEW APPROACHES TO CELL IMMUNOTHERAPY.....	5P01 CA15848-03	192,487
COOPERBAND, SIDNEY R.....	MULTIDISCIPLINARY CANCER CENTER: CORE GRANT.....	5P30 CA19135-02	232,118
COUSER, WILLIAM G.....	IMMUNOLOGIC MECHANISMS OF GLOMERULAR INJURY.....	2R01 AM17722-04	74,320
DAWBER, THOMAS R.....	THE EPIDEMIOLOGY OF STROKE.....	5R01 NS09695-07	6,042
DEYKIN, DANIEL.....	ROLE OF PLATELET LIPIDS IN HEMOSTASIS AND THROMBOSIS.....	5R01 HL18586-02	24,479
ECKNER, ROBERT J.....	BIOLOGICAL AND PHYSICAL PROPERTIES OF FRIEND VIRUS.....	5R01 CA19562-02	46,701
EGDAHL, RICHARD H.....	ENDOCRINE AND METABOLIC RESPONSE TO SHOCK AND TRAUMA.....	5R01 GM23870-02	165,145
FEINGOLD, DAVID S.....	ANTIMICROBIAL AGENTS AND THE CELL SURFACE.....	5R01 AI12679-03	54,432
FEINGOLD, DAVID S.....	CHEMICAL DETECTION OF NEISSERIA GONORRHOEAE.....	5R01 AI13185-02	38,533
FINE, RICHARD E.....	ACTIN AND OTHER FILAMENTS IN THE GROWING NEURON.....	5R01 NS10582-05	68,760
FOSTER, JUDITH A.....	ELASTIN STRUCTURE, FIBROGENESIS AND DISEASE.....	5R01 HL15964-05	30,714
FRANZBLAU, CARL.....	RESPONSE OF THE LUNG TO INJURY.....	1P01 HL19717-01	566,531
GAENSLER, EDWARD A.....	DIFFUSE INFILTRATIVE LUNG DISEASE CENTER SUPPORT.....	3P50 HL15063-05S1	86,924
GENSLER, WALTER J.....	SYNTHETIC MYCOLIC ACIDS—CORDFACTOR ANTIBODIES.....	5R22 AI09308-06	48,192
GOODGLASS, HAROLD.....	APHASIA RESEARCH CENTER SUPPORT.....	5P50 NS06209-12	169,357
GORMAN, ANTHONY L.....	VISUAL RESPONSES TO LIGHT DECREMENT.....	2R01 EY01157-04	77,664
GORMAN, ANTHONY L.....	THE METABOLIC REGULATION OF MEMBRANE PERMEABILITY.....	3R01 NS11429-03S1	14,774
GORMAN, ANTHONY L.....	INTRACELLULAR CALCIUM EFFECTS ON MEMBRANE PERMEABILITY.....	2R01 NS11429-04	77,599
GUTERMAN, SONIA K.....	BACTERIAL MUTANTS WITH DEFECTIVE RNA POLYMERASE.....	1R01 GM24461-01	23,318
HALL, DIANA L.....	COMPARATIVE EVOLUTION OF SEX ENDOCRINOLOGY.....	1R01 LM02719-01	21,258
HINDS, JAMES W.....	SERIAL SECTION ANALYSIS OF DEVELOPING MOUSE RETINA.....	2R01 EY01398-03	56,949
HOLLANDER, WILLIAM.....	ROLE OF THE ARTERIAL WALL IN ATHEROSCLEROSIS.....	5P01 HL13262-06	913,424
HOOD, WILLIAM B, JR.....	PATHOPHYSIOLOGY OF MYOCARDIAL ISCHEMIA.....	2R01 HL14646-04A1	72,743
HOYT, RICHARD F, JR.....	CHARACTERIZATION OF SMALL-GRANULE CELLS IN THE LUNG.....	5R01 HL19379-02	63,105
JENKINS, C DAVID.....	RECOVERY AFTER HEART SURGERY: BIO-BEHAVIORAL FACTORS.....	1R01 HL20637-01	212,765
JICK, HERSHEL.....	ACUTE AND LONG-TERM CLINICAL TOXICITY OF DRUGS.....	1R01 GM23430-01	321,097
KAGAN, HERBERT M.....	PROPERTIES OF CONNECTIVE TISSUE LYSYL OXIDASE.....	5R01 AM18880-02	59,216
KAMINER, BENJAMIN.....	REGULATORY PROTEINS IN VERTEBRATE SMOOTH MUSCLE.....	5R01 AM18207-02	50,451
KELMAN, ASHER D.....	MOLECULAR MECHANISMS OF PLATINUM AND RUTHENIUM DRUGS.....	5R01 CA18522-02	75,613
KIBRICK, SIDNEY.....	DIABETES MELLITUS; ROLE OF COXSACKIEVIRUS B INFECTION.....	2R01 AM17202-04	58,711
KUMAR, VINAY.....	STUDIES OF ISOLATED MARROW-DEPENDENT (M) CELLS.....	1R01 CA21401-01	50,117
LAING, RONALD A.....	STUDIES OF THE CORNEAL ENDOTHELIUM OF THE EYE.....	5R01 EY01227-03	94,579
LAING, RONALD A.....	METABOLIC STUDIES OF CORNEAL TISSUES.....	1R01 EY01990-01	118,004
LANG, MICHAEL A.....	CELL VOLUME REGULATION DURING OSMOTIC STRESS.....	1R01 AM20403-01	51,003
LAURSEN, RICHARD A.....	STRUCTURE AND FUNCTION OF HUMAN PLASMIN.....	5R01 HL15535-05	60,362
LEIBOWITZ, HOWARD M.....	STUDIES IN CORNEAL TRANSPLANTATION.....	5R01 EY00544-08	84,747
LESSELL, SIMMONS.....	EXPERIMENTAL OPTIC NEUROPATHIES.....	5R01 EY00013-11	81,003
LEVINSKY, NORMAN G.....	HYPOTENSION, RENAL ISCHEMIA AND EFFECT OF MANNITOL.....	3R01 HL18313-02S1	3,913
LEVINSKY, NORMAN G.....	HYPOTENSION, RENAL ISCHEMIA AND EFFECT OF MANNITOL.....	5R01 HL18313-03	117,333
LIANG, CHANG-SENG.....	METABOLIC CONTROL OF CARDIAC OUTPUT.....	5R01 HL17403-03	56,251
LOWENSTEIN, LEAH M.....	AGING IN THE KIDNEY.....	3R01 AG00449-02S1	12,018
MATHE, ALEKSANDER A.....	AUTONOMIC NERVOUS SYSTEM FUNCTION IN BRONCHIAL ASTHMA.....	2R01 HL15677-05	61,429
MATOLTSY, ALEXANDER G.....	CHEMISTRY OF KERATINS AND THEIR PRECURSORS.....	3R01 AM05924-15S2	36,905
MC LAUGHLIN, ROBERT J.....	CONTRACTILE AND ELASTIC PROPERTIES OF CARDIAC MUSCLE.....	2R01 HL19133-02	79,930
MOOLTEN, FREDERICK L.....	ONCOLYSIS BY ANTIBODY-TOXIN CONJUGATES.....	3R01 CA12404-06S1	12,847
MOZDEN, PETER J.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18019-03	200,450
NILES, RICHARD M.....	BIOCHEMICAL FACTORS INVOLVED IN TUMOR CELL METASTASIS.....	5R01 CA18913-02	40,827

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
NIMBERG, RICHARD B.....	OSTEOCLAST ACTIVATING FACTOR IN METASTATIC CANCER.....	1R01 CA22062-01	55,691
O'BRYAN, PAUL M. JR.....	EARLY RECEPTOR POTENTIALS IN SINGLE VERTEBRATE CONES.....	5R01 EY01812-02	68,252
O'SULLIVAN, JOHN B.....	CARDIOVASCULAR DISEASE AND EVOLVING DIABETES MELLITUS.....	5R01 HL20535-02	222,877
OPPENHEIM, FRANK G.....	STUDIES ON PROLINE-RICH SALIVARY PROTEINS.....	5R01 OE03433-06	37,153
PETERS, ALAN.....	STRUCTURE AND ORGANIZATION OF THE CEREBRAL CORTEX.....	5R01 NS07016-11	68,729
POLGAR, PETER.....	PROSTAGLANDINS, CYCLIC NUCLEOTIDES AND CELLULAR AGING.....	2R01 AG00455-03	67,589
PURI, SURENDRA K.....	EFFECT OF AGING ON THE STRIATAL DOPAMINERGIC SYSTEM.....	1R23 AG00635-01	17,019
RAVIOLA, GIUSEPPINA E.....	FUNCTIONAL ANATOMY OF THE ANTERIOR SEGMENT OF THE EYE.....	5R01 EY01349-03	50,980
ROSENBERG, ISADORE N.....	IODINE METABOLISM OF THE THYROID GLAND.....	5R01 AM02585-20	118,365
ROTHSCHILD, KENNETH J.....	BIOPHYSICAL STUDY OF ORIENTED PHOTORECEPTOR MEMBRANE.....	1R01 EY02142-01	55,446
RYAN, N THOMAS.....	CHRONIC ALTERATIONS IN TISSUE METABOLISM AFTER SHOCK.....	5R01 GM21037-03	61,791
RYSER, HUGUES J.....	PENETRATION OF MACROMOLECULES INTO MAMMALIAN CELLS.....	5R01 CA14551-05	78,071
SANDSON, JOHN I.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00533-09	581,722
SANDSON, JOHN I.....	BIOMEICAL RESEARCH SUPPORT GRANT.....	5S07 RR05380-16	213,709
SCHMID, KARL.....	CHEMISTRY OF HUMAN PROTEINS AND GLYCOPROTEINS.....	5R01 GM10374-15	120,846
SHAPIRO, JERROLD M.....	LASER CONTOUR ANGIOGRAPHY IN EXPERIMENTAL GLAUCOMA.....	5R01 EY01788-02	76,561
SHEPRO, DAVID.....	ENDOTHELIAL CELL COMMUNICATION IN HOMEOSTASIS.....	3R01 HL16714-03S1	4,019
SHEPRO, DAVID.....	ENDOTHELIAL CELL COMMUNICATION IN HOMEOSTASIS.....	2R01 HL16714-04	114,493
SIMONS, ELIZABETH R.....	THE NATURE OF THE COLLAGEN-PLATELET INTERACTION.....	5R01 HL15335-05	49,437
SINEX, F MAROTT.....	AGING IN CONNECTIVE TISSUE, BRAIN AND AUDITORY SYSTEM.....	3P01 AG00001-05S1	19,578
SINEX, F MAROTT.....	AGING IN CONNECTIVE TISSUE, BRAIN AND AUDITORY SYSTEM.....	5P01 AG00001-06	301,648
SLECHTA, ROBERT F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07043-12	48,687
SMALL, DONALD M.....	PHYSICAL CHEMISTRY OF BIOLOGICALLY ACTIVE LIPIDS.....	5R01 HL18623-11	311,027
STANLEY, H EUGENE.....	RAMAN & F.T.IR STUDIES OF MEMBRANE LIPID FLEXIBILITY.....	1R01 EY01996-01	104,742
STANLEY, H EUGENE.....	NORMAL AND ABNORMAL MECHANISMS OF VISION.....	5R01 EY02006-02	39,493
TROXLER, ROBERT F.....	SYNTHESIS OF BILE PIGMENTS IN PLANTS.....	5R01 GM22822-02	27,952
ULLRICK, WILLIAM C.....	STUDIES ON THE Z-LINES OF TENOTOMIZED MUSCLE.....	1R01 NS14033-01	68,912
WARR, WILLIAM B.....	THE STRUCTURE AND PROJECTIONS OF THE COCHLEAR NUCLEI.....	5R01 NS07720-10	58,270
WEINTRAUB, LEWIS R.....	IRON METABOLISM.....	5R01 AM18550-02	99,130
WILLIAMS, LESTER F, JR.....	ROLE OF THE GALL BLADDER IN PATHOGENESIS OF GALLSTONES.....	5R01 AM15304-06	96,823
WOTIZ, HERBERT H.....	ETIOLOGIC AND PROGNOSTIC FACTORS IN BREAST CANCER.....	5P01 CA18226-02	227,190
WOTIZ, HERBERT H.....	METABOLISM OF A LONG ACTING ORAL CONTRACEPTIVE.....	5R01 HD07980-03	47,985
YOUNG, DELANO V.....	TRANSFORMED CELL GROWTH: SERUM PEPTIDE, LIPO FACTORS.....	5R01 CA20040-02	40,237
ZURIF, EDGAR B.....	COMMUNICATION IN APHASIA: MECHANISMS AND REHABILITATION.....	5R01 NS11408-05	73,568
ORGANIZATION TOTAL	102 10,721,864		
CENTER FOR BLOOD RESEARCH ZIP CODE 02115			
ALPER, CHESTER A.....	THE MOLECULAR BASIS FOR HEREDITARY ANGIONEUROTIC EDEMA.....	5R01 AI13626-02	75,193
ALPER, CHESTER A.....	INVESTIGATIONS OF HUMAN COMPLEMENT.....	5R01 AM13855-08	121,544
ALPER, CHESTER A.....	BIOMEICAL RESEARCH SUPPORT GRANT.....	5S07 RR05626-11	43,266
ANTONIADES, HARRY N.....	CHARACTERIZATION OF SERUM FACTORS INDUCING MITOSIS.....	2R01 CA15388-04	108,195
BING, DAVID H.....	SPECIFICITY OF PROTEASES CLR, CLS, PLASMIN AND THROMBIN.....	2R01 AM17351-05	86,969
BING, DAVID H.....	1ST COMPONENT OF COMPLEMENT BY HUMAN CARCINOMA IN VITRO.....	5R01 CA17376-03	78,056
BING, DAVID H.....	CHARACTERIZATION OF HUMAN ALPHA-1-ANTITRYPSIN.....	5R01 HL18825-03	55,340
CHAO, FRANCIS C.....	PLATELETS, FIBRINOGEN, SOLUBLE FIBRIN INTERACTION.....	5R01 HL18935-02	78,396
REMOLD-O'DONNELL, EILEEN.....	MACROPHAGE ACTIVATION BY LYMPHOCYTE MEDIATORS.....	5R01 CA21225-02	69,792
ORGANIZATION TOTAL	9 716,751		
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
AVERY, MARY ELLEN.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00128-13	591,025
BARLOW, CHARLES F.....	MENTAL RETARDATION RESEARCH PROGRAM.....	2P30 HD06276-06	467,718
BARLOW, CHARLES F.....	DEVELOPMENTAL NEUROLOGY.....	5P01 NS09704-07	900,018
BERNHARD, WILLIAM F.....	LEFT VENTRICULAR-AORTIC BYPASS AND COMPOSITE PROSTHESIS.....	1R01 HL20037-01	88,448
BOREL, YVES R.....	IMMUNOLOGIC TOLERANCE TO DNA IN MURINE LUPUS NEPHRITIS.....	3R01 AI13867-01S2	18,813
BOREL, YVES R.....	IMMUNOLOGIC TOLERANCE TO DNA IN MURINE LUPUS NEPHRITIS.....	2R01 AI13867-02	108,937
BRAZELTON, T BERRY.....	DEVELOPMENT OF PRE- AND FULL-TERM INFANTS.....	1R01 HD10889-01	185,041
BRESLOW, JAN L.....	CYSTIC FIBROSIS: A CELL CULTURE APPROACH.....	1R01 AM20010-01	96,563
BRESLOW, JAN L.....	IN VITRO STUDY OF LIPOPROTEINS IN VASCULAR DISEASE.....	2R01 HL15895-04	73,657
BROSEGHINI, ALBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05482-15	213,709
CARLSON, MARY L.....	CONSEQUENCES OF PARIETAL LESIONS.....	7R01 NS14261-01	53,668

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
COLTEN, HARVEY R.....	GENETIC ASPECTS OF THE ALLERGIC RESPONSE.....	5R01 AI11419-04	60,612
COLTEN, HARVEY R.....	BIOSYNTHESIS OF SERUM COMPLEMENT.....	5R01 AI12791-06	85,408
DAVIDSON, RICHARD L.....	BUDR DEPENDENCE, MALIGNANCY, AND DIFFERENTIATION.....	2R01 CA16751-04	104,045
DE LUCA, CARLO J.....	FORCE-EMG SIGNAL RELATION FOR ISOMETRIC CONTRACTIONS.....	1R01 AM19665-01	67,401
DUFFY, FRANK H.....	THE ROLE OF INHIBITION IN EXPERIMENTAL AMBLYOPIA.....	3R01 EY01901-01S1	20,215
DUFFY, FRANK H.....	THE ROLE OF INHIBITION IN EXPERIMENTAL AMBLYOPIA.....	5R01 EY01901-02	136,254
EDELSON, PAUL J.....	MECHANISMS OF MACROPHAGE ANTITUMOR ACTIVATION.....	1R01 CA23503-01	97,077
ELLISON, ROBERT C.....	CHILDHOOD DETERMINANTS OF BLOOD PRESSURE.....	5R01 HL19922-02	155,035
FISCHER, EDWIN G.....	IMPAIRMENT OF CEREBRAL PERFUSION FOLLOWING ISCHEMIA.....	5R01 NS10805-03	29,105
FOLKMAN, MOSES J.....	TUMOR ANGIOGENESIS: A CONTROL POINT IN TUMOR GROWTH.....	2R01 CA14019-04	238,118
FOX, THOMAS O.....	STEROID RECEPTOR MECHANISMS IN DEVELOPING MOUSE BRAIN.....	1R01 HD10818-01	71,845
FRIEDMAN, PAUL A.....	PLACENTAL TRANSPORT OF VITAMIN B12.....	5R01 HD08884-03	35,334
GABBAY, KENNETH H.....	NEUROPATHY IN DIABETES: ROLE OF SORBITOL PATHWAY.....	2R01 AM15019-07	111,231
GABBAY, KENNETH H.....	BLOOD GLUCOSE, HGB A1C, AND DIABETIC VASCULAR DISEASE.....	5R01 HL20539-02	268,432
GALLOP, PAUL M.....	FIBROBLASTS AND CONNECTIVE TISSUES IN DEVELOPMENT.....	5P01 AG00376-03	225,668
GALLOP, PAUL M.....	PROTEIN STRUCTURE AND COLLAGEN MATURATION.....	5R01 AM16754-05	74,056
GALLOP, PAUL M.....	ELASTIN & CALCIFICATION IN PULMONARY & VASCULAR DISEASE.....	1R01 HL20764-01	149,524
GERALD, PARK S.....	GENETIC & CYTOGENETIC STUDIES OF MENTAL RETARDATION.....	5P01 HD04807-08	85,708
GERALD, PARK S.....	GENETIC AND CYTOGENETIC STUDY OF MENTAL RETARDATION.....	2P01 HD04807-09	410,959
GERALD, PARK S.....	GENETIC STUDIES OF LYSOSOMAL DISORDERS.....	5R01 HD06285-06	80,681
GILLES, FLOYD H.....	EPIDEMIOLOGIC PATHOLOGY OF CHILDHOOD BRAIN TUMORS.....	1R01 CA20462-01	121,598
GLIMCHER, MELVIN J.....	THE BIOLOGY OF SKELETAL AND OTHER CONNECTIVE TISSUES.....	5P01 AM15671-07	1,041,051
GRAND, RICHARD J.....	DEVELOPMENT AND CONTROL OF SYNTHESIS AND SECRETION.....	5R01 AM14523-08	132,434
GREENE, LLOYD A.....	NEUROCHEMICAL STUDIES ON CULTURED SYMPATHETIC NEURONS.....	2R01 NS11557-04A1	81,162
HOLTROP, MARUKE E.....	ULTRASTRUCTURAL ANALYSIS OF BONE CELL METABOLISM.....	3R01 AM17834-03S1	17,245
HOYER, JOHN R.....	PATHOGENESIS OF IMMUNOLOGIC RENAL DISEASE.....	5R01 AM19810-02	59,393
KLGSBRUN, MICHAEL.....	GROWTH CONTROL BY A MITOGEN PURIFIED FROM CARTILAGE.....	1R01 CA21763-01	99,760
LATT, SAMUEL A.....	PROTEIN-DNA INTERACTIONS IN HUMAN CHROMOSOMES.....	5R01 GM21121-04	118,453
LEVEY, RAPHAEL H.....	INTRATHYMIC EVENTS IN T-CELL DIFFERENTIATION.....	5R01 CA20171-02	75,695
LEVITON, ALAN.....	CLASSIFICATION AND ETIOLOGY OF CHILDHOOD BRAIN TUMORS.....	1R01 CA21819-01	169,076
LIAN, JANE B.....	ROLE OF γ -CARBOXYGLUTAMIC ACID IN BONE AND ENAMEL.....	1R23 DE04641-01	41,556
LUX, SAMUEL E, IV.....	LIPID METABOLISM OF PLASMA AND MEMBRANE LIPOPROTEINS.....	5R01 HL15963-05	118,903
NADAS, ALEXANDER S.....	A MULTIDISCIPLINARY STUDY OF CONGENITAL HEART DISEASE.....	5P01 HL10436-12	571,915
NATHAN, DAVID G.....	LEUKOCYTE OXIDASE ACTIVITY & SUSCEPTIBILITY TO INFECTION.....	5R01 AI08173-10	73,008
NATHAN, DAVID G.....	LYSIS OF RED CELLS BY HEMOGLOBIN AND MEMBRANE DISEASE.....	5R01 AM15322-11	21,982
NATHAN, DAVID G.....	LYSIS OF RED CELLS BY HEMOGLOBIN AND MEMBRANE DISEASE.....	2R01 AM15322-12	175,641
NATHAN, DAVID G.....	IRON OVERLOAD IN HOMOZYGOUS BETA THALASSEMIA.....	5R01 HL20000-02	85,625
NEEDLEMAN, HERBERT L.....	DEVELOPMENTAL EFFECTS OF LOW LEVEL LEAD EXPOSURE.....	5P01 HD08945-03	387,673
NORWOOD, WILLIAM I.....	HYPOTHERMIC CIRCULATORY ARREST—CEREBRAL VASCULAR CHANGE.....	1R01 HL20143-01	113,621
ORKIN, STUART H.....	EXPRESSION OF HUMAN GLOBIN IN THALASSEMIA.....	1R23 HL21428-01	30,430
RAKIC, PASKO T.....	NEUROGENETIC PROCESSES IN FETAL BRAIN.....	5R01 NS11233-05	193,171
REID, LYNNE M.....	TYPES AND MECHANISMS OF PULMONARY HYPERTENSION.....	1R01 HL19225-01	162,877
ROBB, RICHARD M.....	HISTOCHEMISTRY OF PHOSPHODIESTERASE IN THE RETINA.....	5R01 EY01451-03	76,023
ROSEN, FRED S.....	REACTIONS AND METABOLISM OF IMMUNE PROTEINS AND CELLS.....	5P01 AI05877-14	343,049
ROSEN, FRED S.....	IMMUNOLOGIC MECHANISMS IN RENAL DISEASES IN CHILDHOOD.....	5P01 AM16392-05	291,647
SCHACHNER, MELITTA.....	STUDIES ON NEURAL CELL SURFACE COMPONENTS.....	5R01 NS12659-02	145,936
SELKOE, DENNIS J.....	AGING IN THE BRAIN: ROLE OF THE FIBROUS PROTEINS.....	1R01 AG00704-01	69,288
SHELANSKI, MICHAEL L.....	PATHOLOGY & BIOLOGY OF THE NEURONAL FIBROUS PROTEINS.....	2R01 NS11504-04	124,149
SIDMAN, RICHARD L.....	BRAIN DEVELOPMENT IN NORMALS AND MUTANTS.....	5R01 NS11237-05	341,358
SIDMAN, RICHARD L.....	GROWTH AND REGENERATION IN THE NERVOUS SYSTEM.....	3P01 NS12200-01A1S1	29,206
SIDMAN, RICHARD L.....	GROWTH AND REGENERATION IN THE NERVOUS SYSTEM.....	5P01 NS12200-02	279,278
SMITH, ARNOLD L.....	DEVELOPMENT AND UTILIZATION OF MICRO-ENZYMATIC ASSAYS.....	1R01 GM24411-01	139,154
SNODGRASS, S ROBERT.....	ABNORMAL MOVEMENTS AND PHARMACOLOGY OF THE FOREBRAIN.....	5R01 NS12368-03	119,228
TAEUSCH, H WILLIAM, JR.....	PULMONARY SURFACTANT REGULATION IN FETUS AND NEWBORN.....	5R01 HD08529-03	133,446
TREVES, SALVADOR.....	A BROMINE-77-SELENIUM-77M GENERATOR.....	3R01 HL18487-01S1	4,673
WATKINS, JOHN B.....	BILE ACID METABOLISM IN INFANCY AND CHILDHOOD.....	5R01 HD08489-03	85,736
WOHL, MARY ELLEN.....	RESPIRATORY MECHANICS IN CHILDREN.....	5R01 HL15526-05	61,310
ORGANIZATION TOTAL	68 11,440,055		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
ADOLPH, ALAN R.....	RETINAL SYNAPTIC MECHANISMS AND VISUAL FUNCTION.....	1R01 EY01703-01A1	63,919
ALLANSMITH, MATHEA R.....	STUDIES IN OCULAR IMMUNOLOGY.....	3R01 EY01552-02S2	62,655
ALLANSMITH, MATHEA R.....	OCULAR ANAPHYLAXIS.....	1R01 EY02099-01	68,639
BERMAN, MICHAEL B.....	REGULATION OF COLLAGENASE ACTIVITY IN ULCERATION.....	5R01 EY01246-04	76,556
CASTANY, MARIE A.....	EFFECTS OF BLOOD PO2, PCO2, AND PH ON RETINAL VESSELS.....	2R01 EY01400-02	39,832
CHAKRABARTI, BIRESWAR.....	ROLE OF HYALURONIC ACID IN THE VITREOUS STRUCTURE.....	5R01 EY01760-02	19,847
CINTRON, CHARLES.....	CORNEAL WOUND HEALING.....	2R01 EY01199-04	100,597
DELDRI, FRANCOIS C.....	STUDY OF HEMODYNAMICS OF CHOROIDAL CIRCULATION.....	5R01 EY01556-03	38,023
DDANE, MARSHALL G.....	THE INTERACTION OF LIDS AND TEARS IN CORNEAL WETTING.....	1R01 EY01846-01	79,085
GRAGDUDAS, EVANGELOS S.....	PROTON THERAPY OF EYE TUMORS.....	3R01 CA17638-02S1	30,000
GRAGDUDAS, EVANGELOS S.....	PROTON THERAPY OF EYE TUMORS.....	5R01 CA17638-03	101,561
HARTLINE, PETER H.....	PHOTORESPONSE KINETIC: EFFECTS OF ADAPTATION.....	7R01 EY02491-01	65,069
HIRDSE, TATSUO.....	HUMAN VER AND ERG WITH FDCAL RETINAL STIMULATION.....	5R01 EY01259-03	52,255
MUKAI, NORITSUGU.....	PATHOGENESIS OF RETINOBLASTOMAS.....	5R01 EY01667-03	29,185
NEUFELD, ARTHUR H.....	TROPHIC INFLUENCES ON THE CORNEAL EPITHELIUM.....	1R01 EY02360-01	32,499
NEUFELD, ARTHUR H.....	MEDIATORS THAT REGULATE AQUEOUS HUMOR DYNAMICS.....	7R01 EY02367-01	28,231
PECZON, BENIGNO D.....	DIABETIC, CATARACTOUS, AND NORMAL HUMAN LENS CAPSULES.....	5R01 EY01564-03	43,651
POMERANTZEFF, OLEG.....	OPTICS APPLIED TO DIAGNOSIS AND TREATMENT OF EYE DISEASE.....	1R01 EY01975-01	147,574
REFOJO, MIGUEL F.....	SYNTHETIC HYDROPHILIC POLYMERS FOR EYE SURGERY.....	5R01 EY00327-12	83,486
REIF-LEHRER, LIANE.....	BIOCHEMICAL CONTROL IN NORMAL AND DISEASED RETINAS.....	7R01 EY02171-01	116,981
RIVA, CHARLES E.....	STUDY OF OCULAR BLOOD FLOW WITH DYE DILUTION METHOD.....	3R01 EY01242-03S2	8,118
RIVA, CHARLES E.....	FLOW AND DIFFUSION OF FLUORESCEIN IN THE OCULAR FUNDUS.....	2R01 EY01242-04	90,872
RIVA, CHARLES E.....	HUMAN RETINAL BLOOD FLOW AND LASER VELOCIMETRY.....	5R01 EY01303-03	43,288
SCHEPENS, CHARLES L.....	EYE RESEARCH CORE SERVICES SUPPORT.....	5P30 EY01784-02	290,328
SCHEPENS, CHARLES L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05527-15	74,506
SNODDERLY, D MAX, JR.....	FUNCTIONAL DESCRIPTION OF VISUAL MECHANISMS.....	5R01 EY01520-03	62,046
THDFT, RICHARD A.....	METABOLISM OF OCULAR SURFACE EPITHELIUM.....	1R01 EY01830-01	66,968
ORGANIZATION TOTAL	27	1,915,771	
FORSYTH DENTAL CENTER ZIP CODE 02115			
AMDUR, BENJAMIN H.....	LIPIDS OF GRAM-POSITIVE RODS OF HUMAN DENTAL PLAQUE.....	5R01 DE03529-05	78,454
GIBBONS, RONALD J.....	MICROBIAL ECOLOGY AND ITS RELATION TO DENTAL DISEASE.....	5P01 DE02847-09	440,569
GOODSON, JO M.....	ROLE OF PROSTAGLANDINS IN PERIODONTAL DISEASE.....	5R01 DE04671-02	110,618
HAY, DONALD I.....	TOOTH-SALIVA INTERFACE PHENOMENA AND DENTAL CARIES.....	2R01 DE03915-04	95,443
HEELEY, JOHN D.....	ADAPTIVE GROWTH POTENTIAL OF EMBRYONIC CARTILAGE.....	1R01 DE04236-01A1	55,782
HEIN, JOHN W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05483-15	88,391
HILLMAN, JEFFREY D.....	MUTANT ANALYSIS OF THE ADHESION OF ORAL BACTERIA.....	5R01 DE04529-02	62,596
KASHKET, SHELBY.....	INTERACTIONS OF SALIVA PROTEINS AND BACTERIA.....	5R01 DE03430-05	79,509
KASHKET, SHELBY.....	FLUORIDE AND THE METABOLISM OF PLAQUE BACTERIA.....	5R01 DE03917-03	30,752
LEES, SIDNEY.....	MINERALIZATION DYNAMICS STUDY BY ULTRASOUND.....	5R01 DE03992-02	78,459
MODRREES, CENRAAD F.....	FACIAL AND DENTAL GROWTH IN PRE- AND POST-ADOLESCENTS.....	5R01 DE02873-10	139,056
MORENO, EDGARD C.....	TRANSPORT IN ENAMEL & SOLUBILITY OF FLUORIDATED APATITE.....	2R01 DE03187-06	149,907
SKDBE, ZIEDONIS.....	COMPARATIVE ULTRASTRUCTURE OF MAMMALIAN AMELOGENESIS.....	5R01 DE04230-03	44,841
SDCRANSKY, SIGMUND S.....	MICROBIAL COMPOSITION OF DEVELOPING DENTAL PLAQUE.....	5R01 DE03488-06	88,237
SOCRANSKY, SIGMUND S.....	CENTER FOR CLINICAL RESEARCH IN PERIODONTAL DISEASES.....	1P50 DE04881-01	291,260
TAUBMAN, MARTIN A.....	IMMUNE PHENOMENA IN EXPERIMENTAL PERIODONTAL DISEASE.....	5R01 DE03420-05	43,443
TAUBMAN, MARTIN A.....	SECRETORY IMMUNE RESPONSE AND S. MUTANS ENZYME ANTIGENS.....	1R01 DE04733-01	135,162
ORGANIZATION TOTAL	17	2,012,479	
HARVARD UNIVERSITY ZIP CODE 02138			
ABELMANN, WALTER H.....	PATHOPHYSIOLOGY OF THE CIRCULATION.....	5P01 HL10539-12	270,790
ABRAMS, HERBERT L.....	DIAGNOSTIC RADIOLOGY RESEARCH CENTER.....	5P50 GM18674-06	435,697
ADELSTEIN, S JAMES.....	CYTOCHEMICAL AND MACROMOLECULAR RADIATION EFFECTS.....	2R01 AM04219-18	87,767
ADELSTEIN, S JAMES.....	THERAPEUTIC/TOXIC ACTION OF ELECTRON-EMITTING NUCLIDES.....	2R01 CA15523-04	65,148
AMDUR, MARY O.....	FACTORS AFFECTING IRRITANT POTENCY OF GASES & AEROSOLS.....	5R01 ES00827-05	77,936
AMOS, HAROLD.....	SUGARS, GLYCOPROTEINS: NORMAL AND MALIGNANT CELLS.....	5R01 CA19015-02	88,234
ANDERSON, EVERETT.....	STUDIES IN COMPARATIVE CYTOLOGY.....	5R01 HD06822-06	83,499
ATWOOD, DOUGLAS A.....	MAXILLOFACIAL PROSTHETIC REHABILITATION FOR CANCER.....	5R18 CA18870-02	162,083

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
AULT, KENNETH A.....	LIGAND-SURFACE RECEPTOR EFFECTS IN NEOPLASTIC LYMPHOCYTE.....	1R01 CA22109-01	58,188
BARGER, A CLIFFORD.....	KIDNEY FUNCTION IN EXPERIMENTAL HEART FAILURE.....	5R01 HL02493-21	115,611
BARGER, A CLIFFORD.....	REGULATION OF BLOOD PRESSURE.....	5R01 HL19467-02	127,448
BECKWITH, JONATHAN R.....	REGULATION OF TRANSCRIPTION INITIATION AND TERMINATION.....	2R01 GM13017-13	43,244
BEEUWKES, REINIER, III.....	ELECTRON PROBE STUDIES OF THE RENAL MEDULLA.....	5R01 AM18249-03	42,086
BELLVE, ANTHONY R.....	MAMMALIAN SPERMIogenesis: ANALYSIS OF NUCLEAR PROTEIN.....	5R01 HD08270-04	56,109
BENACERRAF, BARUJ.....	STUDIES ON IMMUNOLOGICAL RESPONSIVENESS.....	5R01 AI09920-08	264,240
BENACERRAF, BARUJ.....	STUDY OF EXPERIMENTAL CANCER IMMUNOLOGY.....	5P01 CA14723-05	710,135
BENJAMIN, THOMAS L.....	MECHANISM OF CELL TRANSFORMATION BY POLYOMA VIRUS.....	1R01 CA19567-01	126,788
BERSON, ELIOT L.....	ELECTROPHYSIOLOGICAL STUDIES OF RETINAL DEGENERATIONS.....	5R01 EY00169-07	57,373
BERSON, ELIOT L.....	STUDIES OF RETINITIS PIGMENTOSA AND ALLIED DISEASES.....	1P50 EY02014-01	198,155
BIENFANG, DON C.....	BRAINSTEM PATHWAYS FOR ADDUCTION OF THE EYE.....	3R01 EY01370-01S3	896
BIGGERS, JOHN D.....	STUDY OF REPRODUCTION.....	5P01 HD06916-04	338,194
BIGGERS, JOHN D.....	THE GRAAFIAN FOLLICLE AND MEIOTIC MATURATION.....	5R01 HD08909-03	69,401
BIGNAMI, AMICO.....	BRAIN SPECIFIC PROTEIN (GFA PROTEIN) IN ASTROCYTES.....	5R01 NS13034-03	70,878
BISWAS, DEBAJIT K.....	CONTROL OF GENE EXPRESSION IN PITUITARY TUMOR CELLS.....	5R01 GM22834-02	81,233
BLOUT, ELKAN R.....	PEPTIDES AND PROTEINS.....	5R01 AM07300-15	154,496
BLOUT, ELKAN R.....	SYNTHESIS OF OLIGOPEPTIDES AND CYCLIC PEPTIDES.....	2R01 AM10794-11	81,433
BLUMBERG, PETER M.....	TRANSFORMATION AND THE CELL SURFACE.....	5R01 CA18294-03	59,977
BRAIN, JOSEPH D.....	FACTORS INFLUENCING DEPOSITION OF INHALED PARTICLES.....	5R01 ES01016-03	62,259
BRAUNWALD, EUGENE.....	THE DEVELOPMENT AND REGRESSION OF CARDIAC HYPERTROPHY.....	1P01 HL20552-01	344,257
CARRAWAY, ROBERT E.....	ISOLATION AND CHEMISTRY OF NEUROTENSIN-LIKE SUBSTANCES.....	5R01 AM19428-02	64,154
CERNY, JAN.....	REGULATORY MECHANISMS OF NEOPLASIA.....	2R01 CA14922-05	101,468
CERNY, JAN.....	IMMUNOCOMPETENT CELLS IN EXPERIMENTAL LEUKEMIA.....	5R01 CA15277-03	58,884
CHAN-PALAY, VICTORIA.....	ORGANIZATION OF THE STRIATE CORTEX.....	5R01 NS10536-06	80,397
CHERNIN, ELI.....	BIOLOGY AND BIOLOGICAL CONTROL OF SCHISTOSOMIASIS.....	5R01 AI00513-23	84,919
CHYLACK, LEO T, JR.....	LENS METABOLISM AND CATARACT FORMATION.....	2R01 EY01276-04	181,864
CLOWES, GEORGE H, JR.....	FACTORS INDUCING THE ABNORMAL METABOLISM OF TRAUMA.....	5R01 GM19954-06	116,273
COHEN, JONATHAN B.....	NEUROCHEMICAL BASIS OF CHOLINERGIC EXCITABILITY.....	5R01 NS12408-03	39,535
COONS, ALBERT H.....	STUDIES ON ANTIBODY FORMATION.....	5R01 CA20811-22	113,912
COTRAN, RAMZI S.....	PATHOPHYSIOLOGY OF VASCULAR INJURY.....	5R01 HL08251-15	96,636
DAVIS, BERNARD D.....	RIBOSOME FUNCTION: ANTIBIOTIC ACTION.....	5R01 GM16835-09	68,513
DAVIS, MICHAEL A.....	CHEMISTRY OF TECHNETIUM RELATED TO NUCLEAR MEDICINE.....	1R01 GM23270-01	102,559
DAWIDOWICZ, ELIEZAR A.....	PHYSICAL STUDY OF LIPID MOTION IN RED CELL MEMBRANES.....	5R01 GM22175-02	36,924
DAWSON, STANLEY V.....	LUNG AIRWAY PROPERTIES BY ACOUSTIC IMPULSE REFLECTION.....	2R01 HL17613-03	94,753
DE PAMPHILIS, MELVIN L.....	TUMOR VIRUS DNA REPLICATION: A PROBE INTO ONCOGENESIS.....	2R01 CA15579-04	83,882
DIAMANDOPoulos, GEORGE T.....	VIRAL CARCINOGENESIS WITH SPECIAL REFERENCE TO SV40.....	5R01 CA08731-12	196,747
DORF, MARTIN E.....	H-2-LINKED IR AND IS GENES AND THEIR PRODUCTS.....	5R01 AI13419-02	86,172
DRAGER, URSULA C.....	DEVELOPMENTAL DEFECTS IN VISUAL SYSTEM OF MICE.....	1R01 EY01938-01	34,653
DRESSLER, DONALD P.....	BACTERIAL SUSCEPTIBILITY IN SPLENECTOMIZED RATS.....	1R01 HD10865-01	39,423
DRESSLER, DONALD P.....	TREATMENT OF SMOKE INHALATION INJURY.....	5R01 HL19002-02	76,672
DYM, MARTIN.....	THE ROLE OF THE SERTOLI CELL IN SPERMATOGENESIS.....	2R01 HD06969-04	49,941
DYM, MARTIN.....	HORMONAL CONTROL OF THE TESTIS.....	5R01 HD10004-02	57,580
EBERT, ROBERT H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05381-16	213,709
EDWARDS, ROSS B.....	STUDIES OF PIGMENT EPITHELIUM IN VITRO: PHAGOCYTOSIS.....	1R01 EY02028-01	63,350
ELGIN, SARAH C.....	RECONSTITUTION OF DROSOPHILA CHROMATIN.....	1R01 GM24069-01	5,344
ENGEL, LEWIS L.....	DEUTERIOHORMONE-PROTEIN INTERACTIONS.....	5R01 AM17304-03	37,335
ENGEL, LEWIS L.....	PATTERNS OF STEROID METABOLISM IN CANCER.....	2R01 CA01393-27	157,030
ESSEX, MYRON E.....	STUDY OF (FLV) LEUKEMIA VIRUS.....	5R01 CA18216-02	101,712
EVANS, CARLA A.....	THE PERIOSTEAL INTERFACE IN CRANIOFACIAL DEVELOPMENT.....	1R01 DE04684-01	40,140
FAWCETT, DON W.....	MEMBRANE STRUCTURE & CELL INTERACTIONS IN REPRODUCTION.....	5R01 HD02344-12	86,128
FERRIS, BENJAMIN G, JR.....	EFFECTS OF SO2 AND RESPIRABLE PARTICULATES ON HEALTH.....	5R01 ES01108-03	751,528
FIELD, MICHAEL.....	MOLECULAR MECHANISM OF ACTION OF CHOLERA TOXIN.....	5R22 AI09029-09	14,134
FIELDS, BERNARD N.....	GENETICS OF REOVIRUS.....	5R01 AI13178-02	90,202
FISCHBACH, GERALD D.....	SYNAPSE FORMATION IN LOW DENSITY CELL CULTURES.....	5R01 NS11160-05	124,685
FITZPATRICK, THOMAS B.....	SKIN REACTION TO LIGHT-NORMAL, PHOTOSENSITIVITY, CANCER.....	5R01 CA05003-19	133,486
FLECKENSTEIN, BERNHARD.....	HERPES VIRUS ATELES DNA AND ONCOGENIC TRANSFORMATION.....	1R01 CA22271-01	56,884
FRAENKEL, DAN G.....	ENZYMOLGY OF GLYCOLYTIC MUTANTS.....	2R01 GM21098-04	67,338
FURSHPAN, EDWIN J.....	NEUROPHYSIOLOGICAL AND NEUROCHEMICAL STUDIES.....	2P01 NS02253-18	401,697
FURSHPAN, EDWIN J.....	STUDIES ON CELL INTERCONNECTIONS.....	5R01 NS03273-17	72,341

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
GARFIELD, JOSEPH M.	BEHAVIORAL MODEL FOR ASSESSMENT OF ANESTHETIC ACTION	1R01 GM23794-01	21,281
GEYER, ROBERT P.	TOTAL BLOOD REPLACEMENT BY FLUOROCARBONS AND POLYOLS	5R01 HL15520-05	91,715
GEYER, ROBERT P.	LIPID STUDIES IN VASCULAR SMOOTH MUSCLE CELLS	5R01 HL15646-03	54,092
GEYER, ROBERT P.	ARTIFICIAL BLOOD SUBSTITUTES: O ₂ -BINDING IRON CHELATES	5R01 HL17844-03	108,269
GIMBRONE, MICHAEL A, JR.	CULTURED BLOOD VESSEL CELLS: PATHOPHYSIOLOGY	1R01 HL20054-01	118,100
GITTES, RUBEN F.	HORMONAL DEPENDENCE OF PROSTATE CANCER	2R26 CA19213-02	102,719
GOLDBERG, ALFRED L.	MECHANISMS OF GROWTH AND ATROPHY OF SKELETAL MUSCLE	5R01 NS10571-06	147,111
GOLDBERG, IRVING H.	MOLECULAR PHARMACOLOGY OF ANTICANCER DRUGS	2R01 GM12573-13	119,292
GOLDHABER, PAUL	THE MECHANISM AND TREATMENT OF PERIODONTAL DISEASE	3P01 DE02849-01	50,519
GOLDHABER, PAUL	THE MECHANISM AND TREATMENT OF PERIODONTAL DISEASE	5P01 DE02849-10	305,206
GOLDHABER, PAUL	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05318-16	62,361
GOLDMAN, PETER	DETECTION OF ULTIMATE CARCINOGENS IN THE COLON	1R26 CA21681-01	69,635
GOODENOUGH, DANIEL A.	STRUCTURE & FUNCTION OF LIVER & HEART GAP JUNCTIONS	5R01 GM18974-06	38,975
HAY, ELIZABETH D.	ROLE OF EXTRACELLULAR MATRIX IN MORPHOGENESIS	5R01 HD00143-18	111,712
HAYES, KENNETH C.	NUTRITIONAL REQUIREMENTS OF THE VISUAL PROCESS	5R01 FY00631-07	57,843
HAYES, KENNETH C.	PRIMATES IN CARDIOVASCULAR RESEARCH	3P01 HL10098-12S1	65,317
HAYES, KENNETH C.	LIPID METABOLISM AND ATHEROSCLEROSIS IN PRIMATES	5R01 HL15797-04	127,716
HECHTMAN, HERBERT B.	CARDIOPULMONARY FAILURE FOLLOWING SHOCK AND TRAUMA	7R01 GM24891-01	151,281
HEGSTED, DAVID M.	NUTRITIVE VALUE OF PROTEINS	5R01 AM09520-12	94,516
HEGSTED, DAVID M.	MALNUTRITION AND BEHAVIORAL DEVELOPMENT	5R22 HD07032-04	206,910
HEGSTED, DAVID M.	SPECIFIC FATTY ACIDS AND CHOLESTEROL METABOLISM	5R01 HL12399-12	83,091
HELLMAN, SAMUEL	PROLIFERATION AND DIFFERENTIATION OF STEM CELLS	2R01 CA10941-10	114,389
HELLMAN, SAMUEL	CANCER RESEARCH CENTER	2P01 CA12662-06	556,578
HENNEMAN, ELWOOD	ORGANIZATION OF THE MOTONEURON POOL AND ITS INPUTS	5R01 NS10857-04	63,705
HERD, JAMES A.	CENTRAL CONTROL OF DISTRIBUTION OF ORGAN BLOOD FLOW	5R01 HL09154-14	64,665
HERD, JAMES A.	EPISODIC HYPERTENSION ASSOCIATED WITH HUMAN BEHAVIOR	1R01 HL20364-01A1	67,042
HERRERA, M GUILLERMO	MALNUTRITION AND PSYCHOLOGIC DEVELOPMENT	5R01 HD06774-04	198,375
HERZFELD, JUDITH	NMR STUDIES OF BIOLOGICAL MEMBRANES	5R01 GM23316-02	39,955
HOLMAN, B LEONARD	ACUTE MYOCARDIAL INFARCT SCINTIGRAPHY	5R01 HL17739-03	45,479
HUANG, ALICE S.	REPLICATION OF VESICULAR STOMATITIS VIRUS	5R01 AI10100-06	88,352
HUBEL, DAVID H.	ORGANIZATION OF THE VISUAL SYSTEM	5R01 EY00605-18	203,780
HUBER, AGNES M.	LEAD RETENTION IN RELATION TO NUTRIENT INTAKE	1R01 ES01507-01	45,257
HUTCHISON, GEORGE B.	COOPERATIVE STUDY OF HODGKIN'S DISEASE	5R10 CA13607-06	63,469
ITO, SUSUMU	ULTRASTRUCTURE OF RICKETTSIA-HOST CELL RELATIONSHIPS	5R01 AI11508-05	83,509
ITO, SUSUMU	STUDY OF ISOLATED AND SEPARATED GASTRIC CELL TYPES	5R01 AM17255-05	96,877
JANDL, JAMES H.	DESTRUCTION OF RED BLOOD CELLS IN HEMOLYTIC ANEMIAS	2R01 HL07652-13	84,986
KARNOVSKY, MANFRED L.	BIOCHEMICAL BASIS OF PHAGOCYTOSIS	5R01 AI03250-18	61,634
KARNOVSKY, MORRIS J.	ULTRASTRUCTURAL IMMUNOCYTOCHEMISTRY OF CELL SURFACES	5R01 AI10677-06	75,172
KARNOVSKY, MORRIS J.	THE ULTRASTRUCTURAL BASIS OF GLOMERULAR PERMEABILITY	5R01 AM13132-08	85,970
KARNOVSKY, MORRIS J.	ULTRASTRUCTURAL CYTOCHEMISTRY	5R01 HL09125-13	94,601
KARNOVSKY, MORRIS J.	ENDOTHELIAL INJURY AND REGENERATION	5R01 HL17747-03	57,013
KENNEDY, EUGENE P.	METABOLISM AND FUNCTION OF COMPLEX LIPIDS	5R01 GM19822-18	62,740
KENNEDY, EUGENE P.	BIOGENESIS AND FUNCTION OF MEMBRANES	5R01 GM22057-03	90,875
KITZ, RICHARD J.	ANESTHESIOLOGY CENTER FOR RESEARCH AND TEACHING	5P50 GM15904-10	607,672
KITZMILLER, JOHN L.	PROBLEMS OF HUMAN REPRODUCTION—IMMUNOLOGIC MECHANISMS	5R01 HD10026-02	58,427
KOHN, HENRY I.	ANALYSIS AND PRODUCTION OF HISTOCOMPATIBILITY MUTANTS	1R01 AI14039-01	63,675
KORNBERG, ROGER D.	RELATION OF HISTONES TO DNA IN NORMAL AND CANCER CELLS	1R01 CA20768-01	93,170
KRAVITZ, EDWARD A.	STUDIES OF SYNAPTIC CHEMISTRY IN THE NERVOUS SYSTEM	5R01 NS07848-10	98,887
KRAWCZYK, WALTER S.	CONTRACTILE PROTEINS IN NORMAL PALATE MORPHOGENESIS	5R01 DE04380-02	55,150
KUFFLER, STEPHEN W.	MICROPHYSIOLOGY OF SYNAPTIC TRANSMISSION	1R01 NS13288-01	136,290
KUSHMERICK, MARTIN J.	MUSCLE ENERGY METABOLISM	5R01 AM14485-06	67,142
LE VAY, SIMON	DEVELOPMENT AND PLASTICITY OF THE VISUAL SYSTEM	1R01 EY01960-01	61,213
LECHENE, CLAUDE P.	ELECTRONPROBE MICROANALYSIS OF NEPHRON FUNCTION	5R01 AM16898-05	86,195
LECHENE, CLAUDE P.	ELECTRONPROBE MICROANALYSIS OF RED BLOOD CELLS	5R01 AM19449-02	38,282
LECHENE, CLAUDE P.	BIOTECHNOLOGY RESOURCE IN ELECTRONPROBE MICROANALYSIS	2P41 RR00679-06	617,286
LEEMAN, SUSAN F.	PURIFICATION AND FUNCTION OF HYPOTHALAMIC PEPTIDES	2R01 AM16510-06	140,294
LIKHTE, VILAS V.	CORYNEBACTERIUM PARVUM IN CANCER IMMUNOTHERAPY	5R01 CA18582-02	102,914
LIN, EDMUND C.	GLYCEROL DISSIMILATION AND ITS REGULATION IN BACTERIA	2R01 GM11983-14	67,642
LIN, EDMUND C.	GENETICS OF ENERGY GENERATION FROM GLYCEROPHOSPHATE	5R01 GM22906-02	36,099
LINCK, RICHARD W.	ASSEMBLY AND MOTILE MECHANISMS OF CILIA AND FLAGELLA	5R01 GM21527-03	54,978

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
LITTLE, JOHN B.....	EFFECTS OF RADIATION ON STATIONARY CELLS.....	5R01 CA11751-08	131,591
LIU, ALICE Y.....	PROTEIN SYNTHESIS REGULATION BY CYCLIC AMP AND STEROID.....	1R01 AM20274-01	32,834
LOWN, BERNARD.....	SUDDEN DEATH AND CARDIAC ARRHYTHMIAS.....	5R01 HL07776-14	177,756
LOWN, BERNARD.....	DETECTION AND CONTROL OF VENTRICULAR PREMATURE BEATS.....	5R01 HL18783-03	145,652
MACMAHON, BRIAN.....	CANCER EPIDEMIOLOGY AND PREVENTION RESEARCH CENTER.....	5P01 CA06373-16	410,316
MACMAHON, BRIAN.....	CHILDHOOD ENVIRONMENT AND HODGKIN'S DISEASE.....	1R01 CA19619-01	167,228
MC MAHAN, UEL J, II.....	STRUCTURE AND FUNCTION OF REGENERATIVE AXON TERMINALS.....	5R01 NS12922-02	16,273
MEAD, JERE.....	PROGRAM PROJECT IN RESPIRATORY MECHANICS.....	2P01 HL14580-06	612,097
MELLER, SAMUEL M.....	HUMAN PALATAL DEVELOPMENT: A STUDY OF EPITHELIAL FUSION.....	5R01 DE04695-02	54,537
MILLETTE, CLARKE F.....	MAMMALIAN SPERMATOGENESIS: CELL MEMBRANE BIOCHEMISTRY.....	1R01 HD11267-01	66,377
MOORE-EDE, MARTIN C.....	NEURAL CONTROL OF CIRCADIAN BEHAVIOR AND PHYSIOLOGY.....	1R01 NS13921-01	85,507
MOORE, FRANCIS D.....	SURGICAL CARE: METABOLISM AND BIORHYTHMS.....	5P01 GM22085-20	224,902
MOREST, DONALD K.....	STUDIES ON VERTEBRATE NEUROGENESIS.....	1R01 NS13463-01	73,993
MORRISON, ALAN S.....	INTERNATIONAL CASE-CONTROL STUDY OF BLADDER CANCER.....	5R26 CA18660-02	187,923
MORROW, JOHN F.....	EUKARYOTIC GENE ISOLATION AND EXPRESSION.....	5R01 GM22383-03	119,151
MOYLE, WILLIAM R.....	ROLE OF CYCLIC AMP IN ADRENAL TUMOR STEROIDOGENESIS.....	2R01 CA15155-04	72,438
MURPHY, JOHN R.....	VIRULENCE FACTORS OF CORYNEBACTERIUM DIPHTHERIAE.....	2R01 AI12500-03	66,009
MURPHY, JOHN R.....	VIBRIO CHOLERAE: DEVELOPMENT OF A LIVE ORAL VACCINE.....	1R22 AI13938-01	74,866
MURRAY, EDWARD S.....	CAPE COD TICK, ANIMAL, HUMAN SPOTTED FEVER STUDY.....	5R01 AI13552-02	65,978
NICHOLS, ROGER L.....	CENTER FOR STUDY OF SEXUALLY TRANSMITTED DISEASES.....	3F01 AI12381-03S1	34,620
NICHOLS, ROGER L.....	TYPE-SPECIFIC ANTIGEN OF CHLAMYDIA TRACHOMATIS.....	3R01 EY01568-02S1	13,271
OFNER, PETER.....	ANDROGENS IN PROSTATIC AND EPIDIDYMAL CULTURE.....	5R01 CA13417-04	52,969
PALAY, SANFORD L.....	THE FINE STRUCTURE OF THE NERVOUS SYSTEM.....	5R01 NS03659-16	127,562
PALMER, FOSTER M.....	HOSPITAL LIBRARY DEVELOPMENT PROGRAM.....	5R01 LM01741-06	128,436
PANDYA, DEEPAK N.....	CONNECTIONS OF THE CEREBRAL CORTEX.....	5R01 NS09211-07	100,628
PATTERSON, PAUL H.....	NEURONAL DEVELOPMENT & CELLULAR INTERACTION IN VITRO.....	5R01 NS11027-05	68,590
PERLMAN, ROBERT L.....	STUDIES ON ADRENAL CATECHOLAMINE SECRETION.....	5R01 HL18148-03	33,758
POLLARD, THOMAS D.....	THE MOLECULAR MECHANISM OF CELLULAR MOTILITY.....	2R01 GM19654-06	75,461
POLLARD, THOMAS D.....	ACTOMYOSIN-MICROTUBULE INTERACTIONS IN CELL DIVISION.....	1R01 GM23531-01	63,295
POTTER, DAVID D.....	DEVELOPMENT OF SYMPATHETIC JUNCTIONS IN CULTURE.....	5R01 NS11576-04	45,769
RAVIOLA, ELIO.....	FREEZE-FRACTURE STUDIES ON THE RETINA.....	2R01 EY01344-03	85,920
RICHARDSON, CHARLES C.....	STUDIES ON THE STRUCTURE AND SYNTHESIS OF DNA.....	5R01 AI06045-14	170,405
RUDERMAN, JOAN V.....	RNA SYNTHESIS AND UTILIZATION IN SEA URCHIN OOGENESIS.....	1R01 HD10994-01	85,652
RYAN, KENNETH J.....	CENTER FOR POPULATION RESEARCH.....	2P30 HD06645-06A1	438,336
RYAN, KENNETH J.....	STEROID HORMONE METABOLISM.....	5R01 HD07923-05	101,401
SALHANICK, HILTON A.....	MODE OF ACTION & SYNTHESIS OF PROGESTATIONAL HORMONES.....	2R01 AM10081-12	97,115
SCHMIDT, SUSAN Y.....	BIOCHEMICAL STUDIES OF RETINA AND PIGMENT EPITHELIUM.....	5R01 EY01687-02	63,337
SHAW, JAMES H.....	WORKSHOP ON SWEETENERS AND DENTAL CARIES.....	1R13 DE04735-01	29,799
SHULMAN, LEONARD B.....	CARBON DENTAL IMPLANTS.....	5R01 DE03755-05	125,210
SOLOMON, ARTHUR K.....	STUDIES ON RED CELL ION TRANSPORT AND LIPID BILAYERS.....	5R01 GM15692-10	81,919
SOLOMON, ARTHUR K.....	FACTORS AFFECTING PHYSIOLOGY OF BIOLOGICAL MEMBRANES.....	5R01 HL14820-06	78,698
SOROKIN, SERGEI P.....	RESPONSE OF ALVEOLAR MACROPHAGES TO INHALED PARTICLES.....	2R01 ES00583-07	99,790
SPECTOR, REYNOLD.....	DRUG, VITAMIN, AND HORMONE TRANSPORT IN SPINAL FLUID.....	7R01 NS14211-01	62,648
SPIELMAN, ANDREW.....	POPULATION STRUCTURE AND FEEDING HABITS OF C. PIPPIENS.....	5R01 AI12723-03	63,218
STUART, ANN E.....	NEURAL MECHANISMS IN PROCESSING VISUAL INFORMATION.....	5R01 EY01188-05	59,965
SYVANEN, MICHAEL.....	ONCOGENIC MECHANISMS: ENZYMOLOGY OF VIRAL INTEGRATION.....	5R01 CA18217-02	51,661
SZABO, GEORGE.....	ULTRASTRUCTURE AND PHYSIOLOGY OF GUT MUCOSA.....	5R01 DE01766-15	102,590
TAI, PHANG-CHENG.....	TRANSLATION ON POLYCYSTRONIC MRNA & ANTIBIOTIC ACTION.....	5R01 GM22030-03	61,823
TASHJIAN, ARMEN H, JR.....	HORMONES AFFECTING MINERAL METABOLISM.....	5R01 AM10206-12	110,841
TASHJIAN, ARMEN H, JR.....	DIFFERENTIATED FUNCTION IN DISPERSED CELL CULTURES.....	5R01 AM11011-12	192,852
THENEN, SHIRLEY W.....	METABOLIC ASPECTS OF OBESITY.....	2R01 AM02911-19	135,197
THENEN, SHIRLEY W.....	NUTRITION AND PREGNANCY: THE FOLIC ACID REQUIREMENT.....	5R01 HD08353-03	29,379
THOMAS, CHARLES A, JR.....	MOLECULAR CYTOGENETICS.....	5R01 GM21740-03	109,820
TILNEY, NICHOLAS L.....	MECHANISMS OF ALLOGRAFT REJECTION AND SURVIVAL.....	5R01 AI12250-03	80,630
TILNEY, NICHOLAS L.....	ALLOGRAFT REJECTION AND ENHANCEMENT.....	9R01 CA23024-04	86,943
TOSTESON, DANIEL C.....	NEW ENGLAND REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00168-16	1,653,119
UNANUE, EMIL R.....	STUDIES ON ANTIGENIC STIMULATION.....	5R01 AI10091-07	110,256
VALLEE, BERT L.....	THE BIOLOGICAL FUNCTION OF METALS.....	5P01 GM15003-16	398,074
VENKATACHALAM, MANJERI A.....	RENAL PATHOPHYSIOLOGY: NORMAL AND ALTERED STRUCTURE.....	5R01 AM16749-05	68,345
VILLEE, CLAUDE A.....	RNA-MEDIATED EFFECTS OF STEROID SEX HORMONES.....	5R01 HD09424-03	44,393

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
VON LICHTENBERG, FRANZ C.....	STUDIES ON SCHISTOSOMIASIS AND ON GRANULOMA FORMATION.....	5R22 AI02631-19	54,342
WARRAM, JAMES H, JR.....	STATISTICAL CENTER FOR BLADDER CANCER PROJECT.....	2R26 CA15497-04	152,120
WASSARMAN, PAUL M.....	TUMOR VIRUS CHROMATIN: STRUCTURE AND REPLICATION.....	5R01 CA20841-02	65,551
WAXMAN, STEPHEN G.....	REGIONAL MORPHOLOGY OF MYELINATED AXONS.....	5R01 NS12307-03	47,530
WELLER, THOMAS H.....	STUDY OF PATHOGENIC AGENTS USING IN VITRO TECHNIQUES.....	5R01 AI01023-21	144,092
WEST, CHRISTOPHER D.....	A RAPID GOLGI STUDY OF AGING RAT CEREBELLUM.....	1R23 AG00607-01	13,323
WHITTENBERGER, JAMES L.....	OCCUPATIONAL AND ENVIRONMENTAL HEALTH.....	5P30 ES00002-15	701,885
WHITTENBERGER, JAMES L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05446-16	209,228
WIESEL, TORSTEN N.....	STUDIES OF THE VISUAL SYSTEM.....	3R01 EY00606-13S1	16,200
WIESEL, TORSTEN N.....	STUDIES OF THE VISUAL SYSTEM.....	1R01 EY00606-14	187,346
WIESEL, TORSTEN N.....	EXPERIMENTAL MYOPIA IN PRIMATES.....	1R01 EY01966-01	53,382
WIESEL, TORSTEN N.....	STUDIES OF BASIC MECHANISMS IN VISION.....	1P30 EY01995-01	291,834
WILLIAMS, JERRY R.....	DNA METABOLISM AND HUMAN AGING.....	5R01 AG00414-03	52,301
WILLIAMS, JERRY R.....	DNA REPAIR IN CELL KILLING, AGING AND CARCINOGENESIS.....	5R01 CA16649-03	64,891
WILSON, T HASTINGS.....	COMPARATIVE PHYSIOLOGY OF MEMBRANE TRANSPORT.....	5R01 AM05736-16	114,832
YOSHINAGA, KOJI.....	ONSET OF PARTURITION: RAT MODEL.....	5R01 HD10184-02	76,378
ZIGMOND, RICHARD E.....	EXPERIENCE AND THE NEUROCHEMISTRY OF THE SYNAPSE.....	5R01 NS12651-02	56,692
ORGANIZATION TOTAL	205	26,244,909	
JOSLIN DIABETES FOUNDATION ZIP CODE 02215			
CAHILL, GEORGE F, JR.....	PHYSIOLOGY, PATHOLOGY, AND BIOCHEMISTRY OF DIABETES.....	5R01 AM15191-08	234,647
CAHILL, GEORGE F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05673-08	64,161
CHICK, WILLIAM L.....	PANCREATIC ISLET AND BETA CELL STUDIES.....	5R01 AM15398-07	103,108
CHICK, WILLIAM L.....	STUDIES TOWARDS DEVELOPMENT OF AN ARTIFICIAL PANCREAS.....	1R01 AM21222-01	116,171
ROSSINI, ALDO A.....	EXPERIMENTAL JUVENILE-TYPE DIABETES.....	1R01 AM21111-01	58,019
SOELDNER, JOHN S.....	DIABETES—PATHOGENESIS, DETECTION, AND ORAL AGENTS.....	3R01 AM09748-11S1	106,618
SOELDNER, JOHN S.....	THE DEVELOPMENT OF AN IMPLANTABLE GLUCOSE SENSOR.....	5R01 AM18352-02	302,393
SOELDNER, JOHN S.....	PATHOGENESIS OF MICROANGIOPATHY IN DIABETES.....	5R01 EY01421-16	81,553
SPIRO, ROBERT G.....	STUDY OF THE STRUCTURE OF GLYCOPROTEINS.....	5R01 AM17325-05	86,131
SPIRO, ROBERT G.....	STUDY OF BIOSYNTHESIS OF GLYCOPROTEINS.....	5R01 AM17477-05	80,492
ORGANIZATION TOTAL	10	1,233,293	
LAHEY CLINIC FOUNDATION ZIP CODE 02215			
WATKINS, ELTON, JR.....	MODIFICATION OF SIALYL INHIBITION OF IMMUNE RESPONSE.....	5R01 CA18938-02	61,614
ORGANIZATION TOTAL	1	61,614	
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE 02114			
ALBERT, DANIEL M.....	HISTOPATHOLOGIC STUDY OF PIGMENTED OCULAR TUMORS.....	5R01 EY01917-02	121,788
DOHLMAN, CLAES H.....	OPHTHALMIC RESEARCH CORE FACILITIES.....	5P30 EY01537-03	130,674
DONALDSON, DAVID D.....	OPHTHALMIC INSTRUMENTATION RESEARCH.....	5R01 EY00999-04	104,828
DUEKER, DAVID K.....	PATHOGENESIS OF IRIS NEOVASCULARIZATION.....	1R01 EY01750-01	69,898
EPSTEIN, DAVID L.....	METABOLISM OF THE TRABECULAR MESHWORK.....	1R01 EY01894-01	84,546
GRANT, W MORTON.....	PRESSURE-REGULATING MECHANISMS IN GLAUCOMA.....	5R01 EY00002-25	102,234
JEDZINIAK, JUDITH A.....	ISOLATION CHARACTERIZATION OF PROTEINS FROM HUMAN LENS.....	1R01 EY01964-01	92,580
KIANG, NELSON Y.....	BASIC AND CLINICAL STUDIES OF THE AUDITORY SYSTEM.....	5P01 NS13126-02	510,119
KIMURA, ROBERT S.....	ELECTRON MICROSCOPY OF THE INNER EAR.....	5R01 NS03932-16	80,567
SCHUKNECHT, HAROLD F.....	OTOPATHOLOGY BY LIGHT MICROSCOPY.....	5R01 NS05881-12	41,278
SCHUKNECHT, HAROLD F.....	VESTIBULAR ABLATION.....	1R01 NS13425-01	20,891
SCHUKNECHT, HAROLD F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05485-15	63,194
ORGANIZATION TOTAL	12	1,422,597	
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
ALPERT, ELLIOT E.....	STUDIES OF LIVER INJURY.....	5P01 AM19124-02	241,427
ALPERT, ELLIOT E.....	IMMUNOCHEMICAL STUDIES OF GASTROINTESTINAL CANCER.....	5R01 CA12389-07	69,901
AREES, EDWARD A.....	DEVELOPMENT OF OPTIC PATHWAY DURING EMBRYOGENESIS.....	3R01 EY01287-03S1	5,833
ATHANASOULIS, CHRISTOS A.....	BOWEL PROTECTION WITH VASOPRESSIN DURING RADIOTHERAPY.....	5R01 AM19811-02	55,104
AUSIELLO, DENNIS A.....	STUDY OF PROTEIN PHOSPHORYLATION AND HORMONE ACTION.....	1R01 AM19406-01A1	27,813
AVRUCH, JOSEPH.....	RED CELL CATION TRANSPORT AND CONTRACTILE FUNCTIONS.....	2R01 AM16914-04	76,480
AVRUCH, JOSEPH.....	STUDIES ON PHOSHOPEPTIDE METABOLISM IN AOIPOCYTES.....	2R01 AM17776-03	56,136
BADEN, HOWARD P.....	STUDIES ON THE BIOSYNTHESIS OF KERATIN.....	5R01 AM06838-15	122,411

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BARLOW, JOHN S.....	COMPUTER STUDIES OF BRAIN POTENTIALS IN MAN.....	5R01 NS03752-16	100,404
BECK, WILLIAM S.....	THE METABOLISM OF NORMAL AND LEUKEMIC LEUKOCYTES.....	5R01 CA03728-20	105,479
BISWAS, CHITRA.....	MAMMALIAN COLLAGENASE IN TUMOR INVASION.....	5R01 CA19158-02	52,498
BLACK, PAUL H.....	MECHANISMS OF TRANSFORMATION BY ONCOGENIC VIRUSES.....	2R01 CA10126-11	161,510
BLANK, IRVIN H.....	PHYSICAL AND CHEMICAL NATURE OF THE CUTANEOUS BARRIER.....	5R01 AM15461-12	90,383
BROWNELL, GORDON L.....	TRANSVERSE SECTION X-RAY CAMERA.....	2R01 CA15882-04	96,911
BROWNELL, GORDON L.....	RADIOISOTOPE DATA PROCESSING AND DISPLAY.....	5R01 GM16712-09	119,364
BUCHER, NANCY L.....	THE ROLE OF NUCLEOTIDES IN CELL PROLIFERATION.....	5R01 AM19435-02	42,450
BUCHER, NANCY L.....	CYTOPLASMIC FACTORS IN CELLULAR GROWTH.....	5R01 CA02146-24	87,379
BURKE, JOHN F.....	BURN TRAUMA CENTER.....	5P50 GM21700-03	226,036
BURTON, JAMES A.....	SYNTHESIS OF INHIBITORS FOR THE STUDY OF RENAL RENIN.....	5R01 HL19517-02	37,780
CARES, HERBERT L.....	INTRAVASCULAR MAGNETIC TECHNIQUES & THE NERVOUS SYSTEM.....	5R01 NS09349-07	53,600
CAREY, ROBERT W.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	3R10 CA12449-06S1	2,495
CAREY, ROBERT W.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	2R10 CA12449-07	66,523
CHESLER, DAVID A.....	GATED IMAGING WITH THE MGH X-RAY CAMERA.....	1R01 HL20274-01	43,475
CODINGTON, JOHN F.....	MASKING OF ANTIGENS AT CANCER CELL SURFACES.....	5R01 CA18600-02	30,232
COGGINS, CECIL H.....	STUDY OF THE ADULT IDIOPATHIC NEPHROTIC SYNDROME.....	5R01 AM15646-07	85,160
COLVIN, ROBERT B.....	CELL INTERACTION AND THE CLOTTING SYSTEM.....	5R01 CA20822-02	77,410
COOPER, JEFFREY B.....	NEW APPROACHES FOR ANESTHESIA MANAGEMENT.....	5R01 GM22023-03	69,041
CORI, CARL F.....	CELLULAR REGULATION OF ENZYME ACTIVITY.....	5R01 AM11448-10	63,491
CROWELL, ROBERT M.....	REVERSIBILITY OF FOCAL CEREBRAL ISCHEMIA.....	5R01 NS13165-02	54,174
DAGGETT, WILLARD M.....	EXTRINSIC FACTORS INFLUENCING MYOCARDIAL PERFORMANCE.....	2R01 HL12322-09	66,640
DAGGETT, WILLARD M.....	MECHANISMS IN CARDIAC PERFORMANCE.....	5R01 HL12777-08	64,168
DALY, JAMES J.....	TUMOR ANTIGENS IN EXPERIMENTAL BLADDER CANCER.....	5R26 CA20042-02	55,858
DONAHOE, PATRICIA K.....	MULLERIAN INHIBITING SUBSTANCE.....	5R01 CA17393-03	59,248
DVORAK, ANN M.....	BASOPHIL/MAST CELL FUNCTION IN THE CONTROL OF CANCER.....	2R01 CA19141-02	89,444
DVORAK, HAROLD F.....	PATHOGENESIS OF CELLULAR IMMUNITY AND TOLERANCE.....	5R01 AI09529-08	54,208
DVORAK, HAROLD F.....	BASOPHILIC LEUKOCYTES IN HUMAN ALLERGIC DISEASE.....	5R01 AI10496-07	84,895
DVORAK, HAROLD F.....	MACROPHAGES AND THE SURFACE COAT IN TUMOR DESTRUCTION.....	5R01 CA16881-03	74,884
EPP, EDWARD R.....	FAST TIME PROCESSES IN CANCER RADIOBIOLOGY.....	5R01 CA18614-02	102,440
ERBE, RICHARD W.....	FOLATES AND DNA SYNTHESIS IN TRANSFORMED CELLS.....	5R01 CA16838-03	52,649
ERBE, RICHARD W.....	FOLATE METABOLISM AND MENTAL RETARDATION.....	5R01 HD06356-06	81,238
FAHMY, NABIL R.....	HEMODYNAMICS OF BONE CEMENT DURING ORTHOPEDIC SURGERY.....	5R01 GM22835-02	40,709
FISHER, CHARLES M.....	CLINICOPATHOLOGIC INVESTIGATION OF STROKE.....	5R01 NS05152-14	58,809
FITZPATRICK, THOMAS B.....	XTH INTERNATIONAL PIGMENT CELL CONFERENCE.....	1R13 AM20701-01	12,500
FITZPATRICK, THOMAS B.....	MALIGNANT MELANOMA CLINICAL COOPERATIVE GROUP.....	3R10 CA13651-05S1	141,018
GROSS, JEROME.....	STUDY OF MESENCHYMAL TISSUES AND THEIR DISEASES.....	5P01 AM03564-18	842,210
HABER, EDGAR.....	SEQUENCE, SHAPE AND SPECIFICITY OF ANTIBODIES.....	5R01 AI04967-15	135,541
HABER, EDGAR.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17665-03	1,062,514
HABER, EDGAR.....	DIGOXIN SPECIFIC ANTIBODY IN HUMAN THERAPY.....	5P01 HL19259-02	348,452
HACKETT, THOMAS P.....	IMPACT OF EMOTION ON CORONARY ARTERIES.....	5R01 HL19567-02	65,603
HARRIS, WILLIAM H.....	PREVENTION OF POSTOPERATIVE VENOUS THROMBI.....	5R01 HL18738-02	61,806
HIRSCH, MARTIN S.....	IMMUNE REACTIVITY AND ONCOGENIC VIRUS INFECTIONS.....	5R01 CA12464-07	84,988
HOCHBERG, FRED H.....	ISOLATION OF ASTROCYTOMA-SPECIFIC ANTIGENS.....	5R01 CA19336-02	62,645
HOLMES, LEWIS B.....	THE EXTRACELLULAR MATRIX IN HEREDITARY LIMB MALFORMATION.....	5R01 HD09689-02	27,690
HYSLOP, NEWTON E, JR.....	ALLERGY TO PENICILLIN AND CEPHALOSPORIN ANTIBIOTICS.....	1R01 AI14010-01	84,351
IRWIN, DAVID.....	RIBONUCLEOPROTEIN COMPLEXES IN RENAL CARCINOMA.....	1R01 CA20634-01A1	29,037
ISSELBACHER, KURT J.....	INTESTINAL CELL MEMBRANES-STRUCTURE AND FUNCTION.....	5R01 AM01392-21	102,084
ISSELBACHER, KURT J.....	METABOLIC STUDIES OF INTESTINAL MUCOSA.....	5R01 AM03014-19	65,033
ISSELBACHER, KURT J.....	TUMOR ASSOCIATED CHANGES OF INTESTINAL CELLS.....	3P01 CA14294-03S2	25,783
JACOBY, LEE B.....	MUTATION AND REGULATION IN NORMAL OR NEOPLASTIC CELLS.....	5R01 CA14534-05	103,123
JEANLOZ, ROGER W.....	CHEMISTRY AND BIOCHEMISTRY OF BACTERIAL CELL WALL.....	5R01 AI06692-12	64,320
JEANLOZ, ROGER W.....	STUDY OF GLYCOPROTEINS FROM CANCER CELLS.....	5R01 CA08418-13	95,708
JEANLOZ, ROGER W.....	GLYCOPROTEINS OF CELL SURFACE OF HUMAN BREAST CANCER.....	5R01 CA19763-02	24,571
KALISHER, LESTER.....	LOW-DOSE SCREENING TECHNIQUES FOR MAMMOGRAPHY.....	5R01 CA19622-02	48,107
KEUTMANN, HENRY T.....	STRUCTURAL AND METABOLIC STUDIES OF FSH.....	5R01 HD08322-03	58,981
KORNBLITH, PAUL.....	INTERRELATIONSHIPS OF NORMAL AND CANCER CELLS.....	3P01 CA07368-13S1	133,948
KUMAR, AJIT.....	MESSANGER RNA METABOLISM IN MAMMALIAN CELLS.....	5R01 CA16797-03	47,707
LEAF, ALEXANDER.....	SUPPORT FOR METABOLIC DISEASE RESEARCH CENTER.....	5P01 AM04501-16	573,263
LEAF, ALEXANDER.....	CARDIOPULMONARY FUNCTION IN REMEDIABLE VASCULAR DISEASE.....	2P01 HL06664-16	415,609

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
LEHRICH, JAMES R.....	AMYOTROPHIC LATERAL SCLEROSIS - IMMUNOVIROLOGIC MODELS.....	5R01 NS09675-07	84,832
LEVINE, DAVID N.....	DISTURBANCES OF VISUAL PERCEPTION IN CEREBRAL DISEASE.....	5R01 NS13102-02	42,627
LIPPIELLO, LOUIS.....	EFFECT OF PROSTAGLANDINS ON ARTICULAR CARTILAGE.....	5R01 AM19111-02	51,194
LONG, JOHN C.....	AN ANTIGEN IN HODGKIN'S DISEASE TISSUE CULTURES.....	5R01 CA19514-02	70,338
MALT, RONALD A.....	STUDY OF NEPHRECTOMY AT BIRTH AND DURING GROWTH.....	5R01 AM12769-12	77,700
MALT, RONALD A.....	ENTERIC INTERRELATIONS IN CANCER OF THE COLON.....	2R26 CA17324-03	51,091
MANKIN, HENRY J.....	NUCLEIC ACID AND PROTEIN METABOLISM IN CARTILAGE.....	2R01 AM16265-06	110,365
MANKIN, HENRY J.....	BIOCHEMICAL AND IMMUNOLOGIC STUDY OF CHONDROSARCOMA.....	2R01 CA15614-03	71,645
MARTIN, DONALD B.....	GLUCOSE AND INSULIN INTERACTIONS WITH CELL MEMBRANE.....	2R01 AM13774-07	40,329
MASLAND, RICHARD H.....	NEUROTRANSMISSION IN MAMMALIAN RETINA.....	2R01 EY01075-04	27,232
MC CLUSKEY, ROBERT T.....	IMMUNOLOGIC FACTORS IN TUBULOINTERSTITIAL NEPHRITIS.....	5R01 AM18729-02	107,473
MC CLUSKEY, ROBERT T.....	LYMPHOCYTES IN TUMOR, CELLULAR AND AUTO-IMMUNITY.....	5R01 CA19393-02	64,108
MC CULLY, KILMER S.....	CONTROL OF SPECIFICITY IN PROTEIN SYNTHESIS.....	5R01 AM15978-09	78,918
MILLER, KEITH W.....	ACTION OF ANESTHETICS ON MEMBRANE IONOPHORES.....	5R01 GM22671-02	31,470
MURPHY, RICHARD A.....	NERVE GROWTH FACTOR IN THE CENTRAL NERVOUS SYSTEM.....	1R01 NS13674-01	64,263
ORKIN, ROSLYN W.....	CELL-MATRIX INTERACTIONS.....	1R23 DE04734-01	20,560
PLATE, JANET M.....	IMMUNOLOGICAL EFFECTS ON TUMOR GROWTH & REJECTION.....	5R01 CA17754-03	89,197
POHOST, GERALD M.....	THALLIUM AND ANTIMYOSIN IN ISCHEMIA AND INFARCTION.....	1R01 HL21751-01	147,572
POLLEN, DANIEL A.....	SPATIAL SELECTIVITY IN NONSTRIATE VISUAL CORTICES.....	5R01 EY00597-08	76,317
POTTS, JOHN T, JR.....	HORMONAL CONTROL OF CALCIUM METABOLISM.....	5P01 AM11794-10	316,755
POTTS, JOHN T, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05486-15	213,709
POWELL, WILLIAM J, JR.....	PHARMACOLOGIC STUDIES ON NEUROGENIC DIGITALIS EFFECTS.....	5R01 HL18657-02	64,103
PROUT, GEORGE R, JR.....	CHEMOTHERAPY FOR PATIENTS WITH PROSTATIC CARCINOMA.....	5R26 CA15284-05	42,798
PROUT, GEORGE R, JR.....	EVALUATION OF MANAGEMENT OF BLADDER CARCINOMA PATIENTS.....	2R26 CA15944-04	145,310
RICHARDSON, GEORGE S.....	SEX STEROID RECEPTORS OF ENDOMETRIUM IN CULTURE.....	5R01 CA18678-03	92,669
ROBINSON, DWIGHT R.....	PROSTAGLANDINS IN RHEUMATIC DISEASES.....	5R01 AM19427-02	52,293
RUSSELL, PAUL S.....	TISSUE SPECIFICITY STUDIES.....	2R01 AM07055-15	89,705
RUSSELL, PAUL S.....	STUDIES BASIC TO HEART TRANSPLANTATION.....	5P01 HL18646-02	416,026
SCOTT, JESSE F.....	TURNOVER OF RIBOSOMAL RNA IN VIRUS TRANSFORMED CELLS.....	5R01 CA14630-05	36,203
SHARP, GEOFFREY W.....	STUDIES ON THE MECHANISM OF INSULIN RELEASE.....	5R01 AM18460-03	85,853
SHIH, VIVIAN E.....	NEW AMINO ACID DISORDERS IN CEREBRAL DISEASE.....	2R01 NS05096-15	214,218
SILVER, DONALD M.....	TOLERANCE AND DOMINANT NONRESPONSIVENESS TO F-ANTIGEN.....	1R01 AI13984-01	82,364
SLATER, EVE E.....	PURIFICATION OF HUMAN RENAL RENIN.....	1R23 HL21247-01	39,194
STOSSEL, THOMAS P.....	LEUKOCYTE ANTIBODIES AND SUPPORT OF CANCER PATIENTS.....	1R01 CA20414-01	26,101
STOSSEL, THOMAS P.....	PHAGOCYTOSIS: INGESTION IN ALVEOLAR MACROPHAGES.....	5R01 HL19429-02	76,500
SUIT, HERMAN D.....	MODIFICATION OF TUMOR RESPONSE TO LOCAL IRRADIATION.....	5R01 CA13311-06	167,617
SUIT, HERMAN D.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	3P20 CA17784-02S1	31,727
SUIT, HERMAN D.....	CLINICAL TRIAL OF RADIATION THERAPY AND CORYNEBACTERIUM.....	5R01 CA19415-02	248,368
SUIT, HERMAN D.....	PROTON RADIATION THERAPY RESEARCH.....	1P01 CA21239-01	1,512,346
SUMMERS, ANNE O.....	EFFECT OF HG RESISTANT MOUSE GUT FLORA ON HG TOXICITY.....	1R01 ES01461-01	1,376
SWANN, DAVID A.....	MOLECULAR BASIS OF JOINT LUBRICATION.....	1R01 AM19834-01	132,824
SWANN, DAVID A.....	CHEMISTRY AND BIOLOGY OF VITREOUS STRUCTURAL PROTEINS.....	2R01 EY01030-04	72,898
TAVERAS, JUAN M.....	AN INTERDEPARTMENTAL STROKE PROGRAM.....	2P50 NS10828-04	399,266
TOOLE, BRYAN P.....	MORPHOGENETIC ROLE OF GLYCOSAMINOGLYCANS.....	5R01 DE04220-03	82,403
TRELSTAD, ROBERT L.....	EXTRACELLULAR MATRIX-BLOOD VESSEL CELL INTERACTIONS.....	3R01 HL18714-02S1	339
TRELSTAD, ROBERT L.....	EXTRACELLULAR MATRIX-BLOOD VESSEL CELL INTERACTIONS.....	5R01 HL18714-03	104,689
WALKER, W ALLAN.....	INTESTINAL UPTAKE OF MACROMOLECULES.....	2R01 AM16269-04	53,582
WANDS, JACK R.....	HORMONAL PROTECTION AND REPAIR IN HEPATOCELLULAR INJURY.....	1R01 AM20309-01	44,558
WEISER, MILTON M.....	TUMOR-ASSOCIATED INTESTINAL CELL MEMBRANE FACTORS.....	5R01 CA16703-03	111,104
WEISMAN, AVERY D.....	PSYCHOSOCIAL INTERVENTIONS IN CANCER CARE.....	1R18 CA19797-01	247,096
WINN, HENRY J.....	STUDIES IN TUMOR IMMUNOLOGY.....	5R01 CA17800-03	136,366
WINN, HENRY J.....	STUDIES IN TRANSPLANTATION IMMUNOLOGY.....	5R01 CA20044-12	119,565
WITTERS, LEE A.....	REGULATION OF HEPATIC METABOLISM BY INSULIN.....	1R01 AM19270-01	64,653
WRAY, SHIRLEY H.....	DEMYELINATION AND THE OPTIC NERVE.....	2R01 NS11551-04	109,206
YOUNG, DAVID M.....	NERVE GROWTH FACTOR FUNCTION & SECRETION BY CANCER CELLS.....	5R01 CA17137-03	81,710
ZERVAS, NICHOLAS T.....	TREATMENT OF POST-SURGICAL VASOCONSTRICTION.....	7R01 HL22573-01	122,982
ZERVAS, NICHOLAS T.....	BRAIN CATECHOLAMINES IN CEREBRAL VASCULAR OCCULSION.....	7R01 NS14298-01	56,711
ORGANIZATION TOTAL	125	15,125,100	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MASSACHUSETTS OFFICE OF HUMAN SERVICES—BOSTON STATE HOSPITAL ZIP CODE 02124			
LOCKE, SIMEON.....	AN ANATOMICAL STUDY OF CENTRAL VESTIBULAR CONNECTIONS.....	3R01 NS09732-04S1	7,463
ORGANIZATION TOTAL	1 7,463		
NEW ENGLAND DEACONESS HOSPITAL ZIP CODE 02215			
BLACKBURN, GEORGE L.....	NEW CONCEPTS IN PARENTERAL PROTEIN SPARING THERAPY	5R01 GM22691-03	108,592
GREENGARD, OLGA	THE REGULATION OF MAMMALIAN ENZYME SYNTHESIS	5R01 CA08676-13	106,473
HERZFELD, ANNEMARIE	DEVELOPMENTAL ENZYME FORMATION IN MAMMALIAN TISSUES.....	3R01 HD04532-07S1	9,980
HERZFELD, ANNEMARIE	DEVELOPMENTAL ENZYME FORMATION IN MAMMALIAN TISSUES.....	5R01 HD04532-08	59,585
KNOX, W EUGENE.....	REGULATION OF TYROSINE AND TRYPTOPHAN METABOLISM.....	2R01 AM00567-24	111,482
MC DERMOTT, WILLIAM V, JR.....	EARLY DIAGNOSIS OF CARCINOMA OF THE PANCREAS	5R26 CA19232-02	62,084
MC DERMOTT, WILLIAM V, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05591-13	37,365
MONACO, ANTHONY P.....	IMMUNOSUPPRESSION AND ACTIVE ENHANCEMENT	7R01 AI14551-01	105,402
MONACO, ANTHONY P.....	IMMUNODIAGNOSTIC ASSAY OF BLADDER CARCINOMA.....	5R26 CA20888-02	108,472
WARREN, SHIELDS.....	INDUCTION OF LEUKEMIA IN RODENTS BY RADIATION.....	5R01 CA12944-06	49,019
ORGANIZATION TOTAL	10 758,454		
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111			
AGNELLO, VINCENT.....	STUDY OF HUMAN IMMUNE COMPLEX DISEASES.....	5R01 AM16984-05	62,548
BABIOR, BERNARD M.....	THE FUNCTION OF NORMAL AND MALIGNANT PHAGOCYTTIC CELLS	5R01 AI11827-05	72,234
BABIOR, BERNARD M.....	STUDY OF COENZYME B12 AND RELATED COMPOUNDS	5R01 AM16589-05	77,555
BAUM, JULES L.....	OCULAR PENETRATION OF ANTIBIOTICS IN A MODEL.....	5R01 EY01517-03	79,931
BAUM, JULES L.....	BIOCHEMISTRY OF NORMAL AND DYSTROPHIC CORNEAS IN CULTURE	3R01 EY01793-01S1	10,814
BAUM, JULES L.....	BIOCHEMISTRY OF NORMAL AND DYSTROPHIC CORNEAS IN CULTURE	5R01 EY01793-02	92,912
BRENNER, JOHN F.....	AUTOMATIC METAPHASE CELL LOCATION SYSTEM DEVELOPMENT.....	5R01 GM22965-02	126,091
COHEN, JORDAN J.....	REGULATION OF ELECTROLYTE AND ACID-BASE EQUILIBRIUM.....	5R01 HL00759-28	142,372
COHEN, JORDAN J.....	ELECTROLYTE PHYSIOLOGY & RESPIRATORY ACID-BASE.....	5R01 HL15810-05	117,116
DATTA, SYAMAL K.....	MURINE LEUKEMIA VIRUSES IN NEW ZEALAND MICE.....	5R01 CA19575-02	56,681
DESFORGES, JANE.....	COMPUTER ASSISTED EVALUATION OF PATIENTS WITH CANCER.....	5R18 CA19122-02	129,684
FANBURG, BARRY L.....	LUNG METABOLISM—ENZYMES IN THE PULMONARY CIRCULATION.....	5R01 HL14456-06	98,515
FANBURG, BARRY L.....	DEFENSES OF LUNG CELLS AGAINST OXYGEN TOXICITY.....	1R01 HL20352-01	42,874
FURIE, BARBARA C.....	METAL-DEPENDENT COMPLEX FORMATION IN BLOOD COAGULATION	5R01 HL18834-03	37,002
FURIE, BRUCE.....	STRUCTURE-FUNCTION RELATION OF BLOOD CLOTTING PROTEINS	1R01 HL21543-01	73,724
GENNARI, F JOHN.....	INTRARENAL CONTROL OF SODIUM BALANCE.....	5R01 AM18446-03	90,495
GORBACH, SHERWOOD L.....	CHOLERA-LIKE TOXIGENIC COLIFORM DIARRHEA IN CHILDREN.....	5R22 AI13164-02	37,158
KAPLAN, MARSHALL M.....	ENZYME REGULATION IN LIVER DISEASE.....	5R01 AM10571-11	90,184
LEVINE, HERBERT J.....	CARDIODYNAMICS AND METABOLISM OF CONGESTIVE FAILURE	5R01 HL07139-16	99,193
ONDERDONK, ANDREW B.....	EXPERIMENTAL MODEL FOR ULCERATIVE COLITIS.....	5R01 AM18767-03	68,887
PIRO, ANTHONY J.....	COMPUTER ASSISTED DECISION MAKING IN RADIOTHERAPY.....	5R01 CA17365-03	60,856
PLAUT, ANDREW G.....	PROTEOLYTIC MECHANISMS IN HUMAN COLON CONTENTS.....	5R01 AM17194-05	46,285
RABEN, MAURICE S.....	ACTION AND CLINICAL EVALUATION OF GROWTH HORMONE.....	2R01 AM01567-21	66,408
RABEN, MAURICE S.....	HUMORAL AND METABOLIC ASPECTS OF CARDIAC FUNCTION.....	5R01 HL06924-15	59,431
RABEN, MAURICE S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05598-12	126,094
REICHLIN, SEYMOUR.....	NEURAL CONTROL MECHANISMS OF METABOLIC FUNCTIONS.....	5R01 AM16684-06	140,590
REICHLIN, SEYMOUR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00054-16	680,341
SCHWARTZ, BERNARD.....	RESPONSE OF OCULAR PRESSURE TO CORTICOSTEROIDS.....	5R01 EY00024-09	102,261
SCHWARTZ, BERNARD.....	CHANGES IN THE OPTIC DISC IN PATIENTS WITH GLAUCOMA.....	2R01 EY00936-04	131,699
SCHWARTZ, ROBERT S.....	IMMUNOSUPPRESSION.....	5R01 AM07937-14	124,204
SCHWARTZ, ROBERT S.....	STUDY OF SYSTEMIC LUPUS ERYTHEMATOSUS.....	5R01 AM09351-12	214,594
SCHWARTZ, ROBERT S.....	EXPERIMENTAL MODEL OF MALIGNANT LYMPHOMA.....	5R01 CA10018-12	188,115
SOKOL, SAMUEL.....	ERG AND VECP AS INDICES OF PHOTOPIC DYSFUNCTION.....	5R01 EY00926-04	30,083
ORGANIZATION TOTAL	33 3,576,931		
NORTHEASTERN UNIVERSITY ZIP CODE 02115			
ARMINGTON, JOHN C.....	STIMULUS ALTERNATION AND VISUAL POTENTIALS.....	5R01 EY00589-10	61,472
DAVIS, MICHAEL A.....	SYNTHESIS OF NOVEL 75SE PANCREATIC IMAGING AGENTS.....	5R01 CA19898-02	63,165
FINE, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07143-06	36,096
HALPERN, ARTHUR M.....	ALKALOIDS AND PROTOALKALOIDS: PHOTOPHYSICAL PROPERTIES.....	5R01 GM22698-03	30,381
KARGER, BARRY L.....	STUDIES IN HIGH PERFORMANCE LIQUID CHROMATOGRAPHY.....	5R01 GM15847-09	57,832

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MAHUT, HELEN S.....	HIPPOCAMPUS: A NEUROPSYCHOLOGICAL DEVELOPMENTAL STUDY.....	3R01 HD08135-03S2	3,122
QUICK, JAMES E.....	A SYNTHETIC SCHEME FOR THE LYTHRACEAE ALKALOIDS.....	5R01 NS12007-03	34,251
VOUROS, PAUL.....	MASS SPECTROMETRY OF BIOLOGICALLY SIGNIFICANT COMPOUNDS.....	5R01 GM22787-02	42,585
WEISS, KARL.....	LASER RADIATION IN PHOTOCHEMISTRY AND PHOTOBIOLOGY.....	5R01 ES00376-14	39,373
ORGANIZATION TOTAL	9 368,277		
SIDNEY FARBER CANCER INSTITUTE ZIP CODE 02115			
CANTOR, HARVEY I.....	T-CELL SUBPOPULATIONS IN TRANSPLANTATION IMMUNITY.....	3R01 AI12184-02S1	5,729
CANTOR, HARVEY I.....	T-CELL SUBPOPULATIONS IN TRANSPLANTATION IMMUNITY.....	2R01 AI12184-03	90,256
CANTOR, HARVEY I.....	IMMUNOBIOLOGY OF LYO T CELL SUBCLASSES.....	5R01 AI13600-02	106,278
CHAYKOVSKY, MICHAEL.....	NEW FOLATE ANTAGONISTS IN CANCER CHEMOTHERAPY.....	5R01 CA17718-02	60,900
COOPER, GEOFFREY M.....	INFECTIOUS DNA FOR ENDOGENOUS RNA TUMOR VIRUS GENES.....	5R01 CA18689-02	71,650
ENSMINGER, WILLIAM D.....	METHOTREXATE WITH PROTECTION BY THYMIDYLATE PRECURSOR.....	1R01 CA22030-01	72,428
FRECHETTE, ALFRED L.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	2R18 CA16408-03	1,275,272
FREI, EMIL, III.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA06516-14	2,217,696
FREI, EMIL, III.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17979-03	176,410
FREI, EMIL, III.....	CLINICAL CANCER RESEARCH CENTER.....	5P01 CA19589-02	1,563,713
FREI, EMIL, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05526-15	146,278
GANJU-KRISHAN, AWATAR.....	CELL KINETICS AND CANCER CHEMOTHERAPY.....	5R01 CA20008-02	2,540
HASELTINE, WILLIAM A.....	REPLICATION OF RNA TUMOR VIRUSES.....	5R01 CA19341-02	74,971
ISRAEL, MERVYN.....	PREPARATION OF ADRIAMYCIN ANALOGS AND DERIVATIVES.....	5R01 CA17263-03	113,573
JAFFE, NORMAN.....	EFFECTS OF PRECONCEPTION AND IN UTERO IMMUNOSUPPRESSION.....	5R01 CA19711-02	54,885
LAZARUS, HERBERT.....	CYSTINE AUXOTROPHY IN HUMAN MALIGNANCY—IMPLICATIONS.....	5R01 CA19126-02	86,162
LIVINGSTON, DAVID M.....	FUNCTION OF TUMOR VIRUS SPECIFIC NON-VIRION PROTEINS.....	5R01 CA15751-03	52,885
LIVINGSTON, DAVID M.....	STRUCTURE AND FUNCTION OF SV40 NON-VIRION PROTEINS.....	2R01 CA15751-04	104,491
MAYER, ROBERT J.....	BEDSIDE APPROACH TO THE ETIOLOGY OF CANCER.....	5R01 CA19727-02	58,461
MODEST, EDWARD J.....	BIOCHEMICAL PHARMACOLOGY OF NEW ACTINOMYCIN D ANALOGS.....	5R01 CA17409-03	97,473
MODEST, EDWARD J.....	BIOCHEMICAL PHARMACOLOGY OF A NEW ADRIAMYCIN ANALOG.....	5R01 CA19118-02	132,332
NATHAN, DAVID G.....	A PROGRAM FOR INVESTIGATION OF CHILDHOOD LEUKEMIA.....	5P01 CA18662-03	488,602
O'MALLEY, JOHN E.....	PSYCHOSOCIAL SEQUELAE OF CHILDHOOD CANCER.....	2R18 CA18429-03	155,911
PARDEE, ARTHUR B.....	IN VIVO PROTECTION AGAINST ANTINEOPLASTIC AGENTS.....	1R01 CA19864-01A1	41,810
PARDEE, ARTHUR B.....	DRUG RESISTANCE ASSAY OF NEOPLASTIC TRANSFORMATION.....	5R01 CA19949-02	63,723
REINISCH, CAROL L.....	IMMUNOSUPPRESSION BY ADJUVANT-STIMULATED T CELLS.....	1R01 CA21100-01	98,021
ROSENBERG, ROBERT D.....	HYPERCOAGULABILITY AND ASSAYS FOR ITS DETECTION.....	5R01 HL19131-03	184,008
RUBIN, GERALD M.....	STUDIES ON CONTROL OF GENE EXPRESSION IN ANIMAL CELLS.....	1R01 GM23614-01	72,484
SAGER, RUTH.....	CYTOPLASMIC GENES IN NORMAL AND TUMORIGENIC CELLS.....	1R01 CA21365-01	81,297
SAGER, RUTH.....	CYTOPLASMIC GENETIC CONTROL SYSTEMS.....	5R01 GM22874-03	137,687
SAMY, T S.....	PHARMACOLOGY OF ANTITUMOR PROTEIN NEOCARZINOSTATIN.....	5R01 CA17305-03	95,128
SCHAFFER, PRISCILLA A.....	TRANSFORMING GENES OF HERPES SIMPLEX VIRUS.....	1R01 CA20260-01	106,596
SCHLOSSMAN, STUART F.....	STUDY OF ISOLATION AND GENETIC CONTROL OF IMMUNOCYTES.....	5R01 AI12069-04	153,056
STILES, CHARLES D.....	ROLE OF SERUM IN THE FOREIGN BODY RESPONSE.....	1R01 CA22042-01	68,484
STROMINGER, JACK L.....	MOLECULAR BASIS OF VIRAL ONCOGENESIS.....	1P01 CA21082-01	273,083
UREN, JACK R.....	ENZYMATIC CYST(E)INE DEPLETION THERAPY OF CANCER.....	5R01 CA18917-02	69,145
WILLIAMS, R MICHAEL.....	GENETIC CONTROL OF TUMOR RESISTANCE AND IMMUNITY.....	5R01 CA19791-02	60,364
YANKEE, RONALD A.....	AUTOLOGOUS STEM CELL RECONSTITUTION IN CANCER THERAPY.....	5R01 CA18412-02	121,671
YUNIS, EDMOND J.....	GENETIC ANALYSIS OF NORMAL AND MALIGNANT LYMPHOCYTES.....	1R01 CA20531-01	197,467
YUNIS, EDMOND J.....	IMMUNOLOGICAL ASPECTS OF AGING.....	5R01 CA21084-02	57,600
YUNIS, EDMOND J.....	IMMUNOLOGIC FACTORS IN SPONTANEOUS MAMMARY CARCINOMA.....	5R01 CA21672-02	62,740
ZAIA, JOHN A.....	CORRELATION OF ZOSTER IMMUNITY AND VIRUS REACTIVATION.....	1R23 AI14373-01	43,112
ZELEN, MARVIN.....	CANCER CLINICAL INVESTIGATIONS COORDINATING CENTER A.....	7R10 CA23318-01	416,436
ZELEN, MARVIN.....	STATISTICAL MODELS OF BIOMEDICAL PHENOMENA.....	7R01 CA23415-01	67,163
ORGANIZATION TOTAL	44 9,679,971		
ST. ELIZABETH'S HOSPITAL OF BOSTON ZIP CODE 02135			
GUREWICH, VICTOR.....	PATHOGENESIS OF PULMONARY THROMBOEMBOLIC DISEASE.....	7R01 HL21548-01	117,616
GUREWICH, VICTOR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05587-09	22,886
ORGANIZATION TOTAL	2 140,502		
ST. MARGARET'S HOSPITAL FOR WOMEN ZIP CODE 02125			
SBARRA, ANTHONY J.....	EFFECTS OF X-IRRADIATION ON THE PHAGOCYtic RESPONSE.....	5R01 CA15670-03	64,570

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
ORGANIZATION TOTAL	1	64,570	
TUFTS UNIVERSITY ZIP CODE 02111			
BLOOMQUIST, EUNICE I.....	SMOOTH MUSCLE OF RESISTANCE VESSELS IN HYPERTENSION.....	5R01 HL19012-02	49,681
BLUMENSTEIN, MICHAEL.....	NMR STUDIES OF PEPTIDE-MACROMOLECULE INTERACTION.....	1R01 HD10616-01	36,860
BORYSENKO, JOAN Z.....	CONTROL OF SURFACE PHENOMENA IN VIRAL TRANSFORMATION.....	5R01 CA17328-03	36,183
BORYSENKO, MYRIN.....	COMPARATIVE IMMUNOBIOLOGY.....	5R01 CA20093-05	42,214
BOYD, DANA H.....	FUNCTION OF STRUCTURES INVOLVED IN TRANSCRIPTION.....	5R01 GM22170-03	54,498
BRAWERMAN, GEORGE.....	THE ROLE OF NUCLEIC ACIDS IN CELL DIFFERENTIATION.....	5R01 GM17973-08	84,707
CATHOU, RENATA E.....	CONFORMATION AND STRUCTURAL DYNAMICS OF ANTIBODIES.....	2R01 AI10115-07	54,494
CAVAZOS, LAURO F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05382-16	155,025
COFFIN, JOHN M.....	RELATIONSHIP OF AVIAN TUMOR VIRUS RNA AND HOST GENOME.....	5R01 CA17659-02	47,896
COHEN, JONATHAN B.....	ASSAY OF TISSUE REACTION TO IMPLANTED MATERIALS.....	5R01 AM18591-05	65,093
COOPER, AMIEL G.....	STRUCTURE AND SYNTHESIS OF LEUKEMIC PLASMA MEMBRANES.....	5R01 AI12875-03	120,087
COOPER, AMIEL G.....	ROLE OF SURFACE AND SHED GLYCOPROTEIN IN METASTASIS.....	5R01 CA19987-02	47,476
DRYSDALE, JAMES W.....	MAMMALIAN ISOFERRITINS—STRUCTURE AND METABOLISM.....	3R01 AM17775-03S1	12,713
DRYSDALE, JAMES W.....	MAMMALIAN ISOFERRITINS—STRUCTURE AND METABOLISM.....	2R01 AM17775-04	108,327
DRYSDALE, JAMES W.....	CARCINOFETAL HUMAN ISOFERRITINS.....	3R01 CA16309-02S1	7,784
EL-BERMANI, AL-WALID I.....	STUDIES ON THE INNERVATION OF THE LUNG.....	5R01 HL20548-02	44,181
FINE, JACOB.....	ROLE OF THE PLATELET IN ENDOTOXEMIA.....	5R01 HL19174-02	55,960
GOLDBERG, EDWARD B.....	GENETIC CONTENT AND RECOMBINATION OF DNA FRAGMENTS.....	2R01 GM13511-12	85,849
HITCHCOCK, KAREN R.....	THE LUNG SURFACTANT SYSTEM: CONTROL MECHANISMS.....	5R01 HL15316-06	71,928
KISLIUK, ROY L.....	FOLATE ENZYMES, COENZYMES, AND ANALOGS.....	5R01 CA10914-09	64,349
LESKOWITZ, SIDNEY.....	CELLULAR ASPECTS OF TOLERANCE & DELAYED HYPERSENSITIVITY.....	5R01 AI10895-06	102,345
LESKOWITZ, SIDNEY.....	MECHANISMS OF IMMUNOLOGIC INJURY TO TUMORS.....	5R01 CA17220-03	74,449
LIN, CHI-WEI.....	HISTAMINASE AS A CANDIDATE CARCINOPLACENTAL ISOENZYME.....	5R01 CA17194-03	45,460
LIN, CHI-WEI.....	BETA-GLUCURONIDASE TRANSPORT & MOLECULAR MODIFICATION.....	5R01 GM21755-02	60,384
MAUTNER, HENRY G.....	STUDIES OF POTENTIAL ANTICANCER AGENTS.....	3R01 CA12186-06S1	3,101
NAJJAR, VICTOR A.....	TISSUE ENZYMES AND PLASMA PROTEINS.....	5R01 AI09116-09	83,925
NATHANSON, LARRY.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17983-03	102,149
OFNER, PETER.....	PROSTATIC DIFFERENTIATION AND SEX HORMONE METABOLISM.....	5R01 CA15776-03	79,628
PLANTE, LAURENCE T.....	DEUTERIUM AND 13C LABELED ENZYMES AND ANTIFOLATES.....	5R01 CA20539-02	37,226
RESNICK, ROBERT H.....	DISTAL SPLENORENAL VS PORTALSYSTEMIC ANASTOMOSIS.....	5R01 AM18702-03	54,530
SCHAECHTER, MOSELIO.....	BACTERIAL CELL MEMBRANE ROLE IN GROWTH AND CELL DIVISION.....	5R01 AI09465-08	55,133
SCHMIDT, GERHARD.....	METABOLIC STUDIES WITH PLASMALOGENS AND SPHINGOLIPIDS.....	2R01 NS11250-04	20,948
SHAPIRO, EVERETT.....	PULSATING FORCES IN ORTHODONTICS.....	1R01 DE04487-01	52,249
SILBERT, JEREMIAH E.....	METABOLISM OF MUCOPOLYSACCHARIDES.....	5R01 AM08816-13	49,383
SONENSHAIN, ABRAHAM L.....	ROLE OF RNA POLYMERASE IN BACTERIAL DIFFERENTIATION.....	5R01 GM19168-06	55,485
STEARNS, NORMAN S.....	DOCUMENTED READING FOR IMPROVED PATIENT CARE.....	3R01 LM02543-02S1	42,532
STOLBACH, LEO L.....	COOPERATIVE STUDY OF ONCOLOGY.....	5R10 CA07190-15	134,086
STOLLAR, BERNARD D.....	IMMUNOCHEMICAL BASIS FOR INDUCING TOLERANCE TO DNA.....	1R01 AI14534-01A2	46,446
TECCE, JOSEPH J.....	NEUROPSYCHOLOGICAL STUDIES OF ATTENTION AND AGING.....	5R01 AG00515-02	88,678
TEVETHIA, SATVIR S.....	BIOLOGY OF SV-40 SPECIFIC TRANSPLANTATION ANTIGEN.....	5R01 CA14939-05	125,507
VAAGE, JAN.....	IMMUNOTHERAPY OF MAMMARY TUMORS.....	3R01 CA15960-04S1	14,294
VAAGE, JAN.....	RADIATION EFFECTS ON ESTABLISHED TUMOR IMMUNITY.....	5R01 CA16683-03	50,382
WOLFE, HUBERT J.....	CARCINOEMBRYONIC PROTEINS & NEOPLASTIC TRANSFORMATION.....	5P01 CA12924-06	582,539
WOLFE, HUBERT J.....	C-CELL HYPERPLASIA AND THYROID MEDULLIARY CARCINOMA.....	5R01 CA17389-03	71,094
WORTIS, HENRY H.....	NEOPLASIA IN NUDE (ATHYMIC) MICE.....	5R01 CA16172-03	84,965
WORTIS, HENRY H.....	LYMPHOCYTE BINDING TO MACROPHAGES.....	1R01 CA21348-01	79,059
WRIGHT, ANDREW.....	STRUCTURE AND FUNCTION OF THE CELL MEMBRANE.....	5R01 GM15837-10	55,366
ORGANIZATION TOTAL	47	3,496,648	
TUFTS-NEW ENGLAND MEDICAL CENTER ZIP CODE 02111			
GORBACH, SHERWOOD L.....	DIET AND ITS EFFECT ON ENZYMES LINKED TO COLON CANCER.....	5R26 CA17511-03	82,660
MIKKELSEN, ROSS B.....	CA20 METABOLISM IN NORMAL AND TRANSFORMED LYMPHOCYTES.....	1R01 CA22269-01	70,327
PIRO, ANTHONY J.....	RADIOTHERAPY ONCOLOGY CENTER.....	5P01 CA12178-07	507,203
PIRO, ANTHONY J.....	T- AND B-CELL IMAGE QUANTITATION AND RADIATION THERAPY.....	5R01 CA18742-02	106,273
ORGANIZATION TOTAL	4	766,463	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
UNIVERSITY HOSPITAL ZIP CODE 02118			
CHIDECKEL, ELLIOTT W.....	FUEL AND AMINO ACID METABOLISM IN THE PRIMATE BRAIN.....	1R01 AM21081-01	60,572
COFFMAN, JAY D.....	ANTILIPEMIC REGIMES IN PERIPHERAL ARTERIOSCLEROSIS.....	5R01 HL13654-07	54,679
COFFMAN, JAY D.....	PERIPHERAL CIRCULATORY STATUS IN MYOCARDIAL INFARCT.....	5R01 HL14350-05	22,968
COFFMAN, JAY D.....	FINGERTIP BLOOD FLOW IN NORMALS AND RAYNAUD'S DISEASE.....	5R01 HL18467-02	26,488
COFFMAN, JAY D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05487-15	122,006
GOODMAN, MICHAEL N.....	METABOLIC ADAPTATION TO STARVATION: AN ANIMAL MODEL.....	5R01 AM19469-02	73,913
HARRIS, LAURAN D.....	CONTROL OF SPHINCTER STRENGTH.....	5R01 AM11907-10	77,915
HOLLANDER, WILLIAM.....	DRUG TREATMENT OF ATHEROSCLEROSIS.....	5R01 HL16437-04	41,395
KRAMSCH, DIETER M.....	PRIMATE MODEL FOR CORONARY HEART DISEASE.....	3R01 HL15512-04S1	2,988
KRAMSCH, DIETER M.....	PRIMATE MODEL FOR CORONARY HEART DISEASE.....	2R01 HL15512-05	97,904
KRAMSCH, DIETER M.....	EXERCISE AND CORONARY ATHEROSCLEROTIC HEART DISEASE.....	5R01 HL18060-03	137,325
LANGE, YVONNE.....	CHOLESTEROL DISTRIBUTION IN ERYTHROCYTE MEMBRANES.....	5R01 HL20303-02	64,202
MELBY, JAMES C.....	SUPPORT FOR CLINICAL METABOLIC RESEARCH UNIT.....	5P01 AM08657-13	370,768
MELBY, JAMES C.....	MECHANISMS REGULATING ADRENOCORTICAL SECRETION.....	2R01 AM12027-10	124,367
MIRSKY, ALLAN F.....	NEUROBEHAVIORAL STUDIES IN PETIT MAL EPILEPSY.....	2R01 NS12201-03	90,550
RUDERMAN, NEIL B.....	GLUCOSE AND AMINO ACID METABOLISM IN SKELETAL MUSCLE.....	3R01 AM19514-01S1	9,019
RUDERMAN, NEIL B.....	GLUCOSE AND AMINO ACID METABOLISM IN SKELETAL MUSCLE.....	5R01 AM19514-02	112,250
STRAUS, MARC J.....	COOPERATIVE STUDY OF ONCOLOGY.....	5R10 CA11109-09	92,759
STRAUS, MARC J.....	CELLULAR KINETICS OF CLINICAL CANCER CHEMOTHERAPY.....	3P01 CA18837-01S1	8,982
STRAUS, MARC J.....	CELLULAR KINETICS OF CLINICAL CANCER CHEMOTHERAPY.....	5P01 CA18837-02	254,204
STRAUSS, JOHN S.....	EVALUATION OF PATHOGENIC FACTORS IN ACNE VULGARIS.....	2R01 AM07388-15	130,084
ORGANIZATION TOTAL	21	1,975,338	
UNIVERSITY OF MASSACHUSETTS AT BOSTON ZIP CODE 02125			
MARGIULIS, THOMAS N.....	STRUCTURE OF COLCHICINE RELATED ANTIMITOTIC DRUGS.....	5R01 CA17436-03	40,074
ORGANIZATION TOTAL	1	40,074	
VETERANS ADMINISTRATION OUTPATIENT CLINIC ZIP CODE 02108			
FOZARD, JAMES L.....	MENTAL PERFORMANCE AND AGING.....	2R01 AG00467-03	43,371
POON, LEONARD W.....	AGE, IMAGERY, REWARD AND PRACTICE IN VERBAL LEARNING.....	1R23 AG00738-01	13,303
ORGANIZATION TOTAL	2	56,674	
CAMBRIDGE			
BIO-RESEARCH INSTITUTE ZIP CODE 02141			
HOMBURGER, FREDDY.....	NEW ANIMAL MODELS OF CHEMICAL CARCINOGENESIS.....	3R01 CA13232-05S1	39,522
HOMBURGER, FREDDY.....	INBRED LINES AND MUTANT STOCKS OF THE SYRIAN HAMSTER.....	5P40 RR01033-02	74,085
HOMBURGER, FREDDY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05525-15	21,315
ORGANIZATION TOTAL	3	134,922	
CHARLES STARK DRAPER LABORATORY ZIP CODE 02139			
DEW, BROCK S.....	AUTOMATIC CYTOLOGY INSTRUMENTATION DEVELOPMENT.....	5R01 GM21817-04	92,955
ORGANIZATION TOTAL	1	92,955	
HARVARD UNIVERSITY ZIP CODE 02138			
BLOCH, KONRAD E.....	BIOSYNTHESIS AND FUNCTION OF LIPIDS.....	5R01 HL02477-22	165,957
BOGORAD, LAWRENCE.....	MOLECULAR MECHANISMS OF INTRACELLULAR INTEGRATION.....	5R01 GM20470-05	79,903
BRANTON, DANIEL.....	ORGANIZATION OF NORMAL AND TRANSFORMED CELL MEMBRANES.....	5R01 GM20396-05	126,709
BRANTON, DANIEL.....	MOLECULAR STUDIES OF RED BLOOD CELL SPECTRIN.....	5R01 HL17411-03	18,038
COREY, ELIAS J.....	ANTITUMOR/ANTIBIOTIC SUBSTANCES: SYNTHESIS & CHEMISTRY.....	5R01 CA16421-03	237,311
COREY, ELIAS J.....	COMPUTER-ASSISTED ANALYSIS OF CHEMICAL SYNTHESIS.....	5R01 GM18519-07	126,732
DOTY, PAUL M.....	CHROMATIN, SPECIAL GENES AND RNA IN DEVELOPMENT.....	2R01 HD01229-26	134,658
DOWLING, JOHN E.....	ANATOMICAL ORGANIZATION OF THE VISUAL SYSTEM.....	2R01 EY00811-06	50,356
DOWLING, JOHN E.....	FUNCTIONAL ORGANIZATION OF VERTEBRATE VISUAL SYSTEMS.....	5R01 EY00824-07	72,706
DRESSLER, DAVID H.....	MOLECULAR MECHANISMS IN DNA REPLICATION.....	2R01 GM17088-08	68,736
ELGIN, SARAH C.....	NONHISTONE CHROMOSOMAL PROTEINS OF DROSOPHILA.....	2R01 GM20779-04	74,479
GELBART, WILLIAM M.....	GENETIC CONTROL OF DROSOPHILA ACETYLCHOLINESTERASE.....	1R01 GM23522-01	83,940
GILBERT, WALTER.....	CONSTRUCTION OF AN INSULIN-PRODUCING BACTERIAL STRAIN.....	1R01 AM21240-01	124,368

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
GILBERT, WALTER	ROLE OF RIBONUCLEIC ACID IN PROTEIN SYNTHESIS	2R01 GM09541-16	334,306
GILBERT, WALTER	INTERACTION OF PROTEINS WITH DNA	5RC1 GM21514-03	49,686
GILL, D MICHAEL	MECHANISM OF ACTION OF CHOLERA TOXIN	5R22 AI13083-02	84,199
GOODENOUGH, URSULA W	MEMBRANE RECOGNITION AND AGGLUTINATION	5R01 GM23058-02	61,577
GREEN, DAVID M	TEMPORAL FACTORS IN MASKING	5R01 NS11620-04	84,831
GUIDOTTI, GUIDO	STRUCTURE AND FUNCTION OF MEMBRANE PROTEINS	5R01 HL08893-13	91,188
HARRISON, STEPHEN C	VIRUS STRUCTURE AND ASSEMBLY	5R01 CA13202-06	89,249
KAFATOS, FOTIS C	SUPPORT OF CENTRAL LABORATORY FOR ELECTRON MICROSCOPY	5R01 GM06637-18	37,422
KAFATOS, FOTIS C	REGULATION AND EVOLUTION OF A MULTIGENE FAMILY	1R01 GM24225-01	53,211
KAFATOS, FOTIS C	STUDIES IN DEVELOPMENTAL BIOLOGY	5R01 HD04701-08	88,204
KAGAN, JEROME	COGNITIVE AND EFFECTIVE DEVELOPMENT IN INFANCY	1R01 HD10094-01	76,575
KARPLUS, MARTIN	ELECTRONIC STRUCTURE OF BIOMOLECULES	3R01 EY00062-07S1	10,282
KARPLUS, MARTIN	THEORETICAL STUDIES OF BIOMOLECULES	2R01 EY03062-08	83,700
KESSIN, RICHARD H	GENETIC CONTROL OF CELL ADHESION IN D. DISCOIDEUM	5R01 GM21809-03	48,326
KISHI, YOSHITO	SYNTHETIC STUDIES ON COMPLEX NATURAL PRODUCTS	5R01 NS12108-03	108,221
KLOTZ, LYNN C	PHYSICAL STUDIES OF CHROMOSOMAL DNA	2R01 GM20798-03	31,590
KNOWLES, JEREMY R	ENZYME-CATALYZED PHOSPHATE TRANSFER REACTIONS	5R01 GM21659-03	87,217
KNOWLES, JEREMY R	PHOTOGENERATED REAGENTS FOR BIOLOGICAL RECEPTORS	5R01 GM22961-02	69,675
KOHLBERG, LAWRENCE	THE MEASUREMENT OF STAGES OF MORAL DEVELOPMENT	5R01 HD04128-09	109,274
KRONAUER, RICHARD E	CONE INPUTS TO HUMAN SPATIAL DETECTORS	5R01 EY01808-02	41,694
KRONAUER, RICHARD E	BREATHING PATTERNS IN MAN	2R01 HL16325-02	44,306
LEVINE, ROBERT P	COMPLEMENT ACTION ON MEMBRANES USING MYCOPLASMA MUTANTS	5R01 AI12885-03	63,540
LEWONTIN, RICHARD C	GENETIC VARIATION OF PROTEINS IN NATURAL POPULATIONS	5R01 GM21179-04	105,664
LIPSCOMB, WILLIAM N	STRUCTURE & FUNCTION OF BIOLOGICALLY ACTIVE MOLECULES	5R01 GM06920-19	252,460
LOEBLICH, ALFRED R, III	DNA AND CHROMOSOMES OF DINOFLAGELLATES	5R01 GM19519-06	42,530
LOSICK, RICHARD M	ROLE OF RNA POLYMERASE IN BACTERIAL DIFFERENTIATION	5R01 GM18568-05	57,756
MC CLURE, WILLIAM R	MECHANISM AND REGULATION OF E. COLI RNA POLYMERASE	2R01 GM21052-03	91,812
MC MAHON, THOMAS A	MUSCLE FORCE DURING RUNNING BY X-RAY CINE	1R01 AM19638-01	66,422
MC MAHON, THOMAS A	THERMALLY INDUCED OCULAR DEFORMATION	5R01 EY01907-02	47,023
MC MAHON, THOMAS A	SERVO-SIMULATED COMPLIANCE CHANGES: A REVERSIBLE M.I.	1R01 HL21425-01	54,648
MESELSON, MATTHEW S	NUCLEAR AND MESSENGER RNA OF DROSOPHILA	3R01 GM22274-02S1	19,457
MESELSON, MATTHEW S	NUCLEAR AND MESSENGER RNA OF DROSOPHILA	2R01 GM22274-03	124,862
MILLER, KENNETH R	STRUCTURE OF THE PHOTOSYNTHETIC MEMBRANE	1R01 GM24078-01	44,613
PTASHNE, MARK S	MOLECULAR MECHANISM OF CONTROL OF GENE FUNCTION	5R01 GM21050-03	31,698
RADIN, ERIC L	AN INVESTIGATION OF JOINT DEGENERATION	3R01 AM18069-02S1	14,320
RADIN, ERIC L	AN INVESTIGATION OF JOINT DEGENERATION	2R01 AM18069-03A1	108,002
RADIN, ERIC L	BONE-CEMENT INTERFACE AFTER JOINT REPLACEMENT	1R01 AM19801-01	209,521
ROSENKRANTZ, BARBARA G	DIAGNOSIS AND TREATMENT OF ASYLUM INMATES 1824-1860	5R01 LM02355-03	17,767
ROSOVSKY, HENRY	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07046-12	196,291
SATO, VICKI L	FUNCTIONAL STUDIES OF ANTIGEN-REACTIVE T LYMPHOCYTES	5R01 CA20103-02	50,003
STROMINGER, JACK L	BIOCHEMISTRY—MECHANISM OF ACTION OF ANTIBIOTICS	5R01 AI09152-09	75,457
STROMINGER, JACK L	CHEMICAL AND SEROLOGICAL STUDIES OF LYMPHOCYTE SURFACES	5R01 AI09576-08	57,008
STROMINGER, JACK L	STRUCTURAL AND BIOSYNTHETIC STUDIES OF HLA DETERMINANTS	5R01 AI10736-03	83,457
STROMINGER, JACK L	BIOSYNTHESIS OF COMPLEX POLYSACCHARIDES	5R01 AM13230-09	44,309
TAYLOR, C RICHARD	LOCOMOTION: IDLING METABOLISM AND GAIT DYNAMICS	5R01 AM18140-03	39,173
TAYLOR, DOUGLASS L	MUSCLE CONTRACTION AND CYTOPLASMIC STREAMING	3R01 AM18111-02S1	5,334
TAYLOR, DOUGLASS L	MUSCLE CONTRACTION AND CYTOPLASMIC STREAMING	5R01 AM18111-03	56,484
WALD, GEORGE	CHEMISTRY AND PHYSIOLOGY OF VISUAL EXCITATION	5R01 EY00508-09	94,016
WANG, JAMES C	PHYSICOCHEMICAL STUDIES OF NUCLEIC ACIDS	7R01 GM24544-01	158,231
WARE, BENNIE R	FLUCTUATION ANALYSIS OF NITELLA AND PHYSARUM	2R01 GM21910-03	25,983
WARE, BENNIE R	AUTOMATED ELECTROPHORETIC ANALYSIS OF LIVING CELLS	1R01 GM23788-01	50,575
WENDER, PAUL A	SYNTHETIC STUDIES ON CYTOTOXIC SESQUITERPENES	1R01 CA21136-01	56,536
WESTHEIMER, FRANK H	MECHANISM OF ENZYME ACTION	2R01 GM04712-21	95,322
WILEY, DON C	VIRAL MEMBRANE AND GLYCOPROTEIN STRUCTURE	1R01 AI13654-01	70,577
WILLIAMS, CARROLL M	NEW STRATEGIES IN THE SELECTIVE CONTROL OF INSECTS	5R01 AI12604-03	79,247
WOODWARD, ROBERT B	STUDIES IN THE CHEMISTRY OF NATURAL PRODUCTS	2R01 GM04229-23	253,709
ORGANIZATION TOTAL	69	5,892,433	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
ADELSTEIN, S JAMES	NUCLEAR TECHNIQUES IN METABOLISM & BONE DISEASE	5R01 AM17930-03	276,587

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
ARCHER, MICHAEL C.....	MECHANISM OF NITROSAMINE ALKYLATION OF DNA AND RNA.....	1R01 CA21951-01	42,280
BAKER, RAYMOND M.....	MEMBRANE MUTANTS OF CULTURED MAMMALIAN CELLS.....	5R01 GM21665-03	65,054
BALDWIN, JACK E.....	CHEMISTRY AND BIOSYNTHESIS OF ANTIBIOTICS.....	5R01 AI11997-03	52,251
BALDWIN, JACK E.....	SYNTHESIS OF ANTITUMOR AMINO ACIDS.....	5R01 CA20747-02	30,467
BALDWIN, JACK E.....	STUDIES ON THE OXIDATION OF ESSENTIAL FATTY ACIDS.....	5R01 GM22639-02	49,264
BALDWIN, JACK E.....	CHELATING AGENTS AS BLOOD SUBSTITUTES.....	5R01 HL17794-03	63,261
BALTIMORE, DAVID.....	MOLECULAR BIOLOGY OF RNA VIRUSES.....	5R01 AI08388-10	113,865
BARRETT, ALAN H.....	NONINVASIVE SENSING OF SUBCUTANEOUS TEMPERATURES.....	2R01 GM20370-05	172,597
BELL, EUGENE.....	ANALYSIS OF AGING IN CELL LINEAGES.....	1P01 AG00354-01	178,754
BENEDEK, GEORGE B.....	PHYSICAL AND CHEMICAL BASIS OF LENS OPACITY.....	3R01 EY00797-05S1	788
BENEDEK, GEORGE B.....	PHYSICAL AND CHEMICAL BASIS OF LENS OPACITY.....	2R01 EY00797-06	121,468
BERCHTOLD, GLENN A.....	ANTICANCER AGENTS: SYNTHESIS AND ACTIVITY STUDIES.....	5R01 CA18888-02	68,030
BERCHTOLD, GLENN A.....	INVESTIGATIONS OF METABOLIC SYSTEMS.....	5R01 GM19103-06	85,488
BEVAN, MICHAEL J.....	CYTOTOXIC RESPONSE TO HISTOCOMPATIBILITY ANTIGENS.....	1R01 AI14269-01	80,857
BIEMANN, KLAUS.....	MASS SPECTROMETRIC SEQUENCING OF PROTEINS.....	2R01 GM05472-19	95,754
BIEMANN, KLAUS.....	MASS SPECTROMETRY FACILITY FOR BIOMEDICAL RESEARCH.....	5P41 RR00317-11	168,582
BIZZI, EMILIO.....	STUDY OF EYE-HEAD COORDINATION.....	5R01 NS09343-08	92,591
BOTSTEIN, DAVID.....	DNA REPLICATION OF PHAGE P22.....	5R01 GM18973-06	35,600
BOTSTEIN, DAVID.....	MOLECULAR GENETICS OF MORPHOGENETIC PATHWAYS.....	5R01 GM21253-03	93,709
BRAIDA, LOUIS D.....	INTENSITY PERCEPTION AND LOUDNESS.....	2R01 NS11153-02A1	59,553
BRAIDA, LOUIS D.....	HEARING-AID RESEARCH.....	5R01 NS12846-02	140,776
BROWN, GENE M.....	BIOSYNTHESIS OF B VITAMINS.....	2R01 AM03442-19	85,043
BROWNELL, GORDON L.....	CLINICAL TRIAL OF BORON NEUTRON CAPTURE THERAPY.....	5R01 CA19665-02	74,452
BUCHANAN, JOHN M.....	NUCLEOTIDE AND NUCLEIC ACID METABOLISM.....	5R01 CA02015-25	127,790
BUCHI, GEORGE H.....	THE CHEMISTRY OF NATURAL PRODUCTS.....	2R01 GM09686-16	145,458
CAREY, SUSAN E.....	DEVELOPMENT OF VISUAL FORM RECOGNITION IN CHILDREN.....	5R01 HD09179-03	48,500
COHEN, DAVID.....	MAGNETIC DETECTION OF INJURY CURRENT FROM TUMORS.....	1R01 CA20631-01	72,712
COLTON, CLARK K.....	TRANSPORT OF LDL IN THE ARTERIAL WALL.....	1R01 HL21429-01	171,794
CORNELIUS, WAYNE A.....	IMPACT OF GOVERNMENT POLICIES ON RURAL OUT-MIGRATION.....	1R01 HD11161-01	119,119
CRAVALHO, ERNEST G.....	CRYOPRESERVATION OF THE ISOLATED HEART.....	1R01 HL20219-01	87,337
DEEN, WILLIAM M.....	PHYSICOCHEMICAL ASPECTS OF RENAL TRANSPORT PROCESSES.....	1R01 AM20368-01	41,436
ECKAUS, RICHARD S.....	DEMOGRAPHIC DEVELOPMENT AND DISTRIBUTION MODELING.....	1R01 HD10551-01	22,469
EISEN, HERMAN N.....	IMMUNITY TO MYELOMA TUMORS.....	2R01 CA15472-05	171,102
FODOR, JERRY A.....	PROCESSES IN UNDERSTANDING AND PRODUCING SENTENCES.....	3R01 HD05168-05S1	11,451
FOX, JAMES G.....	RESEARCH ANIMAL DIAGNOSTIC LABORATORY.....	5P40 RR01046-02	90,502
FOX, MAURICE S.....	GENETIC RECOMBINATION AND MICROBIAL DNA SYNTHESIS.....	5R01 AI05388-15	102,049
FRISHKOPF, LAWRENCE S.....	TRANSDUCTION MECHANISMS IN HAIR CELL ORGANS.....	2R01 NS11080-04	99,902
GEFTER, MALCOLM L.....	REGULATORY MECHANISMS IN NORMAL AND NEOPLASTIC CELLS.....	5R01 AI13357-02	101,009
GEFTER, MALCOLM L.....	MECHANISM AND CONTROL OF DNA REPLICATION.....	2R01 GM20363-05	76,396
GOTTLIEB, PAUL D.....	GENETIC MARKERS, LEUKEMOGENESIS, AND THYMIC FUNCTION.....	5R01 CA15808-04	48,119
GREEN, HOWARD.....	STUDY OF GROWTH AND CELL CONTROL PROCESSES.....	5P01 CA12174-08	406,721
GREEN, HOWARD.....	GROWTH AND DIFFERENTIATED FUNCTION IN MAMMALIAN CELLS.....	5R01 CA12187-08	123,972
GRIFFIN, ROBERT G.....	SOLID STATE NMR STUDIES OF LIPID BILAYER STRUCTURE.....	5R01 GM23289-02	60,301
GRIFFIN, ROBERT G.....	SOLID STATE NMR STUDIES OF AMINO ACIDS AND PEPTIDES.....	1R01 GM23403-01	50,436
HALL, LINDA M.....	ANALYSIS OF A TETRODOTOXIN-SENSITIVE MUTANT.....	1R01 NS13881-01	83,583
HEIN, ALAN.....	DEVELOPMENT OF PERCEPTUAL CAPACITIES.....	5R01 NS09279-06	61,895
HELD, RICHARD M.....	VISION AND VISUOMOTOR MECHANISMS.....	5R01 EY01191-05	102,384
HELD, RICHARD M.....	EXTENT AND LIMITS OF NEUROPLASTICITY.....	5P01 NS12336-03	261,671
HENDERSON, ELLEN J.....	MECHANISM OF A CAMP MEMBRANE RECEPTOR IN DEVELOPMENT.....	5R01 GM21828-03	36,840
HERMANN, HOWARD T.....	COMPENSATORY VISUAL NEURAL CHANGES WITH EYE MOVEMENTS.....	5R01 EY01415-03	71,823
HOPKINS, NANCY H.....	STUDIES ON THE ENDOGENOUS VIRUSES OF BALB/C MICE.....	3R01 CA19308-01S1	9,248
HOPKINS, NANCY H.....	STUDIES ON THE ENDOGENOUS VIRUSES OF BALB/C MICE.....	5R01 CA19308-02	46,291
HOUSMAN, DAVID E.....	ERYTHROID DIFFERENTIATION IN FRIEND LEUKEMIA CELLS.....	5R01 CA17575-03	55,048
HYNES, RICHARD O.....	CELL SURFACE STRUCTURE AND TRANSFORMATION.....	2R01 CA17007-03	60,231
INGRAM, VERNON M.....	DIFFERENTIATION OF ERYTHROPOIESIS AND MYOGENESIS.....	5R01 AM13945-08	230,291
KEMP, DANIEL S.....	SYNTHESIS AND REACTIONS OF PEPTIDES.....	2R01 GM13453-12	149,386
KHORANA, HAR G.....	STUDIES OF BIOLOGICAL MEMBRANES.....	5R01 AI11479-05	70,621
KHORANA, HAR G.....	SYNTHETIC AND BIOLOGICAL STUDIES OF NUCLEIC ACIDS.....	5R01 CA11981-08	317,833
KING, JONATHAN A.....	BACTERIOPHAGE ASSEMBLY AND ITS GENETIC CONTROL.....	5R01 GM17980-08	107,520
LEES, ROBERT S.....	SUPPORT FOR ARTERIOSCLEROSIS RESEARCH CENTER.....	3P50 HL14209-05S2	336,024

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
LEES, ROBERT S.....	LIPOPROTEINS, HEMOSTASIS AND ATHEROSCLEROSIS.....	1R01 HL21460-01	135,411
LELE, PADMAKAR P.....	LOCAL ULTRASONIC HYPERTHERMIA FOR CANCER THERAPY.....	2R01 CA16111-03	205,002
LETTVIN, JEROME Y.....	STUDIES IN THE PHYSIOLOGY AND PSYCHOLOGY OF VISION.....	3R01 EY01149-03S2	101,742
LEVENE, MARTIN B.....	DOSE DISTRIBUTION IN CANCER RADIATION THERAPY.....	2P01 CA17588-03	466,261
LODISH, HARVEY F.....	TRANSLATION OF VIRAL MESSENGER RNAS.....	5R01 AI08814-10	99,430
LONDON, IRVING M.....	REGULATION OF HEMOGLOBIN SYNTHESIS AND HEMATOPOIESIS.....	5R01 AM16272-06	173,954
LURIA, SALVADOR E.....	CELL CONTROL FUNCTIONS AND BACTERIOCIN ACTION.....	2R01 AI03038-19	88,604
LURIA, SALVADOR E.....	SUPPORT FOR CANCER BIOLOGY CENTER.....	5P01 CA14051-06	1,324,202
MAGASANIK, BORIS.....	SYNTHESIS OF HISTIDINE DEGRADING ENZYMES.....	5R01 AM13894-08	90,516
MAGASANIK, BORIS.....	METABOLISM AND BIOLOGICAL FUNCTION OF INOSITOL.....	2R01 GM07446-19	88,608
MANN, ROBERT W.....	PRESSURE DISTRIBUTION ACROSS HUMAN HIP JOINT.....	3R01 AM16116-03S1	29,939
MANN, ROBERT W.....	PRESSURE DISTRIBUTION ACROSS HUMAN HIP JOINT.....	2R01 AM16116-04	157,068
MARK, ROGER G.....	BIOMEDICAL ENGINEERING CLINICAL INSTRUMENTATION CENTER.....	5P50 GM22392-02	418,910
MARTIN, WILLIAM A.....	LABORATORY FOR CLINICAL DECISION MAKING.....	1P41 RR01096-01	82,148
MERRILL, EDWARD W.....	THROMBORESISTANT MATERIALS.....	1R01 HL20079-01	395,002
MUNRO, HAMISH N.....	NUTRITIONAL REGULATION OF PROTEIN METABOLISM.....	5R01 AM15364-07	85,728
MUNRO, HAMISH N.....	ISOFERRITINS IN NORMAL AND MALIGNANT TISSUES.....	5R01 CA17249-03	41,374
NEURINGER, LEO J.....	A NATIONAL NMR FACILITY FOR BIOMOLECULAR RESEARCH.....	3P41 RR00995-01S1	25,000
NEURINGER, LEO J.....	A NATIONAL NMR FACILITY FOR BIOMOLECULAR RESEARCH.....	5P41 RR00995-02	146,408
NEWBERNE, PAUL M.....	NUTRITION AND THE THYMOLYMPHATIC SYSTEM.....	2R22 HD06917-04A1	50,465
NEWBERNE, PAUL M.....	NEW SYRIAN HAMSTER GENETIC POOL: A RESOURCE.....	3P40 RR00844-04S1	42,397
PARDUE, MARY L.....	GENE FUNCTION ANALYSIS BY POLYTENE CHROMOSOMES.....	5R01 GM21874-03	83,248
PENMAN, SHELDON.....	TRANSCRIPTION AND TRANSLATION IN MAMMALIAN CELLS.....	5R01 CA08416-12	181,832
POLLITT, ERNESTO.....	BEHAVIORAL EFFECTS OF IRON DEFICIENCY.....	5R22 HD09228-03	149,844
RAJBHANDARY, UTTAM L.....	STRUCTURE AND FUNCTION OF TRANSFER RIBONUCLEIC ACIDS.....	5R01 GM17151-08	81,185
RASTETTER, WILLIAM H.....	CHELATION-ANTIBIOTICS/TREATMENT OF IRON OVERLOAD.....	1R01 AM20452-01	45,936
RASTETTER, WILLIAM H.....	REACTIVE HETEROCYCLES—CANCER AND BIOMECHANISM.....	1R01 CA20574-01	63,833
RICH, ALEXANDER.....	MOLECULAR STRUCTURE OF NUCLEIC ACIDS AND PROTEINS.....	3R01 CA04186-18S2	6,034
RICH, ALEXANDER.....	MOLECULAR STRUCTURE OF NUCLEIC ACIDS AND PROTEINS.....	2R01 CA04186-19	138,658
RICHARDS, WHITMAN A.....	STUDIES OF BINOCULAR VISION.....	5R01 EY00742-06	49,908
ROBBINS, PHILLIPS W.....	CELL SURFACE BIOCHEMISTRY OF TRANSFORMED ANIMAL CELLS.....	5R01 CA14142-15	144,768
ROSE, ROBERT M.....	POLYETHYLENE BEHAVIOR AFTER JOINT REPLACEMENT.....	5R01 AM18227-03	118,650
ROSENBLITH, WALTER A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07047-12	213,709
SCHILLER, PETER H.....	STUDIES OF INTERACTION BETWEEN EYE MOVEMENT AND VISION.....	5R01 EY00676-07	88,080
SCHIMMEL, PAUL R.....	INVESTIGATIONS OF REACTIONS OF PHYSIOLOGICAL IMPORTANCE.....	5R01 GM15539-10	116,792
SCHIMMEL, PAUL R.....	GENETIC APPROACHES TO PROTEIN-NUCLEIC ACID INTERACTIONS.....	1R01 GM23562-01	42,873
SCHNEIDER, GERALD E.....	NEUROPSYCHOLOGICAL STUDIES OF THE VISUAL SYSTEM.....	5R01 EY00126-08	119,743
SCRIMSHAW, NEVIN S.....	PROTEIN NEEDS OF ELDERLY PEOPLE.....	5R01 AG00475-03	75,100
SCRIMSHAW, NEVIN S.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00088-14	616,624
SHAPIRO, ASCHER H.....	EXTERNAL PNEUMATIC COMPRESSION IN DEEP VENOUS THROMBOSIS.....	5R01 HL17974-02	101,236
SHARPLESS, K BARRY.....	BIOCHEMICAL ASPECTS OF SELENIUM CHEMISTRY.....	5R01 GM21686-03	64,755
SIEBERT, WILLIAM M.....	BINAURAL HEARING.....	5R01 NS10916-03	118,016
SOLOMON, EDWARD I.....	SPECTROSCOPIC STUDIES OF BINUCLEAR COPPER PROTEINS.....	1R01 AM20406-01	51,070
STANBURY, JOHN B.....	GOITER AND RETARDATION IN ECUADOR AND PERU.....	5R01 AM17266-04	38,161
STANBURY, JOHN B.....	A MONOGRAPH ON ENDEMIC GOITER AND CRETINISM.....	1R01 LM02962-01	24,538
STEINER, LISA A.....	VARIATIONS IN ANTIBODY AFFINITY.....	5R01 AI08054-11	67,378
STEVENS, KENNETH N.....	PHYSIOLOGICAL AND ACOUSTICAL STUDIES OF SPEECH.....	3R01 NS04332-14S1	178,854
STEVENS, KENNETH N.....	PHYSIOLOGICAL AND ACOUSTICAL STUDIES OF SPEECH.....	5R01 NS04332-15	261,767
STEVENS, KENNETH N.....	SEGMENTAL TIMING IN SPEECH.....	5R01 NS13028-02	29,951
TANAKA, TOYOICHI.....	IN VIVO DETECTION OF PROTEIN AGGREGATES IN THE LENS.....	5R01 EY01696-02	48,426
THILLY, WILLIAM G.....	BIOASSAY: IN VITRO MODELS OF HUMAN ONCOGENESIS.....	2R01 CA15010-04	53,779
TORRIANI-GORINI, ANNAMARIA.....	ENZYME SYNTHESIS, STRUCTURE—E COLI ALKALINE PHOSPHATASE.....	1R01 GM24009-01	72,377
TYLER, BONNIE M.....	REGULATION OF TRANSCRIPTION BY GLUTAMINE SYNTHETASE.....	5R01 GM22527-02	56,688
WALKER, GRAHAM C.....	MUTAGENESIS AND REPAIR OF DNA.....	1R01 CA21615-01	75,922
WALSH, CHRISTOPHER T.....	ENZYMATIC REACTION MECHANISMS.....	5R01 GM20011-05	53,637
WALSH, CHRISTOPHER T.....	5-DEAZAFLAVIN COENZYMES AS FLAVOENZYME PROBES.....	5R01 GM21643-03	39,019
WAUGH, DAVID F.....	BLOOD COAGULATION: PHYSICOCHEMICAL INTERACTIONS.....	5R01 HL13198-20	121,443
WAUGH, JOHN S.....	HIGH RESOLUTION NMR IN SOLIDS.....	5R01 GM16552-09	58,542
WEAVER, JAMES C.....	BIOCHEMICAL ASSAY AND SPATIAL MAPPING OF ENZYMES.....	5R01 GM22633-03	23,356
WEINBERG, ROBERT A.....	CHARACTERIZATION OF THE PROVIRAL DNA OF MULV.....	5R01 CA17537-03	29,458

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
WOGAN, GERALD N	STUDY OF FOOD-BORNE ENVIRONMENTAL TOXICANTS.....	5P01 ES00597-07	625,117
WOLF, GEORGE D	FUNCTION OF VITAMIN A IN GLYCOPROTEIN SYNTHESIS.....	3R01 AM08732-15S1	6,512
WOLF, GEORGE D	VITAMIN A-GLYCOPHOSPHOLIPIDS AND GLYCOPROTEINS.....	1R01 AM20476-01	74,586
WOLF, GEORGE D	VITAMIN A AND GLYCOPROTEINS OF SKIN TUMORS	1R01 CA13792-01A3	56,272
WOLF, GEORGE D	VITAMIN A AND GLYCOPROTEINS OF CORNEA	5R01 EY00515-09	59,156
WURTMAN, RICHARD J	CONTROL OF AROMATIC AMINO ACID UTILIZATION IN MAMMALS.....	5R01 AM14228-08	83,276
YANNAS, IOANNIS V	DESIGN AND EVALUATION OF AN ARTIFICIAL SKIN	1R01 GM23946-01	88,452
YOUNG, VERNON R	DIETARY PROTEIN INTAKE AND HUMAN PROTEIN METABOLISM	5R01 AM15856-06	57,143
YOUNG, VERNON R	NUTRITION AND MUSCLE PROTEIN TURNOVER	2R01 AM16654-05	50,638
ORGANIZATION TOTAL	130	15,680,846	
RESEARCH INSTITUTE FOR EDUCATIONAL PROBLEMS ZIP CODE 02138			
BUDOFF, MILTON.....	STUDIES IN THE DEVELOPMENT OF CATEGORICAL CLUSTERING.....	5R01 HD08307-03	73,190
ORGANIZATION TOTAL	1	73,190	
CHESTNUT HILL			
BOSTON COLLEGE ZIP CODE 02167			
BADE, MARIA L	BIOCHEMISTRY OF INSECT CUTICLE	5R01 ES00650-05	52,767
BOGER, ELIAHU.....	BENZO (RST) PENTAPHENE AND FLUORO DERIVATIVES.....	5R01 CA18959-03	45,061
KELLY, T ROSS.....	SYNTHESIS OF THE ANTITUMOR AGENT HARRINGTONINE	2R01 CA14014-05	28,305
KELLY, T ROSS.....	PRACTICAL SYNTHESIS OF THE ANTICANCER DRUG ADRIAMYCIN.....	5R01 CA17631-03	50,602
LISS, MAURICE.....	PROTEIN METHYLATION IN POSTERIOR PITUITARY FUNCTION.....	5R01 AM17612-03	27,297
NUMAN, MICHAEL.....	MATERNAL BEHAVIOR: NEURAL SITE OF PROGESTERONE ACTION	1R01 HD10395-01	15,656
PETRI, WILLIAM H	CONTROL OF DIFFERENTIATION: DROSOPHILA CHORION GENES.....	1R01 GM24185-01	45,753
PLOCKE, DONALD J	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07156-02	35,356
RULE, ALLYN H	IMMUNE MECHANISMS IN REMISSION OF THE DUNNING LEUKEMIA	5R01 CA19430-02	42,174
SPAGNOLI, PAUL G.....	FERTILITY IN THE NINETEENTH-CENTURY LILLE REGION.....	5R01 HD10095-02	5,869
YOON, CHAI H	GENETICS AND BIOCHEMISTRY OF NEUROLOGICAL MUTANTS.....	5R01 NS02267-17	40,732
ORGANIZATION TOTAL	11	389,572	
LOWELL			
UNIVERSITY OF LOWELL ZIP CODE 01854			
LYNCH, ROBERT D.....	CHANGES IN LIPID UNSATURATION AND IN VITRO CELL AGING	1R23 AG00747-01	17,408
ORGANIZATION TOTAL	1	17,408	
MEDFORD			
TUFTS UNIVERSITY ZIP CODE 02155			
APRILLE, JUNE R	DEVELOPMENT OF NEONATAL THERMOREGULATION	7R01 HD11697-01	66,488
FELDBERG, ROSS S.....	THE NATURE AND REPAIR OF A NEW FORM OF DNA DAMAGE.....	5R01 CA19419-02	39,535
GERSHOFF, STANLEY N.....	EFFECT OF DIET ON VESICAL TUMOR AND STONE FORMATION.....	1R01 CA23714-01	57,568
KANAREK, ROBIN B.....	DIET SELECTION AND OBESITY.....	1R01 AM19821-01	27,561
KANAREK, ROBIN B.....	BEHAVIORAL AND NEUROANATOMICAL ASPECTS OF FOOD INTAKE	1R01 AM20683-01	87,126
ORGANIZATION TOTAL	5	278,278	
NORTHAMPTON			
SMITH COLLEGE ZIP CODE 01060			
OLIVO, MARGARET A.....	STUDIES ON A SINGLE SARCOMERE	5R01 NS12196-03	18,042
TEGHTSOONIAN, ROBERT.....	DYNAMIC RANGE AND RESOLVING POWER OF SENSORY SYSTEMS.....	5R01 NS12597-02	54,225
ORGANIZATION TOTAL	2	72,267	
SHREWSBURY			
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545			
ABERHART, DONALD J.....	STEREOCHEMISTRY IN VALINE AND LEUCINE METABOLISM	1R01 GM24420-01	46,329

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BARIL, EARL F.....	DNA SYNTHESIS: REGULATION IN NORMAL AND CANCER CELLS	3R01 CA15187-02S1	5,282
BARTKE, ANDRZEJ.....	INFLUENCE OF PROLACTIN ON THE TESTIS.....	2R01 HD06867-04A1	66,585
BARTKE, ANDRZEJ.....	ANDROGENS IN RETE TESTIS FLUID AND SPERMATOGENESIS.....	5R01 HD09584-02	96,314
BRODIE, ANGELA M.....	AROMATASE INHIBITORS FOR CONTROL OF BREAST CANCER.....	5R01 CA18595-03	68,806
BRODIE, HARRY J.....	ANTIFERTILITY COMPOUNDS—SYNTHESIS AND TESTING	5R01 HD10269-02	86,634
CASPI, ELIAHU.....	STUDIES WITH STEREOSPECIFICALLY LABELED MEVALONATES	5R01 AM12156-10	113,105
CASPI, ELIAHU.....	IODINATED ESTROGENS IN BREAST CANCER.....	2R01 CA16464-03	97,538
CHANG, MIN C.....	PHYSIOLOGY OF THE FEMALE TRACT.....	5R01 HD03003-17	72,340
CHANG, MIN C.....	PHYSIOLOGY OF MAMMALIAN FERTILIZATION.....	5R01 HD03472-15	70,291
DAVIS, BRIAN K.....	SYNTHETIC AND NATURAL ANTIFERTILIZATION VESICLES	5R01 HD10206-02	110,079
FAIRBANKS, GRANT.....	MEMBRANE AND RED CELL DYSFUNCTION IN HEMOLYTIC ANEMIA	1R01 HL19933-01	71,847
FORBES, WILLIAM B.....	DIETARY RESTRICTION, LONGEVITY AND CNS AGING.....	1R23 AG00779-01	14,228
GREENBERG, JAY R.....	MESSENGER RNA SYNTHESIS AND TURNOVER IN TUMOR CELLS.....	3R01 CA16895-03S1	4,526
HELE, MARY E.....	ACTIVATION COMPLEXES IN PROTEIN SYNTHESIS.....	5R01 GM20751-03	71,709
HOAGLAND, MAHLON B.....	CANCER CENTER SUPPORT (CORE) GRANT.....	2P30 CA12708-07	641,002
HOAGLAND, MAHLON B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05528-15	157,299
JAHAN-PARWAR, BEHRUS.....	NEURAL BASES OF BEHAVIOR.....	5R01 NS12483-03	70,946
KUPFER, DAVID.....	EFFECTS OF INSECTICIDES ON MAMMALIAN SYSTEMS.....	2R01 ES00834-04	64,634
KUPFER, DAVID.....	PROSTAGLANDINS: INTERACTIONS WITH MONOOXYGENASES.....	5R01 GM22688-02	73,396
LEAVITT, MICHAEL W.....	HORMONE RECEPTOR ONTOGENY AND CANCER.....	1R01 CA23693-01	42,006
LONGCOPE, CHRISTOPHER L.....	OVARIAN FUNCTION IN POSTMENOPAUSAL WOMEN.....	1R01 AG00058-01	93,561
LONGCOPE, CHRISTOPHER L.....	REPRODUCTIVE FUNCTION AND GONADAL STEROID DYNAMICS.....	3R01 HD08034-03S1	8,430
LUFTIG, RONALD B.....	VIRAL INTERACTION OF MICROTUBULES IN CANCER CELLS.....	5R01 CA18979-02	97,616
MACRIDES, FOTEOS.....	OLFACTORY AND NEUROENDOCRINE FUNCTIONS.....	5R01 NS12344-03	94,388
MASON, JAMES I.....	STUDY OF ADRENOCORTICOTROPIC ACTION.....	5R01 CA18635-17	158,227
MC CRACKEN, JOHN A.....	ENDOCRINE FUNCTION OF TRANSPLANTED UTERUS AND OVARY.....	2R01 HD08129-04	88,296
MC CRACKEN, JOHN A.....	BRAIN PROSTAGLANDINS AND GONADOTROPIN SECRETION.....	5R01 HD09731-02	70,888
O'CONNELL, ROBERT J.....	MECHANISMS OF OLFACTORY COMMUNICATIONS IN MAMMALS.....	7R01 NS14453-01	18,947
PEDERSON, THORU.....	STUDIES ON GENE TRANSCRIPTION IN EUKARYOTES.....	5R01 GM21595-03	108,484
RESNICK, OSCAR.....	MATERNAL PROTEIN RESTRICTION AND MENTAL RETARDATION.....	5P01 HD06364-06	406,066
ROBERTS, JOHN S.....	OXYTOCIN CONTROL: STEROIDS, AMINES AND PROSTAGLANDINS.....	5R01 HD09345-03	60,763
ROBINSON, HARRIET L.....	INHERITANCE AND EXPRESSION OF AVAIN C-TYPE VIRUSES.....	7R01 CA23086-01	114,541
VOGLMAYR, JOSEF K.....	SPERM MATURATION, AND ENDOCRINE FUNCTION OF THE TESTIS.....	5R01 HD09356-03	88,222
WEIHING, ROBERT R.....	STUDY OF ACTIN AND TUBULIN CANCER CELLS.....	3R01 CA15229-02S1	14,540
ORGANIZATION TOTAL	35	3,467,865	
SPRINGFIELD			
BAYSTATE MEDICAL CENTER ZIP CODE 01107			
DE CONTI, RONALD C.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	1R10 CA20182-01	58,240
ORGANIZATION TOTAL	1	58,240	
STOW			
RED ACRE FARM ZIP CODE 01775			
SERONDE, JOSEPH, JR.....	OBESITY—DIETARY, HORMONAL AND GENETIC DETERMINANTS.....	5R01 AM08272-14	24,581
SERONDE, JOSEPH, JR.....	MODELS FOR THE STUDY OF OBESITY AND GROWTH.....	5P40 RR00427-10	24,596
ORGANIZATION TOTAL	2	49,177	
WALTHAM			
BRANDEIS UNIVERSITY ZIP CODE 02154			
ABELES, ROBERT H.....	ENZYME MECHANISMS AND ENZYME INHIBITORS.....	5R01 GM12633-14	91,356
ABELES, ROBERT H.....	IMPROVEMENT OF ANIMAL RESOURCE FACILITY.....	5P40 RR00913-03	12,588
AREND, LAWRENCE E.....	ANALYSIS OF FREQUENCY CHANNELS IN HUMAN VISION.....	5R01 EY01797-02	33,790
BIRNBAUM, SANFORD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07044-12	132,866
CASPAR, DONALD L.....	ASSEMBLY OF VIRUSES, MEMBRANES, AND TISSUE.....	5R01 CA15468-04	174,488
CHAN, IU-YAM.....	PHOSPHORESCENT TRIPLET STATE OF CARBONYL COMPOUNDS.....	5R01 GM20275-05	37,146
COHEN, CAROLYN.....	MUSCLE STRUCTURE AND THE CONTRACTILE MECHANISM.....	5R01 AM17346-05	146,463

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
DE ROSIER, DAVID J.....	STRUCTURAL STUDIES OF BIOLOGICAL COMPLEXES.....	5R01 GM21189-05	120,522
FASMAN, GERALD D.....	PROTEIN NUCLEIC ACID INTERACTIONS: MODEL STUDIES.....	5R01 GM17533-16	107,361
FREIFELDER, DAVID M.....	PHYSICO-CHEMICAL AND GENETIC STUDIES OF DNA FUNCTION.....	5R01 GM14358-11	74,856
HABER, JAMES E.....	CONTROL OF GAMETOGENESIS.....	5R01 GM20056-05	83,807
HALL, JEFFREY C.....	NEUROGENETICS OF DROSOPHILA REPRODUCTIVE BEHAVIOR.....	5R01 GM21473-03	32,203
HALVORSON, HARLYN O.....	STUDIES ON PROTEIN METABOLISM IN YEAST.....	5R01 AI10610-07	92,305
HALVORSON, HARLYN O.....	REGULATION OF DIFFERENTIATION IN BACILLUS SPORES.....	5R01 GM18904-06	90,097
HONG, JEN-SHIANG.....	BIOCHEMISTRY AND GENETICS OF MEMBRANE FUNCTIONS.....	5R01 GM22576-02	55,420
HOPPER, JAMES E.....	MOLECULAR BASIS OF INTERCHROMOSOMAL GENE REGULATION.....	5R01 GM23717-02	73,936
INGLE, DAVID J.....	MOTOR FUNCTIONS OF OPTIC TECTUM AND THALAMUS.....	5R01 NS13592-02	54,508
JENCKS, WILLIAM P.....	CHEMISTRY AND BIOCHEMISTRY OF ENERGY TRANSFER.....	5R01 GM20888-20	94,471
KIRSCHNER, DANIEL A.....	MYELIN MEMBRANE STRUCTURE: STABILITY AND PATHOLOGY.....	1R01 NS13408-01	83,206
LEVINE, LAWRENCE.....	PROSTAGLANDINS & ENZYMES IN NORMAL AND MALIGNANT TISSUES.....	5R01 CA17309-03	77,231
LEVINE, LAWRENCE.....	EFFECTS OF PROSTAGLANDINS ON TUMOR GROWTH IN VIVO.....	5R01 CA19416-02	47,805
LEVINE, LAWRENCE.....	STUDIES ON THE PHYSIOLOGICAL ROLE OF THE PROSTAGLANDINS.....	5R01 HD07966-04	78,447
LISMAN, JOHN E.....	MECHANISMS OF ADAPTATION.....	2R01 EY01496-04	85,112
LOWENSTEIN, JOHN M.....	LIPOGENESIS AS A FUNCTION OF AGING.....	5R01 AG00120-03	58,399
LOWENSTEIN, JOHN M.....	ENZYMATIC & CHEMICAL REACTIONS OF ADENOSINE TRIPHOSPHATE.....	5R01 GM07261-17	50,517
LOWEY, SUSAN.....	CHEMISTRY OF MUSCLE PROTEINS.....	5R01 AM17350-05	96,515
MILLER, CHRISTOPHER.....	IONOPHORES OF THE SARCOPLASMIC RETICULUM MEMBRANE.....	1R01 AM19826-01	47,786
MURAKAMI, WILLIAM T.....	VIRUS-INDUCED NEOPLASTIC CONVERSIONS.....	5R01 CA06654-15	96,832
NISONOFF, ALFRED.....	IDIOTYPE AND GENETIC CONTROL OF ANTIBODY BIOSYNTHESIS.....	5R01 AI12895-03	55,482
NISONOFF, ALFRED.....	STRUCTURE AND BIOSYNTHESIS OF ANTIBODIES.....	5R01 AI12907-03	96,358
NISONOFF, ALFRED.....	IMMUNOSUPPRESSION OF IDIOTYPIC SPECIFICITIES.....	2R01 AI12908-03	61,659
PARRY, RONALD J.....	BIOSYNTHESIS OF ANTILEUKEMIC CEPHALOTAXUS ALKALOIDS.....	5R01 GM19220-06	34,271
PRESS, JOAN L.....	IMMUNOGENETIC ANALYSIS OF B CELL DIFFERENTIATION.....	1R01 AI13725-01	81,362
REDFIELD, ALFRED G.....	STRUCTURAL KINETIC STUDIES BY NUCLEAR MAGNETIC RESONANCE.....	5R01 GM20168-05	118,681
ROSBASH, MICHAEL M.....	ORGANIZATION OF YEAST RIBOSOMAL PROTEIN GENES.....	1R01 GM23549-01	67,272
ROSBASH, MICHAEL M.....	MACROMOLECULAR SYNTHESIS IN OOGENESIS AND DEVELOPMENT.....	5R01 HD08887-03	44,896
ROSENBLUM, MYRON.....	ORGANOMETALLIC REAGENTS IN ORGANIC SYNTHESIS.....	5R01 GM16395-10	68,712
SCHIFF, JEROME A.....	STUDIES OF THE CONTINUITY OF CELLULAR ORGANELLES.....	5R01 GM14595-12	97,052
SCHLEIF, ROBERT F.....	ACTION MECHANISM OF ARABINOSIDE C GENE PROTEIN.....	5R01 GM18277-07	67,487
STOUT, ROBERT D.....	T-LYMPHOCYTE DIFFERENTIATION AND ITS REGULATION.....	1R01 AI13806-01	97,924
SZENT-GYORGYI, ANDREW G.....	REGULATION IN STRIATED, SMOOTH AND CARDIAC MUSCLES.....	2R01 AM15963-12	145,192
TIMASHEFF, SERGE N.....	TUBULIN ASSOCIATIONS AND EFFECTS OF ANTICANCER DRUGS.....	5R01 CA16707-03	137,458
TIMASHEFF, SERGE N.....	STRUCTURE AND INTERACTIONS OF PROTEINS IN SOLUTION.....	2R01 GM14603-11	108,309
WENSINK, PIETER C.....	SEQUENCE ARRANGEMENT IN EUKARYOTIC DNA & CHROMOSOMES.....	5R01 GM21626-03	50,787
ORGANIZATION TOTAL	44	3,562,935	
EUNICE KENNEDY SHRIVER CENTER FOR MENTAL RETARDATION ZIP CODE 02154			
ADAMS, RAYMOND D.....	RESEARCH IN MENTAL RETARDATION.....	2P30 HD04147-09	476,023
ADAMS, RAYMOND D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05730-06	71,662
CAVINESS, VERNE S, JR.....	DEVELOPMENTAL NEUROPATHOLOGY.....	5R01 NS12005-03	98,005
JUNGALWALA, FIROZE B.....	BIOCHEMICAL ASPECTS OF EXPERIMENTAL BRAIN TUMORS.....	5R01 CA16853-04	65,692
JUNGALWALA, FIROZE B.....	ASSEMBLY OF CEREBRAL MYELIN MEMBRANES.....	5R01 NS10437-06	49,329
LEES, MARJORIE B.....	RELATIONSHIP BETWEEN BRAIN PROTEINS AND LIPIDS.....	5R01 NS13649-02	127,015
MC CLUER, ROBERT H.....	BIOCHEMICAL AND GENETIC ASPECTS OF MENTAL RETARDATION.....	2P01 HD05515-08	633,885
MC CLUER, ROBERT H.....	IMPROVEMENT OF ANIMAL CARE FACILITY.....	5P40 RR01023-02	17,968
MILUNSKY, AUBREY.....	PRENATAL DETECTION OF NEURAL TUBE DEFECTS.....	5R01 HD09281-03	123,793
SIDMAN, MURRAY.....	MENTAL RETARDATION: BASIC AND APPLIED RESEARCH.....	5P01 HD05124-07	301,384
STODDARD, LAWRENCE T.....	AUTOMATED TEACHING PROGRAMS FOR THE SEVERELY RETARDED.....	5R01 HD10210-02	42,831
STOFFYN, PIERRE J.....	STRUCTURE OF GLYCOLIPIDS IN ONCOGENIC CELLS.....	5R01 CA17441-04	46,743
STOFFYN, PIERRE J.....	CHEMISTRY OF GLYCOLIPIDS.....	5R01 NS12060-03	70,537
ORGANIZATION TOTAL	13	2,124,867	
WELLESLEY			
WELLESLEY COLLEGE ZIP CODE 02181			
GAUTHIER, GERALDINE F.....	CYTOLOGICAL HETEROGENEITY OF SKELETAL MUSCLE FIBERS.....	5R01 AM17964-03	72,938

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
PADYKULA, HELEN A.....	CYCLIC UTERINE DIFFERENTIATION—ALBINO RAT AND HUMAN.....	5R01 HD09209-03	65,285
ORGANIZATION TOTAL	2 138,223		
WILLIAMSTOWN			
WILLIAMS COLLEGE ZIP CODE 01267			
CRISWELL, HUGH E.....	MORPHINE MICROINJECTION, ANALGESIA AND NEURAL FIRING.....	5R01 NS13147-02	19,356
DRICKAMER, LEE C.....	FACTORS AFFECTING SEXUAL MATURATION IN MAMMALS.....	5R01 HD08585-03	14,275
MC GILL, THOMAS E.....	THE GENETICS AND PHYSIOLOGY OF BEHAVIORAL DIFFERENCES.....	5R01 GM07495-16	41,074
ORGANIZATION TOTAL	3 74,705		
WOODS HOLE			
MARINE BIOLOGICAL LABORATORY ZIP CODE 02543			
BALL, ERIC G.....	REGULATION OF METABOLISM.....	5R01 AM16793-05	5,807
DOWLING, JOHN E.....	MEMBRANE TRANSDUCTION MECHANISMS—A SYMPOSIUM.....	1R13 NS13779-01	3,000
EDDS, KENNETH T.....	THE FORMATION AND FUNCTION OF MICROFILAMENTOUS BUNDLES.....	5R01 GM23351-02	39,735
FEIN, ALAN.....	MECHANISMS OF VISION.....	2R01 EY01362-03	67,690
OSCHMAN, JAMES L.....	CALCIUM AND THE CELL SURFACE.....	5R01 AM19189-02	45,835
STEPHENS, RAYMOND E.....	THE FORMATION AND FUNCTION OF MICROTUBULES.....	5R01 GM20644-05	55,058
ORGANIZATION TOTAL	6 217,125		
WORCESTER			
CLARK UNIVERSITY ZIP CODE 01610			
GOODGLASS, HAROLD.....	NEW MEASURES OF APHASIC SYMPTOM VARIABLES.....	5R01 NS07615-18	54,962
SHERMAN, ROBERT G.....	DEVELOPMENT OF EMBRYONIC MYOCARDIAL CELLS.....	5R01 HL18267-03	38,584
SHERMAN, ROBERT G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07177-01	18,188
STEIN, DONALD G.....	THE PSYCHOBIOLOGY OF AGING.....	3R01 AG00295-01S1	600
STEIN, DONALD G.....	THE PSYCHOBIOLOGY OF AGING.....	5R01 AG00295-02	42,435
ORGANIZATION TOTAL	5 154,769		
ST. VINCENT HOSPITAL ZIP CODE 01610			
DRISCOLL, WALTER G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05660-03	35,494
FRIEDEL, GILBERT H.....	ADMINISTRATION OF THE NATIONAL BLADDER PROJECT.....	5R26 CA13859-06	344,586
FRIEDEL, GILBERT H.....	CENTRAL CYTOLOGY AND PATHOLOGY LABORATORY SUPPORT.....	2R26 CA15490-04	216,241
FRIEDEL, GILBERT H.....	STUDIES ON EXPERIMENTAL BLADDER TUMORS.....	2R26 CA15945-04	102,637
ORGANIZATION TOTAL	4 698,958		
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605			
BRAVERMAN, LEWIS E.....	REGULATION OF THYROID FUNCTION, T4 AND T3 KINETICS.....	5R01 AM18919-04	81,763
BROWN, NEAL C.....	THE STRUCTURE AND FUNCTION OF A DNA REPLICASE.....	5R01 CA15915-05	81,255
BULGER, RUTH E.....	EVOLUTION OF RENAL ULTRASTRUCTURE AND FUNCTION.....	5R01 AM19471-02	80,077
BUTCHER, REGINALD W.....	CONTROL OF CYCLIC AMP LEVELS.....	5R01 AM13904-08	98,155
BUTCHER, REGINALD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05712-06	96,507
CHLAPOWSKI, FRANCIS J.....	CYCLIC AMP METABOLISM IN TRANSITIONAL EPITHELIUM.....	1R26 CA21612-01	49,845
CLARK, RICHARD B.....	REGULATION OF ADENYL CYCLASE BY ADENOSINE.....	2R01 GM21420-04	39,271
COOKE, WILLIAM J.....	HEPATIC EXCRETION OF ANIONIC DRUGS.....	3R01 AM16552-03S1	3,627
DOBSON, JAMES G, JR.....	REGULATION OF CARDIAC CONTRACTILITY AND METABOLISM.....	5R01 HL18280-02	33,214
DUNN, EDWARD J.....	A SEGMENTAL POROUS PROSTHETIC IMPLANT FOR LONG BONES.....	5R01 AM20059-02	16,576
FAY, FREDRIC S.....	GENERATION AND REGULATION OF FORCE IN SMOOTH MUSCLE.....	2R01 HL14523-06	100,795
FLATT, JEAN-PIERRE.....	STUDY ON THE CONTROL OF LIPOGENESIS IN ADIPOSE TISSUE.....	5R01 AM17352-02	35,720
FLATT, JEAN-PIERRE.....	FAT MOBILIZATION AND PROTEIN SPARING THERAPY.....	5R01 AM17456-05	69,270
GACEK, RICHARD R.....	THE VESTIBULAR NUCLEI AND THEIR CONNECTIONS.....	2R01 NS12509-03	12,073
GOODMAN, H MAURICE.....	MECHANISM OF ACTION OF GROWTH HORMONE.....	5R01 AM19392-02	63,737
GOODMAN, H MAURICE.....	INSULIN EFFECT ON AMINO ACID METABOLISM IN ADIPOCYTES.....	1R01 AM21216-01	41,040
GRIGG, PETER.....	SEGMENTAL REFLEXES MEDIATED BY JOINT AFFERENT NEURONS.....	5R01 NS10783-05	35,316
HOPPER, ANITA K.....	YEAST MUTANTS IN tRNA TRANSCRIPTION AND MATURATION.....	5R01 GM23209-02	57,556
KANE, EILEEN S.....	CENTRAL AUDITORY SYSTEM CONNECTIONS IN MAMMALS.....	7R01 NS14260-01	25,153

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
LIKE, ARTHUR A.....	ULTRASTRUCTURAL AND PHYSIOLOGIC STUDIES OF DIABETES.....	2R01 AM19155-03	102,095
MAJNO, GUIDO.....	CARDIOVASCULAR PATHOLOGY.....	5R01 HL16952-04	49,359
MARINUS, MARTIN G.....	FUNCTION OF METHYLATED BASES IN NUCLEIC ACIDS.....	5R01 GM22055-03	29,065
MARKS, SANDY C, JR.....	THE ORIGIN AND ROLE OF OSTEOCLASTS IN TOOTH ERUPTION.....	2R01 DE03818-04	28,635
MC GUIRE, ROBERT F.....	INTERACTION OF HORMONES WITH CELL SURFACE MEMBRANES.....	5R01 GM22583-03	32,079
MILLER, THOMAS B, JR.....	REGULATION OF HEPATIC GLYCOGEN SYNTHESIS.....	5R01 AM18269-03	28,324
MILLER, THOMAS B, JR.....	EFFECTS OF DIABETES ON CARDIAC PERFORMANCE.....	5R01 HL20476-02	50,076
MULROY, MICHAEL J.....	INNERVATION OF THE INNER EAR.....	5R01 NS12801-02	22,943
NEMECEK, GEORGINA M.....	CYCLIC NUCLEOTIDE METABOLISM IN VASCULAR ENDOTHELIUM.....	1R23 HL21320-01	37,630
PARKER, DAVID C.....	ACTIVATION OF MOUSE B CELLS BY INSOLUBLE ANTI-Ig.....	5R01 AI13447-02	36,740
PECHET, LIBERTO.....	PURIFIED HUMAN CLOTTING FACTOR IX: IMMUNOLOGIC STUDIES.....	5R01 HL17752-03	24,936
SCHNEIDER, FREDERICK H.....	NEUROTRANSMITTERS IN NORMAL AND NEOPLASTIC CELLS.....	5R01 NS12970-02	36,100
SINGER, ROBERT H.....	MESSANGER RNA CONTROL IN DIFFERENTIATING MUSCLE CELLS.....	2R01 NS11329-04	63,775
SMITH, M SUSAN.....	CONTROL OF GONADOTROPIN SECRETION DURING LACTATION.....	5R01 HD09442-03	36,381
SUSSKIND, MIRIAM M.....	INTERACTING REGULATORS OF GENE EXPRESSION.....	5R01 GM22877-02	45,632
TIPPER, DONALD J.....	CONTROL OF BACTERIAL CELL-WALL SYNTHESIS AND BREAKDOWN.....	5R01 AI10806-04	49,258
WAUD, DOUGLAS R.....	STUDY OF DRUG-RECEPTOR INTERACTIONS.....	5R01 NS12255-04	34,203
WHEELER, H BROWNELL.....	PLETHYSMOGRAPHIC EVALUATION OF CAROTID BLOOD FLOW.....	1R01 HL19038-01A1	52,052
ORGANIZATION TOTAL	37	1,780,234	
WORCESTER POLYTECHNIC INSTITUTE ZIP CODE 01609			
BROWNE, DOUGLAS T.....	ENZYME CONFORMATION AND MECHANISM.....	5R01 GM22008-03	28,889
DANIELLI, JAMES F.....	EXPERIMENTAL AND THEORETICAL STUDIES OF CELL SENESCENCE.....	5P01 AG00544-02	150,021
ORGANIZATION TOTAL	2	178,910	
STATE TOTAL	1,293	141,210,497	
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48104			
AGRANOFF, BERNARD W.....	PHOSPHOLIPIDS OF THE NERVOUS SYSTEM.....	5R01 NS03101-17	84,105
AGRANOFF, BERNARD W.....	BIOCHEMICAL CONCOMITANTS OF NERVE REGENERATION.....	1R01 NS13743-01	76,933
ALLEN, SALLY L.....	GENETICS OF TETRAHYMENA AND PARAMECIUM.....	5R01 GM15879-20	78,171
ALPERN, MATHEW.....	PSYCHOPHYSIOLOGICAL STUDIES OF OCULAR ABNORMALITIES.....	5R01 EY00197-20	107,879
AMINOFF, DAVID.....	BIOSYNTHESIS AND DEGRADATION OF BLOOD GROUP SUBSTANCES.....	5R01 HL17881-14	65,093
ASHE, ARTHUR J, III.....	PHOSPHORUS ANALOGUES OF BIOLOGICALLY ACTIVE PYRIDINES.....	5R01 GM20992-03	20,342
AVERY, JAMES K.....	ROLE OF NERVES IN DENTINOGENESIS.....	2R01 DE01604-14	53,778
AVERY, JAMES K.....	DEVELOPMENT SUPPORT FOR DENTAL RESEARCH INSTITUTE.....	2P50 DE02731-11	1,220,955
BAKER, BURTON L.....	HYPOPHYSEAL RESPONSE TO ESTROGENS AND PROGESTINS.....	2R01 HD03159-10	72,369
BALLOU, DAVID P.....	RAPID KINETICS STUDY OF BIOLOGICAL OXYGEN ACTIVATION.....	5R01 GM20877-03	35,989
BEAUDOIN, ALLAN R.....	MECHANISMS OF ACTION OF CHEMICAL TERATOGENS.....	5R01 HD00400-15	35,694
BEIERWALTES, WILLIAM H.....	RADIONUCLIDES: RADIATION, DETECTION AND MEASUREMENT.....	5R01 GM16188-08	96,066
BERNSTEIN, ISADORE A.....	NEOPLASTIC AND HYPERPLASTIC EPIDERMAL METABOLISM.....	5R01 AM15206-06	117,180
BERNSTEIN, ISADORE A.....	EPIDERMAL BIOCHEMISTRY CONFERENCE.....	5R13 AM16751-03	8,323
BERNSTEIN, ISADORE A.....	IN VITRO CHEMICAL CARCINOGENESIS.....	5R01 CA19988-02	131,117
BOETTNER, EDWARD A.....	A STUDY OF FIBROUS DUST PROPAGATION USING HOLOGRAPHY.....	1R01 ES01613-01	42,609
BOHR, DAVID F.....	MECHANISMS OF VASCULAR CHANGES IN HYPERTENSION.....	5P01 HL18575-02	398,681
BOLE, GILES G, JR.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20557-01	333,537
BRADLEY, ROBERT M.....	ROLE OF TASTE BUDS IN SUDDEN INFANT DEATH SYNDROME.....	1R01 HD11081-01	52,082
BROCKMAN, WILLIAM W.....	ROLE OF SV40 GENE A IN CELLULAR TRANSFORMATION.....	5R01 CA19816-02	61,118
BULL, FRANCES E.....	COOPERATIVE STUDY OF CANCER.....	3R10 CA14485-03S3	14,061
BURCKHALTER, JOSEPH H.....	METABOLIC STUDY OF A HYPOCHOLESTEREMIC PYRIDINE.....	5R01 GM19815-06	56,605
BURDI, ALPHONSE R.....	PRENATAL ORIGINS OF POSTNATAL DENTOFACIAL VARIABILITY.....	5R01 DE03443-06	63,419
CAPLAN, ROBERT D.....	ROLE OF A SUPPORTING PARTNER IN ADHERENCE.....	5R25 HL18418-03	126,175
CARLSON, BRUCE M.....	ADAPTIVE MECHANISMS IN EARLY MUSCLE TRANSPLANTS.....	5R01 NS13116-02	50,824
CASEY, KENNETH L.....	CRANIAL SOMATIC AND VISCERAL PAIN: CENTRAL MECHANISMS.....	5R01 NS12015-03	57,026

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
CASEY, KENNETH L.....	NEURAL MECHANISMS OF THERMAL PAIN.....	5R01 NS12581-03	25,705
CASTOR, C WILLIAM.....	CONNECTIVE TISSUE ACTIVATION IN RHEUMATIC DISEASES.....	5R01 AM10728-11	91,597
CASTOR, C WILLIAM.....	PATHOGENESIS OF INFLAMMATION IN THE LUNG.....	5R01 HL19685-02	80,876
CHAMBERS, DONALD A.....	MOLECULAR MEDIATORS OF ORAL DISEASE.....	5R01 DE04373-03	57,770
CHRISTENSEN, HALVOR N.....	SITES AND REACTANTS IN AMINO ACID TRANSPORT.....	5R01 HD01233-22	113,677
CHU, ERNEST H.....	GENETIC CONTROL OF MAMMALIAN CELL METABOLISM.....	5R01 GM20608-04	103,652
CICERONE, CAROL M.....	LIGHT-INDUCED AND INHERITED RETINAL DEGENERATION.....	1R01 EY02055-01	66,234
CLAFLIN, J LATHAM.....	CLONAL NATURE OF IMMUNE RESPONSES TO PHOSPHORYLCHOLINE.....	5R01 AI12533-03	45,080
COHAN, BRUCE E.....	CONTOURING THE HUMAN OPTIC DISC.....	3R01 EY01076-04S1	27,645
COHEN, BENNETT J.....	SUPPORT FOR ANIMAL-CARE FACILITY.....	3P40 RR00200-13S1	2,535
COHEN, BENNETT J.....	SUPPORT FOR ANIMAL-CARE FACILITY.....	5P40 RR00200-14	207,775
CONNELLY, THOMAS G.....	IRIS-LENS METAPLASIA IN VITRO: ROLE OF THE PITUITARY.....	5R01 HD08150-03	24,923
COON, MINOR J.....	FUNCTION OF HYDROXYLASES AND OTHER OXIDATIVE ENZYMES.....	5R01 AM10339-12	107,482
COUNSELL, RAYMOND E.....	POTENTIAL TUMOR OR ORGAN IMAGING AGENTS.....	5R01 CA08349-11	113,190
CRAIG, ROBERT G.....	HYDROPHOBIC FLUORINE-CONTAINING RESTORATIVE POLYMERS.....	5R01 DE04050-03	32,691
D'ALECY, LOUIS G.....	CARDIOVASCULAR REFLEXES FOR CEREBRAL CIRCULATION.....	5R01 NS12386-03	41,654
DANTZKER, DAVID R.....	GAS EXCHANGE IN ACUTE RESPIRATORY FAILURE.....	5R01 HL19449-02	41,580
DATTA, PRASANTA.....	CHANGES IN THE CELL SURFACE INDUCED BY TUMOR VIRUSES.....	5R01 CA16494-03	55,904
DATTA, PRASANTA.....	ALLOSTERIC ENZYMES AND METABOLIC REGULATION.....	5R01 GM21436-03	59,381
DAVENPORT, HORACE W.....	DAMAGE AND REPAIR OF THE GASTRIC MUCOSAL BARRIER.....	5R01 AM08716-14	49,836
DEKKER, EUGENE E.....	ENZYMIC PATHS AND MECHANISMS IN AMINO ACID METABOLISM.....	5R01 AM03718-18	72,738
DUKMAN, DICK J.....	PATTERN PROFILES IN CLEFT LIP AND/OR PALATE.....	5R01 DE04253-03	45,453
EASTER, STEPHEN S, JR.....	VISUAL MECHANISMS IN LOWER VERTEBRATES.....	5R01 EY00168-08	19,115
EDINGTON, DEE W.....	HEART MITOCHONDRIA IN AGING AND TRAINED MALE RATS.....	3R01 HL21633-01S1	7,730
EVANS, F GAYNOR.....	STRUCTURE AND MECHANICAL PROPERTIES OF BONE.....	5R01 AM03865-18	48,963
FAJANS, STEFAN S.....	PREDICTION AND LONG-TERM STUDY OF FUTURE DIABETES.....	5R01 AM00888-22	99,457
FAJANS, STEFAN S.....	STUDIES IN CARBOHYDRATE METABOLISM.....	5R01 AM02244-19	105,335
FAJANS, STEFAN S.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM20572-01	1,305,191
FAULKNER, JOHN A.....	CHARACTERISTICS OF MAMMALIAN WHOLE MUSCLE TRANSPLANTS.....	5R01 AM18727-02	48,446
FEE, JAMES A.....	MECHANISMS OF SUPEROXIDE DISMUTASES.....	5R01 GM21519-03	53,666
FISHER, LESLIE J.....	DEVELOPMENTAL ANALYSIS OF RETINAL SYNAPTIC ORGANIZATION.....	2R01 EY01281-03	41,672
FOLK, WILLIAM R.....	MAMMALIAN CELL TRANSFORMATION BY ONCOGENIC VIRUSES.....	5R01 CA13978-05	58,020
FOLK, WILLIAM R.....	ANALYSIS OF THE POLYOMA GENOME IN TRANSFORMED CELLS.....	1R01 CA21808-01	62,411
FOX, IRVING H.....	REGULATION OF HUMAN PURINE CATABOLISM.....	1R01 AM19674-01	53,406
FOX, JEFFREY L.....	HYDROXYAPATITE REMINERALIZATION: THE ROLE OF FLUORIDE.....	1R01 DE04600-01	40,951
FREEDMAN, DEBORAH S.....	LONGITUDINAL STUDY OF CORRELATES OF FERTILITY: 1962-77.....	1R01 HD10407-01	168,387
FREEDMAN, RONALD.....	FERTILITY AND FAMILY PLANNING IN TAIWAN.....	2R01 HD03002-10	158,327
FRETER, ROLF G.....	ECOLOGIC CONTROL MECHANISMS OF NORMAL ENTERIC FLORA.....	5R01 AI07328-12	58,874
FRIEDMAN, DAVID I.....	HOST & VIRAL INFLUENCES ON PHAGE LAMBDA DEVELOPMENT.....	5R01 AI11459-05	34,051
FRIEDMAN, DAVID I.....	GENETICS OF HOST FACTORS IN INTEGRATIVE RECOMBINATION.....	1R01 AI14363-01	50,814
GAY, HELEN.....	CHROMOSOME STRUCTURE IN RELATION TO GENE ACTION.....	5R01 GM10499-15	55,361
GOLDSTEIN, IRWIN J.....	PROTEIN-CARBOHYDRATE INTERACTION.....	5R01 AM10171-12	69,688
GOLDSTEIN, IRWIN J.....	MURINE ASCITES TUMOR CELL GLYCOPROTEINS.....	1R01 CA20424-01	68,918
GREEN, DANIEL G.....	FUNCTIONAL ORGANIZATION OF THE RETINA.....	5R01 EY00379-10	61,457
GREENBERG, G ROBERT.....	PHAGE INFECTION: DEOXYRIBONUCLEOTIDE & DNA BIOSYNTHESIS.....	5R01 AI08133-20	80,634
GRONVALL, JOHN A.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00042-17	923,031
GRONVALL, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05383-16	213,709
GUMUCIO, JORGE J.....	BILE SECRETION CHOLESTASIS AND MEMBRANE PROTEINS.....	5R01 AM18409-03	84,944
GUTMANN, DAVID L.....	THE PSYCHOLOGY OF AGING AMONG THE GOLAN DRUZE.....	1R01 AG00222-01	23,783
HAJRA, AMIYA K.....	METABOLISM OF PHOSPHATIDIC ACID & ITS ANALOGS IN BRAIN.....	5R01 NS08841-09	64,975
HAN, SEONG S.....	SUBCELLULAR FATE OF GONADOTROPHIC HORMONES.....	5R01 HD09202-03	42,960
HAND, JAMES H.....	CERAMIC-ELASTOMER BIOMATERIALS.....	5R01 GM22447-02	26,776
HANSEN, BARBARA W.....	OBESITY AND THE REGULATION OF APPETITE.....	7R01 AM20493-01	93,320
HARBURG, ERNEST.....	EARLY LIFE STRESSORS AND ADULT CHRONIC DISEASE.....	1R01 GM23954-01	39,058
HARRIS, JAMES E.....	CRANIOFACIAL VARIATION AND MALOCCLUSION IN FAMILIES.....	5R01 DE03013-10	77,436
HAWKINS, JOSEPH E, JR.....	MICROSCOPIC STUDIES OF THE INNER EAR.....	5R01 NS05065-14	80,001
HAWKINS, JOSEPH E, JR.....	DISORDERS OF COCHLEAR HOMEOSTASIS AND FUNCTION.....	5R01 NS12881-02	37,944
HERMALIN, ALBERT I.....	POPULATION STUDIES CENTER.....	5P30 HD10003-02	151,873
HEYN, RUTH M.....	COOPERATIVE STUDY OF CANCER AMONG CHILDREN.....	2R10 CA02971-21	136,030
HEYN, RUTH M.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19762-02	111,348

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
HICKS, SAMUEL P.....	DEVELOPMENT OF CORTICOSPINAL SYSTEM.....	5R01 NS10531-05	12,299
HIGGINS, MILLICENT W.....	EPIDEMIOLOGIC STUDY OF CHRONIC LUNG DISEASE.....	1R01 HL18632-01A2	211,397
HIGGINS, MILLICENT W.....	HIGH BLOOD PRESSURE IN YOUNG PEOPLE IN TECUMSEH.....	5R01 HL19962-02	285,638
HIGUCHI, WILLIAM I.....	MECHANISMS OF CHOLESTEROL GALLSTONE DISSOLUTION.....	2R01 AM16694-04	58,734
HIGUCHI, WILLIAM I.....	QUANTITATION OF ENAMEL DEMINERALIZATION MECHANISMS.....	5R01 OE01830-15	75,962
HIRSHFIELD, IRVIN N.....	EFFECT OF METABOLITES ON LYSYL-TRNA SYNTHETASE FORMATION.....	7R01 GM25274-01	10,510
HOFFMAN, LOIS W.....	THE VALUE OF CHILDREN IN THE UNITED STATES.....	2R01 HD08287-02	96,957
HULTQUIST, DONALD E.....	REDOX SYSTEMS OF ERYTHROCYTES.....	5R01 AM09250-12	46,215
JOHNSSON, LARS-GORAN.....	COCHLEAR NERVE DEGENERATION IN DEAFENED EARS.....	5R01 NS12706-03	59,120
JOKELAINEN, PENTTI T.....	MICROSCOPY OF SPONTANEOUSLY HYPERTENSIVE ARTERIAL LESION.....	5R01 HL18831-02	98,152
JONES, GARTH W.....	VIRULENCE DETERMINANTS OF SALMONELLAE.....	1R01 AI13842-01	54,238
JONES, GEORGE H.....	CONTROL OF PROTEIN SYNTHESIS IN TUMORS.....	5R01 CA12752-06	25,544
JOUROIAN, GEORGE W.....	BIOCHEMISTRY OF MUCOPOLYSACCHARIDES.....	5R01 AM10531-12	48,320
JUNI, ELLIOT.....	GENETICS AND METABOLISM OF GRAM-NEGATIVE COCCOBACILLI.....	5R01 AI10107-07	85,331
KARSCH, FRED J.....	ROLE OF ESTROGEN IN FUNCTIONAL LUTEOLYSIS IN PRIMATES.....	5R01 HD07689-05	65,850
KELLEY, WILLIAM N.....	REGULATION OF PURINE METABOLISM IN HUMAN CELLS.....	5R01 AM19045-03	125,228
KEYES, JOHN W, JR.....	RAOIONUCLIDE COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	2R01 GM22678-02	70,380
KEYES, PAUL L.....	REGULATION OF OVARIAN FUNCTION DURING PREGNANCY.....	5R01 HD07127-06	52,566
KLUGER, MATTHEW J.....	EVOLUTION AND ADAPTIVE VALUE OF FEVER.....	1R01 AI13878-01	61,026
KNOEEL, JOHN E.....	POPULATION DYNAMICS IN FOUR GERMAN VILLAGES.....	5R01 HD10178-02	36,473
KOPELMAN, RAOUL.....	EXCITATIONS IN CONDENSED MOLECULAR AGGREGATES.....	3R01 NS08116-09S1	25,255
KORAN, ANOREW, III.....	MAXILLOFACIAL MATERIALS—COLOR STUDY.....	5R01 DE04136-03	55,774
KRIMM, SAMUEL.....	STUDIES OF HUMAN ERYTHROCYTE MEMBRANE STRUCTURE.....	5R01 HL18737-02	23,269
LANDS, WILLIAM E.....	CONSEQUENCES OF SELECTIVE FATTY ACID ESTERIFICATION.....	5R01 AM05310-17	74,473
LAWRENCE, MERLE.....	STUDY OF CAUSES OF DEAFNESS.....	2P01 NS05785-13	879,421
LAWRENCE, MERLE.....	CONTROL OF INNER EAR MICROCIRCULATION.....	2R01 NS11731-04	57,571
LEE, RONALD D.....	POPULATION DYNAMICS IN PREINDUSTRIAL ENGLAND.....	5R01 HD08586-04	28,241
LEVINE, MYRON.....	STUDY OF CELLULAR AND BIOCHEMICAL GENETICS.....	5P01 GM15419-10	903,552
LOESCHE, WALTER J.....	EFFECT OF CHEMOTHERAPY ON PLAQUE AND MICROBIAL ECOLOGY.....	5R01 DE03011-09	105,206
LOESCHE, WALTER J.....	ANALYSIS OF NORMAL AND DISEASE-ASSOCIATED PLAQUE.....	5R01 OE03423-05	23,423
LUCCHESI, BENEDICT R.....	ANALYSIS OF ANTIARRHYTHMIC AGENTS.....	5R01 HL05806-17	25,696
LUCCHESI, BENEDICT R.....	PHARMACOLOGIC STUDIES ON THE ISCHEMIC HEART.....	1R01 HL19782-01	62,112
LUDWIG, MARTHA L.....	STRUCTURE AND ACTIVITY OF ENZYMES IN CRYSTALLINE STATE.....	2R01 GM16429-10	164,047
MALVIN, RICHARD L.....	RENAL TUBULAR REABSORPTION OF SODIUM AND WATER.....	5R01 AM05077-16	55,431
MANN, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05321-16	75,362
MASON, MERLE.....	REGULATION OF TRYPTOPHAN AND LYSINE CATABOLISM.....	5R01 AM18647-02	36,715
MASSEY, VINCENT.....	STUDIES ON BIOLOGICAL OXIDATION MECHANISMS.....	5R01 GM11106-15	163,394
MATHEWS, KENNETH P.....	CLINICAL STUDY OF ALLERGIC DISEASES.....	2P50 AI10391-06	62,055
MC NAMARA, JAMES A, JR.....	ADAPTATIONS TO CHANGES IN MASTICATORY MUSCLE LENGTH.....	5R01 DE04227-03	65,325
MC REYNOLDS, JOHN S.....	FUNCTIONAL ORGANIZATION OF THE VERTEBRATE RETINA.....	5R01 EY01653-02	34,280
MEISLER, MIRIAM H.....	GENETIC REGULATION OF MOUSE ENZYMES.....	1R01 GM24872-01	55,397
MENGE, ALAN C.....	IMMUNOLOGICAL-INDUCED INFERTILITY.....	5R01 HD05200-06	71,335
MENON, K M.....	REGULATION OF OVARIAN FUNCTION BY GONADOTROPINS.....	5R01 HD06656-05	57,493
MIDGLEY, A REES, JR.....	HORMONES IN REPRODUCTION: A PROGRAM PROJECT.....	3P50 HD08333-03S1	32,001
MIDGLEY, A REES, JR.....	HORMONES IN REPRODUCTION: A PROGRAM PROJECT.....	5P50 HD08333-04	487,288
MISTRETTA, CHARLOTTE M.....	NERVE-EPITHELIUM INTERACTION IN OROFACIAL DEVELOPMENT.....	5R01 DE04491-02	41,786
MORRIS, MICHAEL D.....	ANALYTICAL APPLICATIONS OF THE RESONANCE RAMAN EFFECT.....	5R01 GM22604-02	39,355
MOUW, DAVID R.....	LEAD: ITS RENAL HANDLING, RENIN AND ERYTHROPOIETIN.....	5R01 ES01141-03	69,964
MOUW, DAVID R.....	MECHANISMS OF CNS-INDUCED CHANGES IN SODIUM EXCRETION.....	5R01 NS12825-02	50,022
MOYERS, ROBERT E.....	STUDY OF CRANIOFACIAL GROWTH AND DEVELOPMENT.....	2P01 OE03610-11	178,136
MURPHY, WILLIAM H.....	MECHANISMS OF IMMUNITY IN LEUKEMIA.....	5R01 CA13701-06	83,748
NACE, GEORGE W.....	AMPHIBIANS FOR HEALTH-RELATED RESEARCH.....	5P40 RR00572-07	161,601
NAWROT, CHARLES F.....	COLLAGEN—MINERAL PHASE INTERACTIONS IN DENTIN.....	5R01 DE04538-02	35,888
NEIDHARDT, FREDERICK C.....	REGULATION OF BACTERIAL METABOLISM.....	5R01 GM17892-08	59,964
NIEDERHUBER, JOHN E.....	IMMUNE RESPONSES IN VITRO-H-2 (IR) LOCUS FUNCTION.....	5R01 AI14006-02	49,003
NORDMAN, CHRISTER E.....	X-RAY STRUCTURE ANALYSIS OF BIOLOGICAL COMPOUNDS.....	5R01 GM15259-14	90,087
O'BRIEN, WILLIAM J.....	CAPILLARY PHENOMENA RELATED TO CARIES SITES.....	5R01 DE03480-06	80,048
OAKLEY, BRUCE.....	NEURAL PLASTICITY IN TASTE AND CUTANEOUS SENSES.....	5R01 NS07072-11	52,221
OLSON, GARY M.....	INFANT MEMORY PROCESSES.....	1R01 HD10486-01	50,219
ONCLEY, J LAWRENCE.....	BIOPHYSICAL STUDIES OF PROTEINS.....	5R01 HL09739-12	89,439

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
OSTRANDER, LEON D, JR.....	DIABETES, HYPERGLYCEMIA AND CARDIOVASCULAR DISEASE.....	5R01 HL20508-02	138,655
OVERBERGER, CHARLES G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07050-12	168,642
OXENDER, DALE L.....	MEMBRANE TRANSPORT COMPONENTS IN BACTERIA.....	5R01 GM11024-14	62,516
OXENDER, DALE L.....	TRANSPORT COMPONENTS FROM EUKARYOTES.....	2R01 GM20737-04	55,789
PAUL, ARA G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05571-13	28,190
PAYNE, ANITA H.....	ROLE OF STEROID SULFATES IN GONADAL TISSUE.....	5R01 HD04064-09	82,319
PAYNE, ANITA H.....	MECHANISM OF ACTION OF GONADOTROPINS IN THE TESTIS.....	3R01 HD08358-02S1	6,724
PAYNE, FRANCIS E.....	VIRAL SUBACUTE AND CHRONIC NERVOUS SYSTEM DISEASE.....	5R01 NS09547-08	91,934
PEK, SUMER.....	PROSTAGLANDINS AND SECRETION OF GLUCAGON AND INSULIN.....	1R01 AM21192-01	72,748
POWERS, JOHN M.....	WEAR OF COMPOSITE RESTORATIVE RESINS.....	2R01 DE03416-06	72,165
PRATT, WILLIAM B.....	STEROID RECEPTORS IN MOUSE CELLS CULTURED IN VITRO.....	5R01 CA16041-03	35,421
PRINGLE, JOHN R.....	GENETIC STUDY OF CELL PROLIFERATION CONTROL IN YEAST.....	1R01 GM23936-01	81,090
RADIN, NORMAN S.....	CHEMOTHERAPY AND MODELS OF HERITABLE SPHINGOLIPIDOSES.....	2R01 HD07406-04	45,631
RADIN, NORMAN S.....	BRAIN GLYCOLIPIDS: METABOLISM AND PATHOLOGY.....	5R01 NS03192-18	157,683
REMINGTON, RICHARD D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05447-16	73,714
RICHARDS, JOANNE S.....	OVARIAN FOLLICULAR DEVELOPMENT AND HORMONE ACTION.....	5R01 HD09110-02	71,087
RICHARDSON, RUDY J.....	NEUROTOXIC ESTERASE: NORMAL AND PATHOGENIC ROLES.....	1R01 ES01611-01	85,197
RIGGS, THOMAS R.....	ACTION OF HORMONES ON AMINO ACID TRANSPORT SYSTEMS.....	5R01 AM03709-17	38,247
RIZKI, TAHIR M.....	CELL INTERACTIONS IN HEREDITARY TUMORS OF DROSOPHILA.....	5R01 CA16619-03	57,538
ROSENSTOCK, IRWIN M.....	ADHERENCE TO HYPERTENSIVE MEDICAL REGIMENS.....	5R25 HL18406-03	143,909
ROSS, MURIEL D.....	OTOCONIAL FORMATION AND DEGENERATION.....	1R01 AG00767-01A2	40,419
ROSS, MURIEL D.....	IDENTIFICATION OF SOURCE(S) OF COCHLEAR EFFERENTS.....	1R01 NS13428-01	31,393
RUTLEDGE, LESTER T.....	NEURAL MECHANISMS ASSOCIATED WITH LEARNING.....	5R01 NS04119-14	56,160
SANDS, RICHARD H.....	REDOX REACTIONS BY OPTICAL AND EPR SPECTROMETRY.....	2R01 GM12176-14	174,815
SCHACHT, JOCHEN.....	MECHANISMS OF ANTIBIOTIC INDUCED HEARING LOSS.....	1R01 NS13792-01	64,936
SCHEIDER, WALTER.....	STOPFLOW DIELECTRIC STUDY OF PROTEIN BINDING KINETICS.....	5R01 GM22309-03	38,069
SCHMICKEL, ROY D.....	ISOLATION AND CHARACTERIZATION OF HUMAN RIBOSOMAL DNA.....	2R01 HD04569-07	85,723
SCHULTZ, JAKE S.....	IMMUNOGENETIC AND CYTOLOGICAL STUDY OF TISSUE GRAFTS.....	5R01 CA18638-03	35,781
SELLINGER, OTTO Z.....	CEREBRAL METHYLATIONS IN NORMAL AND CONVULSIVE STATES.....	3R01 NS06294-09S1	41,568
SHAFFER, JULES A.....	MACROMOLECULES FOR ISOLATING PROTEIN ON CELL SURFACES.....	5R01 AI12625-03	53,225
SHAFFER, JULES A.....	REACTION MECHANISMS FOR ENZYMES.....	5R01 AM09276-13	71,520
SIMMONS, GEORGE B.....	MORTALITY AND FERTILITY IN UTTAR PRADESH, INDIA.....	5R01 HD09957-02	29,028
SISSON, JAMES C.....	MUCOPOLYSACCHARIDE METABOLISM IN EXOPHTHALMOS.....	3R01 AM17538-12S1	17,887
SMITH, AARON.....	CHANGING EFFECTS OF HEMISPHERECTOMY.....	5R01 NS10089-05	5,059
SOLOMON, WILLIAM R.....	ALLERGENICITY OF AIRBORNE PARTICULATES.....	2R01 AI10181-07	68,841
SPARKS, HARVEY V.....	DYNAMIC CONTROL OF CORONARY BLOOD FLOW.....	2R01 HL16760-04	58,038
SPARKS, HARVEY V.....	VASCULAR CONTROL IN EXPERIMENTAL DIABETES MELLITUS.....	5R01 HL20399-02	75,395
STEBBINS, WILLIAM C.....	LATENCY-INTENSITY FUNCTIONS IN THE AUDITORY SYSTEM.....	5R01 NS05077-14	87,397
VOORHEES, JOHN J.....	MECHANISMS & THERAPY OF PSORIASIS: A PROGRAM PROJECT.....	5P01 AM15740-06	389,721
WALKER, SARA E.....	DRUG-INDUCED ONCOGENESIS IN AUTOIMMUNE NZB/NZW MICE.....	5R01 CA13297-06	45,873
WEBER, WENDELL W.....	N-ACETYLATION OF DRUGS.....	5R01 GM21723-04	73,971
WEIDLER, DONALD J.....	CARDIAC DAMAGE & ARRHYTHMIAS AFTER CEREBRAL INFARCTION.....	5R01 HL17351-03	39,566
WEINHOLD, PAUL A.....	PHOSPHOLIPID METABOLISM DURING DEVELOPMENT.....	5R01 HD02871-11	42,380
WEINHOLD, PAUL A.....	LUNG ORGAN CULTURE AND SURFACTANT BIOSYNTHESIS.....	5R01 HL19669-02	78,922
WHITFIELD, CAROLYN D.....	CHARACTERIZATION OF ANIMAL CELL CARBOHYDRATE MUTANTS.....	1R01 AM19602-01	58,188
WILLIAMS, CHARLES H, JR.....	PYRIDINE NUCLEOTIDE-DISULFIDE OXIDOREDUCTASES.....	5R01 GM21444-13	48,777
WILLIAMS, WILLIAM J.....	DYNAMIC ANALYSIS OF THE PROPRIOCEPTIVE SYSTEM.....	5R01 NS08470-09	74,467
ZAND, ROBERT.....	BRAIN BILIRUBIN-EFFECTS ON GROWTH AND NEUROCHEMISTRY.....	5R01 NS11923-03	62,103
ORGANIZATION TOTAL	194	19,639,539	
BERKLEY			
WILLIAM BEAUMONT HOSPITAL ZIP CODE 48072			
POULIK, MIROSLAV D.....	STUDY OF URINARY PROTEIN COMPONENTS.....	5R01 AI11335-06	38,392
ORGANIZATION TOTAL	1	38,392	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
DETROIT			
CHILDREN'S HOSPITAL OF MICHIGAN ZIP CODE 48201			
KAPLAN, JOSEPH.....	LYMPHOCYTE DIFFERENTIATION IN CHILDHOOD LEUKEMIA.....	2R01 CA17534-03	58,033
ORGANIZATION TOTAL	1 58,033		
DETROIT HEALTH DEPARTMENT ZIP CODE 48202			
GODLEY, ALEGRO J.....	DETROIT HYPERTENSION CONTROL PROGRAM.....	1R01 HL22380-01	223,057
ORGANIZATION TOTAL	1 223,057		
HENRY FORD HOSPITAL ZIP CODE 48202			
CARRETERO, OSCAR A.....	PHYSIOLOGICAL ROLE OF ISORENIN AND KALLIKREIN.....	2R01 HL15839-04A1	91,847
CARRETERO, OSCAR A.....	FACTORS OTHER THAN RENIN IN RENAL HYPERTENSION.....	1R01 HL21092-01	40,321
GOLDSTEIN, SIDNEY.....	PROSPECTIVE STUDY OF RESUSCITATED SUDDEN DEATH VICTIM.....	3R01 HL18800-02S1	2,984
GOLDSTEIN, SIDNEY.....	PROSPECTIVE STUDY OF RESUSCITATED SUDDEN DEATH VICTIM.....	5R01 HL18800-03	120,853
HALVORSON, HERBERT R.....	RELAXATION KINETICS OF SUBUNIT INTERACTIONS.....	5R01 GM23302-02	12,210
HUSEBY, ROBERT A.....	STUDIES OF SOME ENDOCRINE ASPECTS OF NEOPLASIA.....	7R01 CA22401-01	62,775
PARFITT, A MICHAEL.....	BONE MASS AND BONE CELL FUNCTION IN DIABETES MELLITUS.....	1R01 AM21296-01	52,427
SHORE, JOSEPH D.....	REGULATION OF HEART MITOCHONDRIAL MALATE DEHYDROGENASE.....	5R01 HL13035-08	35,728
TALLEY, ROBERT W.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	5R10 CA04915-18	124,640
TALLEY, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05490-15	24,425
ORGANIZATION TOTAL	10 568,210		
MERRILL-PALMER INSTITUTE ZIP CODE 48202			
FOX, GREER L.....	MOTHER-DAUGHTER COMMUNICATION PATTERNS RE SEXUALITY.....	1R01 HD11224-01	128,947
ORGANIZATION TOTAL	1 128,947		
MICHIGAN CANCER FOUNDATION ZIP CODE 48201			
BRENNAN, MICHAEL J.....	DETROIT BREAST CANCER DEVELOPMENTAL RESEARCH UNIT.....	5P01 CA16175-03	175,354
BUTLER, W BARKLEY.....	ESTROGEN RESPONSE IN A HUMAN BREAST CANCER CELL LINE.....	1R01 CA21606-01	64,285
CHLADEK, STANISLAV.....	THE STUDY OF PEPTIDYL TRANSFERASE RECOGNITION SITES.....	5R01 GM19111-06	49,088
HOROWITZ, SAMUEL B.....	STEROID-TARGET CELL INTERACTION.....	5R01 CA17456-03	59,143
HOROWITZ, SAMUEL B.....	REGULATION OF NUCLEAR-CYTOPLASMIC SOLUTE TRANSPORT.....	5R01 GM19548-06	96,662
HORWITZ, JEROME P.....	SPECIFICITY OF PAPS IN STEROID SULFATION.....	5R01 CA16716-03	48,300
HORWITZ, JEROME P.....	NMR AND EPR STUDIES OF ESTROGEN SULFOTRANSFERASES.....	5R01 CA16855-03	75,090
MC GRATH, CHARLES M.....	ENDOGENOUS VIRUS AND HORMONES IN MAMMARY CANCER.....	5R01 CA18175-02	52,999
RICH, MARVIN A.....	STUDIES ON THE VIRAL ETIOLOGY OF CANCER.....	5R01 CA14100-05	137,319
RICH, MARVIN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05529-15	76,802
ZEMLICKA, JIRI.....	METABOLICALLY STABLE ANALOGS OF PUROMYCIN.....	1R01 CA21388-01	46,412
ZEMLICKA, JIRI.....	TRANSITION STATE MODELS OF PROTEIN SYNTHESIS.....	3R01 GM21093-02S1	12,217
ORGANIZATION TOTAL	12 893,671		
SINAI HOSPITAL OF DETROIT ZIP CODE 48235			
BECKMAN, HUGH.....	LASER GLAUCOMA SURGERY.....	5R01 EY00886-03	38,793
FOA, PIERO P.....	INSULIN, PANCREATIC & GUT GLUCAGON IN DIABETES MELLITUS.....	5R01 AM06034-16	52,411
FOA, PIERO P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05641-11	42,032
ORGANIZATION TOTAL	3 133,236		
UNIVERSITY OF DETROIT ZIP CODE 48221			
WEMPLE, JAMES N.....	SYNTHETIC ROUTES TO NEW THIOL ESTER DERIVATIVES.....	2R01 CA17719-03	25,009
ORGANIZATION TOTAL	1 25,009		
WAYNE STATE UNIVERSITY ZIP CODE 48202			
AGER, JOEL W.....	CONSEQUENCES OF TEEN CONTRACEPTIVE PROGRAM DROP OUT.....	5R01 HD09361-03	45,979
ARKING, ROBERT.....	GENETIC ANALYSIS OF PATTERN FORMATION IN DROSOPHILA.....	5R01 GM23327-02	34,452
BACH, ROBERT D.....	THE CHEMICAL BEHAVIOR OF ORGANOMERCURY COMPOUNDS.....	5R01 ES00761-06	41,585
BAGCHI, MIHIR.....	CELL BIOLOGY OF MAMMALIAN EYE LENS IN CULTURE.....	5R01 EY01848-02	28,588
BENJAMINS, JOYCE A.....	MYELINATION: ASSEMBLY OF LIPIDS AND PROTEINS.....	1R01 NS13143-01A1	54,868
BERGUER, RAMON.....	GRADING OF ATHEROSCLEROSIS BY CW DOPPLER ULTRASOUND.....	5R01 HL19406-02	56,080

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
BERK, RICHARD S.....	PSEUDOMONAS EYE INFECTIONS—AN EXPERIMENTAL MODEL.....	1R01 EY01935-01	29,275
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF THE POTENT ANTILEUKEMIC AGENT ADRIAMYCIN.....	5R01 CA15061-03	37,239
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF ANTILEUKEMIC AND ANTITUMOR LACTONES.....	5R01 CA17154-02	34,940
BOROS, DOV L.....	LYMPHOCYTE INTERACTION IN SCHISTOSOMIASIS MANSONI.....	5R22 AI12913-02	66,363
BOROS, DOV L.....	LYMPHOKINES IN PULMONARY GRANULOMATOUS INFLAMMATION.....	5R01 HL19732-02	25,154
BOROS, DOV L.....	PULMONARY GRANULOMATOUS INFLAMMATIONS.....	5R01 HL20104-02	46,889
BOYCE, CHARLES R.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12477-07	17,083
BROOKS, SAM C.....	UTERINE STEROID METABOLISM AND REPRODUCTIVE FUNCTION.....	5R01 HD08735-03	33,590
CHEN, YU M.....	SERUM TYROSINASE IN MALIGNANT DISEASE.....	5R01 CA16563-03	66,436
CHOE, BYUNG-KIL.....	IMMUNOCHEMICAL STUDIES OF PROSTATIC ACID PHOSPHATASE.....	5R26 CA18748-03	37,646
CROSSLAND, WILLIAM J.....	DEVELOPMENT AND MAINTENANCE OF VISUAL CONNECTIONS.....	5R01 EY01796-02	30,868
CURTIN, THOMAS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07051-12	72,758
ENDICOTT, JOHN F.....	REACTION MECHANISMS OF CYCLIC TETRA-MINE COMPLEXES.....	5R01 AM14341-09	71,515
ESSNER, EDWARD S.....	THE ROLE OF LYSOSOMES IN CHEDIAK-HIGASHI SYNDROME.....	5R01 AM19386-02	50,776
ESSNER, EDWARD S.....	A CYTOCHEMICAL AND MORPHOLOGICAL STUDY OF COLON.....	5R26 CA19648-02	54,357
ESSNER, EDWARD S.....	CYTOCHEMICAL STUDIES OF RAT, RETINAL DYSTROPHIES.....	1R01 EY01889-01	39,428
FOOR, W EUGENE.....	BASIC STUDIES IN REPRODUCTION.....	5R01 HD10280-02	44,664
FOX, CLEMENT A.....	THE FINE STRUCTURE OF THE NERVOUS SYSTEM.....	2R01 NS06925-12	56,387
FRANK, ROBERT N.....	RETINAL MICROVESSELS: TISSUE CULTURE AND BIOCHEMISTRY.....	3R01 EY01857-01S1	40,555
FRANK, ROBERT N.....	RETINAL MICROVESSELS: TISSUE CULTURE AND BIOCHEMISTRY.....	5R01 EY01857-02	34,965
GALA, RICHARD R.....	PROLACTIN—ADRENAL INVOLVEMENT IN DMBA MAMMARY TUMORS.....	1R01 CA21597-01	62,912
GLAROS, ALAN G.....	BEHAVIORAL CONTROL OF BRUXISM.....	5R23 DE04536-02	18,731
GORELIC, LESTER S.....	RADIATION EFFECTS: DNA TEMPLATE INACTIVATION AND REPAIR.....	5R01 CA18046-03	22,856
GORELL, JAY M.....	CNS ACETYLCHOLINE: HYPOGLYCEMIA, HYPOXIA AND RECOVERY.....	1R01 HD10890-01	67,023
GROSSMAN, LAWRENCE I.....	MITOCHONDRIAL DNA FROM NEOPLASTIC AND NORMAL CELLS.....	5R01 GM21704-03	77,995
GROSSMAN, LAWRENCE I.....	GENES ON MITOCHONDRIAL DNA.....	5R01 GM22837-02	133,574
HARDING, CLIFFORD V.....	TISSUE GROWTH IN THE NORMAL AND INJURED EYE.....	1R01 EY01874-01	66,047
HOLLANDER, DANIEL.....	FAT SOLUBLE VITAMINS ABSORPTION EMPHASIZING VITAMIN K.....	5R01 AM17607-04	35,602
HONG, FELIX T.....	PHOTOBIOLOGICAL SYSTEMS AND MEMBRANE INTERFACES.....	7R01 GM25144-01	52,303
HULL, FRANKLIN E.....	BETA-HYDROXY FATTY ACID PRODUCTION BY ISCHEMIC HEART.....	5R01 HL14730-06	62,787
JOHNSON, JEAN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05718-06	15,879
JOHNSON, PAUL H.....	RESTRICTION ENDONUCLEASE MECHANISMS AND DNA STRUCTURE.....	1R01 GM23690-01	70,271
JOHNSON, ROBERT M.....	MOLECULAR ASPECTS OF ERYTHROCYTE MEMBRANE RESEALING.....	5R01 HL15793-05	39,392
KIMURA, TOKUJI.....	STUDIES ON STEROID HYDROXYLASES.....	5R01 AM12713-09	112,611
KING, ALBERT I.....	GAIT ANALYSIS WITH MINIATURE SHOE-BORNE LOAD CELLS.....	1R01 AM19777-01	94,141
KING, ALBERT I.....	STRUCTURAL AND MECHANICAL PROPERTIES OF THE SPINE.....	5R01 GM20201-05	66,047
KITAI, STEPHEN T.....	EXPERIMENTAL STUDIES OF SENSORY PATHWAYS.....	5R01 NS00405-22	80,774
LEE, CHUAN-PU.....	SUBCELLULAR RESPIRATORY-FUNCTIONS OF CARDIAC MUSCLE.....	3R01 GM22751-02S1	19,443
LEON, MYRON A.....	BIOLOGICAL ACTIVITIES OF HOMOGENEOUS MITOGENS.....	5R01 CA20812-03	54,321
LEWIS, BENJAMIN M.....	PULMONARY TOXICITY OF BLEOMYCIN.....	5R01 HL17874-03	22,279
MAISEL, HARRY.....	A STUDY OF STRUCTURAL LENS PROTEINS.....	2R01 EY01417-04	33,823
MAISEL, HARRY.....	PLASMA MEMBRANE PROTEINS OF OCULAR LENS CELLS.....	1R01 EY01855-01	58,344
MARKS, BERNARD H.....	DISTRIBUTION AND METABOLISM OF LABELED DIGITALOIDS.....	5R01 HL17555-04	43,107
MARNETT, LAWRENCE J.....	MALONALDEHYDE STUDIES.....	1R01 CA22206-01	22,128
MARNETT, LAWRENCE J.....	STUDIES ON PROSTAGLANDIN SYNTHETASE.....	1R01 GM23642-01	35,942
MARRAZZI, MARY A.....	HYPOTHALAMIC GLUCORECEPTOR POTENTIALS—PHARMACOLOGY.....	1R01 AM21476-01	46,224
MC COY, LOWELL E.....	PROCOAGULANT LIPOPROTEINS: BIOCHEMISTRY & BIOACTIVITY.....	1R01 HL20317-01	48,744
MILLETTE, ROBERT L.....	HERPES SIMPLEX VIRUS GENE REGULATION.....	5R01 CA21065-02	58,087
MITCHELL, J ANDREW.....	P02 IN REPRODUCTIVE TRACT OF FEMALE ANIMALS.....	1R01 HD11266-01	12,782
MITCHELL, ROBERT A.....	PATHWAYS FOR ATP SYNTHESIS AND UTILIZATION.....	5R01 GM19562-09	26,722
PRASAD, ANANDA S.....	REQUIREMENT FOR ZINC IN MAN.....	1R01 AM19338-01A1	29,533
PUTNEY, JAMES W, JR.....	CELLULAR PHARMACOLOGY OF SALIVARY SECRETION.....	5R01 DE04067-03	32,451
PUTNEY, JAMES W, JR.....	CELLULAR PHARMACOLOGY OF LACRIMATION.....	1R01 EY01978-01	51,310
RABAN, MORTON.....	IONIC BONDING CONFORMATIONAL BEHAVIOR OF ENOLATE ANIONS.....	5R01 GM22594-02	24,637
RILLEMA, JAMES A.....	REGULATION OF METABOLISM IN MAMMARY GLAND TUMORS.....	5R01 CA18296-03	40,318
RILLEMA, JAMES A.....	HORMONAL CONTROL OF METABOLISM IN THE MAMMARY GLAND.....	5R01 HD06571-06	32,774
RORABACHER, DAVID B.....	CYCLIC POLYTHIAETHERS IN METAL ION TRANSPORT.....	2R01 GM20424-04	103,299
ROSE, NOEL R.....	AUTOIMMUNE THYROIDITIS IN OS CHICKENS.....	1R01 AM20028-01	115,732
ROSE, NOEL R.....	ANTIGENIC COMPONENTS OF HUMAN PROSTATIC ADENOCARCINOMA.....	5R26 CA16426-04	125,155
ROSE, NOEL R.....	PROGRAM IN CANCER IMMUNOLOGY.....	1P01 CA18900-01A1	215,756

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
SARDESAI, VISHWANATH M.....	THE EFFECT OF ALCOHOL ON THE HEART.....	5R01 HL20369-02	22,441
SCHAAP, A PAUL.....	ENZYMATICALLY GENERATED SINGLET OXYGEN IN CARCINOGENESIS.....	3R01 CA15874-03S1	15,482
SEEGERS, WALTER H.....	FORMATION AND PROPERTIES OF PROTHROMBIN DERIVATIVES.....	5R01 HL03424-20	88,875
SEEGERS, WALTER H.....	COAGULATION AND CELLS IN THROMBOSIS AND HEMOSTASIS.....	3P50 HL14142-05S2	71,165
SEEGERS, WALTER H.....	PROPERTIES OF THROMBIN AND AC-GLOBULIN.....	5R01 HL18435-02	24,361
SUNDICK, ROY S.....	EFFECT OF THYROXINE ON LYMPHOID TISSUES OF CHICKENS.....	1R23 AG00634-01	14,811
SWANBORG, ROBERT H.....	ENCEPHALITOGENIC NATURE OF ALTERED BRAIN PREPARATION.....	5R01 NS06985-11	57,289
TCHEN, TCHE-TSING.....	CONVERSION OF CHOLESTEROL TO PREGNENOLONE.....	5R01 AM13724-08	72,019
TSENOGLOU, DEMETRIUS.....	X-RAY DIFFRACTION ANALYSIS OF THROMBIN AND NEUROTOXIN.....	2R01 HL15958-05	199,742
VAITKEVICIUS, VAINUTIS K.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA14028-04	146,952
VAITKEVICIUS, VAINUTIS K.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17952-03	165,633
VINOGRADOV, SERGE N.....	QUATERNARY STRUCTURE OF ERYTHRO AND CHLOROCHROMOPHYLLS.....	5R01 HL18634-02	20,923
WEINER, LAWRENCE M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05384-16	127,047
WEINSIEDER, ALLAN.....	EXTRA-OCULAR FACTORS AFFECTING LENS GROWTH.....	1R01 EY02105-01	45,070
WHITTEN, CHARLES F.....	COMPREHENSIVE SICKLE CELL CENTER SUPPORT.....	2P60 HL16008-05	1,064,147
ZWAS, FRED.....	PSYCHOPHYSICAL STUDIES OF RETINITIS PIGMENTOSA.....	5R01 EY01707-02	13,872
ORGANIZATION TOTAL	82	5,634,125	

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AKERA, TAI.....	CARDIAC GLYCOSIDES: MECHANISM OF INOTROPIC ACTION.....	2R01 HL16052-04	140,344
ASHER, JAMES H, JR.....	GENETIC AND MOLECULAR ANALYSIS OF MESODERMAL INDUCTION.....	5R01 HD08134-03	29,549
AUST, STEVEN.....	XENOBIOTIC CONJUGATION BY THE INTESTINE.....	5R01 GM22535-02	21,691
BAILIE, MICHAEL D.....	ANATOMICAL AND FUNCTIONAL DEVELOPMENT OF THE KIDNEY.....	5R01 HD06290-04	63,868
BAILIE, MICHAEL D.....	METABOLISM AND INTRARENAL ACTION OF ANGIOTENSIN II.....	3R01 HL14075-05S1	3,671
BAND, RUDOLPH N.....	PHYSIOLOGY OF ACANTHAMOEBA AND ENTAMOEBA.....	5R01 AI06117-14	47,498
BARKER, ROBERT.....	MEMBRANE OLIGOSACCHARIDES.....	5R01 GM21731-03	63,567
BENNETT, JAMES L.....	DRUG DISRUPTION OF TREMATODE PHYSIOLOGICAL PROCESSES.....	1R22 AI14294-01	29,355
BERKER, ROBERT.....	MEMBRANE FORMATION IN CYTODIFFERENTIATION.....	5R01 GM17773-06	28,667
BIEBER, LORAN L.....	BIOCHEMISTRY OF POLYENE ANTIBIOTICS.....	5R01 AI12187-03	46,077
BIEBER, LORAN L.....	SHORT-CHAIN ACYLCARNITINES—FUNCTION AND ENZYMOLOGY.....	5R01 AM18427-03	64,421
BOEZI, JOHN A.....	PHOSPHONOACETIC ACID: ANTIVIRAL AND CYTOTOXIC ACTION.....	1R01 AI14357-01	61,080
BOEZI, JOHN A.....	MAREK'S DISEASE HERPES VIRUS INDUCED DNA POLYMERASE.....	5R01 CA17554-03	44,209
BRUBAKER, ROBERT R.....	IRON-DEPENDENT ENHANCEMENT OF VIRULENCE IN YERSINIAE.....	1R01 AI13590-01	45,700
BULL, ROBERT W.....	IMMUNOHEMATOLOGICAL REFERENCE CENTER SUPPORT.....	3P40 RR00931-02S1	2,995
BULL, ROBERT W.....	IMMUNOHEMATOLOGICAL REFERENCE CENTER SUPPORT.....	5P40 RR00931-03	75,647
CANTLON, JOHN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07049-12	103,375
CARROW, REXFORD E.....	MUSCULAR DYSTROPHY: ALTERATIONS MEDIATED BY EXERCISE.....	5R01 NS10716-03	101,681
CHOU, CHING-CHUNG.....	MECHANISMS OF HEMODYNAMIC CHANGES DURING DIGESTION.....	2R01 HL15231-04A1	50,350
CLEMENS, LYNWOOD G.....	NEURAL CONTROL OF SEXUAL BEHAVIOR IN THE RAT.....	5R01 HD06760-06	94,283
CONVEY, EDWARD M.....	CONTROL OF BOVINE SERUM PROLACTIN CONCENTRATION.....	5R01 AM15899-06	45,700
CONVEY, EDWARD M.....	CONTROL OF BOVINE LUTEINIZING HORMONE SECRETION.....	5R01 HD10123-02	39,531
COSTILOW, RALPH N.....	METABOLISM OF AMINO ACIDS BY CLOSTRIDIA.....	5R01 AI10951-06	35,202
DUKELOW, W RICHARD.....	CYTOGENETIC STUDIES OF PRIMATE DEVELOPMENT.....	3R01 HD07534-03S1	6,720
ESSELMAN, WALTER J.....	EXPRESSION OF T LYMPHOCYTE DIFFERENTIATION ANTIGENS.....	5R01 AI12549-03	39,874
FRAKER, PAMELA J.....	DIETARY ZINC: ITS EFFECT ON THE IMMUNE RESPONSE.....	1R01 HD10586-01	45,107
FROMM, PAUL O.....	COMPARATIVE PHYSIOLOGICAL STUDIES OF VERTEBRATE EYES.....	5R01 EY00009-14	48,214
GEBBER, GERARD L.....	CENTRAL NEURAL CONTROL OF CARDIOVASCULAR FUNCTION.....	5R01 HL13187-08	46,391
GERHARDT, PHILIPP.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05772-03	26,951
GOODMAN, JAY I.....	REPAIR SYNTHESIS OF DNA IN PRECANCEROUS RAT LIVER.....	5R01 CA13344-06	46,288
GOODMAN, JAY I.....	NORMAL & PRECANCEROUS REGENERATING LIVER IN VITRO.....	5R01 CA17001-03	38,039
GREGA, GEORGE J.....	PATHOPHYSIOLOGY OF CIRCULATORY SHOCK.....	5R01 HL12421-09	53,907
HAFS, HAROLD D.....	ENDOCRINE CORRELATES WITH PROSTAGLANDIN F2ALPHA.....	5R01 HD06948-05	49,126
HART, HAROLD.....	STUDIES IN ORGANIC SYNTHESIS.....	5R01 GM15997-08	73,945
HATTON, GLENN I.....	INTERNAL SENSING SYSTEMS AND DRINKING BEHAVIOR.....	2R01 NS09140-07	56,591
HEISEY, S RICHARD.....	EFFECTS OF BLOOD FLOW AND ANESTHESIA ON CSF DYNAMICS.....	1R01 NS13565-01	59,570
HELMRATH, THOMAS A.....	NEONATAL GLUCONEOGENESIS: INITIATION AND CONTROL.....	5R01 HD05821-06	61,960
HOOK, JERRY B.....	FACTORS AFFECTING RENAL PHYSIOLOGY IN THE NEWBORN.....	2R01 AM10913-11	73,439

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
HOOK, JERRY B.....	PERINATAL PESTICIDE TOXICITY.....	5R01 ES00560-06	61,710
HUNT, ANDREW D, JR.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA19364-02	76,768
JOHNSON, JOHN I, JR.....	DEVELOPMENT OF AFFERENT NEURAL CENTERS.....	5R01 NS05982-12	34,160
KABARA, JON J.....	SPECIFIC DIETARY LIPIDS AS ANTICARIOGENIC AGENTS.....	1R01 DE04077-01A4	27,378
KALLEN, DAVID J.....	FACTORS INFLUENCING CONTRACEPTIVE USE.....	5R01 HD10689-02	81,146
LEW, GLORIA M.....	ORAL CONTRACEPTIVES AND HYPERTENSION.....	5R01 HL17724-02	18,227
MAHER, VERONICA M.....	ROLE OF MUTAGENESIS IN CHEMICAL CARCINOGENESIS.....	2R01 CA21247-02	130,961
MAHER, VERONICA M.....	INTERACTION OF CARCINOGENS WITH DNA—REPAIR OF LESIONS.....	5R01 CA21253-02	93,316
MC CONNELL, DAVID G.....	STUDIES OF RETINAL ROD CYCLIC GMP PHOSPHODIESTERASE.....	3R01 EY01574-01S1	17,822
MC CORMICK, J JUSTIN.....	TRANSFORMATION OF HUMAN CELLS BY CHEMICAL CARCINOGENS.....	1R01 CA21289-01	65,386
MEITES, JOSEPH.....	HYPOTHALAMO-PITUITARY-OVARIAN RELATIONSHIPS IN AGING RAT.....	5R01 AG00416-03	67,320
MEITES, JOSEPH.....	CONTROL OF SECRETION OF HYPOTHALAMIC HORMONES.....	5R01 AM04784-17	87,349
MEITES, JOSEPH.....	NEUROENDOCRINE CONTROL OF MAMMARY AND PITUITARY TUMORS.....	5R01 CA10771-10	91,674
MICHELAKIS, ANDREW M.....	THE ENDOCRINE KIDNEY IN HYPERTENSION.....	5R01 HL18019-04	78,973
MICHELAKIS, ANDREW M.....	NEW VASOACTIVE FACTORS AND THEIR ROLE IN HYPERTENSION.....	5R01 HL18027-03	71,986
MILLER, HAROLD C.....	DEVELOPMENT OF IMMUNOGENESIS FROM BONE-MARROW CELLS.....	5R01 CA13396-06	65,493
MOORE, KENNETH E.....	THE ROLE OF CATECHOLAMINES IN DRUG TOXICITY.....	5R01 NS09174-12	57,739
NADLER, KENNETH D.....	HEMOGLOBIN SYNTHESIS IN GLYCINE MAX NODULES.....	5R01 AM18295-03	25,783
PATRICK, RICHARD A.....	STUDIES ON COMPLEMENT CLEAVAGE REACTIONS.....	5R01 AI11367-04	39,966
POTCHEN, E JAMES.....	A COMMUNITY BASED STUDY OF COLORECTAL CANCER CONTROL.....	5R18 CA18871-02	142,257
RIVERA, EVELYN M.....	CARCINOGEN-INDUCED RAT MAMMARY HYPERPLASIAS.....	5R01 CA17862-03	49,721
ROBINSON, NORMAN E.....	DEVELOPMENT OF COLLATERAL VENTILATION.....	2R01 HL17768-03	41,572
ROMSOS, DALE R.....	EFFECT OF MEAL PATTERN AND DIET ON ENERGY METABOLISM.....	5R01 AM15847-07	54,894
ROMSOS, DALE R.....	EFFECT OF DIET ON CARBOHYDRATE AND LIPID METABOLISM.....	5R01 AM18957-02	52,008
ROSENBERG, BARNETT.....	METAL COORDINATION COMPLEXES IN CANCER CHEMOTHERAPY.....	5R01 CA11349-09	97,526
ROTTMAN, FRITZ M.....	CONTROL OF RNA PROCESSING IN NORMAL AND TUMOR CELLS.....	5R01 CA13175-06	111,779
SADOFF, HAROLD L.....	CELL DIFFERENTIATION IN PROCARYOTIC ORGANISMS.....	5R01 AI01863-20	66,123
SMITH, WILLIAM L.....	REGULATION OF UTERINE PROSTAGLANDIN BIOSYNTHESIS.....	5R01 HD10013-02	37,179
STICKNEY, JANICE L.....	DIGITALIS: MECHANISMS OF CARDIAC SYMPATHETIC EFFECTS.....	3R01 HL15802-02S1	2,870
SUELTER, CLARENCE H.....	COMPARATIVE ENZYMOLOGY OF NORMAL AND ABNORMAL TISSUE.....	2R01 GM20716-04	57,541
SWEELEY, CHARLES C.....	CHEMISTRY AND METABOLISM OF SPHINGOLIPIDS.....	2R01 AM12434-10	124,989
SWEELEY, CHARLES C.....	FOURTH INTERNATIONAL SYMPOSIUM ON GLYCOCONJUGATES.....	1R13 AM20945-01	10,000
SWEELEY, CHARLES C.....	ROLE OF GLYCOSPHINGOLIPIDS IN PLATELET AGGREGATION.....	5R01 HL17462-02	29,620
SWEELEY, CHARLES C.....	SUPPORT FOR MASS SPECTROMETRY FACILITY.....	5P41 RR00480-09	137,454
TIEN, H TI.....	BILAYER LIPID MEMBRANES IN AQUEOUS MEDIA.....	5R01 GM14971-12	99,251
TOLBERT, N EDWARD.....	PEROXISOMES IN DEVELOPING LIVER AND KIDNEY.....	5R01 HD06441-06	92,497
TROSKO, JAMES E.....	MUTATION AND DEREPRESSION OF GENES IN CARCINOGENESIS.....	1R01 CA21104-01	71,180
TUCKER, H ALLEN.....	CORTISOL RECEPTORS IN CULTURED MAMMARY TISSUE.....	5R01 HD05750-06	43,619
TUCKER, H ALLEN.....	PHOTOPERIODIC CONTROL OF BOVINE SERUM PROLACTIN.....	5R01 HD09883-02	45,634
TULINSKY, ALEXANDER.....	X-RAY CRYSTALLOGRAPHIC STUDIES OF ALPHA-CHYMOTRYPSIN.....	5R01 GM21225-03	44,379
VAN EGEREN, LAWRENCE F.....	INTERPERSONAL STRESS AND CORONARY-PRONE BEHAVIOR.....	1R01 HL21319-01	70,237
WALKER, BRUCE E.....	DEVELOPMENT OF THE PALATE AND LIP.....	5R01 DE02852-10	65,104
WEAVER, LYNNE C.....	AUTONOMIC CONTROL OF RENAL FUNCTION.....	1R01 HL21436-01	39,942
WELLS, WILLIAM W.....	ENERGY RELATIONSHIPS IN INBORN ERRORS OF METABOLISM.....	5R01 AM10209-12	75,952
WELLS, WILLIAM W.....	METABOLISM OF MYO-INOSITOL DURING DEVELOPMENT.....	5R01 HD06007-06	49,650
WELSCH, FRANK.....	DISTRIBUTION AND FUNCTIONS OF ACH IN PLACENTA.....	2R01 HD07091-04A1	33,455
WELSER, JOHN R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05623-11	50,798
WESTON, W DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05656-10	113,592
WILLIAMS, JEFFREY F.....	STUDY OF IMMUNOLOGY DURING LARVAL TAPEWORM INFECTION.....	5R01 AI10842-06	93,550
WILSON, JOHN E.....	MITOCHONDRIAL HEXOKINASE AND BRAIN METABOLISM.....	5R01 NS09910-07	67,157
ORGANIZATION TOTAL	88	5,229,270	
ELOISE			
WAYNE COUNTY GENERAL HOSPITAL ZIP CODE 48132			
MC CANN, DAISY S.....	ACTIVE SITE CHARACTERIZATION OF PARATHYROID HORMONE.....	5R01 AM18680-02	13,280
MC CANN, DAISY S.....	SCREENING OF HYPERTENSIVES BY RIA OF METANEPHRINES.....	5R01 NS12584-02	30,387
ORGANIZATION TOTAL	2	43,667	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
HOLLAND			
HOPE COLLEGE ZIP CODE 49423			
BOYER, RODNEY F.....	2-HYDROXY FATTY ACIDS: METABOLISM IN BRAIN TISSUE.....	5R01 NS13081-02	10,765
ORGANIZATION TOTAL	1	10,765	
MARQUETTE			
NORTHERN MICHIGAN UNIVERSITY ZIP CODE 49855			
WEST, LUTHER S.....	FIVE YEAR SUPPLEMENT TO 'MUSCA DOMESTICA'.....	1R01 LM02708-01	35,131
ORGANIZATION TOTAL	1	35,131	
ROCHESTER			
OAKLAND UNIVERSITY ZIP CODE 48063			
CALLEWAERT, DENIS M.....	MOLECULAR MECHANISMS IN CELLULAR IMMUNOLOGY.....	5R01 AI12766-03	38,345
CALLEWAERT, DENIS M.....	EVOLUTION OF CERTAIN DEHYDROGENASES IN PSEUDOMONAS.....	5R01 GM22233-02	16,645
DOHERTY, PAUL M.....	DIFFUSION OF PROTEINS IN INTACT CATARACTOUS LENSES.....	5R01 EY01698-02	30,367
GOUDSMIT, ESTHER M.....	MOLLUSCAN REPRODUCTIVE CYCLE: NEUROHORMONAL CONTROL.....	5R01 GM23240-02	46,969
KINSEY, V EVERETT.....	INTRAOCULAR FLUID DYNAMICS.....	3R01 EY00483-08S1	800
KINSEY, V EVERETT.....	INTRAOCULAR FLUID DYNAMICS.....	5R01 EY00483-09	88,872
OBEAR, FREDERICK W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07131-08	40,253
REDDAN, JOHN R.....	CONTROL OF CELL DIVISION IN THE OCULAR LENS.....	5R01 EY00362-11	78,543
REDDY, VENKAT N.....	STUDY OF INTRAOCULAR TRANSPORT.....	3R01 EY00484-09S1	12,500
REDDY, VENKAT N.....	STUDY OF INTRAOCULAR TRANSPORT.....	5R01 EY00484-10	95,784
REDDY, VENKAT N.....	PROTEINS OF NORMAL AND CATARACTOUS LENSES.....	1R01 EY02027-01	61,153
RILEY, MICHAEL V.....	CONTROL OF CORNEAL HYDRATION AND TRANSPARENCY.....	5R01 EY00541-08	72,379
ROY, ARUN K.....	HORMONAL CONTROL OF ALPHA-2U GLOBULIN SYNTHESIS IN LIVER.....	5R01 AM14744-07	47,077
UNAKAR, NALIN J.....	MORPHOLOGICAL STUDIES IN EXPERIMENTAL CATARACTS.....	5R01 EY01680-02	44,392
WINKLER, BARRY S.....	PHOTORECEPTOR ELECTROGENESIS: DYNAMICS AND CONTROLS.....	5R01 EY01219-03	55,035
ZEPELIN, HAROLD.....	AGING AND THE QUALITY OF HUMAN SLEEP.....	1R23 AG00723-01	12,518
ORGANIZATION TOTAL	15	741,632	
SAGINAW			
SAGINAW COOPERATIVE HOSPITALS ZIP CODE 48601			
DIMITROV, NIKOLAY V.....	PRIMARY BREAST CANCER THERAPY (NSABP).....	1R10 CA20647-01	18,829
ORGANIZATION TOTAL	1	18,829	
STATE TOTAL	415	33,421,513	
MINNESOTA			
AUSTIN			
UNIVERSITY OF MINNESOTA ZIP CODE 55912			
BAUMANN, WOLFGANG J.....	UNUSUAL LIPIDS IN CANCER TISSUES.....	5R01 CA12150-06	41,985
BROCKMAN, HOWARD L, JR.....	REGULATION OF CHOLESTERYL ESTER LEVELS IN THE AORTA.....	3R01 HL17371-03S1	6,795
CHIPAULT, JACQUES R.....	DIET, FECAL STEROIDS AND COLON CANCER.....	5R01 CA19519-02	41,830
CHIPAULT, JACQUES R.....	LIPIDS OF CATARACTS.....	2R01 EY01424-03	59,110
HOLMAN, RALPH T.....	REQUIREMENTS OF POLYUNSATURATED FATTY ACIDS.....	5R01 AM04524-17	79,519
HOLMAN, RALPH T.....	CHEMICAL AND BIOLOGICAL PROPERTIES OF LIPIDS.....	5P01 HL08214-14	565,136
HOLMAN, RALPH T.....	THE METABOLISM OF TRANS FATTY ACIDS.....	1R01 HL21513-01	68,064
PRIVETT, ORVILLE S.....	RELATIONSHIPS OF DIET AND AIR POLLUTANTS TO AGING.....	5R01 AG00174-03	87,830
PRIVETT, ORVILLE S.....	EFFECT OF DIETARY FAT ON GLYCERIDE STRUCTURE.....	2R01 AM04942-17	74,347
SCHLENK, HERMANN.....	INTERCONVERSION OF LIPIDS IN ANIMALS.....	5R01 AM13424-17	76,590
SCHLENK, HERMANN.....	CHEMISTRY AND BIOCHEMISTRY OF A NEW TYPE OF FATTY ACIDS.....	5R01 GM22880-02	47,213

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
ORGANIZATION TOTAL	11	1,148,419	
DULUTH			
UNIVERSITY OF MINNESOTA ZIP CODE 55812			
ANDERSON, PAUL M.....	CYANATE: REACTION WITH CYANASE AND AMIDOTRANSFERASES.....	5R01 GM22434-02	37,582
HUNTLEY, THOMAS E.....	PLATELET FATTY ACID METABOLISM IN DIABETES.....	5R01 HL20411-02	58,568
THEISEN, CHARLES T.....	ANIMAL RESOURCE IMPROVEMENT FACILITY.....	1P40 RR00943-01A2	66,560
ZIEGLER, RICHARD J.....	HERPES VIRUS INFECTIONS OF NERVE TISSUE IN VITRO.....	1R01 NS13326-01A1	49,724
ORGANIZATION TOTAL	4	212,434	
MINNEAPOLIS			
HENNEPIN COUNTY MEDICAL CENTER ZIP CODE 55415			
HODGES, MORRISON.....	MYOCARDIAL BLOOD FLOW IN ACUTE MYOCARDIAL INFARCTION.....	5R01 HL18190-02	28,346
ORGANIZATION TOTAL	1	28,346	
UNIVERSITY OF MINNESOTA ZIP CODE 55455			
ABUL-HAJJ, YUSUF J.....	METABOLISM OF STEROIDS BY HUMAN BREAST CANCER.....	1R01 CA20530-01	18,990
AHMED, KHALIL.....	STUDIES OF NORMAL AND NEOPLASTIC PROSTATE.....	2R01 CA15062-04	57,755
AMPLATZ, KURT.....	RADIOGRAPHIC VENTRICULOMETRY FOR CORONARY HEART DISEASE.....	2R01 HL16484-03	41,122
ANDERS, MARION W.....	METABOLISM AND CELLULAR INTERACTIONS OF HALOFORMS.....	1R01 CA21899-01	50,773
ANDERS, MARION W.....	ENVIRONMENTAL CHEMICALS AS CO-TOXICANTS.....	5R01 ES00953-03	41,167
ANDERS, MARION W.....	METABOLISM OF DIHALOMETHANES.....	5R01 ES01082-03	31,998
ANDERSON, DWIGHT L.....	MORPHOGENESIS OF BACTERIOPHAGE PHI-29.....	5R01 DE03606-09	79,874
ANDERSON, ROBERT W.....	VENTRICULAR DYSFUNCTION AFTER CARDIAC VALVULAR SURGERY.....	7R01 HL22152-01	50,800
ANDERSON, ROBERT W.....	ANALYSIS OF PULMONARY CIRCULATION IN HIGH FLOW STATES.....	7R01 HL22332-01	35,720
ARMSTRONG, WALLACE D.....	MONOGRAPH ON FLUORIDE IN BIOLOGY AND HEALTH SCIENCES.....	1R01 LM02696-01	15,196
AYALA, GIOVANNI F.....	EFFECT OF EPILEPTOGENIC DRUGS ON MEMBRANE PROPERTIES.....	2R01 NS09784-04A1	39,783
BACHE, ROBERT J.....	THE CORONARY VASCULAR RESPONSE TO ISCHEMIA.....	2R01 HL20598-02	64,358
BALFOUR, HENRY H, JR.....	THE ROLE OF VIRUSES IN RENAL TRANSPLANT PATIENTS.....	5R01 AM18883-02	66,806
BARBOSA, JOSE J.....	GENETIC AND HLA STUDIES IN DIABETES MELLITUS.....	1R01 AM20729-01	84,413
BAUER, G ERIC.....	HORMONE SYNTHESIS AND SECRETION IN ANGLERFISH ISLETS.....	1R01 AM19223-01A1	34,497
BENSON, ELLIS S.....	HEMOGLOBIN AND RED CELL SYSTEM IN HEMOGLOBINOPATHIES.....	5P01 HL16833-03	444,044
BISHOP, JONATHAN S.....	INSULIN RESISTANCE AND PHOSPHO-PROTEIN PHOSPHATASES.....	5R01 AM13319-09	29,766
BLACKSHEAR, PERRY L, JR.....	PULSATORY WATER FLUX AND ENDOTHELIAL CELL DESQUAMATION.....	1R01 HL21188-01	85,698
BLOEDEL, JAMES R.....	THE NEOCEREBELLUM-ASPECTS OF ORGANIZATION AND FUNCTION.....	5R01 NS09447-08	74,418
BLOEDEL, JAMES R.....	A PSYCHOPHYSICAL AND NEUROPHYSICAL STUDY OF PAIN.....	5R01 NS13002-02	50,882
BLUMENTHAL, MALCOLM N.....	GENETIC MAPPING OF THE IR GENE TO RAGWEED ANTIGEN E.....	5R01 AI13132-02	65,541
BODLEY, JAMES W.....	THE MECHANISM OF TRANSLOCATION.....	5R01 GM17101-06	22,506
BODLEY, JAMES W.....	PHOTOCHEMICAL CROSS-LINKING OF THE RIBOSOME.....	5R01 GM23276-02	30,955
BRAND, GERHARD K.....	FOREIGN BODY TUMORIGENESIS.....	5R01 CA10712-10	68,863
BRANDA, RICHARD F.....	CELLULAR FOLATE METABOLISM IN PRE-LEUKEMIA.....	1R01 CA20251-01	27,069
BROWN, DAVID M.....	ISLET TRANSPLANTATION AND DIABETIC VASCULAR DISEASE.....	2R01 AM17697-04	77,883
BRYANT, ROBERT G.....	SOLVENT AND SMALL SOLUTES IN TISSUES AND PROTEINS.....	5R01 GM18719-06	33,997
BUCHWALD, HENRY.....	TOTALLY IMPLANTABLE ARTIFICIAL 'BETA CELL'.....	1R01 AM19033-01	73,575
BUCHWALD, HENRY.....	CANCER CHEMOTHERAPY WITH A TOTALLY IMPLANTABLE PUMP.....	1R01 CA20564-01	23,005
BUCHWALD, HENRY.....	DEVICE FOR CONTINUOUS INFUSION DRUG SCREENING.....	5R01 GM22605-02	50,477
BUCHWALD, HENRY.....	EFFECTS OF METABOLIC SURGERY ON THE HYPERLIPIDEMIAS.....	2R01 HL11901-11	95,279
BUCHWALD, HENRY.....	PROGRAM ON SURGICAL CONTROL OF THE HYPERLIPIDEMIAS.....	5P01 HL15265-04	1,420,043
BURKHARDT, DWIGHT A.....	VISION AND INTRARETINAL POTENTIALS.....	5R01 EY00460-09	28,811
COHN, JAY N.....	SPLANCHNIC HEMODYNAMICS IN MAN.....	2R01 HL18020-03	39,518
COHN, JAY N.....	HEMODYNAMIC FACTORS IN CLINICAL SHOCK AND HYPOTENSION.....	5R01 HL18043-03	54,724
COLLINS, W ANDREW.....	CHILD PSYCHOLOGY SYMPOSIUM SUPPORT.....	1R13 HD10650-01	10,050
CRADDOCK, PHILIP R.....	LEUKEMIA THERAPY AND NEUTROPHIL DYSFUNCTION.....	2R01 CA15627-04	54,542
DALMASSO, AGUSTIN P.....	ROLE OF COMPLEMENT IN INTRAVASCULAR COAGULATION.....	5R01 HL15215-05	36,536
DELANEY, JOHN P.....	GASTRIN CELL POPULATIONS.....	1R01 AM19326-01A1	68,542
DELANEY, JOHN P.....	A PROSTHETIC SPHINCTER FOR INTESTINAL STOMAS.....	2R26 CA18015-03	48,143
DEMPSEY, MARY E.....	ENZYMIC CHOLESTEROL SYNTHESIS.....	2R01 HL08634-14	110,089

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
DOUGHMAN, DONALD J.....	ORGAN CULTURE OF CORNEAS.....	3R01 EY01211-03S2	59,805
DOUGLAS, STEVEN D.....	MORPHODYNAMICS OF HUMAN LYMPHOCYTES AND MONOCYTES.....	2R01 AI12478-04	77,074
DREWES, LESTER R.....	METABOLISM IN THE BRAIN.....	1R01 NS13597-01	62,046
DUNHAM, EARL W.....	VASCULAR ROLE OF PROSTAGLANDIN AND CYCLIC NUCLEOTIDES.....	5R01 HL15447-05	24,974
DUVALL, ARNDT J, III.....	FLUID BARRIERS AND PATHWAYS WITHIN THE COCHLEA.....	2R01 NS04615-15	68,927
DWORKIN, MARTIN.....	CELL INTERACTIONS DURING MYXOBACTERIAL DEVELOPMENT.....	5R01 GM19957-05	59,985
EDSTROM, RONALD D.....	NORMAL AND LEUKEMIC LYMPHOCYTE SURFACE GLYCOPROTEINS.....	3R01 CA14351-03S1	5,292
EINZIG, STANLEY.....	REGIONAL BLOOD FLOW IN VIRAL MYOCARDITIS.....	5R01 HL18204-03	13,367
EISENBERG, M MICHAEL.....	GASTROINTESTINAL/BILIARY VAGAL-GASTRIN MECHANISMS.....	5R01 AM18379-03	59,423
ERLANDSEN, STANLEY L.....	LYSOZYME SECRETION AND PANETH CELL FUNCTION.....	5R01 AM18344-03	35,116
ESTENSEN, RICHARD D.....	A COCARCINOGEN AS A LYMPHOCYTE MITOGEN.....	1R01 CA22195-01	59,546
FARAS, ANTHONY J.....	RNA-DIRECTED DNA POLYMERASE AND 70S RNA OF ONCORNAVIRUS.....	5R01 CA18303-03	49,024
FARAS, ANTHONY J.....	MECHANISM OF ONCORNAVIRUS PROVIRAL DNA SYNTHESIS.....	5R01 CA20011-02	28,965
FERRIERI, PATRICIA.....	HOST RESPONSES TO GROUP B STREPTOCOCCI.....	1R01 AI13926-01	60,271
FOWLKS, W L.....	STUDIES OF THE BLOOD VITREOUS BODY BARRIER.....	5R01 EY01258-03	79,219
FOX, IRWIN J.....	REGIONAL MYOCARDIAL FLOW AND FUNCTION RELATIONSHIPS.....	5R01 HL18024-03	32,514
FRALEY, ELWIN E.....	VIROLOGY, IMMUNOBIOLOGY, & BIOCHEMISTRY OF RENAL CANCER.....	5P01 CA13095-06	196,049
FRANTZ, IVAN D, JR.....	INTERMEDIARY METABOLISM OF CHOLESTEROL.....	3R01 HL01875-22S1	9,055
FROHRIB, DARRELL A.....	SYSTEM DESIGN STUDY OF FLUID ENERGY TRANSFER DEVICES.....	5R01 GM21178-04	67,885
FURCHT, LEO T.....	PATHOBIOLOGY OF THE CELL MEMBRANE IN CANCER.....	1R01 CA21463-01	77,484
GAJL-PECZALSKA, KAZIMIERA.....	IMMUNOLOGY OF HUMAN LYMPHOID TUMORS OF B-CELL ORIGIN.....	5R01 CA17034-03	42,101
GASSMAN, PAUL G.....	HIGHLY STRAINED NITROGEN HETEROCYCLICS.....	5R01 CA17269-03	74,796
GAULT, N L, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05385-16	213,709
GERMAINE, GREG R.....	ROLE OF ORAL BACTERIAL PROTEASES IN ORAL INFLAMMATION.....	5R01 DE04171-03	61,063
GOLDBERG, NELSON D.....	THE CELL MEMBRANE IN PROLIFERATION AND ONCOGENESIS.....	5P01 CA16228-03	277,729
GOLDBERG, NELSON D.....	KREBS CYCLE AND CYCLIC NUCLEOTIDE CONTROL.....	2R01 NS05979-12	116,436
GONZALEZ, RICARDO.....	STEROL METABOLISM IN HUMAN RENAL CANCER.....	5R01 CA18256-03	9,552
GOODALE, ROBERT L, JR.....	CANCER DETECTION PROGRAM.....	5R26 CA20115-02	57,126
GORLIN, ROBERT J.....	ORAL PATHOLOGY SUPPORT.....	2R01 DE01770-15	88,740
GRAGE, THEODOR B.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12282-05S3	14,422
GRAY, BEULAH H.....	METABOLISM OF LEUKOCYTES DURING PHAGOCYTOSIS.....	5R01 AI13614-02	33,767
GRAY, GARY R.....	ANTITUMOR ACTIVE COMPONENTS OF BCG CELL WALLS.....	2R01 CA15325-04	84,739
GUTMANN, HELMUT R.....	MECHANISM OF ACTION OF AROMATIC AMINES IN CELL CULTURE.....	2R01 CA02571-22	77,903
HALBERG, FRANZ.....	MEAL-TIMING, CIRCADIAN RHYTHMS AND LIFESPAN.....	1R01 AG00158-01	74,531
HALBERG, FRANZ.....	CARCINOSTATIC TREATMENT ACCORDING TO SPECTRUM OF RHYTHMS.....	5R01 CA14445-05	138,676
HANSON, RUSSELL F.....	METABOLISM OF BILE ACIDS.....	2R01 AM15077-07	82,174
HARRIS, JOHN E.....	STUDIES OF THE TRIPARANOL CATARACT.....	3R01 EY01200-03S1	12,900
HARRIS, JOHN E.....	STUDIES OF THE TRIPARANOL CATARACT.....	5R01 EY01200-04	38,906
HARTUP, WILLARD W.....	RESEARCH IN DEVELOPMENTAL PSYCHOLOGY.....	5P01 HD05027-08	300,635
HEGRE, ORION D.....	FETAL PANCREATIC TRANSPLANTATION.....	1R01 AM19899-01	63,818
HEGRE, ORION D.....	FETAL ENDOCRINOLOGY AND DIABETES.....	5R01 HD00412-20	46,087
HOGENKAMP, HENRICUS P.....	STRUCTURE AND REACTIONS OF THE COBAMIDE COENZYMES.....	5R01 GM23773-02	48,342
HOLTZMAN, JORDAN L.....	CYTOCHROME-REDUCTASE ACTIVATION IN HYDROXYLATIONS.....	5R01 GM21310-03	25,221
HOLTZMAN, JORDAN L.....	FREE RADICALS IN THE TOXICITY OF NITRO AND AZO DRUGS.....	5R01 GM23032-02	28,574
HOWARD, RICHARD J.....	VIRAL DIABETES: RENAL LESIONS, ANTIBODY & TRANSPLANTS.....	1R01 AM21068-01	31,913
HUMPHREY, EDWARD W.....	POST-TRAUMATIC PULMONARY INSUFFICIENCY.....	5R01 HL18762-02	68,381
JACOB, HARRY S.....	ABNORMAL BLOOD CELL MEMBRANES IN DISEASE.....	2R01 AM15730-09	48,318
JACOB, HARRY S.....	COMPLEMENT-INDUCED PULMONARY INJURY.....	5R01 HL19725-02	67,564
JACOBS, DAVID R, JR.....	PHYSICAL ACTIVITY AND INCIDENCE OF CHRONIC HEART DISEASE.....	1R01 HL20662-01	63,912
JENKINS, JAMES J.....	CENTER FOR RESEARCH IN HUMAN LEARNING.....	5P01 HD01136-14	229,694
JOHNSON, RUSSELL C.....	CHARACTERIZATION OF PATHOGENIC & SAPROPHYTIC LEPTOSPIRAE.....	5R01 AI06589-13	39,422
JOHNSON, RUSSELL C.....	COMPARATIVE STUDIES OF PARASITIC SPIROCHETES.....	5R01 AI08124-10	45,342
JOHNSON, RUSSELL C.....	IN VITRO CULTIVATION OF TREPONEMA PALLIDUM.....	5R01 AI12978-02	30,286
KAPLAN, EDWARD L.....	PROBLEMS IN PREVENTION OF RHEUMATIC HEART DISEASE.....	5R01 HL19307-02	94,766
KAUNG, HUE-LEE C.....	DEVELOPMENTAL STUDIES OF ENDOCRINE PANCREAS.....	1R01 AM19868-01	34,622
KENNEDY, BYRL J.....	ACUTE LEUKEMIA GROUP B—MEDICAL ONCOLOGY SUPPORT.....	3R10 CA16450-02S1	14,492
KENNEDY, BYRL J.....	CANCER & LEUKEMIA GROUP B—MEDICAL ONCOLOGY SUPPORT.....	2R10 CA16450-03	138,050
KENNEDY, BYRL J.....	CLINICAL CANCER EDUCATION PROGRAM, PARTS I AND II.....	5R25 CA19527-02	157,396
KENNEDY, WILLIAM R.....	FINE STRUCTURE OF MUSCLE SPINDLES.....	5R01 NS10969-03	31,339
KERSEY, JOHN H.....	EPIDEMIOLOGY OF CANCER IN IMMUNODEFICIENCY FAMILIES.....	5R01 CA18083-02	86,117

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KIRKWOOD, SAMUEL.....	USE OF ENZYMES IN STRUCTURAL CARBOHYDRATE CHEMISTRY.....	5R01 GM09293-15	42,364
KNOX, CHARLES K.....	NEURAL CONTROL OF RESPIRATION.....	2R01 HL16430-04	57,662
KNYCH, EDWARD T, JR.....	MECHANISM OF ANGIOTENSIN ACTION: ROLE OF RECEPTOR.....	5R01 HL18893-02	36,990
KOFFLER, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07052-12	171,642
KOLTHOFF, IZAAK M.....	POLAROGRAPHY WITH ALBUMIN AND CANCEROUS HUMAN BLOOD SERA.....	5R01 CA16466-03	23,779
KRIVIT, WILLIAM.....	PEDIATRIC ONCOLOGY PROGRAM PROJECT.....	1P01 CA21737-01	280,510
LEE, JUI S.....	VILLUS PRESSURES AND LYMPH FLOW OF INTESTINE.....	5R01 AM18085-03	31,318
LEETE, EDWARD.....	METABOLISM OF NATURAL PRODUCTS OF MEDICINAL INTEREST.....	5R01 GM13246-20	70,333
LEON, ARTHUR S.....	EXERCISE, DIABETES AND VASCULAR RISK.....	1R01 AM20311-01	77,552
LEVITT, MICHAEL D.....	PRODUCTION AND ABSORPTION OF INTESTINAL GASES.....	5R01 AM13309-09	75,517
LEVITT, SEYMOUR H.....	RADIATION ONCOLOGY RESEARCH AND CLINICAL CENTER.....	5P01 CA15548-03	461,754
LI, JONATHAN J.....	ESTROGEN CARCINOGENICITY AND HORMONE DEPENDENT TUMORS.....	1R01 CA22008-01	66,036
LIFSON, NATHAN.....	HETEROGENEITY OF INTESTINAL MICROCIRCULATION.....	5R01 AM19209-02	32,428
LILLEMARK, WILLIAM F.....	ADHERENCE OF ORAL STREPTOCOCCI TO HYDROXYAPATITE.....	1R01 DE04614-01	40,167
LILLEHEI, RICHARD C.....	RES STIMULATING MATERIALS IN EXPERIMENTAL SHOCK.....	1R01 HL18731-01A1	73,496
LIMAS, CATHERINE.....	CELL SURFACE CHANGES IN TRANSITIONAL CELL TUMORS.....	1R01 CA22753-01	19,785
MALKINSON, ALVIN M.....	GENETICS OF MURINE CYCLIC AMP EFFECTOR MOLECULES.....	5R01 GM22492-02	28,685
MANNERING, GILBERT J.....	DRUG METABOLISM AND BIOCHEMICAL PHARMACOLOGY.....	5R01 GM15477-11	245,199
MARATSOS, MICHAEL P.....	PRESPONTANEOUS LINGUISTIC COMPETENCE.....	5R01 HD09112-02	8,291
MARIANI, TONI N.....	INTERRELATIONSHIP BETWEEN MALIGNANCY AND IMMUNITY.....	5R01 CA12929-06	51,628
MARTINSON, IDA M.....	HOME CARE FOR CHILD WITH CANCER.....	3R18 CA19490-01S1	1,500
MARTINSON, IDA M.....	HOME CARE FOR CHILD WITH CANCER.....	5R18 CA19490-02	122,526
MATAS, ARTHUR J.....	TRANSPLANTATION OF LIVER CELLS.....	5R01 AM19113-02	45,809
MC EVOY, ROBERT C.....	DIFFERENTIATION/GROWTH OF PANCREAS IN VIVO/IN VITRO.....	1R01 AM19851-01	39,789
MC KHANN, CHARLES F.....	BIOLOGICAL AND CLINICAL STUDIES OF COLON CARCINOMA.....	5R26 CA17774-03	88,224
MC KHANN, CHARLES F.....	LYMPHOID CELL INTERACTIONS IN MALIGNANCY.....	5R01 CA19510-02	75,881
MC KHANN, CHARLES F.....	ROLE OF CIRCULATING ANTIGEN IN TUMOR IMMUNITY.....	1R01 CA21431-01	85,657
MEYER, MAURICE W.....	CIRCULATION STUDIES IN TEETH AND SUPPORTING STRUCTURES.....	2R01 DE02212-10	104,131
MICHAEL, ALFRED F.....	STUDY OF RENAL DISEASE IN CHILDHOOD.....	2R01 AI10704-17	104,270
MILLER, JACK W.....	OXYTOCIN AND NEUROPHYSIN STORAGE AND RELEASE.....	5R01 HD10268-02	54,594
MILLER, JOSHUA.....	ENHANCEMENT & GRAFT ADAPTATION IN ORGAN TRANSPLANTATION.....	2R01 AM17407-04	64,644
MILLER, LARRY L.....	ELECTROCHEMICAL MEDICINAL SYNTHESIS.....	7R01 GM24493-01	54,106
MILLER, WILMER G.....	CHOLESTERIC BIOPOLYMER LIQUID CRYSTALS.....	5R01 GM16922-09	56,916
MOLDOW, CHARLES F.....	CELL SURFACE RECEPTORS FOR ONCOGENIC VIRUSES.....	5R01 CA13722-05	51,293
MONTGOMERY, MARK R.....	STUDIES ON OXIDANT-INDUCED PULMONARY LESIONS.....	1R01 ES01365-01	31,657
NAJARIAN, JOHN S.....	STUDIES OF ORGAN TRANSPLANTATION IN ANIMALS AND MAN.....	2P01 AM13083-10	695,472
NAJARIAN, JOHN S.....	IMMUNOLOGIC ADAPTATION TO HUMAN RENAL ALLOGRAFTS.....	5R01 AM16011-05	68,563
NAJARIAN, JOHN S.....	ISOLATION AND TRANSPLANTATION OF PANCREATIC ISLETS.....	2R01 AM16566-04	106,665
NELSON, ROBERT D.....	MECHANISMS OF HUMAN LEUKOCYTE CHEMOTAXIS.....	1R01 CA23707-01	50,362
NESBIT, MARK E, JR.....	COOPERATIVE STUDY OF CHEMOTHERAPY FOR CHILDREN'S CANCER.....	2R10 CA07306-14	212,645
OEGEMA, THEODORE R.....	BIOCHEMISTRY OF LUNG PROTEOGLYCAN.....	1R01 HL21612-01	39,392
OPPENHEIMER, JACK H.....	THYROXINE-PROTEIN INTERACTIONS.....	3R01 AM19812-01S1	26,567
OPPENHEIMER, JACK H.....	THYROXINE-PROTEIN INTERACTIONS.....	2R01 AM19812-02	189,078
PAPARELLA, MICHAEL M.....	EXPERIMENTALLY INDUCED SEROUS OTITIS MEDIA.....	2R01 NS07623-10	39,744
PAPARELLA, MICHAEL M.....	MECHANISMS OF HEARING LOSS.....	5P50 NS12125-03	491,291
PASS, FRANKLIN.....	HUMAN PAPILOMA VIRUS-ASSOCIATED ANTIGENS.....	5R01 CA15955-04	43,960
PLAGEMANN, PETER G.....	REPLICATION OF LDH-ELEVATING VIRUS AND MENGO VIRUS.....	5R01 CA16959-11	62,064
PRINEAS, RONALD J.....	PREVENTION OF HIGH BLOOD PRESSURE IN CHILDREN.....	1R01 HL19877-01A1	180,552
PURPLE, RICHARD L.....	STUDIES ON INTEGRATIVE MECHANISMS OF NEURONS.....	5R01 EY00293-12	34,538
QUEBBEMANN, ALOYSIUS J.....	THE PHARMACOLOGY OF RENAL TUBULAR EXCRETORY TRANSPORT.....	5R01 AM14145-08	34,669
QUICK, CEDRIC A.....	ETIOLOGY AND IMMUNOBIOLOGY OF LARYNGEAL PAPILOMA.....	5R01 CA17136-02	61,526
OUIE, PAUL G.....	HOST REACTIONS TO MICROORGANISMS IN CHRONIC DISEASE.....	5R01 AI06931-12	53,235
OUIE, PAUL G.....	STUDIES OF OPSONINS IN PHAGOCYTOSIS.....	5R01 AI08821-08	76,705
RAMSAY, ROBERT C.....	INVOLUTIONAL DIABETIC RETINOPATHY STUDY.....	1R01 EY02316-01	15,397
RATHBUN, WILLIAM B.....	GLUTATHIONE METABOLISM IN OCULAR TISSUES.....	2R01 EY01197-04	88,839
RESCH, JOSEPH A.....	CEREBRAL VASCULAR CLINICAL CENTER SUPPORT.....	5P50 NS03364-15	532,578
ROON, ROBERT J.....	L-ASPARAGINASE: SYNTHESIS OF AN EXTERNAL YEAST ENZYME.....	5R01 GM22374-02	44,012
ROON, ROBERT J.....	AMINO ACID TRANSPORT IN YEAST: ENERGETICS & REGULATION.....	5R01 GM23135-02	29,650
SALAPATEK, PHILIP H.....	PATTERN PROCESSING DURING HUMAN INFANCY.....	5R01 HD07317-03	66,615
SAMUELS, S J.....	STUDY OF BEGINNING AND FLUENT READING.....	5R01 HD06730-05	94,387

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
SCARR-SALAPATEK, SANDRA W.....	BEHAVIORAL AND GENETIC STUDIES OF FAMILIES	3R01 HD08016-03S1	10,020
SCHACHTELE, CHARLES F.....	STUDIES ON THE MOLECULAR BASIS OF DENTAL CARIES.....	5R01 DE03654-05	52,363
SCHAFFER, ERWIN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05322-16	50,196
SCHMIDTKE, JON R.....	CELLULAR IMMUNOLOGY OF HUMAN LYMPHOCYTES.....	5R01 AI12813-03	23,892
SCHMIDTKE, JON R.....	MACROPHAGE REGULATION OF ANTITUMOR IMMUNOCYTOTOXICITY.....	1R01 CA21539-01A1	30,793
SCHMITT, OTTO H.....	ANALYSIS OF TIME-COHERENT CARDIOVASCULAR DATA.....	5R01 HL07575-15	66,948
SCHUMAN, LEONARD M.....	EPIDEMIOLOGIC STUDY OF PROSTATIC CANCER.....	5R26 CA18467-03	28,752
SCHWARTZ, JEFFREY S.....	CORONARY VASOMOTION.....	1R23 HL21298-01	38,685
SCHWARTZ, SAMUEL.....	PORPHYRIN, HEME, AND BILE PIGMENT METABOLISM.....	5R01 AM12466-13	67,947
SHIDEMAN, FREDERICK E.....	PHOSPHOLIPIDS AND CARDIAC RECEPTOR FUNCTION.....	1R01 HL20793-01	33,574
SIMMONS, RICHARD L.....	ORGAN REPLACEMENT USING GRAFTS MODIFIED IN VITRO.....	5R01 AI12754-03	97,378
SIMMONS, RICHARD L.....	IMMUNOLOGICAL REACTIVITY IN SPECIAL CIRCUMSTANCES.....	5R01 CA11605-09	138,490
SINGER, LEON.....	FLUORIDE METABOLISM.....	5P01 DE01850-14	152,808
SOINE, TAITO O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05634-10	20,426
SONG, CHANG W.....	VASCULARITY AND REOXYGENATION IN X-IRRADIATED TUMORS.....	2R01 CA13353-04A1	47,399
STAUFFER, LEE D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05448-16	19,162
SUTHERLAND, DAVID E.....	PANCREATIC ISLET TRANSPLANTATION IN DIABETIC PATIENTS.....	5R01 AM19269-02	101,306
TAN, AGNES W.....	CONTROL OF GLYCOGEN SYNTHASE BY PROTEIN MODIFICATION.....	1R01 AM21277-01	31,462
TAYLOR, HENRY L.....	MYOCARDIAL FUNCTION, RISK FACTORS AND FUTURE CHD.....	5R01 HL16909-03	31,520
TERZUOLO, CARLO A.....	PROBLEMS OF NERVE CELL PHYSIOLOGY.....	5R01 NS02567-18	67,754
TOBIAN, LOUIS.....	KIDNEY, NA, CARDIAC OUTPUT, ARTERIOLES, & HYPERTENSION.....	5P01 HL17871-03	215,062
ULSTROM, ROBERT A.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00400-09	554,625
VERNIER, ROBERT L.....	IMMUNOLOGIC MECHANISMS IN CARDIOVASCULAR DISEASE.....	5P01 HL06314-17	1,039,713
VINCE, ROBERT.....	RIBOSOMAL MAPPING WITH CARBOCYCLIC PUROMYCIN ANALOGS.....	5R01 CA13592-08	66,231
VINCE, ROBERT.....	DESIGN OF AMINONUCLEOSIDE CHEMOTHERAPEUTIC AGENTS.....	5R01 CA16623-03	62,073
WANGENSTEEN, O DOUGLAS.....	BLOOD-GAS BARRIER STUDIES IN FETAL & NEONATAL LUNGS.....	5R01 HD08981-03	29,587
WANGENSTEEN, O DOUGLAS.....	BLOOD-GAS BARRIER SOLUTE AND WATER TRANSPORT.....	1R01 HL21376-01	56,773
WANNAMAHER, LEWIS W.....	BIOLOGY OF STREPTOCOCCI.....	5P01 AI08724-22	110,537
WANNAMAHER, LEWIS W.....	DYNAMICS OF STREP ANTIGENS, PHAGES, AND ANTIBODIES.....	2R01 AI09527-13	85,929
WATSON, DENNIS W.....	STREPTOCOCCAL PYROGENIC EXOTOXINS: HOST INTERACTIONS.....	5R01 AI06487-13	67,737
WATSON, DENNIS W.....	IMMUNOBIOLOGY OF GRAM-NEGATIVE BACTERIAL ENDOTOXINS.....	5R01 AI12673-03	36,913
WATTENBERG, LEE W.....	MICROSOMAL INDUCTION AND RESPONSE TO CARCINOGENS.....	5R01 CA09599-20	81,639
WATTENBERG, LEE W.....	INHIBITION OF CHEMICAL CARCINOGENESIS.....	5R01 CA14146-05	74,880
WATTENBERG, LEE W.....	INHIBITION OF NEOPLASIA OF THE LARGE BOWEL.....	2R26 CA15638-04	92,062
WHITE, JAMES G.....	STRUCTURAL PHYSIOLOGY & PATHOLOGY OF BLOOD PLATELETS.....	3R01 HL11880-08S1	3,893
WHITE, JAMES G.....	STRUCTURAL PHYSIOLOGY & PATHOLOGY OF BLOOD PLATELETS.....	2R01 HL11880-09	161,319
WHITE, JAMES G.....	INVESTIGATIONS OF STORED PLATELETS.....	1R01 HL20695-01	75,843
WILSON, IVAN D.....	IMMUNOLOGIC ASPECTS OF PANETH CELL FUNCTION.....	1R01 AM19710-01	43,498
WITKOP, CARL J, JR.....	OCULOCUTANEOUS PIGMENT DEFECTS, BLOCKS AND TREATMENT.....	5R01 AM15317-06	40,933
WITKOP, CARL J, JR.....	ALBINISM.....	5P01 GM22167-03	112,046
WOLD, FINN.....	PROTEIN STRUCTURE AND FUNCTION.....	5R01 GM15053-12	93,943
WORMS, FRANK W.....	QUANTITATION OF JAW FUNCTION.....	2R01 DE03528-04	106,423
YUNIS, JORGE J.....	HETEROCHROMATIN, REPETITIVE DNA, AND CELL FUNCTION.....	3R01 HD01962-11S1	2,642
ZANJANI, ESMAIL D.....	REGULATION OF CELLULAR PROLIFERATION IN NEOPLASTIC STATE.....	7R01 CA23021-01	42,795
ZIMMERMAN, BEN G.....	PHARMACOLOGIC AND REFLEX INFLUENCE ON VASCULAR TONE.....	5R01 HL08570-14	41,235
ORGANIZATION TOTAL	206	18,782,635	

NORTHFIELD

ST. OLAF COLLEGE **ZIP CODE 55057**

HENDRICKSON, H STEWART.....	LIPOLYTIC ENZYME ACTION ON MIXED LIPID MONOLAYERS.....	5R01 NS11777-04	20,132
ORGANIZATION TOTAL	1	20,132	

ROCHESTER

MAYO FOUNDATION **ZIP CODE 55901**

ARNAUD, CLAUDE O.....	PARATHYROID HORMONE AND CALCITONIN.....	5R01 AM12302-10	67,209
ARNAUD, SARA B.....	25-HYDROXYVITAMIN D METABOLISM IN GI DISEASE.....	5R01 AM18977-02	23,653
ATASSI, M ZOUHAIR.....	DETERMINATION OF THE ANTIGENIC STRUCTURE OF LYSOZYME.....	2R01 AI13181-03	43,343

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
ATASSI, M ZOUHAIR.....	IMMUNOCHEMICAL STUDIES ON HEMOGLOBIN AND MYOGLOBIN.....	5R01 AM18920-03	50,677
BEELER, GEORGE W, JR.....	EXCITATION-CONTRACTION COUPLING IN MYOCARDIUM.....	3R01 HL12824-06S2	7,212
BLINKS, JOHN R.....	CALCIUM TRANSIENTS IN STRIATED MUSCLE AND OTHER CELLS.....	2R01 HL12186-08	106,053
BOWIE, E J.....	CONTROL OF COAGULATION.....	3P01 HL17430-03S1	74,705
BOWIE, E J.....	CONTROL OF COAGULATION.....	5P01 HL17430-04	497,029
BRIMJOIN, WILLIAM S.....	AXONAL TRANSPORT IN ADRENERGIC AND CHOLINERGIC NERVES.....	5R01 NS11855-06	32,849
BRUBAKER, RICHARD F.....	PATHOLOGY OF THE BLOOD-AQUEOUS BARRIER.....	5R01 EY00634-07	101,090
CHAO, EDMUND Y.....	FUNCTIONAL FORCES IN NORMAL AND ABNORMAL FINGERS.....	5R01 AM17172-04	66,741
CHESEBRO, JAMES H.....	PLATELET INHIBITOR DRUG IN CORONARY SURGERY.....	1R01 HL21533-01	110,004
DAVID, CHELLA S.....	GENETIC AND SEROLOGY OF H-2(IR)-LINKED IA ANTIGENS.....	7R01 AI14764-01	87,058
DICKSON, EDGAR R.....	PRIMARY BILIARY CIRRHOSIS: PENICILLAMINE TRIAL.....	5R01 AM19448-02	70,508
DONALD, DAVID E.....	RESPONSE OF THE TOTALLY DENERVATED HEART TO EXERCISE.....	5R01 HL06143-17	93,517
DOUSA, THOMAS P.....	CELLULAR ACTION OF VASOPRESSIN IN THE KIDNEY.....	5R01 AM16105-06	74,860
DYCK, PETER J.....	PERIPHERAL NEUROPATHY IN MAN AND IN EXPERIMENTAL ANIMALS.....	5R01 NS05811-13	123,817
EARLE, JOHN D.....	TOTAL BODY IRRADIATION IN ADVANCED MOUSE LYMPHOMA.....	5R01 CA21695-02	60,043
ENGEL, ANDREW G.....	ELECTRON MICROSCOPY OF MYOPATHIES.....	2R01 NS06277-12	89,830
FARROW, GEORGE M.....	URINE CYTOLOGY.....	5R26 CA16725-03	37,369
FUSTER, VALENTIN.....	ATHEROSCLEROSIS IN BLEEDER AND DRUG TREATED SUBJECTS.....	5R01 HL19001-02	72,911
GERICH, JOHN E.....	ALPHA AND BETA CELL FUNCTION IN HUMAN DIABETES.....	1R01 AM20411-01	71,560
GERICH, JOHN E.....	PANCREATIC SOMATOSTATIN SECRETION IN VITRO.....	1R01 AM20837-01	71,875
GLEICH, GERALD J.....	THE FUNCTIONS OF EOSINOPHILS.....	5R01 AI09728-08	55,051
GLEICH, GERALD J.....	ALLERGIC DISEASE CENTER PROGRAM GRANT.....	5P50 AI11483-05	89,841
GODT, ROBERT E.....	CALCIUMION, LENGTH & FORCE VS. VELOCITY IN MUSCLE.....	5R01 AM17828-03	39,856
GRONERT, G A.....	GAS EXCHANGE DURING ANESTHESIA AND SURGERY.....	5R01 GM21729-18	71,776
HAHN, RICHARD G.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA13650-05	130,552
HARRISON, CARLOS E, JR.....	MYOCARDIAL DEFECTS INDUCED BY POTASSIUM DEPLETION.....	2R01 HL12997-06	79,151
HEATH, HUNTER, III.....	FRACTURE RISK AND CALCIUM METABOLISM IN DIABETES.....	1R01 AM21101-01	45,810
HOFMANN, ALAN F.....	ROLE OF BILE ACID METABOLISM IN HEALTH AND DISEASE.....	5R01 AM16770-05	100,803
HYATT, ROBERT E.....	VENTILATION MECHANICS IN CHRONIC PULMONARY DISEASE.....	5R01 HL12229-15	81,750
HYATT, ROBERT E.....	PULMONARY MECHANICS.....	5R01 HL14593-06	48,727
HYATT, ROBERT E.....	ENGINEERING APPROACH TO RESPIRATORY MECHANICS.....	5R01 HL19205-02	70,045
HYATT, ROBERT E.....	RESPIRATORY MECHANICS IN NORMAL AND ABNORMAL STATES.....	1P01 HL21584-01	844,331
JONES, JAMES D.....	GUANIDINES, N RESTRICTION AND RENAL FAILURE.....	5R01 AM19142-02	51,648
JOWSEY, JENIFER O.....	STUDY OF OSTEOPOROSIS AND METABOLIC BONE DISORDERS.....	5R01 AM08658-13	120,702
KAYE, MICHAEL P.....	NERVE GROWTH FACTOR EFFECT ON THE DENERVATED HEART.....	5R01 HL18123-03	72,169
KAYE, MICHAEL P.....	NERVE GROWTH FACTOR AND OBSTRUCTIVE CARDIOMYOPATHY.....	1R01 HL20610-01	51,088
KELLY, KEITH A.....	MOTILITY OF THE DIGESTIVE TRACT IN HEALTH AND DISEASE.....	5R01 AM18278-03	86,799
KELLY, PATRICK J.....	HEMODYNAMIC FACTORS IN FRACTURES AND BONE DISEASE.....	5R01 AM15980-05	55,967
KERR, FREDERICK W.....	SOMATIC SENSORY AND VISCERAL EFFERENT PATHWAYS.....	5R01 NS05995-11	92,265
KNOX, FRANKLYN G.....	INTRARENAL REGULATION OF PHOSPHATE METABOLISM.....	1R01 AM19715-01	68,898
KNOX, FRANKLYN G.....	INTRARENAL REGULATION OF ELECTROLYTE REABSORPTION.....	5R01 HL14133-07	78,000
KOTKIE, BRUCE A.....	LIPIDS, THROMBOSIS AND GENETICS IN ATHEROSCLEROSIS.....	3P50 HL14196-05S2	305,518
KURLAND, LEONARD T.....	STUDY OF NATURAL HISTORY OF HEART, CANCER, AND STROKE.....	5P01 GM14231-12	522,628
KYLE, ROBERT A.....	CHEMOTHERAPY OF ACUTE LEUKEMIA AND RELATED DISORDERS.....	3R10 CA04646-17S1	8,105
KYLE, ROBERT A.....	CHEMOTHERAPY OF ACUTE LEUKEMIA AND RELATED DISORDERS.....	2R10 CA04646-18	120,599
KYLE, ROBERT A.....	STUDIES ON MONOCLONAL GAMMOPATHIES IN HUMANS.....	3P01 CA16835-02S1	42,260
MANN, KENNETH G.....	PRIMARY STRUCTURE OF PROTHROMBIN.....	5R01 HL16150-04	57,479
MC DUFFIE, FREDERIC C.....	IMMUNE COMPLEXES IN RHEUMATOID ARTHRITIS.....	2R01 AM17174-04	97,343
MC KEAN, DAVID J.....	CHARACTERIZATION OF PRECURSOR PROTEINS AND FC RECEPTOR.....	1R01 CA22491-01	92,690
MEYERS, PAUL.....	TOLERANCE AND IMMUNITY TO AVIAN RNA TUMOR VIRUSES.....	5R01 CA15494-05	63,863
MICHENFELDER, JOHN D.....	CEREBRAL METABOLISM AND BLOOD FLOW.....	5R01 NS07507-11	97,846
MILLER, R DREW.....	CHRONIC OBSTRUCTIVE PULMONARY DISEASE—FAMILIAL/GENETIC.....	1R01 HL20875-01	96,293
MOERTEL, CHARLES G.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	2P30 CA15083-04	629,776
MOSES, HAROLD L.....	MECHANISM OF CHEMICAL CARCINOGENESIS IN VITRO.....	3R01 CA16816-03S1	6,456
MULDOON, SHEILA M.....	GENERAL ANESTHETICS AND VASCULAR NEUROEFFECTOR SYSTEM.....	5R01 GM23347-02	56,425
NORTHROP, THOMAS E.....	CELLULAR ACTIONS OF INSULIN IN THE KIDNEY CORTEX.....	1R01 AM21114-01	68,398
PALUMBO, PASQUALE J.....	STEROL BALANCE AND CHOLESTEROL ABSORPTION IN DIABETICS.....	5R01 HL20483-02	67,056
PALUMBO, PASQUALE J.....	PERIPHERAL ARTERIAL DISEASE IN THE DIABETIC.....	5R01 HL20522-02	144,554
PEARSON, GARY R.....	BIOCHEMISTRY OF HERPES VIRUS-INDUCED MEMBRANE ANTIGENS.....	1R01 CA20679-01	78,688
REHDER, KAI.....	ALVEOLAR VENTILATION IN ANESTHETIZED MAN.....	2R01 HL12090-10	104,198

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
ROBERTSON, DENNIS M.....	CHORIORETINOPATHY	3R01 EY01709-01S1	20,700
ROMERO, JUAN C.....	PROSTAGLANDINS IN RENAL HYPERTENSION.....	5R01 HL16496-03	72,383
RUSSELL, JAMES A.....	AUTONOMIC RECEPTORS IN AIRWAY SMOOTH MUSCLE.....	5R01 HL19470-02	27,924
RYAN, ROBERT J.....	MODE OF ACTION OF REPRODUCTIVE HORMONES.....	5P50 HD09140-03	544,483
SHEPHERD, JOHN T.....	REFLEX CONTROL OF RESISTANCE AND CAPACITANCE VESSELS.....	2R01 HL05883-17	171,559
SHEPHERD, JOHN T.....	GENERAL CLINICAL RESEARCH CENTER	2M01 RR00585-06	441,794
SHEPHERD, JOHN T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05530-15	213,709
SHORTER, ROY G.....	INFLAMMATORY BOWEL DISEASE: CYTOTOXIC MECHANISMS.....	5R01 AM18634-02	62,101
SMITH, LYWOOD H.....	SPECIALIZED CENTER OF RESEARCH IN UROLITHIASIS.....	1P50 AM20605-01	204,889
SPELSBERG, THOMAS C.....	ACIDIC CHROMATIN PROTEINS AND CARCINOGENS.....	5R01 CA14920-05	74,089
STAUFFER, RICHARD N.....	BIOMECHANICAL EVALUATION OF TOTAL KNEE ARTHROPLASTY.....	5R01 AM18029-02	94,743
SUBBIAH, M T.....	EARLY INTERVENTION OF AGE-RELATED ARTERIAL CHANGES.....	5R01 HL18610-02	38,643
SUMMERSKILL, WILLIAM H.....	STUDY OF DIGESTIVE AND HEPATOBILIARY FUNCTION.....	5P01 AM06908-15	183,623
SZURSZEWski, JOSEPH H.....	GASTROINTESTINAL HORMONES AND GASTRIC SMOOTH MUSCLE.....	2R01 AM17238-04	61,652
SZURSZEWski, JOSEPH H.....	NEUROPHYSIOLOGICAL CONTROL OF GI MOTILITY.....	3R01 AM17632-03S1	4,764
SZURSZEWski, JOSEPH H.....	NEUROPHYSIOLOGICAL CONTROL OF GI MOTILITY.....	2R01 AM17632-04	54,370
TAYLOR, WILLIAM F.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21184-01	126,391
THISTLE, JOHNSON L.....	HUMAN GALLSTONES: THERAPEUTIC TRIAL WITH BILE ACIDS.....	5R01 AM15887-06	72,106
TOMASI, THOMAS B, JR.....	IMMUNOSUPPRESSION IN EXPERIMENTAL AND HUMAN TUMORS.....	5R01 CA18204-02	147,787
TOMASI, THOMAS B, JR.....	STUDIES OF MATERNAL AND NEONATAL IMMUNITY.....	5R01 HD09720-02	87,856
TYCE, GERTRUDE M.....	METABOLISM OF AROMATIC AMINES.....	5R01 NS09143-06	49,496
TYCE, GERTRUDE M.....	A STUDY OF DEMETHYLATION IN RED BLOOD CELLS.....	5R01 NS12367-03	46,342
VAN DYKE, RUSSELL A.....	MECHANISMS OF ENZYMATIC DECHLORINATION.....	5R01 ES00743-06	54,649
VAN DYKE, RUSSELL A.....	METABOLISM OF VOLATILE ANESTHETICS.....	2R01 GM17158-07	69,789
VENEZIALE, CARLO M.....	HORMONAL REGULATION OF GLUCONEOGENESIS IN HEPATOCYTES.....	5R01 AM16319-04	65,502
WEINSHILBOUM, RICHARD M.....	DOPAMINE-BETA-HYDROXYLASE-NEURAL RELEASE & METABOLISM.....	5R01 NS11014-03	58,719
WHISNANT, JACK P.....	CEREBROVASCULAR CLINICAL RESEARCH CENTER.....	3P50 NS06663-11S1	246,814
WHISNANT, JACK P.....	CEREBROVASCULAR CLINICAL RESEARCH CENTER.....	5P50 NS06663-12	513,190
WOOD, EARL H.....	CARDIOVASCULAR & LUNG DYNAMICS.....	5P01 HL04664-17	2,615,409
WOOD, EARL H.....	COMPUTER ANALYSES OF BIOSYSTEM STRUCTURES & FUNCTIONS.....	2P41 RR00007-14	357,766
ORGANIZATION TOTAL	93	13,812,559	
SAINT PAUL			
MACALESTER COLLEGE ZIP CODE 55105			
WHITEHEAD, RUSSELL A.....	MORPHOLOGY AND FUNCTION OF VISUAL SYSTEMS.....	5R01 EY00526-06	36,166
ORGANIZATION TOTAL	1	36,166	
UNITED HOSPITALS ZIP CODE 55102			
EDWARDS, JESSE E.....	FUNCTIONAL PATHOLOGY OF CARDIOVASCULAR DISEASE.....	3R01 HL05694-18S1	4,394
EDWARDS, JESSE E.....	FUNCTIONAL PATHOLOGY OF CARDIOVASCULAR DISEASE.....	5R01 HL05694-19	69,911
ORGANIZATION TOTAL	2	74,305	
UNIVERSITY OF MINNESOTA ZIP CODE 55455			
ANDERSON, JOHN S.....	ENZYMOLGY OF BACTERIAL CELL MEMBRANES.....	5R01 AI08295-09	52,270
BLOOMFIELD, VICTOR A.....	PHYSICAL CHEMISTRY OF BACTERIAL VIRUSES.....	2R01 GM17855-07	103,654
BLUMENFELD, MARTIN S.....	SATELLITE DNA & MOLECULAR ORGANIZATION OF CHROMOSOMES.....	5R01 GM22138-03	42,281
BRAMBL, ROBERT M.....	FUNGAL SPORE GERMINATION AND MITOCHONDRIAL BIOGENESIS.....	2R01 GM19398-04	47,446
BROOKS, MARION A.....	SYMBIOTES AS MODELS OF VECTOR PARASITISM.....	2R01 AI09914-08	61,598
CRAWFORD, RONALD L.....	DEGRADATION OF AROMATIC COMPOUNDS BY BACILLUS SPECIES.....	1R01 ES01284-01A1	56,521
DAGLEY, STANLEY.....	THE ENZYMATIC DEGRADATION OF AROMATIC COMPOUNDS.....	2R01 ES00678-11	55,183
ENFIELD, FRANKLIN D.....	INVESTIGATIONS IN QUANTITATIVE GENETICS.....	2R01 GM16074-09	53,070
FAN, DAVID P.....	CELL GROWTH AND DIVISION.....	5R01 GM19483-09	58,554
FLETCHER, THOMAS F.....	DEVELOPMENTAL NERVOUS DISORDERS: KRABBE'S DISEASE.....	5R01 NS06756-11	69,322
FUCHS, JAMES A.....	DEOXYRIBONUCLEOTIDE METABOLISM IN ESCHERICHIA COLI.....	2R01 GM20884-04A1	47,249
GANDER, JOHN E.....	FUNGAL GLYCOPOLYMER BIOSYNTHESIS.....	2R01 GM19978-04	66,716
GANDER, JOHN E.....	GLYCAN ROLE IN GALACTOFURANOSIDASE PROPERTIES.....	5R01 GM20441-03	12,250
GUILFOYLE, THOMAS J.....	REGULATION OF RNA POLYMERASES DURING DEVELOPMENT.....	1R01 GM24096-01	66,845
HENDERSON, LA VELL M.....	NIACIN AND VITAMIN B6 METABOLISM IN RAT INTESTINE.....	5R01 AM19012-02	60,798

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
HENDERSON, LA VELL M.....	CARNITINE BIOSYNTHESIS; TRIMETHYLLYSINE FISSION	1R01 AM19764-01	44,047
HERMAN, ROBERT K.....	DEVELOPMENTAL GENETICS OF CAENORHABDITIS ELEGANS.....	5R01 GM22387-02	35,552
JENDRISAK, JEROME J.....	REGULATION OF EUKARYOTIC GENE TRANSCRIPTION.....	1R01 GM24294-01	44,742
JOHNSON, DONALD W.....	IMMUNOLOGIC CONTROL OF C-TYPE VIRUS ACTIVATION.....	5R01 CA17232-03	45,865
LAKOWICZ, JOSEPH R.....	PASSIVE DIFFUSIONAL TRANSPORT IN MEMBRANES.....	1R01 ES01283-01A1	32,806
LIENER, IRVIN E.....	THE AVAILABILITY OF AMINO ACIDS OF LEGUMES.....	5R01 AM18324-03	34,483
LIENER, IRVIN E.....	THE ROLE OF PROTEOLYSIS IN MALIGNANT GROWTH.....	5R01 CA16231-04	24,361
LIENER, IRVIN E.....	BIOCHEMICAL STUDIES ON THE PATHOGENESIS OF EMPHYSEMA.....	3R01 HL14865-05S1	5,000
LOVRIEN, REX E.....	RESTORATION OF FUNCTION OF DAMAGED CELLS AND ENZYMES.....	5R01 GM18807-06	62,181
MC KINNELL, ROBERT G.....	A FROG MUTAGENESIS TEST SYSTEM.....	1R01 ES01605-01	72,814
MC KINNELL, ROBERT G.....	MINNESOTA LEOPARD FROGS: ABUNDANCE AND HEALTH.....	1R01 RR01072-01	41,607
MUNCK, ECKARD.....	STUDIES OF O2 ACTIVATION BY MOSSBAUER SPECTROSCOPY.....	5R01 GM22701-02	55,217
NELSESTUEN, GARY L.....	THE CARBOHYDRATE OF THE BLOOD-CLOTTING GLYCOPROTEINS.....	5R01 HL15728-05	77,632
PHILLIPS, RICHARD E.....	BRAIN ORGANIZATION OF SPECIES-TYPICAL BEHAVIOR.....	5R01 NS12686-02	36,828
RICHARDS, A GLENN.....	STRUCTURE & PERMEABILITY STUDIES ON MOSQUITOES & FLEAS.....	5R01 AI09559-08	41,616
ROSENBERG, MURRAY D.....	MEMBRANE CHANGES DURING OOGENESIS AND FERTILIZATION.....	5R01 HD04702-07	72,136
SCHWARTZ, SAMUEL.....	METABOLIC STUDIES OF CONGENITAL BOVINE PORPHYRIA.....	3R01 AM02096-18S1	6,914
SCHWARTZ, SAMUEL.....	METABOLIC STUDIES OF CONGENITAL BOVINE PORPHYRIA.....	5R01 AM02096-19	37,534
SHERIDAN, JUDSON D.....	CELL JUNCTION FORMATION & ROLE IN CELL PROLIFERATION.....	5R01 CA16335-03	77,535
WARNER, HUBER R.....	NUCLEOTIDE METABOLISM AFTER PHAGE T5 INFECTION.....	5R01 GM21464-03	40,569
WEBER, ALVIN F.....	PREPARATION OF MAMMALIAN HISTOLOGICAL NOMENCLATURE.....	5R13 LM00824-08	3,550
WOOD, JOHN M.....	CHEMICAL STUDIES WITH FREE AND BOUND VITAMIN B12.....	5R01 AM18101-04	61,190
ORGANIZATION TOTAL	37 1,807,936		
STATE TOTAL	356 35,922,932		
MISSISSIPPI			
HATTIESBURG			
UNIVERSITY OF SOUTHERN MISSISSIPPI ZIP CODE 39401			
TOOM, PAUL M.....	STUDY OF TOXIN FROM A JELLYFISH MODEL.....	2R01 ES00858-04	39,370
TOOM, PAUL M.....	SYSTEMIC EFFECTS OF FRACTIONATED MAN-OF-WAR TOXIN.....	5R01 ES01088-03	41,728
ORGANIZATION TOTAL	2 81,098		
HOLLY SPRINGS			
MISSISSIPPI INDUSTRIAL COLLEGE ZIP CODE 38635			
CHETTY, KOTHAPA N.....	COBALT-IRON INTERACTION STUDY.....	5S06 RR08133-02	65,759
ORGANIZATION TOTAL	1 65,759		
JACKSON			
JACKSON STATE UNIVERSITY ZIP CODE 39217			
GARRITY, EVELYN M.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08047-06	75,177
GARRITY, EVELYN M.....	BIOMEDICAL SCIENCES SUPPORT (INTERDISCIPLINARY).....	2S06 RR08047-07	358,461
ORGANIZATION TOTAL	2 433,638		
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216			
BERNDT, WILLIAM O.....	DRUG AND HORMONE EFFECTS ON TRANSPORT PROCESSES.....	3R01 AM18124-03S1	20,322
BLASECKI, JOHN W, JR.....	ROLE OF FREE TUMOR ANTIGEN IN IMMUNITY TO SV40 TUMORS.....	5R01 CA18298-02	43,952
COWLEY, ALLEN W, JR.....	QUANTIFICATION OF ARTERIAL PRESSURE CONTROL.....	5R01 HL14306-06	35,854
GROGAN, JAMES B.....	ANTERIOR CHAMBER IMPLANTS AND TRANSPLANTATION IMMUNOLOGY.....	5R01 AI09588-05	47,128
GUYTON, ARTHUR C.....	CARDIOVASCULAR DYNAMICS AND THEIR CONTROL.....	5P01 HL11678-10	420,475
HARDY, JAMES D.....	LUNG TRANSPLANTATION.....	5R01 HL11730-09	94,489
HAYES, A WALLACE.....	THE EFFECTS OF RUBRATOXIN B ON MAMMALIAN SYSTEMS.....	5R01 ES01351-03	30,124
HAYES, A WALLACE.....	CARCINOGENICITY OF ENVIRONMENTAL MYCOTOXINS.....	5R01 ES01352-03	44,929

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSISSIPPI—Continued			
JACKSON, JOHN F.....	SPINOCEREBELLAR ATAXIA LINKAGE TO HL-A AND OTHER LOCI	1R01 NS13279-01A1	43,075
KLEIN, RICHARD L.....	ELECTRON MICROSCOPIC STUDIES IN PHARMACOLOGY.....	5R01 GM15490-11	59,955
LANGFORD, HERBERT G.....	ELECTROLYTE INTAKE AND BLOOD PRESSURE IN HYPERTENSION.....	1R01 HL18891-01A1	59,673
LEHAN, PATRICK H.....	ASSESSMENT OF INFUSION METHODS FOR MYOCARDIAL MAPPING	5R01 HL19289-02	60,180
MC CAA, CONNIE S.....	MECHANISMS RELATED TO CONGESTIVE HEART FAILURE	5R01 HL09921-12	76,605
MEHENDALE, HARIHARA M.....	PULMONARY UPTAKE AND ACCUMULATION OF DRUGS.....	1R01 HL20622-01	53,402
MORRISON, FRANCIS S.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA16385-03	90,889
NELSON, NORMAN C.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00626-05	272,840
NELSON, NORMAN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05386-16	109,725
OELSHELGELE, FRED J, JR.....	BIOCHEMISTRY OF MALARIA HOST-PARASITE INTERACTIONS.....	5R01 AI13356-02	47,761
PULLEN, D JEANETTE.....	SOUTHWEST CANCER CHEMOTHERAPY STUDY GROUP.....	2R10 CA15989-03	49,375
RANDALL, CHARLES C.....	BIOCHEMISTRY OF FOWLPOX REPLICATION AND HYPERPLASIA.....	5R01 AI02031-19	48,882
RANDALL, CHARLES C.....	STUDY OF NUCLEIC ACIDS OF HERPES VIRUS-INFECTED CELLS.....	5R01 AI02032-20	48,896
SMITH, ROBERT R.....	FLUID RESTRICTION IN ACUTE SUBARACHNOID HEMORRHAGE.....	5R01 NS12499-03	19,604
SWAN, ROBERT.....	GROUP STUDY OF GYNECOLOGIC CANCER PATIENTS.....	5R10 CA13633-06	86,280
TAYLOR, AUBREY E.....	INTESTINAL SECRETION-CAPILLARY AND TISSUE FORCES.....	5R01 HL15680-05	36,240
WATSON, ROBERT L.....	BLOOD PRESSURE-PRECURSORS AND CONSEQUENCES.....	5R01 HL19858-02	139,928
WILKINSON, J SIDNEY.....	RADIOIMMUNOASSAY OF ANGIOTENSINOGEN.....	5R01 HL18561-02	46,677
YOUNG, DAVID B.....	CONTROL, CARDIOVASCULAR & RENAL EFFECTS OF POTASSIUM.....	1R01 HL21435-01	26,288
ORGANIZATION TOTAL	27	2,113,548	
LORMAN			
ALCORN STATE UNIVERSITY		ZIP CODE 39096	
PARKER, HENRY L.....	ROLE OF ANTICOAGULANTS IN IMMUNOCHEMISTRY OF CELLULOSE.....	5S06 RR08095-05	54,463
ORGANIZATION TOTAL	1	54,463	
MISSISSIPPI STATE			
MISSISSIPPI STATE UNIVERSITY		ZIP CODE 39762	
GLICK, BRUCE.....	IMMUNOGLOBULINS OF BURSECTOMIZED CHICKENS.....	5R01 AI11894-04	39,949
GLICK, BRUCE.....	LYMPHOCYTE LIFESPAN IN NORMAL AND BURSA-LESS BIRDS.....	5R01 CA20169-02	25,768
MILES, D HOWARD.....	ANTINEOPLASTIC AGENTS FROM AMERICAN PLANTS.....	5R01 CA13268-05	73,428
NORMENT, BEVERLY R.....	DETERMINATION OF NECROTIC ENZYMES OF BROWN SPIDER VENOM.....	5R01 ES00651-03	14,804
YARBROUGH, JAMES D.....	CHRONIC EFFECTS OF INSECTICIDES ON MAMMALIAN BEHAVIOR.....	5R01 ES00817-03	36,262
ORGANIZATION TOTAL	5	190,211	
TOUGALOO			
TOUGALOO COLLEGE		ZIP CODE 39174	
MEHROTRA, BAM D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08110-05	46,635
ORGANIZATION TOTAL	1	46,635	
UNIVERSITY			
UNIVERSITY OF MISSISSIPPI		ZIP CODE 38677	
BORNE, RONALD F.....	2-AZABICYCLO(2.2.2)OCTANE ANALOGS AS RECEPTOR MODELS.....	5R01 NS09188-06	29,498
GUESS, WALLACE L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05594-10	20,454
HUFFORD, CHARLES D.....	ANTITUMOR AGENTS FROM WEST AFRICAN PLANTS.....	3R01 CA15590-02S3	3,500
HUFFORD, CHARLES D.....	ANTITUMOR AGENTS FROM SELECTED AFRICAN PLANTS.....	2R01 CA15590-03	46,353
ORGANIZATION TOTAL	4	99,805	
STATE TOTAL	43	3,085,157	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI			
COLUMBIA			
CANCER RESEARCH CENTER ZIP CODE 65201			
HALBROOK, CHARLES W.....	CLERGY COUNSELING OF THE CANCER PATIENT.....	1R18 CA20381-01	12,656
MENGEL, CHARLES E.....	SPECIALIZED MULTIDISCIPLINARY CANCER CENTER.....	5P01 CA08023-12	294,196
RIDENHOUR, C E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17946-02	120,771
RODES, NED D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05618-11	34,358
YOURTEE, DAVID M.....	AFLATOXIN METABOLISM BY HUMAN LIVER.....	5R01 ES00640-03	10,077
ORGANIZATION TOTAL	5 472,058		
MISSOURI CANCER PROGRAMS, INC. ZIP CODE 65201			
YARBRO, JOHN W.....	EXPLORATORY PLANNING FOR CANCER CENTER DEVELOPMENT.....	5P20 CA19348-02	82,031
YARBRO, JOHN W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	5P30 CA19409-02	222,847
ORGANIZATION TOTAL	2 304,878		
UNIVERSITY OF MISSOURI-COLUMBIA ZIP CODE 65201			
ABDOU, NANCY L.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19343-02	67,834
ADDINGER, HANS K.....	CELL-MEDIATED IMMUNITY IN MAREK'S DISEASE.....	5R01 CA16350-03	35,321
AGRIS, PAUL F.....	TRANSFER RNA STRUCTURE DURING PROTEIN SYNTHESIS.....	5R01 GM23037-02	22,304
ANAST, CONSTANTINE S.....	CALCITONIN AND PARATHYROID HORMONE IN CHILDREN.....	5R01 HD02756-11	80,360
BARR, RONALD E.....	OXYGEN CONSUMPTION AND DIFFUSION IN RABBIT CORNEA.....	5R01 EY01604-02	53,238
BARRETT, JAMES T.....	DETECTION OF BACTEROIDES ANTIGENS IN INFECTED TISSUES.....	5R01 AI12530-03	53,400
BURNS, THOMAS W.....	HUMAN ADIPOSE TISSUE: REGULATION OF FAT MOBILIZATION.....	5R01 AM11265-09	60,452
CARNES, DAVID L, JR.....	PARATHYROID AND VITAMIN D CONTROL OF BONE AND KIDNEY.....	1R23 DE04601-01	12,530
DAVIS, JAMES O.....	HUMORAL FACTORS IN HEART FAILURE AND HYPERTENSION.....	5R01 HL10612-12	154,603
FORTE, LEONARD R.....	MOLECULAR PHARMACOLOGY OF RENAL PLASMA MEMBRANES.....	5R01 AM14787-08	26,444
GAYLOR, JAMES L.....	STEROL BIOSYNTHESIS.....	7R01 AM21336-01	21,899
GOLDBERG, HERBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05387-16	119,669
GRIGGS, DOUGLAS M, JR.....	REGIONAL MYOCARDIAL BLOOD FLOW AND METABOLISM.....	5R01 HL11876-10	77,322
HARRIS, PATRICK D.....	MICROCIRCULATORY CONTROL MECHANISMS AND HYPERTENSION.....	5R01 HL12614-08	58,831
HEIMBERG, MURRAY.....	REGULATORY MECHANISMS IN LIPID METABOLISM.....	5R01 AM18125-04	124,183
HENRY, PATRICK H.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	3R10 CA12046-06S1	12,270
HENRY, PATRICK H.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	2R10 CA12046-07	183,453
HUMPHREY, LOREN J.....	SURGERY OR TRAUMA: IMPACT UPON INFECTIOUS COMPLICATION.....	7R01 GM24458-01	59,893
JACKSON, ROBERT L.....	VASCULAR CHANGES IN DIABETES MELLITUS.....	5R01 HL13632-08	48,753
JOHNSON, JOSEPH A.....	MECHANISMS IN THE PRODUCTION OF RENAL HYPERTENSION.....	3R01 HL17366-03S1	7,659
JOHNSON, JOSEPH A.....	MECHANISMS IN EXPERIMENTAL HYPERTENSION.....	2R01 HL17366-04	48,717
JONES, ALLAN W.....	HYPERTENSIVE MECHANISMS AND VASCULAR ION EXCHANGE.....	2R01 HL15852-05	69,246
KAISER, EDWIN M.....	NOVEL CARBANIONS OF METHYLATED HETEROAROMATICS.....	5R01 GM21500-03	27,661
KNOWLES, CHARLES O.....	METABOLISM AND MODE OF ACTION OF ACARICIDE CHEMICALS.....	1R01 ES01316-01	37,644
KOIRTYOHANN, S R.....	BIOLOGICAL TRACE METAL ATOMIC EMISSION SPECTROMETER.....	5R01 GM20795-03	23,436
KUNTZ, ROBERT R.....	FREE RADICAL REACTIONS IN MODEL BIOLOGICAL SYSTEMS.....	1R01 AG00200-01	29,848
LOBECK, CHARLES C, JR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00287-11	376,165
LODWICK, GWILYM S.....	COMPUTER ANALYSIS OF TUMOR ROENTGENOGRAMS.....	5R01 CA06263-16	159,765
LODWICK, GWILYM S.....	DIAGNOSTIC CONTENT AND REDUNDANCY IN RADIANT IMAGES.....	5P01 GM17729-08	100,906
LOEPPKY, RICHARD N.....	NITROSAMINE FRAGMENTATION AND NITROSAMINE CARCINOGENESIS.....	1R01 CA22289-01	42,581
MACQUARRIE, RONALD A.....	STUDIES OF ALPHA-GLYCEROL PHOSPHATE DEHYDROGENASE.....	5R01 GM21938-03	21,068
MARTINEZ, J RICARDO.....	METABOLIC & SECRETORY INTERACTIONS IN EXOCRINE GLANDS.....	5R01 AM18150-02	61,577
MULLEN, HELEN B.....	CELLULAR MECHANISMS REGULATING ANTIBODY PRODUCTION.....	5R01 AI12830-03	50,733
MULLEN, HELEN B.....	CELLULAR AND GENETIC REGULATION OF AUTOIMMUNE DISEASE.....	5R01 AM19409-02	47,820
MUSACCHIA, X J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07053-12	48,262
O'DELL, BOYD T.....	TRACE ELEMENTS IN NUTRITION.....	5R01 HL11614-10	58,694
ORTWERTH, BERYL J.....	ROLE OF TRNA IN THE CONTROL OF LENS PROTEIN SYNTHESIS.....	3R01 EY00786-05S1	11,044
ORTWERTH, BERYL J.....	ROLE OF TRNA IN THE CONTROL OF LENS PROTEIN SYNTHESIS.....	5R01 EY00786-06	51,992
ORTWERTH, BERYL J.....	LENS INHIBITOR PROTEINS AND CATARACTOGENESIS.....	1R01 EY02035-01	56,986
RIDDLE, DONALD L.....	DEVELOPMENTAL GENETICS OF THE C. ELEGANS DAUER LARVA.....	1R01 HD11239-01	61,306
SAUER, HERBERT I.....	PANCREATIC CANCER MORTALITY: GEOGRAPHIC EPIDEMIOLOGY.....	5R26 CA19212-02	71,499
SCHMITZ, KENNETH S.....	CONFORMATION OF CHROMATIN MULTIMERS IN SOLUTION.....	1R01 GM24346-01	70,748
SCHUDER, JOHN C.....	IN VIVO INDUCTIVE PROBE MEASUREMENTS OF OMEGA & SIGMA.....	5R01 GM22506-02	33,712

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
SCHUDER, JOHN C.....	WAVEFORM DEPENDENCY IN DEFIBRILLATING 100 KG CALVES.....	5R01 HL18040-03	54,154
SHERMAN, LOUIS A.....	ANALYSIS OF FLUORESCENCE MUTATIONS IN PHOTOSYNTHESIS.....	5R01 GM21827-03	39,452
SILVER, DONALD.....	EFFECT OF TRAUMA ON THE FIBRINOLYTIC MECHANISM.....	5R01 GM23041-02	31,123
SILVER, DONALD.....	SURGICAL VASCULAR DISORDERS.....	2R01 HL18815-02A1	93,860
SUN, ALBERT Y.....	AGING AND MEMBRANE FUNCTION IN THE BRAIN.....	5R01 NS12752-03	43,744
SUN, GRACE Y.....	FATTY ACID METABOLISM IN BRAIN SUBCELLULAR MEMBRANES.....	5R01 NS12960-03	55,349
TOWNSEND, JOHN F.....	DIABETIC MICROANGIOPATHY IN MYSTROMYS ALBICAUDATUS.....	5R01 AM19008-02	34,968
TSUTAKAWA, ROBERT K.....	QUANTAL RESPONSES ANALYSIS.....	1R01 GM23548-01	28,837
VORBECK, MARIE L.....	MITOCHONDRIAL STRUCTURE AND FUNCTION IN AGING.....	1R01 AG00590-01	36,800
WAGNER, JOSEPH E.....	RESEARCH ANIMAL DIAGNOSTIC LABORATORY.....	3P40 RR00471-08S1	18,523
WAGNER, JOSEPH E.....	RESEARCH ANIMAL DIAGNOSTIC LABORATORY.....	2P40 RR00471-09	113,904
WANG, RICHARD J.....	MITOSIS AND MITOTIC ARREST IN MAMMALIAN CELLS.....	2R01 GM21305-03	53,075
WHITE, ARNOLD A.....	BIOCHEMICAL PHARMACOLOGY OF GUANYLATE CYCLASE IN LUNG.....	5R01 HL15002-06	31,648
WIXOM, ROBERT L.....	HISTIDINE BIOSYNTHESIS IN ANIMAL DEVELOPMENT.....	5R01 AM12708-07	46,801
WOLFE, JOHN F.....	NUCLEAR ANTIGEN IMMUNE MECHANISMS IN POLYMYOSITIS.....	1R01 AM20305-01	25,756
WOSLAIT, WALTER D.....	FACTORS AFFECTING THE ACTION OF ANTICOAGULANTS.....	2R01 HL15698-11A1	53,977
ZATZMAN, MARVIN L.....	CARDIOVASCULAR AND RENAL FUNCTIONS OF MARMOTS.....	5R01 HL17847-03	37,223
ORGANIZATION TOTAL	60	3,641,022	
CREVE COEUR			
ST. JOHN'S MERCY MEDICAL CENTER ZIP CODE 63141			
MONAFO, WILLIAM W.....	ELECTROLYTE AND WATER FLUXES IN BURN SHOCK.....	5R01 GM22364-02	58,917
MONAFO, WILLIAM W.....	THERMAL AND WORK STRESS IN POST-BURN PATIENTS.....	5R01 GM22399-02	42,480
ORGANIZATION TOTAL	2	101,397	
JEFFERSON CITY			
LINCOLN UNIVERSITY ZIP CODE 65101			
GARNES, JAMES.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08041-06	13,243
ORGANIZATION TOTAL	1	13,243	
KANSAS CITY			
CHILDREN'S MERCY HOSPITAL ZIP CODE 64108			
OLSON, LLOYD C.....	PERSISTENT INFLUENZA VIRUS INFECTIONS.....	5R01 AI14021-02	32,047
ORGANIZATION TOTAL	1	32,047	
KANSAS CITY COLLEGE OF OSTEOPATHIC MEDICINE ZIP CODE 64124			
HALL, L RAYMOND.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17933-03	73,140
ORGANIZATION TOTAL	1	73,140	
MIDWEST RESEARCH INSTITUTE ZIP CODE 64110			
COOK, MARY R.....	EFFECTS OF BIOFEEDBACK AND HYPNOSIS ON CANCER PAIN.....	2R18 CA17936-02	141,279
COOK, MARY R.....	STUDIES ON COGNITIVE CONTROL OF VASCULAR MECHANISMS.....	5R01 HL18698-02	60,255
ORGANIZATION TOTAL	2	201,534	
ST. LUKE'S HOSPITAL ZIP CODE 64111			
GOETZ, KENNETH L.....	ATRIAL RECEPTORS.....	3R01 HL13623-07S1	7,751
ORGANIZATION TOTAL	1	7,751	
UNIVERSITY OF MISSOURI-KANSAS CITY ZIP CODE 64110			
COHN, DAVID V.....	METABOLIC PATHWAYS IN BONE.....	5R01 DE01523-16	56,844
DIAS, JERRY P.....	SYNTHESIS OF ANTILEUKEMIC ANALOGS OF QUASSIN.....	3R01 CA15824-03S1	6,247
EL ATTAR, TAWFIK M.....	PROSTAGLANDINS, CYCLIC AMP AND STEROIDS IN GINGIVA.....	1R01 DE04276-01A1	53,075
SCHANKER, LEWIS S.....	ABSORPTION OF NONVOLATILE COMPOUNDS FROM THE LUNG.....	5R01 HL18028-02	42,977
ORGANIZATION TOTAL	4	159,143	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
KIRKSVILLE			
KIRKSVILLE COLLEGE OF OSTEOPATHIC MEDICINE ZIP CODE 63501			
CENESELLA, RICHARD J.....	INVESTIGATIONS OF LIPOLYTIC ACTIVITIES IN TUMOR CELLS.....	3R01 CA20885-01S1	1,503
WILLINGHAM, ALLAN K.....	THE MECHANISM OF ACTION OF VITAMIN K.....	2R01 HL20577-02	30,945
ORGANIZATION TOTAL	2 32,448		
SAINT LOUIS			
CENTRAL INSTITUTE FOR THE DEAF ZIP CODE 63110			
HIRSH, IRA J.....	AUDITORY COMMUNICATION AND ITS DISORDERS.....	5P50 NS03856-15	672,348
ORGANIZATION TOTAL	1 672,348		
JEWISH HOSPITAL OF ST. LOUIS ZIP CODE 63110			
AVIOLI, LOUIS V.....	BONE METABOLISM IN CHRONIC DISORDERS.....	2R01 AM11674-11	98,501
AVIOLI, LOUIS V.....	RENAL FUNCTION OF BONE METABOLISM.....	1R01 AM20521-01	85,621
DEUEL, THOMAS F.....	ENZYME REGULATION IN NORMAL NEOPLASTIC CELLS.....	7R01 CA22409-01	58,954
GRAFF, RALPH J.....	IMMUNITY AND TOLERANCE TO TRANSPLANTATION ANTIGENS.....	5R01 AI07437-11	53,114
HADDAD, JOHN G, JR.....	QUANTITATIVE STUDIES OF VITAMIN D METABOLISM.....	5R01 AM14570-08	55,961
HAHN, THEODORE J.....	ANTICONVULSANT, PSYCHOACTIVE DRUG-INDUCED OSTEOMALACIA.....	5R01 NS10262-06	34,477
KAPP-PIERCE, JUDITH A.....	MODE OF ACTION OF H-LINKED IMMUNE RESPONSE (IR) GENES.....	1R01 AI13987-01	68,272
LITTLE, J RUSSELL, JR.....	NEOPLASTIC AND NORMAL CELL THYMUS-LEUKEMIA ANTIGENS.....	5R01 CA20168-02	72,824
LUBOWITZ, HERBERT.....	TRANSPORT AND METABOLISM IN RED BLOOD CELLS.....	5R01 HL17778-03	43,794
PECK, WILLIAM A.....	HORMONAL REGULATION OF BONE CELL METABOLISM.....	5R01 AM19855-02	92,298
PECK, WILLIAM A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05491-15	39,012
PIERCE, CARL W.....	CELL INTERACTIONS IN IMMUNE RESPONSES IN VITRO.....	5R01 AI13915-02	58,532
PRESANT, CARY A.....	STRUCTURE OF HUMAN PLASMA MEMBRANE GLYCOPROTEINS.....	3R01 CA15621-03S1	3,743
THOMAS, DAVID W.....	T LYMPHOCYTE AND MACROPHAGE INTERACTIONS.....	1R01 AI14226-01	77,874
ORGANIZATION TOTAL	14 842,977		
ST. LOUIS UNIVERSITY ZIP CODE 63103			
ARENS, MAX Q.....	ENZYMOLGY OF A REPLICATION COMPLEX FROM CELLS.....	1R01 AI13540-01	40,010
BELLONE, CLIFFORD J.....	NATURE OF ANTIGEN RECOGNITION ON T-CELLS.....	5R01 AI13115-02	44,443
BROWN, GORONWY O, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA17214-02S1	20,408
CHALLONER, DAVID R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05388-16	129,881
COSCIA, CARMINE J.....	ABERRANT L-OOPA METABOLISM.....	5R01 NS12342-03	57,675
DUS, KARL M.....	COMPARATIVE STRUCTURAL STUDIES OF P-450 HEMOPROTEINS.....	5R01 GM21726-03	60,934
ELICEIRI, GEORGE L.....	CONTROL MECHANISMS IN HUMAN TUMOR CELLS—SMALL RNAs.....	1R01 CA20683-01	62,566
ELICEIRI, GEORGE L.....	RNA METABOLISM IN NORMAL AND MALIGNANT GROWTH.....	5R01 GM22463-02	40,472
ELLIOTT, WILLIAM H.....	ROLE OF BILE ACIDS IN ETIOLOGY OF LARGE BOWEL CANCER.....	2R26 CA16375-04	70,963
ELLIOTT, WILLIAM H.....	METABOLISM OF NEUTRAL STEROLS.....	5R01 HL07878-15	114,863
FEIR, DOROTHY J.....	PROLONGED EXPOSURE TO FOUR LEVELS OF AIR POLLUTANTS.....	1R01 ES01361-01	30,593
FITCH, COY D.....	METABOLIC ADAPTATION OF MUSCLE: THE NEED FOR CREATINE.....	2R01 AM16623-04	61,399
GOLD, ALVIN H.....	GLYCOGEN SYNTHETASE IN DEVELOPING LIVER.....	5R01 HD07788-03	34,183
GRANDGENETT, DUANE P.....	AVIAN RNA TUMOR VIRUS DNA SYNTHESIS AND ITS REGULATION.....	5R01 CA16312-04	54,698
GREEN, MAURICE.....	BIOCHEMISTRY OF ANIMAL VIRUS MULTIPLICATION.....	5R01 AI01725-20	146,086
GREEN, MAURICE.....	REPLICATION OF RNA TUMOR VIRUSES.....	5R01 CA19996-02	127,501
GREEN, MAURICE.....	TRANSFORMING PROTEINS OF THREE HUMAN ADENOVIRUS GROUPS.....	1R01 CA21824-01	77,706
GREEN, MICHAEL.....	CELL-FREE SYNTHESIS OF PLASMACYTOMA IMMUNOGLOBULINS.....	5R01 CA20821-02	42,711
GREGORY, JOHN G.....	OXALATE STONE DISEASE AFTER SMALL BOWEL BYPASS.....	5R01 AM18589-03	59,093
HERTELENDY, FRANK.....	ROLE OF PROSTAGLANDINS IN AVIAN REPRODUCTION.....	5R01 HD09763-02	51,140
HIRSCHBERG, CARLOS B.....	GLYCOLIPIDS: ROLE IN NORMAL AND TRANSFORMED CELLS.....	5R01 CA17015-03	43,856
HIRSCHBERG, CARLOS B.....	METABOLISM AND FUNCTION OF SPHINGOLIPIDS.....	5R01 NS12827-02	37,764
HUNSLEY, JAMES R.....	REGULATION OF PROTEIN SYNTHESIS IN DEVELOPMENT.....	5R01 GM21961-02	54,354
KAMINSKI, DONALD L.....	HEPATIC CHANGES IN THE OBESE WITH INTESTINAL BYPASS.....	5R01 AM19348-02	63,868
LAMBOWITZ, ALAN M.....	BIOGENESIS OF MITOCHONDRIA IN NEUROSPORA.....	1R01 GM23961-01	69,195
LONGMORE, WILLIAM J.....	REGULATION OF LIPID METABOLISM IN THE LUNG.....	5R01 HL13405-08	72,712
LOZERON, HOMER A.....	POST-TRANSCRIPTIONAL REGULATION IN BIOLOGICAL SYSTEMS.....	5R01 GM20639-05	61,367
MARRS, BARRY L.....	THE REGULATION OF BACTERIAL MEMBRANE FORMATION.....	5R01 GM20173-05	50,836

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
MARTONOSI, ANTHONY N	STUDIES ON SARCOPLASMIC RETICULUM AND MYOSIN	5R01 AM18117-10	98,750
MINH, VU-DINH	ROLE OF THE DIAPHRAGM IN REGIONAL LUNG MECHANICS	7R01 HL22148-01	42,632
MUNNS, THEODORE W	CHARACTERIZATION OF TRNA IN ONCOGENIC SYSTEMS	5R01 CA17715-03	53,404
MUNNS, THEODORE W	REGULATION OF PROTHROMBIN SYNTHESIS IN CULTURED CELLS	2R01 HL15619-04	69,281
NADEL, ELI M	CLINICAL CANCER EDUCATION PROGRAM	1R25 CA17949-01A1	102,287
OLSON, ROBERT E	MODE OF ACTION OF THE FAT-SOLUBLE VITAMINS	2R01 AM09992-13	126,827
OLSON, ROBERT E	BIOSYNTHESIS OF UBIQUINONE (COENZYME Q)	3R01 AM10904-12S1	13,840
OLSON, ROBERT E	ETIOLOGY OF NUTRITIONAL ANEMIAS IN THAILAND	3R22 AM11044-10S1	88,483
POGELL, BURTON M	CONTROL AND REGULATION OF CARBOHYDRATE BIOSYNTHESIS	3R01 CA12080-06S1	21,094
RUH, MARY F	ECDYSONE AND JUVENILE HORMONE ACTION	3R01 HD08186-02S2	4,031
RUH, MARY F	ECDYSONE AND JUVENILE HORMONE ACTION	2R01 HD08186-03	44,345
WEBER, MORTON M	STUDIES OF ELECTRON TRANSPORT IN MICROORGANISMS	5R01 AI03046-16	78,154
WILLMAN, VALLEE L	STUDIES IN SURGICAL CARDIOLOGY	5P01 HL06312-16	429,133
ORGANIZATION TOTAL	41	2,953,538	

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AGRAWAL, HARISH C	BIOCHEMICAL AND IMMUNOLOGICAL STUDIES OF MYELIN PLP	1R01 NS13464-01	58,695
ALLEN, ROBERT H	THE STRUCTURE AND FUNCTION OF B12-BINDING PROTEINS	5R01 AM16668-05	44,724
ALLISON, JAMES H	EFFECTS OF LITHIUM ON INOSITOL AND PHOSPHOINOSITIDES	1R01 NS13781-01	91,120
ALPERS, DAVID H	INTESTINAL PROTEIN METABOLISM AND FUNCTION	5R01 AM14038-08	94,491
ARTHUR, R MARTIN	PREPROCESSOR SYSTEM FOR CARDIOGRAMS	5R01 HL18144-03	39,492
BAENZIGER, JACQUES U	OLIGOSACCHARIDE STRUCTURE AND RECEPTOR SPECIFICITY	1R01 CA21923-01	74,427
BALLINGER, WALTER F, II	SURGICAL TRANSPLANTATION OF ISLETS OF LANGERHANS	5R01 AM17188-04	80,127
BALLINGER, WALTER F, II	ISLET TRANSPLANTATION IN THE TREATMENT OF DIABETES	5P01 AM18235-03	167,407
BANASZAK, LEONARD J	STRUCTURAL STUDIES OF DEHYDROGENASES AND LIPOPROTEINS	3R01 GM13925-11S1	38,750
BANASZAK, LEONARD J	STRUCTURAL STUDIES OF DEHYDROGENASES AND LIPOPROTEINS	5R01 GM13925-12	83,241
BANASZAK, LEONARD J	X-RAY DIFFRACTION STUDIES OF E. COLI MEMBRANES	5R01 GM22595-02	24,804
BAUER, EUGENE A	CONTROL OF COLLAGENASE IN HUMAN FIBROBLAST CULTURES	1R01 AM19537-01	51,235
BECKER, BERNARD	TRANSPORT PROCESSES AND THE EYE	5R01 EY00004-23	220,739
BECKER, BERNARD	GLAUCOMA CLINICAL RESEARCH CENTER	5P50 EY00336-11	599,073
BELL, C ELLIOTT, JR	ANTIGENS AND IMMUNITY IN HUMAN LUNG CANCER	2R01 CA15556-04	66,224
BERG, DOUGLAS E	MECHANISMS OF GENE TRANSPOSITION IN BACTERIA	1R01 AI14267-01	52,294
BLAUSTEIN, MORDECAI P	THE PHYSIOLOGY OF PRESYNAPTIC NERVE TERMINALS	5R01 NS08442-09	83,857
BOHNE, BARBARA A	RESPONSE OF INNER EAR TO INJURY	5R01 NS01791-20	67,764
BOIME, IRVING	ISOLATION OF PROINSULIN MRNA	5R01 AM16865-05	20,815
BRADSHAW, RALPH A	STUDIES ON STRUCTURE AND FUNCTION OF DEHYDROGENASES	5R01 AM13362-09	99,936
BRADSHAW, RALPH A	STRUCTURE AND FUNCTION OF NERVE GROWTH FACTOR	5R01 NS10229-06	61,022
BROWN, DAVID H	ENZYMATIC STUDY OF MAMMALIAN GLYCOGEN METABOLISM	5R01 GM04761-22	100,225
BROWN, ELMER B	MAMMALIAN IRON METABOLISM	5R01 AM16577-05	82,223
BUNGE, RICHARD P	CYTOLOGICAL STUDIES OF DEVELOPING AND MATURE NEURONS	5R01 NS09923-07	77,081
BURTON, HAROLD	TEMPERATURE AND PAIN IN THE CENTRAL NERVOUS SYSTEM	2R01 NS09809-07	50,673
BUTCHER, HARVEY R, JR	PRIMARY BREAST CANCER THERAPY GROUP (NSABP)	2R10 CA12030-06	34,689
CHAPLIN, HUGH, JR	SYMPTOMATIC HEMOLYTIC ANEMIA IN MALIGNANT DISEASES	5R01 CA02918-22	67,497
CLARK, RICHARD E	ADVANCED CARDIAC VALVULAR AND VASCULAR PROSTHESES	5R01 HL13803-07	228,450
COHEN, ADOLPH I	CYTOLOGY AND PHYSIOLOGY OF THE RETINA	3R01 EY00258-14S1	8,200
COHEN, ADOLPH I	CYTOLOGY AND PHYSIOLOGY OF THE RETINA	5R01 EY00258-15	103,210
COWAN, W MAXWELL	QUANTITATIVE ANATOMICAL STUDIES OF VISUAL DEPRIVATION	5R01 EY01255-03	90,190
COWAN, W MAXWELL	STUDIES OF NEURONAL SPECIFICITY IN THE HIPPOCAMPUS	5R01 NS10943-05	97,464
COX, JEROME R, JR	A RESOURCE FOR BIOMEDICAL COMPUTING	5P41 RR00396-10	1,888,974
CULLEN, SUSAN E	STRUCTURAL AND SEROLOGICAL STUDIES ON IA ANTIGENS	1R01 CA20500-01	80,150
DANFORTH, WILLIAM H	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07054-12	92,006
DAUGHADAY, WILLIAM H	HORMONAL CONTROL OF CHONDROITIN SULFATE SYNTHESIS	3R01 AM01526-20S1	16,333
DAUGHADAY, WILLIAM H	HORMONAL CONTROL OF CHONDROITIN SULFATE SYNTHESIS	2R01 AM01526-21	73,340
DAUGHADAY, WILLIAM H	THE MEASUREMENT OF PROTEIN HORMONES IN PLASMA	2R01 AM05105-16	148,970
DAUGHADAY, WILLIAM H	DIABETES AND ENDOCRINOLOGY CENTER	5P30 AM17904-03	607,632
DAUGHADAY, WILLIAM H	DIABETES RESEARCH AND TRAINING CENTER	1P60 AM20579-01	1,448,191
DAVID, CHELLA S	GENETICS AND SEROLOGY OF H-2(IR)-LINKED IA ANTIGENS	5R01 AI12715-02	47,056

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
DAVIE, JOSEPH M.....	ROLE OF THE T-CELLS IN B-CELL DIFFERENTIATION.....	2R01 AI11635-04	86,072
DAW, NIGEL W.....	NEURAL MECHANISMS OF VISION.....	5R01 EY00053-08	53,715
DE WEER, PAUL J.....	MODES OF OPERATION OF THE SODIUM PUMP.....	5R01 NS11223-06	79,170
DEVIVO, DARRYL C.....	SEIZURES, KETOSIS, AND CEREBRAL METABOLISM.....	5R01 NS09808-05	74,046
DIETZLER, DAVID N.....	STUDIES OF COORDINATE ALLOSTERIC REGULATION IN VIVO.....	5R01 AM18670-02	64,567
EISEN, ARTHUR Z.....	ROLE OF COLLAGENASES IN COLLAGEN REMODELING.....	5R01 AM12129-10	161,646
EL-MOFTY, SAMIR K.....	ALVEOLAR IN EXPERIMENTAL RENAL INSUFFICIENCY.....	1R23 DE04755-01	26,755
ETHEREDGE, EDWARD E.....	PRESENSITIZATION AND HUMAN TRANSPLANTATION.....	5R01 A119110-02	66,132
FAIR, WILLIAM R.....	INVESTIGATION OF THE PROSTATIC ANTIBACTERIAL FACTOR.....	5R01 AI13463-02	68,888
FERRENDELLI, JAMES A.....	REGIONAL CNS CYCLIC NUCLEOTIDE BIOCHEMISTRY.....	5R01 NS09667-07	58,622
FERRENDELLI, JAMES A.....	NEUROCHEMISTRY OF METABOLIC DISORDERS OF THE CNS.....	5R01 NS13104-02	28,908
FINGER, STANLEY.....	SERIAL SURGERY AND FACTORS AFFECTING TACTILE RECOVERY.....	5R01 NS11002-03	33,630
FLEISCHMAN, JULIAN B.....	MOLECULAR GENETICS OF ANTIBODY FORMATION.....	5R01 CA20094-11	66,776
FLETCHER, ANTHONY P.....	FIBRINOGEN CATABOLISM AND INTRAVASCULAR COAGULATION.....	1R01 HL20218-01	84,363
FRAZIER, WILLIAM A, III.....	BIOCHEMISTRY OF DEVELOPMENT: A MORPHOGENETIC MODEL.....	1R01 NS13269-01	56,513
FRIEDEN, CARL.....	METABOLIC REGULATION AND INTERACTING ENZYME SYSTEMS.....	2R01 AM13332-09	134,284
GARDNER, RICHARD A.....	FLUID SHEAR OR MAGNETIC ALIGNMENT OF BLOOD COMPONENTS.....	5R01 HL18321-03	38,356
GELB, LAWRENCE D.....	THE MOLECULAR BIOLOGY OF THE VARICELLA-ZOSTER VIRUS.....	5R01 AI13219-02	41,843
GELLER, DAVID M.....	MECHANISM AND CONTROL OF SERUM ALBUMIN BIOSYNTHESIS.....	2R01 AM16226-04	35,759
GLASER, LUIS.....	REGULATION AND MECHANISM OF CELL SURFACE SYNTHESIS.....	5R01 GM18405-06	95,733
GOLDRING, SIDNEY.....	COORDINATED BASIC AND CLINICAL BRAIN RESEARCH PROGRAM.....	5P50 NS04513-14	271,931
GOLDRING, SIDNEY.....	BIOELECTRIC STUDIES OF CEREBRAL CORTEX.....	5R01 NS06947-12	63,221
GOTTLIEB, DAVID I.....	STUDIES ON NEURONAL RECOGNITION.....	5R01 NS12867-02	16,631
GREIDER, MARIE H.....	CELLULAR LOCALIZATION OF GASTRIN.....	5R01 AM13205-10	79,958
GURGO, SANDRA B.....	OPTIMIZATION OF MYELOMA-SPECIFIC IMMUNOTHERAPY.....	5R01 CA18592-02	59,286
GUTSCHE, C DAVID.....	CALIXARENES AS ENZYME MODELS.....	1R01 GM23534-01	71,989
GUZE, SAMUEL B.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16217-02	401,211
HAHN, BEVRA H.....	ARTHRITIS CENTER.....	1P60 AM20602-01	135,675
HAMBURGER, VIKTOR.....	PROBLEMS OF NEUROGENESIS AND OF DEVELOPMENT OF BEHAVIOR.....	2R01 NS05721-13	45,761
HARTMAN, BOYD K.....	NORADRENERGIC SYSTEM IN BRAIN: ANATOMY AND FUNCTION.....	5R01 NS12311-03	61,873
HARTMAN, BOYD K.....	EVALUATION OF NEUROLOGICAL DISEASE WITH BRAIN ANTIGENS.....	1R01 NS13672-01	51,357
HARTROFT, PHYLLIS M.....	ENVIRONMENTAL QUALITY: EFFECTS ON DISEASE PROCESSES.....	5P01 ES00734-06	238,589
HAYMOND, MOREY W.....	ETIOLOGY OF HYPOGLYCEMIA IN INFANTS AND CHILDREN.....	5R01 HD06355-06	49,801
HILLMAN, LAURA S.....	CLINICAL CORRELATIONS TO VITAMIN D STATUS IN INFANTS.....	5R01 HD09998-02	45,798
HILLMAN, RICHARD E.....	MEMBRANE TRANSPORT OF AMINO ACIDS.....	5R01 AM15531-07	75,233
HOLLOSZY, JOHN O.....	EXERCISE-INDUCED BIOCHEMICAL AND ANATOMIC ADAPTATIONS.....	5R01 AG00425-13	94,137
HOLLOSZY, JOHN O.....	CARBOHYDRATE AND FAT METABOLISM DURING EXERCISE.....	5R01 AM18986-02	53,407
HOLMES, WILLIAM F.....	A RESOURCE FOR BIOMEDICAL MASS SPECTROMETRY.....	5P41 RR00954-03	218,454
HUNT, CARLTON C.....	VERTEBRATE MUSCLE RECEPTORS.....	5R01 NS07907-10	99,562
HUNTER, F EDMUND, JR.....	CHARACTERIZATION AND FUNCTION OF A NEW GSH-PEROXIDASE.....	5R01 GM22587-02	44,514
JACKSON, CRAIG M.....	IN VITRO REGULATION OF PROTHROMBIN ACTIVATION.....	5R01 HL12820-08	66,623
JARETT, LEONARD.....	HORMONAL REGULATION OF FAT CELL METABOLISM.....	5R01 AM11892-10	74,123
JARETT, LEONARD.....	MORPHOLOGICAL STUDIES ON MECHANISM OF INSULIN ACTION.....	1R01 AM20097-01	169,929
JOHNSON, EUGENE M, JR.....	SYMPATHECTOMY: CARDIOVASCULAR & MOLECULAR PHARMACOLOGY.....	2R01 HL20604-02	65,433
JOHNSON, GEORGE B.....	KINETIC STUDIES OF 'HIDDEN' ELECTROPHORETIC VARIATION.....	1R01 GM23504-01	37,350
JONES, EDWARD G.....	SYNAPTIC RELATIONS IN SENSORY SYSTEMS.....	5R01 NS10526-06	60,020
KAHN, ARNOLD J.....	DENTAL DISEASE AND OSTEOCLASTIC BONE RESORPTION.....	1R01 DE04629-01	68,223
KASS, MICHAEL A.....	CYCLIC NUCLEOTIDE PHOSPHODIESTERASES AND PROSTAGLANDIN.....	5R01 EY01333-03	63,538
KENNEL, DAVID E.....	MESSENGER RNA METABOLISM IN BACTERIA.....	5R01 AI13492-02	61,289
KING, BARRY F.....	FUNCTIONAL CYTOLOGY OF THE PLACENTA AND FETAL MEMBRANES.....	5R01 HD06734-06	4,605
KING, M KENTON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05389-16	213,709
KINSKY, STEPHEN C.....	IMMUNOGENICITY OF LIPOSOMES.....	5R01 AI13414-02	90,957
KIPNIS, DAVID M.....	TRANSPORT PROCESSES IN MAMMALIAN CELLS.....	5R01 AM01921-21	173,149
KIPNIS, DAVID M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00036-17	1,587,766
KIRK, DAVID L.....	GENETIC CONTROL OF MORPHOGENESIS IN VOLVOX.....	1R01 GM24172-01	34,797
KLahr, SAULO.....	RENAL DISEASE.....	5P01 AM09976-13	386,017
KORNFIELD, STUART A.....	THE STRUCTURE AND BIOLOGIC FUNCTION OF GLYCOPROTEINS.....	5R01 CA08759-12	199,474
KRUPIN, THEODORE.....	CENTRAL NERVOUS EFFECTS ON AQUEOUS HUMOR DYNAMICS.....	1R01 EY01942-01	33,431
KUHN, CHARLES.....	ENVIRONMENTAL PATHOBIOLOGY OF THE LUNG.....	5R01 HL12650-07	89,954
LACY, PAUL E.....	ELECTRON MICROSCOPY OF ISLET CELLS.....	5R01 AM01226-21	74,496

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
LACY, PAUL E.....	MICROENZYMATIC STUDIES OF ISLETS OF LANGERHANS.....	2R01 AM03373-19	47,011
LACY, PAUL E.....	STUDY OF SECRETION AND BIOSYNTHESIS OF INSULIN.....	2R01 AM06181-16	132,241
LICHTENSTEIN, JACK R.....	HERITABLE DISEASES OF COLLAGEN METABOLISM.....	5R01 AM18515-03	93,451
LIEBERMAN, MICHAEL W.....	CHEMICAL CARCINOGEN-INDUCED DNA REPAIR IN HUMAN CELLS.....	1R01 CA20513-01	82,463
LIN, HSIU-SAN.....	PROLIFERATION & DIFFERENTIATION OF ALVEOLAR MACROPHAGES.....	5R01 HL19746-02	49,946
LOEB, VIRGIL, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA03376-20S1	23,808
LOEWY, ARTHUR D.....	CENT. NERVOUS SYSTEM: DEGENERATIVE/REGENERATIVE CHANGES.....	2R01 NS12751-03	47,136
LOWRY, OLIVER H.....	QUANTITATIVE HISTOCHEMISTRY OF DEVELOPING ORGANS.....	5R01 HD03891-09	87,828
LOWRY, OLIVER H.....	METABOLISM OF CELLS AND PARTS OF CELLS IN NERVOUS TISSUE.....	5R01 NS08862-08	46,468
LYNCH, RICHARD G.....	LOCALIZATION OF MYELOMA CELL SURFACE IMMUNOGLOBULIN.....	5R01 CA17114-03	74,930
MAJERUS, PHILIP W.....	SPECIALIZED CENTER OF RESEARCH IN THROMBOSIS.....	5P50 HL14147-07	599,583
MAJERUS, PHILIP W.....	REGULATION OF METABOLISM IN FIBROBLASTS AND PLATELETS.....	5R01 HL16634-12	132,128
MARSHALL, GARLAND R.....	HYPERTENSION—CHEMISTRY AND BIOPHYSICS OF ANGIOTENSIN.....	2R01 HL14509-06	79,899
MARSHALL, GARLAND R.....	PHARMACOLOGY OF KININS IN CARDIOVASCULAR DISEASE.....	5R01 HL19374-02	92,169
MATHEWS, F SCOTT.....	STRUCTURAL STUDIES OF CYTOCHROME B562.....	5R01 GM20530-05	74,821
MATSCHINSKY, FRANZ M.....	METABOLISM OF ISLETS OF LANGERHANS AND HORMONE RELEASE.....	5R01 AM10591-12	79,659
MATSCHINSKY, FRANZ M.....	BIOCHEMISTRY OF EXTRAPANCREATIC GLUCORECEPTOR CELLS.....	1R01 AM21310-01	81,200
MATSCHINSKY, FRANZ M.....	BIOCHEMISTRY OF PROMINENT AUDITORY STRUCTURES.....	5R01 NS08000-10	70,086
MC KEEL, DANIEL W, JR.....	ADENOHYPHYSIAL HORMONE STORAGE AND SECRETION.....	5R01 AM18698-02	30,805
MECHAM, ROBERT P.....	CONNECTIVE TISSUE PRECURSOR MOLECULES IN THE LUNG.....	1R23 HL21225-01	39,200
MEDOFF, GERALD.....	TREATMENT OF FUNGAL INFECTIONS.....	5R01 AI10622-06	92,990
MEDOFF, GERALD.....	CURING OF LEUKEMIC MICE WITH AMPHOTERICIN B AND BCNU.....	5P01 CA15665-03	194,235
MENTON, DAVID N.....	STRUCTURE AND BARRIER FUNCTION OF STRATUM CORNEUM.....	3R01 AM11908-08S1	12,186
MICHAELIDES, MARIA C.....	IMMUNE STATUS OF THE LDV-INFECTED MOUSE.....	5R01 AI12243-03	62,296
MILLER, JAMES G.....	DETECTION OF MYOCARDIAL INJURY WITH ULTRASOUND.....	5R01 HL19537-02	63,456
MOLNAR, CHARLES E.....	PERIPHERAL AUDITORY MECHANISMS.....	5R01 NS07498-10	55,724
MOOG, FLORENCE.....	FUNCTIONAL DIFFERENTIATION OF THE SMALL INTESTINE.....	2R01 HD03490-24	78,246
MOORE, BLAKE W.....	FRACTIONATION OF BRAIN PROTEINS.....	5R01 NS05270-14	88,577
MOSES, ROBERT A.....	FACTORS AFFECTING INTRAOCULAR PRESSURE.....	2R01 EY00256-14	127,718
NAKEFF, ALEXANDER.....	MEGAKARYOCYTE PROLIFERATION AND ITS CONTROL.....	1R01 HL20826-01	50,856
NEEDLEMAN, PHILIP.....	HYPERTENSION: ANGIOTENSIN & PROSTAGLANDIN PHARMACOLOGY.....	2R01 HL14397-06	80,270
NEEDLEMAN, PHILIP.....	THROMBOXANES & PROSTAGLANDINS: BIOCHEMICAL PHARMACOLOGY.....	1R01 HL20787-01	46,779
NELSON, JAMES S.....	DIABETIC AUTONOMIC NEUROPATHY.....	1R01 AM19645-01	61,703
NELSON, JAMES S.....	PATHOGENESIS OF NUTRITIONAL BRAIN INJURY.....	5R01 NS11277-03	55,292
OLIVER, G CHARLES.....	PREDICTION AND PREVENTION OF SUDDEN CARDIAC DEATH.....	5R01 HL18808-03	429,607
OLNEY, JOHN W.....	CNS ULTRASTRUCTURE: DISEASE, DRUGS AND DEVELOPMENT.....	5R01 NS09156-08	74,460
OSTLUND, RICHARD E, JR.....	CONTRACTILE PROTEINS OF SECRETORY TISSUES.....	1R01 AM20421-01	50,396
PARKER, CHARLES W.....	ASTHMA CLINICAL CENTER.....	5P50 AI10405-07	132,027
PARKER, CHARLES W.....	CYCLIC NUCLEOTIDES IN IMMUNITY.....	5P01 AI12450-04	142,451
PARKER, CHARLES W.....	CYTOTOXIC ANTITUMOR ANTIBODIES.....	5R01 CA12626-06	101,067
PEARLMAN, ALAN L.....	FUNCTIONAL ORGANIZATION OF THE VISUAL SYSTEM.....	3R01 EY00621-05S1	12,417
PEREZ, CARLOS A.....	COOPERATIVE STUDY OF RADIATION THERAPY.....	5R10 CA12261-06	101,958
PEREZ, CARLOS A.....	CLINICAL CANCER RADIATION ONCOLOGY CANCER CENTER.....	3P01 CA13053-05S2	1,124,519
PERMUTT, MARSHALL A.....	CONTROL OF INSULIN BIOSYNTHESIS.....	5R01 AM16746-05	65,058
PERRAULT, JACQUES.....	VESICULAR STOMATITIS VIRUS DI RNA, STRUCTURE & FUNCTION.....	1R01 AI14365-01	67,617
PHILPOTT, GORDON W.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA03376-21	148,884
PHILPOTT, GORDON W.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA15241-03S3	29,831
PHILPOTT, GORDON W.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17955-03	77,932
PIERCE, JOHN A.....	STUDY OF EMPHYSEMA.....	5P01 HL16118-05	374,773
POLAKOSKI, KENNETH L.....	ACTIVE SITE CHARACTERIZATION OF ACROSIN.....	5R01 HD09422-03	45,011
PRICE, JOSEPH L.....	STUDIES ON THE OLFACTORY CORTEX.....	5R01 NS09518-08	44,410
PULLON, PETER A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17966-03	30,881
PURVES, DALE.....	LONG-TERM CHANGES IN NEURONS.....	5R01 NS11699-03	68,779
RAICHEL, MARCUS E.....	AN INTERDISCIPLINARY STROKE PROGRAM.....	2P50 NS06833-11	465,525
RASKAS, HESCHEL J.....	GENE EXPRESSION OF ONCOGENIC VIRUSES.....	2R01 CA16007-04A1	67,892
RASKAS, HESCHEL J.....	CELLULAR ROLE IN REPLICATION OF ONCOGENIC VIRUSES.....	5R01 CA12462-03	38,921
REIJSS, LUIS.....	ELECTROPHYSIOLOGY OF NECTURUS GALLBLADDER EPITHELIUM.....	1R01 AM19580-01	49,706
ROEDER, ROBERT G.....	REGULATION OF ADENOVIRUS GENE EXPRESSION.....	5R01 CA16640-03	54,802
ROGERS, JOHN C.....	MECHANISM AND REASON FOR DNA EXCRETION FROM LYMPHOCYTES.....	5R01 CA17143-03	53,066
ROOS, ALBERT.....	TRANSMEMBRANE MOVEMENTS.....	2R01 HL00082-29	43,182

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
ROVAINEN, CARL M.....	ORGANIZATION OF PRIMITIVE SPINAL CORD.....	5R01 NS09367-08	42,108
RUTHERFORD, WILLIAM E.....	CALCIUM ABSORPTION IN UREMIA.....	5R01 AM18843-02	43,398
SCHLAEPFER, WILLIAM W.....	MECHANISMS OF PERIPHERAL NERVE DYSFUNCTION.....	5R01 NS08620-07	72,456
SCHLESINGER, MILTON J.....	EFFECTS OF ENVELOPED RNA VIRUSES ON MURINE IMMUNITY.....	5R01 AI12237-03	60,861
SCHLESINGER, MILTON J.....	RNA-ENVELOPE VIRUS FORMATION IN ANIMAL CELLS.....	2R01 CA14311-05	88,892
SCHLESINGER, PAUL H.....	CONTROL OF EXTRACELLULAR LYSOSOMAL HYDROLASE LEVELS.....	1R23 HL21411-01	42,553
SCHLESINGER, SONDR A.....	STRUCTURE AND REPLICATION OF ENVELOPED RNA VIRUSES.....	5R01 AI11377-04	44,938
SCHLESINGER, SONDR A.....	REPLICATION OF ENVELOPED RNA VIRUSES IN MACROPHAGES.....	2R01 AI12242-04	70,965
SCHLESSINGER, DAVID.....	PROCESSING AND TURNOVER OF HUMAN CELL NUCLEAR RNA.....	5R01 GM21357-03	40,281
SCHONFELD, GUSTAV.....	ASSAYS FOR THE PEPTIDES OF LIPOPROTEINS.....	5R01 HL15308-06	84,367
SCHONFELD, GUSTAV.....	STUDIES ON THE SECRETION OF PLASMA LIPOPROTEINS.....	5R01 HL15427-05	63,785
SCHWARTZ, BENJAMIN D.....	STRUCTURAL AND CHEMICAL STUDIES ON MHC ANTIGENS.....	1R01 AI13782-01	78,004
SHEARER, WILLIAM T.....	STIMULATION OF TUMOR CELL GROWTH BY ANTIBODY.....	5R01 CA16391-03	43,880
SHERMAN, LAURENCE A.....	CONTROLLING MECHANISMS FOR SYNTHESIS OF FIBRINOGEN.....	5R01 HL17753-03	34,464
SHERMAN, WILLIAM R.....	THE METABOLISM OF THE INOSITOLS AND INOSITIDES.....	5R01 NS05159-14	94,844
SHREFFLER, DONALD C.....	ORGANIZATION AND FUNCTIONS OF THE H-2 GENE COMPLEX.....	5R01 AI12734-02	162,863
SILBERT, DAVID F.....	BIOCHEMICAL GENETIC STUDY OF MEMBRANE LIPID.....	2R01 GM16292-09	74,363
SILVER, SIMON D.....	BIOCHEMISTRY OF MEMBRANE MUTANTS OF ESCHERICHIA COLI.....	5R01 AI08062-09	68,973
SIMMONS, DAVID J.....	CIRCADIAN VARIATIONS IN CARTILAGE AND BONE GROWTH.....	5R01 AM16391-05	84,913
SIMMS, ERNEST S.....	THE STRUCTURE OF IGA IMMUNOGLOBULINS.....	5R01 AI03231-18	104,114
SLY, WILLIAM S.....	ENZYME THERAPY IN LYSOSOMAL STORAGE DISEASES.....	3P01 GM21096-02S1	20,757
SLY, WILLIAM S.....	ENZYME THERAPY IN LYSOSOMAL STORAGE DISEASES.....	5P01 GM21096-03	298,797
SMITH, CARL H.....	PLACENTAL MECHANISMS OF AMINO ACID TRANSFER.....	2R01 HD07562-04	106,486
SOBEL, BURTON E.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17646-03	1,037,960
SPARKS, ROBERT E.....	BIOSORBABLE THROMBORESISTANT SURFACES.....	5R01 HL18764-02	97,780
SPILBERG, ISAIAS.....	STUDIES ON CRYSTAL INDUCED CHEMOTACTIC FACTOR.....	5R01 AM19349-02	91,025
STAHL, PHILIP D.....	LYSOSOME BIOGENESIS: NORMAL AND TUMOR CELLS.....	5R01 CA12858-06	58,615
STORANDT, MARTHA A.....	A MULTI-FACETED INVESTIGATION OF AGING AND BEHAVIOR.....	1P01 AG00535-01	290,987
STRAUSS, ARNOLD W.....	SYNTHETIC CONTROL: FATTY ACID SYNTHETASE AND ALBUMIN.....	1R01 AM20407-01	93,585
SULLIVAN, TIMOTHY J.....	BIOCHEMISTRY OF MAST CELL SECRETION.....	1R01 AI13880-01	38,049
SUTERA, SALVATORE P.....	FLOW, TRANSPORT AND MEMBRANE PHENOMENA IN BLOOD.....	5R01 HL12839-08	126,358
SWANSON, LARRY W.....	CONNECTIONS OF THE LIMBIC SYSTEM AND HYPOTHALAMUS.....	1R01 NS13267-01A1	66,532
SWEET, FREDERICK.....	STEROID BIOSYNTHESIS, TRANSPORT & MECHANISM OF ACTION.....	3R01 AM16854-03S1	8,563
TER-POGOSSIAN, MICHEL M.....	CYCLOTRON PRODUCED ISOTOPES IN BIOLOGY AND MEDICINE.....	3P01 HL13851-15S1	642,186
THACH, BRADLEY T.....	CONTROL OF BREATHING IN RECOVERY FROM APNEA.....	1R01 HD10993-01	71,093
THACH, ROBERT E.....	REPLICATION OF VIRULENT AND ONCOGENIC VIRUSES.....	5R01 CA13008-06	100,763
THACH, WILLIAM T, JR.....	TIMING AND CODING OF CEREBELLAR OUTPUT.....	2R01 NS12777-03	71,436
THALMANN, RUEDIGER R.....	METABOLIC PROCESSES OF THE INNER EAR.....	5R01 NS06575-11	124,203
THURSTON, JEAN H.....	CEREBRAL METABOLISM IN THE NEWBORN AND THE YOUNG.....	5R01 NS06163-12	76,900
TOLMACH, L J.....	EFFECTS OF X-RAYS ON NORMAL AND MALIGNANT CELLS.....	5R01 CA04483-18	143,499
VIETTI, TERESA J.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA05587-17	277,733
VOLPE, JOSEPH J.....	REGULATION OF FATTY ACID SYNTHESIS DURING DEVELOPMENT.....	2R01 HD07464-04	64,499
WALBOT, VIRGINIA E.....	VARIATION IN MITOCHONDRIAL GENOTYPE AND PHENOTYPE.....	1R01 GM23479-01	54,189
WALTMAN, STEPHEN R.....	STUDIES IN GLAUCOMA AND RELATED DISEASES.....	5R01 EY01167-05	89,517
WARREN, JAMES C.....	BINDING, BIOSYNTHESIS, AND ACTION OF STEROIDS.....	5R01 AM15708-06	90,217
WATERSTON, ROBERT H.....	MOLECULAR GENETICS OF MUSCLE ASSEMBLY IN C. ELEGANS.....	1R01 GM23883-01	76,705
WEEKS, PAUL M.....	THE BIOLOGY OF SCAR MATURATION.....	5R01 GM21598-03	67,393
WEST, WALTER G.....	HORMONAL REGULATION OF THE REPRODUCTIVE TRACT.....	5P50 HD08235-03	215,209
WILLARD, MARK B.....	AXONALLY TRANSPORTED PROTEINS IN THE VISUAL SYSTEM.....	5R01 NS12450-03	26,206
WILLIAMSON, JOSEPH R.....	CAPILLARY BASEMENT MEMBRANE IN CARDIOVASCULAR DISEASE.....	5R01 HL13694-07	63,137
WILLIAMSON, JOSEPH R.....	PHYSICAL PROPERTIES & STRUCTURE OF THE RED CELL MEMBRANE.....	5R01 HL17819-03	44,138
WOOLSEY, THOMAS A.....	THE STRUCTURE OF THE SOMATOSENSORY NEOCORTEX.....	5R01 NS10244-06	35,083
ZARKOWSKY, HAROLD S.....	SHEAR AND AREA MODULI FOR ABNORMAL RED CELL MEMBRANES.....	1R01 HL20241-01	28,318
ORGANIZATION TOTAL	214	27,572,112	
STATE TOTAL	351	37,079,636	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
MONTANA			
BOZEMAN			
MONTANA STATE UNIVERSITY	ZIP CODE 59715		
ABBOTT, EDWIN H.....	THE GENERAL INTERMEDIATE FOR VITAMIN B-6 CATALYSIS.....	7R01 AM21669-01	45,699
COKELET, GILES R.....	THE RHEOLOGY AND CAPILLARY FLOW OF BLOOD.....	5R01 HL12723-09	49,674
JURIST, JOHN M.....	LONGITUDINAL STUDY OF SKELETAL STATUS IN WOMEN.....	5R01 AM20130-02	5,553
REED, NORMAN D.....	CELLULAR AND HUMORAL IMMUNITY IN HELMINTH INFECTIONS.....	5R01 AI12854-03	20,371
ORGANIZATION TOTAL	4 121,297		
GREAT FALLS			
COLUMBUS HOSPITAL	ZIP CODE 59401		
STIMPLING, JACK H.....	THE HISTOCOMPATIBILITY ANTIGENS OF THE MOUSE.....	5R01 AI06525-13	100,278
ORGANIZATION TOTAL	1 100,278		
MISSOULA			
UNIVERSITY OF MONTANA	ZIP CODE 59801		
ANDERSON, C LEROY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07134-05	23,876
CARD, GEORGE L.....	CHARACTERIZATION OF ATPASE ASSOCIATED MEMBRANE LIPID.....	1R01 GM23960-01	33,339
FEVOLD, H RICHARD.....	ACTH ACTION ON ADRENAL 17ALPHA-HYDROXYLATION.....	5R01 AM18492-03	36,065
GUSTAFSON, GARY L.....	CONTROL OF ENZYME ACCUMULATION DURING DIFFERENTIATION.....	5R01 GM22188-03	25,570
PATENT, GREGORY J.....	NERVOUS REGULATION OF INSULIN RELEASE.....	5R01 AM17161-03	15,487
WATSON, KENNETH F.....	MECHANISM OF VIRAL RNA-DIRECTED DNA POLYMERIZATION.....	5R01 CA19729-02	40,110
ORGANIZATION TOTAL	6 174,447		
STATE TOTAL	11 396,022		
NEBRASKA			
BOYS TOWN			
FATHER FLANAGAN'S BOYS' HOME	ZIP CODE 68010		
WATSON, CHARLES S.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09003-01	99,953
ORGANIZATION TOTAL	1 99,953		
LINCOLN			
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA AT LINCOLN	ZIP CODE 68508		
BANERJEE, MIHIR R.....	HORMONES, CELLULAR BIOSYNTHESIS & MAMMARY CARCINOGENESIS.....	5R01 CA11058-09	79,131
BRUMBAUGH, JOHN A.....	MECHANISMS MEDIATING MELANOGENIC CONTROL GENE EFFECTS.....	5R01 GM18969-06	38,865
BULLERMAN, LLOYD B.....	MOLDS AND MYCOTOXINS IN REFRIGERATED AND FROZEN FOODS.....	5R01 CA14260-05	30,498
CROMWELL, NORMAN H.....	STUDIES IN HETEROCYCLIC SYNTHESIS.....	5R01 CA02931-20	54,610
GUPTA, NABA K.....	GENETIC CODE AND PROTEIN SYNTHESIS IN MAMMALIAN SYSTEMS.....	5R01 GM18796-06	52,861
GUPTA, NABA K.....	PROTEIN SYNTHESIS INITIATION IN RED BLOOD CELLS.....	5R01 GM22079-03	58,459
MICHEJDA, CHRISTOPHER J.....	IN VITRO, IN VIVO AND MODEL STUDIES OF NITROSAMINES.....	1R01 CA22110-01	51,323
PARKHURST, LAWRENCE J.....	HEMOGLOBIN AND MYOGLOBIN KINETIC STUDIES.....	5R01 HL15284-06	54,192
SCHMEHL, FRANCIS L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07055-12	45,333
SMITH, GARY L.....	GROWTH CONTROL IN NORMAL AND NEOPLASTIC CELLS.....	5R01 CA17620-03	26,241
VAN ETEN, JAMES L.....	MACROMOLECULAR ASPECTS OF FUNGAL SPORE GERMINATION.....	5R01 AI08057-09	25,939
VIDAVER, ANNE MARIE.....	VIRUSES OF PSEUDOMONAS SPECIES.....	5R01 AI10638-06	35,972
VIDAVER, GEORGE A.....	AMINO ACID TRANSPORT BY RED CELL MEMBRANES.....	5R01 HL13256-07	45,629
ORGANIZATION TOTAL	13 599,053		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEBRASKA—Continued			
OMAHA			
CREIGHTON UNIVERSITY ZIP CODE 68173			
ANDREWS, RICHARD V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05390-16	34,273
BAUMSTARK, JOHN S.....	ELASTASE, SERUM INHIBITORS AND THE VASCULATURE.....	5R01 HL15979-04	90,527
BEWTRA, AGAINDRA K.....	BRONCHIAL SENSITIVITY TO MEDIATORS.....	1R23 AI14233-01	45,525
DOWD, FRANK J.....	PROTEIN KINASE INTERACTION WITH SALIVARY GLAND.....	5R23 DE04572-02	28,017
GAMBAL, DAVID.....	ATHEROSCLEROSIS: EARLY EVENTS AND REGRESSION FACTORS.....	5R01 HL19399-02	41,323
HEANEY, ROBERT P.....	SUPPORT FOR BONE RESEARCH CENTER.....	5R01 AM07912-13	109,436
LYNCH, HENRY T.....	MAINTENANCE OF CANCER FAMILY SYNDROME RESOURCE.....	5R01 CA18408-03	44,809
MAGEE, DONAL F.....	THE SECRETION OF PEPSIN.....	3R01 AM17125-03S2	8,090
SANDERS, W EUGENE, JR.....	PREVENTION OF PYOGENIC INFECTIONS.....	5R01 AI11584-05	24,375
TOWNLEY, ROBERT G.....	ALLERGIC DISEASES CENTER GRANT—MECHANISMS IN ASTHMA.....	2P50 AI12029-04A1	84,530
TRIMBLE, JOHN J, III.....	CYTOPHYSIOLOGY OF NEMATODE INTESTINAL CELL SURFACE.....	1R01 AI13652-01	31,112
WATT, DEAN D.....	BIOLOGICAL—IMMUNOLOGICAL ACTIONS OF TOXINS.....	5R01 NS12365-03	35,021
WELLS, IBERT C.....	LIPID—MOBILIZATION AND DIABETIC ATHEROSCLEROSIS.....	1R01 HL22115-01	44,285
ORGANIZATION TOTAL	13	621,323	
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER ZIP CODE 68105			
BARKER, KENNETH L.....	SPECIFICITY OF UTERINE RESPONSE TO OVARIAN HORMONES.....	5R01 H002851-11	49,268
BARKER, KENNETH L.....	REGULATION OF UTERINE RIBOSOME ACTIVITY BY ESTROGENS.....	1R01 HD10528-01A1	101,960
BLAKE, CHARLES A.....	MECHANISMS OF CYCLIC LH AND FSH RELEASE.....	1R01 HD11011-01	70,583
CAMPBELL, GARY T.....	CYTOARCHITECTURE IN BRAIN—PITUITARY CONTROL SYSTEMS.....	5R01 AM19170-03	27,262
COOK, DAVID E.....	REGULATION OF DIABETIC GLUCONEOGENESIS BY BIGUANIDES.....	5R01 AM17400-03	26,759
COOK, DAVID E.....	MECHANISM OF ACTION OF DIABETES ON DRUG METABOLISM.....	1R01 AM21282-01	51,561
DONNELLY, THOMAS E, JR.....	REGULATION OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASES.....	5R01 GM22424-02	18,685
ELLINGSON, ROBERT J.....	LONGITUDINAL STUDY OF EEGS AND EPS OF INFANTS.....	5R01 HD09338-03	93,605
GARDNER, PAUL J.....	IMMUNOCYTOCHEMICAL LOCALIZATION OF FSH IN THE TESTIS.....	5R01 HD09881-02	21,271
GILMORE, JOSEPH P.....	NEURAL CONTROL OF BLOOD VOLUME.....	5R01 HL13427-08	107,744
GILMORE, JOSEPH P.....	STUDY OF THE MAMMALIAN RENAL MICROCIRCULATION.....	2R01 HL17902-03	79,991
GRANDJEAN, CARTER J.....	METABOLISM AND MODE OF ACTION OF NITROSAMINES.....	5R01 CA14659-05	70,475
HEIDRICK, MARGARET L.....	AGING OF IMMUNOCOMPETENT CELLS.....	5R01 AI12454-03	34,015
HEIDRICK, MARGARET L.....	CYCLIC AMP LEVELS IN TUMOR CELLS.....	3R01 CA16279-03S1	1,788
JOYNER, WILLIAM L.....	ROLE OF ENDOTHELIAL CELLS IN VASCULAR PERMEABILITY.....	5R01 HL19455-02	27,662
LANGENBACH, ROBERT J.....	IN VITRO CHEMICAL CARCINOGENESIS.....	5R01 CA20022-02	41,418
LEMON, HENRY M.....	CLINICAL CANCER EDUCATION.....	5R25 CA19623-02	114,844
MATSCHNER, JOHN T.....	ROLE OF PITUITARY HORMONES IN THE ACTION OF VITAMIN K.....	5R01 HL19322-02	42,058
MORIARTY, C MICHAEL.....	CELLULAR MECHANISMS OF PITUITARY HORMONE SECRETION.....	5R01 AM18328-03	22,053
PHARES, C K.....	GROWTH FACTOR FROM PLEROCERCIDS OF S. MANSONIOIDES.....	2R01 AM17226-03	32,123
PHARES, C K.....	EFFECTS OF GROWTH FACTORS IN DIABETICS.....	1R01 AM21186-01	52,470
POUR, PARVIZ M.....	MULTIDISCIPLINARY INVESTIGATIONS ON PANCREATIC NEOPLASMS.....	1R26 CA20193-01	206,426
RAMALEY, JUDITH A.....	NEURAL CONTROL OF ADRENAL DEVELOPMENT.....	5R01 H008703-03	34,350
RIGBY, PERRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05391-16	60,848
ROSENQUIST, GLENN C.....	HISTOGENESIS AND BIOCHEMISTRY OF EMBRYONIC LUNG.....	2R01 HL20132-02	64,618
SHARP, JOHN G.....	ROLE OF SUPPRESSOR T CELLS IN PANCREATIC DISEASE.....	1R01 AM21137-01	47,896
SHARP, JOHN G.....	ARTIFICIAL CAPILLARY CULTURE OF HEMOPOIETIC CELLS.....	5R01 CA18548-02	37,305
SHUBIK, PHILIPPE.....	STUDIES IN TUMOR ANGIOGENESIS AND INVASIVENESS.....	5R01 CA14766-05	40,697
ORGANIZATION TOTAL	28	1,579,725	
STATE TOTAL	55	2,900,054	
NEVADA			
RENO			
UNIVERSITY OF NEVADA SYSTEM—UNIVERSITY OF NEVADA RENO ZIP CODE 89507			
HALL, MARK R.....	ROLE OF HISTONES IN ONCOGENIC DNA VIRUS REPLICATION.....	7R01 CA23081-01	31,900
KILEY, MICHAEL P.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09035-01	185,430

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEVADA—Continued			
KOZEL, THOMAS R.....	CRYPTOCOCCAL POLYSACCHARIDE: INHIBITION OF PHAGOCYTOSIS.....	1R01 AI14209-01	33,530
LIGHTNER, DAVID A.....	BILIRUBIN PHOTOCHEMISTRY AND JAUNDICE PHOTOTHERAPY.....	2R01 HD09026-02A1	87,950
ORGANIZATION TOTAL	4	338,810	
STATE TOTAL	4	338,810	
NEW HAMPSHIRE			
DURHAM			
UNIVERSITY SYSTEM OF NEW HAMPSHIRE—UNIVERSITY OF NEW HAMPSHIRE ZIP CODE 03824			
CHASTEEN, N DENNIS.....	VANADYL ION EPR: METAL-BIOPOLYMER INTERACTIONS.....	5R01 GM20194-06	44,404
CHESBRO, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07108-06	21,700
COLLINS, WALTER M.....	GENETICS, THE LYMPHOCYTE AND TUMOR REGRESSION.....	3R01 CA17680-02S1	5,925
COLLINS, WALTER M.....	GENETICS, THE LYMPHOCYTE AND TUMOR REGRESSION.....	2R01 CA17680-03	49,577
HERBST, EDWARD J.....	POLYAMINES AS METABOLIC INDICATORS OF CARCINOGENESIS.....	5R01 CA16827-03	42,354
SMITH, ROBERT A, JR.....	THE PHYSIOLOGY OF TUNED CHANNELS IN HUMAN VISION.....	2R01 EY01475-03	46,670
STEWART, JAMES A.....	REGULATION OF PROTEIN SYNTHESIS IN NEURAL DEVELOPMENT.....	5R01 NS08391-09	45,408
ORGANIZATION TOTAL	7	256,038	
HANOVER			
DARTMOUTH COLLEGE ZIP CODE 03755			
ADLER, ROBERT A.....	MORPHOLOGIC AND METABOLIC STUDIES OF HUMAN OBESITY.....	5R01 AM13321-09	57,496
ALLEN, ROBERT D.....	STUDIES ON SELECTED BIOLOGICAL MOVEMENT PROCESSES.....	5R01 GM22356-03	99,182
ALLEN, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07056-04	39,930
BARTLETT, DONALD, JR.....	FACTORS AFFECTING GROWTH AND FUNCTION OF THE LUNG.....	3R01 HL15497-04S1	16,769
BARTLETT, DONALD, JR.....	ROLE OF THE UPPER AIRWAYS IN THE CONTROL OF BREATHING.....	1R01 HL19827-01	65,918
BERGER, EDWARD M.....	GENETIC CONTROL OF PROTEIN SYNTHESIS IN EUKARYOTES.....	5R01 GM22866-03	61,414
BORISON, HERBERT L.....	CHEMOSENSORS OF THE NERVOUS SYSTEM.....	5R01 NS04456-16	80,280
BURGESS, DAVID R.....	ULTRASTRUCTURE AND BIOCHEMISTRY OF MICROVILLUS GROWTH.....	1R01 AM20021-01	38,713
CARPENTER, STANLEY J.....	ULTRASTRUCTURAL STUDIES ON RODENT PLACENTAL MEMBRANES.....	5R01 HD09585-02	50,844
CHAMBERS, WILBERT F.....	DEVELOPING NEOPLASMS FROM EMBRYONIC PITUITARY.....	5R01 CA18148-02	39,361
CHANG, TA-YUAN.....	ROLES OF CHOLESTEROL AND ITS METABOLIC REGULATION.....	1R01 HL21246-01	68,456
CRICHLow, ROBERT W.....	HEPATIC ARTERIAL INFUSION SYSTEM.....	5R26 CA19280-02	20,704
DAUBENSPECK, JOHN A.....	DYNAMICS OF BREATHING PATTERN RESPONSES TO LOADING.....	5R01 HL19248-02	10,031
DETAR, REED.....	OXYGEN AND VASCULAR SMOOTH MUSCLE.....	3R01 HL19054-01S1	12,626
DETAR, REED.....	OXYGEN AND VASCULAR SMOOTH MUSCLE.....	5R01 HL19054-02	37,338
FERM, VERGIL H.....	TERATOGENIC EFFECTS OF HEAVY METALS.....	2R01 ES00697-06	127,325
FORSTER, ROY P.....	CELLULAR ASPECTS OF ACTIVE TRANSPORT.....	5R01 HL04457-19	73,898
GALTON, VALERIE A.....	MECHANISMS OF THYROID HORMONE ACTION IN DEVELOPMENT.....	5R01 HD09020-03	30,938
HARRIS, EDWARD D, JR.....	STUDY OF CONNECTIVE TISSUE METABOLISM IN MAN.....	5R01 AM14780-07	71,424
HARRIS, EDWARD D, JR.....	MULTI-PURPOSE ARTHRITIS CENTER.....	1P60 AM20641-01	148,509
INSELBURG, JOSEPH W.....	STUDIES OF STABLE PLASMID-CELL ASSOCIATIONS.....	5R01 AI08937-09	65,907
JENNETTE, KAREN W.....	INTERACTION OF CARCINOGENIC METALS WITH NUCLEIC ACIDS.....	1R01 CA22270-01	80,820
KILHAM, LAWRENCE.....	INTRAUTERINE AND TRANSPLACENTAL VIRUS INFECTIONS.....	5R01 HD07775-17	61,355
LAYTON, WILLIAM M, JR.....	CONGENITAL HEART MALFORMATIONS AND SITUS INVERSUS.....	5R01 HL19430-02	40,451
LIENHARD, GUSTAV E.....	THE GLUCOSE TRANSPORT SYSTEM OF THE HUMAN ERYTHROCYTE.....	5R01 GM22996-02	44,045
LONGNECKER, DANIEL S.....	STUDIES OF AZASERINE INDUCED DNA CHANGES IN RATS.....	5R01 CA17843-03	47,686
LONGNECKER, DANIEL S.....	SURVEY OF HUMAN PANCREASES FOR ACINAR CELL DYSPLASIA.....	5R26 CA19410-02	15,645
LUBIN, MARTIN.....	MODIFICATION OF TUMOR CELLS AND TUMOR SYSTEMS.....	5R01 CA17293-03	146,320
MARIN-PADILLA, MIGUEL.....	NORMAL & ABNORMAL STRUCTURE, HUMAN CEREBRAL CORTEX.....	5R01 HD09274-03	67,162
MC INTYRE, O ROSS.....	CANCER AND ACUTE LEUKEMIA GROUP B.....	3R10 CA04326-18S2	3,794
MC INTYRE, O ROSS.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	2R10 CA04326-19	152,917
MC INTYRE, O ROSS.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19379-02	81,725
MICHAELS, GEORGE A.....	STUDIES OF NUCLEAR ENVELOPE IN NORMAL AND TUMOR CELLS.....	3R01 CA15831-03S1	3,786
MORIN, LAWRENCE P.....	BEHAVIOR, BIOLOGICAL CLOCKS AND HORMONES.....	1R01 HD10740-01	45,764
MUDGE, GILBERT H.....	PHARMACOLOGY OF ANGIOGRAPHIC AND CHOLEGRAPHIC AGENTS.....	5R01 AM06818-16	63,668

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW HAMPSHIRE—Continued			
MUNCK, ALLAN U.....	THE MODE OF ACTION OF STEROID HORMONES.....	2R01 AM03535-19	133,055
MUNCK, ALLAN U.....	GLUCOCORTICOID-RESISTANT LEUKEMIC LYMPHOCYTES.....	5R01 CA17323-03	51,937
NATTIE, EUGENE E.....	BRAIN METABOLISM, ACID-BASE BALANCE, AND RESPIRATION.....	2R01 HL18351-02	44,540
NODA, LAFAYETTE H.....	HIGH ENERGY PHOSPHATE TRANSFERRING ENZYMES.....	5R01 GM23123-20	92,368
OU, LO-CHANG.....	PATHOPHYSIOLOGICAL EFFECTS OF HYPOXIA.....	1R01 HL21159-01	61,172
PETTENGILL, OLIVE S.....	IN VITRO FACTORS ONCOGENICITY OF CULTURED TUMOR CELLS.....	5R01 CA17487-03	39,269
PFEFFERKORN, ELMER R.....	BIOCHEMICAL STUDIES OF ARBOVIRUS MULTIPLICATION.....	5R01 AI08238-11	48,097
SCHNEIDER, DONALD L.....	ENZYMES LINKING BIOENERGY TO CATABOLISM IN LYSOSOMES.....	7R01 GM24459-01	2,937
SCHNEIDER, DONALD L.....	ENZYMES LINKING BIOENERGY TO CATABOLISM IN LYSOSOMES.....	5R01 GM24459-02	32,331
SCORNIK, OSCAR A.....	REGULATION OF PROTEIN METABOLISM IN MAMMALIAN LIVER.....	2R01 AM13336-09A1	97,633
SMITH, KENDALL A.....	TUMOR IMMUNITY IN HUMAN AND MURINE LEUKEMIA.....	5R01 CA17643-03	62,226
SMITH, LUCILE.....	RESPIRATORY CHAIN SYSTEM OF HEART MUSCLE AND BACTERIA.....	5R01 GM06270-19	77,596
SMITH, ROGER P.....	METHEMOGLOBINEMIA AND ANTIHYPERTENSIVE DRUGS.....	5R01 HL14127-15	71,261
SORENSEN, GEORGE D.....	PATHOBIOLOGY OF SMALL CELL CARCINOMA OF THE LUNG.....	5R01 CA17710-03	148,834
SPENCER, THOMAS A.....	MECHANISM OF C4 DEMETHYLATION IN STEROID BIOGENESIS.....	5R01 AM12855-09	55,491
SPIEGEL, MELVIN.....	REAGGREGATION OF DISSOCIATED EMBRYONIC AND ADULT CELLS.....	5R01 HD09320-03	45,524
ST JOHN, WALTER M.....	BRAIN STEM INTEGRATION OF CHEMORECEPTOR ACTIVITY.....	2R01 HL20574-02	38,650
STRICKLER, JAMES C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05392-16	136,830
TENNEY, STEPHEN M.....	INTERRELATIONSHIPS OF CIRCULATION AND RESPIRATION.....	5R01 HL02888-21	43,760
THRON, CHRISTOPHER D.....	MATHEMATICAL THEORY OF PHARMACOKINETICS.....	5R01 GM21269-03	25,702
TRUMPOWER, BERNARD L.....	STRUCTURE AND FUNCTION OF HEART MEMBRANE PROTEINS.....	5R01 GM20379-05	53,884
VALTIN, HEINZ.....	HEREDITARY DIABETES INSIPIDUS.....	2R01 AM08469-13	214,106
VALTIN, HEINZ.....	ECTOPIC HORMONES IN SMALL CELL CARCINOMA OF THE LUNG.....	5R01 CA19613-02	56,959
VELEZ, SAMUEL J.....	REGENERATION OF NEURONAL CONNECTIONS.....	1R01 NS13800-01	51,614
WIRA, CHARLES R.....	SEX HORMONE REGULATION OF IMMUNOGLOBULINS.....	1R01 AI13541-01	70,794
YAGER, JAMES D, JR.....	DNA REPAIR DURING INITIATION OF HEPATOCARCINOGENESIS.....	5R01 CA18353-02	49,631
YAGER, JAMES D, JR.....	EFFECT OF DIETARY STRESS ON PANCREATIC CARCINOGENESIS.....	3R01 CA20948-01S1	4,090
ORGANIZATION TOTAL	62	3,882,492	
STATE TOTAL	69	4,138,530	

NEW JERSEY

CAMDEN

INSTITUTE FOR MEDICAL RESEARCH		ZIP CODE 08103		
CORIELL, LEWIS L.....	CORE PROGRAM ON ETIOLOGY OF CANCER.....	3P01 CA11405-07S2	40,698	
CORIELL, LEWIS L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05582-10	44,687	
LASFARGIJS, ETIENNE Y.....	TISSUE CULTURE STUDIES OF THE MAMMARY TUMOR VIRUS.....	5R01 CA08515-12	130,376	
MC GARRITY, GERARD J.....	MASS AIR FLOW FOR ANIMAL ISOLATION/QUARANTINE.....	2R01 RR00903-03	68,083	
MILLER, ROBERT C.....	CHEMICALLY INDUCED HERITABLE CHROMOSOME DEFECTS.....	5R01 ES01136-03	96,631	
ORGANIZATION TOTAL	5	380,475		

HOBOKEN

STEVENS INSTITUTE OF TECHNOLOGY		ZIP CODE 07030		
SCHILLER, RALPH.....	LASER HOMODYNE STUDY OF PLAQUE BACTERIA AGGREGATION.....	5R01 DE04559-02	28,220	
ORGANIZATION TOTAL	1	28,220		

JERSEY CITY

JERSEY CITY MEDICAL CENTER		ZIP CODE 07304		
WEDEEN, RICHARD P.....	AUTORADIOGRAPHIC STUDIES OF CONCENTRATIVE TRANSPORT.....	5R01 AM16266-06	75,379	
ORGANIZATION TOTAL	1	75,379		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
NEWARK			
CANCER INSTITUTE OF NEW JERSEY ZIP CODE 07107			
CLEMENTE, CELESTINO.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA18828-02	32,741
ORGANIZATION TOTAL	1 32,741		
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103			
BARTELL, PASQUALE F.....	STUDIES ON THE EXTRACELLULAR SLIME OF P. AERUGINOSA.....	5R01 AI08504-09	52,098
CHINARD, FRANCIS P.....	PULMONARY TRANSPORT AND METABOLISM IN VIVO.....	5R01 HL12879-08	270,088
CHINARD, FRANCIS P.....	TRACER AND OSMOTIC KINETICS IN BODY ORGANS.....	5R01 HL12974-09	41,443
ETTINGER, PHILIP O.....	REGIONAL CONDUCTION ABNORMALITIES AND ARRHYTHMIAS.....	5R01 HL19398-02	36,217
FARNSWORTH, PATRICIA N.....	COMPARATIVE STUDY OF AGING OF THE CRYSTALLINE LENS.....	3R01 EY01533-02S2	7,220
FARNSWORTH, PATRICIA N.....	COMPARATIVE STUDY OF AGING OF THE CRYSTALLINE LENS.....	2R01 EY01533-03	73,523
FRIEDMAN, KENNETH J.....	ROLE OF LIPIDS IN CONTROLLING MEMBRANE PHYSIOLOGY.....	1R01 GM24017-01	33,322
FU, S JOSEPH.....	PROGRESSION OF CATARACTOGENESIS AND POSSIBLE REVERSAL.....	3R01 EY01156-03S2	41,135
GERTNER, SHELDON B.....	METABOLIC & DRUG STUDIES ON EXPERIMENTAL FAT EMBOLISM.....	5R01 HL18607-02	29,149
GONA, AMOS G.....	NORMAL AND THYROID-INDUCED CEREBELLAR MATURATION.....	3R01 HD08157-03S2	4,493
GONA, AMOS G.....	NORMAL AND THYROID-INDUCED CEREBELLAR MATURATION.....	2R01 HD08157-04	37,629
HIRSCHBERG, ERICH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05393-16	112,905
JACOBY, JACOB H.....	DRUGS AND BRAIN SEROTONIN METABOLISM.....	5R01 NS12876-02	33,853
JANSONS, VILMA K.....	LIPOSOMES AS CARRIERS FOR ANTITUMOR AGENTS.....	5R01 CA19127-02	2,700
KAPLAN, HARRY A.....	VASCULAR ANATOMY OF THE TELECEPHALON.....	5R01 HL19053-02	19,498
KUMAR, SURIENDER.....	MECHANISM OF CONTROL OF FATTY ACID SYNTHESIS.....	2R01 AM16070-04	54,054
KUMAR, SURIENDER.....	PULMONARY FATTY ACID AND PHOSPHOLIPID METABOLISM.....	5R01 HL18938-02	24,948
LAEMLE, LOIS K.....	AN EXPERIMENTAL STUDY OF THE DEVELOPING VISUAL SYSTEM.....	3R01 EY01174-03S2	30,212
LAZARO, ERIC J.....	LIPID ROLE IN PANCREATITIS: PATHOPHYSIOLOGY & DIAGNOSIS.....	5R01 AM17921-03	57,627
LEA, MICHAEL A.....	HISTONE METABOLISM IN NEOPLASTIC TISSUES.....	5R01 CA12933-06	52,018
LEA, MICHAEL A.....	NONHISTONE CHROMOSOMAL PROTEINS AND HEPATOMA GROWTH.....	3R01 CA16274-03S1	4,156
LEA, MICHAEL A.....	NONHISTONE CHROMOSOMAL PROTEINS AND HEPATOMA GROWTH.....	2R01 CA16274-04	39,927
LOWNDES, HERBERT E.....	DRUG-INDUCED SENSORY AND MOTOR NERVE DYSFUNCTION.....	5R01 NS11948-03	28,574
MACEDO-SOBRINHO, BRAZ.....	CELL MEDIATED IMMUNITY IN GINGIVAL INFLAMMATION.....	5R01 DE04501-02	22,199
MC ARDLE, JOSEPH J.....	CONTROL OF MUSCLE DURING REINNERVATION.....	5R01 NS11055-05	25,529
MOSCHOS, CHRISTOS B.....	CORONARY THROMBOSIS.....	3R01 HL13036-06S2	4,905
MOSCHOS, CHRISTOS B.....	CORONARY THROMBOSIS: PATHOGENESIS AND DIAGNOSIS.....	2R01 HL13036-07	81,346
MOSKOWITZ, HARVEY D.....	EVALUATION OF NEW FILLERS FOR DENTAL COMPOSITE RESINS.....	1R23 DE04334-01A1	30,968
OPDERBECK, WILLIAM R.....	COMPARISON OF TREATMENT PROCEDURES USED IN ENDODONTICS.....	5R23 DE04335-02	13,242
OPDYKE, DAVID F.....	DEVELOPMENT OF VERTEBRATE VASCULAR CONTROL SYSTEMS.....	5R01 HL18868-02	12,026
REGAN, TIMOTHY J.....	MYOCARDIAL FUNCTION AND METABOLISM IN CHRONIC DISEASE.....	5R01 HL09914-12	173,238
RUBIN, ARNOLD D.....	PROGRAM FOR CANCER EDUCATION.....	5R25 CA19536-02	56,743
RUSH, BENJAMIN F, JR.....	COOPERATIVE STUDY OF ONCOLOGY.....	3R10 CA12289-05S3	14,678
RUSH, BENJAMIN F, JR.....	PATHOPHYSIOLOGY OF POST-TRAUMATIC AND SHOCK STATES.....	5R01 HL13193-08	55,599
SALEN, GERALD.....	THE METABOLISM OF URSODEOXYCHOLIC ACID IN MAN.....	2R01 AM18707-03	45,390
SCHWALB, MARVIN N.....	REGULATION OF MORPHOGENESIS IN THE HIGHER FUNGI.....	5R01 AI09779-08	33,480
SHOVLIN, FRANCIS E.....	UPTAKE OF HYDROXYAPATITE PHOSPHORUS BY ORAL BACTERIA.....	2R01 DE03867-04	58,923
SIEGEL, ALLAN.....	ROLE OF THE LIMBIC SYSTEM IN HYPOTHALAMIC AGGRESSION.....	2R01 NS07941-08	54,261
STUDZINSKI, GEORGE P.....	ACTION OF AMINONUCLEOSIDE ON NORMAL AND CANCER CELLS.....	5R01 CA19750-02	61,659
STUDZINSKI, GEORGE P.....	DEOXYRIBONUCLEASES OF TUMOR NUCLEI.....	5R01 CA20043-02	55,416
SWAN, KENNETH G.....	VASOACTIVE AGENTS IN SPLANCHNIC VISCERA.....	2R01 HL18096-03	60,434
VITALE, LEONARD F.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA12637-06	49,765
YANG, CHUNG S.....	MONOOXYGENASE: PROPERTIES AND CARCINOGEN ACTIVATION.....	2R01 CA16788-04	29,239
YANG, CHUNG S.....	NUCLEAR PHOSPHOPROTEIN PHOSPHATASE.....	5R01 GM23164-02	33,341
ORGANIZATION TOTAL	44 2,059,170		
NEWARK BETH ISRAEL MEDICAL CENTER ZIP CODE 07112			
KIRSCHNER, MARVIN A.....	BIOCHEMICAL MARKERS OF MALIGNANCY.....	5R01 CA18954-02	28,388
PARSONNET, VICTOR.....	EXTENDING THE LIFE OF IMPLANTED PACEMAKERS.....	2R01 HL15247-04A1	35,477
ORGANIZATION TOTAL	2 63,865		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
RUTGERS THE STATE UNIVERSITY NEWARK ZIP CODE 07104			
FEDER, HARVEY H.....	HORMONAL REGULATION OF BEHAVIOR.....	2R01 HD04467-06	65,584
HALL, JAMES C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07059-12	45,815
JORDAN, FRANK.....	MECHANISM OF THIAMINE PYROPHOSPHATE REQUIRING ENZYMES.....	2R01 AM17495-04	64,916
JORDAN, FRANK.....	TOTAL APPROACH TO NUCLEOSIDE CONFORMATIONAL ANALYSIS.....	2R01 GM19338-03	20,890
ORGANIZATION TOTAL	4	197,205	
NEW BRUNSWICK			
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903			
AMAREL, SAUL.....	SPECIAL RESEARCH RESOURCE: COMPUTERS IN BIOMEDICINE.....	3P41 RR00643-06S2	108,372
APPLEBY, ALAN.....	RADIATION CHEMISTRY OF HIGH ENERGY HEAVY ION BEAMS.....	5R01 CA19307-02	5,691
BROWN, HARRY D.....	MICROCALORIMETRIC ANALYSIS FOR CLINICAL CHEMISTRY.....	5R01 GM22679-03	56,708
CHAMPE, SEWELL P.....	GENETIC CONTROL OF BACTERIOPHAGE DEVELOPMENT.....	5R01 GM17020-09	77,851
COLLIER, GEORGE H.....	THE DETERMINANTS OF REINFORCEMENT.....	1R01 HD10588-01	65,977
COUSINS, ROBERT J.....	ZINC AND THE SYNTHESIS OF ZINC BINDING PROTEIN.....	5R01 AM18555-03	18,224
COUSINS, ROBERT J.....	ZINC METABOLISM IN ISOLATED LIVER CELLS.....	1R01 AM20485-01	57,296
COUSINS, ROBERT J.....	METABOLISM AND BIOCHEMICAL ACTIONS OF CADMIUM.....	2R01 ES00777-06	60,354
DAVIS, FRANK F.....	NONIMMUNOGENIC ENZYMES FOR THERAPEUTIC USE.....	5R01 GM20946-03	39,266
DENNEY, DONALD B.....	REACTIONS OF ORGANOPHOSPHORUS COMPOUNDS.....	5R01 CA10737-13	56,697
ESSIEN, FRANCINE B.....	STUDY OF A LETHAL MUTATION AFFECTING LUNG DEVELOPMENT.....	1R01 HD10260-01	94,165
FISHER, HANS.....	HISTIDINE: REQUIREMENT, DERIVATIVES AND THEIR FUNCTION.....	5R01 AM18932-02	25,580
FRANKEL, HARRY M.....	PHYSIOLOGICAL REGULATION DURING CHRONIC HYPERTHERMIA.....	3R01 HL17352-02S1	275
FRANKEL, HARRY M.....	PHYSIOLOGICAL REGULATION DURING CHRONIC HYPERTHERMIA.....	5R01 HL17352-03	34,310
GRIMINGER, PAUL.....	EFFECT OF AGE AND TRAUMA ON NUTRIENT REQUIREMENTS.....	5R01 AG00160-03	21,997
GROB, GERALD N.....	HISTORY OF MENTAL HOSPITALS IN THE U.S. SINCE 1875.....	2R01 LM02306-08	18,571
KAPLAN, MURRAY L.....	EARLY NUTRITION AND DEVELOPMENT OF OBESITY.....	5R01 AM18557-03	17,163
KENT, HARRY A, JR.....	ACTION OF CONTRACEPTIVE TETRAPEPTIDE AND STEROID.....	5R01 HD09608-02	80,550
LAMPEN, J OLIVER.....	CELL PERMEABILITY AND INVERTASE BIOSYNTHESIS.....	2R01 AI04572-16	102,798
LEATHEM, JAMES H.....	OVARIAN INVOLUTION IN AGING.....	2R01 AG00468-04	64,541
LEATHEM, JAMES H.....	HYPOTHALAMO-HYPOPHYSEAL-ADRENAL AXIS MATURATION.....	5R01 HD09533-02	40,672
MACKAY, VIVIAN L.....	ENZYMES, GENES, AND REGULATION OF RECOMBINATION.....	5R01 GM22149-03	35,214
MANDELES, STANLEY.....	DETERMINATION OF VIRUS NUCLEIC ACID SEQUENCES.....	5R01 GM19148-03	23,256
MOSS, ROBERT A.....	SYNTHESES OF ELAIOMYCIN AND OTHER AZOXYALKANES.....	2R01 CA14912-12A1	61,602
OLSON, WILMA K.....	NUCLEIC ACID CONFORMATION, PROPERTIES AND INTERACTIONS.....	2R01 GM20861-04	48,941
OTHMER, HANS G.....	DYNAMIC PATTERN IN CHEMICALLY-REACTING SYSTEMS.....	2R01 GM21558-03	22,369
PAGE, CHARLES H.....	POSTURAL REGULATION.....	5R01 NS12262-03	23,839
PIECZENIK, GEORGE.....	GENOTYPIC SELECTION: SYNTAX AND STRUCTURE OF SEQUENCES.....	1R01 GM23550-01	23,148
PORETZ, RONALD D.....	STRUCTURAL ANALYSIS OF CELL SURFACE CARBOHYDRATES.....	5R01 CA17193-03	47,463
PORETZ, RONALD D.....	DEVELOPMENT OF TYPE B PHYTOHEMAGGLUTININ.....	5R01 CA20889-05	39,029
PRAMER, DAVID.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07058-12	134,521
SAN FILIPPO, JOSEPH, JR.....	A STUDY OF SUPEROXIDE REACTIVITY.....	5R01 AM18713-02	47,819
SCHAFFNER, CARL P.....	POLYENE MACROLIDES—PHARMACOLOGY AND TOXICOLOGY.....	2R01 AI12602-03	111,166
SCHUGAR, HARVEY J.....	BIOINORGANIC ASPECTS OF SELECTED MERCAPTIDE COMPLEXES.....	2R01 AM16412-04	40,275
SINHA, NAVIN K.....	IN VITRO ANALYSIS OF A DNA REPLICATION APPARATUS.....	1R01 GM24391-01	55,468
STRAUSS, ULRICH P.....	SPECIFIC COUNTERION BINDING BY POLYELECTROLYTES.....	5R01 GM12307-12	45,797
STRUMEYER, DAVID H.....	POSSIBLE ROLE OF AMYLASE INHIBITOR IN CELIAC DISEASE.....	5R01 AM18800-02	39,668
WALKOWITZ, JUDITH R.....	PROSTITUTION, VENEREAL DISEASE, AND CONTAGIOUS DISEASES.....	1R01 LM02574-01A1	20,304
WITKIN, EVELYN M.....	INDUCED MUTATIONS IN BACTERIA.....	5R01 AI10778-06	60,484
ORGANIZATION TOTAL	39	1,927,421	
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY-RUTGERS MEDICAL SCHOOL ZIP CODE 08854			
BRECKENRIDGE, BRUCE M.....	CYCLIC AMP AND METABOLIC CONTROL IN THE NERVOUS SYSTEM.....	5R01 NS10975-11	83,540
BRODSKY, BARBARA M.....	X-RAY DIFFRACTION OF CONNECTIVE TISSUE.....	1R01 AM19626-01	68,733
BROSTROM, CHARLES O.....	CONTROL OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASE.....	3R01 NS11340-03S1	4,232
BROSTROM, CHARLES O.....	CONTROL OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASE.....	2R01 NS11340-04	66,371
BROWNING, EDWARD T.....	METABOLIC REGULATION IN GLIOMA CELLS.....	2R01 NS08436-07A1	52,558

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
CRANE, ROBERT K.....	BRUSH BORDER PHASE OF DIGESTIVE-ABSORPTIVE FUNCTION.....	5R01 AM10696-12	119,811
DUBIN, DONALD T.....	R-RNA & RIBOSOME SYNTHESIS IN BACTERIA & ANIMAL CELLS.....	5R01 GM14957-10	75,230
EDELMAN, NORMAN H.....	DETERMINANTS OF THE VENTILATORY RESPONSE TO HYPOXIA.....	2R01 HL16022-04	65,412
EGGER, M DAVID.....	NEUROANATOMICAL INVESTIGATIONS OF SPINAL INTERNEURONS.....	5R01 NS12261-03	18,458
EGGER, M DAVID.....	PLASTICITY IN A CUTANEOUS SPINAL REFLEX.....	1R01 NS13456-01	38,494
EICHHOLZ, ALEXANDER.....	STUDY OF THE TRANSPORT OF SUGARS IN THE INTESTINE.....	5R01 AM17874-03	28,426
GOCKE, DAVID J.....	CORRELATIVE STUDIES IN VIRAL HEPATITIS.....	5R01 AI11593-05	73,390
HOLOWCZAK, JOHN A.....	TRANSCRIPTION & TRANSLATION IN POX VIRUS INFECTED CELLS.....	5R01 CA11027-10	48,407
JOYEUSE, RENE.....	COLLAGEN-ENZYME MATERIALS FOR ENZYME THERAPY.....	1R01 GM23672-01	37,449
KHACHADURIAN, AVEDIS K.....	FAMILIAL HYPERCHOLESTEROLEMIA: STUDIES ON FIBROBLASTS.....	5R01 HL18878-02	72,902
LENARD, JOHN.....	CHARACTERIZATION OF VSV MUTANTS WITH MEMBRANE LESIONS.....	5R01 AI13002-02	41,920
MALATHI, PARAMESWARA.....	BRUSH BORDER-MEMBRANE ASSOCIATED ENZYMES.....	5R01 AM19217-02	27,505
MC ALLISTER, WILLIAM T.....	REGULATION OF VIRAL GENE EXPRESSION.....	5R01 GM21783-03	28,594
MORRIS, N RONALD.....	GENETICS AND BIOCHEMISTRY OF MITOSIS IN ASPERGILLUS.....	5R01 GM23060-02	58,635
PROCKOP, DARWIN J.....	BIOCHEMISTRY OF NORMAL AND DISEASED CONNECTIVE TISSUE.....	5P01 AM16516-07	267,429
RASKA, KAREL, JR.....	LOW MOLECULAR WEIGHT RNA IN ADENOVIRUS INFECTIONS.....	1R01 CA21196-01	58,395
ROBINSON, ROBERT J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05576-13	98,946
SANDERS, MARILYN M.....	CHROMOSOME STRUCTURE AND REGULATION IN DROSOPHILA.....	5R01 GM23119-02	35,494
SCHIMMEL, RICHARD J.....	THE ACTION OF CALCIUM ON ADIPOSE TISSUE.....	1R01 AM21431-01	34,661
SCHLESINGER, R WALTER.....	TOGAVIRUS REPLICATION IN INSECT AND VERTEBRATE CELLS.....	5R22 AI05920-15	128,897
SHEA, STEPHEN M.....	GLOMERULAR PATHOLOGY FOLLOWING PARTIAL NEPHRECTOMY.....	2R01 AM13495-08	67,122
STEVENSON, NANCY R.....	FEEDING-INDUCED RHYTHMICITY IN INTESTINAL FUNCTION.....	5R01 AM18953-02	69,093
STROHL, WILLIAM A.....	VIRAL CARCINOGENESIS AND LATENCY.....	3R01 CA08851-13S1	18,416
TAKAHASHI, MARK T.....	REGULATION OF THREONINE-SENSITIVE ASPARTOKINASE ACTIVITY.....	5R01 GM18628-07	38,208
WEISS, HARVEY R.....	REGIONAL O ₂ CONSUMPTION OF HEART AND OTHER ORGANS.....	1R01 HL21172-01	41,917
WOLFF, DONALD J.....	FUNCTION OF A BRAIN CALCIUM-BINDING PROTEIN.....	2R01 NS11252-04	55,372
ORGANIZATION TOTAL	31 1,924,017		
PRINCETON			
EDUCATIONAL TESTING SERVICE	ZIP CODE 08540		
MESSICK, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05729-02	37,085
SIGEL, IRVING.....	SPACING/BIRTH ORDER EFFECTS ON COGNITIVE DEVELOPMENT.....	5R01 HD10686-02	164,303
ORGANIZATION TOTAL	2 201,388		
PRINCETON UNIVERSITY	ZIP CODE 08540		
APPLEBURY, MEREDITH L.....	PHOTORECEPTION AND TRANSDUCTION IN VISION.....	3R01 EY01542-02S2	1,049
APPLEBURY, MEREDITH L.....	PHOTORECEPTION AND TRANSDUCTION IN VISION.....	5R01 EY01542-03	57,104
BONNER, JOHN T.....	THE ROLE OF CYCLIC AMP IN DEVELOPMENT.....	5R01 GM17856-06	44,019
BRATZLER, ROBERT L.....	PROTEIN TRANSPORT THROUGH ARTERIAL TISSUE.....	5R01 HL18736-02	50,119
CAMPBELL, BYRON A.....	ANIMAL MODELS OF DECLINING MEMORY IN THE AGED.....	5R01 AG00092-03	83,904
CLINE, THOMAS W.....	MATERNAL CONTROL OF DROSOPHILA EMBRYONIC DEVELOPMENT.....	1R01 GM23468-01	91,217
COHEN, EDWARD H.....	ORGANIZATION AND EVOLUTION OF DROSOPHILA DNA.....	5R01 GM21786-03	46,755
COWAN, NICHOLAS J.....	IMMUNOGLOBULIN BIOSYNTHESIS IN MOUSE MYELOMA CELLS.....	1R01 CA20918-01	72,313
COX, EDWARD C.....	MUTATOR GENES OF ESCHERICHIA COLI.....	5R01 AI09392-08	80,560
FRESCO, JACQUES R.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA18448-02	107,386
FRESCO, JACQUES R.....	MACROMOLECULAR ASPECTS OF RNA STRUCTURE AND FUNCTION.....	5R01 GM07654-17	99,898
FRESCO, JACQUES R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07057-12	114,818
GILVARG, CHARLES.....	PEPTIDE UTILIZATION.....	5R01 AM10336-12	48,026
GOULD, JAMES L.....	GENETIC CONTROL OF BEHAVIOR.....	5R01 GM22692-02	31,941
KIRSCHNER, MARC W.....	BIOCHEMICAL STUDIES OF MITOSIS.....	5R01 GM19667-05	87,298
LAEMMLI, ULRICH K.....	HEAD MATURATION AND DNA PACKAGING OF BACTERIOPHAGE T4.....	5R01 GM18776-06	53,882
LEVINE, ARNOLD J.....	DNA REPLICATION IN SV40 INFECTED CELLS.....	5R01 CA11049-09	73,200
LEVINE, ARNOLD J.....	REGULATION OF DEOXYPYRIMIDINE KINASES BY TUMOR VIRUSES.....	5R01 CA16380-03	17,736
LEVINE, ARNOLD J.....	CELL SURFACE ANTIGENS OF TRANSFORMED CELLS TERATOMAS.....	1R01 CA21788-01	70,947
NEWTON, AUSTIN.....	REGULATION OF DEVELOPMENT IN CAULOBACTER CRESCENTUS.....	5R01 GM22299-03	57,307
NORTON, JACK R.....	A GENERAL CATALYTIC SYNTHESIS OF ANTICANCER LACTONES.....	5R01 CA18546-03	43,892
PATON, MARTHA C.....	EXPERIMENTS ON THE DEVELOPMENT OF NEURAL PATHWAYS.....	1R01 EY01872-01	62,622
SANDERS, THOMAS G.....	Y CHROMOSOME STRUCTURE AND REGULATION IN DROSOPHILA.....	2R01 GM20770-04	59,942

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
SHERRICK, CARL E.....	THE ROLE OF THE HAPTIC SYSTEM IN COMMUNICATION.....	5R01 NS04755-15	107,669
SNIDER, BARRY B.....	NEW SYNTHETIC APPLICATIONS OF THE ENE REACTION.....	5R01 GM23159-02	52,680
SPIRO, THOMAS G.....	METAL CENTERS IN BIOLOGICAL SYSTEMS.....	2R01 GM13498-12	72,571
SPIRO, THOMAS G.....	RAMAN SPECTRA OF HEME PROTEINS AND RELATED MOLECULES.....	5R01 HL12526-09	76,875
STEINBERG, MALCOLM S.....	CHEMISTRY AND MEASUREMENT OF INTERCELLULAR ADHESION.....	5R01 CA13605-06	115,194
TAYLOR, EDWARD C.....	CHEMICAL AND BIOCHEMICAL STUDIES OF PTERIDINES.....	5R01 CA12876-06	114,521
WEINTRAUB, HAROLD M.....	THE COMPLEXITY OF CHROMOSOME STRUCTURE AND ASSEMBLY.....	5R01 GM22444-02	58,900
WESTOFF, CHARLES F.....	POPULATION RESEARCH CENTER.....	5P30 HD08008-04	118,016
WEVER, ERNEST G.....	THE NATURE OF HEARING.....	5P01 NS03798-15	168,472
WITMAN, GEORGE B, III.....	MOLECULAR MECHANISM OF FLAGELLA MOTILITY AND ASSEMBLY.....	5R01 GM21586-03	41,956
WORCEL, ABRAHAM.....	CHROMOSOME STRUCTURE IN INTERPHASE AND MITOSIS.....	5R01 GM21574-03	67,863
WRIGHT, HARLAN T.....	STRUCTURAL BASIS OF MACROMOLECULE ASSOCIATION.....	1R01 GM23598-01	96,944
ZIMMERBERG, HELEN Y.....	CYCLIC AMP—A CLASSIFIED BIBLIOGRAPHY OF PUBLICATIONS.....	1R01 LM02968-01	19,076
ORGANIZATION TOTAL	36	2,566,672	
SOUTH ORANGE			
SETON HALL UNIVERSITY ZIP CODE 07079			
ANDER, PAUL.....	COION INTERACTIONS WITH BIOLOGICAL POLYELECTROLYTES.....	5R01 GM21234-03	16,326
ORGANIZATION TOTAL	1	16,326	
TEANECK			
FAIRLEIGH DICKINSON UNIVERSITY ZIP CODE 07666			
ALFANO, MICHAEL C.....	NUTRITIONAL MODULATION OF ORAL MUCOSAL PERMEABILITY.....	5R23 DE04228-03	23,033
ALFANO, MICHAEL C.....	MODIFICATION OF PERMEABILITY OF THE GINGIVAL CREVICE.....	5R01 DE04480-02	69,832
SINGER, ROBERT M.....	FETAL ISOENZYME EXPRESSION IN HUMAN TUMOR XENOGRAFTS.....	1R01 CA22360-01	52,594
ORGANIZATION TOTAL	3	145,459	
THOROFARE			
AMERICAN GASTROENTEROLOGICAL ASSOCIATION ZIP CODE 08086			
KERN, FRED, JR.....	RESEARCH WORKSHOPS IN GASTROENTEROLOGY.....	5R13 AM19726-02	29,400
ORGANIZATION TOTAL	1	29,400	
STATE TOTAL	171	9,647,738	
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF ALBUQUERQUE ZIP CODE 87140			
PFEIFER, CHARLES H, JR.....	BIOMEDICAL SCIENCES SUPPORT (MINORITY STUDENTS).....	5S06 RR08108-05	78,654
ORGANIZATION TOTAL	1	78,654	
UNIVERSITY OF NEW MEXICO ZIP CODE 87131			
ANDERSON, ROBERT E.....	RADIATION INJURY IN SUBPOPULATIONS OF LYMPHOCYTES.....	5R01 CA13805-05	38,807
ANDERSON, ROBERT E.....	IMMUNE SURVEILLANCE IN RADIATION CARCINOGENESIS.....	5R01 CA14270-05	23,893
ATENCIO, ALONZO.....	BIOMEDICAL SCIENCES ADVANCEMENT PROGRAM.....	2S06 RR08139-04	471,491
AVNER, BARRY P.....	DESENSITIZATION OF TRACHEAL MUSCLE TO ISOPROTERENOL.....	1R01 HL20184-01	31,752
BANKHURST, ARTHUR D.....	LYMPHOCYTE HETEROGENEITY IN THE RHEUMATIC DISEASES.....	5R01 AM18487-02	39,663
BUECHLEY, ROBERT W.....	CANCER INCIDENCE IN NEW MEXICO INDIANS AND SPANISH.....	5R01 CA19710-02	50,927
DAUB, GUIDO H.....	13C-ENRICHED CHEMICAL CARCINOGENS.....	5R01 CA16871-02	77,381
EATON, R PHILIP.....	GLUCAGON REGULATION OF KETOGENESIS IN DIABETIC MAN.....	1R01 AM18681-01	75,278
EATON, R PHILIP.....	LIPOPROTEIN-CARBOHYDRATE METABOLISM.....	5R01 HL12085-09	56,222
EVAN, ANDREW P.....	RENAL PAH TRANSPORT DURING DEVELOPMENT.....	5R01 HD10214-02	31,605
GALEY, WILLIAM R, JR.....	MECHANISMS OF PANCREATIC ELECTROLYTE AND H2O SECRETION.....	5R01 AM17843-03	36,784

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW MEXICO—Continued			
GARRY, PHILIP J.....	EFFECTS OF INFANT IRON NUTRITION ON SERUM FERRITIN.....	1R01 HD10691-01	25,800
GOLDBERG, ELLEN H.....	IMMUNOBIOLOGY OF THE H-Y (MALE) ANTIGENIC SYSTEM.....	2R01 AI11560-04	42,134
HURWITZ, LEON.....	ACTION OF VASCULAR AND OTHER SMOOTH MUSCLE INHIBITORS.....	3R01 HL16179-03S1	1,095
JOHNSON, PEDER J.....	INFLUENCE OF STRATEGIES IN CHILDREN'S COGNITIVE FUNCTION.....	5R01 HD03390-09	21,368
KELLEY, ROBERT O.....	BIOLOGY OF THE AGING CELL SURFACE.....	5R01 AG00191-03	37,913
KLIGERMAN, MORTON M.....	PRECLINICAL STUDIES FOR PION RADIOTHERAPY.....	5P01 CA14052-05	1,030,119
KLIGERMAN, MORTON M.....	CANCER RESEARCH AND TREATMENT CENTER PROGRAM.....	2P01 CA16127-04	998,892
KLIGERMAN, MORTON M.....	RADIATION THERAPY ONCOLOGY GROUP.....	1R10 CA20379-01	38,502
KLIGERMAN, MORTON M.....	CANCER CENTER SUPPORT (CORE) GRANT.....	1P30 CA21074-01	531,030
KLINGLER, EUGENE L, JR.....	RADIATION NEPHRITIS IN A NONHUMAN PRIMATE.....	3R01 CA14771-03S1	10,772
KOGOMA, TOKIO.....	DNA REPLICATION IN BACTERIA: REGULATORY MUTANTS.....	5R01 GM22092-03	20,734
MESSNER, RONALD P.....	ANTIBODIES AND LYMPHOCYTE FUNCTION IN LUPUS FAMILIES.....	5P01 AM13789-08	57,309
MORROW, CARY J.....	GAS CHROMATOGRAPHIC RESOLUTION OF ENANTIOMERS.....	5R01 GM23204-02	30,174
NAPOLITANO, LEONARD M.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00997-02	333,925
NAPOLITANO, LEONARD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05583-13	140,623
OMDAHL, JOHN L.....	VITAMIN D ACTION: EFFECT OF MINERALS.....	3R01 AM16905-03S1	11,498
PEAKE, GLENN T.....	SOMATOTROPE METABOLISM AND LACTOTROPE METABOLISM.....	2R01 HD05794-06	57,252
PRIOLA, DONALD V.....	INTRINSIC INNERVATION OF THE HEART.....	5R01 HL18517-03	52,289
RADLOFF, ROGER J.....	POLYPEPTIDE CLEAVAGE DURING EMC VIRUS SYNTHESIS.....	5R01 AI11658-04	22,264
RATNER, ALBERT.....	ADRENERGIC CONTROL OF OVARIAN STEROIDOGENESIS.....	5R01 HD09475-02	40,643
REYES, PHILIP.....	PYRIMIDINE SYNTHESIS IN NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA15036-05	52,264
SAIKI, JOHN H.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	5R10 CA12213-06	102,929
SCALLEN, TERENCE J.....	LIPID METABOLISM IN BIOLOGICAL SYSTEMS.....	5R01 AM10628-12	117,979
SCALLEN, TERENCE J.....	CHOLESTEROL REGULATION BY HMG-COA REDUCTASE.....	2R01 HL16796-04	99,120
SOLOMON, SIDNEY.....	POSTNATAL DEVELOPMENT OF RENAL AMMONIA EXCRETION.....	1R01 HD10792-01	49,728
TAPSCOTT, ROBERT E.....	CHELATE ISOMERISM WITH MESO AND PROCHIRAL LIGANDS.....	5R01 GM22435-02	23,279
VAN EPPS, DENNIS E.....	PHAGOCYtic CELLS: REGULATION, DYSFUNCTION AND DISEASE.....	5R01 CA20819-02	52,766
VANDERJAGT, DAVID L.....	GLUTATHIONE METABOLISM IN NORMAL AND ABNORMAL TISSUE.....	5R01 CA17298-03	19,837
VORHERR, HELMUTH W.....	DES-INDUCED TRANSPLACENTAL CARCINOGENESIS.....	5R01 CA19563-02	47,883
WARNER, NOEL L.....	GENETICS OF MURINE PLASMACYTOMAS AND AUTOIMMUNITY.....	1R01 AM19841-01	65,790
WARNER, NOEL L.....	ALLOTYPES OF MURINE IMMUNOGLOBULINS.....	1R01 CA22105-01	100,552
WARNER, NOEL L.....	GENETIC ASPECTS OF TUMOR HOST IMMUNE RELATIONSHIP.....	1R01 CA22268-01	113,751
WATTS, RICHARD S.....	EXTERNAL ISOTOPE ASSAY OF ANIMAL ATHEROSCLEROSIS.....	5R01 HL14826-05	18,750
WILLIAMS, RALPH C, JR.....	IMMUNOLOGICAL STUDIES.....	5P01 AI13433-02	106,200
WILLIAMS, RALPH C, JR.....	STUDIES OF AUTOANTIBODIES AND IMMUNOGLOBULINS.....	5R01 AM13690-09	86,277
WILLIAMS, RALPH C, JR.....	INTERACTIONS OF CELLULAR AND HUMORAL IMMUNITY.....	2R01 AM13824-08	98,150
WOODSIDE, WILLIAM F.....	HORMONAL REGULATION OF HEPATIC KETOGENESIS.....	1R01 AM19998-01	40,950
YUHAS, JOHN M.....	RADIOPROTECTANTS AND RADIOSENSITIZERS IN RADIOTHERAPY.....	1R01 CA19326-01A1	61,162
ORGANIZATION TOTAL	49	5,695,506	

LAS VEGAS

NEW MEXICO HIGHLANDS UNIVERSITY ZIP CODE 87701

ANSELMO, VINCENT C.....	COORDINATED RESEARCH AND TRAINING PROGRAM.....	5S06 RR08066-06	55,449
ZENICK, HAROLD.....	COORDINATED RESEARCH AND TRAINING PROGRAM.....	2S06 RR08066-07	170,612
ORGANIZATION TOTAL	2	226,061	

PORTALES

EASTERN NEW MEXICO UNIVERSITY ZIP CODE 88130

IRWIN-WILLIAMS, CYNTHIA C.....	EFFECTS OF ENVIRONMENTAL STRESS ON RURAL POPULATIONS.....	5R01 HD09417-02	85,011
ORGANIZATION TOTAL	1	85,011	

UNIVERSITY PARK

NEW MEXICO STATE UNIVERSITY LAS CRUCES CAMPUS ZIP CODE 88001

BIRNBAUM, EDWARD R.....	LANTHANIDE IONS AS PROBES OF PROTEIN STRUCTURE.....	5R01 AM16582-05	60,303
CASILLAS, EDMUND R.....	CARNITINE AND CAMP IN MATURING MAMMALIAN SPERM.....	5R01 HD10664-02	43,635
DARNALL, DENNIS W.....	SUBUNIT INTERACTIONS AND CONTACT SITES IN PROTEINS.....	5R01 GM22241-03	32,630

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW MEXICO—Continued			
DARNALL, DENNIS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07154-02	34,282
HAGEMAN, JAMES H.....	SERINE PROTEASE & PROTEOLYSIS IN BACTERIAL SPORULATION.....	5R01 GM19643-05	45,174
KUEHN, GLENN D.....	CELL DEVELOPMENT STUDIES IN PHYSARUM POLYCEPHALUM.....	2R01 GM18538-07	38,862
KUEHN, GLENN D.....	HEALTH SCIENCE RESEARCH FOR ETHNIC MINORITY STUDENTS.....	2S06 RR08136-04	236,449
LWOWSKI, WALTER.....	CYCLIC AMINIMIDES AS ALKYLATING AGENTS, II.....	5R01 CA12816-09	40,467
WILKINS, RALPH G.....	KINETIC STUDIES OF HEMERYTHRIN REACTIONS.....	5R01 HL17828-03	39,893
ORGANIZATION TOTAL	9 571,695		
STATE TOTAL	62 6,656,927		
NEW YORK			
ALBANY			
NEW YORK STATE DEPARTMENT OF HEALTH ZIP CODE 12237			
BERNS, DONALD S.....	BILIPROTEIN AND CHLOROPHYLL-LIPID MEMBRANE STUDIES.....	5R01 GM22247-03	36,420
CHATTERJEE, NANDO K.....	PROCESSING AND TRANSLATION OF GROUP C ADENOVIRUS HNRNA.....	5R01 CA19707-02	54,021
CREAVEN, PATRICK J.....	TUMOR DRUG RESPONSE PARAMETERS IN INDIVIDUAL PATIENTS.....	1P01 CA21071-01	462,435
DICKERMAN, HERBERT W.....	MECHANISMS OF ANDROGEN EFFECT ON ERYTHROID DEVELOPMENT.....	5R01 AM19253-02	31,430
DODDS, W JEAN.....	COMPARATIVE STUDY OF COAGULATION AND VASCULAR DISEASE.....	5R01 HL09902-12	189,519
FASCO, MICHAEL J.....	ROLE OF WARFARIN METABOLISM IN ANTIVITAMIN K ACTIVITY.....	1R01 HL19772-01	30,997
FENTON, JOHN W, II.....	HUMAN THROMBINS.....	3R01 HL13160-06S1	1,500
FENTON, JOHN W, II.....	HUMAN THROMBINS.....	5R01 HL13160-07	72,678
FLAHERTY, LORRAINE.....	IMMUNOGENETICS AND DIFFERENTIATION.....	3R01 AI12603-02S1	6,893
FLAHERTY, LORRAINE.....	IMMUNOGENETICS AND DIFFERENTIATION.....	5R01 AI12603-03	50,812
FLAHERTY, LORRAINE.....	IMMUNOGENETIC MAPPING OF THE CELL SURFACE.....	1R01 CA23027-01	36,165
GREENWALD, PETER.....	CANCER EPIDEMIOLOGY PROGRAM GRANT.....	5P01 CA12707-06	299,460
GREENWALD, PETER.....	EPIDEMIOLOGIC STUDY OF OVARIAN CANCER.....	1R01 CA20502-01A1	115,960
GRUFT, HOWARD.....	EPIDEMIOLOGY OF INFECTION WITH ATYPICAL MYCOBACTERIA.....	1R01 AI13813-01	64,659
JANERICH, DWIGHT T.....	CANCER IN PARENTS OF CONGENITALLY DEFECTIVE CHILDREN.....	1R01 CA19564-01A1	51,236
KAMINSKY, LAURENCE S.....	POLYCHLORINATED BIPHENYLS METABOLISM/INDUCTION/TOXICITY.....	1R01 ES01544-01	51,230
KAMINSKY, LAURENCE S.....	HEPATIC MICROSOMAL ENZYME METABOLISM OF ANESTHETICS.....	5R01 GM23029-02	34,411
LAWSON, WILLIAM B.....	ENZYME MODIFICATION WITH BIFUNCTIONAL INHIBITORS.....	5R01 AM05299-16	15,084
LAWSON, WILLIAM B.....	ENZYMES OF BLOOD COAGULATION AND FIBRINOLYSIS.....	3R01 HL15887-03S1	3,366
LAWSON, WILLIAM B.....	ENZYMES OF BLOOD COAGULATION AND FIBRINOLYSIS.....	2R01 HL15887-04	59,238
MALEY, FRANK.....	MODEL SYSTEM TO STUDY CELL DIFFERENTIATION AND AGING.....	1P01 AG00207-01A1	199,953
PAOLETTI, ENZO.....	VACCINIA RNA SYNTHESIS: A MODEL FOR MRNA PROCESSING.....	1R01 GM23853-01	69,696
PARSONS, DONALD F.....	FUNDAMENTAL STUDIES ON BIOLOGICAL ELECTRON IMAGING.....	5R01 GM23727-02	77,265
PLUMMER, THOMAS H, JR.....	COMPARATIVE STUDIES ON HUMAN CARBOXYPEPTIDASES.....	5R01 GM11764-12	36,547
POLLARA, BERNARD.....	SPECIFICITY OF HUMAN NEPHROTOXIC ANTIGENS.....	5R01 AM18158-07	115,663
ROSE, HARALD H.....	IMAGING METHODS FOR BIOLOGICAL OBJECTS IN EM.....	1R01 GM24006-01	66,355
TRIMBLE, ROBERT B.....	BIOSYNTHESIS OF THE YEAST GLYCOPROTEIN INVERTASE.....	1R01 GM23900-01	36,873
WHALEN, ROBERT P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05649-11	82,325
WOLIN, MEYER J.....	FERMENTATION INTERACTIONS IN MICROBIAL ECOSYSTEMS.....	5R01 AI12461-04	70,147
ORGANIZATION TOTAL	29 2,422,338		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE ZIP CODE 12229			
BROCKERHOFF, HANS.....	ROLE OF CHOLESTEROL IN BIOLOGICAL MEMBRANES.....	5R01 GM21875-03	70,130
KARTEN, HARVEY J.....	RETINAL GANGLION CELLS AND ACCESSORY OPTIC NUCLEI.....	1R01 EY02146-01	93,622
MALIK, MAZHAR N.....	ALLOSTERIC FUNCTION OF PLATELET CONTRACTILE PROTEINS.....	7R01 HL22194-01	49,314
MARKS, NEVILLE.....	BRAIN ENZYMES AND INACTIVATION OF PEPTIDYL HORMONES.....	5R01 NS12578-02	32,894
PENN, NATHAR W.....	RETARDATION OF BRAIN DNA.....	1R01 HD10643-01	85,007
ORGANIZATION TOTAL	5 330,967		
STATE UNIVERSITY OF NEW YORK AT ALBANY ZIP CODE 12222			
ALLINGTON, RICHARD L.....	IDENTIFYING AND EASING THE READING DEMANDS OF THE AGED.....	1R23 AG00682-01	16,880
BAGLIONI, CORRADO.....	STRUCTURE AND SYNTHESIS OF IMMUNOGLOBULINS.....	5R01 AI11887-04	118,078
BAGLIONI, CORRADO.....	SELECTIVE REPLICATION OF HEMOGLOBIN GENES.....	5R01 HL17710-03	81,286

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
DAS, TARA P.....	THEORY OF ELECTRONIC PROPERTIES OF METALLOPROTEINS.....	5R01 HL15196-05	38,920
EADON, GEORGE A.....	STRUCTURE DETERMINATION BY MASS SPECTROMETRY.....	5R01 GM20003-03	12,529
HIRSCH, HELMUT V.....	DEVELOPMENT AND FUNCTIONS OF THE VISUAL CORTEX.....	5R01 EY01268-05	46,545
HOLMES, DAVID S.....	REGULATION OF GENE EXPRESSION IN HIGHER ORGANISMS.....	1R01 GM24295-01	78,556
JACKLET, JON W.....	PERIPHERAL AND CENTRAL MODULATION OF SPECIFIC NEURONS.....	5R01 NS08443-09	39,798
KING, TSOO E.....	BIOENERGETICS OF AGING: FACTS AND MECHANISMS.....	5R01 AG00069-03	64,827
KING, TSOO E.....	A SYMPOSIUM ON OXIDASES (ISOX-III).....	1R13 AM19787-01	13,000
KING, TSOO E.....	RECONSTITUTION OF MITOCHONDRIAL RESPIRATORY CHAIN.....	5R01 GM16767-10	52,258
KING, TSOO E.....	BIOENERGETIC APPARATUS IN HEART MITOCHONDRIA.....	5R01 HL12576-09	89,445
LERMAN, LEONARD S.....	REGULATION AND CHARACTERIZATION OF THE HUMAN GENOME.....	5R01 GM24030-02	79,447
MILLIS, ALBERT J.....	SURFACE PROTEINS AND CELLULAR SENESCENCE.....	1R01 AG00697-01	53,648
MILLIS, ALBERT J.....	REGULATION OF HUMAN AND MAMMALIAN CELL PROLIFERATION.....	5R01 HD09515-03	50,592
RIKMENSPOEL, ROBERT.....	MECHANISMS IN CILIARY AND FLAGELLAR MOTION.....	2R01 HD06445-04	48,279
RIKMENSPOEL, ROBERT.....	CONTROL OF SPERM MOTILITY.....	5R01 HD08752-03	56,864
SARMA, RAMASWAMY H.....	MAGNETIC RESONANCE STUDIES OF BIOLOGICAL INTERACTIONS.....	2R01 CA12462-07	59,019
SATURNO, ANTONY F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07122-09	64,395
SAUNDERS, JOHN W, JR.....	EMBRYONIC CONTROLS OF LIMB DEVELOPMENT.....	2R01 HD07390-04	59,682
SCHOLES, CHARLES P.....	PROBING HEME AND HEMOPROTEINS.....	2R01 AM17884-03	126,455
SHUB, DAVID A.....	REGULATION OF DEVELOPMENT OF BACTERIOPHAGE SP01.....	5R01 AI11323-05	56,144
ZUBIETA, JON A.....	MOLYBDENUM-SULFUR COMPOUNDS AS NITROGENASE MODELS.....	5R01 GM22566-02	34,029
ORGANIZATION TOTAL	23	1,340,676	
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE ZIP CODE 12208			
ALLEN, S H.....	PRODUCTION OF PROPIONIC ACID BY ORAL MICROORGANISMS.....	5R01 DE04284-03	21,149
BALINT, JOHN A.....	METABOLISM OF PULMONARY SURFACTANT.....	5R01 HL15273-05	51,915
BARRON, KEVIN D.....	ENZYME HISTOCHEMISTRY OF AXON INJURY.....	5R01 NS08735-09	38,442
BONDURANT, STUART.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00749-05	233,835
BONDURANT, STUART.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05394-16	135,872
BOURKE, ROBERT S.....	BRAIN AND SPINAL CORD TRAUMA.....	5P50 NS13042-02	213,662
COULSTON, FREDERICK.....	COMPARATIVE ENVIRONMENTAL TOXICOLOGY.....	3P01 ES00226-10S1	118,793
COWGER, MARILYN L.....	BIOENERGETICS OF AGING: FACTS AND MECHANISMS.....	5R01 AG00070-03	49,615
COWGER, MARILYN L.....	MECHANISM OF BILIRUBIN TOXICITY.....	5R01 HD05333-08	54,943
DOYLE, JOSEPH T.....	PROGNOSTICATION BY COMPUTER-ANALYZED VECTORCARDIOGRAM.....	5R01 HL16403-04	34,151
DUTTON, ROBERT E, JR.....	CONTROL OF RESPIRATION AND BLOOD GASES.....	2R01 HL12564-08	75,174
GOLDFARB, ROY D.....	GENESIS OF CIRCULATORY SHOCK BY PANCREATIC PEPTIDES.....	1R01 HL19977-01	32,380
HALL, CHARLES A.....	VIT. B-12 & TRANSCOBALAMIN II ROLES IN ANTIBODY RESPONSE.....	2R01 AM17767-04	16,898
HAN, JAOK.....	EXPERIMENTAL CARDIAC ARRHYTHMIAS.....	5R01 HL18796-03	44,376
HOF, LISELOTTE B.....	A FLUORESCENT LABEL FOR CELL SURFACE SIALIC ACIDS.....	1R01 GM24409-01	37,915
HOOK, ERNEST B.....	ENVIRONMENTAL FACTORS RELATED TO CHROMOSOME DAMAGE.....	5R01 ES01207-03	37,922
HOOK, ERNEST B.....	EPIDEMIOLOGY OF VOMITING IN PREGNANCY.....	5R01 HD09374-03	66,946
HORTON, JOHN.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA06594-15	154,746
JOSHI, SHARAD G.....	TISSUE-SPECIFIC PROTEINS IN PRIMATE ENDOMETRIUM.....	1R01 HD09622-01A1	59,067
LAM, KWOK-WAI.....	BIOCHEMISTRY AND CYTOLOGY OF SUBRETINAL FLUIDS.....	3R01 EY01464-02S1	4,177
LAM, KWOK-WAI.....	BIOCHEMICAL STUDIES OF ACID PHOSPHATASE 5.....	2R01 GM22260-03	46,933
LAWRENCE, DAVID A.....	ANTIGEN-ACTIVATION OF THYMUS-DERIVED LYMPHOCYTES.....	5R01 AI12527-03	47,494
LEE, PEI-FEI.....	COLLAGEN TUBES FOR AQUEOUS-VENOUS SHUNT.....	5R01 EY01164-03	30,896
LOEGERING, DANIEL J.....	MECHANISM OF RETICULOENDOTHELIAL FAILURE IN SHOCK.....	5R01 HL18051-03	27,078
LUDLUM, DAVID B.....	ALKYLATING AGENTS, NITROSOUREAS—MOLECULAR PHARMACOLOGY.....	2R01 CA20129-02	80,030
LUDLUM, DAVID B.....	MUTAGENIC ALTERATIONS IN NUCLEIC ACID STRUCTURE.....	5R01 CA20292-02	58,905
MALIK, ASRAR B.....	PULMONARY VASCULAR ADJUSTMENTS IN CIRCULATORY COLLAPSE.....	5R01 HL17355-03	22,855
MC KNEALLY, MARTIN F.....	SURGERY AND REGIONAL NODE STIMULATION FOR LUNG CANCER.....	5R01 CA17346-03	18,011
MEGIRIAN, ROBERT.....	ANTITUMOR ACTIVITY OF BCG, C. PARVUM AND GLUCAN.....	1R01 CA21099-01	33,674
OBRIG, TOM G.....	POSTTRANSCRIPTIONAL-TRANSLATIONAL CONTROL MECHANISMS.....	7R01 GM24448-01	55,636
POULOS, DENNIS A.....	CENTRAL PROCESSING OF TEMPERATURE INFORMATION.....	5R01 NS11384-04	31,751
POWERS, SAMUEL R, JR.....	ON-LINE COMPUTER STUDY OF THERAPY FOR HUMAN SHOCK.....	2P50 GM15426-10A1	272,001
REINECKE, ROBERT D.....	STEREOPSIS AND MICROTROPIA IN AMBLYOPIA PATHOGENESIS.....	5R01 EY00752-06	48,343
RODGERS, JOHN B, JR.....	USE OF THE GUT FOR THERAPY OF CORONARY ARTERY DISEASE.....	3R01 HL17332-03S1	14,430
SABA, THOMAS M.....	OPSONIC AND PHAGOCYTTIC ACTIVITY DURING TUMOR GROWTH.....	2R01 CA16011-03	35,142
SABA, THOMAS M.....	SYSTEMIC HOST DEFENSE FOLLOWING TRAUMA.....	5R01 GM21447-03	49,590
SARFEH, I JAMES.....	A COMPARATIVE STUDY OF THE MAJOR HUMAN BILE SALTS.....	5R01 AM18765-02	30,732

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SCHELL, RONALD F.....	SPECIFIC IMMUNE REACTIVITY TO SYPHILITIC INFECTION.....	5R01 AI13307-02	46,756
SMITH, RICHARD S.....	ULTRASTRUCTURAL STUDY OF OCULAR VASCULAR PERMEABILITY.....	3R01 EY00538-07S1	3,639
SMITH, RICHARD S.....	ULTRASTRUCTURAL STUDY OF OCULAR VASCULAR PERMEABILITY.....	5R01 EY00538-08	66,205
STROMINGER, NORMAN L.....	NEUROANATOMICAL CIRCUITS OF SOMATIC MOTOR FUNCTION.....	5R01 NS12208-03	28,098
THOMAS, WILBUR A.....	CENTER FOR PREVENTION & TREATMENT OF ATHEROSCLEROSIS.....	3P50 HL14177-05S2	436,289
THOMAS, WILBUR A.....	POPULATION DYNAMICS OF ARTERIAL CELLS IN ATHEROGENESIS.....	1P01 HL20993-01	625,355
THOMAS, WILBUR A.....	PATHOLOGY OF ATHEROSCLEROSIS: CELL BIRTHS AND DEATHS.....	1R01 HL21118-01	116,861
TURINSKY, JIRI.....	THE MECHANISM OF INSULIN RESISTANCE AFTER BURNS.....	5R01 GM22825-02	26,755
WONG, PATRICK Y.....	STUDY OF KININS IN HYPERTENSION AND OTHER DISEASES.....	5R01 HL18624-02	39,620
ORGANIZATION TOTAL	46	3,775,057	
BINGHAMTON			
STATE UNIVERSITY OF NEW YORK AT BINGHAMTON ZIP CODE 13901			
DONOVICK, PETER J.....	NUTRITION, EXPERIENCE, CNS LESIONS: AGE AND BEHAVIOR.....	5R01 HD08498-03	26,884
FRANKEL, ARTHUR I.....	REGULATION OF REPRODUCTION IN THE MALE.....	5R01 HD04081-08	63,051
HASSNER, ALFRED.....	SYNTHESIS AND REACTIONS OF NOVEL HETEROCYCLES.....	5R01 CA19203-03	56,995
PASTORE, RICHARD E.....	AUDITORY ATTENTION: TEMPORAL & FREQUENCY EFFECTS.....	5R01 NS10995-03	29,080
SCHRIER, EUGENE E.....	THE EFFECTS OF SALTS ON INTERACTIONS IN AQUEOUS MEDIA.....	2R01 GM11762-13	43,473
SCOBIE, STANLEY R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07149-04	32,348
SHRIFT, ALEX.....	SELENIUM TOXICITY: SELENOCYSTEINE IN PROTEINS.....	2R01 ES00807-04	60,707
SHRIFT, ALEX.....	ASSIMILATION OF SE INTO HUMAN GLUTATHIONE PEROXIDASE.....	1R01 ES01465-01	62,716
STEVENS, EUGENE S.....	CHARACTERIZATION OF BIOPOLYMERS BY VACUUM UV CD.....	7R01 GM24862-01	38,778
ORGANIZATION TOTAL	9	414,032	
BROCKPORT			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT BROCKPORT ZIP CODE 14420			
BLANCO, RICHARD L.....	AMERICAN REVOLUTIONARY WAR PHYSICIAN.....	1R01 LM02597-01	29,781
KOWALSKI, JOHN C.....	ANTIBODY LEVELS DURING A FILARIAL NEMATODE INFECTION.....	1R01 AI12994-01A2	15,472
ORGANIZATION TOTAL	2	45,253	
BUFFALO			
CHILDREN'S HOSPITAL ZIP CODE 14222			
EGAN, EDMUND A.....	ABNORMAL ALVEOLAR PERMEABILITY AND LUNG DISEASE.....	1R01 HL22552-01	91,976
ELLIS, ELLIOT F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05493-15	24,341
HUMBERT, JAMES R.....	POWER IN LEUKOCYTE BACTERICIDAL LEUKEMIA.....	7R01 CA22351-01	7,516
MACGILLIVRAY, MARGARET H.....	HORMONES, BLOOD GLUCOSE AND LIPIDS IN DIABETIC CHILDREN.....	3R01 AM17879-01A1S1	4,007
MACGILLIVRAY, MARGARET H.....	HORMONES, BLOOD GLUCOSE AND LIPIDS IN DIABETIC CHILDREN.....	5R01 AM17879-02	92,340
NETER, ERWIN.....	STUDY OF BACTERIAL TOXINS AND HEMAGGLUTINATION.....	5R01 AI00658-21	38,077
OGRA, PEARAY L.....	ARTHRITIS AND RUBELLA VIRUS INFECTION.....	5R01 AM17050-03	41,518
OGRA, PEARAY L.....	ETIOLOGIC ASPECTS OF SUDDEN INFANT DEATH SYNDROME.....	5R01 HD10088-02	86,782
PARK, BYUNG H.....	PULMONARY ALVEOLAR PROTEINOSIS PATHOGENETIC MECHANISMS.....	2R01 HL19628-02	26,772
RATTAZZI, MARIO C.....	ENZYME THERAPY IN GM2 GANGLIOSIDOSIS: AN ANIMAL MODEL.....	1R01 NS13677-01	59,721
ORGANIZATION TOTAL	10	473,050	
MEDICAL FOUNDATION OF BUFFALO ZIP CODE 14203			
BELLINO, FRANCIS L.....	REGULATION OF HUMAN ESTROGEN SYNTHETASE.....	1R01 HD10921-01	45,952
CODY, VIVIAN.....	MOLECULAR STRUCTURES OF THYROACTIVE COMPOUNDS.....	5R01 AM15051-06	58,702
DETTITA, GEORGE T.....	DIFRACTION STUDIES OF THE BIOTIN VITAMERS.....	1R01 AM19856-01	51,840
DORSET, DOUGLAS L.....	ELECTRON DIFRACTION OF MEMBRANE PHOSPHOLIPIDS.....	5R01 GM21047-04	86,448
DUAX, WILLIAM L.....	MOLECULAR STRUCTURE OF STEROIDS.....	2R01 CA10906-10	122,400
DUAX, WILLIAM L.....	IONOPHORES, TRANSPORT AND MEMBRANE STRUCTURE.....	5R01 GM19684-05	72,360
DUAX, WILLIAM L.....	DISSEMINATION OF MOLECULAR DATA FOR BIOMEDICAL USE.....	5R01 LM02353-03	89,889
HAUPTMAN, HERBERT A.....	ULTRASTRUCTURE OF ANTIHYPERTENSIVE PROSTAGLANDINS.....	5R01 HL15378-05	60,348
HAUPTMAN, HERBERT A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05716-06	40,453
OSAWA, YOSHIO.....	HUMAN DEVELOPMENT AND ESTROGEN BIOSYNTHESIS.....	2R01 HD04945-07	143,866
ORGANIZATION TOTAL	10	772,258	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
AMBRUS, CLARA M.....	IMMOBILIZED ENZYMES FOR MANAGEMENT OF PHENYLKETONURIA.....	5R01 GM22735-02	65,757
BERNACKI, RALPH J.....	PLASMA MEMBRANE AS A TARGET IN TUMOR CHEMOTHERAPY.....	2R01 CA15757-04	51,523
BERNACKI, RALPH J.....	METABOLIC FATE OF MAMMARY CELL SURFACE GLYCOCONJUGATES.....	5R01 CA19814-02	33,515
BERTRAM, JOHN S.....	MECHANISMS OF CARCINOGENESIS IN CELL CULTURE.....	1R01 CA18197-01A1	54,817
BERTRAM, JOHN S.....	CELL INTERACTIONS DURING MALIGNANT TRANSFORMATION.....	1R01 CA21359-01	29,795
BICHER, HAIM I.....	PROTECTING MICROCIRCULATORY LIVER RADIATION DAMAGE.....	5R01 CA21033-02	38,376
BICHER, HAIM I.....	ISOTT INTERNATIONAL MEETING—JULY 1977.....	1R13 HL21330-01	12,200
BLOCH, ALEXANDER.....	DEVELOPMENT OF ANTITUMOR NUCLEOSIDES AND NUCLEOTIDES.....	5R01 CA12585-07	135,336
BOX, HAROLD C.....	THE MOLECULAR BASIS OF RADIATION SENSITIZATION.....	5R01 CA14434-05	14,416
BROSS, IRWIN D.....	PROGRAM IN BIOMETRICS OF CANCER EPIDEMIOLOGY.....	5P01 CA11531-09	263,173
CARTER, WILLIAM A.....	CHEMOTHERAPY AND REGULATION OF ONCOGENIC VIRUSES.....	5P01 CA14801-05	555,871
CARTER, WILLIAM A.....	SEARCH FOR A 'VIROGENE' IN PROSTATIC TISSUES AND FLUIDS.....	2R26 CA15502-04	111,777
CHAPMAN, VERNE M.....	REGULATION OF X-CHROMOSOME DIFFERENTIATION IN MAMMALS.....	1R01 GM24125-01	88,424
CHAPMAN, VERNE M.....	CONTROL OF GENE EXPRESSION DURING EARLY EMBRYOGENESIS.....	5R01 HD08768-03	65,157
CHENG, YUNG-CHI.....	CANCER CHEMOTHERAPY AND DEOXYNUCLEOTIDE METABOLISM.....	5R01 CA18499-02	56,021
CHHEDA, GIRISH B.....	MODIFIED NUCLEOSIDES IN CANCER AND NORMAL URINES.....	2R01 CA14185-04A1	52,227
CHU, TSANN M.....	ACID AND ALKALINE PHOSPHATASES IN PROSTATIC CANCER.....	5R26 CA15126-04	54,607
CHU, TSANN M.....	ANTIGEN(S) MARKERS IN DIAGNOSIS OF PROSTATIC CANCER.....	2R26 CA15437-04	73,729
CHU, TSANN M.....	ONCOFETAL ANTIGEN(S) AND PANCREATIC CANCER.....	5R26 CA18410-02	79,834
DAO, THOMAS L.....	CLINICAL AND EXPERIMENTAL BREAST CANCER RESEARCH.....	2P01 CA14812-04A1	271,777
DAVE, CHANDRAKANT V.....	ANTICANCER DRUG ACTION ON POLYAMINES AND MITOCHONDRIA.....	1R01 CA22153-01	68,465
DOUGHERTY, THOMAS J.....	ACTIVATED DYES AS SPECIFIC CANCER DRUGS.....	2R01 CA16717-04	94,680
DOYLE, DARRELL J.....	PROTEINS OF THE HEPATOMA CELL PLASMA MEMBRANE.....	5R01 CA17149-03	73,348
EVANS, MARY J.....	DNA POLYMERASES IN MURINE LYMPHOID CELLS.....	5R01 CA18646-03	32,547
FREEMAN, ARNOLD I.....	CHEMOTHERAPY OF ACUTE LEUKEMIA.....	3R10 CA07918-12S1	8,847
FREEMAN, ARNOLD I.....	CHEMOTHERAPY OF ACUTE LEUKEMIA.....	2R10 CA07918-13	80,755
FREEMAN, ARNOLD I.....	PHARMACOLOGIC AND THERAPEUTIC EFFECTS OF RIN.RCN.....	5R01 CA18533-02	55,040
FUJI, HIROSHI.....	CONTROL OF TUMOR GROWTH BY INDUCTION OF B-CELL TOLERANCE.....	5R01 CA16866-03	30,288
GAETA, JOHN F.....	SCANNING MICROSCOPY OF PROSTATIC CANCER.....	5R26 CA18052-03	36,001
GOLDROSEN, MARTIN H.....	MURINE COLON ADENOCARCINOMA: IMMUNOBIOLOGY.....	1R26 CA22931-01	48,836
GRINDEY, GERALD B.....	RATIONAL APPROACHES TO COMBINATION CHEMOTHERAPY.....	5R01 CA17156-03	60,315
GURTOO, HIRA L.....	LUNG CANCER, MICROSOMAL OXYGENASES AND THEIR GENETICS.....	5R01 CA17538-02	38,499
GURTOO, HIRA L.....	MICROSOMAL OXYGENASES-AFLATOXIN ACTIVATION-DNA DAMAGE.....	5R01 ES00993-03	27,736
HAKALA, MAIRE T.....	CELL CULTURE STUDIES ON DRUGS AND ANTIMETABOLITES.....	5R01 CA04175-20	130,348
HAN, TIN.....	IN VITRO LYMPHOCYTE RESPONSES IN HODGKIN'S DISEASE.....	5R01 CA12318-06	48,987
HELD, WILLIAM A.....	ASSEMBLY OF E. COLI 30S RIBOSOMES FROM PRECURSOR RNA.....	5R01 GM22204-03	42,890
HELMSTETTER, CHARLES E.....	PLASMIDS AND INTEGRATIVE SUPPRESSION IN E. COLI.....	1R01 AI13761-01	33,292
HELMSTETTER, CHARLES E.....	BIOCHEMISTRY AND RADIATION EFFECT DURING THE CELL CYCLE.....	5R01 CA08232-13	50,396
HENDERSON, EDWARD S.....	ACUTE LEUKEMIA GROUP B.....	3R10 CA02599-22S1	17,680
HENDERSON, EDWARD S.....	CANCER AND LEUKEMIA GROUP B.....	2R10 CA02599-23	118,781
HENDERSON, EDWARD S.....	CANCER CLINICAL RESEARCH CENTER.....	5P01 CA05834-16	734,277
HOLTERMANN, OLE A.....	ANTITUMOR EFFECTS OF NONSPECIFICALLY ACTIVATED W.B.C.....	5R01 CA17205-03	38,610
HOLYOKE, EDWARD D.....	IMMUNE STATUS: GASTROINTESTINAL TUMOR (COLON).....	5R26 CA15263-04	165,073
HUANG, CHESTER C.....	A MODIFIED HOST-MEDIATED ASSAY USING HUMAN CELLS.....	5R01 ES01290-02	39,390
JACOBSON, KENNETH A.....	SURFACE DYNAMICS OF NORMAL AND TRANSFORMED CELLS.....	2R01 CA16743-04	85,238
JOHNSON, RICHARD J.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA14058-04	71,104
KARTHA, GOPINATH.....	CYCLIC PEPTIDES, STRUCTURE AND FUNCTION.....	5R01 GM22490-02	47,705
KIRDANI, RASHAD.....	PROSTATIC ESTROGEN RECEPTORS.....	5R26 CA20459-02	32,981
KLEIN, EDMUND.....	RELATION OF IMMUNE REACTIONS TO CUTANEOUS NEOPLASIA.....	3R01 CA13599-06S1	4,284
KLEIN, EDMUND.....	RELATION OF IMMUNE REACTIONS TO CUTANEOUS NEOPLASIA.....	2R01 CA13599-07	97,005
KORYTNYK, WALTER.....	CANCER CHEMOTHERAPY AND PLASMA MEMBRANE.....	5R01 CA08793-11	42,840
LASKOWSKI, MICHAEL, SR.....	STUDY OF LIMITED ENZYMIC CLEAVAGES OF NATIVE DNA.....	5R01 CA17788-03	33,584
LASKOWSKI, MICHAEL, SR.....	INHIBITORS OF PROTEINASES.....	5R01 HL15892-04	76,196
MARKUS, GABOR.....	PLASMINOGEN ACTIVATORS AND RELATED PROTEASES IN TUMORS.....	1R01 CA20367-01	26,511
MASLOW, DAVID E.....	SPECIFICITY OF NORMAL AND CANCER CELL INTERACTIONS.....	5R01 CA14370-05	27,246
MAYHEW, ERIC G.....	MECHANISM OF ANTITUMOR EFFECTS OF POLYNUCLEOTIDES.....	5R01 CA14405-05	28,958
MC LIMANS, WILLIAM F.....	DIRECT SUSPENSION CULTURE OF HUMAN PROSTATE CELLS.....	2R26 CA18652-03	88,505
MERRIN, CLAUDE E.....	NBCCGA: MANAGEMENT OF PATIENTS WITH BLADDER CARCINOMA.....	2R26 CA15937-04	48,404

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MIHICH, ENRICO.....	EXPERIMENTAL THERAPEUTICS AND CANCER DRUG PROGRAM.....	5P01 CA13038-06	1,161,670
MIHICH, ENRICO.....	DEVELOPMENT AND STUDY OF NEW ANTICANCER AGENTS.....	5R01 CA14078-06	89,080
MIHICH, ENRICO.....	CANCER CHEMOTHERAPY AND IMMUNOLOGIC EFFECTS.....	5R01 CA15142-04	107,373
MINOWADA, JUN.....	STUDY OF HUMAN LYMPHATIC NEOPLASIA.....	5R01 CA14413-05	87,188
MIRAND, EDWIN A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18201-03	238,588
MITTELMAN, ARNOLD.....	EASTERN COOPERATIVE ONCOLOGY GROUP SUPPORT.....	5R10 CA12296-07	115,527
MOAYERI, HOUSHANG.....	LEUKOCYTE THYMIDINE UPTAKE IN CHRONIC LEUKEMIA.....	5R01 CA17668-03	30,408
MORREAL, CHARLES E.....	BIOLOGICAL AND CHEMICAL STUDIES OF NEW DMBA COMPOUNDS.....	1R01 CA22001-01	54,103
MURPHY, GERALD P.....	NATIONAL PROSTATIC CANCER PROJECT.....	5R26 CA14716-05	319,524
MURPHY, GERALD P.....	SUPPORT FOR CANCER CORE CENTER.....	5P30 CA16056-03	437,057
MURPHY, GERALD P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05648-11	213,709
NEEMAN, MOSHE.....	INHIBITION OF INITIATION-PROMOTION CARCINOGENESIS.....	5R01 CA15890-03	26,586
PAIGEN, BEVERLY J.....	GENETICS OF AHH IN RELATION TO CANCER ETIOLOGY.....	5R01 CA18542-02	84,564
PAIGEN, KENNETH.....	GENETIC STUDY OF MAMMALIAN CONTROL SYSTEMS.....	2P01 GM19521-06	514,520
PAPAHADJOPOULOS, P D.....	LIPID VESICLES AS DRUG CARRIERS IN VITRO AND IN VIVO.....	5R01 CA18527-02	47,446
PAPAHADJOPOULOS, P D.....	PHOSPHOLIPID-PROTEIN INTERACTIONS AND MEMBRANE FUNCTION.....	5R01 GM18921-06	67,870
PARTHASARATHY, RENGACHARY.....	STEREOCHEMISTRY OF THIOL-DISULFIDE INTERCHANGES.....	1R01 CA23704-01	37,407
PIERUCCI, OLGA.....	THE CELL DIVISION CYCLE OF GRAM-POSITIVE BACILLI.....	5R01 AI13453-02	34,024
PIERUCCI, OLGA.....	ROLE OF THE BACTERIAL ENVELOPE IN CELL DUPLICATION.....	5R01 GM21006-03	16,260
PLAGER, JOHN E.....	IN VIVO CELL CYCLE SYNCHRONIZATION OF MURINE TUMORS.....	5R01 CA19097-02	22,684
PORTER, CARL W.....	GLYCOSYL TRANSFERASES AND THE PLASMA MEMBRANE.....	5R01 GM23233-02	29,783
POSTE, GEORGE H.....	MODIFICATION OF CELL BEHAVIOR BY LIPID VESICLES.....	5R01 CA18260-02	49,787
PREISLER, HARVEY D.....	PATHOPHYSIOLOGY OF MURINE MYELOID LEUKEMIA.....	5R01 CA17785-03	55,582
PRESSMAN, DAVID.....	STRUCTURE AND CHEMICAL NATURE OF SPECIFIC ANTIBODY SITES.....	5R01 AI03962-17	132,386
PRESSMAN, DAVID.....	IMMUNOBIOLOGICAL STUDIES WITH CULTURED HUMAN LYMPHOCYTES.....	2R01 AI08899-09	170,381
PRESSMAN, DAVID.....	MEMBRANE ANTIGENS FROM NORMAL AND LEUKEMIC LYMPHOCYTES.....	5R01 CA17276-03	62,697
PRIORE, ROGER L.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21190-01	110,145
ROHOLT, OLIVER A.....	BINDING SITES OF MYELOMA PROTEINS AND ANTIBODIES.....	2R01 AI12100-04	43,796
ROHOLT, OLIVER A.....	FUNCTIONAL SURFACE ANTIGENS OF T- AND B-CELL TUMORS.....	5R01 CA19161-02	32,963
ROSEN, FRED.....	GLUCOCORTICOID RECEPTORS IN NORMAL AND MALIGNANT TISSUE.....	3R01 CA05671-16S1	31,327
RUSTUM, YUCEF M.....	CELLULAR SELECTIVITY OF ANTIMETABOLITES.....	5R01 CA18420-02	31,449
SANDBERG, AVERY A.....	PROTEIN BINDING AND BILIARY EXCRETION OF STEROIDS.....	5R01 AM01240-21	109,833
SANDBERG, AVERY A.....	CHROMOSOMES OF HUMAN BLADDER TUMORS.....	5R26 CA14555-05	66,734
SANDBERG, AVERY A.....	TEST SYSTEMS FOR DRUGS AGAINST PROSTATIC CANCER.....	2R26 CA15436-04	63,418
SANDBERG, AVERY A.....	INTRACELLULAR FACTORS CONTROLLING MITOTIC EVENTS.....	5R01 CA16935-03	24,706
SANDBERG, AVERY A.....	ESTROGEN RECEPTORS AND CANCER OF THE PANCREAS.....	5R26 CA18396-03	31,935
SEON, BYEONG-KUK.....	HUMAN LEUKEMIA AND LYMPHOMA ASSOCIATED ANTIGENS.....	5R01 CA19304-02	36,849
SHOWS, THOMAS B.....	HUMAN GENE LINKAGE RELATIONSHIPS IN CELL HYBRIDS.....	5R01 GM20454-05	126,126
SHOWS, THOMAS B.....	AN APPROACH TO HUMAN DEVELOPMENT WITH CELL HYBRIDS.....	5R01 HD05196-07	71,162
SRIVASTAVA, B I.....	TERMINAL DEOXYNUCLEOTIDYL TRANSFERASE AND LEUKEMIA.....	5R01 CA17140-03	50,661
SULKOWSKI, EUGENE.....	AFFINITY CHROMATOGRAPHY OF HUMAN INTERFERON.....	5R01 AI12933-02	50,283
TABER, ROBERT L, JR.....	INTERACTION OF NONENVELOPED VIRUSES WITH LIPOSOMES.....	1R01 AI14042-01	48,623
WALLACE, HAROLD J, JR.....	CANCER CONTROL OUTREACH PROGRAM.....	5R18 CA16411-03	272,312
WEISS, LEONARD.....	CANCER CELL PROPERTIES AND HOST RESPONSE.....	5P30 CA17609-03	142,841
WENNER, CHARLES E.....	THE EFFECT OF COCARCINOGENS ON CELLULAR MEMBRANES.....	5R01 CA13784-05	41,690
ZUCALI, JAMES R.....	REGULATION OF ERYTHROPOIETIN BIOGENESIS.....	5R01 AM18650-02	41,084
ORGANIZATION TOTAL	104	10,528,115	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—RESEARCH INSTITUTE ON ALCOHOLISM ZIP CODE 14203			
FABER, DONALD S.....	VERTEBRATE NEURONAL INTERACTIONS AND ELECTROGENESIS.....	5R01 NS12132-04	65,777
ORGANIZATION TOTAL	1	65,777	
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
ACARA, MARGARET A.....	RENAL METABOLISM OF CHOLINE: ENHANCEMENT OF EXCRETION.....	2R01 AM17201-04	41,032
ANDERSON, WAYNE K.....	VINYLOGOUS CARBINOLAMINE TUMOR INHIBITORS.....	1R01 CA22935-01	35,860
ANDRES, GIUSEPPE A.....	IMMUNOPATHOLOGY OF NEPHRITIS AND RENAL TRANSPLANTS.....	5R01 AI10334-07	128,501
APICELLA, MICHAEL A.....	TAXONOMIC STUDIES OF B MENINGOCOCCI.....	2R01 AI10236-07	36,145
APICELLA, MICHAEL A.....	SEROGROUPS OF NEISSERIA GONORRHOEA.....	2R01 AI11873-04	49,854
BAHL, OM P.....	CHARACTERIZATION OF GLYCOSIDASES & GLYCOSYL TRANSFERASES.....	5R01 AM17441-03	56,981
BAHL, OM P.....	STUDIES ON CHORIONIC GONADOTROPIN.....	3R01 HD08766-11S1	27,804

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BARDOS, THOMAS J.....	CHEMICAL AND BIOLOGICAL STUDIES IN CANCER CHEMOTHERAPY.....	5R01 CA06695-15	74,398
BEREZNEY, RONALD.....	THE NUCLEAR MATRIX AND DNA REPLICATION.....	1R01 GM23922-01	60,017
BORDER, JOHN R.....	SEQUENCE OF ORGAN FAILURES FOLLOWING TRAUMA.....	3P50 GM15768-08S1	141,578
BORDER, JOHN R.....	SEQUENCE OF ORGAN FAILURES FOLLOWING TRAUMA.....	2P01 GM15768-09A1	245,184
BROWNIE, ALEXANDER C.....	CONTROL OF STEROIDOGENESIS IN ADRENAL CORTICAL TISSUE.....	5R01 AM18141-03	26,150
BROWNIE, ALEXANDER C.....	PATHOGENESIS AND PREVENTION OF HYPERTENSION.....	5R01 HL06975-17	176,390
BRUENN, JEREMY A.....	SEQUENCING OF YEAST KILLER-FACTOR RNAS.....	2R01 GM22200-03	71,989
CADENHEAD, DAVID A.....	SURFACE STUDIES OF MEMBRANE LIPIDS AND PROTEINS.....	5R01 HL12760-08	39,248
CHANG, HSIN-KANG.....	ROLE OF MULTICOMPONENT DIFFUSION IN GAS EXCHANGE.....	5R01 HL18022-03	21,219
COBURN, ROBERT A.....	CONTROL OF PERIODONTAL DISEASES: DESIGN OF NEW AGENTS.....	1R01 DE04744-01	71,890
CORAH, NORMAN L.....	CONTROL OF STRESS DURING DENTAL PROCEDURES.....	5R01 DE04494-02	37,131
CUDKOWICZ, GUSTAVO.....	FACTORS CONTROLLING GRAFT-HOST INTERACTIONS.....	2R01 AM13969-09	132,754
CUDKOWICZ, GUSTAVO.....	CONTROLS OF PROLIFERATION SPECIFIC FOR LEUKEMIAS.....	5R01 CA12844-05	70,588
DAVIS, PAUL J.....	THYROID HORMONE-BINDING PROTEINS IN CYTOSOL.....	5R01 AM19177-03	24,239
DICKEY, JAMES M.....	ADAPTIVE SMOOTHING MODELS FOR ESTIMATED PROBABILITIES.....	5R01 GM23043-02	39,404
DOBSON, RICHARD L.....	MECHANISM OF ECCRINE SWEAT GLAND FUNCTION.....	5R01 AM16258-05	71,621
DZIAK, ROSE M.....	BONE CELL CALCIUM REGULATION.....	5R23 DE04637-02	30,566
EDWARDS, JOHN A.....	INHERITED ABNORMALITIES OF IRON AND GLOBIN METABOLISM.....	5R01 AM19424-02	31,522
ELLISON, ROSE R.....	CHEMOTHERAPY OF CANCER: ACUTE LEUKEMIA GROUP B.....	3R10 CA16451-02S1	8,156
ELLISON, ROSE R.....	CHEMOTHERAPY OF CANCER: ACUTE LEUKEMIA GROUP B.....	2R10 CA16451-03	111,484
ETTINGER, MURRAY J.....	THE MOLECULAR BASIS OF ANTIDIURETIC HORMONE ACTION.....	2R01 AM17911-03	70,349
ETTINGER, MURRAY J.....	CELLULAR DYNAMICS OF COPPER METABOLISM.....	1R01 AM19708-01	59,423
EVANS, RICHARD T.....	SALIVARY ANTIBODIES TO S. MUTANS: INDUCTION AND EFFECTS.....	5R01 DE04061-03	47,763
FEDOR, LEO R.....	CHEMISTRY AND BIOLOGY OF BETA-GLUCURONIDASE.....	1R01 CA21755-01	27,600
FOURTNER, CHARLES R.....	CENTRAL NERVOUS CONTROL OF BEHAVIORAL DIVERSITY.....	5R01 NS13044-02	24,657
GALE, ELLIOT N.....	TREATMENT OF TEMPOROMANDIBULAR JOINT PAIN.....	5R01 DE04358-02	37,993
GARRICK, MICHAEL D.....	STUDIES ON HEMOGLOBIN: BIOSYNTHESIS AND GENETICS.....	2R01 AM14923-06	60,010
GENCO, ROBERT J.....	ANTIBODIES OF SALIVA AND OTHER SECRETIONS.....	5R01 DE02814-09	64,516
GENCO, ROBERT J.....	PERIODONTAL DISEASE RESEARCH CENTER.....	1P50 DE04898-01	303,327
GIBALDI, MILO.....	CLINICAL PHARMACOKINETICS AND BIOPHARMACEUTICS.....	5P50 GM20852-04	263,098
GRAHAM, SAXON.....	SOCIAL EPIDEMIOLOGY AND CONTROL OF CANCER.....	5P01 CA11535-08	530,856
GRUSHKA, ELI.....	SEPARATION OF AMINO ACIDS USING LIQUID CHROMATOGRAPHY.....	5R01 GM20846-03	14,966
GUTHRIE, ROBERT.....	DETECTION AND STUDY OF INBORN ERRORS.....	5R01 HD03967-12	52,970
HARFORD, A GAYLER.....	NATURAL CORRECTION OF GENE DEFICIENCIES.....	5R01 GM21487-03	46,349
HAUSMANN, ERNEST.....	ORAL BACTERIAL PRODUCTS AND BONE RESORPTION.....	5R01 DE01932-13	88,584
HERMAN, GABOR T.....	COMPUTER TECHNOLOGY FOR TRANSAXIAL TOMOGRAPHY.....	5R01 HL18968-02	153,476
HOGAN, PERRY M.....	MECHANISMS OF CARDIAC AUTORHYTHMICITY.....	2R01 HL16135-04	27,923
HONG, SUK K.....	SECRETION OF WEAK ORGANIC ACIDS BY THE KIDNEY TUBULE.....	5R01 AM18918-02	46,659
HRESHCHYSHYN, MYROSLAW M.....	GYNECOLOGIC ONCOLOGY GROUP (GOG).....	5R10 CA12476-07	38,699
HULL, MC ALLISTER H, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07066-12	124,659
JACOBS, DIANE M.....	MODE OF ACTION OF A STIMULATOR OF TUMOR RESISTANCE.....	3R01 CA20078-01S1	25,844
JACOBS, DIANE M.....	MODE OF ACTION OF A STIMULATOR OF TUMOR RESISTANCE.....	2R01 CA20078-02	65,936
JUNG, CHAN Y.....	IDENTIFICATION AND ISOLATION OF SUGAR TRANSPORT CARRIER.....	5R01 AM13376-09	44,107
JUSKO, WILLIAM J.....	AGE AND DISEASE IN DRUG DISPOSITION.....	1R01 GM24211-01	83,453
KALMAN, THOMAS I.....	SELECTED STUDIES IN NUCLEIC ACID METABOLISM.....	5R01 CA13604-06	50,571
KITE, JOSEPH H, JR.....	PATHOGENESIS OF PULMONARY MYCOPLASMA INFECTION.....	5R01 HL20063-02	44,969
KLOCKE, FRANCIS J.....	PATHOPHYSIOLOGY OF CARDIOPULMONARY DYSFUNCTION.....	2P01 HL15194-06	444,608
KRASNEY, JOHN A.....	MECHANISMS OF THE CARDIOVASCULAR RESPONSE TO ANOXIA.....	5R01 HL18416-03	28,675
LANE, ROGER S.....	PROTEIN TURNOVER AND AGING.....	1R01 AG00617-01	55,140
LEE, GEORGE C.....	SOLID AND STRUCTURAL MECHANICS OF LUNGS.....	5R01 HL14495-04	57,114
LEVINE, MICHAEL J.....	SPECIFICITY OF SALIVARY AGGREGATION BY ORAL BACTERIA.....	5R23 DE04518-02	34,898
LEVY, GERHARD.....	PHARMACOKINETICS OF SALICYLATE IN CHILDREN.....	5R01 GM19568-10	48,081
LI, HSUEH-JEI.....	INTERACTION BETWEEN DNA AND MODEL PROTEINS.....	5R01 GM23079-02	50,103
MC ISAAC, ROBERT J.....	INFLUENCE OF PREGANGLIONIC NERVE ON GANGLION RESPONSES.....	5R01 NS06990-11	44,686
MILANO, MICHAEL J.....	MULTICOMPONENT SIMULTANEOUS CLINICAL ANALYSIS.....	5R01 GM23001-02	28,610
MILGROM, FELIX.....	HUMORAL ANTIBODIES ACCOMPANYING HOMOGRAFTS.....	5R01 AM17317-13	131,710
MILLER, ROBERT F.....	GLIAL CONTRIBUTIONS TO RETINAL FUNCTION.....	5R01 EY00844-06	31,324
MILLER, WILLIAM A.....	EXPLANTATION OF DENTAL LAMINA.....	5R01 DE02908-06	35,697
MILLER, WILLIAM A.....	DIFFERENTIATION OF ODONTOBLASTS IN PULPAL HEALING.....	5R01 DE04048-02	30,654
MOHN, JAMES F.....	BLOOD GROUP ANTIGENS AND ANTIBODIES.....	5R01 HL05351-17	52,386

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MURRAY, DANIEL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05454-15	41,537
NANCOLLAS, GEORGE H.....	THE KINETICS OF FORMATION OF RENAL STONES.....	5R01 AM19048-02	58,663
NANCOLLAS, GEORGE H.....	THE KINETICS OF MINERALIZATION OF TEETH.....	5R01 DE03223-07	69,869
NATIELLA, JOSEPH R.....	STRUCTURAL-FUNCTIONAL CHANGES IN FREEZING ORAL TISSUE.....	2R01 DE03991-03	41,564
NAUGHTON, JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05400-16	177,732
NILES, EDWARD G.....	IN VITRO TRANSCRIPTION OF TETRAHYMENA PYRIFORMIS RDNA.....	5R01 GM23259-02	35,965
NISENGARD, RUSSELL J.....	IMMUNOPATHOLOGY OF GINGIVITIS AND PERIODONTITIS.....	5R01 DE03408-06	30,957
NOBLE, ROBERT W.....	REACTION OF HEMOGLOBIN WITH LIGANDS AND ANTIBODIES.....	2R01 HL12524-09	39,488
PADWA, ALBERT.....	HETEROCYCLIC SMALL RING COMPOUNDS.....	5R01 CA12195-11	50,838
PHIPPS, GRANT T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05330-16	56,669
PROVOST, THOMAS T.....	IMMUNOLOGIC STUDIES IN CUTANEOUS LUPUS.....	2R01 AM16593-04	35,565
RECHNITZ, GARRY A.....	CLINICAL ANALYSIS WITH SELECTIVE MEMBRANE ELECTRODES.....	2R01 GM17576-07	63,213
RENNICK, BARBARA R.....	HOMEOSTATIC REGULATION OF PLASMA CHOLINE.....	3R01 HL14092-05S1	9,275
RENNICK, BARBARA R.....	HOMEOSTATIC REGULATION OF PLASMA CHOLINE.....	5R01 HL14092-06	46,108
RENNIE, DONALD W.....	CARDIORESPIRATORY PERFORMANCE & ENVIRONMENTAL FACTORS.....	3P01 HL14414-05S1	7,448
RENNIE, DONALD W.....	CARDIORESPIRATORY PERFORMANCE & ENVIRONMENTAL FACTORS.....	2P01 HL14414-06	582,301
ROTHSTEIN, MORTON.....	AGE-RELATED ALTERATION OF ENZYMES.....	1R01 AG00618-01	105,266
SACHS, FREDERICK.....	VOLTAGE CLAMP OF ISOLATED CARDIAC PURKINJE CELLS.....	1R01 HL21294-01	63,836
SACHS, FREDERICK.....	SYNAPTIC CHANNELS IN TISSUE CULTURED CELLS.....	1R01 NS13194-01A1	64,426
SCHENK, WORTHINGTON G, JR.....	HEMODYNAMICS AS APPLIED TO SURGICAL PROBLEMS.....	5R01 HL03181-20	76,421
SCHUBART, ULRICH K.....	CYCLIC AMP-DEPENDENT PHOSPHOPROTEINS & INSULIN RELEASE.....	1R01 AM21205-01	41,293
SEGAL, HAROLD L.....	ENZYMIC RESPONSES TO ALTERED ENDOCRINE STATES.....	5R01 AM08873-13	51,281
SEGAL, HAROLD L.....	SYMPOSIUM ON PROTEIN TURNOVER AND LYSOSOME FUNCTION.....	1R13 AM20413-01	15,702
SIEGEL, JOHN H.....	THE ROLE OF OCCULT MYOCARDIAL FAILURE IN HUMAN SHOCK.....	5R01 HL15676-05	158,551
SLAUNWHITE, W ROY, JR.....	THE STRUCTURE OF HUMAN TRANSCORTIN.....	5R01 GM21045-05	57,141
SPAULDING, STEPHEN W.....	REGULATION OF THYROIDAL METABOLISM BY PROTEIN KINASES.....	7R01 AM20150-01	13,501
SPAULDING, STEPHEN W.....	STUDIES OF THYROGLOBULIN SYNTHESIS.....	7R01 AM20229-01	19,198
SPAULDING, STEPHEN W.....	HORMONAL CONTROL OF RNA SYNTHESIS IN THE THYROID.....	1R01 AM20283-01	36,091
STRAUSS, NORMAN.....	REGULATORY FACTORS OF SPOULATION IN BACILLUS SUBTILIS.....	5R01 GM20728-03	44,511
TRIGGLE, DAVID J.....	SOURCES AND ROLES OF CALCIUM IN SMOOTH MUSCLE EXCITATION.....	2R01 HL16003-07	40,985
VENTER, J CRAIG.....	RECEPTOR REGULATION & CARDIAC SITES OF DRUG ACTION.....	1R01 HL21329-01	42,634
WANG, JUI H.....	RESPIRATORY CONTROL AND COUPLED PHOSPHORYLATION.....	5R01 GM19990-05	103,035
WANG, TUNG Y.....	MECHANISM OF ANDROGEN ACTION.....	5R01 HD09443-02	65,327
YU, C P.....	RESPIRATORY TRACT DEPOSITION OF INHALED AEROSOLS.....	5S01 ES01239-02	48,953
ZALESKI, MAREK B.....	IMMUNE RESPONSE OF MICE TO THE THY-1 ANTIGENS.....	5R01 AI13628-02	27,647
ZELEN, MARVIN.....	STATISTICAL MODELS OF BIOMEDICAL PHENOMENA.....	5R01 CA10810-10	25,670
ZELEN, MARVIN.....	COOPERATIVE CLINICAL CANCER CENTER: COMPUTING FACILITY.....	5R10 CA12721-06	320,769
ORGANIZATION TOTAL	104	8,103,578	
STATE UNIVERSITY OF NEW YORK—COLLEGE AT BUFFALO ZIP CODE 14222			
ISSEROFF, HADAR.....	PROLINE IN FASCIOLIASIS.....	5R01 AI09911-05	38,431
ORGANIZATION TOTAL	1	38,431	
COLD SPRING HARBOR			
COLD SPRING HARBOR LABORATORY ZIP CODE 11724			
BROACH, JAMES R.....	GENETIC REGULATION OF GALACTOSE METABOLISM IN YEAST.....	1R01 GM24226-01	69,114
BUKHARI, AHMAD I.....	THE LIFE CYCLE OF MUTATOR PHAGE MU.....	1R01 GM23566-01	39,325
CHOW, LOUISE T.....	INVERSION OF THE G-SEGMENT IN THE PHAGE MU CHROMOSOME.....	1R01 GM23996-01	72,023
GESTELAND, RAYMOND F.....	SUPPORT FOR CANCER RESEARCH CENTER COURSES.....	2R13 CA16224-04	89,100
WATSON, JAMES D.....	SUPPORT FOR SYMPOSIA ON QUANTITATIVE BIOLOGY.....	5R13 CA02809-22	20,000
WATSON, JAMES D.....	SUPPORT FOR LABORATORY CANCER RESEARCH CENTER.....	2P01 CA13106-06	2,426,599
ZAIN, SAYEEDA B.....	SEQUENCE ANALYSIS OF SV40 INTEGRATION SITES.....	1R01 CA22698-01	13,786
ZIPSER, DAVID.....	THE POLYPEPTIDE PRODUCTS OF LAC OPERON MUTATIONS.....	5R01 GM17612-07	69,513
ORGANIZATION TOTAL	8	2,799,460	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
COOPERSTOWN			
MARY IMOGENE BASSETT HOSPITAL AND CLINICS ZIP CODE 13326			
BLUMENSTOCK, DAVID A.....	ALLOGRAFT TOLERANCE WITH RADIATION AND MARROW.....	5R01 AI12270-03	58,939
PETERS, THEODORE, JR.....	FORMATION AND FUNCTION OF SERUM ALBUMIN.....	5R01 HL02751-20	72,672
SAUER, LEONARD A.....	PATHWAYS OF MALATE METABOLISM IN MALIGNANCY.....	5R01 CA18262-02	36,818
ORGANIZATION TOTAL	3 168,429		
EAST MEADOW			
NASSAU COUNTY MEDICAL CENTER ZIP CODE 11554			
NEVINS, ALAN J.....	REVITALIZING PULPLESS TEETH USING COLLAGEN-CAPO4 GEL.....	5R23 DE04552-02	21,806
ORGANIZATION TOTAL	1 21,806		
GARDEN CITY			
ADELPHI UNIVERSITY ZIP CODE 11530			
BETTELHEIM, FREDERICK A.....	THE ROLE OF PROTEOGLYCANS IN THE AGING OF TISSUES.....	1R01 AG00249-01	23,100
BETTELHEIM, FREDERICK A.....	OPTICOMECHANICAL STUDY OF GEL STRUCTURES IN THE EYE.....	5R01 EY00501-09	35,980
BETTELHEIM, FREDERICK A.....	POLARIZATION STUDIES IN THE INTACT EYE.....	5R01 EY01725-02	20,316
BETTELHEIM, FREDERICK A.....	STUDIES OF INDUCED CATARACTS IN FISH LENSES.....	1R01 EY02073-01	27,374
COOPERSTEIN, DEBORRA F.....	ENERGY SOURCES FOR CORNEAL TRANSPORT PROCESSES.....	2R01 EY01485-04	16,112
DAVIS, DONALD G.....	THE CONFORMATION AND FUNCTION OF CYCLIC PEPTIDES.....	1R01 GM24267-01	17,675
ORGANIZATION TOTAL	6 140,557		
HEMPSTEAD			
HOFSTRA UNIVERSITY ZIP CODE 11550			
ERNHART, CLAIRE B.....	PRESCHOOL SUBCLINICAL LEAD AND SCHOOL AGE PERFORMANCES.....	1R01 ES01442-01	54,208
ORGANIZATION TOTAL	1 54,208		
INSTITUTE FOR PIAGETIAN STUDIES ZIP CODE 11550			
MERMELSTEIN, EGON.....	LOGICAL NECESSITY AND CONSERVATION OF VOLUME.....	1R01 HD10288-01A1	32,068
ORGANIZATION TOTAL	1 32,068		
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
ALBRECHT, ANDREAS C.....	NEAR ULTRAVIOLET RAMAN STUDIES OF CYTOCHROME P450.....	1R01 AM20379-01	60,945
ALBRECHT, ANDREAS C.....	BASIC PHOTOELECTRIC STUDIES IN ORGANIC SOLID STATE.....	5R01 GM10865-18	84,356
ANDREWS, EDWIN J.....	RELATIONSHIP OF REGENERATION, ONCOGENESIS AND IMMUNITY.....	5R01 CA17080-03	38,276
ARION, WILLIAM J.....	GLUCOSE 6-PHOSPHATASE AND HEPATIC GLUCOSE PRODUCTION.....	1R01 AM19625-01	58,111
AUSTIC, RICHARD E.....	INTERACTION OF NA AND K IN HYPERURICEMIA AND GOUT.....	1R01 AM18946-01A1	35,513
BENSADOUN, ANDRE.....	LIPID TRANSPORT IN AVIAN SPECIES.....	5R01 HL14990-06	74,517
BERGMAN, EMMETT N.....	CARBOHYDRATE AND KETONE BODY METABOLISM.....	5R01 AM05976-17	125,028
BOYER, CLYDE I, JR.....	LABORATORY ANIMAL DIAGNOSTIC RESOURCE.....	5P40 RR00979-03	114,001
CALNEK, BRUCE W.....	STUDIES ON THE AVIAN LEUKOSIS COMPLEX.....	5R01 CA06709-16	147,210
CALVO, JOSEPH M.....	REGULATION OF LEUCINE BIOSYNTHESIS IN BACTERIA.....	1R01 AI14340-01	55,464
CAMHI, JEFFREY M.....	BEHAVIORAL NEUROPHYSIOLOGY OF INSECTS.....	2R01 NS09083-07	68,330
CAMPBELL, T COLIN.....	EFFECT OF NUTRITION ON CARCINOGEN AND TOXIN METABOLISM.....	5R01 CA20079-02	70,974
CAPRANICA, ROBERT R.....	ENCODING OF VOCAL SIGNALS IN THE AUDITORY SYSTEM.....	5R01 NS09244-07	61,232
COOKE, W DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07061-12	191,304
CORRADINO, ROBERT A.....	SYNTHESIS AND FUNCTION OF CALCIUM-BINDING PROTEIN.....	2R01 AM15355-07	32,473
CYPRESS, RAYMOND H.....	THE EPIDEMIOLOGY OF VISCERAL LARVA MIGRANS.....	1R01 AI14718-01	69,759
CYPRESS, RAYMOND H.....	IMMUNITY TO A PARASITIC NEMATODE.....	7R01 AI15008-01	42,575
DILLS, WILLIAM L, JR.....	FRUCTOSE ANALOGS AS METABOLIC INHIBITORS.....	1R01 HD10967-01	53,256
DROST, CORNELIS J.....	ACCURATE TRANSCUTANEOUS DOPPLER BLOODFLOW MONITORING.....	5R01 HL19019-02	64,876
EISNER, THOMAS.....	SECRETIONS OF ARTHROPODS.....	5R01 AI02908-19	71,015

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ELSON, ELLIOT L.....	DYNAMICS OF BIOPHYSICAL MEMBRANE PROCESSES.....	5R01 GM21661-03	84,801
ELSON, ELLIOT L.....	BIOPOLYMERIC TRANSFORMATIONS BY SMALL PERTURBATION.....	5R01 GM22082-03	54,887
FABRICANT, CATHERINE G.....	VIRAL ROLE IN ARTERIOSCLEROSIS PATHOGENESIS.....	5R01 HL19381-02	69,788
FEIGENSON, GERALD W.....	LIPID-PROTEIN INTERACTIONS AND CALCIUM TRANSPORT.....	3R01 HL18255-02S1	11,288
FEIGENSON, GERALD W.....	LIPID-PROTEIN INTERACTIONS AND CALCIUM TRANSPORT.....	5R01 HL18255-03	60,240
FINK, GERALD R.....	REGULATION OF HISTIDINE BIOSYNTHESIS IN YEAST.....	5R01 GM15408-10	77,265
FITCHEN, DOUGLAS B.....	HEME PROTEIN SOLUTION STRUCTURE FROM RAMAN SPECTRA.....	2R01 AM18048-03	58,106
FOOTE, ROBERT H.....	MATURATION, METABOLISM AND AGING OF GAMETES.....	3R01 HD03471-12S1	6,226
GANEM, BRUCE.....	THE SYNTHESIS OF TUMOR-INHIBITORY DIEPOXIDES.....	1R01 CA17670-01A2	35,627
GANEM, BRUCE.....	SYNTHESIS OF MAYTANSINE, AN IMPORTANT ANTITUMOR AGENT.....	5R01 CA19686-02	51,267
GAYLOR, JAMES L.....	STEROL BIOSYNTHESIS.....	5R01 AM10767-11	68,200
GEORGI, JAY R.....	LIFE HISTORY AND CONTROL OF FILAROIDES HIRTHI.....	1R01 RR01058-01	42,263
GIBSON, QUENTIN H.....	KINETICS OF ENZYMES AND HEMOGLOBIN-LIGAND REACTIONS.....	5R01 GM14276-13	120,829
GOLDSTEIN, MELVIN J.....	NEW FRAMEWORKS FOR CHEMOTHERAPEUTIC DESIGN.....	3R01 CA10495-08S1	5,332
HAGEDORN, HENRY H.....	CHARACTERIZATION OF MOSQUITO BRAIN HORMONE.....	7R01 AI14771-01	49,729
HALLBERG, RICHARD L.....	DNA AND PROTEIN METABOLISM IN OOCYTES.....	5R01 HD06448-06	31,408
HAMMES, GORDON G.....	KINETICS OF PHYSIOLOGICALLY IMPORTANT REACTIONS.....	5R01 GM13292-13	137,974
HANSEL, WILLIAM.....	THE ROLE OF ESTROGEN IN CONTROL OF THE FEMALE CYCLE.....	5R01 HD06718-06	87,245
HANSEL, WILLIAM.....	MAINTENANCE OF THE CORPUS LUTEUM OF PREGNANCY.....	5R01 HD09870-02	69,966
HEPPEL, LEON A.....	MECHANISMS OF ACTIVE TRANSPORT AND MEMBRANE ENZYMES.....	5R01 AM11789-10	61,155
HESS, GEORGE P.....	INTERRELATIONSHIP BETWEEN PROTEIN STRUCTURE AND FUNCTION.....	5R01 GM04842-22	40,653
HESS, GEORGE P.....	CHEMICAL REACTIONS IN TRANSMISSION OF NERVE IMPULSES.....	5R01 NS08527-09	50,196
HINKLE, PETER C.....	ENERGY CONSERVATION IN HEART MITOCHONDRIA.....	3R01 HL14483-06S1	4,886
HINKLE, PETER C.....	ENERGY CONSERVATION IN HEART MITOCHONDRIA.....	2R01 HL14483-07	69,330
HOARD, JAMES L.....	STEREOCHEMISTRY OF HEMES AND RELATED MODEL SYSTEMS.....	5R01 GM09370-16	49,056
HORST, R KENNETH.....	REPLICATION MECHANISMS OF SMALL INFECTIOUS RNAs.....	1R01 AI13647-01	38,236
HOUP, T RICHARD.....	CONTROL OF FOOD INTAKE: GLUCOSTATIC AND GI FACTORS.....	5R01 AM17601-03	59,455
HOY, RONALD R.....	NEUROLOGICAL & GENETIC ANALYSIS OF ACOUSTIC BEHAVIOR.....	2R01 NS11630-05	53,780
JAGENDORF, ANDRE T.....	MEMBRANE-ASSOCIATED PHOSPHORYLATION.....	2R01 GM14479-12	88,011
KELLER, ELIZABETH B.....	THE BIOSYNTHESIS OF RNAs: MECHANISMS AND CONTROLS.....	5R01 GM10791-15	89,428
KIM, MYUNGHWAN.....	STUDY OF CANCER CELL KINETICS AND CHEMOTHERAPY.....	5R01 CA16259-03	31,157
KINSELLA, JOHN E.....	ATHEROSCLEROSIS—DIET, LINOLEIC ACID & PROSTAGLANDINS.....	5R01 HL19337-02	44,427
LEWIS, AARON.....	LASER RAMAN SPECTROSCOPY OF THE VISUAL PROCESSES.....	2R01 EY01377-04	81,623
MACDONALD, RUSSELL E.....	ENERGY COUPLING TO TRANSPORT OF IONS BY CELL MEMBRANES.....	5R01 GM23225-02	46,584
MC CORMICK, DONALD B.....	INVESTIGATIONS OF FLAVIN SYSTEMS.....	2R01 AM04585-17	87,122
MC FARLAND, WILLIAM N.....	ENVIRONMENTAL LIGHT AND VISUAL PIGMENTS.....	5R01 EY00323-12	32,329
MC GREGOR, DOUGLAS D.....	MEDIATOR OF CELLULAR IMMUNITY.....	7R01 AI14482-01	88,230
MC GREGOR, DOUGLAS D.....	AGING IMMUNITY AND CANCER.....	7R01 CA21159-01	145,177
MC LAFFERTY, FRED W.....	MASS SPECTROMETRY IN BIOMEDICAL RESEARCH.....	2R01 GM16609-09	119,682
MEINWALD, JERROLD.....	CHEMISTRY OF ARTHROPOD SECRETIONS.....	5R01 AI12020-05	78,390
MELBY, EDWARD C, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05462-15	62,500
MINOR, RONALD R.....	FACTORS IN LUNG DEVELOPMENT.....	2R01 HL20635-02	106,012
MOFFAT, JOHN K.....	OXYGEN TRANSPORT: HEMOGLOBINS WITH MODIFIED HEMES.....	5R01 HL18309-03	28,043
MOFFAT, JOHN K.....	SICKLE CELL HEMOGLOBIN AGGREGATION: PHYSICAL STUDIES.....	5R01 HL18817-03	30,913
MORRISON, GEORGE H.....	ION MICROSCOPY IN BIOLOGY AND MEDICINE.....	1R01 GM24314-01	56,221
NEMETHY, GEORGE.....	AGING: CONFORMATIONAL CHANGES OF COLLAGEN.....	5R01 AG00322-02	40,505
O'BRIEN, RICHARD D.....	MECHANISMS OF INSECTICIDE SELECTIVITY.....	5R01 ES00901-17	107,076
O'BRIEN, RICHARD D.....	ATTEMPTED ISOLATION OF ACETYLCHOLINE RECEPTOR.....	5R01 NS09144-08	68,617
RACKER, EFRAIM.....	ENERGY METABOLISM IN NORMAL AND TUMOR CELLS.....	2R01 CA08964-11	280,957
RACKER, EFRAIM.....	MEMBRANES IN NORMAL AND CANCER CELLS.....	5P01 CA14454-05	243,326
ROBERTS, JEFFREY W.....	GENE CONTROL IN INFECTION & LYSOGENY BY PHAGE LAMBDA.....	5R01 GM21941-03	42,815
SALPETER, MIRIAM M.....	HIGH RESOLUTION AUTORADIOGRAPHY.....	5R01 GM10422-15	61,677
SALPETER, MIRIAM M.....	FUNCTIONAL ULTRASTRUCTURE OF THE NERVOUS SYSTEM.....	5R01 NS09315-08	86,834
SCHERAGA, HAROLD A.....	INTERACTIONS IN SYNTHETIC POLYAMINO ACIDS.....	5R01 AM08465-12	49,666
SCHERAGA, HAROLD A.....	MOTION AND PROXIMITY RELATIONS IN POLYPEPTIDES.....	5R01 AM13743-08	41,533
SCHERAGA, HAROLD A.....	INTERNAL BONDING IN PROTEINS.....	2R01 GM14312-23	78,320
SCHERAGA, HAROLD A.....	EQUILIBRIA IN THE FIBRINOGEN-FIBRIN CONVERSION.....	3R01 HL01662-23S1	16,909
SCHERAGA, HAROLD A.....	EQUILIBRIA IN THE FIBRINOGEN-FIBRIN CONVERSION.....	2R01 HL01662-24A1	62,979
SCHULTZ, ARTHUR G.....	THE TOTAL SYNTHESIS OF VERNOLEPIN AND VERNOMENIN.....	5R01 CA16624-03	49,524
SCHULTZ, ARTHUR G.....	SYNTHESIS OF ASPIDOSPERMA AND HASUBANAN ALKALOIDS.....	2R01 GM21159-04	82,270

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SCHWARTZ, RUTH	STABLE 26MG AND 28MG IN MEASUREMENT OF MG UTILIZATION.....	2R01 AM18569-03	91,910
SEMMElhACK, MARTIN F.....	NATURAL PRODUCT SYNTHESSES.....	5R01 AI08687-09	74,192
SEMMElhACK, MARTIN F.....	SYNTHESIS OF NATURAL ANTICANCER AGENTS AND ANALOGS.....	5R01 CA18333-02	47,889
SIEGEL, BENJAMIN M.....	BIOMOLECULAR HIGH RESOLUTION ELECTRON MICROSCOPY.....	5R01 GM12873-13	115,280
SRB, ADRIAN M.....	DEVELOPMENTAL GENETIC STUDIES OF NEUROSPORA.....	5R01 GM12953-28	51,440
STEVENS, CHARLES E.....	COMPARATIVE STUDIES OF LARGE INTESTINAL FUNCTION.....	5R01 AM09280-13	52,830
STEVENSON, JAMES F.....	MASS TRANSFER IN BLOOD AND HOLLOW FIBER MEMBRANES.....	5R01 AM17009-04	26,603
TAPPER, DANIEL N.....	NEURAL CORRELATES OF SKIN SENSIBILITY.....	5R01 NS07505-10	32,578
VOGT, VOLKER M.....	STRUCTURE AND ASSEMBLY OF AVIAN ONCORNAVIRUSES.....	1R01 CA20081-01A1	54,378
WASSERMAN, ROBERT H.....	INTESTINAL ABSORPTION OF MINERAL IONS.....	5R01 AM04652-17	131,427
WILKINSON, CHRISTOPHER F.....	MICROSOMAL ENZYMES IN INSECTS.....	5R01 ES00400-09	77,399
WU, RAY.....	ANALYSIS OF DNA SEQUENCE IN POLYOMA AND SV40 TUMOR VIRUS.....	5R01 CA14989-04	95,756
WU, RAY.....	PROMOTER AND OPERATOR SITE DNA SEQUENCE ANALYSIS.....	3R01 GM18887-05S1	17,955
ZILVERSMIT, DONALD B.....	FAT METABOLISM AND EXPERIMENTAL ATHEROSCLEROSIS.....	5R01 HL10933-12	109,240
ZILVERSMIT, DONALD B.....	LIPID TRANSPORT.....	2R01 HL10940-12	117,643
ORGANIZATION TOTAL	95	6,693,780	
ITHACA COLLEGE ZIP CODE 14850			
PASTERNAK, ROBERT F.....	FAST REACTIONS IN SOLUTION.....	5R01 GM17574-06	25,446
ORGANIZATION TOTAL	1	25,446	
LAKE PLACID			
TISSUE CULTURE ASSOCIATION—W. ALTON JONES CELL SCIENCE CENTER ZIP CODE 12946			
DOUGLAS, WILLIAM H.....	CYSTIC FIBROSIS.....	1R13 AM20515-01	4,195
DOUGLAS, WILLIAM H.....	SURFACTANT SYNTHESIS BY TYPE II CELLS IN VITRO.....	1R01 HL19513-01	108,461
DOUGLAS, WILLIAM H.....	EFFECT OF POLLUTANTS ON ORGANOTYPIC LUNG CULTURES.....	1R01 HL21008-01	48,503
DOUGLAS, WILLIAM H.....	CYSTIC FIBROSIS.....	1R13 HL22166-01	3,600
SMITH, JAMES R.....	CLONAL ANALYSIS OF AGING HUMAN DIPLOID CELL CULTURES.....	1R01 AG00338-01A1	53,316
SMITH, JAMES R.....	EFFECTS OF AIR POLLUTANTS ON LUNG CELLS IN CULTURE.....	1R01 HL21009-01	95,476
ORGANIZATION TOTAL	6	313,551	
MANHASSET			
NORTH SHORE UNIVERSITY HOSPITAL ZIP CODE 11030			
BIRNBAUM, GARY.....	SUPPRESSOR LYMPHOCYTES IN NEUROLOGICAL DISEASE.....	1R01 NS13040-01A1	37,929
TEICHBERG, SAUL.....	AXONAL TRANSPORT OF PROTEIN AND MEMBRANE IN NEURONS.....	5R01 NS12148-03	50,041
ORGANIZATION TOTAL	2	87,970	
NEW YORK			
AMERICAN CANCER SOCIETY ZIP CODE 10017			
ARJE, SIDNEY L.....	ACS/NCI LYMPHOMAS & LEUKEMIAS NATIONAL CONFERENCE.....	1R13 CA21588-01	50,000
ORGANIZATION TOTAL	1	50,000	
AMERICAN DIABETES ASSOCIATION ZIP CODE 10017			
FREINKEL, NORBERT.....	ANNUAL RESEARCH SYMPOSIUM.....	1R13 AM21508-01	9,632
ORGANIZATION TOTAL	1	9,632	
AMERICAN HEALTH FOUNDATION ZIP CODE 10019			
ARNOLD, CHARLES.....	CANCER CONTROL AND PREVENTION PROGRAM SUPPORT.....	5R18 CA17867-03	750,669
FIALA, EMERICH.....	MECHANISM OF ACTION OF COLON CARCINOGENESIS.....	5R26 CA15400-05	182,926
HECHT, STEPHEN S.....	METABOLISM OF THE CARCINOGEN NITROSONORNICOTINE.....	1R01 CA21393-01	63,121
WYNDER, ERNST L.....	ENVIRONMENTAL CARCINOGENESIS.....	3P01 CA12376-06S2	154,977
WYNDER, ERNST L.....	METABOLIC EPIDEMIOLOGY OF COLON CANCER.....	3R26 CA16382-03S1	35,469
WYNDER, ERNST L.....	CORE SUPPORT, CANCER CENTER PROGRAM.....	5P30 CA17613-03	1,296,986
WYNDER, ERNST L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05775-02	81,323
ORGANIZATION TOTAL	7	2,565,471	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BARNARD COLLEGE ZIP CODE 10327			
BRAINE, LILA G.....	PROCESSING OF ORIENTATION INFORMATION BY CHILDREN.....	5R01 HD09513-02	28,624
ORGANIZATION TOTAL	1 28,624		
BRONX-LEBANON HOSPITAL CENTER ZIP CODE 10456			
EVIATAR, LYDIA.....	OTONEUROLOGICAL EVALUATION OF INFANTS AND CHILDREN.....	5R01 NS10238-06	22,249
ORGANIZATION TOTAL	1 22,249		
BROOKDALE HOSPITAL MEDICAL CENTER ZIP CODE 11212			
PORUSH, JEROME G.....	RENAL SODIUM TRANSPORT IN EXPERIMENTAL ALDOSTERONISM.....	5R01 HL10914-10	61,242
ORGANIZATION TOTAL	1 61,242		
CENTER FOR POLICY RESEARCH ZIP CODE 10027			
ETZIONI, AMITAI.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05739-05	40,547
ORGANIZATION TOTAL	1 40,547		
CITY UNIVERSITY OF NEW YORK—BROOKLYN COLLEGE ZIP CODE 11210			
ABRAMOV, ISRAEL.....	SPECTRAL PROPERTIES OF CELLS IN THE GOLDFISH RETINA.....	5R01 EY01697-02	55,127
COTTRELL, STEPHEN F.....	THE STUDY OF AGING IN VOLVOX—ROLE OF MITOCHONDRIA.....	1R01 AG00554-01	29,204
GUTTMAN, RITA.....	EXCITATION PROCESS IN NERVE.....	5R01 NS12272-03	18,217
HAINLINE, LOUISE D.....	VISUAL PERCEPTUAL DEVELOPMENT IN INFANCY.....	5R01 HD08706-03	29,192
HURST, DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07119-06	18,078
NISHIURA, JAMES T.....	BIOCHEMICAL-GENETICS OF EUCARYOTIC RNA POLYMERASES.....	1R01 GM23456-01	28,290
OSMAN, ELI.....	DETECTION AND RECOGNITION IN AUDITION AND VISION.....	3R01 NS10843-03S1	11,644
ORGANIZATION TOTAL	7 189,752		
CITY UNIVERSITY OF NEW YORK—CITY COLLEGE OF NEW YORK ZIP CODE 10031			
BIRKE, RONALD L.....	REDOX CHEMISTRY OF VITAMIN B12 DERIVATIVES.....	5R01 AM18440-03	34,235
COSLOY, SHARON D.....	MOLECULAR MECHANISM OF RECOMBINATION IN E. COLI K12.....	5R01 GM22562-02	45,292
LEVINE, LOUIS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07132-07	18,070
SCHULZ, HORST H.....	FATTY ACID METABOLISM IN HEART AND ITS REGULATION.....	5R01 HL18089-03	57,987
ORGANIZATION TOTAL	4 155,584		
CITY UNIVERSITY OF NEW YORK—COLLEGE OF STATEN ISLAND ST. GEORGE CAMPUS ZIP CODE 10301			
NAIDER, FRED R.....	PEPTIDE TRANSPORT IN MICROORGANISMS.....	5R01 GM22086-03	28,510
ORGANIZATION TOTAL	1 28,510		
CITY UNIVERSITY OF NEW YORK—GRADUATE SCHOOL AND UNIVERSITY CENTER ZIP CODE 10036			
PROSHANSKY, HAROLD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07126-06	50,132
STUDEBAKER, GERALD A.....	PAIRED COMPARISON HEARING AID CHARACTERISTIC SELECTION.....	5R01 NS13514-02	107,367
ORGANIZATION TOTAL	2 157,499		
CITY UNIVERSITY OF NEW YORK—HERBERT H. LEHMAN COLLEGE ZIP CODE 10468			
ACKERMAN, EVELYN B.....	A HISTORY OF MEDICAL CARE IN RURAL FRANCE, 1700-1915.....	1R01 LM03001-01	37,851
ORGANIZATION TOTAL	1 37,851		
CITY UNIVERSITY OF NEW YORK—HUNTER COLLEGE ZIP CODE 10021			
ABBOTT, EDWIN H.....	THE GENERAL INTERMEDIATE FOR VITAMIN B-6 CATALYSIS.....	5R01 AM15705-06	6,327
BEVERIDGE, DAVID L.....	SOLVENT EFFECTS ON BIOMOLECULAR CONFORMATIONAL STABILITY.....	5R01 NS12149-03	60,929
CHAPPELL, RICHARD L.....	NEURAL INTERACTIONS OF THE RETINA.....	5R01 EY00777-06	39,406
COHEN, WILLIAM D.....	STUDIES ON THE MARGINAL BAND SYSTEM OF ERYTHROCYTES.....	1R01 HL20902-01	33,769
FRIEDMAN, S MARVIN.....	STRUCTURE AND FUNCTION OF MEMBRANE-BOUND RIBOSOMES.....	5R01 GM22164-03	45,344
HANDLER, EUGENE S.....	HEMATOPOIETIC COLONY FORMATION IN VIVO.....	5R01 CA19487-02	53,618
HERSKOWITZ, IRWIN H.....	BIBLIOGRAPHY ON THE GENETICS OF DROSOPHILA.....	5R01 GM20705-03	9,564
KRAKOW, JOSEPH S.....	RNA SYNTHESIS BY AZOTOBACTER VINELANDII RNA POLYMERASE.....	5R01 GM18673-07	93,216
KRAKOW, JOSEPH S.....	STUDIES ON THE CYCLIC AMP RECEPTOR PROTEIN OF E. COLI.....	5R01 GM22619-02	41,228
MAWE, RICHARD C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07109-09	47,129
OZER, HARVEY L.....	HOST FUNCTIONS RELATED TO TUMOR VIRUS INFECTION.....	7R01 CA23002-01	114,724
OZER, HARVEY L.....	REGULATION OF EXPRESSION OF VIRAL TRANSFORMANTS.....	7R01 CA23003-01	90,536

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
RUDNER, RIVKA.....	MACROMOLECULAR ASPECTS OF SYNCHRONOUS CELL DIVISION.....	5R01 GM16059-09	52,581
ORGANIZATION TOTAL	13 688,371		
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029			
AARONSON, ROBERT P.....	BIOCHEMICAL STUDIES OF THE NUCLEAR PORE COMPLEX.....	5R01 GM21950-03	53,454
ABRAMSON, RUTH G.....	MICROPUNCTURE STUDY OF URATE TRANSPORT IN RAT KIDNEY.....	2R01 AM12872-09	107,735
ACS, GEORGE.....	STUDIES ON CHEMOTHERAPEUTIC DEOXYRIBONUCLEOSIDES.....	3R01 CA16890-03S1	14,947
ACS, GEORGE.....	STUDIES ON CHEMOTHERAPEUTIC DEOXYRIBONUCLEOSIDES.....	2R01 CA16890-04	83,448
BAHLER, ALAN S.....	COMPETITIVE CORONARY FLOW IN NATIVE AND GRAFT VESSELS.....	1R01 HL20163-01	98,816
BARKA, TIBOR D.....	SALIVARY GLAND HYPERPLASIA AND HYPERTROPHY.....	3R01 CA11155-08S1	19,098
BEATTIE, DIANA S.....	HEPATIC ALA SYNTHETASE AND ITS CONTROL IN AGING.....	1R01 AG00099-01A1	72,402
BEATTIE, DIANA S.....	SYNTHESIS OF MITOCHONDRIAL PROTEIN.....	5R01 HD04007-08	48,669
BENTLEY, PETER J.....	PHARMACOLOGY OF LENTICULAR ION TRANSPORT.....	2R01 EY01278-04	67,016
BERL, SOLL.....	AMINO ACIDS & PROTEINS IN BRAIN STRUCTURE & FUNCTION.....	5R01 NS11824-04	94,969
BERMAN, A J.....	PURPOSIVE MOVEMENT IN THE ABSENCE OF SENSORY FEEDBACK.....	5R01 NS12330-03	41,487
BODIS-WOLLNER, IVAN G.....	PARALLEL PATHWAYS IN HUMAN VISION.....	1R01 EY01708-01A1	76,765
BURSTEIN, SHLOMO.....	POLAR CORTICOIDS IN ANIMALS AND CANCER.....	5R01 CA19102-03	150,094
CALHOUN, DAVID H.....	CONTROL OF GENE EXPRESSION BY AN ALLOSTERIC ENZYME.....	5R01 GM23182-02	53,119
CANDIA, OSCAR A.....	ELECTROLYTE AND FLUID TRANSPORT IN OCULAR MEMBRANES.....	2R01 EY00160-07	124,691
CANDIA, OSCAR A.....	INTERDISCIPLINARY RESEARCH CENTER FOR VISUAL SCIENCES.....	1P30 EY01867-01	167,852
CHURG, JACOB.....	RENAL, VASCULAR AND PULMONARY STRUCTURE IN DISEASE.....	5R01 AM00918-23	129,485
COHEN, BERNARD.....	THE OCULOMOTOR SYSTEM AND BODY POSTURAL MECHANISMS.....	5R01 NS00294-23	98,332
DE SALEGUI, MIRIAM.....	ANALYSIS OF CILIOINHIBITORY CYSTIC FIBROSIS FACTORS.....	5R01 AM18060-03	79,652
FRIEND, CHARLOTTE.....	FILTERABLE AGENTS AND TUMOR INDUCTION IN MICE.....	5R01 CA10000-12	164,231
FRIEND, CHARLOTTE.....	CONTROL MECHANISMS OF DIFFERENTIATION AND MALIGNANCY.....	5R01 CA13047-06	150,309
GITLOW, STANLEY E.....	CATECHOLAMINE METABOLISM IN HYPERTENSIVE DISEASES.....	5R01 HL12648-08	109,287
GLASS, JOHN D.....	SOLID-PHASE PEPTIDE SYNTHESIS.....	5R01 GM18752-05	67,784
GREEN, JACK P.....	ACH TURNOVER AND CHOLINE METABOLISM IN THE CNS.....	5R01 NS08829-10	138,630
GREENBERG, MICHAEL L.....	KINETICS OF CELL TURNOVER IN LEUKEMIA.....	5R01 CA10515-10	79,399
GURPIDE, ERLIO.....	STEROID DYNAMICS IN HUMAN ENDOMETRIAL CANCER.....	2R01 CA15648-04	126,816
GURPIDE, ERLIO.....	STEROID DYNAMICS IN ENDOCRINOLOGY.....	5R01 HD07197-06	143,501
HEIKKILA, RICHARD E.....	STUDIES ON THE MODE OF ACTION OF DIABETOGENIC AGENTS.....	1R01 AM21260-01	69,778
HENLEY, WALTER L.....	COMMON HUMAN AND ANIMAL ANTIGENS IN CORNEA.....	5R01 EY01689-02	100,614
HIRSCHHORN, KURT.....	STUDY OF PROBLEMS IN CLINICAL GENETICS.....	3P50 GM19443-05S1	144,837
HIRSCHHORN, KURT.....	CELLULAR ASPECTS OF HUMAN GENETICS AND IMMUNOLOGY.....	3R01 HD02552-10S2	118,072
HOLLAND, JAMES F.....	CANCER AND LEUKEMIA GROUP B.....	2R10 CA04457-18	335,086
HOLLAND, JAMES F.....	LEUKEMIA CENTER PLATELET PROGRAM.....	5R01 CA11816-17	124,686
HOLLAND, JAMES F.....	SPECIALIZED CANCER CENTER.....	3P01 CA15936-03S1	1,100,263
HOLLAND, JAMES F.....	CANCER AND ACUTE LEUKEMIA GROUP B (OPERATIONS).....	3R10 CA16118-03S2	190,749
HOLLAND, JAMES F.....	CANCER AND ACUTE LEUKEMIA GROUP B (OPERATIONS).....	2R10 CA16118-04	799,043
HUANG, PENG YUN.....	CEREBRAL VEINS—ANATOMICAL & RADIOLOGICAL CORRELATIONS.....	5R01 HL09913-12	36,543
KATSOYANNIS, PANAYOTIS G.....	SYNTHETIC INSULINS AND ANALOGS.....	2R01 AM12925-08	128,202
KEUSCH, GERALD T.....	SHIGELLA EXOTOXIN: CELL RECEPTORS AND MODE OF ACTION.....	5R01 AI13284-02	66,140
KILBOURNE, EDWIN D.....	BIOLOGY AND BIOCHEMISTRY OF INFLUENZA VIRUSES.....	5R01 AI09304-09	205,217
KIRCHBERGER, MADELEINE A.....	C-AMP-DEPENDENT PROTEIN KINASE IN CARDIAC CONTRACTION.....	2R01 HL15764-04	56,875
KNITTLE, JEROME L.....	EFFECT OF EARLY NUTRITION ON GROWTH AND DEVELOPMENT.....	5R01 HD03326-10	132,668
KOFFLER, DAVID.....	TISSUE INJURY IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	5R01 AM13721-08	54,692
KORITZ, SEYMOUR B.....	ADRENAL METABOLISM POSSIBLY RELATED TO ACTH ACTION.....	2R01 AM13361-09A1	70,745
KRAKOFF, LAWRENCE R.....	RENIN AND VASCULAR HYPER-REACTIVITY IN HYPERTENSION.....	5R01 HL13595-07	94,245
KRIEGER, DOROTHY T.....	CENTRAL NERVOUS SYSTEM-PITUITARY-ADRENAL INTERRELATIONS.....	5R01 NS02893-15	117,105
KUPFER, SHERMAN.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00071-14	818,743
LIEBER, CHARLES S.....	BIOCHEMICAL AND FINE STRUCTURAL EFFECTS OF ETHANOL.....	3R01 AM12511-08S1	24,671
LIEBER, CHARLES S.....	EFFECTS OF ETHANOL AND MALNUTRITION ON THE LIVER.....	2R01 AM12511-09A1	24,353
NIEMETZ, JULIAN.....	PROCOAGULANT ACTIVITY OF LEUKOCYTES.....	5R01 HL13155-08	22,561
ORLOWSKI, MARIAN.....	ORGAN SPECIFIC DRUGS: CARDIOVASCULAR AND RENAL EFFECTS.....	1R01 HL21105-01	72,635
ORLOWSKI, MARIAN.....	GLUTATHIONE METABOLISM AND BRAIN AMINO ACID UPTAKE.....	5R01 NS11018-03	64,904
PALESE, PETER M.....	STUDIES WITH SYNTHETIC NEURAMINIDASE SUBSTRATES.....	2R01 AI11823-04	118,122
PATTERSON, RANDOLPH E.....	ISCHEMIC MYOCARDIUM: DELIVERY OF BLOOD FLOW AND DRUGS.....	1R23 HL21151-01	54,870
PODOS, STEVEN M.....	IN VIVO INHIBITORS OF OCULAR PROSTAGLANDIN SYNTHESIS.....	5R01 EY01661-03	50,492
PUSZKIN, SAUL.....	MICROSTRUCTURAL INTEGRITY OF STORED HUMAN PLATELETS.....	1R01 HL20718-01	73,685

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
PUSZKIN, SAUL.....	NEUROTRANSMITTERS, SYNAPTOSOMES AND CONTRACTILE PROTEINS.....	5R01 NS12467-03	77,785
RAYFIELD, ELLIOT J.....	CARBOHYDRATE METABOLISM-INFECTION INTERRELATIONSHIPS.....	5R01 AM18522-03	49,822
REINACH, PETER S.....	COUPLING BETWEEN METABOLISM/IONIC TRANSPORT IN CORNEAS.....	1R01 EY01976-01	49,717
ROSENFELD, RICHARD E.....	ABO ERYTHROBLASTOSIS.....	5R01 HD03972-19	107,549
SACHAR, DAVID B.....	STUDIES OF THE ILETIS GRANULOMA-TRANSMITTING AGENT.....	1R01 AM19695-01	85,773
SCHIAVI, RAUL C.....	DIABETES MELLITUS AND SEXUAL DYSFUNCTION.....	1R01 AM20845-01	78,326
SCHULMAN, JEROME L.....	BIOLOGICAL ASSAY OF DEFINED INFLUENZA A RECOMBINANTS.....	1R01 AI14053-01	71,682
SCHUSSLER, GEORGE C.....	THYROID HORMONE TRANSPORT AND CELLULAR UPTAKE.....	2R01 AM19356-02	86,522
SCHWARTZ, IRVING L.....	MECHANISM OF ACTION OF PEPTIDE HORMONES.....	3R01 AM10080-12S1	5,777
SCHWARTZ, IRVING L.....	MECHANISM OF ACTION OF PEPTIDE HORMONES.....	5R01 AM10080-13	82,603
SCOTT, WALTER N.....	CHARACTERIZATION OF STEROID-INDUCED PROTEINS.....	5R01 AM19130-02	45,450
SCOTT, WALTER N.....	OCULAR CARBONIC ANHYDRASE.....	3R01 EY00718-05S2	47,069
SCOTT, WALTER N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05653-10	213,709
SELIKOFF, IRVING J.....	ENVIRONMENTAL AGENTS: RELATION TO HUMAN HEALTH EFFECTS.....	3P30 ES00928-04S1	49,910
SELIKOFF, IRVING J.....	ENVIRONMENTAL AGENTS: RELATION TO HUMAN HEALTH EFFECTS.....	5P30 ES00928-05	1,007,394
STEINMAN, CHARLES R.....	ETIOLOGY OF RHEUMATOID ARTHRITIS RA AND SLE.....	3R01 AM15544-05S1	17,794
STEINMAN, CHARLES R.....	ETIOLOGY OF RHEUMATOID ARTHRITIS & LUPUS ERYTHEMATOSUS.....	2R01 AM15544-06	122,762
ULICK, STANLEY.....	DISORDERS OF STEROID HORMONE BIOSYNTHESIS.....	5R01 AM14040-09	76,908
ULICK, STANLEY.....	ROLE OF THE ADRENAL CORTEX IN HUMAN HYPERTENSION.....	1R01 HL18102-01	64,708
VAN WOERT, MELVIN H.....	SEROTONIN METABOLISM IN MYOCLONUS AND EPILEPSY.....	5R01 NS12341-03	56,952
WASSERMAN, LOUIS R.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	3R10 CA04457-17S1	31,539
WASSERMAN, LOUIS R.....	COOPERATIVE STUDY OF POLYCYTHEMIA VERA.....	3R10 CA10728-09S1	23,120
WASSERMAN, LOUIS R.....	COOPERATIVE STUDY OF POLYCYTHEMIA VERA.....	2R10 CA10728-10	467,538
WAXMAN, SAMUEL.....	NOVEL TRANSPORT GLYCOPROTEINS IN HEPATOMA.....	3R01 CA14491-03S1	2,913
WERTHER, J LAWRENCE.....	ABSORPTION OF CARCINOGENS AND MUCOSAL BARRIER FUNCTION.....	5R01 CA15541-03	54,658
WETMUR, JAMES G.....	PHYSICAL MAPPING OF POINT MUTANTS OF PARAMYXOVIRUSES.....	1R01 AI14094-01	54,597
WETMUR, JAMES G.....	RENATURATION AND HYBRIDIZATION OF NUCLEIC ACIDS.....	5R01 GM22029-04	49,542
YAHR, MELVIN D.....	PARKINSON'S AND ALLIED DISEASES.....	5P50 NS11631-04	613,908
ORGANIZATION TOTAL	84	11,528,671	
CITY UNIVERSITY OF NEW YORK—QUEENS COLLEGE ZIP CODE 11367			
BERKOWITZ, WILLIAM F.....	CONVERSION OF IRIDOIDS TO PROSTAGLANDINS.....	5R01 GM22098-03	39,691
BITTMAN, ROBERT.....	PHOSPHOLIPID-CHOLESTEROL, PROTEIN INTERACTIONS.....	2R01 HL16660-05	74,676
BOYLAN, ELIZABETH S.....	FETAL EXPOSURE TO HORMONES AND MAMMARY CARCINOGENESIS.....	5R01 CA18458-02	41,899
FRUMKES, THOMAS E.....	ROD-CONE INTERRELATIONSHIPS IN HUMAN VISION.....	1R01 EY01802-01	92,985
KIRMAN, JACOB H.....	TACTILE COMMUNICATION OF SPEECH TO THE DEAF.....	5R01 NS06205-09	82,416
MICHEL, CORINNE A.....	YEAST-A MODEL FOR STUDYING REGULATION IN CANCER CELLS.....	2R01 CA18394-03	63,524
SWICK, KENNETH E.....	AGE-DEPENDENT POPULATION DYNAMICS.....	1R01 GM24326-01	19,638
SZALAY, JEANNE.....	REGULATION OF IRIS BLOOD VESSEL REACTIVITY IN AGING.....	1R01 EY01631-01A1	60,267
WASSERMAN, MARVIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07064-10	25,145
ORGANIZATION TOTAL	9	500,241	
CITY UNIVERSITY OF NEW YORK—YORK COLLEGE ZIP CODE 11432			
ADAMO, AMADEO F.....	SUPPORT FOR BIOMEDICAL SCIENCES.....	5S06 RR08153-02	65,045
HAMPTON, SUZANNE H.....	REPRODUCTIVE BIOLOGY OF MARMOSETS.....	5R01 HD08695-04	29,347
ORGANIZATION TOTAL	2	94,392	
COLUMBIA UNIVERSITY ZIP CODE 10027			
ABRAMSON, MAXWELL.....	PATHOGENESIS AND BONE RESORPTION IN AURAL CHOLESTEATOMA.....	1R01 NS13951-01	124,354
AL-AWQATI, QAIS.....	CONTROL OF SODIUM TRANSPORT AND CELLULAR RESPIRATION.....	7R01 HL21849-01	59,685
ANDERSON, ETHEL I.....	INTERMEDIARY METABOLISM OF THE CORNEA.....	5R01 EY00699-07	66,221
APRIL, ERNEST W.....	THE MYOFILAMENT LATTICE: MORPHOLOGY AND FUNCTION.....	5R01 AM15876-06	45,918
AXEL, RICHARD.....	MOLECULAR CONTROL OF CHROMATIN TRANSCRIPTION.....	5R01 CA16346-03	75,803
BALAZS, ENDRE A.....	BASIC OPHTHALMIC RESEARCH PROGRAM.....	5P30 EY00396-10	143,494
BALAZS, ENDRE A.....	PHYSIOLOGY AND PATHOLOGY OF THE VITREOUS.....	5R01 EY01747-03	185,542
BANK, ARTHUR.....	COOPERATIVE STUDY FOR ACUTE LEUKEMIA.....	3R10 CA12011-05S1	27,377
BANK, ARTHUR.....	ISOLATION AND CHARACTERIZATION OF HUMAN GLOBIN GENES.....	5R01 GM23143-02	58,936
BARRON, BRUCE A.....	STATISTICAL STUDIES OF GYNECOLOGICAL CANCERS.....	5R01 CA19145-02	47,297
BASSETT, C ANDREW.....	BIOELECTRIC PHENOMENA CONTROLLING BONE GROWTH.....	5R01 AM07822-14	109,076
BENESCH, REINHOLD.....	OXYGEN TRANSPORT IN THE PRESENCE OF CARBON MONOXIDE.....	1R01 ES01560-01	28,999

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BENESCH, RUTH E.....	STRUCTURE AND FUNCTION IN HEMOGLOBINS.....	5R01 HL05791-17	67,934
BENESCH, RUTH E.....	SICKLING INHIBITION BY CHEM MODIFICATION OF HEMOGLOBIN.....	5R01 HL17552-03	50,209
BERNE, BRUCE J.....	MOLECULAR DYNAMICS AND LIGHT SCATTERING OF FLUIDS.....	5R01 NS12714-02	53,645
BERSOHN, RICHARD.....	BIFUNCTIONAL STUDIES OF PROTEINS.....	5R01 GM19019-14	52,664
BEYCHOK, SHERMAN.....	PROTEINS OF PLASMA CELL CANCERS.....	5R01 CA13014-06	58,429
BEYCHOK, SHERMAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07060-12	138,717
BILEZIKIAN, JOHN P.....	THE BETA ADRENERGIC CATECHOLAMINE RECEPTOR.....	1R01 HL20859-01	49,797
BITO, LASZLO Z.....	OCULAR FLUID COMPOSITION AND OCULAR TISSUE PHYSIOLOGY.....	5R01 EY00333-11	127,367
BITO, LASZLO Z.....	THE CONTROL OF TISSUE-SENSITIVITY TO AUTONOMIC AGENTS.....	5R01 EY00402-10	68,251
BLOOM, ARTHUR D.....	MUTAGENESIS IN CULTURED LYMPHOCYTES.....	5R01 ES01293-03	218,002
BLOOM, ARTHUR D.....	GENE FUNCTION IN CULTURED HUMAN LYMPHOCYTES.....	5R01 GM22052-03	92,610
BRANDT, PHILIP W.....	CELL PHYSIOLOGY CORRELATED WITH ULTRASTRUCTURE.....	5R01 NS05910-11	54,800
BRASEL, JO ANNE.....	NUTRITION AND CELL GROWTH.....	3R01 HD07195-04S1	5,043
BRESLOW, RONALD C.....	SYNTHESIS OF NOVEL CONJUGATED MOLECULES.....	5R01 GM13651-12	79,411
BRESLOW, RONALD C.....	BIOCHEMICAL MODEL REACTIONS.....	2R01 GM18754-16	96,075
BRYANT, JOHN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05449-16	89,930
BUTLER, VINCENT P, JR.....	DIGOXIN-SPECIFIC ANTIBODIES.....	5R01 HL10608-11	73,613
CALVIN, HAROLD I.....	PROTEINS OF MAMMALIAN SPERMATOZOA.....	2R01 HD05316-06	98,958
CANFIELD, ROBERT E.....	CHEMICAL STUDIES OF HORMONES AND METABOLIC DISORDERS.....	5R01 AM09579-13	165,564
CANNON, PAUL J.....	CIRCULATORY FUNCTION AND ELECTROLYTE METABOLISM.....	5R01 HL10182-12	81,110
CANNON, PAUL J.....	THE REGIONAL CIRCULATIONS.....	5R01 HL14148-06	220,864
CANTOR, CHARLES R.....	NEW TECHNIQUES FOR COMPLEX MACROMOLECULAR ASSEMBLIES.....	5R01 GM14825-11	88,074
CANTOR, CHARLES R.....	FLUORESCENCE AND CHEMICAL STUDIES ON RIBOSOMES.....	2R01 GM19843-05	103,166
CHANG, CHU H.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA14060-05	52,061
CHASALOW, FRED I.....	ANDROGEN AND 16-ANDROSTENE BIOCHEMISTRY IN TESTIS.....	1R01 HD10155-01	20,082
CHASIN, LAWRENCE A.....	MITOTIC RECOMBINATION IN CULTURED MAMMALIAN CELLS.....	5R01 GM22629-03	57,365
CHIEN, SHU.....	HUMAN RED CELL MEMBRANE IN HEALTH AND DISEASE.....	5P01 HL16851-03	522,265
CHIEN, SHU.....	RHEOLOGICAL FACTORS IN TRANSPORT ACROSS ARTERIAL WALL.....	1R01 HL19454-01	159,086
COLE, PATRICIA E.....	RNA CONFORMATION AND PROTEIN-RNA RECOGNITION.....	2R01 GM21352-03	77,724
COLEMAN, D JACKSON.....	ULTRASONIC EVALUATION OF OCULAR TISSUES.....	2R01 EY01218-04	115,693
COTE, LUCIEN J.....	SENESCENCE, NEUROCHEMICAL AND CYTOLOGICAL STUDIES.....	1R01 AG00276-01	94,080
CURNEN, MARY G.....	CANCER RISK IN PROFESSIONAL & OCCUPATIONAL GROUPS.....	3R01 CA17480-02S1	65,478
D'ALESSANDRO, PHILIP A.....	COMPARATIVE STUDY OF TRYPANOSOMAL EXOANTIGENS.....	2R01 AI13387-02	85,076
DAILEY, BENJAMIN P.....	DFUTERIUM NMR AS A PROBE OF MOLECULAR STRUCTURE.....	5R01 GM22310-03	52,391
DANILO, PETER, JR.....	PERINATAL CARDIAC ELECTROPHYSIOLOGY.....	1R23 HL21368-01	45,896
DESPOMMIER, DICKSON D.....	FUNCTIONAL ANTIGENS OF TRICHINELLA SPIRALIS.....	2R01 AI10627-07	77,623
EAKINS, KENNETH E.....	OCULAR EFFECTS OF PROSTAGLANDINS.....	2R01 EY00457-09	133,456
EDELSON, RICHARD L.....	IMMUNOBIOLOGY OF CUTANEOUS T CELL LYMPHOMAS.....	1R01 CA20499-01	88,074
EISENBERG, MAX A.....	BIOTIN; BIOGENESIS, TRANSPORT, AND THEIR REGULATION.....	5R01 AM14450-08	71,337
EISENTHAL, KENNETH B.....	PICOSECOND LASER STUDIES OF HEME-PROTEINS.....	5R01 HL19488-02	49,652
EMMERS, RAIMOND.....	NEUROPHYSIOLOGICAL MECHANISMS OF SENSORY MODALITIES.....	2R01 NS03266-14A1	44,098
ENSINGER, MARCIA J.....	TEMPERATURE-SENSITIVE MUTANTS OF VACCINIA VIRUS.....	1R01 AI13790-01	65,651
ERLANGER, BERNARD F.....	IMMUNOCHEMICAL STUDIES OF NUCLEIC ACIDS.....	5R01 AI06860-12	82,017
FEIGELSON, PHILIP.....	CONTROL OF GENE EXPRESSION: NORMAL AND NEOPLASTIC.....	1P01 CA22376-01	260,069
FERIN, MICHEL J.....	THE HYPOPHYSIS AND REPRODUCTION IN RHESUS MONKEYS.....	1R01 HD10873-01	50,318
FISCHBARG, JORGE.....	BIOELECTRICAL PROPERTIES OF CORNEAL ENDOTHELIUM.....	5R01 EY01080-05	116,997
FLEISS, JOSEPH L.....	STATISTICAL METHODS IN DENTAL RESEARCH.....	5R01 DE04068-03	43,939
FRANTZ, ANDREW G.....	STUDIES ON PROLACTIN.....	2R01 CA11704-07	112,797
FREDA, VINCENT J.....	MANAGEMENT OF THE RH PROBLEM IN OBSTETRICS.....	5R01 HD08728-03	60,141
GANGAT, YAKUB M.....	ANESTHETICS/CAMP SYSTEM: MODE OF ACTION; HEART EFFECT.....	1R23 GM24307-01	43,542
GERSHON, MICHAEL D.....	NEURAL CONTROL OF GASTROINTESTINAL ACTIVITY.....	5R01 NS12969-02	66,309
GINSBERG, HAROLD S.....	BIOCHEMICAL CHANGES—ADENO-INFECTED & TRANSFORMED CELLS.....	2R01 AI12052-05	133,470
GINSBERG, HAROLD S.....	STUDY OF THE MECHANISMS OF VIRAL ECLIPSE AND ASSEMBLY.....	5R01 AI12053-05	107,938
GLICKMAN, ROBERT M.....	CHYLOMICRONS—FORMATION, STRUCTURE, AND FUNCTION.....	7R01 AM21367-01	91,829
GODMAN, GABRIEL C.....	CELL INJURY BY ACTINOMYCIN AND RELATED CARCINOGENS.....	5R01 CA13835-05	76,310
GODMAN, GABRIEL C.....	CYTOCHALASINS AND CELL MEMBRANE CONTRACTILE APPARATUS.....	1R01 CA20836-01	54,959
GOODMAN, DE WITT S.....	STUDIES IN METABOLISM AND NUTRITION.....	2R01 AM05968-17	226,151
GOODMAN, DE WITT S.....	SPECIALIZED CENTER OF RESEARCH IN ARTERIOSCLEROSIS.....	1P50 HL21006-01	547,234
GREENWOOD, MARY R.....	NUTRITION AND ADIPOCYTE GROWTH AND DEVELOPMENT.....	2R01 HD08965-04	93,730
GREER, JONATHAN.....	STRUCTURE AND FUNCTION OF BLOOD PROTEINS.....	2R01 HL16601-04	61,127

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
GUNTAKA, RAMAREDDY V.....	STRUCTURE AND FUNCTION OF AVIAN SARCOMA VIRAL DNA.....	5R01 CA19152-02	66,311
HALL, ERIC J.....	RADIOLOGICAL STUDIES RELATED TO HIGH LET RADIOTHERAPY.....	5R01 CA18506-02	100,585
HANSON, RONALD L.....	MECHANISM OF ENERGY-DRIVEN TRANSHYDROGENASE.....	5R01 GM23092-02	50,273
HARBER, LEONARD C.....	PHOTOSENSITIVITY: ENVIRONMENTAL AND OTHER FACTORS.....	5R01 ES01041-04	110,735
HARVEY, REJANE M.....	LUNG DISEASE AND THE OXYGENATION OF BLOOD AND TISSUE.....	5P01 HL17813-03	470,932
HENDERSON, ANN S.....	HUMAN GENE SITE LOCALIZATION USING HYBRIDIZATION IN SITU.....	5R01 GM21833-03	10,316
HILAL, SADEK K.....	GUIDED VASCULAR OBLITERATION OF CNS VASCULAR LESIONS.....	5R01 HL15781-05	54,779
HILAL, SADEK K.....	STUDY OF CEREBRAL BLOOD FLOW WITH STABLE XENON.....	1R01 HL20761-01	69,838
HILAL, SADEK K.....	NEUROTOXICITY OF ANGIOGRAPHIC CONTRAST AGENTS.....	5R01 NS11994-03	18,388
HOCHBERG, RICHARD B.....	STEROID HORMONES IN BREAST CANCER.....	1R01 CA20510-01	79,267
HOFFMAN, BRIAN F.....	CARDIAC CONDUCTIVITY AND AUTOMATICITY.....	5R01 HL08508-14	83,429
HOFFMAN, BRIAN F.....	PHYSIOLOGIC PHARMACOLOGY AND ITS CLINICAL APPLICATIONS.....	5P01 HL12738-09	1,274,684
HOLLYFIELD, JOE G.....	DEVELOPMENT AND MAINTENANCE OF PHOTORECEPTOR CELLS.....	2R01 EY00624-07	15,848
HOLTZMAN, ERIC.....	TRANSPORT AND MEMBRANE CIRCULATION IN NERVOUS TISSUE.....	5R01 NS09475-08	75,707
HOOD, DONALD C.....	PHYSIOLOGICAL ADJUSTMENT TO AMBIENT LIGHT LEVELS.....	5R01 EY01877-02	20,497
HOOD, DONALD C.....	CONE SATURATION AND LIGHT ADAPTATION IN HUMANS.....	1R01 EY02115-01	30,731
IWAMOTO, TAKEO.....	ELECTRON MICROSCOPY OF THE EYE.....	3R01 EY00190-20S1	10,442
JAGIELLO, GEORGIANA M.....	ENDOCRINE CONTROL OF MAMMALIAN FEMALE MEIOSIS.....	5R01 HD05862-07	54,678
JAGIELLO, GEORGIANA M.....	CYTOGENETICS OF FEMALE MAMMALIAN MEIOSIS.....	5R01 HD10037-02	94,498
JAMES, I STANLEY.....	SUPPORT FOR LUNG CENTER FOR NEWBORNS.....	2P50 HL14218-06	614,490
JOHNSON, WILLIAM G.....	GENETIC NEURAL TUMORS: CELL SURFACE ALTERATIONS.....	5R01 CA18172-03	53,681
KANDEL, ERIC R.....	CELLULAR ANALYSES OF BEHAVIOR.....	5P01 GM23540-02	341,857
KARLIN, ARTHUR.....	MOLECULAR PROPERTIES OF TWO ACETYLCHOLINE RECEPTORS.....	5R01 NS07065-11	111,482
KATZ, THOMAS J.....	SYNTHESIS OF RING SYSTEMS.....	5R01 GM19173-14	78,833
KAVEY, NEIL.....	TRAUMA AND SLEEP PHYSIOLOGY.....	5R01 GM22515-02	93,672
KELLY, JAMES P.....	ANATOMICAL STUDIES OF THE AUDITORY CORTEX.....	1R01 NS13403-01A1	64,063
KIMBERG, DANIEL V.....	REGULATION OF INTESTINAL CALCIUM TRANSPORT.....	1R01 AM19945-01	138,904
KINNEY, JOHN M.....	MUSCLE AMINOACIDS AND FAT TOLERANCE IN CANCER PATIENTS.....	5R01 CA21008-02	83,290
KINNEY, JOHN M.....	INFLUENCE OF ACUTE ILLNESS AND INJURY ON ENERGY EXCHANGE.....	3P50 GM14546-11S1	179,810
KOOPMANS, HENRY S.....	THE SATIATION OF HUNGER.....	3R01 AM17926-03S1	1,251
KRASNA, ALVIN I.....	STRUCTURE AND MECHANISM OF ACTION OF HYDROGENASE.....	5R01 GM22283-03	72,133
KROOTH, ROBERT S.....	GENE ACTION IN CULTURED HUMAN AND OTHER MAMMALIAN CELLS.....	5R01 GM22103-02	235,612
LEVINTHAL, CYRUS.....	NEURAL DEVELOPMENT: GENETIC & ENVIRONMENTAL CONTROL.....	5R01 NS09821-07	118,175
LEVINTHAL, CYRUS.....	COMPUTER RESOURCE FOR IMAGE PROCESSING AND DISPLAYS.....	5P41 RR00442-09	501,643
LEWIS, JAMES A.....	SENSORY NERVE DEVELOPMENT.....	5R01 NS12399-03	42,718
LEWIS, ROBERT A.....	STUDIES IN POPULATION CHANGE.....	5R01 HD05585-06	40,696
LI, LU-KU.....	SUBUNIT INTERACTIONS OF LENS PROTEIN.....	3R01 EY00032-06S1	19,423
LIEBERMAN, SEYMOUR.....	APPLICATION OF CHEMICAL METHODS TO STEROID METABOLISM.....	2R01 AM00110-26	77,959
LIEBERMAN, SEYMOUR.....	STUDIES OF REPRODUCTIVE BIOCHEMISTRY AND MEDICINE.....	5P01 HD05077-08	426,564
LIM, JONG J.....	STANDING-GRADIENT IN CORNEAL ENDOTHELIUM.....	2R23 EY01422-02	9,909
LINKIE, DANIEL M.....	ESTROGEN RECEPTORS & HYPOTHALAMIC-PITUITARY INTERACTION.....	5R01 HD10090-02	62,746
LIPPARD, STEPHEN J.....	METAL BINDING TO POLYNUCLEOTIDES: PROBES AND DRUGS.....	2R01 CA15826-04	71,796
LIPPARD, STEPHEN J.....	LIGAND-BRIDGED BINUCLEAR METAL COMPLEXES AND PROTEINS.....	5R01 GM16449-10	61,165
LOEB, JOHN N.....	HORMONAL REGULATION OF GROWTH AND DIFFERENTIATION.....	2R01 HD05506-06A1	87,106
LOW, BARBARA W.....	STUDIES OF PROTEIN CONFORMATION.....	5R01 GM21632-03	18,900
LOW, BARBARA W.....	STRUCTURE OF NEUROTOXINS—ERABUTOXINS AND LATICOTOXIN.....	3R01 NS07747-07S1	14,859
LOW, BARBARA W.....	STRUCTURE OF NEUROTOXINS.....	2R01 NS07747-08	44,566
MACAGNO, EDUARDO R.....	INVARIANCE OF SYNAPTIC PATHWAYS.....	5R01 NS11738-03	37,952
MANDEL, IRWIN D.....	DENTAL DEPOSITS—NATURE AND PATHOGENICITY.....	5R01 DE01554-16	107,697
MANDL, INES.....	AGING CHANGES IN ELASTIN AND COLLAGEN COMPOSITION.....	1R01 AG00137-01	38,707
MANSKI, WLADYSLAW J.....	IMMUNOLOGICAL STUDY OF NORMAL & PATHOLOGIC OCULAR LENS.....	2R01 EY00189-22	155,350
MANSKI, WLADYSLAW J.....	EFFECTS OF ANTI-OCULAR ANTIBODIES ON OCULAR TISSUES.....	5R01 EY00198-19	63,755
MARKS, PAUL A.....	SUPPORT FOR CLINICAL CANCER RESEARCH CENTER.....	5P30 CA13696-06	1,353,215
MARKS, PAUL A.....	LEUKEMIA CELL SYSTEMS: INDUCTION OF DIFFERENTIATION.....	5R01 CA18314-02	106,113
MARKS, PAUL A.....	NORMAL/ABNORMAL CELL GROWTH—MULTIDISCIPLINARY STUDY.....	5P01 GM14552-12	189,660
MATIN, LEONARD.....	EYE MOVEMENTS AND VISUAL DIRECTION.....	5R01 EY00375-08	83,305
MEYER, KARL.....	MUCOPOLYSACCHARIDES OF CONNECTIVE AND OTHER TISSUES.....	7R01 AG00998-01	86,369
MILCAREK, CHRISTINE A.....	REGULATION AND ADENYLATION OF CYTOPLASMIC MRNA.....	5R01 GM22893-02	44,506
MILLER, ORLANDO J.....	SUPPRESSION OF MALIGNANCY IN CELL HYBRIDS.....	5R01 CA12504-07	72,323
MILLER, ORLANDO J.....	IMMUNOCYTOGENETICS OF SOMATIC CELL HYBRIDS.....	5R01 GM22966-02	55,566

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MORRISON, SHERIE L.....	GENETICS AND BIOCHEMISTRY OF MYELOMA I _G PRODUCTION.....	2R01 CA16858-04	73,273
NAKANISHI, KOJI.....	INSECT AND CRUSTACEAN HORMONES AND PHEROMONES.....	5R01 AI10187-07	108,090
NAKANISHI, KOJI.....	STRUCTURAL AND BIOORGANIC STUDIES OF NATURAL PRODUCTS.....	5R01 CA11572-09	122,640
NAKANISHI, KOJI.....	STRUCTURAL AND CONFORMATIONAL STUDIES OF VISUAL PIGMENTS.....	5R01 EY01253-04	20,849
NAKANISHI, KOJI.....	PIGMENT FORMATION WITH RETINALS.....	5R01 EY01811-02	43,245
NATTA, CLAYTON L.....	MECHANISMS OF THE INHIBITION OF SICKLING BY DBA.....	5R01 HL19324-02	41,331
NGAI, SHIH-HSUN.....	ANESTHESIOLOGY.....	5P50 GMC09069-15	524,295
NIKIAS, MATA K.....	COMPLIANCE FACTORS IN CARIES PREVENTION.....	1R01 DE04303-01A1	96,661
NOBACK, CHARLES R.....	MICROMORPHOLOGY OF BRAIN DURING EARLY MALNUTRITION.....	5R01 NS12436-03	43,774
NOSSSEL, HYMIE L.....	STUDY OF THROMBOSIS.....	5P01 HL15486-05	629,417
NUNEZ, ELADIO A.....	STUDIES OF THE PARAFOLLICULAR CELL OF THE THYROID GLAND.....	5R01 AM19743-02	74,173
OSSERMAN, ELLIOTT F.....	DYSCRASIAS OF PLASMA CELLS AND MACROPHAGES.....	1P01 CA21112-01	232,180
OZANICS, VICTORIA.....	FUNCTIONAL DEVELOPMENT OF THE EYE.....	5R01 EY00184-24	71,424
PERNIS, BENVENUTO G.....	THE PHYSIOLOGY OF LYMPHOCYTE IMMUNOGLOBULIN RECEPTORS.....	1R01 AI14398-01	165,709
PFENNINGER, KARL H.....	SURFACE EVENTS DURING PLASMALEMMA GROWTH IN NEURONS.....	1R01 NS13466-01	111,182
PIRANI, CONRAD L.....	STUDIES OF HUMAN AND EXPERIMENTAL RENAL DISEASES.....	5R01 HL16603-04	99,128
PITT, JANE.....	MILK AND PASSIVE CELLULAR IMMUNITY OF THE NEWBORN.....	5R01 HD09139-03	48,650
POH, MAUREEN B.....	ERYTHROPOIETIC PROTOPORPHYRIA: MECHANISM OF DISEASE.....	5R01 AM18549-02	70,615
PRICE, JOHN B, JR.....	CONTROL FACTORS IN HEPATIC REGENERATION.....	5R01 AM07646-14	99,030
REEMTSMA, KEITH.....	PANCREATIC ISLET TRANSPLANTATION.....	1P01 AM19652-01	226,127
REEMTSMA, KEITH.....	CARDIAC HETEROTRANSPLANTATION: IMMUNOLOGIC MODIFICATION.....	2R01 HL14799-06	66,150
RIVLIN, RICHARD S.....	HORMONAL AND NUTRITIONAL REGULATION OF METABOLISM.....	3R01 AM15265-06S1	20,866
RIVLIN, RICHARD S.....	REGULATORY MECHANISMS IN NORMAL NEOPLASTIC CELLS.....	5R01 CA12126-06	62,799
ROBBINS, HERBERT F.....	SEQUENTIAL CLINICAL TRIALS AND COMPETING RISKS.....	2R01 GM16895-08	49,915
ROGERS, THERESA F.....	LAY GROUP SUPPORT IMPACT ON IMPAIRED'S RECOVERY/FUNCTION.....	1R18 CA22219-01	109,722
ROSSI, HARALD H.....	EFFECTS OF SMALL DOSES OF IONIZING RADIATION.....	5P01 CA12536-07	343,084
ROSSI, HARALD H.....	CELL IRRADIATIONS WITH MOLECULAR IONS.....	3R01 CA15307-03S1	25,753
ROSSI, HARALD H.....	CELL IRRADIATIONS WITH MOLECULAR IONS.....	2R01 CA15307-04	77,261
ROSSO, PEDRO P.....	POSTNATAL EFFECTS OF A MATERNAL HIGH VITAMIN C INTAKE.....	5R01 HD10167-02	30,512
ROWLAND, LEWIS P.....	CLINICAL RESEARCH CENTER FOR NEUROMUSCULAR DISEASE.....	5P50 NS11766-04	494,559
SAWYER, WILBUR H.....	NEUROHYPOPHYSIAL REGULATION OF WATER EXCRETION.....	5R01 AM01940-20	112,380
SCHACHTER, DAVID.....	THE TRANSPORT OF CALCIUM.....	5R01 AM01483-21	109,006
SCHACHTER, DAVID.....	DIABETES MELLITUS: INSULIN CONTROL OF HEXOSE TRANSFER.....	1R01 AM21086-01	62,934
SCHWARTZ, JAMES H.....	BIOCHEMICAL STUDIES IN IDENTIFIED NEURONS.....	5R01 NS12066-04	91,570
SILVERMAN, ANN-JUDITH.....	DEVELOPMENT OF THE ENDOCRINE HYPOTHALAMUS.....	5R01 HD10665-02	28,378
SILVERSTEIN, SAUL J.....	MOLECULAR BIOLOGY OF HERPES VIRUS.....	5R01 CA17477-03	41,890
SMITH, JEANNE A.....	COMPREHENSIVE SICKLE CELL CENTER.....	3P60 HL15161-05S1	235,497
SPECTOR, ABRAHAM.....	OCULAR LENS STUDIES.....	5R01 EY00423-09	138,932
SPECTOR, ABRAHAM.....	STUDIES OF THE EFFECTS OF AGING ON THE OCULAR LENS.....	2R01 EY00759-06	150,436
SPENCER, WILLIAM A.....	PLASTICITY OF THE SIMPLEST NEURONAL PATHWAYS.....	5R01 NS12744-04	163,286
SPIEGELMAN, SOL.....	CLINICAL & LABORATORY NORMAL & ABNORMAL GROWTH STUDIES.....	3P01 CA02332-22S2	408,028
SPRINSON, DAVID B.....	REGULATION OF ERGOSTEROL AND CHOLESTEROL BIOSYNTHESIS.....	5R01 AM00546-27	70,409
SQUIRES, CATHERINE L.....	FUSION OF THE RIBOSOMAL RNA PROMOTOR TO OTHER OPERONS.....	7R01 GM24751-01	53,759
SRINIVASAN, B D.....	CELL DIVISION AND DIFFERENTIATION IN THE CONJUNCTIVA.....	5R23 EY01557-03	9,764
SRINIVASAN, B D.....	CORNEAL REEPITHELIALIZATION.....	1R01 EY01977-01	63,100
STERLING, KENNETH.....	THYROXINE BINDING PROTEIN AND HORMONE UTILIZATION.....	5R01 AM10739-12	28,395
STILL, WILLIAM C.....	SYNTHESIS OF ANTITUMOR AGENTS.....	1R01 CA23094-01	48,104
STORK, GILBERT.....	SYNTHESIS OF BIOLOGICALLY ACTIVE NATURAL PRODUCTS.....	5R01 GM05147-21	126,479
STORK, GILBERT.....	CARDIOACTIVE ALLOYOHIMBINES AND RELATED INDOLE ALKALOIDS.....	5R01 HL16471-04	83,920
SUSSER, MERVYN W.....	EPIDEMIOLOGY OF SPONTANEOUS ABORTION & FETAL DEFECT.....	3R01 HD08838-02S1	42,787
SUSSER, MERVYN W.....	EPIDEMIOLOGY OF SPONTANEOUS ABORTION & FETAL DEFECT.....	5R01 HD08838-03	204,324
TAPLEY, DONALD F.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00645-06	438,556
TAPLEY, DONALD F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05395-16	213,709
TENNYSON, VIRGINIA M.....	ALTERATIONS IN CATECHOLAMINERGIC NEUROBLASTS.....	5R01 NS11870-03	62,735
THOMPSON, ELIZABETH B.....	MORPHOLOGY OF IDENTIFIED SYNAPSES.....	7R01 NS14306-01	35,414
TONNDORF, JUERGEN.....	MECHANICAL PROPERTIES OF THE EAR.....	5R01 NS03654-16	49,689
TORAN-ALLERAND, C D.....	SEX HORMONES AND DEVELOPMENT OF THE GONADOTROPHIC AXIS.....	2R01 HD08364-04	65,049
TURINO, GERARD M.....	CHEMICAL PREDISPOSITIONS TO LUNG INJURY.....	5P01 HL15832-05	396,592
TZAGOLOFF, ALEXANDER A.....	BIOSYNTHESIS OF CYTOCHROME OXIDASE.....	7R01 GM25250-01	37,498
VANDE WIELE, RAYMOND L.....	INTERNATIONAL INSTITUTE FOR HUMAN REPRODUCTION STUDY.....	5P30 HD06132-04	174,616

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
VEENEMA, RALPH J.....	MANAGEMENT OF PATIENTS WITH BLADDER CARCINOMA.....	2R26 CA16899-04	30,028
VOGEL, HENRY J.....	STUDIES ON ENZYME REPRESSION IN BACTERIA.....	5R01 AI09297-09	61,767
WANG, SHIH-C.....	MECHANISM OF ACUPUNCTURE-INDUCED ANALGESIA IN MONKEY.....	5R01 GM22222-03	26,762
WANG, SHIH-C.....	PHYSIOLOGY AND PHARMACOLOGY OF BRAIN STEM.....	5R01 NS00031-28	56,185
WECHSLER, JAMES A.....	CONTROL OF NORMAL AND ABNORMAL CHROMOSOME GROWTH.....	3R01 CA12590-06S1	33,410
WEINSTEIN, I BERNARD.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18180-03	123,925
WEINSTEIN, I BERNARD.....	MOLECULAR EVENTS IN CHEMICAL CARCINOGENESIS.....	1P01 CA21111-01	546,701
WINICK, MYRON.....	NUTRITION AND CELL GROWTH DURING BRAIN DEVELOPMENT.....	5R22 HD06682-05	95,779
WINTERS, ROBERT W.....	STUDIES OF PARENTERAL NUTRITION IN NEWBORN ANIMALS.....	5R01 HD08432-04	251,814
WINTERS, ROBERT W.....	METABOLIC STUDIES OF PARENTERAL NUTRITION IN INFANTS.....	5R01 HD08434-04	247,854
WOLFF, JAMES A.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA03526-20A1	72,629
ZARE, RICHARD N.....	LASER FLUORESCENCE DETECTION OF AFLATOXINS.....	5R01 CA18271-02	26,506
ZEGARELLI, EDWARD V.....	CLINICAL CANCER EDUCATION GRANT.....	1R25 CA19424-01A1	18,074
ZIMMERMAN, EARL A.....	VASOPRESSIN PATHWAYS AND THE PITUITARY-ADRENAL SYSTEM.....	1R01 AM20337-01	69,096
ZUBAY, GEOFFREY L.....	TRANSCRIPTIONAL CONTROL IN INFECTIOUS PLASMIDS.....	1R01 AI13277-01A1	61,788
ZUBAY, GEOFFREY L.....	CELL-FREE SYSTEMS FOR THE STUDY OF GENE REGULATION.....	5R01 GM16648-09	38,243
ORGANIZATION TOTAL	208 25,656,870		
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021			
ABEL, RONALD M.....	MALNUTRITION AND CARDIAC STRUCTURE AND FUNCTION.....	5R01 HL18854-02	56,487
ALONSO, DANIEL R.....	RADIONUCLIDE INFARCT SIZING AND THERAPY EVALUATION.....	1R01 HL21684-01	162,555
ANDERSEN, OLAF S.....	CHANNEL-MEDIATED ION TRANSPORT ACROSS LIPID BILAYERS.....	2R01 GM21342-04	88,151
AULD, PETER A.....	FUNCTIONAL ASPECTS OF PULMONARY IMMATUREITY.....	5R01 HD02644-10	48,767
BACHVAROVA, ROSEMARY F.....	ANALYSIS OF MOUSE EGG RNA AND ITS ROLE IN THE EMBRYO.....	5R01 HD06910-05	65,511
BECKER, CARL G.....	ARTERIOSCLEROSIS, GLOMERULONEPHRITIS, RHEUMATIC FEVER.....	5R01 HL01803-22	111,531
BEDFORD, J MICHAEL.....	MATURATION AND INTERACTION OF MAMMALIAN GAMETES.....	5R01 HD07257-06	101,156
BLACK, IRA B.....	REGULATION OF NEURONAL GROWTH AND DEVELOPMENT.....	5R01 NS10259-06	48,434
BRESLOW, ESTHER M.....	INTERACTIONS OF PROTEINS.....	5R01 GM17528-21	97,468
BRISCOE, WILLIAM A.....	EMPHYSEMA: RESPIRATORY FUNCTION IN DISEASE.....	5R01 HL12530-09	94,189
BROWN, WILLIAM T.....	A STUDY OF CO-CULTIVATED CELLS FROM PROGERIA.....	1R23 AG00632-01	17,880
BUCHANAN, J ROBERT.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00047-17	990,330
CHAN, WALTER Y.....	UTERINE PHARMACOLOGY OF OXYTOCIN AND PROSTAGLANDINS.....	5R01 HD09031-03	47,015
COOPER, GEORGE W, JR.....	THE SURFACE CHARACTER OF SPERMATOOZA AND BLASTOCYSTS.....	5R01 HD09215-03	63,050
CORNELL, GEORGE N.....	COOPERATIVE STUDY OF ONCOLOGY.....	3R10 CA12276-04S3	15,520
COTZIAS, GEORGE C.....	STUDIES OF EXTRAPYRAMIDAL AND RELATED DISORDEPS.....	2P50 NS12776-02	367,296
CURRERI, P WILLIAM.....	METABOLISM AND NUTRITION IN BURNS AND TRAUMA.....	7R01 GM24752-01	67,472
DANES, BETTY S.....	GENETIC STUDIES OF HERITABLE COLORECTAL CANCER.....	2R26 CA15973-04	81,126
DARLINGTON, GRETCHEN J.....	ACTIVATION OF HEPATIC GENES IN CELL HYBRIDS.....	5R01 GM22372-02	96,100
DUFFY, THOMAS E.....	PATHOGENESIS OF HEPATIC COMA.....	5R01 AM16739-05	74,871
ENGLE, MARY A.....	IMMUNOLOGIC STUDIES IN POSTPERICARDIOTOMY SYNDROME.....	5R01 HL16246-05	99,800
FAIRCLOUGH, GORDON F, JR.....	BIOSYNTHESIS OF LUNG SURFACTANT LIPID.....	1R01 HL21628-01	49,901
GARDNER, DANIEL.....	SYNAPTIC ORGANIZATION OF AN IDENTIFIED NEURAL NETWORK.....	2R01 NS11555-04	42,303
GAY, WILLIAM A, JR.....	TISSUE PROTECTION DURING CIRCULATORY INTERRUPTION.....	5R01 HL19030-02	114,897
GIBBS, JAMES G, JR.....	PHYSIOLOGICAL MECHANISMS OF SATIETY.....	2R01 AM17240-04	94,560
GOIDL, EDMOND A.....	LYMPHOCYTE FUNCTION IN AGING HUMANS.....	1R23 AG00681-01	17,880
GRAFSTEIN, BERNICE.....	GROWTH OF AXONS IN DEVELOPMENT AND REGENERATION.....	2R01 NS09015-09	119,658
HARSANYI, ZSOLT P.....	DRUG AND CHEMICALLY INDUCED CHROMOSOMAL ABERRATIONS.....	3R01 ES00675-03S1	10,650
HASCHEMEYER, RUDY H.....	BIOPHYSICAL STUDIES ON MACROMOLECULAR INTERACTIONS.....	5R01 HL11822-09	32,350
HEINEMANN, HENRY O.....	THE LUNG AS A METABOLIC ORGAN.....	5R01 HL13921-07	90,394
HINKLE, LAWRENCE E, JR.....	ANTECEDENTS OF CLINICAL CORONARY HEART DISEASE.....	3R01 HL07796-13S1	8,743
HINKLE, LAWRENCE E, JR.....	PREVENTION OF ACUTE AND FATAL CARDIOVASCULAR DISEASE.....	5R01 HL18776-03	162,704
JAVITT, NORMAN B.....	CHOLESTATIC LIVER DISEASE.....	5R01 AM16201-06	133,008
JONES, THOMAS C.....	INTERACTIONS OF PNEUMOCYSTIS, OPSONINS AND PHAGOCYTES.....	2R01 AI10821-04	30,421
JONES, THOMAS C.....	EFFECTS OF IMMUNITY ON INTRACELLULAR PARASITISM.....	2R01 AI12146-04	37,707
KRAUSS, ALFRED N.....	CONTROL OF BREATHING IN PREMATURE INFANTS.....	5R01 HD09067-03	26,480
LANDESMAN, ROBERT.....	RADIORECEPTORASSAY OF HCG IN EARLY PREGNANCY.....	5R01 HD09004-03	67,299
LARAGH, JOHN H.....	HYPERTENSION CENTER SUPPORT.....	5P50 HL18323-03	658,535
LEE, CHIN O.....	ION ACTIVITIES AND TRANSPORT IN CARDIAC MUSCLE CELLS.....	1R01 HL21136-01	42,009
LEVI, ROBERTO.....	CARDIAC DYSFUNCTIONS CAUSED BY HISTAMINE RELEASE.....	2R01 GM20091-03	88,487
LIEBOW, CHARLES.....	ENTEROPANCREATIC CIRCULATION OF DIGESTIVE PROTEINS.....	1R01 AM20198-01	57,101

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MAACK, THOMAS M.....	RENAL TRANSPORT AND METABOLISM OF PROTEINS.....	2R01 AM14241-07	71,925
MEISTER, ALTON.....	AMINO ACID AND PROTEIN METABOLISM.....	2R01 AM12034-11	210,878
MILLER, DENIS R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA14557-04	70,341
MILLER, DENIS R.....	DEFERRIOXAMINE THERAPY IN THALASSEMIA.....	5R01 HL19898-02	94,322
MINICK, CHARLES R.....	REGRESSION OF CHRONIC ATHEROSCLEROSIS.....	5R01 HL19109-02	65,964
NACHMAN, RALPH L.....	SPECIALIZED CENTER OF RESEARCH IN THROMBOSIS.....	5P50 HL18828-02	1,025,767
NEW, MARIA I.....	ANDROGEN METABOLISM IN CHILDHOOD.....	2R01 HD00072-14	101,358
NEW, MARIA I.....	ADRENOCORTICAL FACTORS IN HUMAN HYPERTENSION.....	5R01 HL17749-03	80,193
NORUM, ROBERT A.....	HUMAN ALPHA-1-ANTITRYPSIN SYNTHESIS IN VITRO.....	5R01 HL18876-02	54,286
O'LEARY, WILLIAM M.....	SEPSIS IN CANCER SURGERY: BACTEROIDES PATHOGENESIS.....	1R01 CA23705-01	44,134
PETERSON, RALPH E.....	MALE PSEUDOHERMAPHRODITISM.....	5R01 HD09421-03	77,000
PLUM, FRED.....	RESEARCH CENTER IN CEREBROVASCULAR DISEASE.....	5P50 NS03346-17	677,680
PLUM, FRED.....	CEREBRAL METABOLISM IN FOCAL SEIZURES.....	5R01 NS04928-13	69,132
QUEN, JACQUES M.....	DR ISAAC RAY: A BIOGRAPHY.....	1R01 LM02591-01A1	34,899
REIS, DONALD J.....	EXPERIMENTAL NEUROGENIC HYPERTENSION PROGRAM.....	5P01 HL18974-02	620,365
REIS, DONALD J.....	BRAIN CATECHOLAMINES IN DEFENSE REACTION.....	5R01 NS06911-11	87,798
RIKER, WALTER F, JR.....	GLUCOCORTICOIDS ON NORMAL & COMPROMISED MOTOR NEURONS.....	5R01 NS01447-21	74,585
ROBERTS, RICHARD B.....	PROGRAM PROJECT IN VENEREAL DISEASE.....	5P01 AI12932-02	230,778
ROSS, GORDON D.....	LYMPHOCYTE RECEPTORS IN IMMUNITY, ARTHRITIS AND CANCER.....	5R01 CA16190-03	84,136
RUBINOW, SOL I.....	KINETICS OF NORMAL AND NEOPLASTIC HEMATOPOIETIC CELLS.....	1R01 CA20610-01	42,593
SAUDEK, CHRISTOPHER D.....	CHOLESTEROL METABOLISM IN DIABETIC MAN.....	5R01 HL20488-02	79,886
SAXENA, BRIJ B.....	PITUITARY GONADOTROPIC AND GROWTH HORMONES.....	5R01 HD06543-06	121,480
SCHNECKLOTH, ROLAND E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05396-16	213,709
SHIRES, GEORGE T.....	EVALUATION OF SALINE SOLUTIONS IN THERAPY OF SHOCK.....	5R01 GM23000-02	104,372
SILAGI, SELMA.....	GENE ACTION AND CELLULAR DIFFERENTIATION IN CULTURE.....	5R01 CA10095-10	159,319
SILAGI, SELMA.....	TUMOR REJECTION ANTIGENS FROM TREATED CANCER CELLS.....	1R01 CA22211-01	68,420
SILK, SUSAN T.....	STUDIES OF ENZYMES IN HUMAN PLATELET MEMBRANES.....	1R23 HL21490-01	44,700
SILVER, RICHARD T.....	LEUKEMIA, LYMPHOMA AND MYELOMA CHEMOTHERAPY.....	3R10 CA07968-12S1	18,639
SILVER, RICHARD T.....	LEUKEMIA, LYMPHOMA AND MYELOMA CHEMOTHERAPY.....	2R10 CA07968-13	271,427
SISKIND, GREGORY W.....	STUDIES ON ANTIBODY AFFINITY AT THE CELLULAR LEVEL.....	2R01 AI11694-03	132,380
SISKIND, GREGORY W.....	ANTIBODY AFFINITY IN IMMUNE RESPONSE & TOLERANCE.....	5R01 CA20075-09	112,644
SMITH, GERARD P.....	NEUROENDOCRINOLOGY OF EMOTIONAL BEHAVIOR.....	5R01 NS08402-08	40,460
SOFFER, RICHARD L.....	PULMONARY ANGIOTENSIN-CONVERTING ENZYME.....	7R01 HL21394-01	114,635
SUSSDORF, DIETER H.....	CARCINOGENESIS IN THE NUDE (ATHYMIC) MOUSE.....	5R01 CA17219-03	51,745
TATE, SURESH S.....	BIOSYNTHESIS OF HYPOTHALAMIC HORMONES: TERMINAL GROUPS.....	5R01 AM19074-02	40,753
TAYLOR, ANN G.....	MICROTUBULES AND MICROFILAMENTS IN VASOPRESSIN ACTION.....	5R01 AM19022-02	89,746
WEKSLER, MARC E.....	AGING AND IMMUNE REACTIVITY.....	5R01 AG00239-03	91,518
WEKSLER, MARC E.....	IMMUNOLOGICAL STUDIES IN AGING.....	1P01 AG00541-01	367,525
WEKSLER, MARC E.....	HOST DEFENSES AGAINST LYMPHOBLASTIC LEUKEMIA.....	5R01 CA13339-05	44,104
WINDHAGER, ERICH E.....	ION AND WATER TRANSPORT ACROSS RENAL TUBULES.....	5R01 AM11489-11	86,169
WOODRUFF, JACK F.....	IMMUNOLOGIC MECHANISMS IN HEART DISEASE.....	2R01 HL17404-04	84,748
YOUNG, RONALD J.....	MALE GAMETES AND REPRODUCTIVE FAILURES.....	5R01 HD10230-02	80,406
ORGANIZATION TOTAL	83	10,916,695	
EYE BANK FOR SIGHT RESTORATION ZIP CODE 10021			
BHUYAN, KAILASH C.....	MECHANISM OF CATARACTOGENESIS CAUSED BY AMINOTRIAZOLE.....	5R01 EY01731-03	63,100
ORGANIZATION TOTAL	1	63,100	
FORDHAM UNIVERSITY ZIP CODE 10458			
AIELLO, EDWARD L.....	PHYSIOLOGY OF MUCOCILIARY TRANSPORT.....	2R01 HL16730-02	57,482
FRANCK, RICHARD W.....	MITOMYCINS AND OTHER QUINOID ANTITUMOR AGENTS.....	3R01 CA11421-11S1	2,607
FRANCK, RICHARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07150-03	25,581
WEINREB, STEVEN M.....	CHEMICAL STUDIES ON POTENTIAL ANTITUMOR AGENTS.....	2R01 CA12568-07	48,652
WEINREB, STEVEN M.....	SYNTHESIS OF THE CYTOCHALASINS.....	5R01 HL18450-03	47,045
ORGANIZATION TOTAL	5	181,367	
HEALTH INSURANCE PLAN OF GREATER NEW YORK ZIP CODE 10022			
RUBERMAN, WILLIAM.....	VENTRICULAR PREMATURE BEATS AND SUDDEN CORONARY DEATH.....	2R01 HL13974-06	132,714
ORGANIZATION TOTAL	1	132,714	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
HOSPITAL FOR JOINT DISEASES AND MEDICAL CENTER ZIP CODE 10035			
HOLLANDER, VINCENT P.....	STUDIES ON HORMONALLY SENSITIVE TUMORS.....	5R01 CA10064-15	112,025
HOLLANDER, VINCENT P.....	THE PATHOGENESIS OF PLASMA CELL TUMORS.....	3R01 CA12635-05S2	12,608
HOLLANDER, VINCENT P.....	CORE GRANT FOR CANCER STUDIES.....	5P30 CA14194-04	248,032
HOLLANDER, VINCENT P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05589-13	43,158
MONDER, CARL.....	NEW PATHWAYS OF CORTICOSTEROID METABOLISM.....	5R01 AM09006-12	78,712
MONDER, CARL.....	FETAL DEVELOPMENT AND TYROSINE METABOLISM.....	5R01 HD09715-02	27,371
STEVENS, JOHN J.....	MECHANISM OF CORTISOL-INDUCED LYMPHOMA REGRESSION.....	2R01 CA14987-04	56,864
ORGANIZATION TOTAL	7 578,770		
HOSPITAL FOR SPECIAL SURGERY ZIP CODE 10021			
BOSKEY, ADELE L.....	MECHANISM OF HARD TISSUE MINERALIZATION.....	5R23 DE04141-03	12,643
BURSTEIN, ALBERT H.....	MECHANICAL FACTORS AFFECTING FLUID TRANSPORT IN JOINTS.....	5R01 AM19849-02	86,700
BURSTEIN, ALBERT H.....	MECHANICAL PROPERTIES OF NORMAL AND PATHOLOGIC BONE.....	1R01 AM20048-01	96,529
CHRISTIAN, CHARLES L.....	IMMUNOLOGICAL STUDIES OF CHRONIC ARTHRITIS.....	5R01 AM14627-08	172,422
KAGEN, LAWRENCE J.....	IMMUNOLOGICAL STUDIES OF MUSCLE AND MYOGLOBIN.....	5R01 AM14650-07	86,633
LANE, JOSEPH M.....	MOLECULAR BIOLOGY OF FRACTURE, INJURY AND REPAIR.....	1R01 AM19776-01	43,418
MELLORS, ROBERT C.....	C-TYPE RNA VIRUS AND IMMUNOPATHOLOGY.....	5R01 CA14928-13	161,863
MELLORS, ROBERT C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05495-15	52,030
POSNER, AARON S.....	ULTRASTRUCTURE OF BONE MINERAL.....	5R01 AM18412-02	122,568
ORGANIZATION TOTAL	9 834,806		
JEWISH HOSPITAL AND MEDICAL CENTER OF BROOKLYN ZIP CODE 11238			
LEE, STANLEY L.....	SUPPORT FOR COOPERATIVE LEUKEMIA STUDY.....	3R10 CA12886-05S1	17,458
LEE, STANLEY L.....	SUPPORT FOR COOPERATIVE CANCER AND LEUKEMIA STUDY.....	2R10 CA12886-06	187,000
ORGANIZATION TOTAL	2 204,458		
LENOX HILL HOSPITAL ZIP CODE 10021			
IOACHIM, HARRY L.....	STUDIES OF INDUCTION AND IMMUNITY.....	3R01 CA16997-03S1	4,975
IOACHIM, HARRY L.....	TUMOR CELL ANTIGEN CHANGES.....	2R01 CA16997-04	39,250
ORGANIZATION TOTAL	2 44,225		
LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER ZIP CODE 11040			
GREENWALD, ROBERT A.....	INTERACTIONS OF CONNECTIVE TISSUE COMPONENTS.....	5R23 DE04234-03	28,149
KLAVINS, JANIS V.....	DIAGNOSTIC TEST FOR PANCREATIC CARCINOMA.....	2R26 CA20128-02	27,290
MULVIHILL, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05496-15	40,169
SAWITSKY, ARTHUR.....	CHEMOTHERAPY OF LEUKEMIA AND NEOPLASTIC DISEASES.....	3R10 CA11028-09S1	13,319
SAWITSKY, ARTHUR.....	SUPPORT FOR COOPERATIVE CANCER AND LEUKEMIA STUDY.....	2R10 CA11028-10	106,653
ORGANIZATION TOTAL	5 215,580		
MAIMONIDES MEDICAL CENTER ZIP CODE 11219			
KAGAN, AVIR.....	SECRETION OF VASOPRESSIN.....	5R01 AM16175-05	21,749
KUMARESAN, PERIANNA.....	PHYSIOLOGY OF OXYTOCIN SECRETION.....	5R01 HD04984-05	35,032
SCHWARTZ, JOEL M.....	HETEROGENEITY OF NADH METHEMOGLOBIN REDUCTASE.....	5R01 HL13585-05	39,835
ORGANIZATION TOTAL	3 96,616		
MANHATTAN COLLEGE ZIP CODE 10471			
EVANS, LANCE S.....	G2 FACTOR: MOLECULAR STRUCTURE AND CELLULAR RESPONSE.....	5R01 GM23232-02	24,058
ORGANIZATION TOTAL	1 24,058		
MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE ZIP CODE 10010			
BAIRD, MALCOLM B.....	METABOLISM OF CARCINOGENS IN SENESCENT TISSUES.....	5R01 CA18486-02	22,981
ORGANIZATION TOTAL	1 22,981		
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
ANDERSON, LOWELL L.....	DOSIMETRY OF 125I FOR INTERSTITIAL BRACHYTHERAPY.....	1R01 CA22383-01	35,523
BEATTIE, EDWARD J, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA20449-01	213,469
BEATTIE, EDWARD J, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05753-05	107,838
BURCHENAL, JOSEPH H.....	CLINICAL CANCER RESEARCH CENTER.....	3P01 CA05826-14S2	23,392

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BURCHENAL, JOSEPH H.....	CLINICAL CANCER RESEARCH CENTER.....	5P01 CA05826-16	2,504,464
BURCHENAL, JOSEPH H.....	IMMUNOLOGY CLINICAL CANCER RESEARCH CENTER PROGRAM.....	5P01 CA19267-02	1,307,666
FREIMAN, ALVIN H.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21169-01	100,326
LEPLEY, JAMES B.....	CLINICAL CANCER EDUCATION (DENTAL).....	1R25 CA20681-01A1	78,781
LUKAS, DANIEL S.....	METABOLISM OF DIGITALIS STEROIDS IN MAN.....	5R01 HL14539-07	40,273
MELAMED, MYRON R.....	AUTOMATION OF URINARY CYTOLOGY FOR CANCER DETECTION.....	5R26 CA14134-05	120,776
ROBBINS, GUY F.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	5R18 CA16402-03	498,423
WINAWER, SIDNEY J.....	DETECTION OF EARLY COLON CANCER.....	2R26 CA15429-04	250,329
ORGANIZATION TOTAL	12	5,281,265	
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
ACKERMAN, SIGURD H.....	PSYCHOBIOLOGIC MECHANISMS OF STRESS ULCER IN THE RAT.....	5R01 AM18804-02	54,172
BANK, NORMAN.....	FACTORS GOVERNING THE RENAL EXCRETION OF ACID.....	5R01 HL14720-07	100,830
BANK, NORMAN.....	RENAL STARLING FORCES IN EXPERIMENTAL CONDITIONS.....	5R01 HL19366-02	70,398
BELLHORN, ROY W.....	VASCULAR ROLE IN EXPERIMENTAL RETINOPATHIES.....	3R01 EY01103-02S1	12,472
BELLHORN, ROY W.....	BLOOD-OCULAR PERMEABILITY BARRIERS OF DEVELOPING EYE.....	1R01 EY02038-01	81,183
BHAN, ASHOK K.....	BIOCHEMICAL PROPERTIES OF HUMAN CARDIAC MYOSIN.....	1R01 HL19458-01A1	45,409
CHEKASKY, MARTIN.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00053-16	891,980
CHEKASKY, MARTIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05499-15	153,684
COHEN, MICHAEL V.....	EFFECTS OF EXERCISE ON THE CORONARY VASCULATURE.....	5R01 HL17809-03	102,873
EMESON, EUGENE E.....	ADOPTIVE IMMUNOTHERAPY OF CANCER BY ALLOGENEIC MARROW.....	5R01 CA17467-03	50,575
ESCHER, DORIS J.....	TECHNOLOGY AND PHYSIOLOGY OF ARTIFICIALLY PACED HEARTS.....	5R01 HL04666-18	67,763
FISHMAN, JACK.....	SPECIALIZED CANCER CENTER FOR CANCER ENDOCRINOLOGY.....	5P01 CA07304-14	1,078,547
HAMERMAN, DAVID J.....	SYNOVIAL CELLS AND THE ETIOLOGY OF RHEUMATOID ARTHRITIS.....	5R01 AM15796-05	111,403
HENKIND, PAUL.....	RETINAL PATHOLOGY AND CIRCULATION.....	5R01 EY00613-07	119,063
HENKIND, PAUL.....	ENDOCRINE AND PHYSIOLOGICAL PARAMETERS IN GLAUCOMA.....	3R01 EY01224-03S1	21,848
HENKIND, PAUL.....	YOUNG VISION SCIENTIST TRAVEL SUPPORT.....	7R13 EY02143-01	10,492
KOSS, LEOPOLD G.....	AUTOMATION OF BLADDER CANCER CYTOLOGY BY TICAS.....	5R26 CA15803-05	96,668
LALEZARI, PARVIZ.....	NEUTROPHIL ANTIGENS; PATHOPHYSIOLOGY & CHEMISTRY.....	2R01 CA15318-03	78,884
LALEZARI, PARVIZ.....	BIOLOGY OF RED CELL ANTIGEN-ANTIBODY REACTION.....	5R01 HL10036-12	85,159
NEHLSSEN, SANDRA L.....	IMMUNOREGULATION THROUGH MODIFICATION OF AMINO GROUPS.....	5R01 AI13138-02	55,925
PUSZKIN, ELENA G.....	THE ROLE OF CONTRACTILE PROTEINS IN PLATELETS.....	5R01 HL18030-03	58,328
ROSEN, JOHN F.....	THE DYNAMICS OF LEAD METABOLISM IN BONE.....	2R01 ES01060-03	121,447
SCHEUER, JAMES.....	EFFECTS OF PHYSICAL TRAINING ON HEART.....	5R01 HL15498-05	98,875
SPAET, THEODORE H.....	THE BLOOD VESSEL AND THROMBOGENESIS.....	5P01 HL16387-03	315,122
SURKS, MARTIN I.....	TRIIODOTHYRONINE RECEPTORS AND THYROTROPH NEOPLASIA.....	5R01 CA16463-03	57,227
VEITH, FRANK J.....	EXPERIMENTAL LUNG TRANSPLANTATION.....	5P01 HL17417-04	379,776
WEINSTEIN, STEPHEN W.....	SOURCES OF ENERGY FOR RENAL SODIUM TRANSPORT.....	5R01 AM16775-05	80,270
WEITZMAN, ELLIOTT D.....	PSYCHONEUROENDOCRINE RHYTHMS, AGING, & SLEEP DISORDERS.....	1R01 AG00792-01	132,332
YIPINTSOI, TADA.....	REGIONAL MYOCARDIAL BLOOD FLOW.....	5R01 HL15983-03	38,987
ORGANIZATION TOTAL	29	4,571,692	
NATIONAL BUREAU OF ECONOMIC RESEARCH ZIP CODE 10016			
WILLIS, ROBERT J.....	ECONOMIC ANALYSIS OF U.S. LIFE CYCLE FERTILITY.....	5R01 HD09666-02	78,331
ORGANIZATION TOTAL	1	78,331	
NEW SCHOOL FOR SOCIAL RESEARCH ZIP CODE 10011			
MACK, ARIEN.....	PERCEPTION DURING PURSUIT EYE MOVEMENTS.....	2R01 EY01135-03	51,668
ORGANIZATION TOTAL	1	51,668	
NEW YORK ACADEMY OF MEDICINE ZIP CODE 10029			
JARCHO, SAUL.....	EARLY HISTORY OF THE CONCEPT OF HEART FAILURE.....	5R01 LM02561-11	17,660
ORGANIZATION TOTAL	1	17,660	
NEW YORK ACADEMY OF SCIENCES ZIP CODE 10021			
KRIEGER, DOROTHY T.....	ACTH & RELATED PEPTIDES: REGULATION, ACTION & STRUCTURE.....	1R13 AM19592-01	15,000
RUOSLAHTI, ERKKI I.....	CONFERENCE ON FIBROBLAST SURFACE PROTEIN.....	1R13 CA22345-01	18,164
SCARPA, ANTONIO.....	CALCIUM TRANSPORT AND CELL FUNCTION.....	1R13 AM20138-01	11,520
ORGANIZATION TOTAL	3	44,684	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
NEW YORK BLOOD CENTER ZIP CODE 10021			
GERMAN, JAMES L, III.....	AGING OF BLOOM'S SYNDROME CELLS IN TISSUE CULTURE.....	5R01 AG00051-03	27,025
GERMAN, JAMES L, III.....	CYTOLOGICAL STUDIES IN HUMAN GENETICS.....	2R01 HD04134-10	112,188
KELLNER, AARON.....	RESEARCH AND RESOURCE BLOOD PROGRAM.....	5P01 HL09011-14	1,965,283
KELLNER, AARON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05688-09	54,236
POGO, ANGEL O.....	CONTROL OF RNA SYNTHESIS IN NORMAL AND NEOPLASTIC CELLS.....	5R01 CA17626-03	31,289
RUBINSTEIN, PABLO.....	THE HLA SYSTEM AND THE GENETICS OF JUVENILE DIABETES.....	1R01 AM19631-01	156,292
WOLF, CARL F.....	AN EXTRACORPOREAL DEVICE TO FUNCTION AS A LIVER.....	5R01 AM15771-06	53,771
ORGANIZATION TOTAL	7 2,400,084		
NEW YORK BOTANICAL GARDEN ZIP CODE 10458			
CAREY, SUSAN T.....	BIOLOGICALLY ACTIVE METABOLITES FROM PYRENOMYCETES.....	5R01 AI13247-02	81,909
NAIR, RAMACHANDRAN M.....	NEW MOLD PRODUCTS: CHEMISTRY AND BIOLOGICAL ACTIVITY.....	5R01 AI13074-02	74,754
NAIR, RAMACHANDRAN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05621-10	19,923
ORGANIZATION TOTAL	3 176,586		
NEW YORK CITY HEALTH SERVICES ADMINISTRATION—PUBLIC HEALTH RESEARCH INSTITUTE OF CITY OF N Y ZIP CODE 10016			
COHEN, BERTRAM I.....	EFFECTS OF STEROLS AND BILE ACIDS ON COLON CANCER.....	5R26 CA18651-02	110,932
DAY, LOREN A.....	PHYSICAL CHEMISTRY OF VIRUSES AND THEIR COMPONENTS.....	5R01 AI09049-09	75,236
DUBNAU, DAVID A.....	BACTERIAL TRANSFORMATION AND THE CELL MEMBRANE.....	3R01 AI10311-06S1	6,481
DUBNAU, DAVID A.....	GENETIC RECOMBINATION IN BACILLUS SUBTILIS.....	2R01 AI10311-07	103,873
GREGORIADES, ANASTASIA.....	REPLICATION AND ASSEMBLY OF INFLUENZA VIRUS.....	5R01 AI12567-03	56,872
HIRST, GEORGE K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05533-15	93,197
LUSTY, CAROL J.....	STRUCTURE-FUNCTION RELATIONS OF UREA CYCLE ENZYMES.....	5R01 AM18044-03	65,023
MANDEL, BENJAMIN.....	STUDIES OF VIRUS-CELL AND VIRUS-ANTIBODY INTERACTION.....	2R01 AI10429-06	67,758
MARGOLIN, PAUL.....	MUTATION AND SUPPRESSOR STUDIES OF A BACTERIAL GENE.....	3R01 GM15255-11S1	12,077
MARGOLIN, PAUL.....	MUTATION AND SUPPRESSOR STUDIES OF A BACTERIAL GENE.....	5R01 GM15255-12	153,586
MINDICH, LEONARD E.....	CELL MEMBRANE SYNTHESIS IN THE CONTROL OF GROWTH.....	2R01 AI09861-11	119,694
MOSBACH, ERWIN H.....	PRODUCTION AND EXCRETION OF BILE ACIDS.....	3R01 AM05222-16S1	7,253
MOSBACH, ERWIN H.....	ROLE OF INTESTINAL BACTERIA IN STEROID METABOLISM.....	2R01 HL10894-11	110,973
NOVICK, RICHARD P.....	MOLECULAR BIOLOGY OF BACTERIAL PLASMIDS.....	2R01 GM14372-11	117,397
OISHI, MICHIO.....	THE MOLECULAR MECHANISM OF GENETIC RECOMBINATION.....	5R01 GM21073-04	101,437
OSLER, ABRAHAM G.....	FUNCTIONS OF THE ALTERNATE COMPLEMENT PATHWAY.....	3R01 AI08710-08S1	5,332
OSLER, ABRAHAM G.....	FUNCTIONS OF THE ALTERNATE COMPLEMENT PATHWAY.....	5R01 AI08710-09	74,802
PENEFSKY, HARVEY S.....	MITOCHONDRIAL MEMBRANE AND OXIDATIVE PHOSPHORYLATION.....	5R01 GM21737-11	92,775
POGO, BEATRIZ G.....	DNASES DURING INFECTION BY VACCINIA AND SHOPE FIBROMA.....	3R01 AI12188-02S1	3,219
POGO, BEATRIZ G.....	DNASES DURING INFECTION BY VACCINIA AND SHOPE FIBROMA.....	5R01 AI12188-03	57,194
PULLMAN, MAYNARD E.....	BIOSYNTHETIC PROCESSES IN MITOCHONDRIA.....	5R01 AM08823-13	97,840
RATNER, SARAH.....	MECHANISMS OF NITROGEN TRANSFER AND UREA FORMATION.....	5R01 AM03428-18	67,319
ROCHOVANSKY, OLGA M.....	INFLUENZA VIRAL RNA AND PROTEIN SYNTHESIS IN VITRO.....	3R01 AI11614-03S1	2,937
SCHAEFLER, SAM.....	ECOLOGY OF EXTRACHROMOSOMAL ANTIBIOTIC RESISTANCE.....	5R01 AI10018-06	28,762
SHEFER, SARAH.....	INBORN ERRORS IN BILE ACID SYNTHESIS.....	1R01 AM19696 01A1	79,625
SMITH, ISSAR.....	GENETICS OF RIBOSOMES AND ANTIBIOTIC RESISTANCE.....	9R01 AI14118-06	71,057
SMITH, ISSAR.....	GENETICS OF RIBOSOME SYNTHESIS: ANTIBIOTIC RESISTANCE.....	3R01 GM19185-05S1	3,992
SMITH, ISSAR.....	REGULATORY MECHANISMS IN RIBOSOME BIOSYNTHESIS.....	5R01 GM19693-04	53,700
TZAGOLOFF, ALEXANDER A.....	BIOSYNTHESIS OF CYTOCHROME OXIDASE.....	3R01 GM18868-06S1	5,378
TZAGOLOFF, ALEXANDER A.....	ASSEMBLY OF MEMBRANES IN HEART AND YEAST MITOCHONDRIA.....	2R01 HL13003-08	100,355
ORGANIZATION TOTAL	30 1,946,076		
NEW YORK MEDICAL COLLEGE ZIP CODE 10029			
BRAVERMAN, ALBERT S.....	BETA-THALASSEMIA: EXCESS ALPHA-CHAIN KINETICS.....	3R01 AM16846-03S1	35,381
COOPERMAN, JACK M.....	RIBOFLAVIN DEFICIENCY IN THE AGED.....	1R01 AG00177-01	68,447
GLASS, GEORGE B.....	MUCOPROTEINS, INTRINSIC FACTOR, AND VITAMIN B12.....	5R01 AM00068-25	98,264
GORDON, EDWIN E.....	INSULIN AND GLUCAGON INTERACTION WITH KIDNEY CELLS.....	1R01 AM20184-01	58,442
LASKER, SIGMUND E.....	CHEMISTRY AND ACTIVITY OF HOMOLOGOUS HEPARIN FRACTIONS.....	1R01 HL18068-01A2	82,830
LERNER, ROBERT G.....	THE ROLE OF LEUKOCYTES IN THROMBOTIC DISEASE.....	2R01 HL14739-05A1	81,413
MADDEN, ROBERT E.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17944-03	28,578
MOROSON, HAROLD.....	EFFECT OF RADIOTHERAPY UPON HOST IMMUNE REACTIONS.....	5R01 CA14374-05	158,126
ROTHBALLER, ALAN B.....	CNS CONTROL OF FLUID AND ELECTROLYTE METABOLISM.....	5R01 NS06624-12	92,323

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ROTHENBERG, SHELDON P	KINETICS OF B 12, INTRINSIC FACTOR, AND OTHER PROTEINS.....	5R01 AM06045-14	78,239
ROTHENBERG, SHELDON P	SPECIFIC RADIOASSAYS FOR FOLATE ANALOGUES.....	5R01 AM16220-06	62,946
ROTHENBERG, SHELDON P	FOLATE REDUCTASE: INDUCTION, SUPPRESSION, THERAPEUTICS.....	5R01 CA08976-11	83,632
ROTMAN, MARVIN.....	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA18358-02	80,130
RUBIN, SAMUEL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05398-16	144,195
SALL, SANFORD.....	GYNECOLOGIC ONCOLOGY GROUP	5R10 CA12483-07	138,134
SHARMA, SANSAR C.....	GENESIS OF NEURAL SPECIFICITY IN THE VISUAL SYSTEM.....	5R01 EY01426-03	84,777
SOUTHREN, A LOUIS	CORTISOL METABOLISM IN GLAUCOMA AND CATARACT.....	5R01 EY01313-03	93,247
SZABO, ANDREW J	INSULIN-SENSITIVE GLUCOREGULATOR IN THE C N S	5R01 AM17347-05	99,329
ORGANIZATION TOTAL	18 1,568,433		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—INSTITUTE FOR BASIC RESEARCH IN MENTAL RETARDATION		ZIP CODE 10314	
GOULD, ROBERT M	COMPLEX LIPID METABOLISM IN THE AXON	1R01 NS13980-01	58,794
THORMAR, HALDOR	VISNA-MAEDI VIRUS CLONES: COMPARISON & DIFFERENTIATION.....	5R01 AI12465-03	30,706
ORGANIZATION TOTAL	2 89,500		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—NEW YORK STATE PSYCHIATRIC INSTITUTE		ZIP CODE 10032	
KUPFERMANN, IRVING.....	BEHAVIORAL AND NEURAL ANALYSIS OF LEARNING.....	5R01 NS12492-04	81,967
RAPPORT, MAURICE M.....	IMMUNONEUROLOGICAL MODEL OF EPILEPSY	1R01 NS13762-01	87,039
SACHAR, EDWARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05650-11	77,706
TAMIR, HADASSAH.....	BIOGENIC AMINE TRANSFER AND STORAGE MECHANISMS.....	1R01 NS12506-01A2	38,895
ORGANIZATION TOTAL	4 285,607		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—RESEARCH INSTITUTE FOR NEUROCHEMISTRY & DRUG ADDICTN		ZIP CODE 10035	
LAJTHA, ABEL.....	PROTEIN AND PEPTIDE BREAKDOWN IN THE BRAIN.....	5R01 NS03226-17	61,101
ORGANIZATION TOTAL	1 61,101		
NEW YORK UNIVERSITY ZIP CODE 10003			
ADESNIK, MILTON B.....	ERYTHROID DIFFERENTIATION IN FRIEND LEUKEMIC CELLS.....	5R01 CA16887-03	42,926
AL-ASKARI, SALAH.....	CHARACTERIZATION OF HOMOGRAFT REACTIONS.....	5R01 AM16522-13	62,083
ALBERT, ROY E.....	FOLLOW-UP STUDY OF IRRADIATED TINEA CAPITIS CASES.....	5R01 CA17188-03	154,240
ALTSZULER, NORMAN.....	HORMONAL REGULATION OF METABOLISM.....	2R01 AM10188-11	118,594
ASKANAS, VALERIE.....	ULTRASTRUCTURE OF CULTURED DISEASED HUMAN MUSCLE.....	5R01 NS12187-03	6,540
BAKER, ROBERT G.....	EYE MOVEMENT: PHYSIOLOGICAL ORGANIZATION.....	5R01 EY02007-02	38,227
BALDWIN, DAVID S.....	GENESIS OF HYPERTENSION IN RENAL DISEASES.....	5R01 HL15124-05	112,062
BARKSDALE, LANE.....	THE GENUS CORYNEBACTERIUM AND ITS VIRUSES.....	5R01 AI01071-21	98,433
BASILICO, CLAUDIO.....	CELLULAR AND VIRAL CONTROL OF ONCOGENIC TRANSFORMATION.....	5R01 CA11893-08	76,370
BASILICO, CLAUDIO.....	BIOSYNTHESIS IN NORMAL AND VIRUS-TRANSFORMED CELLS.....	5P01 CA16239-03	145,411
BELMAN, SIDNEY.....	THE ROLE OF CYCLIC NUCLEOTIDES IN TUMOR PROMOTION.....	5R01 CA18536-02	65,954
BENNETT, IVAN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05399-16	213,709
BERNHEIMER, ALAN W.....	STAPHYLOCOCCAL AND STREPTOCOCCAL PROTEINS.....	5R01 AI02874-19	126,009
BLACK, VIRGINIA H.....	CYTODIFFERENTIATION OF STEROID-SECRETING CELLS.....	5R01 HD04005-09	37,741
BLIZARD, DAVID A.....	HORMONES, DEVELOPMENT AND SEX DIFFERENCES.....	5R01 HD08187-03	73,745
BREININ, GOODWIN M.....	FINE STRUCTURE OF NORMAL AND PATHOLOGIC OCULAR MUSCLE.....	5R01 EY00309-12	128,668
BRIDGES, C DAVID.....	PHOTO AND BIOCHEMICAL REACTIONS IN THE VISUAL SYSTEM.....	5R01 EY00461-09	59,661
BRODY, SEYMOUR S.....	USE OF MONOMOLECULAR FILMS TO STUDY VISUAL PROCESSES.....	3R01 EY00173-08S1	9,717
BROWN, JASON W.....	MEMORY PROCESSES UNDERLYING ANOMIA IN APHASIA.....	1R01 NS13740-01	81,941
BROYDE, SUSE B.....	MOLECULAR CONFORMATIONS OF DNA AND RNA SUBUNITS.....	7R01 GM24482-01	44,239
BYSTRYN, JEAN-CLAUDE.....	ISOLATION OF TUMOR ANTIGENS OF HUMAN MELANOMA.....	5R01 CA13844-06	100,904
CARR, RONALD E.....	ERG AND PSYCHOPHYSICAL STUDIES IN RETINAL DISORDERS.....	3R01 EY00213-17S1	109,033
CARROLL, ROBERT B.....	BIOCHEMICAL AND FUNCTIONAL PROPERTIES OF SV40 T ANTIGEN.....	1R01 CA20802-01	64,352
CHAMBERS, ROBERT W.....	MUTAGENESIS AND CARCINOGENESIS.....	3R01 CA16319-02S2	53,835
CHAMBERS, ROBERT W.....	MUTAGENESIS AND CARCINOGENESIS.....	2R01 CA16319-03	208,687
CHAMBERS, ROBERT W.....	RECOGNITION OF TRNA BY ITS AMINO ACID TRNA LIGASE.....	5R01 GM07262-18	133,071
CHIARANDINI, DANTE J.....	PHYSIOLOGY AND PHARMACOLOGY OF EXTRAOCULAR MUSCLES.....	2R01 EY01297-04	103,579
CONVERSE, JOHN M.....	CRANIOFACIAL ANOMALIES—ETIOLOGY AND TREATMENT.....	2P01 DE03568-03	571,052
COX, RODY P.....	INBORN ERRORS OF METABOLISM IN CELL CULTURE.....	5R01 AM14528-08	124,420
DANCIS, JOSEPH.....	PHYSIOLOGY OF THE PLACENTA.....	3R01 HD00462-21S1	34,794
DANCIS, JOSEPH.....	INBORN ERRORS OF METABOLISM.....	5R01 HD04526-08	44,461
DILLER, LEONARD.....	FURTHER STUDIES ON REMEDIATION OF BRAIN DAMAGE.....	5R01 NS10236-06	155,789

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ELSBACH, PETER.....	METABOLISM OF MEMBRANES AND PHAGOCYTOSIS.....	5R01 AM05472-16	113,480
FARBER, SAUL J.....	HYPERTENSION, HEART FAILURE & RENAL PROSTAGLANDINS.....	5R01 HL17829-03	98,280
FOX, ARTHUR C.....	RELEASE OF NUCLEOSIDES FROM THE ISCHEMIC HEART.....	2R01 HL16412-03	54,913
FRANKLIN, EDWARD C.....	IMMUNOLOGIC STUDIES OF AMYLOID ACCOMPANYING AGING.....	5R01 AG00458-04	40,690
FRANKLIN, EDWARD C.....	RHEUMATIC DISEASES STUDY GROUP.....	5P01 AM01431-21	319,881
FRANKLIN, EDWARD C.....	STRUCTURE OF IMMUNOGLOBULINS AND RELATED PROTEINS.....	5R01 AM02594-20	134,852
FREEDMAN, LEWIS S.....	NEONATAL UNDERNUTRITION, BIOGENIC AMINES AND STRESS.....	5R01 HD10309-02	50,125
FREEDMAN, MICHAEL L.....	CONTROL OF POLYRIBOSOMES IN HUMAN RETICULOCYTES.....	5R01 AM13532-08	43,390
GALDSTON, MORTON.....	PROTEASE/ANTIPROTEASE/CHRONIC OBSTRUCTIVE DISEASES.....	2R01 HL14700-04	55,799
GEACINTOV, NICHOLAS E.....	CHARACTERIZATION OF CARCINOGEN-NUCLEIC ACID COMPLEXES.....	1R01 CA20851-01	100,896
GERSHENGORN, MARVIN C.....	REGULATION OF TSH SYNTHESIS AND SECRETION IN VITRO.....	1R01 AM20249-01	54,787
GERSHON, ANNE A.....	V-Z VIRUS: CLINICAL IMPLICATIONS OF IMMUNITY.....	5R01 AI12814-03	46,192
GIDDON, DONALD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05332-16	18,211
GIGLI, IRMA.....	ACTIVATION OF THE COMPLEMENT SYSTEM.....	1R01 AI13809-01	105,034
GILMOUR, DOUGLAS G.....	CHICKEN LYMPHOCYTE ALLOANTIGENS AND VIRAL ONCOGENESIS.....	3R01 CA14061-05S1	44,340
GOLDBERG, BURTON D.....	THE BIOSYNTHESIS AND METABOLISM OF PROCOLLAGEN.....	3R01 HL17551-02S1	3,295
GOLDBERG, BURTON D.....	THE BIOSYNTHESIS AND METABOLISM OF PROCOLLAGEN.....	5R01 HL17551-03	94,372
GOLDFEDER, ANNA.....	CELL KINETICS OF IRRADIATED TUMORS.....	5R01 CA12076-06	65,095
GOLDSTEIN, BERNARD D.....	BIOCHEMICAL EFFECTS OF OZONE AND NO ₂ IN THE LUNG.....	5R01 ES00673-06	38,708
GOLDSTEIN, BERNARD D.....	FLUORESCENT DETECTION OF RED CELL LIPID PEROXIDATION.....	5R01 HL18163-03	39,198
GOLDSTEIN, IRA M.....	COMPLEMENT MEDIATED IMMUNOPATHOLOGY.....	5R01 AM18531-03	37,604
GOLDSTEIN, MENEK.....	BIOGENIC AMINES AND EXTRAPYRAMIDAL DISORDERS.....	2R01 NS06801-11	114,569
GOLOMB, FREDERICK M.....	COOPERATIVE STUDY OF ONCOLOGY.....	3R10 CA12280-05S3	14,212
GROVER-JOHNSON, NICOLA M.....	DIABETIC NEUROPATHY AND PERIPHERAL VASCULAR DISEASE.....	5R01 HL20400-02	51,083
GUNNISON, ALBERT F.....	DISTRIBUTION AND FATE OF INHALED SULFUR DIOXIDE.....	2R01 ES00613-06	96,816
GUTTENPLAN, JOSEPH B.....	MECHANISM OF MUTAGENESIS AND CARCINOGENESIS.....	5R01 CA19023-02	48,548
HARLEY, NAOMI.....	THE DISTRIBUTION OF POLONIUM-210 IN THE HUMAN LUNG.....	1R01 ES01550-01	49,276
HILLMAN, DEAN E.....	CIRCUITRY MODIFICATIONS AND MATERNAL PROTEIN RESTRICTION.....	7R01 HD10934-01	65,891
HIRSCHHORN, ROCHELLE.....	ACTIVATION OF IMMUNOCOMPETENT LYMPHOCYTES.....	5R01 AI10343-06	76,681
HOLLANDER, CHARLES S.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00096-17	1,057,953
JAVID, JAMSHID.....	AN IMMUNOLOGIC STUDY OF HEMOGLOBIN VARIATION IN MAN.....	5R01 HL19646-02	44,097
JOHNSON, ALAN J.....	COAGULATION, FIBRINOLYSIS, HEMOSTASIS AND HEPATITIS.....	5P01 HL15596-04	657,691
KARPATKIN, SIMON.....	BIOCHEMISTRY, PHYSIOLOGY, IMMUNOLOGY OF HUMAN PLATELETS.....	5R01 HL13336-08	108,662
KAUFMAN, LLOYD.....	INTERSENSORY PERCEPTION OF RELATIONS IN TIME AND SPACE.....	5R01 NS12398-03	36,663
KAYDEN, HERBERT J.....	SUPPORT FOR LIPID METABOLISM STUDIES.....	2R01 HL06481-14A1	94,469
KREIBICH, GERT.....	ORGANIZATION AND BIOSYNTHESIS OF ER MEMBRANE PROTEINS.....	5R01 GM21971-03	29,156
KROHN, DAVID L.....	OCULAR CANCER DETECTION BY HEMATOPORPHYRIN FLUORESCENCE.....	5R01 CA18705-03	143,137
KUHNS, WILLIAM J.....	ABO(H) BLOOD GROUPS AND BLOOD GROUP ENZYMES IN CANCER.....	3R01 CA15516-02S2	14,545
LAMM, MICHAEL E.....	STUDIES ON SECRETORY IMMUNOGLOBULIN.....	5R01 AI09738-06	90,233
LAMM, MICHAEL E.....	ANTIGENIC CHANGES IN MOUSE LEUKEMOGENESIS.....	5R01 CA08627-11	52,942
LAWRENCE, H SHERWOOD.....	CELLULAR IMMUNE RESPONSES—NATURE OF TRANSFER FACTOR.....	5R01 AI01254-22	59,545
LAWRENCE, H SHERWOOD.....	IMMUNOLOGIC RESISTANCE TO CANCER.....	2P01 CA16247-04	683,569
LE GEROS, RACQUEL Z.....	ENAMEL APATITES RELATING TO CARIES SUSCEPTIBILITY.....	5R01 DE04123-03	98,894
LEE-HUANG, SYLVIA.....	PURIFICATION OF ERYTHROPOIETIN.....	1R01 HL21683-01	65,986
LEHNEIS, HANS R.....	ADVANCED PROSTHETICS/ORTHOTICS IN CANCER MANAGEMENT.....	1R18 CA20703-01	114,729
LEVITZ, MORTIMER.....	ESTROGEN METABOLISM AND ACTION IN PREGNANCY AND CANCER.....	5R01 CA02071-24	121,310
LIKHTE, VINAY.....	RNA-ASSOCIATED TRANSFER FACTORS IN TUMOR IMMUNITY.....	3R01 CA17104-03S1	3,511
LIPKIN, GEORGE.....	RESTORATION OF CONTACT INHIBITION IN MELANOMAS.....	5R01 CA16013-03	104,322
LIPKIN, GEORGE.....	SUPPRESSION OF GROWTH OF COLON CARCINOMA.....	5R26 CA18034-03	72,439
LIPPMANN, MORTON.....	REGIONAL DEPOSITION OF INHALED PARTICLES IN MAN.....	5R01 ES00881-05	74,777
LLINAS, RODOLFO R.....	NEUROBIOLOGY OF THE CEREBELLAR-BRAIN STEM SYSTEM.....	5P01 NS13742-02	330,110
LLINAS, RODOLFO R.....	ROLE OF CALCIUM IN SYNAPTIC TRANSMITTER RELEASE.....	1R01 NS14014-01	22,460
LO BUE, JOSEPH.....	PATHOPHYSIOLOGY OF A VIRALLY-INDUCED MURINE LEUKEMIA.....	5R01 CA12815-05	86,599
LOWENSTEIN, JEROME.....	THE CONTROL OF ALDOSTERONE SECRETION.....	3R01 HL17450-02S1	2,685
LOWENSTEIN, JEROME.....	THE CONTROL OF ALDOSTERONE SECRETION.....	5R01 HL17450-03	78,790
MAAS, WERNER K.....	CONTROL OF REPLICATION OF GENETIC ELEMENTS IN BACTERIA.....	5R01 AI09079-09	77,087
MAAS, WERNER K.....	REGULATION OF ENZYME SYNTHESIS IN BACTERIA.....	5R01 GM06048-19	97,332
MC FALL, ELIZABETH.....	STUDIES ON CONTROL MECHANISMS IN ENZYME BIOSYNTHESIS.....	5R01 GM11899-14	65,797
MEISS, HARRIET K.....	ISOLATION AND ANALYSIS OF DNA MUTANTS OF BHK CELLS.....	5R01 CA16631-03	43,570
MERUELO, DANIEL.....	GENETIC CONTROL OF VIRUS-INDUCED LEUKEMIA.....	1R01 CA22247-01	51,053

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MOOR-JANKOWSKI, JAN.....	BLOOD GROUPS IN PRIMATES.....	1P40 RR01082-01	203,813
MOVSHON, J ANTHONY.....	QUANTITATIVE STUDIES OF THE CENTRAL VISUAL SYSTEM.....	1R01 EY02017-01	54,983
NELSON, NORTON.....	RESEARCH IN ENVIRONMENTAL CANCER.....	5P30 CA13343-05	374,921
NELSON, NORTON.....	RESEARCH IN THE ENVIRONMENTAL HEALTH SCIENCES.....	5P30 ES00260-15	1,708,471
NEWALL, JOSEPH.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA15938-04	60,914
NUSSENZWEIG, RUTH S.....	VACCINATION WITH IRRADIATED SPOOROZOITES OF PLASMODIA.....	5R01 AI08952-09	89,057
NUSSENZWEIG, RUTH S.....	SURFACE PROPERTIES OF SPOOROZOITES OF PLASMODIA.....	5R01 AI13366-02	59,102
NUSSENZWEIG, VICTOR.....	CELL COOPERATION IN THE IMMUNE RESPONSE.....	5R01 AI08499-10	80,649
NUSSENZWEIG, VICTOR.....	C3, C3 RECEPTORS AND THE H-2 REGION.....	5R01 AI13224-02	106,003
OPPENHEIM, JOEL D.....	THE I BLOOD GROUP ANTIGEN OF HUMAN ERYTHROCYTE MEMBRANE.....	1R23 HL21328-01	39,767
OVARY, ZOLTAN.....	IMMUNOLOGICAL MECHANISM OF ANAPHYLAXIS.....	5R01 AI03075-18	127,836
PALMES, EDWARD D.....	MOUSE POPULATIONS AS TEST SYSTEMS IN TOXICOLOGY.....	5R01 ES00552-04	96,320
PASTERNAK, BERNARD S.....	HUMAN RADIOACTIVITY DOSE STUDY.....	5R01 ES01120-03	39,112
PEARLSTEIN, EDWARD.....	CELL ADHESION FACTOR: BIOLOGY AND CHEMISTRY.....	1R01 CA22085-01	33,117
PESKIN, CHARLES S.....	COMPUTATIONAL METHODS IN CARDIAC FLUID DYNAMICS.....	5R01 HL17859-03	34,375
PHILLIPS-QUAGLIATA, JULIA.....	ANTIBODY MEDIATED CELL-CELL INTERACTIONS.....	5R01 CA20045-08	69,004
PIOMELLI, SERGIO.....	THE MECHANISM OF RED CELLS AGING--HEMOLYTIC ANEMIAS.....	2R01 AM09274-13	86,462
PIOMELLI, SERGIO.....	REDUCTION OF FE OVERLOAD IN THALASSEMIA.....	5R01 HL19946-02	58,067
POST, JOSEPH.....	TUMOR CELL PROLIFERATION.....	5R01 CA14432-05	132,839
QUARTERMAIN, DAVID.....	EFFECTS OF AGING ON MEMORY IN MICE.....	1R01 AG00760-01	83,648
QUARTERMAIN, DAVID.....	MEMORY STORAGE & RETRIEVAL: THE ROLE OF CATECHOLAMINES.....	5R01 NS12633-02	63,162
RABINOVITCH, MICHEL P.....	MACROPHAGE SPREADING AND PARTICLE RECOGNITION.....	2R01 AI10969-07	51,578
RABINOVITCH, MICHEL P.....	CONTROL OF CELL SHAPE IN NORMAL AND TRANSFORMED CELLS.....	5R01 GM23093-02	34,805
RANSOHOFF, JOSEPH.....	CSF FORMATION AND ABSORPTION IN HYDROCEPHALUS.....	5R01 NS06599-11	45,572
RANSOHOFF, JOSEPH.....	HEAD INJURY CLINICAL CENTER RESEARCH PROGRAM.....	5P50 NS07366-09	377,206
RANSOHOFF, JOSEPH.....	CLINICAL RESEARCH CENTER FOR ACUTE SPINAL CORD INJURIES.....	5P50 NS10164-05	551,361
REEM, GABRIELLE H.....	PURINE METABOLISM IN GENETIC DISEASE AND LEUKEMIA.....	5R01 AM15262-07	78,142
RIPPS, HARRIS.....	VISUAL ADAPTATION IN THE VERTEBRATE RETINA.....	5R01 EY00285-13	158,628
RIPPS, HARRIS.....	VISUAL SCIENCES RESEARCH CENTER (CORE FACILITY).....	1P30 EY01842-01	214,370
ROBINSON, HARRY L.....	CLINICAL CANCER EDUCATION.....	1R25 CA21275-01	62,689
ROSSMAN, TOBY G.....	CANCER AND ERROR-PRONE DNA REPAIR IN ANIMAL CELLS.....	5R01 CA19421-02	57,081
SABATINI, DAVID D.....	ATTACHMENT OF RIBOSOMES TO MICROSOMAL MEMBRANES.....	2R01 GM20277-05	222,105
SAGE, HAROLD H.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18002-03	83,651
SAGER, NAOMI.....	COMPUTER STRUCTURING OF MEDICAL NARRATIVE.....	5R01 LM02616-03	52,616
SAMUELS, HERBERT H.....	METABOLIC EFFECTS OF THYROID HORMONES IN CELL CULTURE.....	5R01 AM16636-05	81,356
SCHREIBER, SIDNEY S.....	CARDIAC PROTEIN SYNTHESIS; OVERLOAD, ALCOHOL & ANOXIA.....	5R01 HL09562-13	72,689
SEGAL, ALVIN.....	MODE OF ACTION OF BETA-PROIOLACTONE IN CARCINOGENESIS.....	5R01 CA16992-03	56,063
SELIGMAN, MYRON L.....	CORTICOSTEROIDS IN FREE RADICAL DAMAGED MEMBRANES.....	1R01 NS13726-01	56,520
SHAPIRO, ROBERT.....	DAMAGE TO NUCLEIC ACIDS BY BISULFITE (SULFUR DIOXIDE).....	5R01 ES01033-06	75,899
SHAPIRO, ROBERT.....	DAMAGED DNA: THE STRUCTURE OF DNA CROSS-LINKS.....	5R01 GM20176-05	64,841
SHENKMAN, LOUIS.....	IMMUNE RESPONSES TO YERSINIA IN THYROID DISEASE.....	1R01 AM19668-01	41,651
SILBER, ROBERT.....	STUDIES OF LEUKOCYTE METABOLISM.....	5R01 CA11655-10	85,588
SILBER, ROBERT.....	EASTERN COOPERATIVE ONCOLOGY GROUP STUDIES.....	2R10 CA16395-02A2	151,084
SPRITZ, NORTON.....	MYELIN SYNTHESIS CONTROL IN NORMAL & DIABETIC STATES.....	3R01 NS10763-08S1	11,728
STRAND, FLEUR L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07062-12	56,777
SZER, WLODZIMIERZ.....	REGULATORY MECHANISMS IN PROTEIN BIOSYNTHESIS.....	5R01 GM23705-05	69,717
TAO, TERENCE C.....	ENERGY TRANSFER STUDIES ON MUSCLE PROTEINS.....	5R01 AM18694-02	35,313
TEEBOR, GEORGE W.....	REPAIR MUTANTS ENZYMES & CHEMICAL CARCINOGENESIS.....	5R01 CA16669-03	73,324
THORBECKE, GEERTRUIDA J.....	LYMPHOID CELLS--PRODUCTION OF ANTIBODIES AND COMPLEMENT.....	5R01 AI03076-18	83,021
THORBECKE, GEERTRUIDA J.....	PROPERTIES OF LYMPHOID TUMOR CELLS IN VIVO AND IN VITRO.....	5R01 CA14462-05	78,952
TONNA, EDGAR A.....	SKELETAL CELL AND MATRICAL CHANGES DURING AGING.....	5R01 AG00314-10	99,265
TROLL, WALTER.....	THE CONTROL OF BLADDER CANCER.....	5R26 CA15315-04	76,011
TROLL, WALTER.....	INHIBITION OF TUMOR PROMOTION BY PROTEASE INHIBITORS.....	5R01 CA16060-06	103,590
TROLL, WALTER.....	FAT LEVEL AND SATURATION IN CARCINOGENESIS.....	1R01 CA20999-01	95,050
TSAI, JIR-SHIONG.....	EFFECT OF THYROID HORMONE ON CULTURED CARDIAC CELLS.....	1R01 HL18176-01A1	37,110
VALENTINE, FRED T.....	CELL-MEDIATED IMMUNITY IN HUMANS: MECHANISMS AND USES.....	5R01 CA19529-02	72,723
VAN DUUREN, BENJAMIN L.....	CARCINOGENIC INTERMEDIATES OF VINYL CHLORIDE & ANALOGS.....	5R01 ES01150-03	51,050
VANDERBERG, IFROME P.....	STUDIES ON THE SPOOROZOITE OF PLASMODIUM.....	5R01 AI09560-07	57,494
VILCEK, JAN T.....	INTERFERON AND RESISTANCE TO VIRUS INFECTION.....	5R01 AI07057-12	73,236
VILCEK, JAN T.....	CHARACTERIZATION OF HUMAN INTERFERONS.....	5R01 AI12948-02	61,150

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
WEISS, GERSON.....	CONTROL OF THE PREGNANCY CORPUS LUTEUM.....	5R01 HD09034-03	33,708
WEISSMANN, GERALD.....	MECHANISMS OF ARTHRITIS.....	2R01 AM11949-11	158,563
WEISSMANN, GERALD.....	EXPERIMENTAL THERAPY OF GENETIC STORAGE DISEASES.....	5R01 GM23211-02	46,377
WEISSMANN, GERALD.....	MODIFICATION OF TISSUE INJURY IN MYOCARDIAL INFARCTION.....	5R01 HL19072-02	46,805
WEISSMANN, GERALD.....	LUNG INFLAMMATION: LYSOSOMAL PROTEASES AND LIPOSOMES.....	5R01 HL19721-02	101,859
WESSLER, STANFORD.....	ANTITHROMBOTIC ACTION OF HEPARIN.....	5R01 HL18333-04	126,959
WHEATLEY, VICTOR R.....	SEBOCYTE DIFFERENTIATION IN NORMAL AND TUMOR TISSUE.....	5R01 AM18792-02	61,109
WOLFF, B BERTHOLD.....	EVALUATION AND CONTROL OF CHRONIC PAIN IN CANCER.....	1R18 CA20652-01	164,205
WOLFF, B BERTHOLD.....	TOOTH PULP PAIN: ANALGESIC AND BEHAVIORAL FACTORS.....	5R01 DE04095-03	95,286
WU, WEN-HSIEN.....	STUDIES OF PATHOPHYSIOLOGY OF VASOPRESSIN IN MAN.....	3R01 HL17723-03S1	9,456
YEATES, DONOVAN B.....	REGIONAL MUCOCILIARY TRANSPORT IN THE HUMAN LUNG.....	5R01 HL19431-02	42,400
ZADUNAISKY, JOSE A.....	CORNEAL ELECTROPHYSIOLOGY.....	5R01 EY01340-04	113,357
ZUCKER-FRANKLIN, DOROTHEA.....	ULTRASTRUCTURE OF LEUKOCYTES AND PLATELETS.....	5R01 AM12274-10	91,198
ORGANIZATION TOTAL	165 18,564,588		
NEW YORK ZOOLOGICAL SOCIETY ZIP CODE 10460			
KALLMAN, KLAUS D.....	INTEGRATED GENETIC SYSTEMS IN XIPHOPHORUS.....	5R01 GM19934-15	59,520
ORGANIZATION TOTAL	1 59,520		
POLYTECHNIC INSTITUTE OF NEW YORK ZIP CODE 11201			
BULKIN, BERNARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07063-11	15,796
MORAWETZ, HERBERT.....	SYNTHETIC POLYMER STUDIES RELATED TO BIOLOGY.....	5R01 GM05811-17	57,217
TOONEY, NANCY M.....	STUDIES OF MICROCRYSTALLINE & CRYSTALLINE FIBRINOGEN.....	5R01 HL18533-02	37,999
ORGANIZATION TOTAL	3 111,012		
POPULATION COUNCIL ZIP CODE 10017			
LYLE, KATHERINE C.....	INTERNATIONAL FAMILY PLANNING PROGRAMS, 1966-1975.....	1R01 LM02926-01	6,565
ORGANIZATION TOTAL	1 6,565		
RIVERSIDE RESEARCH INSTITUTE ZIP CODE 10023			
LIZZI, FREDERIC L.....	ULTRASONIC EVALUATION OF OCULAR TISSUES.....	2R01 EY01212-04	164,076
ORGANIZATION TOTAL	1 164,076		
ROCKEFELLER UNIVERSITY ZIP CODE 10021			
AGOSTA, WILLIAM C.....	ISOLATION AND IDENTIFICATION OF MAMMALIAN PHEROMONES.....	1R01 HD11164-01	39,235
AHRENS, EDWARD H, JR.....	CLINICAL AND LABORATORY STUDIES IN LIPID METABOLISM.....	5R01 HL06222-17	355,489
AHRENS, EDWARD H, JR.....	RESEARCH IN PREVENTION OF PREMATURE ARTERIOSCLEROSIS.....	3P50 HL14236-05S2	994,335
ALLFREY, VINCENT G.....	NUCLEAR PROTEINS IN CARCINOGENESIS OF THE COLON.....	5R26 CA14908-04	123,983
ALLFREY, VINCENT G.....	CHEMISTRY AND METABOLISM OF DNA-ASSOCIATED PROTEINS.....	5R01 GM17383-07	82,180
ASANUMA, HIROSHI.....	CEPBRAL CORTICAL CONTROL OF MOVEMENT.....	5R01 NS10705-06	98,567
BEERS, WILLIAM H.....	THE ROLE OF PLASMINOGEN ACTIVATOR IN OVULATION.....	5R01 HD09401-02	44,307
BICKERS, DAVID R.....	SKIN METABOLISM OF DRUGS, CARCINOGENS AND THE PCB'S.....	1R01 ES01586-01	88,863
BLOBEL, GUNTER K.....	FREE AND MEMBRANE-BOUND POLYSOMES IN PROTEIN SYNTHESIS.....	5R01 CA12413-06	86,475
BLOBEL, GUNTER K.....	NUCLEAR PORE COMPLEX-LAMELLA STRUCTURE AND FUNCTION.....	5R01 GM21751-03	38,907
BOWERS, WILLIAM E.....	LYMPHOCYTE-MEDIATED CYTOTOXICITY AGAINST TUMOR CELLS.....	5R01 CA16875-03	64,999
CERAMI, ANTHONY.....	THE IDENTIFICATION OF NEW IRON-CHELATING DRUGS.....	5R01 AM18894-02	54,578
CERAMI, ANTHONY.....	BIOCHEMICAL BASIS OF THE COMPLICATIONS OF DIABETES.....	1R01 AM19655-01	83,227
CERAMI, ANTHONY.....	SICKLE CELL DISEASE-BIOLOGICAL EFFECTS OF CYANATE.....	5R01 HL14873-05	72,314
CERAMI, ANTHONY.....	CLINICAL MANAGEMENT OF THALASSEMIA: CHELATOR DEVELOPMENT.....	5R01 HL20016-02	107,548
CERAMI, ANTHONY.....	PROTEIN MODIFICATION: THE KEY TO DIABETIC SEQUELAE.....	5R01 HL20520-02	62,857
CHASE, MERRILL W.....	MECHANISMS OF DELAYED-TYPE HYPERSENSITIVITY.....	2R01 AI01258-21	132,801
CHOPPIN, PURNELL W.....	MYXOVIRUS STRUCTURE, REPLICATION, MEMBRANE INTERACTION.....	5R01 AI05600-15	172,818
CHUA, NAM-HAI.....	MEMBRANE-BOUND RIBOSOMES IN CHLOROPLASTS AND BACTERIA.....	2R01 GM21060-04	85,516
COHN, ZANVIL A.....	THE PHYSIOLOGY OF MACROPHAGES.....	5R01 AI07012-12	140,424
COHN, ZANVIL A.....	THE NATURE AND ROLE OF MACROPHAGE SECRETION.....	5R01 AI12975-02	59,332
COWBURN, DAVID A.....	DYNAMIC CONFORMATIONS OF PEPTIDES.....	1R01 AM20357-01	60,169
CRANFIELD, PAUL F.....	MECHANISM AND PREVENTION OF CARDIAC ARRHYTHMIAS.....	2R01 HL14899-06	110,998
CUNNINGHAM, BRUCE A.....	GROWTH REGULATION IN LYMPHOID AND NEOPLASTIC CELLS.....	5R01 CA19040-02	47,685
DARNELL, JAMES E, JR.....	RNA AND GROWTH CONTROL IN ANIMAL CELLS.....	5R01 CA16006-04	179,307
DARNELL, JAMES E, JR.....	CORRELATED PROGRAM IN VIRAL ONCOLOGY.....	5P01 CA18213-02	285,820

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
DE DUVE, CHRISTIAN R.....	SUBCELLULAR EVENTS IN ATHEROSCLEROSIS.....	5R01 HL18157-03	162,438
EDELMAN, GERALD M.....	STRUCTURE AND ACTIVITY OF ANTIBODY-RELATED PROTEINS.....	2R01 AI09273-09	131,642
EDELMAN, GERALD M.....	CELL BIOLOGY & CHEMISTRY OF LYMPHOCYTES & THEIR PRODUCTS.....	5P01 AI11378-05	387,496
EDELMAN, GERALD M.....	INTERACTION AND ENERGY TRANSFER IN BIOLOGICAL SYSTEMS.....	5R01 AM04256-18	94,812
ERICKSON, BRUCE W.....	SYNTHESIS OF ANAPHYLATOXIC AND LEUCOTACTIC PEPTIDES.....	5R01 HL19795-02	68,842
FIELD, FRANK H.....	A MASS SPECTROMETRIC BIOTECHNOLOGY RESOURCE.....	2P41 RR00862-04	181,291
FISCHETTI, VINCENT A.....	PROPERTIES OF STREPTOCOCCAL M-PROTEIN.....	2R01 AI11822-04	49,732
GERSHEY, EDWARD L.....	NUCLEAR CONTROL MECHANISMS: THE ROLE OF POLYAMINES.....	5R01 GM21943-02	51,633
GHEZ, CLAUDE P.....	INPUT OUTPUT RELATIONS IN VOLUNTARY MOVEMENT.....	1R01 NS12730-01A2	74,436
GILULA, NORTON B.....	HEART CELL INTERACTIONS AND CELL JUNCTION BIOGENESIS.....	2R01 HL16507-03	72,310
GISIN, BALTHASAR F.....	STRUCTURE AND FUNCTION OF PEPTIDE INCLUSION COMPLEXES.....	1R01 GM24047-01	70,427
GOLDBERG, ALLAN R.....	RSV FUNCTIONS INVOLVED IN TRANSFORMATION.....	5R01 CA13362-06	53,556
GOTSCHLICH, EMIL C.....	IMMUNOCHEMICAL STUDIES ON GONOCOCCAL SURFACE ANTIGENS.....	5R01 AI10615-07	84,354
GREGORY, JOHN D.....	LINKAGE REGION OF CARTILAGE KERATAN SULFATE.....	5R01 AM18165-03	50,545
GREGORY, JOHN D.....	BIOCHEMISTRY OF PROTEOGLYCANS OF THE DERMIS.....	5R01 AM18635-02	53,521
HANAFUSA, HIDESABURO.....	CELLULAR ALTERATION INDUCED BY ROUS SARCOMA VIRUS.....	5R01 CA14935-05	177,867
HAYWARD, WILLIAM S.....	RNA TUMOR VIRUS GENE EXPRESSION.....	2R01 CA16668-04	58,912
HIRSCH, JULES.....	METABOLIC REGULATIONS IN HUMAN OBESITY.....	5R01 AM18325-13	176,239
HIRSCH, JULES.....	REGULATION OF ADIPOSE TISSUE GROWTH AND DEVELOPMENT.....	1R01 AM20508-01	95,026
HONG, FELIX T.....	PHOTOBIOLOGICAL SYSTEMS AND MEMBRANE INTERFACES.....	2R01 GM20729-04	69,481
HOTCHKISS, ROLLIN D.....	DEOXYRIBONUCLEATES GOVERNING DRUG RESISTANCE.....	5R01 AI03170-18	65,528
HSU, MING-TA.....	BASIC MECHANISM OF VIRAL ONCOGENESIS.....	5R01 CA19073-02	52,207
HUH, MARTIN M.....	REGULATION OF BIOGENIC AMINE METHYLTRANSFERASES.....	7R01 GM24844-01	47,528
JELINEK, WARREN R.....	IN VITRO SYNTHESIS OF CELL AND VIRAL MESSENGER RNA.....	5R01 AI12564-03	70,225
KAPPAS, ATTALLAH.....	LEAD AND PCBs: PHARMACOLOGIC AND TOXICOLOGIC STUDIES.....	3R01 ES01055-03S1	26,461
KAPPAS, ATTALLAH.....	LEAD AND PCBs: PHARMACOLOGIC AND TOXICOLOGIC STUDIES.....	5R01 ES01055-04	203,577
KAPPAS, ATTALLAH.....	HEME AND CHLOROPHYLL BIOSYNTHESIS.....	5R01 GM04922-21	62,422
KILEJIAN, ARAXIE.....	HOST-PARASITE INTERACTIONS IN MALARIA.....	1R01 AI13728-01A1	93,403
KINDT, THOMAS J.....	BACTERIAL ANTIGENS AND ANTIBODIES.....	5R01 AI08429-11	82,656
KINDT, THOMAS J.....	GENETIC COMPONENTS OF THE IMMUNE RESPONSE.....	3R01 AI11439-03S1	19,692
KINDT, THOMAS J.....	IMMUNOCHEMICAL STUDY OF RABBIT ANTIBODY ALLOTYPES.....	3R01 AI11995-03S2	41,131
KNIGHT, BRUCE W, JR.....	MATHEMATICAL ANALYSES OF NEURAL NETWORKS.....	2R01 EY01428-04	96,982
KREY, LEWIS C.....	CELLULAR MECHANISMS AND GONADOTROPIN SECRETION.....	1R01 HD10168-01A1	44,970
KUNKEL, HENRY G.....	STUDIES OF MYELOMA PROTEINS AND ANTIBODIES.....	5R01 AI10811-12	71,340
KUNKEL, HENRY G.....	IMMUNOLOGICAL MECHANISMS IN RHEUMATOID ARTHRITIS.....	5R01 AM04761-17	75,276
LAZAROW, PAUL B.....	BIOGENESIS OF RAT LIVER PEROXISOMES.....	5R01 AM19394-02	53,127
LAZAROW, PAUL B.....	CLOFIBRATE-ENHANCED LIPID OXIDATION BY PEROXISOMES.....	1R01 HL20909-01	49,897
LIPMANN, FRITZ.....	GLUCOSE TRANSPORT: POLYPEPTIDE SYNTHESIS.....	2R01 GM13972-12	188,720
LIZARDI, PAUL M.....	BIOGENESIS OF SILK FIBROIN MESSENGER RNA.....	5R01 GM22865-02	61,606
LUCK, DAVID J.....	BIOCHEMICAL GENETICS OF MICROTUBULES.....	5R01 GM17132-09	113,040
LUCK, DAVID J.....	BIOGENESIS OF MITOCHONDRIA.....	5R01 GM21059-04	64,350
MANNING, JAMES M.....	CHEMICAL BASIS OF CYANATE THERAPY IN SICKLE CELL ANEMIA.....	5R01 HL18819-06	70,358
MC CARTY, MACLYN.....	THE CELL SURFACE OF STREPTOCOCCI.....	5R01 HL03919-19	88,653
MC CARTY, MACLYN.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00102-14	995,300
MC CARTY, MACLYN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07065-12	213,709
MC EWEN, BRUCE S.....	GENE EXPRESSION IN NERVOUS TISSUE.....	3R01 NS07080-11S1	19,495
MC EWEN, BRUCE S.....	GENE EXPRESSION IN NERVOUS TISSUE.....	5R01 NS07080-12	100,322
MERRIFIELD, ROBERT B.....	SOLID PHASE SYNTHESIS OF PEPTIDES AND PROTEINS.....	5R01 AM01260-22	139,146
MILLER, NEAL E.....	CARDIOVASCULAR HOMEOSTASIS AND LEARNING.....	1R01 HL21532-01	136,547
MULLER, MIKLOS.....	BIOCHEMICAL CYTOLOGY OF TRICHOMONAS VAGINALIS.....	5R01 AI11942-04	58,386
NATHAN, CARL F.....	MONONUCLEAR LEUKOCYTES IN TUMOR IMMUNITY.....	1R01 CA22090-01	89,383
NORGREN, RALPH E.....	NEURAL SYSTEMS OF INGESTIVE BEHAVIOR.....	5R01 NS10150-06	55,587
O'CONNELL, ROBERT J.....	MECHANISMS OF OLFACTORY COMMUNICATION.....	5R01 NS08902-08	86,271
PF AFF, DONALD W.....	BRAIN MECHANISMS OF REPRODUCTIVE BEHAVIOR.....	5R01 HD05751-06	76,963
PF AFF, DONALD W.....	CHARACTERIZATION OF HORMONE-CONCENTRATING NEURONS.....	1R01 HD10655-01	59,724
PF AFFMANN, CARL.....	COGNITIVE PROCESSES AND PSYCHOLINGUISTICS.....	5P01 GM21796-03	122,245
POOLE, BRIAN H.....	PROTEIN DEGRADATION, LYSOSOME FUNCTION AND SENESCENCE.....	1R01 AG00609-01	93,992
RATLIFF, FLOYD.....	ELECTRICAL ACTIVITY, SINGLE RECEPTORS, NEURONS OF EYE.....	5R01 EY00188-22	103,409
REEKE, GEORGE, JR.....	COMPUTING METHODS FOR MACROMOLECULAR CRYSTALLOGRAPHY.....	5R01 GM22663-03	49,128
REICH, EDWARD.....	CHEMOTHERAPEUTIC DEOXYNUCLEOSIDES AND OTHER AGENTS.....	2R01 CA08290-12	294,608

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
RIFKIN, DANIEL B.....	MEMBRANE PROTEINS OF NORMAL AND MALIGNANT CELLS.....	5R01 CA13138-06	69,997
RIFKIN, DANIEL B.....	PRODUCTION OF PROTEASES BY LUNG CELLS IN CULTURE.....	1R01 HL20038-01	82,417
RIFKIN, MARY R.....	MECHANISM OF TRYPAKOCIDAL ACTION OF HUMAN SERUM.....	1R01 AI14045-01	66,454
RUTISHAUSER, URS S.....	CELL-CELL ADHESION AMONG EMBRYONIC CELLS.....	5R01 HD09635-03	78,472
SCHEELE, GEORGE A.....	SECRETORY PATHWAY IN THE EXOCRINE PANCREAS.....	5R01 AM18532-03	83,010
SCHEELE, GEORGE A.....	EXOCRINE PANCREATIC PROTEIN IN CANCER OF THE PANCREAS.....	1R26 CA22582-01	55,583
SCHOENFELD, ROBERT L.....	A MICROPROCESSOR BIOTECHNOLOGY RESOURCE.....	1P41 RR01089-01	127,196
SCOTT, WILLIAM A, III.....	BIOCHEMICAL GENETICS OF MICROORGANISMS.....	5R01 GM16224-19	92,859
SCOTT, WILLIAM A, III.....	REGULATION OF MEMBRANE ADENYL CYCLASE.....	5R01 GM21071-03	28,781
SCOTT, WILLIAM A, III.....	CALCIUM BINDING PROTEIN OF CHORIOALLANTOIC MEMBRANE.....	5R01 HD10299-02	35,308
SHAPLEY, ROBERT M.....	SPATIAL SUMMATION AND DYNAMICS OF VISUAL NEURONS.....	5R01 EY01472-04	69,424
SIEKEVITZ, PHILIP.....	CELL BIOLOGY OF THE SYNAPSE.....	5R01 NS12726-02	70,080
SILVERSTEIN, SAMUEL C.....	ROLE OF MONONUCLEAR LEUCOCYTES IN VIRAL IMMUNITY.....	5R01 AI08697-09	63,496
SILVERSTEIN, SAMUEL C.....	PLASMINOGEN ACTIVATORS OF MALIGNANCY.....	5R01 CA18945-02	52,159
STEIN, WILLIAM H.....	CHEMICAL STRUCTURE AND ENZYME ACTIVITY OF PROTEINS.....	5R01 GM07256-18	130,716
STEINMAN, RALPH M.....	CHARACTERIZATION OF LYMPHOID DENDRITIC CELLS.....	5R01 AI13013-02	47,751
TAMM, IGOR.....	VIRUS-INDUCED ALTERATIONS IN ANIMAL CELLS.....	5R01 CA18608-18	123,013
TOMASZ, ALEXANDER.....	TEICHOIC ACIDS: FUNCTIONS AND MODE OF REPLICATION.....	5R01 AI09423-08	66,795
TRAGER, WILLIAM.....	MEMBRANE PHYSIOLOGY IN INTRACELLULAR PARASITISM.....	5R01 AI08989-08	71,438
TRAGER, WILLIAM.....	HOST-PARASITE MEMBRANE INTERACTIONS IN LEISHMANIASIS.....	5R01 AI11916-03	63,098
WEISS, JAY M.....	PSYCHOLOGIC/BEHAVIORAL INFLUENCES ON HEART PATHOLOGY.....	1R01 HL19974-01	72,071
WILSON, VICTOR J.....	STUDIES ON MOTOR CONTROL.....	5R01 NS02619-18	88,575
WINCHESTER, ROBERT J.....	STUDIES OF B LYMPHOCYTE ALLOANTIGENS.....	5R01 CA20107-02	59,752
WOOD, HENRY N.....	TRANSFORMATION AND RECOVERY OF CROWN GALL TUMOR CELLS.....	2R01 CA13808-05	95,874
ZABRISKIE, JOHN B.....	IMMUNOLOGICAL STUDIES IN STREPTOCOCCAL SEQUELAE.....	1R01 AI14361-01	99,479
ZABRISKIE, JOHN B.....	CELLULAR AND HUMORAL REACTIONS IN TRANSPLANTATION.....	3R01 HL13572-05S1	2,047
ZIFF, EDWARD B.....	STRUCTURE OF REGULATORY ELEMENTS IN ADENOVIRUS DNA.....	5R01 GM21779-03	31,863
ORGANIZATION TOTAL	113	12,202,466	
ROOSEVELT HOSPITAL ZIP CODE 10019			
CHARGAFF, ERWIN.....	CELLULAR CONTROL MECHANISMS.....	5R01 CA19289-02	108,224
CHRISTY, NICHOLAS P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05663-10	32,853
FEIGELSON, MURIEL H.....	MECHANISMS OF POSTNATAL ENZYME DEVELOPMENT.....	2R01 HD08712-04	122,997
ROSNER, WILLIAM.....	ESTROGEN BINDING IN HUMAN SERUM.....	2R01 AM11852-11	131,319
WEISS, HARVEY J.....	PRIMARY DISORDERS OF PLATELET FUNCTION.....	5R01 HL14595-06	128,972
ORGANIZATION TOTAL	5	524,365	
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021			
ABBOTT, JOAN.....	ONTOGENY OF B-LYMPHOCYTES IN VITRO.....	1R01 AI13759-01	65,274
ALBRECHT, ALBERTA M.....	MICROBIAL ENZYMES IN THE THERAPY OF NEOPLASIA.....	5R01 CA17839-03	53,940
ARTZT, KAREN.....	TERATOCARCINOMA AND EMBRYONAL TUMORS: SURFACE ANTIGENS.....	2R01 CA21651-02	78,970
BALAZS, IVAN.....	DYNAMICS OF GENE PRODUCT SYNTHESIS IN MAMMALIAN CELLS.....	5R01 CA17159-03	60,880
BALIS, M EARL.....	ENZYMES OF NORMAL AND MALIGNANT INTESTINAL MUCOSA.....	5R26 CA14906-05	210,849
BENNETT, DOROTHEA.....	IMMUNOGENETICS OF SPERMATOZOA, EGGS, AND EMBRYOS.....	5R01 HD10668-02	59,592
BIEDLER, JUNE L.....	DECREASED MALIGNANCY OF DRUG RESISTANT CELL VARIANTS.....	5R01 CA17927-03	84,249
BIEDLER, JUNE L.....	CYTOGENETICS OF AKR MOUSE LEUKEMIA.....	5R01 CA18926-02	44,949
BORENFREUND, ELLEN.....	IN VITRO CHEMICAL CARCINOGENESIS (DCCP-3).....	5R01 CA20019-02	57,257
BOYSE, EDWARD A.....	THE CELL SURFACE PROGRAM PROJECT.....	5P01 CA16889-03	926,376
BOYSE, EDWARD A.....	IMMUNOGENETICS OF THE TLA REGION OF CHROMOSOME 17.....	1R01 CA20473-01	53,841
BOYSE, EDWARD A.....	IMMUNOGENETICS OF LY SYSTEMS.....	1R01 CA22131-01	155,833
BOYSE, EDWARD A.....	NATIONAL CONGENIC MOUSE SUPPLY-MULTICATEGORY RESEARCH.....	5P40 RR01001-02	212,189
BROWN, GEORGE B.....	STUDY OF ONCOGENESIS BY PURINE DERIVATIVES.....	5R01 CA15274-04	171,706
BROWN, GEORGE B.....	SUPPORT FOR MOLECULAR BIOLOGY CANCER PROGRAM.....	5P01 CA17085-03	928,269
BURGER, RICHARD M.....	SV40 TRANSFORMATION OF GARDNER'S SYNDROME FIBROBLASTS.....	5R26 CA19259-02	74,033
CAVALIERI, LIEBE F.....	MECHANISM OF REVERSE TRANSCRIPTION OF ONCORNAVIRAL RNA.....	5R01 CA18383-03	60,356
CHIAO, JEN W.....	NATURE OF LYMPHOCYTES WITH BOTH B- AND T-CELL MARKERS.....	5R01 AI12843-03	27,530
CHOI, YONG SUNG.....	RECOGNITION OF TUMOR CELLS BY T LYMPHOCYTES.....	3R01 CA17049-03S1	15,280
CHOI, YONG SUNG.....	IMMUNOBIOLOGY, IMMUNODEFICIENCY, AND CANCER.....	5P01 CA17404-03	1,217,714
CHOU, TING-CHAO.....	CYTOTOXICITY OF CYTOSINE ARABINOSIDE IN VIVO.....	5R01 CA16534-03	54,161
CLARKSON, BAYARD D.....	CELL PROLIFERATION KINETICS IN HEMATOPOIETIC TUMORS.....	5R01 CA19117-02	158,903

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
CLARKSON, BAYARD D.....	HUMAN HEMATOPOIETIC TUMORS PROGRAM PROJECT.....	5P01 CA20194-02	300,020
COLBY, CLARENCE, JR.....	INTERFERON SYSTEM: A GENETIC AND BIOCHEMICAL ANALYSIS.....	5R01 AI13914-02	72,459
DAY, NOORBIBI K.....	COMPLEMENT AND IMMUNE COMPLEXES IN CANCER.....	5R01 CA18488-02	129,546
DE HARVEN, ETIENNE.....	SCANNING EM OF LYMPHOCYTES WITH MARKERS FOR SIG.....	1R01 CA22212-01	28,222
DJORDJEVIC, BOZIDAR.....	MODIFICATION OF RADIATION DAMAGE IN HYPOXIC CELLS.....	5R01 CA20470-02	37,824
DONNER, DAVID B.....	ALLOSTERIC HORMONE BINDING RELATED TO BIOLOGIC EFFECT.....	1R01 AM19846-01	72,968
DOOHER, GERALD B.....	CELL SURFACE ARCHITECTURE OF EMBRYOS AND SPERM.....	5R01 HD10669-02	61,348
DUPONT, BO.....	SPONTANEOUS REGRESSION IN RETINOBLASTOMA.....	5R01 EY01616-02	83,242
FAANES, RONALD B.....	ANTIBODY, LYMPHOID AND TUMOR CELL INTERACTION.....	5R01 CA16271-03	54,311
FLEISSNER, ERWIN J.....	VIRAL AND MOUSE GENES IN LEUKEMIA VIRUS INFECTION.....	2R01 CA15297-04	120,271
FLEISSNER, ERWIN J.....	ONCOGENIC VIRUSES PROGRAM PROJECT.....	5P01 CA16599-03	671,451
FOX, JACK J.....	SYNTHETIC MASKED NUCLEOSIDES FOR ANTICANCER STUDIES.....	5R01 CA18601-02	196,508
FRIED, JERROLD.....	GROWTH KINETICS AND DRUG RESPONSE OF CELL POPULATIONS.....	5R01 CA16757-03	100,244
GINER-SOROLLA, ALFREDO.....	PSYCHOTROPIC DRUGS AS POTENTIAL CARCINOGENS.....	5R01 CA17860-03	65,296
GOOD, ROBERT A.....	NONSPECIFIC RESISTANCE TO INFECTION AND INTOXICATION.....	2R01 AI11843-05	104,793
GOOD, ROBERT A.....	SUPPORT FOR CANCER RESEARCH PROGRAM.....	2P30 CA08748-12	8,340,974
GOOD, ROBERT A.....	PATHOGENESIS OF CNS AND AUTOIMMUNE DISORDERS.....	5R01 NS11457-05	129,107
GOOD, ROBERT A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05534-05	213,709
GUPTA, SOHAN L.....	IMMUNOCHEMICAL STUDIES ON THYMUS-LEUKEMIA ANTIGENS.....	1R01 CA20490-01	65,339
HAHN, ERIC W.....	HEAT 0 RADIATION ON NEOPLASTIC AND NORMAL TISSUES.....	2R01 CA17410-03	102,130
HARDY, WILLIAM D, JR.....	TUMOR THERAPY: EMPHASIS ON IMMUNOTHERAPY.....	5R01 CA19072-02	114,309
HAWRYLKO, EUGENIA A.....	BCG POTENTIATED ANTITUMOR RESPONSE—ESCAPE MECHANISMS.....	5R01 CA18351-02	143,172
HOFFMANN, MICHAEL K.....	REGULATION OF IMMUNITY BY ANTIBODY AND B-CELLS.....	5R01 CA17673-03	77,292
KENYON, ALAN J.....	MASTOCYTOMAS AND LYMPHOPROLIFERATIVE DISEASES.....	5R01 CA15604-04	124,239
KINCADE, PAUL W.....	DESIGN OF A DIRECT ASSAY FOR HEMOPOIETIC STEM CELLS.....	5R01 AI12740-03	32,166
KINCADE, PAUL W.....	EARLY EVENTS IN MAMMALIAN B-CELL DIFFERENTIATION.....	5R01 AI12741-03	77,815
KOO, GLORIA C.....	DIFFERENTIATIVE IMMUNOGENETICS: THE T/T LOCUS.....	1R01 CA22462-01	47,962
KOURIDES, IONE A.....	REGULATION OF ALPHA AND BETA SUBUNITS OF HUMAN TSH.....	7R01 CA23185-01	81,649
KREIS, WILLI.....	TETRAHYDROURIDINE & 1-BETA-D ARABINOFURANOSYLCYTOSINE.....	5R01 CA18557-03	45,651
KREIS, WILLI.....	TUMOR THERAPY BY L-METHIONINE DEPRIVATION.....	5R01 CA19050-02	63,988
KRUG, ROBERT M.....	REPLICATION OF INFLUENZA VIRUS.....	2R01 AI11772-04	62,209
LAUGHLIN, JOHN S.....	CANCER STUDIES WITH NEW RADIOACTIVE SCANNING COMPOUNDS.....	5R01 CA18153-02	152,853
LEVINE, PHILIP.....	MUTANT A, P1 ANTIGENS IN MALIGNANCY, CYTOTOXICITY.....	1R01 CA20660-01	40,876
LIFTER, JOHN.....	AFFINITY LABELING OF LYMPHOCYTE ANTIGEN RECEPTORS.....	5R01 CA18613-03	78,796
LITMAN, GARY W.....	BIOPHYSICAL STUDIES OF MONOCLONAL CRYOIMMUNOGLOBULINS.....	5R01 AI13528-02	47,609
LLOYD, KENNETH O.....	ANTIGENS OF HUMAN MALIGNANT MELANOMA.....	1R01 CA21445-01	59,207
MARCUS, STUART L.....	RLV DNA POLYMERASE ENZYMOLOGY AND RADIOIMMUNOASSAY.....	5R01 CA18369-03	59,823
MARQUARDT, HANS W.....	HYDROCARBON-INDUCED MALIGNANT TRANSFORMATION IN VITRO.....	5R01 CA15205-04	35,486
MAYLIE-PFENNINGER, MARIE F.....	SURFACE CHEMISTRY OF TERATOCARCINOMA AND EMBRYOS.....	1R01 CA21363-01	66,812
MC DONALD, JOSEPH C.....	CALORIMETRIC OOSIMETRY FOR NEUTRON RADIOTHERAPY.....	1R01 CA22038-01	48,752
MELERA, PETER W.....	GROWTH AND DIFFERENTIATION PHASE BIOCHEMISTRY OF TRNA.....	5R01 GM21863-02	61,821
MODAK, MUKUND J.....	IN VIVO AND IN VITRO STUDIES OF DNA SYNTHESIS.....	1R01 CA21404-01	58,990
MOORE, MALCOLM A.....	MARROW CULTURE STUDIES—HUMAN MYELOID LEUKEMIA, ETC.....	5R01 CA17353-03	96,599
MOORE, MALCOLM A.....	DEVELOPMENT AND FUNCTION OF ACTIVATED MACROPHAGES.....	5R01 CA19052-02	64,266
MURPHY, MARTIN J, JR.....	IDENTITY AND CHARACTERISTICS OF ERYTHROID STEM CELLS.....	1R01 AM19741-01	52,848
OLD, LLOYD J.....	HUMAN CANCER SEROLOGY.....	5P01 CA19765-02	441,833
PARHAM, JAMES C.....	TRANSITION STATE ANALOGS OF PURINES FOR CHEMOTHERAPY.....	5R01 CA18965-02	56,443
PRICE, RICHARD W.....	HERPES SIMPLEX VIRUS INFECTION OF AUTONOMIC GANGLIA.....	5R01 NS12396-02	47,109
ROBERTS, JOSEPH.....	A PROGRAM FOR DEVELOPMENT OF NEW ANTITUMOR ENZYMES.....	2R01 CA15860-04	72,316
ROBERTS, JOSEPH.....	THERAPY BY ENZYMIC DEPLETION OF ESSENTIAL AMINO ACIDS.....	5R01 CA18844-02	78,677
RUSS, GERALD A.....	SELECTIVE IRRADIATION OF OSSEOUS TUMORS WITH 33P-HEDP.....	5R01 CA18873-02	54,635
SALSER, JOSEPHINE S.....	METABOLIC CONTROLS OF THYMIDYLATE IN MALIGNANT GROWTH.....	5R01 CA19608-02	48,960
SARKAR, NURUL H.....	COMPONENTS OF THE MOUSE MAMMARY TUMOR VIRUS.....	5R01 CA17129-03	65,647
SCHEID, MARGRIT P.....	T-CELL DIFFERENTIATION: MOLECULAR MECHANISMS.....	5R01 AI13374-02	55,722
SCHEID, MARGRIT P.....	LYMPHOCYTE SUBSETS IN IMMUNE-DEFICIENCY STATES.....	1R01 CA22241-01	57,732
SCHEID, MARGRIT P.....	INDUCTION OF T-LYMPHOCYTE DIFFERENTIATION.....	2R01 HD08415-04	91,432
SIROTNAK, FRANCIS M.....	BASIC APPROACHS TO IMPROVED ANTIFOLATE CANCER THERAPY.....	3R01 CA16153-02S1	4,663
SKIPSKI, VLADIMIR P.....	BLOOD SERUM GLYCOSPHINGOLIPIDS AND MALIGNANCY.....	2R01 CA15169-04	58,136
SONENBERG, MARTIN.....	CELL SURFACE ALTERATIONS BY GROWTH HORMONES.....	5R01 AM18759-02	90,253
SONENBERG, MARTIN.....	HORMONE-MEMBRANE INTERACTION IN NEOPLASIA.....	5R01 CA15773-03	85,163

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
STACKPOLE, CHRISTOPHER W.....	PLASMA-MEDIATED LEUKEMIA CELL LYSIS AND MODULATION.....	2R01 CA16168-03	66,382
STEWART, WILLIAM E, II.....	CHARACTERIZATION OF INTERFERONS AND THEIR ACTIONS.....	5R01 CA20863-02	58,480
STOCK, C CHESTER.....	AN EXPERIMENTAL CANCER CHEMOTHERAPY PROGRAM.....	5P01 CA18856-02	893,901
STOHRER, GERHARD.....	PURINE N-OXIDES AND OTHER ONCOGENS.....	5R01 CA19667-02	67,457
STUTMAN, OSIAS.....	IMMUNE SURVEILLANCE AND CANCER.....	5R01 CA15988-04	86,329
STUTMAN, OSIAS.....	TUMOR IMMUNITY AND TUMOR-HOST INTERACTIONS.....	5R01 CA17818-02	86,219
SWISLOCKI, NORBERT I.....	LIGAND EFFECTS ON PURIFIED MEMBRANE ADENYLATE CYCLASE.....	5R01 AM18812-02	55,529
TELLER, MORRIS N.....	IMMUNITY TO TUMOR FOLLOWING DRUG-INDUCED REMISSION.....	5R01 CA18253-02	66,311
TROTTA, PAUL P.....	ADENOSINE DEAMINASE REGULATION AND ITS ROLE IN CANCER.....	5R01 CA18428-03	45,787
VARRICCHIO, FREDERICK.....	SITES OF HISTONE F1 PHOSPHORYLATION IN RAT PANCREAS.....	5R26 CA19584-02	66,581
WACHTEL, STEPHEN S.....	SEROLOGICAL ANALYSIS OF EPIDERMAL CELL ANTIGENS.....	2R01 AI11982-04	61,120
WACHTEL, STEPHEN S.....	H-Y ANTIGEN IN HUMANS WITH SEX-CHROMOSOMAL ANOMALIES.....	5R01 HD10065-02	57,101
WARFEL, ALWIN H.....	KILLING OF CANCER CELLS BY BCG ACTIVATED CELLS.....	5R01 CA18893-02	38,854
WEISS, HERBERT.....	DENSELY IONIZING RADIATION AND OXYGEN TENSION IN CELLS.....	5R01 CA18179-02	79,948
WITKIN, STEVEN S.....	DNA SYNTHESIZING COMPLEXES IN SEMEN.....	1R01 HD10826-01	40,290
ZEDECK, MORRIS S.....	A MODEL SYSTEM FOR STUDIES OF COLON CARCINOGENESIS.....	2R26 CA15637-04	63,750
ORGANIZATION TOTAL	98	20,659,863	
ST. LUKE'S HOSPITAL CENTER ZIP CODE 10025			
BENNETT CLARK, SUSANNE.....	MECHANISMS OF CHYLOMICRON CHOLESTEROL HOMEOSTASIS.....	3R01 AM17685-03S1	16,466
BERNSTEIN, ROBERT S.....	REGULATION OF ADIPOCYTE INSULIN SENSITIVITY.....	2R01 AM17200-04	71,441
BERTLES, JOHN F.....	GENETIC CONTROL OF HEMOGLOBIN SYNTHESIS.....	2R01 AM08154-13	101,362
BERTLES, JOHN F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05501-15	80,534
BOKKENHEUSER, VICTOR D.....	BACTERIA OF THE GASTROINTESTINAL TRACT.....	3R01 AM16588-03S2	9,581
CASE, ROBERT B.....	CONTROL OF CORONARY FLOW BY PCO2.....	2R01 HL16307-04	67,153
FAIRCHILD, BEATRICE M.....	SICKLE CELL HEMOGLOBIN: INTERACTIONS AND AGGREGATION.....	5R01 HL15293-06	110,458
HASHIM, GEORGE A.....	SUPPRESSION OF EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS.....	5R01 NS12316-03	72,800
HOLT, PETER R.....	INTESTINAL ABSORPTION AND METABOLISM OF FATS.....	3R01 AM13436-12S1	34,747
PIERCE, JAMES C.....	HUMORAL ANTIBODY AND RENAL ALLOGRAFT REJECTION.....	5R01 AM19470-02	45,306
PIERSON, RICHARD N, JR.....	QUANTITATIVE RADIOCARDIOGRAPHY: A CRITICAL EVALUATION.....	5R01 HL16313-03	61,384
POILLON, WILLIAM N.....	CHEMICAL MODIFICATIONS OF SICKLE CELL HEMOGLOBIN.....	5R01 AM17751-03	49,927
RYAN, STEPHEN F.....	EXPERIMENTAL ACUTE ALVEOLAR INJURY.....	5R01 HL16592-03	85,760
VAN ITALIE, THEODORE B.....	BODY NUTRIENT RESERVES AND FEEDING BEHAVIOR.....	2R01 AM17259-04	55,448
VAN ITALIE, THEODORE B.....	OBESITY RESEARCH CENTER.....	2P50 AM17624-03	555,721
ORGANIZATION TOTAL	15	1,418,088	
ST. VINCENT'S HOSPITAL AND MEDICAL CENTER OF NEW YORK ZIP CODE 10011			
BARTFELD, HARRY.....	CAUSE AND MECHANISMS OF AMYOTROPHIC LATERAL SCLEROSIS.....	5P50 NS11605-03	286,159
GROSSI, CARLO E.....	SURGICAL TREATMENT OF COLORECTAL CANCER, NEW TECHNIQUE.....	5R01 CA10661-10	46,083
MORENO, AUGUSTO H.....	ARTERIAL CHARACTERISTIC INPUT IMPEDANCE IN CIRRHOSIS.....	1R01 AM19508-01	46,622
NEALON, THOMAS F, JR.....	THE NUTRITIONAL COMPONENT OF CANCER THERAPY.....	5R18 CA19632-02	57,260
SCHWARZ, GEORGE.....	X-RAY DOSE RATE EFFECTS ON CELL KINETICS.....	2R01 CA17582-03	52,707
SCHWARZ, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05502-13	33,552
ORGANIZATION TOTAL	6	522,383	
STATE UNIVERSITY OF NEW YORK—DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
ALTURA, BURTON M.....	CIRCULATORY SHOCK, TRAUMA AND RE-SYSTEM FUNCTION.....	5R01 HL18002-03	68,438
ALTURA, BURTON M.....	PHARMACOLOGIC STUDIES ON VASCULAR SMOOTH MUSCLE.....	2R01 HL18015-02	63,590
AMASSIAN, VAHE E.....	INTERRELATIONSHIPS OF SENSORIMOTOR NEURONS.....	5R01 NS11219-05	62,500
BIANCO, CELSO.....	TUMOR RECOGNITION BY NORMAL AND ACTIVATED MACROPHAGES.....	7R01 CA23056-01	33,185
CRACCO, ROGER Q.....	EVOKED SPINAL RESPONSE.....	2R01 NS12039-02A1	40,832
DAMADIAN, RAYMOND V.....	SELECTIVITY, ION ACTIVITIES AND NMR OF BIOLOGICAL TISSUE.....	5R01 GM21733-03	58,394
DAVID, ANSHEL E.....	SV40 INDUCED HOST DNA REPLICATION.....	5R01 CA17101-03	36,249
DEBONS, ALBERT F.....	HYPOTHALAMIC REGULATION OF FOOD INTAKE.....	5R01 AM12479-10	45,631
DETWILER, THOMAS C.....	REACTIONS OF THROMBIN AND COLLAGEN WITH PLATELETS.....	3R01 HL16355-03S1	4,479
DETWILER, THOMAS C.....	REACTIONS OF THROMBIN AND COLLAGEN WITH PLATELETS.....	2R01 HL16355-04	69,349
DETWILER, THOMAS C.....	STIMULUS-RESPONSE COUPLING IN PLATELETS.....	5R01 HL17729-03	64,855
DREIZEN, PAUL.....	PHYSICAL CHEMISTRY OF CONTRACTILE PROTEINS.....	5R01 AM06165-13	61,236
EISENSTEIN, ALBERT B.....	DIETARY EFFECTS ON CARBOHYDRATE METABOLISM.....	5R01 AM19825-02	42,014
FEINMAN, RICHARD D.....	MECHANISM OF THROMBIN ACTION.....	5R01 HL14992-06	32,291

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
FELDMAN, JOSEPH G.....	RISK FACTORS IN HEAD AND NECK CANCER.....	5R01 CA18073-02	3,200
FRIEDMAN, STANLEY.....	THE RELATIONSHIP BETWEEN TRNA MODIFICATION & CELL GROWTH.....	3R01 CA16936-03S1	5,013
GALANAKIS, DENNIS.....	STUDIES ON MECHANISMS OF HEMOSTASIS.....	5P01 HL17419-03	237,408
GARDNER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12033-06	37,084
GERBER, DONALD A.....	METABOLIC ABNORMALITIES IN RHEUMATOID ARTHRITIS.....	5R01 AM10370-12	78,030
HALPERN, MIMI N.....	FUNCTIONAL STUDIES OF THE VOMERONASAL SYSTEM.....	2R01 NS11713-04	41,478
HERBERT, VICTOR D.....	VITAMIN B12 AND FOLIC ACID METABOLISM.....	7R01 AM20526-01	134,792
HOWE, MICHAEL L.....	SENSITIZATION OF LYMPHOCYTES TO VIRUS TRANSFORMED CELLS.....	1R01 CA20163-01	68,030
IQBAL, KHALID.....	MOLECULAR PATHOLOGY OF NEUROFILAMENTS AND NEUROTUBULES.....	7R01 NS14495-01	43,505
JONES, CYRIL J.....	SUPPORT FOR CENTER FOR SICKLE CELL ANEMIA.....	3P60 HL15170-05S1	264,852
KAO, CHIEN-YUAN.....	BIOELECTRIC PROPERTIES OF UTERINE MUSCLE.....	3R01 HD00378-17S2	6,603
KAO, CHIEN-YUAN.....	BIOELECTRIC PROPERTIES OF UTERINE MUSCLE.....	2R01 HD00378-18A3	54,715
KAUFFMAN, SHIRLEY L.....	LUNG PRENEOPLASTIC HYPERPLASIA AND CHEMICAL CARCINOGENS.....	5R01 CA17569-03	38,919
KAVALER, FREDERIC.....	DEPOLARIZATION-CONTRACTION-RELATIONSHIP—HEART MUSCLE.....	3R01 HL12774-07S2	6,025
KOIZUMI, KIYOMI.....	MECHANISM OF FUNCTION OF INTEGRATIVE CENTERS.....	5R01 NS00847-22	37,416
KOUNTZ, SAMUEL L.....	IN VITRO MIXED ORGAN CELL LYMPHOCYTE REACTIONS IN RATS.....	5R01 AI12824-02	58,812
LANKS, KARL W.....	SPONTANEOUS REACTIVATION OF ACETYLCHOLINESTERASE.....	1R01 ES01530-01	44,067
LASTER, LEONARD.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00318-11	493,275
LASTER, LEONARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05401-16	169,124
LEE, KWANG S.....	EXCITATION-CONTRACTION COUPLING AND HEART FAILURE.....	5R01 HL16706-04	67,297
LEE, KWANG S.....	MECHANISM OF THE INOTROPIC ACTION OF CARDIAC GLYCOSIDES.....	1R01 HL21014-01	66,944
LEE, KWANG S.....	ACTIVE TRANSPORT AND EFFECT OF CA00 IN SICKLE CELL.....	1R01 HL21469-01	57,228
LERNER, LEON M.....	ANALOGS OF DECOYININE AS POTENTIAL ANTITUMOR AGENTS.....	5R01 CA13802-05	49,434
LEVERE, RICHARD D.....	CONTROL MECHANISMS IN HEME SYNTHESIS.....	5R01 AM09838-12	66,036
LYONS, HAROLD A.....	EVALUATION OF STEROID THERAPY IN SARCOIDOSIS.....	5R01 HL16651-04	86,058
MARGOLIS, RENEE K.....	STUDIES ON GLYCOPROTEINS IN BRAIN.....	2R01 NS09348-07	68,839
MC GOWAN, ELEANOR B.....	STRUCTURE AND FUNCTION OF PLATELET CA-BINDING PROTEIN.....	1R23 HL21413-01	44,451
MORSE, STEPHEN I.....	BIOLOGICAL ACTIVITIES OF B. PERTUSSIS.....	5R01 AI09683-08	112,319
PORTEOUS, DONALD D.....	TUMOR CELL KILLING BY X-RAYS AND IMMUNITY.....	5R01 CA14117-05	40,039
QUIGLEY, JAMES P.....	EFFECT OF PROTEOLYSIS ON TRANSFORMED CELL MEMBRANES.....	5R01 CA16740-03	58,147
RIEDER, RONALD F.....	PROTEIN SYNTHESIS IN ERYTHROID PRECURSORS.....	5R01 AM12401-11	95,536
ROSENTHAL, CONSTANTIN J.....	SERUM AMYLOID A PROTEIN IN NEOPLASTIC DISEASES.....	1R01 AM20080-01	57,858
SCALIA, FRANK.....	ANATOMICAL CORRELATES OF SUBCORTICAL VISUAL FUNCTION.....	5R01 EY00909-06	24,223
SILVERSTEIN, EMANUEL.....	ENZYME MECHANISM AND CONTROL.....	2R01 GM18453-04	68,249
STRACHER, ALFRED.....	CHARACTERIZATION OF MYOSIN FROM BLOOD PLATELETS.....	5R01 HL14020-06	59,404
STRACHER, ALFRED.....	CELL BIOLOGY OF PLATELET PRESERVATION.....	1R01 HL20666-01	73,871
SULTZER, BARNET.....	MITOGENIC ACTIVITY OF PPD-TUBERCULIN.....	5R22 AI11807-03	46,528
VASSALLE, MARIO.....	DIGITALIS EFFECTS ON CARDIAC AUTOMATICITY MECHANISMS.....	2R01 HL17451-04	62,435
WOODRUFF, JUDITH J.....	IMMUNOLOGY AND PHYSIOLOGY OF RECIRCULATING LYMPHOCYTES.....	5R01 AI10080-08	78,536
ORGANIZATION TOTAL	53	3,788,823	
TEACHERS COLLEGE ZIP CODE 10027			
BLACKMAN, LEONARD S.....	COGNITIVE STRATEGIES IN THE MENTALLY RETARDED.....	5P01 HD07329-05	346,640
ORGANIZATION TOTAL	1	346,640	
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—PHS HOSPITAL ZIP CODE 10304			
DAMATO, ANTHONY N.....	ELECTROPHYSIOLOGICAL STUDIES IN HUMAN AND ANIMAL HEARTS.....	5R01 HL12536-07	28,968
KACHADORIAN, WILLIAM A.....	MEMBRANE STRUCTURE AND FUNCTION OF THE TOAD BLADDER.....	5R01 AM18710-02	28,286
ORGANIZATION TOTAL	2	57,254	
YESHIVA UNIVERSITY ZIP CODE 10033			
ADAMANY, ANTHONY M.....	SMOOTH MUSCLE CELL MEMBRANE GLYCOPROTEIN BIOSYNTHESIS.....	5R01 HL19011-02	68,855
AISEN, PHILIP.....	IRON-BINDING PROTEINS AND CONTROL OF IRON METABOLISM.....	5R01 AM15056-07	128,634
ARIAS, IRWIN M.....	THE MECHANISM OF BILE PIGMENT EXCRETION.....	2R01 AM02019-20	204,924
ARIAS, IRWIN M.....	UREMIA: PATHOGENESIS, EFFECTS, AND POSSIBLE PREVENTION.....	5P01 AM16281-06	199,121
ARIAS, IRWIN M.....	HEPATITIS CIRRHOSIS CENTER.....	2P50 AM17702-04	517,874
ARONSON, RONALD S.....	THE ELECTROPHYSIOLOGY OF CARDIAC HYPERTROPHY.....	1R23 HL21167-01	45,262
ATKINSON, PAUL H.....	SURFACE MEMBRANES IN NORMAL AND CANCER CELLS.....	5R01 CA13402-05	70,623
BAEZ, SILVIO.....	BIOGENIC-MECHANICAL FACTORS IN MICROCIRCULATION.....	5R01 HL06736-17	86,583
BARNETT, HENRY L.....	PEDIATRIC NEPHROLOGY: DRUG TRIALS AND CLINICAL SURVEYS.....	5R01 AM18234-03	373,536

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BASES, ROBERT E.....	MUTAGEN INDUCED ANTINUCLEOSIDE IMMUNOREACTIVITY.....	5R01 CA20879-02	133,485
BAUM, GILBERT.....	ULTRASOUND MAMMOGRAPHY.....	1R01 CA19019-01A1	150,542
BAUM, GILBERT.....	OCULAR TUMOR DIAGNOSIS.....	1R01 EY01804-01A1	114,970
BAUM, STEPHEN G.....	INTERACTION OF ONCOGENIC AND NONONCOGENIC VIRUSES.....	5R01 CA10945-09	76,464
BENNETT, MICHAEL V.....	FUNCTION OF ELECTRICAL COUPLING IN EMBRYONIC TISSUES.....	5R01 HD04248-09	86,227
BENNETT, MICHAEL V.....	SYNAPTIC TRANSMISSION IN THE CNS.....	5R01 NS12627-02	48,650
BIRSHTEIN, BARBARA K.....	CELLULAR AND STRUCTURAL STUDIES OF MYELOMA MUTANTS.....	5R01 AI13509-02	52,087
BLOCH, ERIC.....	ANDROGEN PRODUCTION AND FUNCTION DURING DEVELOPMENT.....	5R01 HD00420-17	91,032
BLOOM, BARRY R.....	THE BIOCHEMICAL BASIS OF DELAYED HYPERSENSITIVITY.....	5R01 AI07118-12	73,056
BLOOM, BARRY R.....	THE CELLULAR BASIS OF DELAYED-TYPE HYPERSENSITIVITY.....	5R01 AI09807-08	76,050
BLUMENFELD, OLGA O.....	PROTEINS OF THE CELL MEMBRANE.....	5R01 GM16389-09	61,524
BOOKCHIN, ROBERT M.....	STUDIES OF SICKLING MECHANISMS & HEMOGLOBIN INTERACTIONS.....	5R01 AM12597-10	115,620
BORNSTEIN, MURRAY B.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11920-03	712,183
BOROWITZ, IRVING J.....	THE DESIGN OF ION SELECTIVE MOLECULES.....	5R01 HL16746-04	82,662
BREWER, CURTIS F.....	NMR STUDIES OF SACCHARIDE BINDING TO CONCAVALIN A.....	2R01 CA16054-03	65,020
BRIEHL, ROBIN W.....	HEMOGLOBIN S GELATION AND HEMOGLOBIN ALLOSTERY.....	5R01 HL07451-15	149,462
BUCKLEY, NANCY M.....	NEONATAL DEVELOPMENT OF ADRENERGIC RECEPTOR MECHANISMS.....	5R01 HL15444-05	52,861
CAGIN, NORMAN A.....	PROSTAGLANDINS AS ANTIARRHYTHMIC AGENTS.....	7R01 HL22551-01	40,961
COHEN, MORTON I.....	NEURAL BASIS OF RESPIRATORY AND SYMPATHETIC ACTIVITY.....	5R01 HL20800-16	162,640
COLOMBINI, MARCO.....	ANALYSIS OF MEMBRANE SYSTEMS IN PLANAR LIPID BILAYERS.....	1R01 GM23578-01	48,446
COSTANTINO-CECCARINI, E.....	ROLE OF CEREBROSIDE SYNTHESIS IN DEVELOPING BRAIN.....	1R01 NS12807-01A1	23,963
CRAIN, STANLEY M.....	DEVELOPMENT OF SPECIFIC SYNAPTIC NETWORKS IN VITRO.....	5R01 NS12405-02	72,192
DURAN-REYNALS, MARIA L.....	POSSIBLE NEOPLASTIC EFFECTS OF NON-NEOPLASTIC VIRUSES.....	5R01 CA07160-13	126,650
EAGLE, HARRY.....	CANCER RESEARCH PROGRAM.....	5P30 CA13330-06	2,291,922
EDELMANN, CHESTER M, JR.....	KIDNEY FUNCTION IN INFANTS AND CHILDREN.....	5P01 AM14877-18	265,513
EDER, HOWARD A.....	METABOLISM OF PLASMA LIPOPROTEINS.....	5R01 HL02965-21	191,443
EISENSTADT, MAURICE.....	DIELECTRIC AND NMR STUDIES OF PROTEINS.....	5R01 GM18298-06	78,091
EISENSTADT, MAURICE.....	STUDY OF MEMBRANE PERMEABILITY BY NMR RELAXATION.....	5R01 HL17571-03	98,404
FLEISCHER, NORMAN S.....	PITUITARY HORMONE AND INSULIN SECRETION AND PRODUCTION.....	2R01 AM17326-05	112,340
FLEISCHER, NORMAN S.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM20541-01	734,731
FRIEDMAN, EPHRAIM.....	BIOTECHNOLOGY RESOURCE FOR NMR STUDIES OF BIOMOLECULES.....	5P41 RR00636-05	72,179
FRIEDMAN, EPHRAIM.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05397-16	213,709
FROSOLONO, MICHAEL F.....	METABOLISM AND CELL BIOLOGY OF LUNG SURFACTANT SYSTEM.....	5R01 HL19010-02	44,225
GARTNER, LAWRENCE M.....	PATHOGENESIS OF NEONATAL JAUNDICE AND KERNICTERUS.....	2R01 HD03783-09	173,123
GASKIN, FELICIA A.....	BIOPHYSICAL STUDIES ON NEUROTUBULES AND TWISTED TUBULES.....	5R01 NS12418-03	27,959
GHOSSEIN, NEMATALLAH A.....	COLORECTAL CANCER TREATMENT—POSTOPERATIVE RADIOTHERAPY.....	5R01 CA17251-03	71,928
GLUECKSOHN-WAELSCH, SALOME.....	GENETIC CONTROL OF GROWTH AND DIFFERENTIATION.....	2R01 HD00193-22	91,465
GOLDSMITH, DAVID I.....	NEONATAL & MATURATIONAL PATTERN OF NAO HOMEOSTASIS.....	1R01 HD10559-01	93,088
HAYS, RICHARD M.....	CONTROL OF WATER AND SOLUTE MOVEMENT ACROSS THE CELL.....	5R01 AM03858-17	118,646
HENRY, SUSAN A.....	GENETICS AND DEVELOPMENT OF YEAST MEMBRANE MUTANTS.....	5R01 GM19629-06	64,067
HIGHSTEIN, STEPHEN M.....	SYNAPTIC LINKAGE OF THE RETICULO-OCULOMOTOR CIRCUITS.....	5R01 EY01670-03	9,230
HORWITZ, MARSHALL S.....	ADENOVIRUS DNA SYNTHESIS AND POLYPEPTIDE ASSEMBLY.....	5R01 CA11512-08	52,075
HORWITZ, SUSAN B.....	BIOCHEMICAL PHARMACOLOGY OF ANTITUMOR DRUGS.....	5R01 CA15714-04	92,180
HURWITZ, JERARD.....	CARCINOGENS ON PRO- AND EUKARYOTIC DNA REPLICATION.....	1R01 CA21622-01	53,597
HURWITZ, JERARD.....	STUDIES OF MACROMOLECULAR ALTERATION AND SYNTHESIS.....	5R01 GM13344-12	189,090
IQBAL, KHALID.....	MOLECULAR PATHOLOGY OF NEUROFILAMENTS AND NEURITUBULES.....	5R01 NS08180-09	27,527
JAFFE, ERNST R.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00050-16	783,469
KAPLAN, BARRY H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14958-02	73,063
KATZMAN, ROBERT.....	NEUROLOGICAL CENTER: METABOLIC/DEGENERATIVE DISORDERS.....	5P50 NS03356-17	830,513
KATZMAN, ROBERT.....	BIOGENIC AMINES AND NEUROLOGICAL DISORDERS.....	5P50 NS09649-07	340,220
KEISER, HAROLD D.....	IMMUNOCHEMISTRY OF CARTILAGE PROTEOGLYCAN.....	5R01 AM07343-14	116,142
KERN, HAROLD L.....	TRANSPORT PROCESSES IN OCULAR TISSUES.....	3R01 EY00268-13S1	79,637
KLINGER, HAROLD P.....	GENE REGULATION & INTERACTION—NORMAL & MALIGNANT CELLS.....	5R01 CA16720-04	125,344
KRUEGER, JOHN W.....	SARCOMERE KINEMATICS IN CARDIAC CONTRACTION.....	1R23 HL21325-01	47,469
LEDEEN, ROBERT W.....	STUDY OF NERVOUS SYSTEM GANGLIOSIDES AND RELATED LIPIDS.....	5R01 NS04834-15	147,041
LEDEEN, ROBERT W.....	BRAIN GLYCOLIPIDS IN MS & SLOW VIRUS DISEASES.....	5R01 NS10931-03	38,930
LEV, MEIR.....	BIOSYNTHESIS OF CERAMIDE PHOSPHORYLETHANOLAMINE.....	5R01 GM21278-03	39,825
LEVENSON, STANLEY M.....	BURN DEBRIDEMENT: CHEMICAL, ENZYMATIC.....	5R01 GM19328-06	104,800
LEVINE, WALTER G.....	ROLE OF METABOLISM IN THE BILIARY EXCRETION OF DRUGS.....	5R01 CA14231-06	89,367
LEVINE, WALTER G.....	PANCREATIC DISPOSITION OF CHEMICAL CARCINOGENS.....	5R26 CA19155-02	95,782

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
LILLY, FRANK.....	GENETIC CONTROL OF RESISTANCE TO FRIEND VIRUS DISEASE.....	1R01 CA19873-01	96,126
LILLY, FRANK.....	MECHANISM OF THE H-2 EFFECT ON VIRAL LEUKEMOGENESIS.....	1R01 CA19931-01	98,575
LISTOWSKY, IRVING.....	CONFORMATION OF FERRITIN AND ITS ROLE IN IRON METABOLISM.....	3R01 HL11511-08S1	13,407
LISTOWSKY, IRVING.....	CONFORMATION OF FERRITIN AND ITS ROLE IN IRON METABOLISM.....	5R01 HL11511-09	108,416
LOWY, BERTRAM A.....	ROLE OF LIVER IN ERYTHROCYTE NUCLEOTIDE SYNTHESIS.....	5R01 AM17622-04	126,944
MAIO, JOSEPH J.....	DNA TRANSCRIPTION CONTROL IN NORMAL AND CANCER CELLS.....	5R01 CA16790-03	91,662
MAITRA, UMADAS.....	ENZYMATIC SYNTHESIS OF BIOLOGICALLY ACTIVE MACROMOLECULE.....	3R01 GM15399-08S1	3,237
MAITRA, UMADAS.....	ENZYMATIC SYNTHESIS OF BIOLOGICALLY ACTIVE MACROMOLECULE.....	5R01 GM15399-09	63,591
MARCUS, DONALD M.....	ANTIBODY INTERACTIONS WITH HAPTENS AND GLYCOLIPIDS.....	5R01 AI05336-14	85,903
MARMUR, JULIUS.....	THE ROLE OF YEAST MITOCHONDRIA AND CANCER.....	5R01 CA12410-07	162,571
MEYER, KARL.....	MUCOPOLYSACCHARIDES OF CONNECTIVE AND OTHER TISSUES.....	5R01 AG00247-11	14,470
MORRILL, GENE A.....	ROLE OF STEROID AND CALCIUM IN MEIOTIC MATURATION.....	1R01 HD10463-01	62,628
NAGEL, RONALD L.....	SICKLE CELL ANEMIA AND OTHER HEMOGLOBINOPATHIES.....	1P01 HL21016-01	555,268
NAGLER, ARNOLD L.....	STUDY OF ROLE OF CARDIOTOXIN IN SHOCK.....	2R01 GM17423-07	94,403
NATHENSON, STANLEY G.....	BIOCHEMICAL STUDIES ON HISTOCOMPATIBILITY ANTIGENS.....	2R01 AI07289-12	164,230
NITOWSKY, HAROLD M.....	SUPPORT FOR GENETICS RESEARCH CENTER.....	5P50 GM19100-05	501,172
NORTON, WILLIAM T.....	THE CHEMISTRY OF CELLS AND CELL PORTIONS FROM THE CNS.....	2R01 NS02476-18	197,493
NOVIKOFF, ALEX B.....	BIOCHEMICAL CYTOLOGY OF NORMAL AND MALIGNANT TISSUES.....	5R01 CA06576-15	290,919
PARK, SUNG S.....	COMPREHENSIVE STUDIES OF MUCOCILIARY TRANSPORT.....	3R01 HL18308-02S1	20,588
PARK, SUNG S.....	COMPREHENSIVE STUDIES OF MUCOCILIARY TRANSPORT.....	5R01 HL18308-03	164,081
PATT, CHARLES.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07124-09	18,442
PEISACH, JACK.....	HEME PROTEIN STRUCTURE AND FUNCTION.....	5R01 HL13399-15	146,345
PICCIANO, PAUL T.....	ISOLATION, GROWTH AND METABOLISM OF TYPE 1 PNEUMOCYTES.....	1R23 HL21396-01	46,796
PURPURA, DOMINICK P.....	SUPPORT FOR MENTAL RETARDATION RESEARCH CENTER.....	2P30 HD01799-13	795,000
PURPURA, DOMINICK P.....	NEURONAL DEVELOPMENT, INTERACTION AND ORGANIZATION.....	2P01 NS07512-10	260,939
RAINE, CEDRIC S.....	EM CYTOPATHOLOGY OF ORGANIZED CNS & PNS CULTURES.....	2R01 NS08952-09	125,023
RICHARDSON, STEPHEN A.....	GROWING UP AS A MENTALLY SUBNORMAL YOUNG PERSON.....	5R01 HD07907-03	142,958
RITTER, WALTER P.....	ELECTROPHYSIOLOGICAL CORRELATES OF COGNITIVE PROCESSES.....	1R01 HD10804-01	68,395
ROSEN, ORA M.....	PROTEINS INVOLVED IN THE ACTION OF CYCLIC AMP.....	2R01 AM09038-13	101,735
ROSEN, ORA M.....	HORMONAL REGULATION OF ADIPOCYTE DEVELOPMENT IN VITRO.....	1R01 AM21248-01	69,915
RUBEN, ROBERT J.....	EMBRYOLOGY OF THE INNER EAR.....	2R01 NS08365-10	173,935
RUBIN, CHARLES S.....	CYCLIC AMP AND PROTEIN KINASES IN CELL REGULATION.....	5R01 GM22792-02	51,639
RUBIN, MERYL S.....	REGULATION OF MEMBRANE PERMEABILITY: MOLECULAR BASIS.....	5R01 AM18128-03	40,091
SATIR, BIRGIT H.....	MEMBRANES PRIOR TO AND DURING FUSION.....	1R01 GM24724-01	111,809
SATIR, PETER.....	STRUCTURE AND MOTION OF CILIA.....	7R01 HL22560-01	144,712
SCARPELLI, EMILE M.....	ALVEOLAR BIOLOGY.....	3P01 HL16137-04S1	60,552
SCARPELLI, EMILE M.....	ALVEOLAR BIOLOGY.....	5P01 HL16137-05	686,313
SCHARFF, MATTHEW D.....	SYNTHESIS AND ASSEMBLY OF IMMUNOGLOBULINS.....	5R01 AI05231-14	90,916
SCHARFF, MATTHEW D.....	CELL BIOLOGY OF LYMPHOID CELLS.....	2P01 AI10702-06	590,866
SCHARRER, BERTA V.....	BIBLIOGRAPHIA NEUROENDOCRINOLOGICA.....	5R01 LM02327-03	16,462
SCHENBERG, I HERBERT.....	HEREDITARY DEFECTS IN PROTEIN SYNTHESIS.....	3R01 AM01059-21S1	108,549
SCHILDKRAUT, CARL L.....	DNA OF NORMAL AND MALIGNANT CELLS.....	5R01 GM22332-03	108,567
SCHULMAN, LA DONNE.....	PROTEIN-NUCLEIC ACID INTERACTIONS.....	2R01 GM16995-09	81,262
SEIFTER, SAM.....	BIOCHEMICAL ASPECTS OF AGING IN VITRO AND IN VIVO.....	3P01 AG00374-05S1	16,000
SEIFTER, SAM.....	BIOCHEMICAL ASPECTS OF AGING IN VITRO AND IN VIVO.....	5P01 AG00374-06	479,966
SEIFTER, SAM.....	BIOSYNTHESIS OF LYSINONORLEUCINE IN ELASTIN OF AORTAE.....	5R01 HL17975-02	36,051
SHAFRITZ, DAVID A.....	PROTEIN SYNTHESIS IN NORMAL AND REGENERATING LIVER.....	2R01 AM17609-04	104,527
SHAPIRO, LUCILLE.....	GENETIC CONTROL OF CELL GROWTH AND DEVELOPMENT.....	5P01 GM11301-15	492,728
SHULMAN, KENNETH.....	BIOMECHANICS OF ICP IN VASOGENIC EDEMA.....	5R01 NS07871-09	91,184
SHULMAN, KENNETH.....	FLUID RESTRICTION IN ACUTE SUBARACHNOID HEMORRHAGE.....	5R01 NS12500-03	30,486
SKOULTCHI, ARTHUR I.....	CONTROL OF DIFFERENTIATION OF ERYTHROLEUKEMIC CELLS.....	2R01 CA16368-04	83,046
SOEIRO, RUY.....	PROCESSING OF RNA IN HUMAN CANCER HELA CELLS.....	5R01 CA10993-09	75,832
SONNENBLICK, EDMUND H.....	MECHANISMS OF HEART FAILURE IN THE MYOPATHIC HAMSTER.....	3R01 HL18824-02S1	518
SONNENBLICK, EDMUND H.....	MECHANISMS OF HEART FAILURE IN THE MYOPATHIC HAMSTER.....	5R01 HL18824-03	79,546
SONNENBLICK, EDMUND H.....	MYOCARDIAL FUNCTION IN DIABETES MELLITUS.....	5R01 HL20426-02	137,809
SPENCER, PETER S.....	CONTROL OF MYELINATION IN PATHOLOGIC STATES.....	5R01 NS13106-02	44,152
SPITZER, ADRIAN.....	MICROPUNCTURE STUDY OF THE NEONATAL KIDNEY.....	5R01 AM12904-09	64,356
STANLEY, EVAN R.....	HORMONE-DEPENDENCE AND AUTONOMY IN TUMOR GROWTH.....	1R01 CA21605-01	58,505
STEEVES, RICHARD A.....	HELPER FACTORS FOR FRIEND SPLEEN FOCUS-FORMING VIRUS.....	5R01 CA14529-05	37,649
STEINMAN, HOWARD M.....	STRUCTURE AND FUNCTION OF SUPEROXIDE DISMUTASES.....	7R01 GM24527-01	60,303

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SUZUKI, KINUKO.....	EXPERIMENTAL PATHOLOGY OF DEVELOPING NERVOUS SYSTEM.....	5R01 NS10803-06	67,654
SUZUKI, KUNIHICO.....	CHEMICAL PATHOLOGY OF NEUROLOGICAL DISORDERS.....	5R01 NS10885-06	162,084
SUZUKI, KUNIHICO.....	CHOLESTEROL ESTER METABOLISM IN THE BRAIN.....	1R01 NS13578-01	66,467
TERRY, ROBERT D.....	CYTOLOGIC STUDIES IN DISEASES OF THE NERVOUS SYSTEM.....	5R01 NS02255-19	193,638
VOLK, HERBERT.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12040-06	58,044
VOLK, HERBERT.....	CLINICAL CANCER EDUCATION PROGRAM (MEDICAL).....	5R25 CA18009-03	140,318
WEBER, HERBERT.....	MYOCARDIAL/VASCULAR CONTRACTILITY & CYCLIC NUCLEOTIDES.....	1R23 HL21421-01	47,017
WILLIAMS, M HENRY, JR.....	REVERSIBILITY OF CHRONIC LUNG DISEASE.....	5R01 HL18434-03	51,202
WITTENBERG, BEATRICE A.....	MYOGLOBIN AND OXYGEN SUPPLY TO HEART AND MUSCLE CELLS.....	5R01 HL19299-02	64,163
WOLINSKY, HARVEY.....	STRUCTURE-FUNCTION RELATIONS OF BLOOD VESSELS.....	5R01 HL12766-08	96,441
WU, CHENG-WEN.....	MECHANISM AND REGULATION OF GENE TRANSCRIPTION.....	5R01 GM19062-06	102,929
YELLIN, EDWARD L.....	DYNAMIC DETERMINANTS OF LEFT VENTRICULAR FILLING.....	5R01 HL19391-02	56,219
ORGANIZATION TOTAL	141	22,346,032	
ONEONTA			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT ONEONTA ZIP CODE 13820			
CHIANG, JOSEPH F.....	MOLECULAR STRUCTURE OF BIOLOGICAL INTEREST COMPOUNDS.....	5R01 CA11537-08	16,711
ORGANIZATION TOTAL	1	16,711	
ORANGEBURG			
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—ROCKLAND PSYCHIATRIC CENTER ZIP CODE 10962			
KLINE, NATHAN S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05651-11	32,127
ORGANIZATION TOTAL	1	32,127	
PLATTSBURGH			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT PLATTSBURGH ZIP CODE 12901			
GRAZIADEI, WILLIAM D.....	INTERFERON: POST-TRANSCRIPTIONAL MECHANISM.....	5R01 AI13168-02	31,347
MOORE, RICHARD D.....	MECHANISM OF INSULIN ACTION UPON SODIUM PUMP.....	5R01 AM17531-03	34,604
MOORE, RICHARD D.....	ROLE OF SODIUM PUMP IN CELLULAR ACTION OF INSULIN.....	1R01 AM21059-01	56,209
ORGANIZATION TOTAL	3	122,160	
POTSDAM			
CLARKSON COLLEGE OF TECHNOLOGY ZIP CODE 13676			
PETHICA, BRIAN A.....	THE EFFECTS OF APPLIED ELECTRIC FIELDS ON SURFACE FILMS.....	1R01 GM24068-01	55,810
PETHICA, BRIAN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07105-01	15,878
SIIMAN, OLAVI.....	LIFE-SUSTAINING SUBSTANCES: COPPER AND ZINC PROTEINS.....	5R01 GM23072-02	33,829
ORGANIZATION TOTAL	3	105,517	
POUGHKEEPSIE			
VASSAR COLLEGE ZIP CODE 12601			
JOHNSON, PATRICIA R.....	GROWTH OF ZUCKER RAT PREADIPOCYTES AND FETAL HEPATOCYTES.....	5R01 AM19382-02	40,628
ORGANIZATION TOTAL	1	40,628	
PURCHASE			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT PURCHASE ZIP CODE 10577			
WOLF, GEORGE.....	NEURAL MECHANISMS OF A MODEL DRIVE SYSTEM.....	5R01 NS12514-02	34,445
ORGANIZATION TOTAL	1	34,445	
RHINEBECK			
ASTOR HOME FOR CHILDREN ZIP CODE 12572			
MORA, GEORGE.....	TRANSLATION OF WEYER'S 'DE PRAESTIGIIS DAEMONUM'.....	1R01 LM02726-01	22,425

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ORGANIZATION TOTAL	1	22,425	
ROCHESTER			
EASTMAN DENTAL CENTER ZIP CODE 14605			
BIBBY, BASIL G.....	A WORKSHOP CONFERENCE ON METHODS OF CARIES PREDICTION	1R13 DE04743-01	37,796
CURZON, MARTIN E.....	STRONTIUM AND DENTAL CARIES	5R01 DE04330-03	72,892
GILMOUR, MARION N.....	THE MICROBIAL COMPOSITION OF DENTAL PLAQUE	5R01 DE03378-07	108,305
LITTLE, MARGUERITE F.....	TRACE ELEMENT INFLUENCE ON CARIES IN VITRO	5R01 DE04431-02	49,314
MC HUGH, WILLIAM D.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05548-15	28,922
ZANDER, HELMUT A.....	BASIC STUDIES BEARING ON PERIODONTAL DISEASE	5P01 DE01648-15	212,469
ORGANIZATION TOTAL	6	509,692	
ROCHESTER INSTITUTE OF TECHNOLOGY ZIP CODE 14623			
LIPPERT, JOSEPH L.....	RAMAN SPECTRAL STUDIES OF LIPID-PROTEIN INTERACTIONS.....	1R01 GM24408-01	42,071
ORGANIZATION TOTAL	1	42,071	
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
ADER, ROBERT.....	BEHAVIORALLY CONDITIONED IMMUNOSUPPRESSION.....	5R01 HD09977-02	65,148
ALLEN, PETER Z.....	IMMUNOCHEMISTRY OF N. GONORRHOEAE ALPHA ANTIGENS	5R01 AI12356-03	36,177
AUER, HENRY E.....	CYTOCHROME OXIDASE-CYTOCHROME C INTERACTIONS.....	5R01 GM21687-03	20,254
BAKEMEIER, RICHARD F.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17988-03	158,864
BALDUZZI, PIERO C.....	GENETIC STUDIES OF RNA TUMOR VIRUSES.....	2R01 CA15716-04	83,138
BALE, WILLIAM F.....	PREPARATION OF 125I-ANTIBODY LOCALIZING IN TUMORS.....	5R01 CA16749-03	11,507
BANERJEE, SHAILESH P.....	CARDIAC GLYCOSIDES AND DIURETICS: ROLE OF NAO PUMP	5R01 HL18185-03	67,178
BENNETT, JOHN M.....	COOPERATIVE STUDY OF ONCOLOGY	5R10 CA11083-10	331,926
BERNHARD, WILLIAM A.....	THE EFFECTS OF IONIZING RADIATION ON NUCLEIC ACIDS.....	5R01 GM20688-03	47,414
BOSMANN, H BRUCE.....	GLYCOPROTEIN SHEDDING AND METASTASIS.....	1R01 CA19757-01A1	60,581
BOSMANN, H BRUCE.....	ASPECTS OF DENERVATED MUSCLE.....	5R01 NS12461-03	40,492
BRODOWS, R G.....	CONTROL OF BASAL INSULIN SECRETION IN MAN.....	1R01 AM21664-01	42,253
BROWN, JOHN L.....	VISION: SPATIAL, TEMPORAL AND ADAPTING EFFECTS	5R01 EY00680-06	48,099
BROWN, JOHN L.....	VISUAL SCIENCE RESEARCH CENTER SUPPORT	2P30 EY01319-04	170,402
BROWN, JOHN L.....	DEVELOPMENT OF VISION IN STROBOSCOPIC ILLUMINATION	1R01 EY01875-01	34,134
CAFFERATA, ROBERT L.....	THE EXPRESSION OF NEURONAL SPECIFICITY	5R01 EY01529-03	70,016
CAMPBELL, ROBERT G.....	STUDIES OF HUMAN FEEDING BEHAVIOR	1R01 AM20494-01	112,624
CARSTENSEN, EDWIN L.....	INTERACTION OF ULTRASOUND WITH BIOLOGICAL MATERIAL.....	5R01 GM09933-15	89,002
CHAPMAN, ROBERT M.....	VISUAL MECHANISMS FOR WAVE LENGTH DISCRIMINATION	5R01 EY01593-03	55,274
CHEY, WILLIAM Y.....	RADIOIMMUNOASSAY OF SECRETIN AND GASTRIN.....	3R01 AM16939-03S2	8,270
CHING, MELVIN CHUNG.....	BRAIN RELEASING HORMONES IN PITUITARY PORTAL BLOOD.....	1R01 HD10912-01	48,566
CLARKSON, THOMAS W.....	TRACE CONTAMINANTS: ENVIRONMENTAL HEALTH HAZARDS TO MAN.....	5P30 ES01247-03	998,243
CLARKSON, THOMAS W.....	HEAVY METALS AS ENVIRONMENTAL HAZARDS TO MAN.....	5P01 ES01248-02	543,822
COHEN, GERALD H.....	PUPIL RESPONSE AS AN INDEX FOR CHROMATIC MECHANISMS.....	5R01 EY01234-03	41,458
COHEN, JULES.....	HEMOGLOBIN FUNCTION AND TISSUE OXYGENATION.....	5R01 HL18328-03	57,400
COHEN, JULIUS J.....	RENAL SUBSTRATE UTILIZATION IN RELATION TO FUNCTION	5R01 AM03602-19	72,850
COHEN, NICHOLAS.....	COMPARATIVE AND DEVELOPMENTAL IMMUNOLOGY.....	5R01 HD07901-10	51,771
COLEMAN, JAMES R.....	ELECTRON PROBE INVESTIGATION OF CELL CALCIUM.....	5R01 AM14272-08	52,930
COLEMAN, PAUL D.....	GENETIC AND POSTNATAL EFFECTS ON BRAIN DEVELOPMENT.....	5R01 NS07870-10	66,985
COOPER, ROBERT A, JR.....	CORE SUPPORT GRANT FOR CANCER CENTER.....	5P30 CA11198-09	1,343,037
CORWIN, THOMAS R.....	SURROUND FIELDS AND TEMPORAL BRIGHTNESS ENHANCEMENT.....	5R01 EY01986-02	40,126
DAHNEKE, BARTON E.....	SIZE/CHEMICAL MEASUREMENTS OF ATMOSPHERIC PARTICLES.....	5R01 ES01107-03	81,977
DAVIDSON, PHILIP W.....	REHABILITATION OF HAPTIC PERCEPTION IN THE BLIND.....	5R01 EY01790-02	35,542
DOLAN, THOMAS E.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA12482-06	33,860
DOTY, ROBERT W.....	LEARNING, PERCEPTION, AND NEURAL INTEGRATION.....	5R01 NS03606-16	124,263
DRLICA, KARL A.....	STRUCTURE OF THE BACTERIAL CHROMOSOME.....	1R01 GM24320-01	104,844
DRUCKER, WILLIAM R.....	METABOLIC BASIS FOR HOMEOSTASIS IN SHOCK.....	7R01 GM25043-01	73,432
EMERSON, ROBERT C.....	IMAGE MOVEMENT: NEURAL PROCESSING MECHANISMS	5R01 EY01440-04	11,230
FISCHER, HARRY W.....	MULTIPLE FACTORS IN SEVERE REACTIONS IN UROGRAPHY.....	5R01 GM22917-02	30,686
FRANCE, ROBERT R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07069-12	95,305
GOH, KONG-OO.....	CELL-MEDIATED IMMUNOLOGICAL DEFECTS AFTER IRRADIATION.....	5R01 CA14876-05	86,614

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
GOROVSKY, MARTIN A.....	REPEATED GENES: AMPLIFICATION, EVOLUTION AND FUNCTION	3R01 GM21793-02S1	6,016
GOROVSKY, MARTIN A.....	REPEATED GENES: AMPLIFICATION, EVOLUTION AND FUNCTION	5R01 GM21793-03	89,056
GRAMIAK, RAYMOND.....	NEW CONCEPTS IN CARDIAC ULTRASOUND TECHNOLOGY.....	5R01 HL15016-06	89,991
GRAMIAK, RAYMOND.....	DEVELOPMENT OF CLINICAL ULTRASOUND CINECARDIOGRAPHY.....	2R01 HL16260-03	118,292
GROSS, PAUL R.....	HISTONE MRNA AND HISTONE SYNTHESIS IN DEVELOPMENT.....	5R01 HD08652-04	85,057
HATTMAN, STANLEY M.....	DNA MODIFICATION/RESTRICTION IN PRO- AND EUKARYOTES.....	5R01 AI10864-06	79,568
HEMPELMANN, LOUIS H.....	HUMAN RADIATION CARCINOGENESIS STUDY	1R18 CA19764-01A1	114,413
HEMPELMANN, LOUIS H.....	SCREENING FOR NEOPLASMS IN IRRADIATED POPULATIONS.....	1R01 CA21452-01	45,196
HENSHAW, EDGAR C.....	INTERMEDIARY METABOLISM IN ANIMALS AND MAN.....	5R01 CA21663-02	134,561
HILF, RUSSELL.....	BIOCHEMICAL BASIS OF HORMONE RESPONSIVENESS IN BREAST.....	5R01 CA12836-06	90,834
HILF, RUSSELL.....	MECHANISMS OF ACTION OF INSULIN ON MAMMARY TUMORS.....	5R01 CA16660-03	77,072
HINKLE, DAVID C.....	BACTERIOPHAGE T7 DNA REPLICATION IN VITRO.....	5R01 GM21782-03	46,402
HINKLE, PATRICIA M.....	MODULATION OF RECEPTOR NUMBER IN CULTURED CELLS.....	1R01 AM19974-01	65,987
HOFFMAN, GLORIA E.....	IMMUNOCYTOCHEMISTRY OF LH-RH AND OTHER NEUROPEPTIDES.....	1R01 NS13725-01	40,952
HONIG, CARL R.....	CONTROLS OF CARDIAC AND VASCULAR SMOOTH MUSCLES.....	5R01 HL03290-21	113,398
HYDE, RICHARD W.....	LUNG TISSUE AND WATER VOLUME.....	2R01 HL16784-02	121,462
ISON, JAMES R.....	FACILITATION AND INHIBITION OF REFLEX BEHAVIOR.....	3R01 NS12443-02S1	9,629
ISON, JAMES R.....	FACILITATION AND INHIBITION OF REFLEX BEHAVIOR.....	5R01 NS12443-03	51,132
IZZO, JOSEPH L.....	EXPERIMENTAL STUDIES—INSULIN, GLUCAGON, PROINSULIN.....	5R01 AM03556-17	71,428
KAPPLER, JOHN W.....	REGULATORY MECHANISMS IN THE IMMUNE RESPONSE.....	2R01 AI11558-04	50,774
KEILSON, JULIAN.....	A MULTICOMPONENT CIRCULATORY METABOLISM MODEL.....	5R01 HL20363-02	27,947
KENDE, ANDREW S.....	ANTHRACYCLINE AND CHROMOMYCIN ANTITUMOR AGENTS.....	2R01 CA11326-09	82,043
KENDE, ANDREW S.....	TWISTED BIARYL ANTITUMOR AGENTS.....	5R01 CA18846-02	85,088
KIMMICH, GEORGE A.....	MECHANISM OF SODIUM-DEPENDENT METABOLITE TRANSPORT.....	3R01 AM15365-06S1	6,574
KIRKPATRICK, FRANCIS H, JR.....	SPECTRIN, ACTIN, LIPID AND RED CELL MEMBRANE STRUCTURE.....	5R01 HL18551-02	20,855
KLEMPERER, MARTIN R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	3R10 CA11174-07A1S1	22,697
KLEMPERER, MARTIN R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	2R10 CA11174-08A1	20,617
KNIGGE, KARL M.....	BASIC AND CLINICAL NEUROENDOCRINOLOGY.....	3P01 NS11642-03S2	99,280
KRAUS, ALAN L.....	STUDIES OF LABORATORY ANIMAL DISEASES.....	2P40 RR00658-06	59,307
KREILICK, ROBERT W.....	LOCAL STRUCTURE OF BIOLOGICAL METAL COMPLEXES.....	5R01 GM22793-02	33,712
KRUGH, THOMAS R.....	MOLECULAR BASIS OF THE ACTINOMYCIN-DNA INTERACTION.....	5R01 CA14103-05	72,806
KRUGH, THOMAS R.....	PHYSICOCHEMICAL STUDIES OF INTERCALATING DRUGS.....	5R01 CA17865-03	75,041
LA CELLE, PAUL L.....	DETERMINANTS OF RBC DEFORMABILITY AND CAPILLARY FLOW.....	5R01 HL16421-07	63,505
LA CELLE, PAUL L.....	CENTER FOR THE STUDY OF BLOOD CELL RHEOLOGY.....	5P01 HL18208-03	370,095
LAWRENCE, CHRISTOPHER W.....	RADIATION MUTAGENESIS AND REPAIR IN SACCHAROMYCES.....	5R01 GM21858-03	88,832
LEDDY, JOHN P.....	HOST DEFENSE, INFLAMMATION AND CELLULAR INJURY.....	5R01 AI12568-03	116,800
LICHTMAN, MARSHALL A.....	SUBSTRATE AND CATION TRANSPORT IN HUMAN LEUKOCYTES.....	5R01 CA12790-06	106,554
LIN, SHU-REN.....	CEREBRAL BLOOD FLOW AFTER CARDIAC ARREST.....	5R01 HL18590-02	45,365
LOCKWOOD, DEAN H.....	INSULIN ACTION IN NORMAL AND RESISTANT STATES.....	5R01 AM20129-02	154,040
MANILOFF, JACK.....	CELLULAR AND MOLECULAR BIOLOGY OF MYCOPLASMAS.....	5R01 AI07939-10	52,241
MANILOFF, JACK.....	BIOLOGY OF MYCOPLASMA VIRUSES.....	5R01 AI10605-06	69,307
MARIN, MATTHEW G.....	RESPIRATORY TRACT SECRETION OF IONS, WATER AND MUCUS.....	1R01 HL21314-01	79,065
MARINETTI, GUIDO V.....	BIOCHEMISTRY AND FUNCTION OF LIPIDS AND CELL MEMBRANES.....	5R01 HL02063-22	76,999
MARQUIS, ROBERT E.....	PHYSIOLOGY OF DENTAL PLAQUE BACTERIA.....	5R01 DE04132-03	50,001
MENGUY, RENE.....	GASTRIC MUCOSAL ENERGY METABOLISM IN STRESS ULCERATION.....	5R01 AM17955-03	41,608
MENGUY, RENE.....	INFLUENCE OF SHOCK ON ENERGY METABOLISM.....	9R01 GM24514-04	58,467
MERIN, ROBERT G.....	EFFECT OF INHALATION ANESTHESIA ON MYOCARDIAL METABOLISM.....	3R01 HL13257-07S1	22,219
MERIN, ROBERT G.....	EFFECT OF INHALATION ANESTHESIA ON MYOCARDIAL METABOLISM.....	2R01 HL13257-08	96,493
MILLER, LEON L.....	NET SYNTHESIS OF PLASMA PROTEINS BY PERFUSED LIVER.....	2R01 AM11029-12	65,948
MILLER, LEON L.....	DIABETES MELLITUS AND PLASMA GLYCOPROTEIN SYNTHESIS.....	1R01 AM21225-01	38,606
MILLER, MORTON W.....	BIOLOGICAL RESPONSES TO BIOMEDICAL ULTRASOUND.....	5R01 GM22680-03	48,322
MORRIS, THOMAS W.....	VENOUS STRUCTURE AND FUNCTION.....	5R01 HL19677-02	39,440
MOSS, ARTHUR J.....	FOLLOW-UP STUDY OF ACUTE CORONARY HEART ATTACKS.....	5R01 HL15790-05	152,947
NEUMAN, WILLIAM F.....	THE ROLE OF BONE MEMBRANES IN CALCIUM REGULATION.....	5R01 AM17074-03	83,924
NOTIDES, ANGELO C.....	THE UTERINE ESTROGEN-BINDING PROTEINS.....	5R01 HD06707-06	108,058
OLMSTED, JOANNA B.....	CELLULAR CONTROL OF NEURONAL MICROTUBULE ASSEMBLY.....	5R01 GM22214-03	53,606
ORBISON, J LOWELL.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00044-17	600,352
ORBISON, J LOWELL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05403-16	213,709
PENNEY, DAVID P.....	EFFECTS OF CHRONIC L-DOPA THERAPY ON GUT AND ADRENALS.....	5R01 NS10897-03	45,132
PERACCHIA, CAMILLO.....	STRUCTURE & FUNCTION IN LOW RESISTANCE JUNCTIONS.....	5R01 GM20113-04	36,163

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
POLAND, ALAN P.....	TOXICOLOGY OF CHLORINATED OIBENZO-P-OIOXINS.....	2R01 ES00965-04	28,971
PRAKASH, LOUISE.....	REPAIR OF DAMAGED DNA AND MUTAGENESIS IN YEAST.....	5R01 GM19261-06	38,995
PRAKASH, SATYA.....	GENE VARIATION IN NATURAL POPULATIONS.....	5R01 GM19217-06	92,406
PUSKIN, JEROME S.....	EPR OF CATION BINDING AND TRANSPORT BY MEMBRANES.....	5R01 GM21664-02	36,906
RICHTER, GOETZ W.....	IRON IN CELL PATHOLOGY.....	5R01 AM12381-10	80,394
RIFKIN, BARRY R.....	PATHOGENESIS OF BONE LOSS IN PERIODONTAL DISEASE.....	5R23 OE04443-02	38,989
ROWLEY, PETER T.....	CONTROL OF FETAL HEMOGLOBIN SYNTHESIS.....	5R01 AM16847-05	60,068
ROWLEY, PETER T.....	BETA-THALASSEMIA SCREENING AND GENETIC COUNSELING.....	3R01 HL17465-03S1	21,900
RUBIN, PHILIP.....	CLINICAL RADIATION RESEARCH CENTER.....	2P01 CA11051-09A1	509,026
RUBIN, PHILIP.....	COOPERATIVE STUDY OF RADIATION THERAPY.....	5R10 CA12262-06	94,023
RUBIN, PHILIP.....	E.C.O.G. RADIATION THERAPY COORDINATING OFFICE.....	2R10 CA16449-02	75,409
SCHLESSINGER, RICHARD H.....	AN EXPEDITIOUS SYNTHESIS OF PENTALENOLACTONE.....	1R01 CA21469-01	51,322
SCHMALE, ARTHUR.....	PSYCHOSOCIAL COLLABORATIVE GROUP FOR CANCER CONTROL.....	5R18 CA19681-02	391,752
SCHWARTZ, SEYMOUR I.....	PULMONARY PLATELETS IN SHOCK, TRAUMA AND EMBOLIZATION.....	5R01 HL13466-07	75,860
SEGEL, GEORGE B.....	CATION FLUX AND ENERGY METABOLISM IN LYMPHOCYTES.....	5R01 CA14576-05	49,999
SHAIKH, ZAHIR A.....	METALLOTHIONEIN IN METABOLISM AND TOXICITY OF CADMIUM.....	1R01 ES01448-01	47,619
SHAMOO, AOIL E.....	PHYSICAL BIOCHEMISTRY OF CALCIUM TRANSPORT IN MUSCLE.....	5R01 AM18892-02	60,873
SHERMAN, FRED.....	THE GENETIC CONTROL OF CYTOCHROME C.....	5R01 GM12702-13	191,140
SHRAGER, PETER G.....	BIOCHEMICAL PROBES OF EXCITABLE MEMBRANES.....	5R01 NS10500-05	30,846
SLAOEK, CELIA O.....	NEUROLOGICAL MECHANISMS IN VASOPRESSIN SECRETION.....	1R01 AM19761-01	36,767
SMITH, DAVID H.....	PATHOGENIC ROLE OF H. INFLUENZAE SURFACE PROTEINS.....	1R01 AI14411-01	91,220
SMITH, FRANK A.....	TOXICITY OF ORGANIC FLUORO COMPOUNDS, FLUOROACETATE.....	5R01 ES00779-03	49,180
SNIDER, RAY S.....	CEREBELLO-CEREBRO-CEREBELLAR CIRCUITS.....	5R01 NS11929-02	60,374
SOBELL, HENRY M.....	DRUG-NUCLEIC ACID INTERACTIONS BY X-RAY CRYSTALLOGRAPHY.....	5R01 CA18776-02	41,600
SOBELL, HENRY M.....	PURINE-PYRIMIDINE CRYSTALLINE COMPLEXES.....	5R01 GM13939-12	112,000
SPATARO, ANN C.....	THE DRUG SENSITIVITY OF AGING CELLS.....	1R23 AG00709-01	17,520
SUTHERLAND, ROBERT M.....	COMBINED RADIOTHERAPY-CHEMOTHERAPY STUDIES.....	5R01 CA20329-02	188,501
TANAKA, RYO.....	BIOCHEMICAL MECHANISM OF TRANSMITTER RELEASE.....	5R01 NS11951-04	62,489
TURNER, DOUGLAS H.....	KINETIC AND SPECTROSCOPIC STUDIES OF NUCLEIC ACIDS.....	5R01 GM22939-02	60,947
TURNER, MICHAEL O.....	TUMOR ASSOCIATED ANTIGENS IN LARGE BOWEL CANCER.....	5R26 CA16732-04	80,982
TURNER, MICHAEL O.....	PANCREATIC TUMOR-ASSOCIATED ANTIGENS.....	5R26 CA19193-02	63,958
WATERHOUSE, CHRISTINE.....	HEPATIC SYNTHESIS AND RELEASE OF TRIGLYCERIDE.....	5R01 CA07123-13	37,664
WHEELER, KENNETH T, JR.....	BRAIN TUMOR THERAPY: RADIATION, DRUGS & DNA REPAIR.....	1R01 CA21662-01	37,567
WIBERG, JOHN S.....	REGULATION OF PROTEIN SYNTHESIS BY BACTERIOPHAGE T4.....	5R01 GM21999-03	105,276
YOUNG, DONALD A.....	MECHANISM OF ACTION OF STEROID HORMONES.....	3R01 AM16177-05S1	8,950
YOUNG, DONALD A.....	MECHANISM OF ACTION OF STEROID HORMONES.....	5R01 AM16177-06	77,999
YOUNG, FRANK E.....	BIOLOGY OF GONORRHEA.....	2R01 AI11709-04	75,950
ZIGMAN, SEYMOUR.....	NEAR ULTRAVIOLET LIGHT EFFECTS ON OCULAR TISSUES.....	2R01 EY00459-08	116,123
ORGANIZATION TOTAL	139	13,933,344	

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CARTER, PHILIP B.....	HOST RESPONSE TO INTESTINAL FLORA.....	5R01 AM18530-03	26,474
COLLINS, FRANK M.....	A MOUSE INFECTION MODEL OF LEPROMATOUS LEPROSY.....	1R22 AI14065-01	78,713
COLLINS, FRANK M.....	PATHOGENESIS OF CHRONIC LUNG DISEASE.....	5R01 HL19774-02	68,987
LEFFORD, MAURICE J.....	CELLULAR DEFENSE MECHANISMS.....	5R01 AI07015-12	181,373
LEFFORD, MAURICE J.....	CELLULAR DEFENSES OF THE LUNG.....	5R01 AI12404-03	55,301
NORTH, ROBERT J.....	IMMUNOLOGICAL BASIS OF TUMOR REGRESSION.....	3R01 CA16642-03S1	41,239
NORTH, ROBERT J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05705-08	64,774
PHILLIPS, PHILIP G.....	BIOCHEMICAL PROBES OF MALIGNANT CELL SURFACES.....	5R01 CA20073-02	66,311
POULTER, LEONARD W.....	MECHANISMS OF IMMUNITY TO LEISHMANIASIS.....	1R01 AI14383-01	89,436
VOLKMAN, ALVIN.....	POLYARTHRITIS IN SALMONELLA-INFECTED RATS.....	2R01 AM17159-04	32,509
ORGANIZATION TOTAL	10	705,117	

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ALTMAN, LAWRENCE J.....	STUDIES ON THE INHIBITION OF SQUALENE SYNTHESIS.....	5R01 AM16773-06	89,639
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Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ALTMAN, LAWRENCE J.....	FACILITY FOR BIOMEDICAL NMR ON RADIOACTIVE SAMPLES.....	1P41 RR01039-01A1	105,363
BACHVAROFF, RADOSLAV J.....	LYMPHOCYTE DIFFERENTIATION AND IMMUNE RESPONSIVENESS.....	7R01 AI14455-01	75,303
BAUER, WILLIAM R.....	VIRAL AND PLASMID DNA STRUCTURE, PROTEIN INTERACTIONS.....	2R01 GM21176-04	60,678
BENJAMIN, WILLIAM B.....	RELATION OF PROTEIN PHOSPHORYLATION TO INSULIN ACTION.....	5R01 AM18905-03	67,853
BERGOFKY, EDWARD H.....	MECHANISM OF HYPOXIC REGULATION OF LUNG CIRCULATION.....	5R01 HL17711-04	101,407
BROWN, JOEL E.....	VISUAL RECEPTOR POTENTIALS.....	5R01 EY01914-02	36,638
BROWN, JOEL E.....	ANATOMY AND PHYSIOLOGY OF VISION.....	5R01 EY01915-02	23,732
CHU, BENJAMIN.....	APPLICATION OF LASER SCATTERING TO BIOLOGICAL SYSTEMS.....	5R01 GM20982-03	42,465
COHEN, IRA S.....	CARDIAC ELECTROPHYSIOLOGY: EFFECTS OF IONS AND DRUGS.....	1R01 HL20558-01	23,702
COHEN, SEYMOUR S.....	STUDIES ON NORMAL AND VIRUS-INFECTED ANIMAL CELLS.....	5R01 AI14005-02	126,782
COLLER, BARRY S.....	RISTOCETIN INDUCED PLATELET AGGREGATION.....	5R01 HL19278-02	30,304
DELIGAS, NICHOLAS.....	RIBOSOME STRUCTURE, FUNCTION AND ANTIBIOTIC INTERACTIONS.....	5R01 GM20052-05	51,488
DEWEY, MAYNARD M.....	THE EFFECT OF FILAMENT LENGTH ON STRIATED MUSCLE TENSION.....	5R01 AM18750-02	62,969
EISENBERG, MOISES.....	INCORPORATION OF RHODOPSIN INTO ARTIFICIAL MEMBRANES.....	5R01 EY01530-02	27,339
FARA, JOHN W.....	HORMONAL CONTROL OF MESENTERIC BLOOD FLOW.....	5R01 HL15422-05	17,067
FLEAGLE, JOHN G.....	GROWTH AND DEVELOPMENT IN EXPERIMENTAL MALNUTRITION.....	1R01 HD10626-01	19,320
FOWLER, FRANK W.....	SYNTHESIS OF ANTINEOPLASTIC ALKALOIDS.....	5R01 CA18170-02	34,483
FREUNDLICH, MARTIN.....	MOLECULAR MECHANISMS IN MULTIVALENT REPRESSION.....	2R01 GM17152-09	75,722
FRIEDMAN, HAROLD L.....	ANTIBIOTIC-ION INTERACTIONS.....	2R01 HL16474-04	65,761
GARANT, PHILIAS R.....	ULTRASTRUCTURE OF EXPERIMENTAL PERIODONTITIS.....	5R01 DE03745-06	91,531
GILCHRIST, ALAN I.....	REFLECTANCE AND ILLUMINATION EDGES.....	1R01 EY02101-01	18,814
GOLUB, LORNE M.....	GINGIVAL COLLAGEN METABOLISM IN HEALTH AND DISEASE.....	5R01 DE03987-03	58,931
GORDON, JOEL S.....	CHANGES IN CELL-SPECIFIC NONHISTONES DURING MYOGENESIS.....	5R01 AM18859-02	45,751
GROLLMAN, ARTHUR P.....	MOLECULAR PHARMACOLOGY OF TUMOR AND VIRUS INHIBITORS.....	2R01 CA17395-03	177,398
HANSON, DAVID M.....	SPECTROSCOPIC INVESTIGATION OF CONFORMATIONAL CHANGES.....	5R01 GM20803-04	32,028
HELOQUIST, PAUL M.....	SYNTHESIS OF THE ANTI-TUMOR AGENT SPARSOMYCIN.....	1R01 CA20701-01A1	22,244
IACONO, VINCENT J.....	IMMUNOCHEMICAL ANALYSES OF ACTINOMYCES ANTIGENS.....	5R23 DE04168-03	15,306
INOUE, MASAYORI.....	CELL DIVISION AND MEMBRANE PROTEINS.....	5R01 GM19043-06	76,875
JANOFF, AARON.....	HUMAN LEUKOCYTE PROTEASES AND THEIR LUNG TARGETS.....	2R01 HL14262-06	69,724
JOHNSON, FRANCIS.....	SYNTHESIS AND CHEMISTRY OF THE ANTIBIOTIC, THERMORUBIN.....	1R01 AI13988-01	40,003
JOHNSON, FRANCIS.....	TOTAL SYNTHESIS OF THE ANTITUMOR ANTHRACYCLINE AGLYCONES.....	1R01 CA20197-01	53,397
JONES, RAYMOND F.....	ENZYME TURNOVER DURING GROWTH AND DEVELOPMENT.....	5R01 HD07986-04	38,207
JONES, RAYMOND F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07067-12	97,875
KARTEN, HARVEY J.....	ANATOMICAL ORGANIZATION OF THE BRAIN.....	5R01 NS12078-04	40,634
KATES, JOSEPH R.....	MOLECULAR BIOLOGY OF VACCINIA VIRUS REPLICATION.....	5R01 AI11839-04	100,199
KATZ, EUGENE R.....	DEVELOPMENTAL GENETIC STUDIES ON CELLULAR SLIME MOLDS.....	2R01 GM18476-05	75,373
KAYE, HERBERT.....	BEHAVIORAL CHARACTERISTICS OF THE NEWBORN INFANT.....	5R01 HD09867-02	75,311
KLEINBERG, ISRAEL.....	EFFECT OF SALIVA ON THE METABOLISM OF DENTAL PLAQUE.....	5R01 DE03993-03	122,743
KLEINBERG, ISRAEL.....	WORKSHOP ON SALIVA AND DENTAL CARIES.....	1R13 DE04984-01	45,727
KOEHN, RICHARD K.....	BIOCHEMICAL GENETICS OF CORRELATED ALLOZYME VARIATION.....	2R01 GM21133-03	54,530
KUSCHNER, MARVIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05736-05	106,160
LAUTERBUR, PAUL C.....	APPLICATION OF NMR ZEUGMATOGRAPHY IN CANCER RESEARCH.....	2R01 CA15300-04	212,852
LUCAS, JOSEPH J.....	ANALYSIS OF GENE REGULATION BY NUCLEAR TRANSPLANTATION.....	1R01 CA22302-01	50,580
MACDONALD, MARIAN L.....	PSYCHOSOCIAL TREATMENTS FOR EXTENDED CARE FACILITIES.....	1R23 AG00608-01	14,278
MILLER, FREDERICK.....	A STUDY OF A COLONIC MUCOPROTEIN ANTIGEN.....	5R01 CA17518-03	34,011
MILLER, FREDERICK.....	CYTOSKELETAL STRUCTURE OF NORMAL AND NEOPLASTIC TISSUES.....	1R01 CA21930-01	44,154
OHTSUBO, EIICHI.....	ELECTRON MICROSCOPE ANALYSIS OF GENETIC FUSION.....	5R01 GM22007-03	38,172
POCCIA, DOMINIC L.....	ACTIVATION OF SPERM NUCLEUS AT FERTILIZATION.....	5R01 HD09654-03	54,152
POLLACK, ROBERT E.....	ONCOGENIC VIRUS GENE CONTROL OF CELL GROWTH AND SHAPE.....	5R01 CA18176-02	23,041
POLLOCK, JERRY J.....	LYSOZYME-CELL SURFACE INTERACTIONS AND ORAL DEFENSE.....	5R01 DE04296-03	80,935
RAMIREZ, FAUSTO.....	SUPERPHOSPHORYLATING AGENTS.....	2R01 GM20672-17	101,095
RAPAPORT, FELIX T.....	INDUCTION OF UNRESPONSIVENESS TO ALLOGRAFTS.....	7R01 AI14453-01	109,573
RAPAPORT, FELIX T.....	MECHANISMS OF CELL DAMAGE IN SEVERE BURNS.....	7R01 GM24481-01	102,861
RILEY, MONICA.....	EVOLUTION OF THE TRYPTOPHANASE GENE IN E. COLI.....	2R01 GM21316-04	72,057
SACHS, JOHN R.....	PHYSIOLOGICAL ASPECTS OF MEMBRANE CATION TRANSPORT.....	5R01 AM19185-03	87,101
SADOGLU, PERIHAN.....	EYE DEVELOPMENT AND CATARACT FORMATION.....	1R01 EY01892-01	90,444
SCANDELLA, CARL J.....	CONTROL OF MEMBRANE FLUIDITY IN ANIMAL CELLS.....	5R01 GM23218-02	55,984
SIMPSON, MELVIN V.....	MITOCHONDRIA: NUCLEIC ACID SYNTHESIS AND ROLE OF DNA.....	5R01 GM22333-11	55,254
SOKAL, ROBERT R.....	GENETIC ARCHITECTURE OF ADAPTIVE RACIAL DIFFERENCES.....	5R01 GM20702-03	39,364
SOKOLOFF, LEON.....	LUBRICATING ABILITY OF SYNOVIAL FLUID.....	3R01 AM17229-03S1	2,615

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SOKOLOFF, LEON.....	IN VITRO CULTURE OF ARTICULAR CHONDROCYTES.....	2R01 AM17258-03	107,592
SREEBNY, LEO M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05778-02	42,527
STRICHARTZ, GARY R.....	MOLECULAR ASPECTS OF SAXITOXIN BINDING TO NERVE.....	5R01 NS12828-02	36,884
TAICHMAN, LORNE B.....	STABILITY OF DIFFERENTIATION: CRANIOFACIAL STUDY.....	5R23 DE04511-02	15,106
TEGMEYER, PETER J.....	MECHANISMS OF VIRAL ONCOGENESIS: SV40 GENE FUNCTION.....	5R01 CA18808-03	62,006
TEWARSON, REGINALD P.....	NUMERICAL SOLUTION OF RENAL TRANSPORT EQUATIONS.....	3R01 AM17593-03S1	8,434
TSENG, LINDA.....	ESTRADIOL DEHYDROGENASE INDUCTION IN HUMAN ENDOMETRIUM.....	1R01 HD10933-01A1	32,866
VAN DER KLOOT, WILLIAM G.....	TRANSMITTER RELEASE BY NERVE TERMINALS.....	5R01 NS10320-06	42,611
WILLIAMS, DAVID L.....	HORMONAL REGULATION OF PHOSVITIN MESSENGER RNA.....	5R01 AM18171-03	46,169
WIMMER, ECKARD A.....	VIRAL ONCOGENESIS.....	5R01 CA15879-04	96,402
WITKOVSKY, PAUL.....	THE ORIGIN AND IONIC BASIS OF THE ELECTRORETINOGRAM.....	5R01 EY01762-02	94,376
YAZULLA, STEPHEN.....	SPATIO-CHROMATIC CODING IN RETINAL NEURONS.....	5R01 EY01682-02	34,385
ORGANIZATION TOTAL	73 4,484,697		
SYRACUSE			
STATE UNIVERSITY OF NEW YORK—COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY ZIP CODE 13210			
FLASHNER, MICHAEL.....	STRUCTURAL BIOCHEMISTRY OF BACTERIAL NEURAMINIDASES.....	5R01 AI12532-03	29,112
LALONDE, ROBERT T.....	NATURALLY OCCURRING MOSQUITO LARVICIDES.....	5R01 ES01278-02	28,901
NAKATSUGAWA, TSUTOMU.....	ORGANOPHOSPHATE-BIOMACROMOLECULE INTERACTIONS.....	2R01 ES01019-03	51,527
SCHUERCH, CONRAD.....	SYNTHETIC CARBOHYDRATE ANTIGENS AND HAPTENS.....	5R01 AI12509-03	67,107
SILVERSTEIN, ROBERT M.....	SEX PHEROMONES IN DISEASE TRANSMITTING TICKS.....	5R01 AI10987-05	24,496
TANENBAUM, STUART W.....	BIOCHEMISTRY OF CYTOTOXIC FUNGAL METABOLITES.....	5R01 AI11902-04	43,967
TANENBAUM, STUART W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07174-01	23,615
ORGANIZATION TOTAL	7 268,725		
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER ZIP CODE 13210			
ANDERSON, GUNNAR H, JR.....	ROLE OF ANGIOTENSIN SENSITIVITY IN RENIN RELEASE.....	5R01 HL19428-02	86,706
ARGYRIS, THOMAS S.....	RIBOSOME ACCUMULATION IN EPIDERMAL REGENERATION.....	5R01 AM18219-03	36,463
AUCHINCLOSS, J HOWLAND, JR.....	OXYGEN UPTAKE AT ONE MINUTE OF EXERCISE.....	5R01 HL17246-03	54,203
BEACH, DAVID H.....	LIPIDS IN A PSEUDOPHYLLIDEAN LIFE-CYCLE.....	1R01 AI13479-01A1	37,348
BORTOFF, ALEXANDER.....	COORDINATION OF VISCERAL SMOOTH MUSCLE ACTIVITY.....	5R01 AM06958-13	26,536
BORTOFF, ALEXANDER.....	EFFECT OF AGING ON GASTROINTESTINAL SMOOTH MUSCLE.....	5R01 AM18400-03	46,017
BROWN, OLIVER M.....	THE PRESENCE AND SIGNIFICANCE OF HEART ACETYLCHOLINE.....	5R01 HL17799-02	32,990
COLTON, RAYMOND H.....	AN INVESTIGATION OF VOICE CHANGE AFTER RADIOTHERAPY.....	5R18 CA17962-03	62,458
CROSS, RICHARD L.....	MECHANISM OF ATP SYNTHESIS BY THE RESPIRATORY CHAIN.....	5R01 GM23152-02	54,067
DOISY, RICHARD J.....	THE IMPORTANCE OF CHROMIUM IN HUMAN NUTRITION.....	5R01 AM15100-07	71,314
DOUGHERTY, ROBERT M.....	ONCOGENIC AND CHRONIC DISEASE WITH TUMOR VIRUSES.....	5R01 CA10148-11	135,293
GACEK, RICHARD R.....	THE VESTIBULAR NUCLEI AND THEIR CONNECTIONS.....	7R01 NS14285-01	34,652
GOODMAN, DONALD C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05402-16	132,486
GORDON, GERALD B.....	PATHOGENESIS OF LIPID ACCUMULATION.....	3R01 HL13713-06S1	7,356
GOTTLIEB, ARLAN J.....	PARTICIPATION IN CANCER AND LEUKEMIA GROUP B.....	1R10 CA21060-01A1	39,039
HAAS, DAVID C.....	STUDIES ON CELL-MEDIATED IMMUNITY IN POLYMYOSITIS.....	5R01 NS11266-03	34,167
HAMERNIK, ROGER P.....	AUDITORY EFFECT OF COMBINED IMPULSE & CONTINUOUS NOISE.....	2R01 ES00969-04	57,497
HODGE, CHARLES J.....	SUPRASEGMENTAL CONTROL OF SENSORY EVENTS.....	1R01 NS12761-01A1	58,831
HOLZ, GEORGE G, JR.....	LIPIDS OF LEISHMANIAS AND TRYPANOSOMES.....	2R01 AI05802-14	56,981
HSU, ROBERT Y.....	MECHANISM OF FATTY ACID SYNTHESIS IN ANIMALS.....	5R01 AM13390-10	44,045
JONES, DAVID B.....	FINE STRUCTURE OF DISEASED GLOMERULI.....	5R01 HL04300-19	44,612
KRONMAN, MARTIN J.....	MODE OF ACTION OF TEMPLATE DIRECTED POLYMERASES.....	5R01 GM21187-03	48,675
LEVINE, ROBERT A.....	CYCLIC NUCLEOTIDES AND MAMMALIAN GASTRIC SECRETION.....	5R01 AM17912-03	64,521
LINSCHER, WILLEM G.....	A NEW APPROACH TO DISSOLUTION OF CHOLESTEROL GALLSTONES.....	5R01 AM18496-02	44,672
LUCAS, JOHN J.....	MEMBRANE GLYCOPROTEIN CHANGES DURING DIFFERENTIATION.....	5R01 HD09046-03	46,165
MARINO, ANDREW A.....	BIOLOGICAL EFFECTS OF 60 HERTZ ELECTRIC FIELDS.....	1R01 ES01621-01	31,906
MC AFEE, JOHN G.....	NUCLEAR DIAGNOSTIC METHODS FOR RENAL DISEASES.....	2R01 GM18248-07	110,068
MC AFEE, JOHN G.....	LABELING GRANULOCYTES FOR DIAGNOSTIC APPLICATIONS.....	5R01 GM23033-02	99,259
MEYER, FRANZ D.....	STUDIES OF THE LIPID METABOLISM IN PARASITIC HELMINTHS.....	5R01 AI07486-11	62,387
MOZELL, MAXWELL M.....	THE ELECTROPHYSIOLOGY OF OLFACTORY DISCRIMINATION.....	5R01 NS03904-14	44,783
MUELLER, JUSTUS F.....	STUDIES ON SPARGANOSIS AND CESTODE BIOLOGY.....	5R01 AI01876-20	22,008
MURRAY, DAVID G.....	BIOMECHANICAL EVALUATION OF KNEE JOINT ENDOPROSTHESES.....	5R01 AM14964-05	55,812

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
NORD, SAMUEL G.....	BRAIN STEM MECHANISMS OF TRIGEMINAL NOCICEPTION.....	2R01 NS10814-04	67,145
OSKI, FRANK A.....	ERYTHROCYTE METABOLISM IN THE NEWBORN INFANT.....	5R01 HD07178-04	23,719
PRESTON, JAMES B.....	SUPRASEGMENTAL INFLUENCES ON SPINAL MOTONEURONS.....	5R01 NS02957-17	22,542
ROBINSON, JOSEPH D.....	CHANGES IN BRAIN MICROSOMAL STRUCTURE AND COMPOSITION.....	5R01 NS05430-12	46,714
ROBINSON, JOSEPH D.....	CALCIUM TRANSPORT IN THE NERVOUS SYSTEM.....	5R01 NS12193-03	34,927
ROSS, CHARLES R.....	RENAL TRANSPORT CARRIER FOR ORGANIC COMPOUNDS.....	5R01 HL02835-20	60,256
SPLITZER, ROGER E.....	THE ROLE OF PROPERDIN IN THE BIOLOGY OF COMPLEMENT.....	5R01 AI12721-03	76,062
STACH, ROBERT W.....	INVESTIGATIONS ON THE NERVE GROWTH FACTOR.....	5R01 NS12325-03	41,979
STONER, LARRY C.....	TRANSPORT ACROSS SINGLE PROXIMAL TUBULE CELLS.....	1R01 AM19521-01	49,509
STREETEN, BARBARA W.....	THE FIBER-GEL STRUCTURE OF THE OCULAR ZONULE.....	5R01 EY01602-03	44,471
TEPPERMAN, JAY.....	ADAPTATION OF MEMBRANE-ASSOCIATED FUNCTIONS.....	2R01 AM05410-16	94,317
TERJUNG, RONALD L.....	SKELETAL MUSCLE ADAPTATIONS INDUCED BY TRAINING.....	7R01 AM21617-01	60,987
WEINER, IRWIN M.....	BIOCHEMICAL ASPECTS OF RENAL ELECTROLYTE TRANSPORT.....	9R01 AM20533-13	101,136
WILLIAMS, WILLIAM J.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00229-12	253,617
YNTEMA, CHESTER L.....	STUDIES ON DEVELOPMENT IN THE TURTLE.....	5R01 HD03484-10	38,811
YOUNG, RONALD F.....	ANATOMIC STUDY OF TRIGEMINAL PRIMARY AFFERENT FIBERS.....	5R01 DE04347-02	2,052
ORGANIZATION TOTAL	48	2,801,561	
SYRACUSE UNIVERSITY ZIP CODE 13210			
BARLOW, ROBERT B, JR.....	FUNCTIONAL ORGANIZATION OF THE VISUAL SYSTEM.....	3R01 EY00667-05S1	35,908
CHAN, SAMUEL H.....	ADENINE NUCLEOTIDE TRANSLOCATION IN TUMOR MITOCHONDRIA.....	1R01 CA20454-01A1	58,140
DITTMER, DONALD C.....	HETEROCYCLIC ORGANOSULFUR CHEMISTRY.....	5R01 CA08250-13	42,964
DOSA, MARTA L.....	DEVELOPMENT/EVALUATION OF HEALTH INFORMATION SHARING.....	1R01 LM02800-01	104,915
DUNHAM, PHILIP B.....	IMMUNOSTIMULATION OF MEMBRANE TRANSPORT IN TUMOR CELLS.....	5R01 CA19064-02	93,570
DUSEK, JEROME B.....	THE DEVELOPMENT OF THE SELF-CONCEPT IN ADOLESCENCE.....	5R01 HD09094-03	56,217
FALK, DARREL R.....	TISSUE DYNAMICS OF PYRIMIDINE SYNTHESIS IN DROSOPHILA.....	7R01 GM24049-01	14,744
FLORINI, JAMES R.....	EFFECT OF AGING ON LEVELS AND ACTION OF SOMATOMEDINS.....	1R01 AG00629-01	70,045
FLORINI, JAMES R.....	RNA AND PROTEIN SYNTHESIS IN REPAIR OF HEART INJURY.....	5R01 HL11551-10	71,690
FONDY, THOMAS P.....	ANALOG ALTERATION OF MEMBRANES IN CANCER CHEMOTHERAPY.....	2R01 CA10250-10A1	60,425
FONDY, THOMAS P.....	GLYCEROL-P SHUTTLE ISOENZYMES IN CANCER CHEMOTHERAPY.....	1R01 CA21640-01	15,639
GARDNER, ERIC F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07068-12	80,683
GARVEY, JUSTINE S.....	ANTIGEN METABOLISM IN MATURING AND SENESCENT ANIMALS.....	1R01 AG00111-01A1	82,284
HARTH, ERICH.....	DETERMINATION OF RECEPTIVE FIELDS IN VISUAL PATHWAYS.....	3R01 EY01215-03S1	25,374
HARTH, ERICH.....	DETERMINATION OF RECEPTIVE FIELDS IN VISUAL PATHWAYS.....	2R01 EY01215-04	69,556
LIPSON, EDWARD D.....	SYSTEM ANALYSIS OF PHYCOMYCES PHOTOMUTANTS.....	1R01 GM24367-01	54,275
SLEPECKY, RALPH A.....	ASYMMETRIC AND SYMMETRIC DIVISION IN DIFFERENTIATION.....	5R01 GM23228-02	53,235
STERN, S ALEXANDER.....	INERT GAS NARCOSIS AND THE LIPID 'FREE VOLUME'.....	5R01 GM19908-05	41,385
STURR, JOSEPH F.....	MECHANISMS OF VISUAL SENSITIVITY.....	5R01 EY01571-03	88,650
SULLIVAN, DAVID T.....	A DEVELOPMENTAL AND GENETIC STUDY OF A TRANSPORT SYSTEM.....	5R01 GM22366-02	44,278
TUPPER, JOSEPH T.....	CAMP AND THE MEMBRANE IN NORMAL AND MALIGNANT CELLS.....	5R01 CA17203-03	51,448
VERRILLO, RONALD T.....	CUTANEOUS MECHANORECEPTOR SYSTEMS.....	5R01 NS09940-06	81,165
VOURNAKIS, JOHN N.....	THE SECONDARY STRUCTURE OF EUKARYOTIC MESSENGER RNA.....	5R01 GM22280-03	47,730
WANG, CHIU-SEN.....	DEPOSITION OF HYGROSCOPIC AEROSOLS.....	5R01 HL19700-02	60,079
WARNER, FRED D.....	MACROMOLECULAR BASIS FOR CILIARY MOTION.....	2R01 GM20690-04	81,692
ZWISLOCKI, JOZEF J.....	SENSORY PROCESSES.....	3R01 NS03950-15S1	60,212
ZWISLOCKI, JOZEF J.....	SENSORY PROCESSES.....	5R01 NS03950-16	176,522
ORGANIZATION TOTAL	27	1,722,825	
TROY			
RENSSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181			
ARCHER, SYDNEY.....	THIOXANTHENONES AND ANTHRAQUINONES AS ANTITUMOR DRUGS.....	1R01 CA19674-01	50,928
DIWAN, JOYCE J.....	MITOCHONDRIAL SOLUTE TRANSPORT MECHANISMS.....	2R01 GM20726-03	55,065
DOREMUS, ROBERT H.....	GROWTH AND AGGLOMERATION OF CALCIUM OXALATE CRYSTALS.....	5R01 AM16132-06	41,833
FERRIS, JAMES P.....	PHOTOSYNTHESIS OF ANTIVIRAL AND ANTITUMOR DRUGS.....	5R01 CA14511-05	54,472
FERRIS, JAMES P.....	A FUNGAL MONOOXYGENASE SIMILAR TO HEPATIC P-450.....	5R01 GM22720-02	29,457
MOSS, GERALD.....	ANESTHESIA AND PATHWAYS OF BRAIN GLUCOSE OXIDATION.....	3R01 GM20560-03S1	8,503
MOW, VAN C.....	BIOMECHANICS OF AGING AND OSTEOARTHRITIC CARTILAGE.....	5R01 AM19094-02	84,541
NEWELL, JONATHAN C.....	PULMONARY HEMODYNAMICS IN ATELECTASIS AND HYPOXIA.....	5R01 HL18630-02	38,664

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
OSTRANDER, LEE E.....	TISSUE ANALYSIS BY MASS SPECTROMETER.....	1R01 HL20607-01	37,695
POTTS, KEVIN T.....	FUSED HETEROCYCLES AS POTENTIAL ANTICANCER AGENTS.....	5R01 CA08495-12	53,723
POTTS, KEVIN T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07104-11	45,719
ROY, HARRY.....	SYNTHESIS AND ASSEMBLY OF FRACTION I PROTEIN.....	5R01 GM23353-02	69,941
WILSON, DWIGHT E, JR.....	STUDIES ON CELL TRANSFORMATION HERPES VIRUS.....	5R01 CA16550-03	45,036
ORGANIZATION TOTAL	13	615,577	
UPTON			
ASSOCIATED UNIVERSITIES—BROOKHAVEN NATIONAL LABORATORY ZIP CODE 11973			
ATKINS, HAROLD L.....	DIAGNOSIS OF MYOCARDIAL INFARCTION BY RADIOISOTOPES.....	3R01 HL16553-03S1	21,704
BENNETT, GERALD W.....	BRAGG PEAK LOCALIZATION AND CONTROL IN VIVO.....	3R01 CA18347-02S1	44,730
BIELSKI, BENON H.....	STUDIES ON BIOLOGICAL SUPEROXIDE RADICAL MECHANISMS.....	1R01 GM23656-01	71,462
BURR, BENJAMIN.....	STORAGE PROTEIN SYNTHESIS IN MAIZE ENDOSPERM.....	1R01 GM24057-01	64,052
CRONKITE, EUGENE P.....	NEUTROPHILIC GRANULOCYTOPOIESIS IN NORMALS & LEUKEMICS.....	2R01 CA14742-04	70,599
CRONKITE, EUGENE P.....	HEMOPOIETIC REGULATORS PRODUCED IN CELL CULTURE.....	2R01 HL15685-04A2	106,541
CRONKITE, EUGENE P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05731-06	66,097
ELZINGA, MARSHALL.....	STRUCTURE-FUNCTION STUDIES ON ACTIN AND MYOSIN.....	7R01 HL21471-01	109,432
IWAI, JUNICHI.....	ENVIRONMENTAL-GENETIC INTERACTIONS IN HYPERTENSION.....	5R01 HL13408-05	50,436
IWAI, JUNICHI.....	HYPERTENSION: GENETIC INFLUENCE OF KIDNEY.....	5R01 HL14913-05	82,656
JEFFREY, GEORGE A.....	CRYSTAL STRUCTURAL STUDIES IN CARBOHYDRATE CHEMISTRY.....	5R01 GM21794-03	84,344
SELTZER, STANLEY.....	STUDY OF MECHANISM OF ENZYMIC CIS-TRANSISOMERIZATION.....	5R01 GM18451-06	23,683
SHAW, ELLIOTT N.....	SUPPORT FOR ELECTRON MICROSCOPE FACILITY.....	5P41 RR00715-05	214,929
STUDIER, F WILLIAM.....	REPLICATION OF T7 DNA.....	5R01 GM21872-03	54,236
SUTHERLAND, BETSY M.....	DNA REPAIR - HUMAN E. COLI PHOTOREACTIVATING ENZYMES.....	7R01 CA23096-01	82,770
WOLF, ALFRED P.....	A PROGRAM IN SUPPORT OF NUCLEAR MEDICINE.....	5P41 RR00657-03	169,637
ORGANIZATION TOTAL	16	1,317,308	
UTICA			
MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE ZIP CODE 13501			
MOE, GORDON K.....	CARDIAC ACTIONS OF DIGITALIS.....	5R01 HL19487-02	113,397
ORGANIZATION TOTAL	1	113,397	
VALHALLA			
NEW YORK MEDICAL COLLEGE ZIP CODE 10595			
DANISHEFSKY, ISIDORE.....	HEPARIN, BLOOD COAGULATION AND LIPID METABOLISM.....	2R01 HL16955-04	81,343
FISHER, CLARK A.....	THE CELL ENVELOPE ANTIGENS OF PROPIONIBACTERIUM ACNES.....	5R01 AI12704-03	14,673
FRANK, MORTON H.....	CHEMORECEPTOR REFLEXES FROM THE ILEUM.....	5R01 HL19268-02	38,602
GIACOMELLI, FILIBERTO.....	PRIMARY MYOCARDIAL DISEASE IN THE DIABETIC MOUSE.....	1R01 AM20926-01	55,973
GUTSTEIN, WILLIAM H.....	NEURAL FACTORS IN ATHEROGENESIS.....	5R01 HL18085-02	100,485
HERP, ANTHONY.....	CORE PROTEINS OF SALIVARY GLYCOPROTEINS.....	5R01 DE04084-03	48,210
HOCHSTADT, JOY.....	TRANSPORT BY MEMBRANE VESICLES OF CULTURED TUMOR CELLS.....	7R01 CA23083-01	141,641
HOROWITZ, MARTIN I.....	BIOCHEMISTRY OF GASTRIC SULFATED GLYCOPROTEINS.....	5R01 AM15475-07	95,047
HOROWITZ, MARTIN I.....	BIOCHEMISTRY OF LIPIDS IN NORMAL AND ULCERATED STOMACHS.....	5R01 AM15565-06	102,540
KIKKAWA, YUTAKA.....	ALVEOLAR TYPE II EPITHELIAL CELLS IN HEALTH & DISEASE.....	5R01 HD10366-02	146,122
LEVINE, NORMAN.....	MALE REPRODUCTION: EPIDIDYMAL MICROPUNCTURE STUDY.....	5R01 HD09010-03	59,057
LOUD, ALDEN V.....	HYPOTHERMIA AND THE HEART.....	5R01 HL14713-06	68,515
MC BRIDE, RAYMOND A.....	ANTITUMOR IMMUNITY IN AGAMMAGLOBULINEMIC INBRED FOWL.....	5R01 CA16164-10	189,624
MOHOS, STEVEN C.....	PATHOGENESIS OF GLOMERULAR MICROANGIOPATHY.....	1R01 AM20766-01	81,137
PIGMAN, W WARD.....	GLYCOPROTEINS OF NORMAL AND CANCEROUS COLONIC TISSUE.....	5R26 CA17168-03	115,473
TABACHNICK, MILTON.....	TRANSPORT OF THYROID HORMONES.....	3R01 AM05344-15S1	1,875
TABACHNICK, MILTON.....	TRANSPORT OF THYROID HORMONES.....	5R01 AM05344-16	74,512
THEIS, GAIL A.....	RESPONSES OF LYMPHOCYTES TO AN ONCOGENIC HERPES VIRUS.....	5R01 CA18904-02	44,316
WALLACE, SUSAN S.....	MODIFICATION OF X-RAY INDUCED DAMAGES IN PHAGE T4.....	5R01 CA21342-02	59,013
WIENER, JOSEPH.....	MORPHOGENESIS OF HYPERTENSIVE VASCULAR DISEASE.....	5R01 HL13742-06	95,866
ORGANIZATION TOTAL	20	1,614,024	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
STATE TOTAL	2,021	219,624,402	
NORTH CAROLINA			
CHAPEL HILL			
POLICY RESEARCH AND PLANNING GROUP ZIP CODE 27514			
HARDING, JOE R.....	ATTITUDES TOWARD FERTILITY REGULATING MECHANISMS.....	5R01 HD10688-02	54,243
ORGANIZATION TOTAL	1	54,243	
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514			
BASEMAN, JOEL B.....	GROWTH AND METABOLISM OF VIRULENT TREPONEMA PALLIDUM.....	5R01 AI11283-05	56,111
BEAR, RICHARD S.....	MOLECULAR STRUCTURE OF CONNECTIVE TISSUE FIBERS.....	2R01 AM14120-08	29,787
BEAR, RICHARD S.....	STRUCTURAL MOLECULAR NEUROANATOMY OF MYELIN.....	5R01 NS10681-06	35,127
BREESE, GEORGE R.....	NEUROPSYCHOPHARMACOLOGY OF DEVELOPMENTAL DISORDERS.....	1P01 HD10570-01	300,842
BRIGGAMAN, ROBERT A.....	UTILIZATION OF EPIDERMAL CELL MODEL FROM HUMAN SKIN.....	2R01 AM10546-12	60,106
BRINKHOUS, KENNETH M.....	BLOOD COAGULATION AND HEMOPHILIA.....	5R01 HL01648-30	80,846
BRINKHOUS, KENNETH M.....	HEMOSTASIS & THROMBOSIS—ANALYSIS, METHODS, & STANDARDS.....	5R01 HL10582-12	27,708
BROOKS, FREDERICK P, JR.....	INTERACTIVE GRAPHICS FOR MOLECULAR STUDIES.....	3P41 RR00898-03S1	29,100
BROOKS, FREDERICK P, JR.....	REGIONAL GRAPHICS RESOURCE FOR MOLECULAR STUDIES.....	2P41 RR00898-04	132,130
BUTLER, THOMAS C.....	BIOCHEMICAL EFFECTS AND CHEMICAL REACTIONS OF DRUGS.....	5P01 GM18715-06	73,787
CAIRNS, ROBERT B.....	THE DEVELOPMENT OF AGGRESSIVE BEHAVIORS.....	5R01 HD08464-04	33,524
CAPLOW, MICHAEL.....	BIOCHEMICAL MECHANISMS RELEVANT TO DENTISTRY.....	5R01 DE03246-08	61,064
CHAE, CHI-BOM.....	ROLE OF CHROMOSOMAL PROTEINS IN AGING.....	5R01 AG00103-03	28,114
CHAE, CHI-BOM.....	REGULATION OF SIMIAN VIRUS 40 GENES IN TRANSFORMED CELLS.....	5R01 CA17390-03	37,811
COOPER, CARY W.....	CALCIUM, CALCEMIC HORMONES AND GASTRIN.....	2R01 AM17743-03	64,201
DYKSTRA, LINDA A.....	SIGNAL DETECTION ANALYSIS OF ANALGESICS.....	5R01 GM22683-03	25,044
EARP, HENRY S, III.....	THE REGULATION AND SIGNIFICANCE OF HEPATIC CYCLIC GMP.....	1R01 AM19796-01	46,148
EARP, JO ANNE.....	HYPERTENSION: FAMILY STRATEGIES FOR PATIENT ADHERENCE.....	5R25 HL18414-03	48,468
ELDRIDGE, FREDERIC L.....	NEUROPHYSIOLOGICAL STUDIES OF RESPIRATORY CONTROL.....	2R01 HL17689-05	77,266
ELSTON, ROBERT C.....	GENETIC & STATISTICAL ANALYSIS OF CANCER ETIOLOGY.....	5R01 CA17107-03	63,139
ELSTON, ROBERT C.....	GENETIC ANALYSIS OF MULTIFACTORIAL TRAITS.....	5R01 GM16697-09	145,731
FINN, ARTHUR L.....	TRANSPORT AND ELECTROPHYSIOLOGY IN ISOLATED EPITHELIA.....	2R01 AM17854-04	83,493
FORDHAM, CHRISTOPHER, III.....	CHILD DEVELOPMENT AND MENTAL RETARDATION.....	2P30 HD03110-11	481,654
FORDHAM, CHRISTOPHER, III.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00046-17	789,744
FORDHAM, CHRISTOPHER, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05406-16	213,709
FREEDLENDER, ELIZABETH F.....	ANTI-TUMOR LECTINS RICIN, ABRIN, AND MOMORDIN.....	7R01 CA23103-01	38,900
FRENCH, FRANK S.....	DEVELOPMENT OF MALE REPRODUCTIVE FUNCTION.....	2R01 HD04466-07	96,983
GALLAGHER, JAMES J.....	LONGITUDINAL INTERVENTION FOR HIGH-RISK CHILDREN.....	5P01 HD09130-03	254,417
GATZY, JOHN T, JR.....	AIRBORNE METALS AND LUNG PERMEABILITY.....	5R01 HL16674-04	43,310
GERATZ, J DIETER.....	PROTEASE INHIBITORS, PHYSIOLOGY AND PATHOLOGY.....	5R01 AM10746-11	53,960
GERATZ, J DIETER.....	SPECIFIC INHIBITORS OF COAGULATION AND FIBRINOLYSIS.....	1R01 HL21540-01	58,894
GOODER, HARRY.....	CELL WALL DEFECTIVE VARIANTS OF NEISSERIA GONORRHOEAE.....	5R01 AI12535-03	34,054
GOTTSCHALK, CARL W.....	MICROPUNCTURE STUDY OF KIDNEY FUNCTION.....	5R01 HL02334-22	236,509
GOZ, BARRY.....	IDURD AND ALKALINE PHOSPHATASE IN HUMAN CANCER CELLS.....	2R01 CA16460-03	52,424
GRAHAM, JOHN B.....	HEMOSTASIS RESEARCH PROGRAM.....	5P01 HL06350-16	518,078
GRAY, TIMOTHY K.....	HORMONAL CONTROL OF CALCIUM AND PHOSPHATE ABSORPTION.....	2R01 AM17835-04	36,252
GREENBERG, B G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05450-16	42,869
GUYMON, LAWRENCE F.....	POLYSACCHARIDE ANTIGENS OF NEISSERIA GONORRHOEAE.....	1R01 AI13966-01	29,990
GWYNNE, JOHN T.....	SERUM LIPOPROTEINS AND CELL CHOLESTEROL METABOLISM.....	1R01 HL20061-01	61,403
HALL, THOMAS L.....	SUPPORT FOR POPULATION CENTER.....	5P30 HD05798-04	184,542
HARNED, HERBERT S, JR.....	EFFECTS OF SWALLOWING ON PERINATAL RESPIRATION.....	5R01 HD08639-03	33,273
HARRIS, ALBERT K.....	ADHESION AND TRACTION IN TISSUE CELL LOCOMOTION.....	1R01 GM24251-01	66,957
HARRISON, JOHN H.....	STRUCTURAL PROPERTIES OF MALATE DEHYDROGENASE.....	5R01 HL12585-09	51,213
HASKILL, JOHN S.....	IMMUNITY TO HUMAN OVARIAN TUMORS AND CHEMOTHERAPY.....	1R01 CA23648-01	126,885
HAUGHTON, GEOFFREY.....	INTEGRATED TUMOR BIOLOGY PROGRAM.....	3P01 CA16246-03S2	81,823
HAYWARD, JAMES N.....	CENTRAL NEURAL REGULATION OF BODY FLUIDS.....	2R01 NS13411-02	91,751
HEIZER, WILLIAM D.....	INTESTINAL PEPTIDASES: PROPERTIES AND FUNCTIONS.....	2R01 AM15119-07	80,379

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
HENSON, O'DELL W, JR.....	MECHANISM OF ACOUSTIC PERCEPTION AND ORIENTATION.....	5R01 NS12445-03	42,950
HERION, JOHN C.....	LEUKOCYTES AND HEMOSTASIS.....	5R01 HL17835-03	64,911
HERMANS, JAN.....	ASSEMBLY, STRUCTURE AND INTERACTIONS OF FIBRIN.....	1R01 HL20319-01	75,413
HIRSCH, PHILIP F.....	REGIONAL DENTAL RESEARCH CENTER.....	2P50 DE02668-11	1,509,455
HISKEY, RICHARD G.....	SYNTHESIS OF INSULIN ANALOGS.....	5R01 AM03416-18	68,053
HISKEY, RICHARD G.....	GAMMA-CARBOXYGLUTAMIC ACID ROLE IN BLOOD COAGULATION.....	1R01 HL20161-01	99,849
HODGSON, DEREK J.....	STRUCTURES OF ANTITUMOR AZAPURINES AND AZAPYRIMIDINES.....	3R01 CA15171-03S1	10,625
HODGSON, DEREK J.....	STRUCTURAL STUDIES IN TREATMENT OF METAL POISONING.....	3R01 ES00895-03S1	4,018
HOLCOMB, GEORGE R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07072-12	116,321
HUANG, ENG-SHANG.....	ANALYSIS OF HUMAN CYTOMEGALOVIRUS.....	5R01 AI12717-03	59,973
HUTCHISON, CLYDE A, III.....	GENETICS AND DNA CHEMISTRY OF PHAGE PHI X-174.....	2R01 AI08998-09	79,311
HUTCHISON, CLYDE A, III.....	EUKARYOTIC GENE ORGANIZATION.....	5R01 GM21313-03	111,904
HUTT, LINDSEY M.....	FUNCTIONS OF ATYPICAL LYMPHOCYTES.....	1R01 CA22093-01	47,581
IBRAHIM, MICHEL A.....	ASSESSMENT OF PAST DIET IN CANCER EPIDEMIOLOGY.....	1R01 CA21514-01	47,107
IRVIN, J LOGAN.....	CHANGES IN NUCLEAR PROTEINS IN SPERMATOGENESIS.....	2R01 HD05277-06	64,406
ISHAQ, KHALID S.....	POTENTIAL INHIBITORS OF CHROMATIN BOUND PROTEASE.....	5R01 CA20047-02	33,392
JOHNSON, ANDREW M.....	INDUCTION OF LIVER DISEASE BY PROTEOLYTIC ENZYMES.....	5R01 AM18540-03	27,902
JOHNSON, CHARLES S, JR.....	QUASI-ELASTIC LIGHT SCATTERING STUDIES ON HEMOGLOBIN S.....	5R01 AM17823-03	33,881
JOHNSON, GEORGE, JR.....	EFFECTS OF ERYTHROCYTE DEFORMABILITY ON TISSUE PERFUSION.....	1R01 HL20177-01	60,478
KAFER, ENID R.....	NEURAL AND VENTILATORY RESPONSES TO MECHANICAL LOADS.....	3R01 HL17314-03S1	5,000
KAUFMAN, DAVID G.....	CHEMICAL CARCINOGENESIS AND CELL PROLIFERATION.....	1R01 CA20658-01	69,843
KINGDON, HENRY S.....	CHEMISTRY AND BIOLOGY OF FACTOR IX ACTIVATOR.....	5R01 HL16633-03	60,984
KINGDON, HENRY S.....	BACTERIAL HEPARINASE IN DIAGNOSTIC COAGULATION STUDIES.....	5R01 HL17726-03	37,800
KOCH, WILLIAM E.....	IN VITRO ANALYSIS OF DEVELOPING ORAL-FACIAL TISSUES.....	1R01 DE04580-01	74,029
KOEHLER, KARL A.....	TRANSITION STATE ANALOG INHIBITORS OF THROMBIN.....	5R01 HL18245-03	48,394
KOEPPE, JOHN K.....	MOLECULAR AND ENVIRONMENTAL EFFECTS OF ALTOSID (TM).....	1R01 ES01563-01	35,274
KRIGMAN, MARTIN R.....	NEUROBIOLOGY OF ENVIRONMENTAL POLLUTANTS.....	5P01 ES01104-03	516,503
KUNO, MOTYO.....	MONOSYNAPTIC TRANSMISSION IN SPINAL NEURONS.....	5R01 NS10319-07	92,502
KUSY, ROBERT P.....	SELF-ACTIVATING DEVICES FOR CLEFT-PALATE CHILDREN.....	1R23 DE04707-01	11,385
LARSH, JOHN E, JR.....	IMMUNOLOGICAL STUDIES IN EXPERIMENTAL TRICHINOSIS.....	5R01 AI10671-06	32,815
LEE, KUO-HSIUNG.....	PLANT ANTITUMOR AGENTS.....	5R01 CA17625-03	31,778
LEEB, IRWIN J.....	THE ROLE OF ETHIONINE IN PAROTID GLAND PROTEIN SYNTHESIS.....	5R23 DE04353-03	34,183
LEINFELDER, KARL F.....	CORROSION OF PRECIOUS METAL ALLOYS.....	2R01 DE04101-03	66,191
LOE, PHILIP R.....	FUNCTIONAL ARCHITECTURE OF SOMATOSENSORY THALAMUS.....	5R01 NS11737-03	45,287
LUCCHESI, JOHN C.....	GENETIC REGULATION IN DROSOPHILA: DOSAGE COMPENSATION.....	5R01 GM15691-10	74,975
MATTHYSSE, ANN G.....	THE MECHANISM OF TUMORIGENESIS BY A. TUMEFACIENS.....	5R01 CA18604-02	27,606
MC DONAGH, JAN M.....	MOLECULAR BIOLOGY OF FACTOR XIII.....	1R01 HL21139-01	66,257
MC ILWAIN, DAVID L.....	BULK ISOLATION OF LARGE SPINAL NEURONS.....	5R01 NS12103-03	16,338
MC MILLAN, CAMPBELL W.....	COLLABORATIVE STUDIES IN THE SOUTHWEST ONCOLOGY GROUP.....	5R10 CA16950-03	68,258
MEISSNER, GERHARD W.....	SARCOPLASMIC RETICULUM FUNCTION AND REASSEMBLY.....	5R01 AM18687-02	41,683
MINKOFF, ROBERT.....	ANALYSIS OF PRIMARY PALATE FORMATION.....	1R01 DE04731-01	67,584
MORELL, PIERRE.....	ASSEMBLY AND MAINTENANCE OF THE MYELIN SHEATH.....	5R01 NS11615-05	92,954
MUNSON, PAUL L.....	PEPTIDE HORMONES AFFECTING CALCIUM METABOLISM.....	2R01 AM10558-12	57,864
NEWSOME, JAMES F.....	CLINICAL CANCER EDUCATIONAL PROGRAM.....	5R25 CA17973-03	160,438
O'TUAMA, LORCAN A.....	REGULATION OF NEURAL DISTRIBUTION OF LEAD.....	5R01 ES01151-03	67,064
OBRIST, PAUL A.....	BLOOD PRESSURE CONTROL: RELATION TO BEHAVIORAL STRESS.....	5R01 HL18976-02	89,496
ONTJES, DAVID A.....	HORMONE RECEPTORS AND ADENYLATE CYCLASE IN THE ADRENAL.....	5R01 AM19288-02	65,910
PAGANO, JOSEPH S.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16086-03	619,715
PAGANO, JOSEPH S.....	DNA VIRUS GENOMES, ONCOGENESIS AND LATENCY.....	3P01 CA19014-01S1	9,232
PAGANO, JOSEPH S.....	DNA VIRUS GENOMES, ONCOGENESIS AND LATENCY.....	5P01 CA19014-02	226,075
PARKER, JOHN C.....	ION TRANSFER AND METABOLISM IN MAMMALIAN RED BLOOD CELLS.....	5R01 AM11356-11	71,853
PARR, ROBERT G.....	THE QUANTUM THEORY OF MOLECULAR ISOELECTRONIC CHANGES.....	5R01 GM22028-04	51,812
PENG, TAI-CHAN.....	C-CELLS AND CALCITONIN IN GOITER AND AGING.....	1R01 AG00686-01	44,499
PENNIAL, RALPH.....	MITOCHONDRIAL CHANGES IN DEVELOPMENT AND AGING.....	1R01 AG00256-01	57,613
PERKINS, JOHN P.....	THE REGULATION OF CYCLIC AMP LEVELS IN BRAIN.....	7R01 NS14210-01	52,564
PERL, EDWARD R.....	SPINAL AND PROJECTION MECHANISMS RELATED TO PAIN.....	2R01 NS10321-07	103,478
PERL, EDWARD R.....	NEURAL BASIS OF EFFECTS PRODUCED BY SPINAL CORD DAMAGE.....	5P01 NS11132-04	247,603
PETRUSZ, PETER.....	FSH-TESTIS INTERACTIONS.....	5R01 HD10306-02	26,184
PIMMEL, RUSSELL L.....	NONINVASIVE MEASUREMENT OF AIRWAYS RESISTANCE.....	5R01 HL19118-02	78,423
POWELL, DON W.....	MECHANISMS OF INTESTINAL SECRETION.....	5R01 AM15350-05	37,100

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
POWELL, DON W.....	WATER AND ELECTROLYTE TRANSPORT IN THE ESOPHAGUS	5R01 AM18576-03	33,669
REILLEY, CHARLES N.....	PARAMAGNETIC SHIFTS, T1, T2: BIORELATED STEREOCHEMISTRY.....	5R01 GM12598-11	41,571
RHEINGOLD, HARRIET L.....	SOCIAL AND EXPLORATORY BEHAVIOR BY THE HUMAN INFANT.....	5R01 HD01107-14	68,517
RUSTONI, ALDO.....	NONPRIMARY AFFERENTS TO THE DORSAL COLUMN NUCLEI.....	5R01 NS12440-03	28,779
SAMS, W MITCHELL, JR.....	THE EPIDERMAL PROTEIN OF PHOTO-CONTACT ALLERGY.....	5R01 AM20031-02	46,315
SCARBOROUGH, GENE A.....	ENERGY TRANSDUCTION IN NEUROSPORA PLASMA MEMBRANES.....	1R01 GM24784-01	59,079
SCHAEFER, EARL S.....	HOSPITAL AND HOME SUPPORT FOR MATERNAL ATTACHMENT.....	5R01 HD09003-03	76,892
SCHWAB, JOHN H.....	BACTERIAL CELL WALLS IN RELAPSING EROSIIVE SYNOVITIS.....	5P01 AI13464-02	227,756
SLOME, CECIL.....	DRUG TAKING FOR HYPERTENSION IN A RURAL COMMUNITY.....	5R01 HL18175-03	105,996
SOBSEY, MARK D.....	VIRUS DETECTION IN SHELLFISH AND THEIR GROWING WATERS.....	5R01 ES01349-02	43,362
SPARLING, PHILIP F.....	GENETICS OF THE GONOCOCCUS: II.....	5R01 AI10646-06	84,445
SPITZNAGEL, JOHN K.....	METABOLIC ASPECTS OF BACTERIAL ECOLOGY IN HOST TISSUE.....	5R01 AI02430-19	80,308
STEINER, ALTON L.....	PHYSIOLOGIC ROLES OF CYCLIC GMP AND CYCLIC AMP.....	5R01 AM17438-05	85,783
STUMPF, WALTER E.....	HORMONE RECEPTORS IN THE BRAIN.....	5R01 NS09914-06	80,831
SWIFT, MICHAEL R.....	NEOPLASIA-PREDISPOSING GENES OF MAN.....	5R01 CA14235-06	106,540
SWIFT, MICHAEL R.....	NEOPLASIA-PREDISPOSING GENES IN CELL CULTURE.....	2R01 CA15207-04	51,372
TALMAGE, ROY V.....	CALCITONIN AND PHOSPHATE.....	5R01 AM14717-08	54,511
TALMAGE, ROY V.....	6TH PARATHYROID CONFERENCE (CALCIUM-REGULATING HORMONES).....	1R13 AM20134-01	5,000
TAYLOR, DUANE F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05333-16	55,342
THOMAS, COLIN G, JR.....	BIOLOGIC CHARACTERISTICS OF THYROID CANCER.....	5R01 CA01915-24	35,228
THURMAN, RONALD G.....	PHARMACOLOGY OF CARCINOGEN ACTIVATION IN INTACT CELLS.....	7R01 CA23080-01	49,960
TRELOAR, ALAN E.....	AGING OF THE MENSURUAL FUNCTION: A LIFE WITHIN A LIFE.....	7R01 AG00997-01	25,246
UNDERWOOD, LOUIS E.....	THE HORMONAL CONTROL OF FETAL GROWTH.....	2R01 HD08299-04	40,933
VAN WYK, JUDSON J.....	ROLE OF ENDOCRINE SECRETIONS IN GROWTH AND DEVELOPMENT.....	5R01 AM01022-22	100,192
WARREN, DONALD W.....	CLEFT PALATE, MALOCCLUSION AND LINGUAL ARTICULATION.....	5R01 DE04267-02	76,824
WHITTEN, DAVID G.....	PHOTOCHEMICAL STUDIES OF MOLECULAR COMPLEXES.....	2R01 GM15238-10	66,200
WILSON, JOHN E.....	BRAIN FUNCTION AND THE METABOLISM OF MACROMOLECULES.....	5R01 NS07457-11	69,436
WOLFENDEN, RICHARD V.....	CHEMICAL MECHANISMS OF BIOSYNTHESIS.....	5R01 GM18325-07	40,527
YONCE, LLOYD R.....	PULSATILE PRESSURE-FLOW DYNAMICS.....	5R01 HL17628-03	42,088
YOUNT, WILLIAM J.....	DIFFERENTIATED FUNCTIONS OF HUMAN LYMPHOBLAST.....	5R01 AI10327-06	73,813
ORGANIZATION TOTAL	137	13,498,171	

CHARLOTTE

INDIVIDUAL AWARD—PATTERSON, K. DAVID ZIP CODE 28223			
PATTERSON, K DAVID.....	HEALTH AND DISEASE IN COLONIAL GHANA, 1900-1957.....	1R01 LM02984-01	14,750
ORGANIZATION TOTAL	1	14,750	
JOHNSON C. SMITH UNIVERSITY ZIP CODE 28216			
SNYDER, RUTH M.....	RESEARCH METHODS FOR PRE- AND PARA-MEDICAL STUDENTS.....	5S06 RR08022-06	83,749
ORGANIZATION TOTAL	1	83,749	

CULLOWHEE

UNIVERSITY OF NORTH CAROLINA SYSTEM—WESTERN CAROLINA UNIVERSITY ZIP CODE 28723			
LUMB, ROGER H.....	PHOSPHOLIPID EXCHANGE PROTEINS IN LUNG TISSUE.....	1R01 HL21176-01	40,848
ORGANIZATION TOTAL	1	40,848	

DURHAM

DUKE UNIVERSITY ZIP CODE 27706			
ABOU-DONIA, MOHAMED B.....	DELAYED NEUROTOXICITY OF ORGANOPHOSPHORUS PESTICIDES.....	1R01 ES01186-01A2	52,204
ADAMS, DOLPH O.....	TUMORICIDAL EFFECTS OF MACROPHAGES: PATHOLOGIC STUDY.....	5R01 CA16784-03	37,035
ADELMAN, MARK R.....	STUDIES OF MOTILITY IN PHYSARUM POLYCEPHALUM.....	5R01 GM20141-05	70,999
AMOS, D BERNARD.....	IMMUNOLOGIC STUDY OF HUMAN HL-A AND MOUSE H-2 ANTIGENS.....	5R01 AI08897-09	259,292
AMOS, D BERNARD.....	CELL-MEDIATED IMMUNITY TO ASCITES TUMORS.....	5R01 CA14049-06	195,609
AMOS, D BERNARD.....	STUDIES OF THE IMMUNOGENETICS OF MAN.....	5R01 GM10356-14	266,588
ANDERSON, NELS C.....	HORMONAL AND IONIC BASIS OF UTERINE EXCITATION.....	5R01 HD02742-10	31,666
ANDERSON, NELS C.....	VOLTAGE-CLAMP STUDIES ON SMOOTH MUSCLE.....	5R01 HD08807-03	15,400

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
ANLYAN, WILLIAM G.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00030-16	878,473
ANLYAN, WILLIAM G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05405-16	213,709
APPEL, STANLEY H.....	STUDIES IN NEUROMUSCULAR DISEASE.....	5P50 NS12213-03	164,053
ASHLEY, TERRY F.....	INVESTIGATION OF CHROMOSOMAL ORGANIZATION IN NUCLEI.....	5R01 GM23712-02	47,177
BACK, KURT W.....	SIMULATION OF LIFE CYCLES.....	1R01 AG00315-01	54,876
BELL, ROBERT M.....	REGULATION OF TRIACYLGLYCEROL SYNTHESIS IN ADIPOCYTES.....	1R01 AM20205-01	58,830
BELL, ROBERT M.....	REGULATION OF MEMBRANE PHOSPHOLIPID SYNTHESIS.....	2R01 GM20015-04	58,751
BIGNER, DARELL D.....	BRAIN TUMORS: VIROLOGICAL AND IMMUNOLOGICAL STUDIES.....	2R01 CA11898-07	115,445
BIGNER, DARELL D.....	WORKSHOP IN BRAIN TUMOR IMMUNOLOGY.....	1R13 CA22248-01	6,000
BLUM, JACOB J.....	CONTROL OF METABOLISM IN TETRAHYMENA.....	2R01 HD01269-15	116,343
BOLOGNESI, DANI P.....	CHARACTERIZATION OF HUMAN BREAST CANCER GLYCOPROTEINS.....	1R01 CA19905-01	52,528
BONAR, ROBERT A.....	RNA IN NORMAL AND NEOPLASTIC UROTHELIAL CELLS.....	5R26 CA14930-05	31,228
BONAVENTURA, JOSEPH.....	MOLECULAR ADAPTATION: HEMOGLOBIN SYSTEMS OF FISH.....	5R01 HL15460-05	74,319
BOSSEN, EDWARD H.....	COMPARATIVE STEREOLOGY OF THE MYOCARDIUM.....	2R01 HL15888-04	53,560
BOYNTON, JOHN E.....	HEREDITARY CONTROL OF ORGANELLE STRUCTURE AND FUNCTION.....	5R01 GM19427-06	113,595
BRUMLEY, GEORGE W.....	LUNG LECITHIN SYNTHESIS.....	5R01 HD06311-06	87,792
BUCKLEY, REBECCA H.....	STUDIES OF CELL-MEDIATED RESPONSES IN ATOPIC DISEASES.....	2P50 AI12026-04A1	70,872
BUCKLEY, REBECCA H.....	HUMAN LYMPHOCYTE RESPONSES TO POLLEN ALLERGENS.....	1R01 AI14314-01	58,742
BURNS, RICHARD O.....	MOLECULAR MECHANISMS OF BIOLOGICAL CONTROL.....	5R01 GM12551-13	66,685
CASSEDAY, JOHN H.....	NEURAL MECHANISMS RELATED TO BINAURAL HEARING.....	5R01 NS12322-03	36,784
CLIPPINGER, FRANK W.....	SENSORY FEED-BACK LEG PROSTHESIS FOR CANCER PATIENTS.....	5R18 CA17945-03	24,426
COBB, FREDERICK R.....	REGIONAL BLOOD FLOW AFTER ACUTE MYOCARDIAL INJURY.....	5R01 HL18537-03	57,738
COHEN, HARVEY J.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA05634-16S1	9,553
COHEN, HARVEY J.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA05634-17	123,211
COOPER, RALPH L.....	HORMONAL AND BEHAVIORAL CONSEQUENCES OF AGING.....	1R01 AG00566-01	48,421
CORLESS, JOSEPH M.....	RETINAL ROD PHOTORECEPTOR MEMBRANE STRUCTURE/FUNCTION.....	5R01 EY01659-02	48,953
COX, EDWIN B.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21192-01	59,988
CRAPO, JAMES D.....	THE BASIS OF OXYGEN TOLERANCE AND TOXICITY.....	3R01 HL17603-03S1	8,720
CREASMAN, WILLIAM T.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12534-07	84,260
CRESSWELL, PETER.....	MOLECULAR STUDIES OF THE MIXED LYMPHOCYTE RESPONSE.....	1R01 AI14016-01	74,410
DANIELS, CHARLES A.....	THE INFLAMMATORY RESPONSE IN VIRAL INFECTION.....	1R01 DE04609-01	43,335
DAVIS, JAMES N.....	THE ROLE OF OXYGEN IN BRAIN MONAMINE SYNTHESIS.....	5R01 NS13101-02	35,204
DAY, EUGENE D.....	AUTOIMMUNE PHENOMENA INDUCED BY SIALYLMUCINS IN THE RAT.....	1R01 AM20201-01	55,990
DAY, EUGENE D.....	STUDIES OF GLIAL CELL MEMBRANES AND MYELIN.....	5R01 NS10237-06	52,796
ERICKSON, CARL J.....	ENDOCRINE FACTORS IN THE SOCIAL BEHAVIOR OF ANIMALS.....	5R01 HD04482-08	55,895
EVANS, EVAN A.....	RBC AND ENDOTHELIAL MEMBRANE MATERIAL CHARACTERISTICS.....	2R01 HL16711-04	62,099
FALLETTA, JOHN M.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA15525-04	32,512
FRIDOVICH, IRWIN.....	THE BIOLOGICAL FUNCTIONS OF SUPEROXIDE DISMUTASES.....	5R01 GM10287-15	124,617
FUCHS, JAMES C.....	ARTERIAL BYPASS SURGERY: STRUCTURE AND METABOLISM.....	2R01 HL17369-03	89,601
GILBERT, DAVID B.....	ATHEROSCLEROSIS, AND DIABETES MELLITUS.....	5R01 HL20471-02	71,570
GOLDSMITH, LOWELL A.....	STRUCTURAL PROTEINS IN GENETIC DEFECTS OF EPIDERMIS.....	5R01 AM17253-05	68,511
GOLDSMITH, LOWELL A.....	FETAL-MATERNAL NUTRITION DETERMINED BY HAIR ANALYSIS.....	5R01 AM17977-04	46,927
GREENE, RONALD C.....	BIOCHEMISTRY OF SULFONIUM COMPOUNDS.....	5R01 GM10317-15	41,631
GREENFIELD, JOSEPH C, JR.....	INSTANTANEOUS BLOOD FLOW IN THE ASCENDING AORTA.....	5R01 HL09711-13	46,950
GREENFIELD, JOSEPH C, JR.....	THE DISTRIBUTION OF FLOW IN THE MYOCARDIUM.....	5R01 HL18468-02	54,783
GRUFFERMAN, SEYMOUR.....	THE EPIDEMIOLOGY OF CHILDHOOD RHABDOMYOSARCOMA.....	1R01 CA21244-01	36,723
GRUFFERMAN, SEYMOUR.....	THE EPIDEMIOLOGY OF MULTIPLE MYELOMA.....	1R01 CA22104-01	36,804
GUILD, WALTER R.....	PNEUMOCOCCAL PHAGE AS GENETIC TOOLS.....	5R01 GM21887-02	38,234
HACKEL, DONALD B.....	HEART PATHOLOGIC, METABOLIC AND PHYSIOLOGIC STUDIES.....	5R01 HL05875-17	71,803
HAGEN, PER-OTTO F.....	SURGICAL AND METABOLIC ASPECTS OF VENOUS GRAFTS.....	5R01 HL15448-05	96,152
HALL, JAMES E.....	VOLTAGE-DEPENDENT CONDUCTANCE IN MEMBRANES.....	5R01 HL17961-03	32,482
HAMMOND, CHARLES B.....	REGIONAL TROPHOBLASTIC DISEASE CENTER.....	5R18 CA19272-02	82,355
HANDWERGER, STUART.....	THE CHEMISTRY AND PHYSIOLOGY OF PLACENTAL LACTOGEN.....	3R01 HD07447-03S1	24,450
HEMPEL, FRANKLIN G.....	CYTOCHROME REDOX STATES IN FUNCTIONING RETINA.....	1R01 EY01953-01	53,621
HEYMAN, ALBERT.....	SUPPORT FOR CEREBROVASCULAR RESEARCH CENTER.....	2P50 NS06233-12	332,806
HILL, ROBERT L.....	STRUCTURE AND FUNCTION OF PROTEINS.....	5R01 HL06400-17	143,352
HYLANDER, WILLIAM L.....	STRAIN IN THE FACIAL BONES.....	5R01 DE04531-02	22,115
JENNINGS, ROBERT B.....	MYOCARDIAL CELL INJURY.....	3R01 HL18833-02S1	8,352
JOBSIS, FRANS F.....	MYOCARDIAL ENERGETICS AND METABOLISM IN HYPOXIA.....	5R01 HL17391-04	72,913
JOHNSON, CHARLES E.....	RESPIRATORY HEAT AND WATER LOSS IN NEONATES.....	5R01 HL19352-02	64,222

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
JOHNSON, EDWARD A.....	FUNCTIONS AND MECHANISM OF CELL MEMBRANE ION TRANSPORT	5P01 HL12157-10	251,624
JOKLIK, WOLFGANG K.....	MACROMOLECULAR SYNTHESIS IN VIRUS-INFECTED CELLS	5R01 AI08909-10	246,269
JONES, RAYFORD S.....	CONTROL OF DUCTULAR AND CANALICULAR BILE PRODUCTION.....	5R01 AM16421-04	26,468
JONES, ROBERT H.....	RADIONUCLIDE STUDIES IN CONGENITAL HEART DISEASE	1R01 HL20677-01	99,512
JOYNER, RONALD W.....	MECHANISM OF CARDIAC ACTION POTENTIAL PROPAGATION.....	5R01 HL19273-02	4,189
KAMIN, HENRY.....	BIOLOGICAL OXIDATIONS IN MITOCHONDRIA AND MICROSOMES.....	5R01 GM21226-16	109,191
KILLENBERG, PAUL G.....	ENZYMATIC BASIS OF BILE ACID CONJUGATION.....	3R01 AM17786-03S1	19,878
KILLENBERG, PAUL G.....	ENZYMOLGY OF BILE ACID CONJUGATION.....	2R01 AM17786-04	76,545
KIM, SUNG-HOU.....	CRYSTALLINE COMPLEXES OF RNA WITH SMALL MOLECULES.....	2R01 CA15802-04	99,472
KIRSHNER, NORMAN.....	BIOCHEMISTRY OF THE ADRENAL MEDULLA.....	5R01 AM05427-16	73,303
KIRSHNER, NORMAN.....	BIOGENESIS OF CHROMAFFIN VESICLES.....	2R01 AM16811-04	57,445
KLINTWORTH, GORDON K.....	EXPERIMENTAL APPROACH TO DISEASES OF THE CORNEA.....	5R01 EY00146-06	38,701
KREDICH, NICHOLAS M.....	REGULATION OF SULFUR METABOLISM.....	2R01 AM12828-10	65,280
LACK, LEON.....	PHARMACOLOGY OF INTESTINAL BILE SALT TRANSPORT.....	5R01 AM09582-14	66,606
LANG, DAVID J.....	LEUKEMIA AND CYTOMEGALOVIRUSES: RECIPROCAL EFFECTS.....	1R01 CA21772-01	90,988
LANG, DAVID J.....	PERSISTENT CONGENITAL AND NEONATAL VIRUS INFECTIONS.....	5R01 HD04183-07	79,842
LASZLO, JOHN.....	MECHANISMS OF DRUG INHIBITION OF HUMAN LEUKEMIC CELLS.....	2R01 CA08800-11	109,059
LASZLO, JOHN.....	GENERAL CLINICAL CANCER RESEARCH CENTER.....	2P01 CA11265-08	412,628
LAZARUS, GERALD S.....	MECHANISMS OF PROTEOLYSIS IN HUMAN SKIN.....	5R01 AM19067-03	89,072
LEBOVITZ, HAROLD E.....	HORMONES AND INTERMEDIARY METABOLISM.....	5R01 AM01324-21	93,207
LEFKOWITZ, ROBERT J.....	MOLECULAR PROPERTIES OF CARDIAC ADRENERGIC RECEPTORS.....	5R01 HL16037-05	95,176
LEFKOWITZ, ROBERT J.....	VASCULAR ALPHA-ADRENERGIC RECEPTOR MOLECULAR PROPERTIES.....	1R01 HL20339-01	35,931
LEVY, NELSON L.....	IMMUNITY TO HUMAN CANCER—FUNCTIONAL COMPONENTS.....	5R01 CA13070-06	85,349
LEVY, NELSON L.....	NUCLEOTIDE-RICH 'ANTIGEN' UNIQUE TO MS SPINAL FLUID.....	1R01 NS13745-01	74,581
LIMBIRD, LEE E.....	ADRENERGIC RECEPTORS & THE ADENYLATE CYCLASE SYSTEM.....	1R23 HL21051-01	35,338
LYNN, WILLIAM S.....	MOLECULAR CONTROL OF ADIPOCYTE METABOLISM BY INSULIN.....	2R01 AM16385-04	46,375
LYNN, WILLIAM S.....	CHEMOTACTIC CONTROL OF AIRWAY PHAGOCYTES.....	5R01 HL19806-02	87,425
MADDOX, GEORGE L.....	AN INTEGRATED INVESTIGATION OF AGING AND THE AGED.....	5P01 AG00364-19	429,119
MADDOX, GEORGE L.....	CENTER FOR THE STUDY OF AGING AND HUMAN DEVELOPMENT.....	5P30 AG00371-05	254,257
MANDEL, LAZARO J.....	MECHANISMS OF ACTIVE AND PASSIVE SOLUTE TRANSPORT.....	5R01 AM16024-06	49,147
MANDEL, LAZARO J.....	OXIDATIVE METABOLISM AND ACTIVE TRANSPORT.....	3R01 AM17876-03S1	15,276
MANSBACH, CHARLES M.....	CHYLOMICRON LECITHIN: PATHWAYS OF ORIGIN IN INTESTINE.....	3R01 AM17526-03S1	10,801
MANTON, KENNETH G.....	A DEMOGRAPHIC STUDY OF MULTIPLE CAUSES OF DEATH.....	1R01 HD10638-01	94,051
MC CLAY, DAVID R, JR.....	CELL SURFACE MOLECULES IN EMBRYONIC CELL ADHESION.....	5R01 GM22477-02	41,985
MC ELHANEY, JAMES H.....	BIOMECHANICAL STUDIES OF THE LOWER SPINE.....	5R01 NS13229-02	96,636
MC KEE, PATRICK A.....	STRUCTURE-FUNCTION RELATION OF BLOOD CLOTTING PROTEIN.....	5R01 HL15615-05	95,435
MC KINNEY, JOHN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07070-12	82,566
MENDELL, LORNE M.....	MECHANISMS OF PLASTICITY IN NEURONAL CONNECTIONS.....	2R01 NS08411-09	108,412
MENZEL, DANIEL B.....	ROLE OF VITAMIN E AND LIPIDS IN LUNG TOXICITY.....	5R01 ES00798-06	59,883
METZGAR, RICHARD S.....	IMMUNOLOGICAL STUDIES OF PRIMATE MEMBRANE ANTIGENS.....	5R01 AM08054-14	89,317
METZGAR, RICHARD S.....	HUMAN LEUKEMIA ASSOCIATED ANTIGENS.....	5R01 CA08975-11	118,381
MICKEY, DON D.....	DETECTION OF RNA TUMOR VIRAL ANTIGENS IN HUMAN PROSTATE.....	5R26 CA19840-02	81,241
MILLER, DONALD S.....	IMMUNOTHERAPY AND IMMUNODIAGNOSIS OF HUMAN LEUKEMIA.....	3R01 CA16320-03S1	17,278
MITCHELL, THOMAS G.....	PATHOGENICITY OF CRYPTOCOCCOSIS.....	5R01 AI13088-02	50,265
MODRICH, PAUL L.....	ENZYMATIC BASIS OF TYPE II RESTRICTION AND MODIFICATION.....	2R01 GM23719-02	59,637
MOORE, JOHN W.....	PHYSIOLOGY OF EXCITABLE MEMBRANES.....	5R01 NS03437-17	106,417
MOORE, JOHN W.....	COMPUTER METHODS FOR PHYSIOLOGICAL PROBLEMS.....	5R01 NS11613-03	46,174
MOSES, MONTROSE J.....	CHROMOSOME ANALYSIS IN LEMUR HYBRIDS.....	5R01 GM23047-02	43,184
NEWELL, JOSEPHINE E.....	BREAST EXAMINATION AND BREAST SELF EXAMINATION.....	5R18 CA19601-02	48,505
NICKLAS, R BRUCE.....	ANALYSIS AND CONTROL OF CHROMOSOME MOVEMENT.....	5R01 GM13745-12	56,104
ODOM, GUY L.....	CENTRAL NERVOUS SYSTEM—TRAUMA RESEARCH STATUS REPORT.....	1R13 NS14256-01	15,219
PADILLA, GEORGE M.....	IDENTIFICATION AND PHARMACOLOGY OF MARINE ALGAL TOXINS.....	9R01 ES01823-12	86,116
PAULSON, DAVID F.....	BIOCHEMISTRY OF NORMAL AND ABNORMAL RENAL GROWTH.....	5R01 AM15756-05	58,878
PAULSON, DAVID F.....	VIRUSES AND VIRUS-LIKE PARTICLES IN PROSTATIC TUMORS.....	5R26 CA15417-04	51,386
PINNELL, SHELDON R.....	THE COLLAGEN AND ELASTIN OF CONNECTIVE TISSUE DISEASE.....	5R01 AM17128-05	35,998
PINNELL, SHELDON R.....	CHARACTERIZATION OF HEART VALVE COLLAGEN.....	5R01 HL18593-02	54,620
PORTER, NED A.....	PEROXY RADICALS AND PROSTAGLANDINS IN VESSELS & LUNG.....	5R01 HL17921-03	74,942
PRITCHETT, EDWARD L.....	ACCESSORY PATHWAYS AND SUPRAVENTRICULAR TACHYCARDIA.....	1R23 HL21347-01	45,183
QUARFORDT, STEVEN H.....	APOPROTEINS OF HUMAN TRIGLYCERIDE RICH LIPOPROTEINS.....	5R01 HL14313-07	72,432
QUIN, LOUIS D.....	ORGANOPHOSPHOROUS COMPOUNDS FOR ANTICANCER SCREENING.....	3R01 CA05507-16S1	1,957

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
RAJAGOPALAN, K V.....	STRUCTURE AND FUNCTION OF ENZYMES—ROLE OF METALS.....	2R01 GM00091-32	136,355
REEDY, MICHAEL K.....	MYOFIBRILLAR FINE STRUCTURE IN STRIATED MUSCLE.....	5R01 AM14317-08	103,782
REISNER, EMILY G.....	ANALYZING HUMAN ALLOANTISERA BY ISOELECTRIC FOCUSING.....	1R01 AI13723-01	33,200
RICHARDSON, DAVID C.....	CRYSTALLOGRAPHIC ANALYSIS OF PROTEIN STRUCTURES.....	2R01 GM15000-08	106,292
ROBERTSON, J DAVID.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF CELLULAR MEMBRANE.....	9P01 GM23911-06	461,514
ROBERTSON, J DAVID.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF CELLULAR MEMBRANE.....	3P01 NS10299-05S2	58,417
ROBINSON, ROSCOE R.....	THE KIDNEY IN HEALTH AND DISEASE.....	5P01 AM17195-04	219,826
ROSATI, ROBERT A.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17670-03	1,239,036
ROSENTHAL, MYRON.....	IN SITU STUDIES OF DRUG ACTIONS ON CNS METABOLISM.....	5R01 NS10384-06	4,724
ROSENTHAL, MYRON.....	CEREBRAL ISCHEMIA, VIABILITY AND OXIDATIVE METABOLISM.....	1R01 NS13319-01	80,954
ROSES, ALLEN D.....	BIOCHEMICAL STUDIES OF MEMBRANE PROTEINS IN DUCHENNE MD.....	1R01 NS13455-01A1	72,098
ROSSE, WENDELL F.....	IMMUNOLOGICAL LYSIS IN NEOPLASTIC DISEASE.....	5R01 CA10267-11	84,582
SABISTON, DAVID C, JR.....	CORONARY INSUFFICIENCY AND MYOCARDIAL REVASCULARIZATION.....	5R01 HL09315-14	98,086
SAGE, HARVEY J.....	SPECIFICITY OF PHYTOHEMAGGLUTININS AND ANTIBODIES.....	5R01 AI06710-09	39,810
SALTZMAN, HERBERT A.....	ENVIRONMENTAL BIOMEDICAL RESEARCH PROGRAM.....	5P01 HL07896-14	825,506
SALZANO, JOHN V.....	REGULATION OF RESPIRATION.....	5R01 HL13888-15	43,066
SCHIFFMAN, SUSAN S.....	GUSTATORY AND OLFATORY QUALITY CHANGES WITH AGE.....	5R01 AG00443-05	49,730
SCHMIDT-NIELSEN, KNUT.....	RESPIRATION, CIRCULATION, & HEAT REGULATION IN EXERCISE.....	5R01 HL02228-23	146,135
SCOTT, DAVID W.....	MECHANISM OF IMMUNOLOGIC TOLERANCE IN VIVO AND IN VITRO.....	5R01 AI10716-06	77,415
SEALY, WILL C.....	EXPANDING THE ROLE OF SURGERY OF ATRIAL DYSRHYTHMIAS.....	5R01 HL13920-06	62,852
SEIGLER, HILLIARD F.....	IMMUNODIAGNOSIS OF MELANOMA.....	1R01 CA20364-01	115,750
SHAW, BARBARA R.....	STRUCTURE AND HETEROGENEITY OF CHROMATIN CORE PARTICLES.....	1R01 GM23681-01	58,341
SHINGLETON, WILLIAM W.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12290-05S3	27,930
SHINGLETON, WILLIAM W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	3P30 CA14236-04S2	168,901
SHINGLETON, WILLIAM W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	5P30 CA14236-05	1,679,401
SHINGLETON, WILLIAM W.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17987-03	119,320
SIEGEL, LEWIS M.....	STUDIES ON SELECTED METALLOFLAVOPROTEINS.....	5R01 AM13460-07	38,664
SILBERMAN, HAROLD R.....	SUPPORT FOR COOPERATIVE STUDIES IN CANCER THERAPY.....	3R10 CA03177-20S1	14,420
SILBERMAN, HAROLD R.....	COOPERATIVE STUDIES IN CANCER THERAPY.....	2R10 CA03177-21	169,055
SLOTKIN, THEODORE A.....	DRUGS AND DEVELOPMENT OF ADRENERGIC NERVOUS SYSTEM.....	5R01 HD09713-02	48,830
SNYDERMAN, RALPH.....	HUMORAL AND CELLULAR MEDIATORS OF INFLAMMATION.....	5R01 DE03738-05	73,267
SOMJEN, GEORGE G.....	CELLULAR SEIZURE MECHANISMS.....	5R01 NS11933-04	57,497
SOMMER, JOACHIM R.....	STRUCTURE-FUNCTION CORRELATION IN THE ATRIUM.....	5R01 HL12486-09	91,536
SPACH, MADISON S.....	BIOPHYSICAL STUDIES IN PEDIATRIC CARDIOLOGY.....	2P01 HL11307-11	624,219
STICKEL, DELFORD L.....	CLINICAL HOMOTRANSPLANTATION OF TISSUES AND ORGANS.....	2P01 AM13084-13	125,027
STONE, KENNETH P.....	TISSUE CULTURE OF MAMMALIAN UROTHELIUM.....	2R26 CA15972-04	100,022
STRAUSS, HAROLD C.....	CHARACTERIZATION OF CARDIAC PACEMAKER ACTIVITY.....	5R01 HL19216-02	67,302
SWITZER, MARY E.....	STRUCTURE-FUNCTION RELATIONSHIPS OF HUMAN FACTOR VIII.....	1R23 HL21208-01	47,870
SYLVIA, AVIS L.....	BRAIN FUNCTION AND OXIDATIVE METABOLISM DURING AGING.....	5R01 AG00517-02	58,732
TANFORD, CHARLES.....	PROTEIN INTERACTIONS AND BIOLOGICAL FUNCTION.....	5R01 AM04576-18	168,115
THURSTONE, FREDRICK L.....	DYNAMIC CARDIOVASCULAR MEASUREMENT USING ULTRASOUND.....	3R01 HL12715-08S1	9,403
THURSTONE, FREDRICK L.....	DYNAMIC CARDIOVASCULAR MEASUREMENT USING ULTRASOUND.....	5R01 HL12715-09	161,487
TISHER, C CRAIG.....	WATER AND ELECTROLYTE MOVEMENT IN RENAL TUBULES.....	5R01 AM13845-08	132,694
VANAMAN, THOMAS C.....	STRUCTURE AND FUNCTION OF ONCORNAVIRUS POLYPEPTIDES.....	5R01 CA18721-02	66,216
VOGEL, F STEPHEN.....	ANTITUMOR ACTIONS OF QUINONES THAT INDUCE CRYPTOSIBIOSIS.....	5R01 CA19013-02	74,436
WALLACE, ANDREW G.....	PHYSIOLOGICAL BASIS OF ARRHYTHMIAS AND THEIR THERAPY.....	5R01 HL15190-06	96,318
WEBSTER, ROBERT E.....	SYNTHESIS AND INTERACTION OF SPECIFIC MEMBRANE PROTEINS.....	5R01 GM18305-06	45,525
WECHSLER, ANDREW S.....	CARDIAC BYPASS AND CORONARY COLLATERAL PHYSIOLOGY.....	1R01 HL20226-01	69,400
WILLIAMS, REDFORD B, JR.....	PSYCHOSOCIAL FACTORS AND OUTCOME IN CORONARY DISEASE.....	5R01 HL18589-02	54,196
WOODBURY, MAX A.....	QUANTITATIVE DESCRIPTIONS OF DISEASE.....	5R01 GM16725-09	101,334
WYNGAARDEN, JAMES B.....	PURINE METABOLISM IN GOUT.....	5R01 AM12413-10	111,887
ORGANIZATION TOTAL	179	19,669,771	
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA CENTRAL UNIVERSITY ZIP CODE 27707			
PATTILLO, WALTER H, JR.....	MINORITY SCHOOLS BIOMEDICAL SUPPORT PROGRAM.....	5S06 RR08049-06	37,968
PATTILLO, WALTER H, JR.....	MINORITY SCHOOLS BIOMEDICAL SUPPORT PROGRAM.....	2S06 RR08049-07	115,330
ORGANIZATION TOTAL	2	153,298	
VETEPANS ADMINISTRATION HOSPITAL ZIP CODE 27705			
PAULSON, DAVID F.....	URO-ONCOLOGY RESEARCH GROUP.....	2R10 CA14940-04	432,781

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
ORGANIZATION TOTAL	1	432,781	
WHITEHEAD MEDICAL RESEARCH INSTITUTE ZIP CODE 27710			
REYNOLDS, JACQUELINE A.....	INTERACTIONS OF STEROLS IN BIOLOGICAL SYSTEMS.....	7R01 HL22570-01	39,337
ORGANIZATION TOTAL	1	39,337	
ELIZABETH CITY			
UNIVERSITY OF NORTH CAROLINA SYSTEM—ELIZABETH CITY STATE UNIVERSITY ZIP CODE 27909			
KHAN, SEKENDER A.....	RESEARCH IMPROVEMENT AND DEVELOPMENT.....	5S06 RR08087-04	71,281
ORGANIZATION TOTAL	1	71,281	
GREENSBORO			
BENNETT COLLEGE ZIP CODE 27420			
SAYLES, J HENRY.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08028-06	12,048
ORGANIZATION TOTAL	1	12,048	
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY ZIP CODE 27411			
BENNETT, RICHARD, JR.....	SUPPORT FOR BIOMEDICAL SCIENCES DEVELOPMENT.....	5S06 RR08019-06	28,203
BENNETT, RICHARD, JR.....	SUPPORT FOR BIOMEDICAL SCIENCES DEVELOPMENT.....	2S06 RR08019-07	177,300
ORGANIZATION TOTAL	2	205,503	
GREENVILLE			
UNIVERSITY OF NORTH CAROLINA SYSTEM—EAST CAROLINA UNIVERSITY ZIP CODE 27834			
BURDEN, HUBERT W.....	OVARIAN NERVES AND REPRODUCTIVE FUNCTION.....	5R01 HD06899-03	32,036
DOHM, GERALD L.....	CONTROL OF MUSCLE PROTEIN METABOLISM DURING EXERCISE.....	5R01 AM19116-02	45,636
FURTH, EUGENE D.....	THYROID STIMULATORS AND THYROID CYCLIC NUCLEOTIDES.....	7R01 AM20151-01	29,479
MARKS, RICHARD H.....	STRUCTURE-FUNCTION RELATIONSHIPS IN COPPER PROTEINS.....	5R01 GM23935-02	19,077
VOLKMAN, ALVIN.....	POLYARTHRITIS IN SALMONELLA-INFECTED RATS.....	7R01 AM21360-01	38,775
VOLKMAN, ALVIN.....	EFFECTS OF ANTITUMOR THERAPY ON MACROPHAGES.....	7R01 CA22996-01	92,551
ORGANIZATION TOTAL	6	257,554	
MORGANTON			
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—WESTERN CAROLINA CENTER ZIP CODE 28655			
FAVELL, JAMES E.....	DEVELOPMENTAL ENVIRONMENT FOR THE PROFOUNDLY RETARDED.....	1R01 HD10853-01	47,362
ORGANIZATION TOTAL	1	47,362	
RALEIGH			
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES ZIP CODE 27511			
GOTTLIEB, GILBERT.....	SENSORY AND PERCEPTUAL DETERMINANTS OF IMPRINTING.....	2R01 HD00878-16	27,750
ORGANIZATION TOTAL	1	27,750	
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—DOROTHEA DIX HOSPITAL ZIP CODE 27611			
GLASCOCK, HAROLD W, JR.....	ANALYSIS OF MODERN CARE FOR ELDERLY DISABLED PATIENTS.....	1R18 AG00570-01	63,114
ORGANIZATION TOTAL	1	63,114	
SHAW UNIVERSITY ZIP CODE 27602			
GHOSH, KALYAN K.....	BIOMEDICAL RESEARCH AND RESEARCH TRAINING.....	5S06 RR08001-06	18,803
ORGANIZATION TOTAL	1	18,803	
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH ZIP CODE 27607			
BEWLEY, GLENN C.....	GENETIC REGULATION OF ENZYME EXPRESSION IN DROSOPHILA.....	1R01 GM23617-01	47,270
BORDNER, JON B.....	STRUCTURES OF COMPOUNDS OF REPRODUCTIVE INTEREST.....	5R01 HD09548-03	42,233
COCKERHAM, C CLARK.....	QUANTITATIVE GENETICS RESEARCH PROGRAM.....	5P01 GM11546-14	487,631

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
DONALDSON, WILLIAM E	NUTRITIONAL REGULATION OF FATTY ACID SYNTHESIS	1R01 AM20199-01	33,066
DONALDSON, WILLIAM E	EMBRYONIC FATTY ACID METABOLISM	5R01 HD02887-09	21,706
DROESSLER, EARL G	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07071-12	63,817
GUTHRIE, FRANK E	MECHANISMS OF PESTICIDE TOXICITY	2P01 ES00044-13	345,376
KNIGHT, KENNETH L	DEVELOPMENT OF MOSQUITO TAXONOMIC GLOSSARY	5R01 LM02787-02	34,472
LEVERE, THOMAS E	THE NATURE OF BEHAVIORAL RECOVERY AFTER BRAIN DAMAGE	5R01 NS12459-03	23,771
SCANDALIOS, JOHN G	A SYSTEM FOR ANALYSIS OF DIFFERENTIAL GENE EXPRESSION	5R01 GM22733-02	52,218
THEIL, ELIZABETH C	DEVELOPMENTAL REGULATION OF RED CELL FERRITIN CONTENT	1R01 AM20251-01	47,786
TOVE, SAMUEL B	METABOLISM OF UNSATURATED FATTY ACIDS	5R01 AM02483-20	80,405
ORGANIZATION TOTAL	12	1,279,751	
RESEARCH TRIANGLE PARK			
RESEARCH TRIANGLE INSTITUTE ZIP CODE 27709			
CHASALOW, FRED I	ANDROGEN AND 16-ANDROSTENE BIOCHEMISTRY IN TESTIS	7R01 HD11678-01	38,231
COOK, CLARENCE E	SYNTHESIS OF STRIGOL, A POTENT PLANT LACTONE	5R01 GM19630-03	23,739
COOK, CLARENCE E	STEREOSELECTIVE RIA FOR ANALYSIS IN PHARMACOLOGY	5R01 GM23197-02	80,359
KEPLER, JOHN A	IRREVERSIBLE INHIBITORS OF THE PROGESTERONE RECEPTOR	1R01 HD10629-01	35,911
PELLIZZARI, EDO D	GAS CHROMATOGRAPHIC TECHNIQUES FOR PHARMACOLOGY	5R01 GM23262-02	47,438
WALL, MONROE E	SYNTHESIS OF PLANT ANTITUMOR AGENTS AND ANALOGS	5R01 CA20050-02	40,878
WALL, MONROE E	BIOMEDICAL RESEARCH SUPPORT GRANT	1S07 RR05791-01	18,718
ORGANIZATION TOTAL	7	285,274	
WINSTON-SALEM			
UNIVERSITY OF NORTH CAROLINA SYSTEM—WINSTON-SALEM STATE UNIVERSITY ZIP CODE 27102			
ATKINSON, WILVERIA B	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES	5S06 RR08040-06	28,675
ATKINSON, WILVERIA B	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES	2S06 RR08040-07	112,616
ORGANIZATION TOTAL	2	141,291	
WAKE FOREST UNIVERSITY ZIP CODE 27109			
ACTON, JEAN D	EFFECT OF NITROGEN DIOXIDE ON PULMONARY MONOCYTES	1R01 ES01561-01	42,412
BO, WALTER J	ESTROGEN-LIKE EFFECT OF THE IUD ON THE UTERUS	5R01 HD06210-06	36,127
BUCKALEW, VARDAMAN M, JR	STUDIES OF A HUMORAL INHIBITOR OF SODIUM TRANSPORT	5R01 AM17341-04	48,141
CLARKSON, THOMAS B	ARTERIOSCLEROSIS RESEARCH CENTER	2P50 HL14164-06	1,024,038
CLARKSON, THOMAS B	A RESOURCE FOR THE STUDY OF NONHUMAN PRIMATES	5P40 RR00919-03	77,641
COWGILL, ROBERT W	THE FUNCTIONS OF PARAMYOSIN IN MUSCLE CONTRACTION	5R01 AM18411-03	38,796
DE CHATELET, LAWRENCE R	PATHOPHYSIOLOGY AND METABOLISM OF THE LEUKOCYTE	5R01 AI10732-06	49,427
DODGE, WILLIAM H	NORMAL AND LEUKEMIC GRANULOPOIESIS IN THE CHICKEN	3R01 CA19275-02S1	4,750
EVANS, DONALD L	IMMUNOBIOLOGICAL PROPERTIES OF EMBRYONIC ANTIGENS	5R01 CA19358-02	40,591
GREEN, HAROLD D	VASOMOTOR TONE AND VENOUS RETURN	2R01 HL00487-28	37,880
GREISS, FRANK C, JR	UTERINE BLOOD FLOW AND CHANGES IN PREGNANCY	5R01 HL03941-18	72,765
GROVES, DAVID L	REGULATION OF THE ANTIBODY RESPONSE	5R01 AI12415-03	59,626
HERNDON, C NASH	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05404-16	142,447
HUTCHINS, PHILLIP M	MICROVASCULAR RESPONSES IN HYPERTENSION	5R01 HL13936-06	48,073
KREGER, ARNOLD S	PATHOGENESIS OF BACTERIAL INFECTIONS OF THE CORNEA	5R01 EY01104-05	37,483
KUCERA, LOUIS S	VIRUS ASSOCIATED NEOPLASMS	5R01 CA12382-06	50,744
KUHN, RAYMOND	IMMUNOCYTOTOXIC RESPONSES IN CHAGAS' DISEASE	5R01 AI13128-02	33,079
LEVITT, MELVIN	SOMATOSENSORY SYSTEMS: CENTRAL PAIN	5R01 NS11921-04	31,482
MC CORMICK, JAMES G	DEAFNESS AND ATHEROSCLEROSIS	5R01 NS12013-03	74,915
MILLER, INGLIS J, JR	MECHANISMS OF TASTE RECEPTOR INTERACTION	5R01 NS10389-06	26,578
MYRVIK, QUENTIN N	INTERACTION OF ALVEOLAR MACROPHAGES AND MYCOBACTERIA	5R01 AI05663-14	31,250
MYRVIK, QUENTIN N	PATHOBIOLOGIC AND HOST DEFENSE REACTIONS IN THE LUNG	3P01 HL16769-03S1	23,592
MYRVIK, QUENTIN N	PATHOBIOLOGIC AND HOST DEFENSE REACTIONS IN THE LUNG	5P01 HL16769-04	314,665
O'STEEN, WENDALL K	REPRODUCTIVE HORMONES AND RETINAL DEGENERATION	7R01 EY02359-01	37,242
RAPELA, CARLOS E	CEREBRAL BLOOD FLOW, HUMORAL, DRUG, NERVOUS CONTROL	5R01 NS11953-04	53,847
RESNICK, MARTIN I	URINARY MACROMOLECULES AND RENAL LITHIASIS	1R01 AM20066-01	50,116
RESNICK, MARTIN I	ULTRASONOGRAPHY IN THE EVALUATION OF PROSTATIC CANCER	5R26 CA20118-02	35,255
RICHARDSON, STEPHEN H	BIOLOGY OF V. CHOLERA/E. COLI VIRULENCE	5R22 AI07772-11	49,622

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
RUDEL, LAWRENCE L.....	RISK FACTOR RELATIONSHIPS OF ATHEROSCLEROSIS.....	1R01 HL21260-01	68,570
SKINNER, NEWMAN S, JR.....	REGULATION OF SKELETAL MUSCLE BLOOD FLOW.....	5R01 HL15562-05	41,180
SPURR, CHARLES L.....	CANCER AND LEUKEMIA GROUP B.....	2R10 CA03927-20	142,524
SPURR, CHARLES L.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA12197-06	508,854
SPURR, CHARLES L.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19439-02	163,038
TOOLE, JAMES F.....	CEREBROVASCULAR RESEARCH CENTER.....	3P50 NS06655-11S1	1,094
TOOLE, JAMES F.....	CEREBROVASCULAR RESEARCH CENTER.....	5P50 NS06655-12	616,081
TURNER, JAMES E.....	REGENERATIVE REPAIR IN THE CENTRAL NERVOUS SYSTEM.....	5R01 NS12070-03	38,289
WAITE, B MOSELEY.....	METABOLISM AND FUNCTION OF MEMBRANE PHOSPHOLIPIDS.....	5R01 AM11799-10	65,562
WAITE, B MOSELEY.....	LYSOPHOSPHOLIPID METABOLISM OF NEOPLASIAS.....	3R01 CA14318-03S1	2,571
WAITE, B MOSELEY.....	CHANGES IN CELL MEMBRANES BY ONCOGENIC HERPES SIMPLEX.....	1R01 CA21146-01	42,408
WITCOWSKI, RICHARD L.....	ULTRASONIC ENHANCEMENT OF CANCER RADIOTHERAPY.....	5R01 CA17581-03	44,937
ORGANIZATION TOTAL	40	4,307,702	
STATE TOTAL	399	40,704,381	
NORTH DAKOTA			
GRAND FORKS			
UNIVERSITY OF NORTH DAKOTA ZIP CODE 58201			
DUERRE, JOHN A.....	BRAIN HISTONE METHYLASES.....	5R01 NS09725-06	30,207
LAMBETH, DAVID O.....	SYNTHESIS AND PROPERTIES OF S-ALKYLISOTHIAZOLIDINES.....	7R01 GM25252-01	17,526
LEE, YA P.....	GLYCEROL-3P DEHYDROGENASES IN CARDIOVASCULAR SYSTEM.....	5R01 HL17432-03	27,410
LOW, FRANK N.....	MICROAPPENDAGES OF THE PLASMALEMMA.....	5R01 NS12106-03	32,101
MYRON, DUANE R.....	BIOLOGICAL FUNCTION OF VANADIUM.....	5R01 HL19530-02	13,749
NORDLIE, ROBERT C.....	LIVER PYROPHOSPHATE-PHOSPHOTRANSFERASE ACTIVITIES.....	5R01 AM07141-15	76,163
OLSON, MARK D.....	THE FINE STRUCTURAL DEVELOPMENT OF BRUCH'S MEMBRANE.....	7R01 EY02361-01	25,917
RAY, PAUL D.....	HORMONE AND DIET CONTROL OF GLUCONEOGENESIS.....	5R01 AM12705-09	29,045
STEWART, JAMES A.....	IONIC STRENGTH AND DIELECTRIC EFFECTS ON CHYMOTRYPSIN.....	2R01 GM16167-08	17,605
THOMFORD, NEIL R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05407-16	19,418
ORGANIZATION TOTAL	10	289,141	
STATE TOTAL	10	289,141	
OHIO			
AKRON			
CHILDREN'S HOSPITAL MEDICAL CENTER OF AKRON ZIP CODE 44308			
IGEL, HOWARD J.....	CELL CULTURE AUTOGRAFTING OF BURNED & TRAUMATIZED SKIN.....	5R01 GM21929-03	82,758
ORGANIZATION TOTAL	1	82,758	
ATHENS			
OHIO UNIVERSITY ZIP CODE 45701			
WAGNER, THOMAS E.....	MATURE SPERM CHROMOSOMES: STRUCTURE AND RELEASE MODE.....	5R01 HD09042-03	29,884
ORGANIZATION TOTAL	1	29,884	
BOWLING GREEN			
BOWLING GREEN STATE UNIVERSITY ZIP CODE 43404			
HOEMANN, HARRY W.....	COMMUNICATION SKILLS IN DEAF AND HEARING CHILDREN.....	2R01 NS09590-05	54,814
MC KEEVER, WALTER F.....	LATERAL DOMINANCE AND LATERAL WORD RECOGNITION.....	5R01 NS10214-06	21,455
NAGY, Z MICHAEL.....	ONTOGENY OF LEARNING AND MEMORY.....	5R01 HD09145-03	34,006
PANKSEPP, JAAK.....	MEDIAL HYPOTHALAMIC REGULATION OF BODY ENERGY BALANCE.....	2R01 AM17157-04	45,776

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ORGANIZATION TOTAL	4	156,051	
CINCINNATI			
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 45229			
AKESON, RICHARD A.....	NERVE AND MUSCLE SURFACE MACROMOLECULE INTERACTION.....	1R01 NS13241-01	27,995
BERRY, HELEN K.....	PHENYLALANINE HYDROXYLASE ACTIVITY IN MAMMALIAN TISSUES.....	5R01 HD06018-06	45,231
CLARK, LELAND C, JR.....	NEW OXYGEN CARRYING RADIOPAQUE FLUOROCARBONS.....	5R01 GM21475-03	49,454
CLARK, LELAND C, JR.....	RAPID SPECIFIC MICRO MEASUREMENT OF BLOOD CHOLESTEROL.....	1R01 HL19083-01A1	25,400
DONALDSON, VIRGINIA H.....	HYDROLYTIC ENZYMES OF BLOOD IN HEALTH AND DISEASE.....	3R01 HL15690-05S1	1,143
DONALDSON, VIRGINIA H.....	HYDROLYTIC ENZYMES OF BLOOD IN HEALTH AND DISEASE.....	5R01 HL15690-06	103,484
GANSCHOW, ROGER E.....	GENETIC CONTROL OF MAMMALIAN ENZYME EXPRESSION.....	2R01 AM14770-08	95,154
JAMES, FREDERICK W.....	MAXIMAL EXERCISE TESTING IN HYPERLIPIDEMIC CHILDREN.....	5R01 HL18454-02	65,437
LAMPKIN, BEATRICE C.....	DRUG EFFECT IN ACUTE LEUKEMIA.....	1R01 CA21435-01	108,757
LAMPKIN, BEATRICE C.....	SUPPORT FOR COMPREHENSIVE SICKLE CELL CENTER.....	5P60 HL15996-05	306,443
PRATT, EDWARD L.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00123-14	514,404
PRATT, EDWARD L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05535-15	69,189
SOUKUP, SHIRLEY W.....	EARLY CHANGES IN POTENTIAL BRAIN TUMOR TISSUE OF THE RAT.....	2R01 CA18588-02	13,899
VALLOTA, ENRIQUE H.....	BIOCHEMISTRY AND BIOLOGICAL FUNCTIONS OF C3A AND C5A.....	5R01 AI12417-03	12,970
WARKANY, JOSEF.....	CORE PROGRAM FOR MENTAL RETARDATION RESEARCH.....	2P30 HD05221-08	525,632
WILSON, JAMES G.....	BASES OF CELLULAR SENSITIVITY TO TERATOGENIC AGENTS.....	5R01 HD09951-02	106,296
ZIMMERMAN, ERNEST F.....	TERATOGENS ON CLEFT PALATE FORMATION.....	5R01 DE03469-06	74,897
ORGANIZATION TOTAL	17	2,145,785	
CHRIST HOSPITAL ZIP CODE 45219			
PONS, MARCEL W.....	BIOCHEMICAL STUDIES ON INFLUENZA VIRUS INFECTED CELLS.....	7R01 AI14225-01	75,452
ORGANIZATION TOTAL	1	75,452	
JEWISH HOSPITAL OF CINCINNATI ZIP CODE 45229			
WEXLER, BERNARD C.....	HYPERADRENOCORTICISM AND ACCELERATED AGING.....	1R01 AG00585-01	55,933
WEXLER, BERNARD C.....	EXPERIMENTAL MYOCARDIAL INFARCTION.....	1R01 HL21418-01	56,942
ORGANIZATION TOTAL	2	112,875	
UNIVERSITY OF CINCINNATI ZIP CODE 45221			
ALEXANDER, J WESLEY.....	IMMUNITY FACTORS: PATHOGENESIS IN SURGICAL INFECTIONS.....	1R01 AI12936-01A1	212,778
ALTEMEIER, WILLIAM A.....	CENTER FOR COMPREHENSIVE CLINICAL STUDY OF TRAUMA.....	3P50 GM15428-10S1	117,578
ARMENTROUT, RICHARD W.....	SELECTIVE REPLICATION OF PARVOVIRUS IN TUMOR CELLS.....	5R01 CA16517-03	44,322
ARMENTROUT, RICHARD W.....	REGULATION OF DNA SYNTHESIS IN HUMAN TUMOR CELLS.....	1R01 CA21508-01	53,441
BERNSTEIN, I LEONARD.....	MITES AND ALGAE IN CLINICAL HOUSE DUST ALLERGY.....	1R01 AI13702-01	74,338
BJORNSON, ANN B.....	HUMORAL FACTORS OF HOST DEFENSE AGAINST B. FRAGILIS.....	1R01 AI13688-01A1	43,686
BJORNSON, ANN B.....	HOST DEFENSE AGAINST S PNEUMONIAE IN SICKLE CELL DISEASE.....	1R01 HL20314-01	50,113
BLAHA, GORDON C.....	FUNCTIONAL AGE CHANGES IN FEMALE REPRODUCTIVE ORGANS.....	9R01 AG00597-04	32,461
BOBST, ALBERT M.....	SPIN ASSAY FOR NUCLEIC ACID BINDING PROTEINS.....	5R01 CA15717-02	43,228
BRAY, NORMAN W.....	MEMORY SKILLS IN RETARDED AND NORMAL CHILDREN.....	5R01 HD09539-03	1,853
BROWN, RONALD D.....	CONTROL OF GENE EXPRESSION DURING EARLY DEVELOPMENT.....	5R01 GM22766-02	32,718
BRYANT, SHIRLEY H.....	ELECTROPHYSIOLOGY AND PHARMACOLOGY OF MYOTONIC MUSCLE.....	5R01 NS03178-15	56,520
CLYNE, DAVID H.....	MYELOMA KIDNEY: STUDIES ON TUBULAR CAST FORMATION.....	5R01 AM18466-03	30,174
COATS, EUGENE A.....	RESPIRATORY INHIBITORS AS ANTINEOPLASTIC AGENTS.....	2R01 CA16253-04	43,694
COLLINS, JOHN H.....	SEQUENCE STUDIES ON CALCIUM BINDING PROTEINS.....	1R01 AM20875-01	96,081
COOPER, GARY P.....	CADMIUM: NEUROBEHAVIORAL AND TRACE METAL STUDIES.....	1R01 ES01494-01	74,094
DANIELS, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05408-16	126,353
DAY, RICHARD A.....	REVERSIBLE COVALENT MODIFICATION OF NUCLEIC ACIDS.....	5R01 GM21705-03	32,123
DAY, RICHARD A.....	A NOVEL APPROACH TO PEPTIDE SEQUENCING.....	5R01 GM23154-02	42,071
DEUTSCH, EDWARD A.....	DEVELOPMENT OF 99-MTC MYOCARDIAL IMAGING AGENTS.....	1R01 HL21276-01	53,125
DI SALVO, JOSEPH.....	REGULATION OF CORONARY ARTERIAL SMOOTH MUSCLE.....	1R01 HL20196-01	29,808
FOULKES, ERNEST C.....	TOXICOLOGICAL SIGNIFICANCE OF CADMIUM-METALLOTHIONEIN.....	5R01 ES01462-02	63,577
FREISHEIM, JAMES H.....	STRUCTURE-FUNCTION STUDIES OF DIHYDROFOLATE REDUCTASE.....	5R01 CA11666-08	88,159
GRUENSTEIN, ERIC I.....	MEMBRANE DEFECTS IN FAMILIAL HYPERCHOLESTEROLEMIA.....	5R01 HL18553-02	30,725
HERMAN, JEROME H.....	IMMUNOPATHOLOGY OF CARTILAGE PROTEOGLYCAN.....	5R01 AM16894-05	72,271

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
HESS, EVELYN V.....	SYSTEMIC LUPUS ERYTHEMATOSUS DRUG INDUCED ANIMAL MODEL.....	5R01 AM12297-06	40,813
HIGHSMITH, ROBERT F.....	PHYSIOLOGICAL REGULATION OF THE FIBRINOLYTIC SYSTEM.....	5R01 HL18101-03	40,577
JACOBSON, EUGENE D.....	INTESTINAL ISCHEMIA.....	7R01 AM20540-01	50,494
JOHNSON, CARL L.....	HISTAMINE AND CARDIAC ADENYL CYCLASE.....	7R01 HL22136-01	93,350
JOHNSON, DALE R.....	EFFECTS OF LEAD ON RENAL MATURATION IN YOUNG ANIMALS.....	5R01 ES00972-03	52,006
JOHNSON, ROBERT L.....	ROLES OF LYMPHOKINES AND MONOCYTES IN LUNG FIBROSIS.....	5R01 HL20095-02	51,114
KAPLAN, PHYLLIS D.....	CDO TOXICITY: BIOLOGICAL INTERACTIONS IN LUNG & KIDNEY.....	1R01 ES01341-01A1	44,706
KLINE, DANIEL L.....	BIOCHEMISTRY AND PHYSIOLOGY OF PLASMINOGEN ACTIVATORS.....	2R01 HL11172-11	67,011
KNOWLES, HARVEY C, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00068-15	504,524
KRUEGER, ROBERT C.....	STRUCTURE AND TEMPLATE ACTIVITY OF CHROMATIN.....	5R01 GM23030-02	32,303
KUHN, W E.....	DEVELOPMENT OF A TOTAL HIP PROSTHESIS WITH IMPROVED LIFE.....	5R01 AM17385-03	48,583
LINGREL, JERRY B.....	MECHANISM OF THE SWITCH FROM FETAL TO ADULT HEMOGLOBIN.....	1R01 AM20119-01	65,874
LINGREL, JERRY B.....	MAMMALIAN MESSENGER RNA AND ITS SYNTHESIS.....	5R01 GM10999-13	52,894
MANSON, JEANNE M.....	TERATOGENICITY OF CHLORINATED HYDROCARBON SOLVENTS.....	1R01 ES01601-01	75,706
MANSON, JEANNE M.....	IN VITRO TERATOLOGIC ASSAY SYSTEM WITH P-450 METABOLISM.....	1R01 HD10868-01	60,296
MC CALL, DAVID.....	PH EFFECT IN HEART CELLS: INFLUENCE OF CARDIAC DRUGS.....	1R01 HL20057-01	17,546
MC CUSKEY, ROBERT S.....	HEPATIC MICROVASCULAR REGULATORY MECHANISMS.....	5R01 HL18914-02	29,361
MC CUSKEY, ROBERT S.....	HEMODYNAMICS OF SICKLE CELLS IN THE MICROCIRCULATION.....	1R01 HL21446-01	45,438
MC CUSKEY, ROBERT S.....	DIABETIC CEREBRAL VASCULAR STRUCTURE AND FUNCTION.....	1R01 HL22106-01	69,620
MEYER, RALPH R.....	REGULATION OF DNA REPLICATION IN NOVIKOFF HEPATOMA.....	5R01 CA17723-03	37,905
MOULTON, BRUCE C.....	ENDOMETRIAL MECHANISMS OF OVARIAN HORMONE SYNERGISM.....	5R01 HD07255-05	34,102
MOULTON, BRUCE C.....	LYSOSOMAL MECHANISMS OF OVUM IMPLANTATION.....	1R01 HD10721-01	32,340
NIENHUIS, ROBERT J.....	ULTRASTRUCTURAL EFFECTS OF CADMIUM ON THE TESTIS.....	1R01 HD11250-01	35,508
PESCE, AMADEO J.....	TRANSPORT OF PROTEIN BY THE KIDNEY.....	5R01 AM17330-05	60,925
PESCE, AMADEO J.....	SPECIFIC ANTIBODIES TO BLADDER CARCINOMA TUMOR ANTIGEN.....	2R26 CA16939-04	85,929
POLLAK, VICTOR E.....	CLINICOPATHOLOGIC AND OTHER STUDIES OF RENAL DISEASE.....	5R01 AM17196-05	126,122
ROE, RYONG-JOON.....	IN VIVO DEGRADATION OF POLYETHYLENE IMPLANTS.....	1R01 AM20269-01	67,560
RUDNEY, HARRY.....	REGULATION OF ENZYMES IN MEVALONATE SYNTHESIS.....	5R01 AM12402-10	73,470
RUDNEY, HARRY.....	STUDIES ON THE BIOSYNTHESIS OF UBIQUINONE.....	5R01 GM20311-09	56,367
SAELINGER, CATHARINE B.....	PATHOGENESIS OF PSEUDOMONAS IN BURN INJURY.....	1R01 GM24028-01	45,510
SCHWARTZ, ARNOLD.....	ION TRANSPORT IN CARDIAC MUSCLE.....	7R01 HL22039-01	58,161
SCHWARTZ, ARNOLD.....	CELLULAR MECHANISMS IN HEART FAILURE.....	1R01 HL22109-01	125,626
SCOTT, RALPH C.....	THE JUVENILE DIABETIC HEART.....	5R01 HL20428-02	107,931
SIGELL, LEONARD T.....	A NEW MODEL FOR MEDICAL INFORMATION COMMUNICATION SYSTEM.....	3R01 LM02350-02S1	2,738
SIGELL, LEONARD T.....	A NEW MODEL FOR MEDICAL INFORMATION COMMUNICATION SYSTEM.....	5R01 LM02350-03	85,150
SMITH, ROGER D.....	VIROLOGIC EVALUATION OF CHRONIC RENAL DISEASE.....	5R01 AM19426-02	60,354
SOLARO, R JOHN.....	MODULATION OF CALCIUM CONTROL OF CARDIAC MYOFIBRILS.....	1R01 HL22231-01	62,675
SUSKIND, RAYMOND R.....	SUPPORT FOR CENTER FOR STUDY OF THE HUMAN ENVIRONMENT.....	5P30 ES00159-12	1,017,252
YOUNKIN, STEVEN G.....	LONG-TERM CONTROL OF MUSCLE MEMBRANE & NERVE TERMINAL.....	5R01 NS13027-02	39,875
ZIMMER, HANS W.....	NOVEL PHOSPHONATE STABILIZED CARBANIONS.....	5R01 CA16666-03	41,129
ZIMMER, HANS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07075-03	29,562
ORGANIZATION TOTAL	66	5,273,698	
CLEVELAND			
AMERICAN ASSOCIATION FOR THE HISTORY OF MEDICINE ZIP CODE 44106			
POTTER, PAUL M.....	LOEB CLASSICAL LIBRARY, HIPPOCRATES, VOLUME FIVE.....	5R01 LM02813-02	600
ORGANIZATION TOTAL	1	600	
CANCER CENTER, INC. ZIP CODE 44106			
FLYNN, ARTHUR.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA17056-03	519,683
ORGANIZATION TOTAL	1	519,683	
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
ADAM, PETER A.....	CONTROL OF FETAL AND NEONATAL GLUCOSE METABOLISM.....	5R01 HD05740-06	79,188
ADAM, PETER A.....	DISORDERED FETAL METABOLISM: ANTENATAL INTERVENTION.....	1P50 HD11089-01	594,901
AIKAWA, MASAMICHI.....	HIGH VOLTAGE ELECTRON MICROSCOPY OF MALARIA.....	5R01 AI10645-06	30,221
ALLEY, KEITH E.....	ONTOGENESIS OF BRAIN STEM VISUOMOTOR SYSTEMS.....	1R01 NS12781-01A1	44,853
BADGER, SHIRLEY J.....	SEROLOGY OF ORAL GRAM NEGATIVE ANAEROBES.....	5R01 DE04422-02	22,808

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
BARBOUR, STEPHEN D.....	GENETIC AND BIOCHEMICAL STUDIES OF RECOMBINATION.....	5R01 GM17329-08	43,367
BENSUSAN, HOWARD B.....	COLAGEN-PLATELET INTERACTION.....	9R01 HL22081-19	55,752
BERNIER, GEORGE M, JR.....	METABOLISM OF LOW-MOLECULAR WEIGHT PROTEINS.....	5R01 AM14700-07	57,269
BERNIER, GEORGE M, JR.....	ORIGINS AND STRUCTURE OF THE MYELOMA CELL.....	5R01 CA17864-03	51,025
BIAGLOW, JOHN E.....	MODIFICATION OF X-RAY RESPONSE OF ANOXIC-HYPOXIC CELLS.....	5R01 CA13747-06	112,010
BLACKWELL, JOHN.....	STRUCTURE AND INTERACTIONS OF LUNG PROTEOGLYCANS.....	1R01 HL21622-01	53,117
BOAT, THOMAS F.....	MUCOUS GLYCOPROTEIN OF HUMAN RESPIRATORY EPITHELIUM.....	5R01 HL14844-06	12,816
BODANSZKY, MIKLOS.....	SYNTHETIC PEPTIDE HORMONES.....	5R01 AM12473-09	69,256
CAPLAN, ARNOLD I.....	CELLULAR CONTROL OF BIOLOGICAL CALCIFICATION.....	5R01 DE04008-03	51,347
CARTER, JAMES R, JR.....	MECHANISM OF ACTION OF INSULIN.....	2R01 AM18382-04	120,171
CASTON, J DOUGLAS.....	PROTEIN SYNTHESIS DURING EMBRYOGENESIS.....	5R01 HD00038-13	71,726
CHERNIACK, NEIL S.....	RESPIRATORY NEUROCHEMICAL CONTROL.....	1R01 HL20847-01	66,700
CHEUNG, PETER W.....	NONINVASIVE REFLECTION OXIMETRY IN PERIPHERAL TISSUE.....	1R01 HL18710-01A1	35,195
CHEUNG, PETER W.....	LIGHT-SCATTERING STUDIES OF THE SICKLING PROCESS.....	5R01 HL18725-02	35,245
COOK, ROBERT T.....	HISTONE CONTROL OF NUCLEAR DNA POLYMERASE ACTIVITY.....	5R01 CA15484-04S1	3,329
CULP, LLOYD A.....	SURFACE PROPERTIES OF CANCER AND REVERTANT CELLS.....	5R01 CA13513-06	78,723
DE MARCO, THOMAS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05335-16	17,487
DE PALMA, RALPH G.....	ATHEROSCLEROTIC PLAQUE DYNAMICS IN NONHUMAN PRIMATES.....	5R01 HL16206-03	111,401
DOERSHUK, CARL F.....	PULMONARY MUCUS TRANSPORT IN OBSTRUCTIVE LUNG DISEASES.....	3R01 HL17776-02S1	274
DUNN, MICHAEL J.....	PROSTAGLANDINS, THE KIDNEY AND HYPERTENSION.....	7R01 HL22563-01	97,259
DYBBS, ALEXANDER.....	IMPROVEMENT OF CORNEAL CONTACT LENS DESIGN.....	5R01 EY01528-02	63,651
ECKSTEIN, RICHARD W.....	CORONARY BLOOD SUPPLY AND FUNCTION OF AORTIC BODIES.....	5R01 HL13926-07	92,279
ENLOW, DONALD H.....	CRANIOFACIAL GROWTH AND REMODELING.....	7R01 DE05078-01	17,804
ESPOSITO, SALVATORE.....	RECONSTRUCTION OF FACIAL DEFECTS IN CANCER PATIENTS.....	5R18 CA17451-03	91,567
EVANS, HELEN H.....	CONTROL OF DNA REPLICATION IN A EUKARYOTE.....	5R01 GM19484-05	75,176
FANTZ, ROBERT L.....	PERCEPTION IN TERM, PRETERM, AND EXCEPTIONAL INFANTS.....	5R01 HD04212-08	77,591
FERGUSON, JOHN H.....	INTRACORTICAL CONNECTIONS AND SEIZURE THRESHOLD.....	5R01 NS12416-03	36,992
FRANK, KAY E.....	OCULAR INJURY BY ULTRASOUND.....	5R23 EY01508-03	11,400
GAMBETTI, PIERLUIGI.....	STUDIES ON SYNAPTOSES AND AXONS.....	7R01 NS14509-01	34,723
GERSHMAN, HOWARD.....	CONTROL OF CELLULAR MOBILITY.....	1R01 CA20323-01	50,664
GOFFMAN, WILLIAM.....	PROBLEM ORIENTED BIOLUMINOMETRY.....	1R01 LM03028-01	47,438
GOLDTHWAIT, DAVID A.....	NUCLEIC ACID FUNCTION IN RELATION TO CANCER.....	5R01 CA11322-09	66,905
GOLDTHWAIT, DAVID A.....	REPAIR OF X-IRRADIATED DNA IN NORMAL AND CANCER CELLS.....	5R01 CA18747-02	47,480
GOODRIDGE, ALAN C.....	REGULATION OF THE SYNTHESIS OF LIPOGENIC ENZYMES.....	1R01 AM21594-01	133,360
GRAVENSTEIN, JOACHIM S.....	SURVEILLANCE & PREDICTIVE DIAGNOSIS IN SURGICAL PATIENTS.....	5P01 GM19599-05	298,800
GREGG, EARLE C.....	MUTANTS AND ALTERED RADIORESPONSE OF CELLS AND TUMORS.....	2R01 CA15901-04	191,248
GREGG, EARLE C.....	CORE SUPPORT FOR RADIATION ONCOLOGY RESEARCH.....	5P30 CA19283-02	227,052
GULLEY, ROBERT L.....	FREEZE-FRACTURE STUDY OF DEGENERATION IN THE AVCN.....	1R01 NS13889-01	90,696
HALL, PHILIP W, III.....	RENAL METABOLISM OF BETA-2 MICROGLOBULIN.....	1R01 AM19556-01	22,037
HARPST, JERRY A.....	LIGHT SCATTERING STUDIES ON DNA.....	5R01 GM21946-03	28,448
HARRIS, JOHN W.....	STUDIES OF ERYTHROCYTE PRODUCTION AND DESTRUCTION.....	5R01 AM00745-23	109,571
HIRSCHMANN, HANS.....	CHEMISTRY AND METABOLISM OF STEROIDS.....	5R01 AM09105-26	3,399
HOGG, ROBERT W.....	CHARACTERIZATION OF L-ARABINOSE BINDING PROTEIN.....	2R01 AM13791-07	64,847
HOPFER, ULRICH.....	INTESTINAL TRANSPORT OF NUTRIENTS AND ELECTROLYTES.....	5R01 AM18265-03	48,308
HOPPEL, CHARLES L.....	PATHWAYS AND CONTROL OF FATTY ACID OXIDATION.....	5R01 AM15804-06	72,250
JONES, JANICE L.....	ELECTRICALLY INDUCED CARDIAC EM-HISTOCHEMICAL CHANGES.....	7R01 HL21038-01	38,922
KAISERMAN-ABRAMOF, ITA R.....	STRUCTURE AND DEVELOPMENT OF THE VISUAL SYSTEM.....	5R01 EY01018-05	80,001
KEAN, EDWARD L.....	GLYCOLIPID AND GLYCOPROTEIN METABOLISM IN EYE TISSUE.....	5R01 EY00393-10	100,969
KEEFE, J RICHARD.....	CYTOLOGY OF RETINAL DIFFERENTIATION.....	7R01 EY02371-01	67,401
KELLERMEYER, ROBERT W.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA15584-03S1	9,833
KLEIN, LEROY.....	QUANTITATIVE DYNAMICS OF BONE REMODELLING WITH AGE.....	5R01 AG00258-09	127,772
KLEIN, LEROY.....	AN INTERDISCIPLINARY PROGRAM OF RESEARCH IN AGING.....	5P01 AG00361-18	430,222
KO, WEN H.....	MICROELECTRONICS LABORATORY FOR BIOMEDICAL SCIENCES.....	3P01 GM14267-11S1	259,200
KO, WEN H.....	BIOMEDICAL ELECTRONICS RESOURCE.....	5P41 RR00857-03	270,305
KOENIG, JACK L.....	RAMAN SPECTROSCOPE STUDY OF NUCLEOHISTONE-DNA COMPLEXES.....	5R01 GM19975-03	39,328
KOWAL, JEROME.....	ENZYMATIC CONTROL OF STEROID BIOSYNTHESIS.....	2R01 AM15236-07	52,181
KOWAL, JEROME.....	HORMONAL CONTROL OF NORMAL AND NEOPLASTIC BREAST CELLS.....	5R01 CA16650-02	49,009
KUSHNER, IRVING.....	REGULATION OF C-REACTIVE PROTEIN SYNTHESIS.....	5R01 HL12886-03	40,603
LANDAU, BERNARD R.....	CARBOHYDRATE AND LIPID METABOLIC PATHWAYS.....	5R01 AM14507-08	90,023
LASEK, RAYMOND J.....	MACROMOLECULAR CONTROL OF NEURONAL FUNCTION.....	5R01 NS09299-08	54,745

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
LASEK, RAYMOND J.....	MOLECULAR STUDIES OF AXONAL GROWTH.....	1R01 NS13658-01	50,312
LEE, EDGAR, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05410-16	213,709
LINDLEY, BARRY D.....	CONTRACTILE ACTIVATION BY RAPID TEMPERATURE JUMPS.....	1R01 HL19848-01	51,541
LITTLE, A BRIAN.....	HORMONE METABOLISM IN REPRODUCTION.....	5R01 HD02378-12	85,628
LITTLE, A BRIAN.....	PROGRAM PROJECT IN REPRODUCTIVE BIOLOGY.....	5P50 HD07640-04	305,768
MACKLIN, MARTIN.....	ELECTROGENIC PROPERTIES OF EPITHELIA.....	5R01 GM20541-04	33,120
MACKO, DONALD.....	ADAPTIVE MONITORING OF DIABETIC KETOACIDOSIS.....	5R01 GM21932-03	48,844
MAHMOUD, ADEL A.....	IMMUNOPATHOGENESIS OF SCHISTOSOMIASIS.....	5R22 AI08163-10	132,599
MANN, J ADIN, JR.....	MEMBRANE DYNAMICS: FLUCTUATION SPECTROSCOPY.....	5R01 GM22031-03	46,369
MANSOUR, EDWARD G.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14548-02	65,600
MARS, HAROLD.....	BIOGENIC AMINE METABOLISM IN APNEA AND CRIB DEATH.....	5R01 HD09324-03	36,310
MATTHEWS, LEROY W.....	STUDIES IN CYSTIC FIBROSIS.....	5P01 AM08305-14	155,468
MATTHEWS, LEROY W.....	CYSTIC FIBROSIS AND PULMONARY DISEASE.....	5R01 HL13885-07	200,328
MEISNER, HERMAN M.....	OCHRATOXIN A—EFFECT ON CELLS, SUBCELLULAR SYSTEMS.....	1R01 ES01170-01A1	44,955
MEISNER, HERMAN M.....	HYPOLIPIDEMIC DRUGS—EFFECT ON FFA-ALBUMIN ASSOCIATION.....	5R01 HL18887-02	59,016
MELAMED, BARBARA G.....	BEHAVIORAL APPROACHES TO PAIN RESPONSES IN PEDODONTICS.....	5R01 DE04243-03	53,619
MIEYAL, JOHN J.....	HEMOPROTEIN-DRUG INTERACTIONS: ROLE IN METABOLISM.....	7R01 GM24076-01	28,105
MOORE, ALLEN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07113-10	153,867
MURRISH, DAVID E.....	FLUID EXCHANGE THROUGH CAPILLARY WALLS.....	5R01 HL14640-06	33,538
NASH, CLYDE L, JR.....	EFFECTS OF SCOLIOSIS ON SPINAL DISC GEOMETRY.....	1R01 AM20272-01	47,649
NEET, KENNETH E.....	INTERACTION OF SUBUNITS IN ENZYMES AND PROTEINS.....	5R01 AM12881-09	67,414
O'BRIEN, WILLIAM E.....	BIOCHEMICAL BASIS FOR HYPERGLYCEMIA.....	1R01 HD10524-01	35,720
OCCHINO, JOSEPH C.....	CHARACTERIZATION OF ORAL MUCOSA AND SKIN BASAL LAMINA.....	5R01 DE04338-02	35,741
OLEINICK, NANCY L.....	RADIATION-INDUCED MODIFICATIONS IN PROTEIN SYNTHESIS.....	2R01 CA15378-04	96,868
PEARSON, OLOF H.....	ENDOCRINE FACTORS INFLUENCING TUMOR GROWTH IN MAN.....	5R01 CA05197-18	91,401
PLOUSEY, ROBERT.....	MULTIPOLE SYSTEMS IN ELECTROCARDIOGRAPHY.....	5R01 HL10417-11	44,878
PLOUSEY, ROBERT.....	NORMALIZED BODY SURFACE POTENTIAL MAPS.....	5R01 HL17931-03	84,325
POST, ROBERT S.....	PROTEIN FILTRATION AND REABSORPTION.....	5R01 AM16302-05	60,581
PURNELL, EDWARD W.....	STUDY OF EYE PHYSIOLOGY AND DISEASE BY ULTRASOUND.....	3R01 EY00224-15S1	6,907
RATNOFF, OSCAR D.....	STUDIES ON HEMOSTATIC MECHANISMS.....	5R01 HL01661-26	138,304
RECKNAGEL, RICHARD O.....	TOXIGENIC LIPID PEROXIDATION AND HEPATIC CDMA.....	9R01 ES01821-21	123,625
ROBBINS, FREDERICK C.....	GENERAL CLINICAL RESEARCH CENTER (MATERNAL-CHILD).....	5M01 RR00210-13	538,059
ROBERTSON, ABEL L.....	ATHEROSCLEROSIS AND ARTERIAL CELL FUNCTIONS.....	1R01 HL20924-01	131,135
ROSEN, MORTIMER G.....	EARLY DIAGNOSTIC STUDIES OF ABERRANT DEVELOPMENT STUDY.....	3R01 HD08966-02S1	41,610
SABLE, HENRY Z.....	MECHANISM OF ACTION OF THIAMIN PYROPHOSPHATE.....	5R01 AM18888-02	38,511
SAKAMI, WARWICK.....	BIOLOGICAL SIGNIFICANCE OF FOLYLPOLYGLUTAMATE SYNTHESIS.....	5R01 GM21552-03	63,580
SAYERS, GEORGE.....	ISOLATED ADENOHYPHYSIAL CELLS.....	5R01 AM13820-08	93,806
SCHILTZ, JOHN R.....	COLLAGEN SYNTHESIS BY DIFFERENTIATING CHICK TISSUES.....	5R01 AM18614-03	45,748
SCHILTZ, JOHN R.....	PATHOPHYSIOLOGY OF CERTAIN HUMAN BULLOUS DERMATOSES.....	5R01 AM19115-02	94,413
SIMMELINK, JAMES W.....	THE STRUCTURE AND PROPERTIES OF HUMAN DENTAL ENAMEL.....	5R01 DE02525-12	75,464
SINGER, MARCUS.....	NERVOUS CONTROL OF REGENERATION; AXON-SHEATH RELATIONS.....	5R01 NS07403-17	300,241
SKEGGS, LEONARD T.....	CAUSE OF CHRONIC EXPERIMENTAL RENAL HYPERTENSION.....	2R01 HL17243-04	58,846
SPECK, WILLIAM T.....	CARCINOGENIC POTENTIAL OF PHOTOTHERAPY.....	1R01 CA23692-01	61,806
STAMBROOK, PETER J.....	STUDY OF MAMMALIAN GENES AND THEIR REPLICATION.....	5R01 GM22248-03	63,606
STAMBROOK, PETER J.....	REPLICATION OF AMPHIBIAN NONAMPLIFIED RIBOSOMAL DNA.....	1R01 GM23728-01	35,792
STAVITSKY, ABRAM B.....	HUMDRAL IMMUNITY: CHOLERA TOXIN IN CAMP CGMP CONTROL.....	5R01 CA18648-03	23,428
STEINBERG, ARTHUR G.....	NATURE & DISTRIBUTION OF HUMAN GAMMA-GLOBULIN FACTDRS.....	5R01 GM07214-17	106,900
STUEHR, JOHN E.....	KINETIC INVESTIGATION OF BIOCHEMICAL REACTIONS.....	2R01 GM13116-12	72,776
THOMPSON, WILMER L.....	SYSTEM OF EMERGENCY TREATMENT OF POISONED PATIENTS.....	5R01 GM22317-03	104,319
TISCHFIELD, JAY A.....	GENETICS OF RESISTANCE TO ADENINE ANALOGS IN VITRO.....	5R01 GM21551-03	60,283
URBACH, FRED L.....	BINUCLEAR REDOX CENTERS IN COPPER PROTEINS.....	5R01 GM23213-02	52,749
UTTER, MERTON F.....	STRUCTURE OF BIOTIN ENZYMES.....	5R01 AM12245-10	141,927
UTTER, MERTON F.....	ELECTRON MICROSCOPY OF ENZYMES.....	5R01 GM22920-02	29,390
VICTOR, MAURICE.....	VITAMIN B12 DEFICIENCY IN RHESUS MONKEYS.....	5R01 EY01663-02	24,185
WALTON, ALAN G.....	PROGRAM PROJECT IN CALCIFIED TISSUE.....	5P01 AM17110-11	209,257
WALTON, ALAN G.....	PROGRAM PROJECT IN BIOLOGICAL MATERIALS.....	5P01 HL15195-03	470,018
WEBSTER, LESLIE T, JR.....	PHARMACOLOGY OF SALICYLATES AND HEPATIC FUNCTION.....	5R01 AM19630-02	53,205
WENTZ, WILLIAM B.....	CARCINOGENESIS WITH HERPES VIRUS II.....	5R01 CA16706-03	77,509
WOOD, HARLAND G.....	SUBUNIT-SUBUNIT INTERACTIONS OF TRANSCARBOXYLASE.....	5R01 GM22579-03	111,116
WOOD, ROBERT E.....	PULMONARY MUCUS TRANSPORT IN OBSTRUCTIVE LUNG DISEASES.....	2R01 HL17776-03	70,471

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ZULL, JAMES E.....	METABOLISM OF PARATHYROID HORMONE.....	5R01 AM18019-03	44,370
ZULL, JAMES E.....	INTERACTION OF PARATHYROID HORMONE WITH THE KIDNEY.....	5R01 AM18784-02	84,960
ORGANIZATION TOTAL	127 11,641,229		
CLEVELAND CLINIC HOSPITAL ZIP CODE 44106			
BUMPUS, F MERLIN.....	CARDIOVASCULAR DISEASE.....	5P01 HL06835-16	848,800
BUMPUS, F MERLIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05674-09	100,210
DEODHAR, SHARAD D.....	IMMUNOLOGIC ASPECTS OF BERYLLIUM LUNG DISEASE.....	5R01 HL15211-05	48,976
EHRHART, ALLEN.....	COLLAGEN BIOSYNTHESIS IN ATHEROSCLEROSIS.....	2R01 HL16588-04	93,086
FERRARIO, CARLOS M.....	THE UNRESOLVED NATURE OF MALIGNANT HYPERTENSION.....	5R01 HL18062-03	54,168
GERRITY, ROSS G.....	THE STRUCTURE AND PERMEABILITY OF ARTERIAL ENDOTHELIUM.....	1R01 HL21438-01	87,807
HEWLETT, JAMES S.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA04919-18	128,383
HOLZBACH, R THOMAS.....	BILIARY CHOLESTEROL SOLUBILITY.....	2R01 AM17562-04	160,758
NOSE, YUKIHIKO.....	STUDIES ON PROSTHETIC TOTAL HEART REPLACEMENT.....	5R01 HL17435-03	94,139
NOSE, YUKIHIKO.....	HUMAN ANATOMY FOR CARDIAC PROSTHESES.....	5R01 HL18639-02	66,510
PROFFITT, MAX R.....	AUTOIMMUNITY AND VIRUS INDUCED LEUKEMIA.....	3R01 CA20242-01S1	26,423
PROFFITT, MAX R.....	AUTOIMMUNITY AND VIRUS-INDUCED LEUKEMIA.....	2R01 CA20242-02	81,536
SHAINOFF, JOHN R.....	FIBRIN COMPLEXES IN INTERMEDIARY COAGULATION.....	5R01 HL16361-02	57,102
TARAZI, ROBERT C.....	RENIN AND CARDIAC HYPERTROPHY IN HYPERTENSION.....	5R01 HL15837-05	90,310
ORGANIZATION TOTAL	14 1,938,208		
MOUNT SINAI HOSPITAL OF CLEVELAND ZIP CODE 44106			
GENUTH, SAUL M.....	ROLE OF CARNITINE AND RELATED METABOLITES IN KETOSIS.....	1R01 AM21009-01	64,119
HAAS, ERWIN.....	EXPERIMENTAL RENAL AND NEUROGENIC HYPERTENSION.....	5R01 HL17947-03	106,723
LEVY, MATTHEW N.....	NEURAL CONTROL OF THE HEART.....	5R01 HL10951-10	109,483
LEVY, MATTHEW N.....	CATECHOLAMINE RELEASE IN THE HEART.....	5R01 HL15758-05	84,485
LEVY, MATTHEW N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05658-10	36,246
ORGANIZATION TOTAL	5 401,056		
ST. LUKE'S HOSPITAL OF THE UNITED METHODIST CHURCH ZIP CODE 44104			
KLEINERMAN, JEROME I.....	ANALYSIS OF MECHANISMS OF EXPERIMENTAL EMPHYSEMA.....	5R01 ES00264-10	54,352
KLEINERMAN, JEROME I.....	EXPERIMENTAL EMPHYSEMA—DEPRESSION OF PROTEASE INHIBITOR.....	5R01 HL17542-03	60,296
ORGANIZATION TOTAL	2 114,648		
ST. VINCENT CHARITY HOSPITAL ZIP CODE 44115			
NAIR, PANKAJAM.....	MECHANISM OF CHEMORECEPTOR DISCHARGE.....	2R01 HL13134-06	49,210
WHALEN, WILLIAM J.....	COMPARATIVE STUDY OF HEART FUNCTION.....	5R01 HL11906-10	74,255
WHALEN, WILLIAM J.....	VASCULAR CONTROL MECHANISMS IN SKELETAL MUSCLE.....	2R01 HL12703-08	56,132
ORGANIZATION TOTAL	3 179,597		
UNIVERSITY HOSPITALS OF CLEVELAND ZIP CODE 44106			
ROBBINS, FREDERICK C.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00080-15	516,832
ORGANIZATION TOTAL	1 516,832		
COLUMBUS			
BATTELLE MEMORIAL INSTITUTE ZIP CODE 43201			
CLARKE, WILLIAM J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05723-06	53,092
DAVIS, ROBERT C.....	SPECTROSCOPIC STUDIES OF METALLOENZYMES.....	5R01 GM23595-02	60,309
DE VORE, DALE P.....	CHARACTERIZATION OF ADHESIVE FORMED BY MYTILUS EDULIS.....	5R01 DE04100-03	63,467
DE VORE, DALE P.....	PESTICIDE TOXICITY IN MAMMALIAN CELL CULTURES.....	5R01 ES00865-03	55,850
GARDNER, DAVID L.....	MATERIALS FOR AN IMPLANTABLE MUSCLE.....	5R01 AM18182-03	40,483
HASSLER, CRAIG R.....	ELECTRICAL AUGMENTATION OF BONE FORMATION & INGROWTH.....	5R01 AM19280-02	73,686
ORGANIZATION TOTAL	6 346,887		
CHILDREN'S HOSPITAL ZIP CODE 43205			
NEWTON, WILLIAM A, JR.....	CHILDREN'S CANCER STUDY GROUP.....	2R10 CA03750-20	198,908
ORGANIZATION TOTAL	1 198,908		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
OHIO DEPARTMENT OF HEALTH	ZIP CODE 43215		
BEAR, GEORGE T.....	EPIDEMIOLOGY OF ARBORVIRUSES OF PUBLIC HEALTH IMPORTANCE.....	5R01 AI12047-03	42,360
ORGANIZATION TOTAL	1 42,360		
OHIO STATE UNIVERSITY	ZIP CODE 43210		
ALBEN, JAMES O.....	NEW SPECTRAL PROBES IN HEMOLYTIC ANEMIAS.....	5R01 HL17839-03	26,658
ALLEN, JAMES N.....	RADIATION ENHANCEMENT IN NERVOUS SYSTEM TUMOR MODELS.....	5R01 CA20348-02	89,357
ALLRED, JOHN B.....	SHORT-TERM DIETARY CONTROL OF LIVER LIPOGENESIS.....	1R01 AM19555-01	23,984
BALCERZAK, STANLEY P.....	LEUKEMIA-LYMPHOMA PROGRAM.....	5P01 CA15147-03	134,013
BARBER, GEORGE A.....	METABOLISM OF 6-DEOXYHEXOSES.....	5R01 GM19701-09	14,271
BASHE, WINSLOW, JR.....	CLINICAL-PATHOLOGIC STUDIES OF SUDDEN CARDIAC DEATH.....	5R01 HL18793-03	83,211
BATTLES, JAMES B.....	A REGIONAL AMBULATORY CANCER CHEMOTHERAPY PROGRAM.....	5R18 CA17942-03	91,691
BEAL, JACK L.....	A PHYTOCHEMICAL SEARCH FOR MEDICINAL CONSTITUENTS.....	5R01 GM20968-03	50,965
BEAL, JACK L.....	PHYTOCHEMISTRY OF THE GENUS THALICTRUM.....	2R01 HL07502-12	39,996
BEHRMAN, EDWARD J.....	BIOCHEMICAL APPLICATIONS OF OSMIUM CHEMISTRY.....	2R01 GM20375-04	31,884
BERLINER, LAWRENCE J.....	THE ROLE OF ALPHA-LACTALBUMIN IN LACTOSE.....	5R01 GM21923-03	40,976
BIERSDORF, WILLIAM R.....	ELECTROPHYSIOLOGICAL STUDIES OF VISUAL ADAPTATION.....	2R01 EY00454-08	44,793
BIRKY, C WILLIAM, JR.....	MECHANISMS OF MITOCHONDRIAL TRANSMISSION GENETICS.....	5R01 GM19607-05	63,404
BOZLER, EMIL.....	MECHANICAL CONTROL AND ENERGETICS OF MUSCLE CONTRACTION.....	1R01 AM20049-01	21,492
BRIERLEY, GERALD P.....	ION TRANSPORT BY HEART MITOCHONDRIA.....	5R01 HL09364-13	46,819
BUSCH, DARYLE H.....	LIGAND REACTIONS, CATALYSIS, AND MACROCYCLIC COMPLEXES.....	5R01 GM10040-15	76,026
CAVALARIS, CONSTANTINE J.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA17999-03	25,332
CERILLI, JAMES.....	ANTIVASCULAR ENDOTHELIAL ANTIBODY.....	2R01 AM16804-04	70,540
CORNWELL, DAVID G.....	PATHOGENESIS OF EXPERIMENTAL ATHEROSCLEROSIS.....	2R01 HL11897-10	61,550
CRAMBLETT, HENRY G.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00034-17	582,302
CRAMBLETT, HENRY G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05409-16	119,825
DODD, MATTHEW C.....	IMMUNE RNA: TUMOR THERAPY AND PROPHYLAXIS IN MICE.....	5R01 CA16867-03	55,664
DUBEY, JITENDER P.....	TOXOPLASMA GONDII & OOCYST SHEDDING.....	1R01 AI12297-01A3	65,329
FERRIS, THOMAS F.....	PHYSIOLOGY OF RENIN, ALDOSTERONE, AND PROSTAGLANDIN.....	2R01 HL13653-06	85,590
FERTEL, RICHARD H.....	PHARMACOLOGIC CONTROL OF MAST CELL PHOSPHODIESTERASE.....	5R01 HL19062-02	34,312
FREY, PERRY A.....	ENZYME CATALYSIS OF ELECTRON AND GROUP TRANSFER.....	5R01 AM13502-09	50,535
HANSON, KENNETH M.....	PITUITARY-ADRENERGIC-OVARIAN VASOMOTOR INTERACTION.....	1R01 HL20685-01	20,904
HART, RONALD W.....	MECHANISM OF CARCINOGEN-COCARCINOGEN INTERACTION.....	5R01 CA17917-03	26,247
HINE, JACK.....	POLYFUNCTIONAL CATALYSIS.....	5R01 GM18593-13	48,495
HOLLANDER, PHILIP B.....	INTRACELLULAR PH AND MYOCARDIAL ELECTROPHARMACOLOGY.....	1R01 HL20153-01	33,016
HOOVER, EDWARD A.....	INVESTIGATIONS OF THE PATHOGENESIS OF ANIMAL LEUKEMIA.....	1R01 CA22527-01	35,202
HORROCKS, LLOYD A.....	MYELIN BIOSYNTHESIS AND TURNOVER.....	2R01 NS08291-05A1	66,103
HORTON, DEREK.....	LIPOPOLYSACCHARIDE ANTIGENS OF PSEUDOMONAS AERUGINOSA.....	5R01 GM20181-02	43,076
HUNT, WILLIAM E.....	ACUTE SPINAL CORD INJURY RESEARCH CENTER.....	3P50 NS10165-05S1	247,972
HUNT, WILLIAM E.....	ACUTE SPINAL CORD INJURY RESEARCH CENTER.....	5P50 NS10165-06	508,784
IVES, DAVID H.....	ANABOLIC CONTROL IN NORMAL AND NEOPLASTIC TISSUES.....	3R01 CA06913-12S1	6,687
JORNS, MARILYN S.....	FLAVOENZYME MECHANISMS: REDOX AND NONREDOX REACTIONS.....	5R01 GM22662-02	36,233
KAPRAL, FRANK A.....	STUDIES ON IN VIVO GROWTH OF STAPHYLOCOCCI.....	5R01 AI07826-09	43,511
KELLER, MARTIN D.....	A CANCER CENTER EPIDEMIOLOGY BIostatistic UNIT.....	1R10 CA21751-01	52,352
KOESTNER, ADALBERT.....	A MODEL OF PARAINFECTIONOUS DEMYELINATING ENCEPHALITIS.....	5R01 AI09022-09	66,391
KOESTNER, ADALBERT.....	NEUROONCOGENESIS BY RESORPTIVE CARCINOGENS.....	5R01 CA11224-09	95,947
KUNZ, ALBERT L.....	DYNAMICS OF O2 AND CO2 REGULATION.....	5R01 HL14870-06	34,690
KUWANA, THEODORE.....	SPECTROELECTROCHEMISTRY OF BIO-ELECTRON TRANSFERS.....	5R01 GM19181-06	48,717
LA PIDUS, JULES B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07074-12	97,340
LIM, DAVID J.....	SEROUS OTITIS MEDIA: IMMUNOCHEMICAL AND EM STUDY.....	2R01 NS08854-08	83,399
MARTIN, GEORGE F.....	THE DEVELOPMENT OF 'EXTRAPYRAMIDAL SYSTEMS'.....	5R01 NS07410-10	49,744
MARZLUF, GEORGE A.....	REGULATION OF GENE EXPRESSION IN NEUROSPORA.....	1R01 GM23367-01	43,380
MATTHEWS, RICHARD H.....	INHIBITION AND ISOLATION OF TUMOR TRANSPORT SYSTEMS.....	5R01 CA17925-03	53,223
MINTON, JOHN P.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12287-05S3	11,895
NEWMAN, MELVIN S.....	SYNTHESIS OF CARCINOGENIC COMPOUNDS.....	5R01 CA07394-13	77,030
O'DORISIO, M S.....	CONTROL OF MACROPHAGE FUNCTION BY CAMP/CGMP IN NEOPLASIA.....	5R01 CA19705-02	73,407
OLSON, CARTER L.....	DEVELOPMENT OF NEW METHODS TO ASSAY ENZYME REACTIONS.....	5R01 GM15821-09	43,946
PAPPAS, PETER W.....	BIOCHEMICAL ASPECTS OF HOST-PARASITE RELATIONSHIPS.....	5R01 AI12265-03	17,108
PAQUETTE, LEO A.....	POLYCONDENSED ALICYCLICS AND THEIR ANTIVIRAL ROLE.....	5R01 AI11490-04	67,727

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
PAQUETTE, LEO A.....	UNSATURATED POLYOLEFINS AND HYDROCARBON CARCINOGENESIS.....	2R01 CA12115-07	101,711
PATIL, POPAT N.....	IRIS COLOR AND OCULAR DRUG EFFECTS.....	5R01 EY01308-03	20,894
PATIL, POPAT N.....	DRUG-RECEPTOR RELATED STEREOSELECTIVITIES.....	5R01 GM17859-09	26,198
PERLMAN, PHILIP S.....	DELETIONS AND MITOCHONDRIAL GENETIC RECOMBINATION.....	5R01 GM21896-02	48,018
PIEPER, HEINZ P.....	ENERGY OUTPUT AND EFFICIENCY OF LEFT VENTRICLE.....	5R01 HL18933-02	34,491
RHEINS, MELVIN S.....	LYMPHOID LEUKEMIA: IMMUNE RNA THERAPY.....	3R01 CA13752-05S1	14,652
RICE, DAVID A.....	SOUND TRANSMISSION IN LUNG.....	1R23 HL21199-01	42,649
RICHARDSON, KEITH E.....	OXALIC ACID METABOLISM AND PRIMARY HYPEROXALURIA.....	5R01 AM12960-08	24,001
RIESKE, JOHN S.....	FT-INFRARED SPECTROSCOPY OF HEART MUSCLE ENERGETICS.....	5R01 HL18304-03	22,690
ROYER, GARFIELD P.....	IMMOBILIZED ENZYMES, APPLICATIONS IN PROTEIN CHEMISTRY.....	5R01 GM19507-06	45,292
SHECHTER, HAROLD.....	SYNTHESIS AND CHEMISTRY OF DIAZO COMPOUNDS.....	5R01 CA11185-09	50,569
SMITH, C ROGER.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05463-15	29,446
SOLOWAY, ALBERT H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05607-11	40,183
SPRECHER, HOWARD W.....	EFFECTS OF DIETARY CHANGE ON PHOSPHOLIPID METABOLISM.....	5R01 AM18844-02	34,110
SPRECHER, HOWARD W.....	FACTORS MODIFYING BLOOD PLATELET FUNCTION IN DIABETICS.....	1R01 AM20387-01	72,531
ST PIERRE, RONALD L.....	MECHANISMS OF LYMPHOID CELL DIFFERENTIATION.....	5R01 CA19346-02	52,287
STOCKWELL, CHARLES W.....	VESTIBULAR CONTROL OF POSTURE.....	1R01 NS13903-01	38,527
STONER, CLINTON D.....	STRUCTURE AND FUNCTION OF HEART MITOCHONDRIA.....	5R01 HL18038-03	59,770
TASSAVA, ROY A.....	CELLULAR REACTIONS TO AMPUTATION IN ANIMALS.....	1R01 HD10417-01	32,940
WEBB, THOMAS E.....	ABERRANT GENE EXPRESSION DURING CHEMOTHERAPY.....	5R01 CA13718-05	36,855
WILSON, HENRY E.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA04920-18	125,816
WITIAK, DONALD T.....	CARCINOGENIC, MUTAGENIC AND CYTOTOXIC MECHANISM (DMBA).....	1R01 CA21371-01	82,079
WITIAK, DONALD T.....	HYPOCHOLESTEROLEMIC AGENTS: STEREOCHEMICAL STUDIES.....	5R01 HL12740-09	76,231
WOLFE, DOUGLAS A.....	NONPARAMETRIC PARTIALLY SEQUENTIAL PROCEDURES.....	5R01 CM23053-02	30,962
WYMAN, MILTON.....	CONGENITAL GLAUCOMA: A DEVELOPMENTAL STUDY.....	5R01 EY01184-04	82,070
YEARY, ROGER A.....	COMPARATIVE STUDIES IN PERINATAL TOXICOLOGY.....	5R01 HD03867-08	71,388
YOHIN, DAVID S.....	CANCER CENTER SUPPORT GRANT.....	2P30 CA16058-04	1,195,405
ZWILLING, BRUCE S.....	IMMUNOPROPHYLAXIS AND IMMUNOTHERAPY OF LUNG CANCER.....	3R01 CA16342-03S1	7,710
ORGANIZATION TOTAL	82	6,562,520	
DAYTON			
CHILDREN'S MEDICAL CENTER ZIP CODE 45404			
ISRAEL, HARRY, III.....	SEQUENCES IN CRANIOFACIAL MALFORMATION.....	5R01 HD10861-02	58,650
ORGANIZATION TOTAL	1	58,650	
UNIVERSITY OF DAYTON ZIP CODE 45469			
SCHWELTZ, FAYE D.....	CYCLIC NUCLEOTIDES, ESPECIALLY CAMP, IN EUGLENA.....	5R01 GM22611-02	25,514
SINGER, SANFORD S.....	STEROID SULFOTRANSFERASES AND GLUCOCORTICOID ACTION.....	1R01 AM19669-01	8,228
TURGEON, ROBERT.....	CROWN GALL TUMOR DISEASE: SUPPRESSION AND RECOVERY.....	1R01 CA23261-01	53,468
ORGANIZATION TOTAL	3	87,210	
WRIGHT STATE UNIVERSITY ZIP CODE 45431			
ARMSTRONG, MARVIN D.....	UNIDENTIFIED AMINO ACIDS IN HUMAN BLOOD PLASMA.....	5R01 GM22433-02	35,267
BATTINO, RUBIN.....	SOLUBILITY OF GASES IN WATER AND CYCLIC SOLVENTS.....	5R01 GM14710-10	36,832
CUMMINGS, SUE C.....	THERMODYNAMIC STUDIES ON MODEL OXYGEN CARRIERS.....	5R01 HL15640-05	37,991
FALKNER, FRANK.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05537-15	72,830
GOTSHALL, ROBERT W.....	EFFECT OF PRESSURE ON RENAL BLOOD FLOW AND FUNCTION.....	1R23 HL21382-01	41,815
HUTCHINGS, BRIAN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07155-02	23,880
KANTOR, GEORGE J.....	EFFECTS OF RADIATION ON HUMAN CELLS CULTURED IN VITRO.....	5R01 CA16477-03	31,261
ORGANISCIAK, DANIEL T.....	ENVIRONMENTAL LIGHT AND RETINAL MEMBRANE DEVELOPMENT.....	1R01 EY01959-01	50,407
ROCHE, ALEXANDER F.....	PATTERNS OF DENTOCRANIOFACIAL GROWTH AND MATURATION.....	2R01 DE03472-06	89,858
ROCHE, ALEXANDER F.....	ASSESSMENT OF SKELETAL MATURITY.....	2R01 HD04629-07	108,829
ROCHE, ALEXANDER F.....	SUBCUTANEOUS FAT, BLOOD LIPIDS AND HEALTH.....	5R01 HD10246-02	466,598
SIERVOGEL, ROGER M.....	GENETICS OF HYPERTENSION AND ASSOCIATED VARIABLES.....	5R01 HL19931-02	222,238
STUHLMAN, ROBERT A.....	LABORATORY ANIMAL RESOURCES FACILITY IMPROVEMENT.....	5P40 RR01034-02	27,062
VARANDANI, PARTAB T.....	REGULATION AND FUNCTION OF INSULIN DEGRADATION.....	5R01 AM03854-18	104,211
ORGANIZATION TOTAL	14	1,349,079	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
DELAWARE			
OHIO WESLEYAN UNIVERSITY ZIP CODE 43015			
BAHRICK, HARRY P.....	RECOGNITION AND RECALL DURING ACQUISITION AND RETENTION.....	5R01 HD00926-16	34,938
ORGANIZATION TOTAL	1 34,938		
KENT			
KENT STATE UNIVERSITY ZIP CODE 44242			
DOANE, J WILLIAM.....	SELF AND RESTRICTED DIFFUSION IN THE BILAYER MEMBRANE.....	5R01 GM22599-02	38,396
ORGANIZATION TOTAL	1 38,396		
ROOTSTOWN			
NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE ZIP CODE 44272			
CRUCE, WILLIAM L.....	STRUCTURE AND FUNCTION OF SUPRASPINAL PATHWAYS.....	1R01 NS14346-01	40,960
LIEBELT, ROBERT A.....	BIO MEDICAL RESEARCH DEVELOPMENTAL GRANT.....	1S08 RR09026-01	90,050
ORGANIZATION TOTAL	2 131,010		
TOLEDO			
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614			
ASKARI, AMIR.....	EFFECTS OF MERCURIAL POISONS ON NAO,KO-ATPASE.....	1R01 ES01599-01	51,625
ASKARI, AMIR.....	CARDIAC GLYCOSIDES MECHANISMS OF CELLULAR ACTIONS.....	5R01 HL19129-03	82,305
BRAND, PAUL H.....	LACTATE TRANSPORT IN ISOLATED PERFUSED RENAL TUBULE.....	5R01 AM19350-02	52,800
CLIFFORD, DONALD H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05700-08	102,066
FABER, LEE E.....	PROGESTERONE RECEPTORS.....	5R01 HD09367-03	81,317
FREIMER, EARL H.....	STREPTOCOCCI AND HEART: CELL-MEDIATED CROSS-REACTIONS.....	5R01 HL19234-02	68,927
HOWARD, JOHN M.....	STUDY OF PANCREATITIS AND ITS TREATMENT.....	3R01 AM17789-03S1	25,050
HOWARD, JOHN M.....	STUDIES OF PANCREATIC DIABETES.....	1R01 AM21116-01	42,028
LEVIN, JEROME A.....	INACTIVATION OF NOREPINEPHRINE IN VASCULAR TISSUE.....	2R01 HL12647-07A1	52,909
LONG, CALVIN L.....	METABOLIC RESPONSE TO TRAUMA.....	5P01 GM23065-02	299,383
MANNING, MAURICE.....	DESIGN AND SYNTHESIS OF NEUROHYPOPHYSIAL PEPTIDES.....	5R01 HD06351-06	77,149
MC CORQUODALE, D JAMES.....	REGULATORY MECHANISMS OF VIRAL INFECTIONS.....	5R01 AI13166-03	77,508
MC GRADY, ANGELE V.....	ELECTROPHYSIOLOGY OF SPERMATOZOAN DIFFERENTIATION.....	5R01 HD09710-02	46,068
MULROW, PATRICK J.....	ETIOLOGICAL FACTORS IN HYPERTENSION.....	5R01 HL19644-02	118,758
RAPP, JOHN P.....	BIOCHEMISTRY AND GENETICS OF SALT HYPERTENSION.....	5R01 HL20176-02	139,902
REIMANN, ERWIN M.....	BIOCHEMICAL ROLE OF CYCLIC AMP IN THE GASTRIC MUCOSA.....	5R01 AM15611-06	55,639
REIMANN, ERWIN M.....	REGULATION OF GLYCOGEN SYNTHASE BY PROTEIN KINASES.....	5R01 AM19231-02	57,416
RHEE, HEE M.....	DIGITALIS INDUCED ARRHYTHMIA AND NAO,KO-ATPASE ACTIVITY.....	1R23 HL21196-01	42,970
SAFFRAN, JUDITH.....	PROGESTERONE BINDING AND METABOLISM IN UTERINE NUCLEI.....	5R01 HD09359-03	81,372
SAFFRAN, MURRAY.....	CORTICOTROPIN-RELEASING FACTOR PREPARATION & PROPERTIES.....	5R01 AM18913-02	64,864
SCHLENDER, KEITH K.....	REGULATION OF THE RENAL GLYCOGEN SYNTHASE SYSTEM.....	2R01 AM14723-07	56,358
SFEL, ROLAND T.....	NORTHWEST OHIO CANCER NETWORK OUTREACH PROGRAM.....	1R18 CA21931-01	140,545
TAN, SIANG Y.....	RENIN-MINERALOCORTICOID AXIS IN HYPERTENSIVE DIABETICS.....	1R23 HL21291-01	45,100
TIDRICK, ROBERT T.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17989-03	101,520
TURNER, JOHN W, JR.....	HORMONAL CONTROL OF SEXUAL DIFFERENTIATION OF THE BRAIN.....	5R01 HD09429-03	36,632
WUU, TING-CHI.....	PROPERTIES AND FUNCTIONS OF NEUROSECRETORY GRANULES.....	5R01 NS12183-03	45,117
ORGANIZATION TOTAL	26 2,045,328		
WILBERFORCE			
CENTRAL STATE UNIVERSITY ZIP CODE 45384			
JOHNSON, MELVIN A, JR.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08052-06	14,066
JOHNSON, MELVIN A, JR.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08052-07	24,141
ORGANIZATION TOTAL	2 38,207		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
WOOSTER			
COLLEGE OF WOOSTER ZIP CODE 44691			
HINTON, CLAUDE W.....	CHROMOSOME BEHAVIOR IN DROSOPHILA	5R01 GM16536-09	19,041
ORGANIZATION TOTAL	1 19,041		
OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER ZIP CODE 44691			
BOHL, EDWARD H.....	IMMUNITY AGAINST ENTERIC VIRAL INFECTIONS.....	5R01 AI10735-05	34,204
ORGANIZATION TOTAL	1 34,204		
XENIA			
GREENE MEMORIAL HOSPITAL ZIP CODE 45385			
COLBERT, CHARLES.....	RADIOLOGICAL BONE DENSITY CHANGES IN LEAD POISONING.....	7R01 ES01825-01	54,815
ORGANIZATION TOTAL	1 54,815		
YELLOW SPRINGS			
CHARLES F. KETTERING FOUNDATION—RESEARCH LABORATORY ZIP CODE 45387			
FLEISCHMAN, DARRELL E.....	CYCLIC NUCLEOTIDE FUNCTION IN PHOTORECEPTORS.....	5R01 EY00847-05	33,158
ORGANIZATION TOTAL	1 33,158		
STATE TOTAL	390 34,263,067		
OKLAHOMA			
DURANT			
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY ZIP CODE 74701			
ROBINSON, JACK L.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08003-06	35,203
ROBINSON, JACK L.....	SUPPORT FOR BIOMEDICAL SCIENCES (MINORITIES).....	2S06 RR08003-07	83,884
ORGANIZATION TOTAL	2 119,087		
NORMAN			
UNIVERSITY OF OKLAHOMA ZIP CODE 73069			
BASTIAN, JOSEPH A.....	SENSORY PROCESSING IN THE CEREBELLUM.....	5R01 NS12337-03	20,120
BURR, JOHN G.....	BIOLOGICAL FUNCTION OF CHEMICALLY MODIFIED PYRIMIDINES.....	5R01 GM19362-08	40,802
DRYHURST, GLENN.....	ELECTROCHEMISTRY AND INTERFACIAL BEHAVIOR OF PURINES.....	2R01 GM21034-04	43,817
FUNG, BING-MAN.....	WATER AND IONS IN MUSCLE AND COLLAGEN IN AGING.....	1R01 AG00199-01	30,610
HUTCHISON, VICTOR H.....	ERYTHROCYTE PHOSPHATES AND VERTEBRATE GAS TRANSPORT.....	5R01 HL18082-02	36,198
LARSH, HOWARD W.....	ISOLATION OF A SKIN TEST ANTIGEN FOR BLASTOMYCOSIS.....	2R01 AI11610-04	35,591
LARSH, HOWARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07078-04	35,279
LEHR, ROLAND E.....	DIOL EPOXIDES: STRUCTURE-ACTIVITY RELATIONSHIP.....	1R01 CA22985-01	32,112
SCHMITZ, FRANCIS J.....	ANTITUMOR AGENTS FROM MARINE ORGANISMS.....	5R01 CA17256-03	46,934
THOMPSON, JAMES N, JR.....	FREQUENCIES OF MUTATOR FACTORS IN NATURAL POPULATIONS.....	5R01 ES01439-02	51,913
VAN DER HELM, DICK.....	STRUCTURE OF ANTICANCER AGENTS BY X-RAY DIFFRACTION.....	5R01 CA17562-03	45,877
VAN DER HELM, DICK.....	STRUCTURE OF SIDEROCHROMES AND PEPTIDE CHELATES.....	5R01 GM21822-03	66,357
ORGANIZATION TOTAL	12 485,610		
OKLAHOMA CITY			
OKLAHOMA MEDICAL RESEARCH FOUNDATION ZIP CODE 73104			
ALAUPOVIC, PETAR.....	COMPOSITION AND STRUCTURE OF PLASMA LIPOPROTEINS.....	5R01 HL06221-16	92,489
BOTTOMLEY, RICHARD H.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA16957-03	123,340
BRADFORD, REAGAN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05538-15	59,361
CARPENTER, MARY P.....	METABOLISM OF THE TESTIS IN VITAMIN E DEFICIENCY.....	3R01 HD05641-15S1	13,890

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OKLAHOMA—Continued			
CARPENTER, MARY P.....	METABOLISM OF THE TESTIS IN VITAMIN E DEFICIENCY.....	5R01 HD05641-16	42,290
CARUBELLI, RAOUL.....	SIALOGLYCOCONJUGATES IN CANCER UNDER DIETARY STRESS.....	1R01 CA20969-01	36,845
FLOYD, ROBERT A.....	CARCINOGEN FREE RADICALS IN ARYLAMINE METABOLISM.....	5R01 CA18591-03	40,921
FLOYD, ROBERT A.....	FREE RADICALS IN NITROSO-UNSATURATED LIPID REACTIONS.....	1R01 CA21542-01	30,052
GANESAN, DEVAKI N.....	LIPOPROTEIN LIPASE AND RELATED LIPOLYTIC ACTIVITIES.....	3R01 HL15336-03S1	2,888
JOHNSON, B CONNOR.....	NUTRITIONAL REGULATION OF ENZYME ACTIVITY.....	2R01 HL12138-07	53,754
JOHNSON, B CONNOR.....	VITAMIN K AND HUMAN PROTHROMBIN.....	3R01 HL16515-03S1	4,597
JOHNSON, B CONNOR.....	VITAMIN K ENZYME ACTIVATION OF FACTOR VII PRECURSOR.....	5R01 HL17619-03	41,054
LEE, DIANA M.....	STUDIES OF NORMAL AND ABNORMAL LOW DENSITY LIPOPROTEINS.....	3R01 HL14087-05S1	4,164
MACK, DONALD O.....	DIETARY INDUCTION OF ATP-CITRATE LYASE.....	5R01 AM19072-02	39,498
MC CAY, PAUL B.....	LIPID PEROXIDATION: DIET ANTIOXIDANTS AND CARCINOGENS.....	5R01 AM06978-15	55,598
MC CAY, PAUL B.....	OXIDASE-GENERATED FREE RADICALS IN VIT. E DEFICIENCY.....	2R01 AM08397-17	52,902
MC CAY, PAUL B.....	DIETARY FATS AND ANTIOXIDANTS IN CARCINOGENESIS.....	1R01 CA21019-01	114,441
MC CAY, PAUL B.....	CHEMICAL CARCINOGENESIS IN SPECIFIC DIETARY STATES.....	1R01 CA21419-01	13,455
ONTKO, JOSEPH A.....	UPTAKE AND METABOLISM OF LIPIDS BY THE LIVER.....	5R01 HL13302-08	55,617
RADCLIFFE, ROBERT D.....	PURIFICATION OF BOVINE PLASMINOGEN PROACTIVATOR.....	1R01 HL20846-01	36,098
SCHMIDT, PAUL G.....	NMR OF TRANSFER RNA.....	7R01 GM25261-01	43,840
TANG, JORDAN J.....	STUDIES OF THE COMPONENTS OF HUMAN GASTRIC JUICE.....	5R01 AM01107-22	76,326
TANG, JORDAN J.....	FACILITIES FOR THE STUDY OF THE PROPERTIES OF PROTEINS.....	5R01 AM06487-15	28,183
WHAYNE, THOMAS F, JR.....	STUDIES ON METABOLISM OF APOLIPOPROTEIN A.....	5R01 HL18178-03	3,966
ORGANIZATION TOTAL	24	1,065,569	
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
ALLISON, JOHN E.....	TUMORIGENESIS IN ANDROGEN INSENSITIVE RATS.....	5R01 CA17855-02	25,396
BOGARDUS, CARL R, JR.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12250-06	52,994
BROYLES, ROBERT H.....	DIFFERENTIATION OF RED BLOOD CELLS IN VITRO.....	7R01 AM21386-01	3,132
BROYLES, ROBERT H.....	DIFFERENTIATION OF RED BLOOD CELLS IN VITRO.....	5R01 AM21386-02	18,418
BULMER, GLENN S.....	PATHOGENESIS OF CRYPTOCOCCOSIS.....	5R01 AI05022-14	33,820
COLEMAN, RONALD L.....	'METALLOTHIONEIN' IN PHYSIOLOGY AND TOXICOLOGY.....	5R01 ES00830-03	48,808
DELANEY, ROBERT.....	STRUCTURE OF RHIZOPUS CHINENSIS ACID PROTEASE.....	5R01 GM22902-02	29,351
EICHNER, EDWARD R.....	EFFECT OF ETHANOL AND OTHER DRUGS ON FOLATE METABOLISM.....	1R01 AM21347-01	36,611
HOLMES, DONALD D.....	ANIMAL RESOURCE DIAGNOSTIC LABORATORY.....	1P40 RR01098-01	70,072
HORN BROOK, KENT R.....	DRUG AND HORMONE EFFECTS ON CARBOHYDRATE METABOLISM.....	2R01 AM16551-05A1	34,201
HOWES, ROBERT I, JR.....	ROOT FORMATION IN LOWER VERTEBRATE TOOTH TRANSPLANTS.....	5R01 DE03709-04	14,544
HUMPHREY, G BENNETT.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	5R10 CA11233-09	159,859
HUMPHREY, G BENNETT.....	SUPPORT FOR CANCER RESEARCH CENTER.....	5P30 CA19437-02	190,612
KEM, DAVID C.....	INTRACELLULAR ACTION OF ALDOSTERONE IN HYPERTENSION.....	5R01 HL19279-02	85,175
KOSS, MICHAEL C.....	ADRENERGIC CONTROL OF A CENTRAL AUTONOMIC SYSTEM.....	1R01 NS14039-01	30,527
METCOFF, JACK.....	REGULATION OF CELL METABOLISM IN UREMIA.....	1R01 AM19503-01	137,469
METCOFF, JACK.....	MATERNAL MALNUTRITION AND FETAL DEVELOPMENT.....	5R01 HD06915-05	252,479
POLLAY, MICHAEL.....	TRANSCAPILLARY EXCHANGE IN EXPERIMENTAL BRAIN TUMORS.....	5R01 CA21427-02	65,760
RILEY, HARRIS D, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00062-15	358,754
SOKATCH, JOHN R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05411-16	89,443
STONE, HUBERT L.....	CARDIAC ADAPTATION TO PHYSICAL TRAINING.....	7R01 HL22518-01	46,121
TAYLOR, FLETCHER B, JR.....	THROMBOSIS AND PLASMA PROTEINS.....	5P01 HL17812-03	461,127
WEST, KELLY M.....	VASCULAR LESIONS OF DIABETES IN OKLAHOMA INDIANS.....	1R01 HL21039-01	92,753
ZEINER, ARTHUR R.....	BEHAVIORAL CONTROL OF ESSENTIAL HYPERTENSION.....	1R01 HL19844-01A1	52,344
ORGANIZATION TOTAL	24	2,389,770	
STILLWATER			
OKLAHOMA STATE UNIVERSITY AT STILLWATER ZIP CODE 74074			
BEAMES, CALVIN G, JR.....	TRANSPORT MECHANISMS OF THE INTESTINE OF ASCARIS SUUM.....	5R01 AI12783-03	37,602
BERLIN, KENNETH D.....	PROPERTIES OF CYCLIC P CPDS-POTENTIAL CARCINOSTATS.....	5R01 CA11967-13	12,156
CARRAWAY, KERMIT L.....	GLYCOPROTEIN SHEDDING AND MAMMARY TUMOR METASTASIS.....	5R01 CA19985-02	65,202
EDMISON, MARVIN T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07077-12	17,923
GARNER, DUANE L.....	ENZYMOLGY OF MAMMALIAN SPERM ACROSOMES.....	5R01 HD07481-06	42,137
HURST, JERRY G.....	CALCIUM HOMEOSTASIS: ENDOCRINE ASPECTS.....	5R01 AM16983-05	66,523
JENNINGS, DAVID P.....	SUPRAOPTIC NEUROENDOCRINE MECHANISMS AND CELL TYPES.....	5R01 NS11978-03	35,111

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OKLAHOMA—Continued			
JONES, E WYNN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05567-13	28,718
LIAO, TA-HSIU T.....	STRUCTURE-FUNCTION RELATIONSHIPS OF DEOXYRIBONUCLEASE.....	5R01 GM22415-02	35,129
MONLUX, ANDREW W.....	NEOPLASMS REGISTRY.....	5R01 CA13184-06	122,849
ORGANIZATION TOTAL	10 463,350		
TAHLEQUAH			
NORTHEASTERN OKLAHOMA STATE UNIVERSITY ZIP CODE 74464			
VAN DENBOS, GARY.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	5S06 RR08123-04	93,868
ORGANIZATION TOTAL	1 93,868		
TULSA			
OKLAHOMA COLLEGE OF OSTEOPATHIC MEDICINE AND SURGERY ZIP CODE 74119			
CONRAD, ROBERT S.....	METABOLIC EFFECTS OF BRANCHED-CHAIN KETO ACIDS.....	1R01 AM19927-01	13,512
ORGANIZATION TOTAL	1 13,512		
STATE TOTAL	74 4,630,766		
OREGON			
BEAVERTON			
OREGON GRADUATE CENTER FOR STUDY AND RESEARCH ZIP CODE 97005			
HAUSER, FRANK M.....	POLYNUCLEAR ANTITUMOR ANTIBIOTICS: A NEW SYNTHESIS.....	5R01 CA18141-02	50,766
HURST, JAMES K.....	FAST-KINETIC STUDIES OF ENZYME-CATALYZED REACTIONS.....	5R01 GM18458-06	30,831
LOEHR, THOMAS M.....	LASER RAMAN SPECTROSCOPY OF METALLOPROTEINS.....	5R01 GM18865-06	51,476
SWANSON, LYWOOD W.....	A SCANNING FIELD ION MICROSCOPE.....	5R01 GM22972-02	63,473
ORGANIZATION TOTAL	4 196,546		
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY ZIP CODE 97331			
BAYNE, CHRISTOPHER J.....	SCHISTOSOMIASIS: CELL BIOLOGY OF THE INTERMEDIATE HOST.....	5R22 AI13295-02	85,048
BROWN, LYLE R.....	RNA POLYMERASE GENES: STRUCTURE, FUNCTION, AND CONTROL.....	5R01 GM19617-05	53,251
BUHLER, DONALD R.....	METABOLISM AND TOXICITY OF PYRROLIZIDINE ALKALOIDS.....	1R01 CA22524-01	76,969
BUHLER, DONALD R.....	METABOLISM OF HEXACHLOROBENZENE—TOXICITY AND PORPHYRIA.....	1R01 ES01556-01	37,538
CARDENAS, M JANET.....	INBORN ERRORS AND PYRUVATE KINASE ISOZYMES.....	2R01 AM15645-07	45,666
FREED, VIRGIL H.....	TOXICOLOGY OF ENVIRONMENTAL CHEMICALS.....	5P01 ES00040-13	491,784
FREED, VIRGIL H.....	ENVIRONMENTAL HEALTH SCIENCES CENTER.....	5P30 ES00210-10	911,058
ISENBERG, IRVIN.....	INTERACTIONS OF CHROMOSOMAL PROTEINS.....	2R01 CA10872-10	111,186
JOHNSON, WALTER C, JR.....	NUCLEIC ACIDS: THEIR CONFORMATION AND FUNCTION.....	5R01 GM21479-03	45,473
KOLLER, LOREN D.....	ENVIRONMENTAL CONTAMINANTS: EFFECT ON TUMOR IMMUNITY.....	1R01 ES01612-01	49,344
MILLS, DALLICE I.....	RIBOSOME ACTIVITY AND TRANSCRIPTION DURING MEIOSIS.....	5R01 GM24040-02	40,971
NEWBURGH, ROBERT W.....	BIOCHEMISTRY OF NEURAL DEVELOPMENT.....	5R01 NS09161-21	52,003
NEWBURGH, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07079-12	107,849
PARKS, LEO W.....	ANALYSIS OF THE STEROL COMPONENTS OF YEAST.....	5R01 AM05190-16	42,411
PEARSON, GEORGE D.....	REPLICATION MAP OF AN ONCOGENIC VIRUS.....	5R01 CA17699-03	64,354
QUATRANO, RALPH S.....	BIOCHEMICAL BASIS FOR ESTABLISHMENT OF CELL POLARITY.....	5R01 GM19247-06	46,270
REED, DONALD J.....	BIOCHEMISTRY OF PROCARBAZINE AND RELATED HYDRAZINES.....	3R01 CA08348-11S1	7,335
SCHMITZ, JOHN A.....	MAMMARY TUMORS—EFFECTS OF DIETARY FATTY ACIDS AND SE.....	1R01 CA20998-01	40,032
SINNHUBER, RUSSELL O.....	METABOLISM AND CARCINOGENICITY OF AFLATOXINS.....	5R01 ES00541-07	108,991
SINNHUBER, RUSSELL O.....	METABOLISM AND COCARCINOGENICITY OF CYCLOPROPENES.....	5R01 ES00550-07	108,782
TERRIERE, LEON C.....	DETOXICATION MECHANISMS IN INSECTS.....	5R01 ES00362-19	61,816
THIES, RICHARD W.....	RING EXPANSION ROUTES TO 8,9,13,14-DISECOSTEROIDS.....	5R01 HD08550-04	34,729
TINSLEY, IAN J.....	TOXICOLOGY OF BROMINATED FATTY ACIDS.....	1R01 ES01377-01	55,645
VAN HOLDE, KENSAL E.....	SUBUNIT STRUCTURE OF CHROMATINS.....	5R01 GM22916-02	44,850

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
WEDMAN, E EDWARD.....	DEVELOPMENT OF LABORATORY ANIMAL DIAGNOSTIC SERVICES.....	5P40 RR00726-04	14,914
WHANGER, PHILIP D.....	EFFECTS OF DIETARY FACTORS ON METALLOTHIONEIN LEVELS.....	5R01 AM19285-02	78,448
WHITE, JAMES D.....	SYNTHESIS OF MACROLIDE ANTIBIOTICS.....	5R01 AI10964-04	71,035
ORGANIZATION TOTAL	27 2,887,752		
EUGENE			
OREGON RESEARCH INSTITUTE ZIP CODE 97401			
ENGELMANN, SIEGFRIED.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05612-09	45,856
ORGANIZATION TOTAL	1 45,856		
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON ZIP CODE 97403			
BAJER, ANDREW S.....	STUDIES ON THE FUNCTION OF THE MITOTIC SPINDLE.....	5R01 GM21741-03	85,809
BERNHARD, SIDNEY A.....	KINETIC ANALYSIS OF ENZYME CATALYSIS.....	5R01 GM10451-13	52,386
BERNHARD, SIDNEY A.....	MOLECULAR INTERACTIONS IN SYNAPTIC TRANSMISSION.....	5R01 NS12240-03	31,943
BOEKELHEIDE, VIRGIL C.....	SYNTHESES OF POTENTIAL ANTITUMOR AND ANTIVIRAL AGENTS.....	5R01 CA15004-04	51,074
GORDON-LICKEY, BARBARA.....	SUPERIOR COLLICULUS AND THE CONTROL OF EYE MOVEMENTS.....	5R01 EY00125-08	67,136
GORDON-LICKEY, MARVIN.....	NEURAL MECHANISMS OF CIRCADIAN RHYTHMS.....	5R01 NS12374-03	54,674
GRIFFITH, O HAYES.....	SPIN LABELING AND MEMBRANE STRUCTURE.....	5R01 CA10337-11	110,409
GRIFFITH, O HAYES.....	PHOTOELECTRON MICROSCOPY OF MAMMALIAN MEMBRANES.....	5R01 CA11695-08	110,190
HERBERT, EDWARD.....	REGULATION OF PRODUCTION OF ACTH IN CELL CULTURE SYSTEMS.....	2R01 AM16879-04	97,068
HERSKOWITZ, IRA.....	PHAGE-HOST INTERACTIONS AND CONTROL OF PHAGE GROWTH.....	5R01 AI11344-05	71,197
HERSKOWITZ, IRA.....	GENETIC CONTROL OF MATING IN YEAST.....	5R01 AI13462-02	60,889
KEANA, JOHN F.....	NEW SPIN-LABELS FOR STUDYING BIOLOGICAL MEMBRANES.....	5R01 CA17338-03	37,871
MARROCCO, RICHARD T.....	PHYSIOLOGY OF VISUAL AFFERENT PATHWAYS.....	3R01 EY01286-03S1	7,235
MATTHEWS, BRIAN W.....	X-RAY STRUCTURAL STUDIES OF PROTEINS.....	5R01 GM20066-05	40,782
MATTHEWS, BRIAN W.....	STRUCTURE, FUNCTION AND STABILITY OF T4 PHAGE LYSOZYME.....	5R01 GM21967-03	77,032
MUNZ, FREDERICK W.....	GENETICS OF VISUAL PIGMENTS.....	5R01 EY00324-12	41,027
NOVICK, AARON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07080-12	114,437
NOVITSKI, EDWARD.....	THE NATURE OF RADIATION INDUCED GENETIC DAMAGE.....	1R01 ES01536-01	62,273
NOVITSKI, EDWARD.....	THE SYNTHESIS AND ANALYSIS OF CHROMOSOMES.....	2R01 GM18678-07	74,021
PETICOLAS, WARNER L.....	LASER RAMAN SCATTERING FROM BIOLOGICAL MACROMOLECULES.....	5R01 GM15547-11	79,994
POSTLETHWAIT, JOHN H.....	GENE AND HORMONE CONTROL OF DROSOPHILA EGG PROTEINS.....	5R01 GM21548-03	52,645
POSTLETHWAIT, JOHN H.....	DETERMINATION AND PATTERN FORMATION IN DROSOPHILA.....	1R01 GM24182-01	79,041
SCHELLMAN, JOHN A.....	INTERACTIONS OF NUCLEOTIDES AND PROTEINS.....	5R01 GM20195-20	82,302
SEDEROFF, RONALD R.....	GENETIC ANALYSIS OF SIMPLE SEQUENCE DNA.....	2R01 GM23334-02A1	102,797
SMITH, GERALD R.....	MOLECULAR BIOLOGY OF PHAGE A OPERATOR AND TRANSCRIPTS.....	1R01 AI13079-01A1	51,583
STAHL, FRANKLIN W.....	RECOMBINATIONAL INTERMEDIATES IN PHAGE LAMBDA.....	5R01 GM20373-04	29,742
STREISINGER, GEORGE.....	MOLECULAR MECHANISMS OF MUTATION.....	5R01 GM19795-05	65,826
STREISINGER, GEORGE.....	GENETIC STUDIES WITH ZEBRA FISH (BRACHYDANIO RERIO).....	5R01 GM22731-02	132,837
VON HIPPEL, PETER H.....	STRUCTURE AND RELATIONS OF PROTEINS AND NUCLEIC ACIDS.....	5R01 GM15792-11	119,310
WESTON, JAMES A.....	SURFACE MACROMOLECULAR CHANGES IN CELL TRANSFORMATION.....	5R01 CA16287-03	64,866
WESTON, JAMES A.....	EXTRACELLULAR MATRIX AND MORPHOGENESIS IN MUTANT MICE.....	5R01 DE04316-02	39,387
WOLFE, RAYMOND G, JR.....	CATALYTIC MECHANISM STUDIES, MALIC DEHYDROGENASE.....	5R01 GM21460-19	32,127
ORGANIZATION TOTAL	32 2,179,910		
FOREST GROVE			
OREGON OPTOMETRIC CENTER ZIP CODE 97116			
SCHOR, CLIFTON M.....	ABNORMAL EYE MOVEMENT IN STRABISMUS AND AMBLYOPIA.....	5R01 EY01692-02	31,467
ORGANIZATION TOTAL	1 31,467		
PORTLAND			
GOOD SAMARITAN HOSPITAL AND MEDICAL CENTER ZIP CODE 97210			
BARMACK, NEAL H.....	THE PERIPHERAL COMPONENTS OF EYE MOVEMENT CONTROL.....	5R01 EY00848-06	73,428
BELL, CURTIS C.....	PHYSIOLOGICAL RELATIONS BETWEEN CEREBELLAR ELEMENTS.....	5R01 NS06728-09	48,412
DOW, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05593-10	16,287
KAPLAN, MICHAEL W.....	OPTICAL STUDIES OF PHOTORECEPTOR FUNCTION.....	5R01 EY01779-02	53,239

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
NASHNER, LEWIS M.....	STUDIES ON CONTROL OF HUMAN POSTURE.....	5R01 NS12661-02	36,773
ORGANIZATION TOTAL	5 228,139		
MEDICAL RESEARCH FOUNDATION OF OREGON ZIP CODE 97225			
BEATTY, CLARISSA H.....	EFFECTS OF PROSTAGLANDINS ON MYOMETRIAL METABOLISM.....	5R01 HD06069-06	39,873
BEATTY, CLARISSA H.....	SUBCELLULAR METABOLISM—FETAL AND ADULT MUSCLE.....	5R01 HD06425-06	49,624
FAHRENBACH, WOLF H.....	ORGANIZATION OF VISUAL CENTERS IN THE LIMULUS BRAIN.....	5R01 EY00392-10	25,140
HU, FUNAN.....	STROMAL PIGMENT CELLS OF THE UVEA IN CULTURE.....	1R01 EY02086-01	51,914
HUTCHINSON, ALFRED C.....	A CONCEPT FOR OPTIMAL CANCER CARE IN OREGON.....	1R18 CA21267-01	157,037
JONES, RICHARD T.....	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00163-18	2,853,585
KITTINGER, GEORGE W.....	ENDOCRINE CONTROL OF DEVELOPMENT IN THE RHESUS FETUS.....	5R01 HD09820-02	65,448
MALINOW, MANUEL R.....	RETINAL & CHOROIDAL ATHEROSCLEROSIS IN MONKEYS.....	1R01 EY02040-01	50,698
MALINOW, MANUEL R.....	CHOLESTEROL BINDING SAPONINS AND ATHEROSCLEROSIS.....	2R01 HL16587-03	94,773
MONTAGNA, WILLIAM.....	THE BIOLOGY OF SKIN OF MAN AND OTHER PRIMATES.....	5P01 AM08445-14	272,708
MONTAGNA, WILLIAM.....	ANNUAL SYMPOSIA ON BIOLOGY OF THE SKIN.....	5R13 AM09431-12	9,000
MONTAGNA, WILLIAM.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05694-08	114,462
NOVY, MILES J.....	ENDOCRINE AND VASCULAR RELATIONSHIPS IN PARTURITION.....	5R01 HD06159-05	136,562
PORTMAN, OSCAR W.....	EXPERIMENTAL VASCULAR SCLEROSIS.....	2R01 HL09744-13	131,772
SPEOFF, LEON.....	PROSTAGLANDINS AND TOXEMIA OF PREGNANCY.....	7R01 HD11217-01	73,435
SPIES, HAROLD G.....	EVENTS THAT CONTROL FERTILIZATION.....	5P01 HD05969-07	487,121
SPIES, HAROLD G.....	NEURAL INFLUENCE ON HYPOPHYSEAL-GONADAL FUNCTION.....	5R01 HD07602-05	154,568
ZINGESER, MAURICE R.....	PCB AND TCDD OROFACIAL TERATOGENESIS IN M. MULATTA.....	1R01 DE04333-01A1	86,749
ORGANIZATION TOTAL	18 4,854,469		
OREGON STATE HIGHER EDUCATION SYSTEM—PORTLAND STATE UNIVERSITY ZIP CODE 97207			
SMEJTEK, PAVEL.....	PESTICIDES AND TRANSPORT ACROSS BILAYER LIPID MEMBRANES.....	2R01 ES00937-04	52,570
ORGANIZATION TOTAL	1 52,570		
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201			
BAGBY, SUSAN P.....	RENIN-VOLUME INTERACTIONS IN COARCTATION HYPERTENSION.....	1R01 HL19825-01	55,396
BENNETT, WILLIAM M.....	GENTAMICIN: NEPHROTOXICITY AND PHARMACOLOGY.....	5R01 GM22928-02	33,164
BISSONNETTE, JOHN M.....	CONTROL OF FETAL BREATHING MOVEMENTS.....	1R01 HD11251-01	44,778
BLACK, JOHN A.....	NATURE OF PYRUVATE KINASE ISOZYME CHANGE IN NEOPLASIA.....	3R01 CA15739-03S1	6,063
BLACK, JOHN A.....	THE ROLE OF PROTEIN DEGRADATION IN NEOPLASIA.....	5R01 CA16558-03	29,309
BROOKHART, JOHN M.....	NEURAL MECHANISMS OF POSTURAL CONTROL.....	5R01 NS04744-14	75,014
BRUMMETT, ROBERT E.....	KANAMYCIN-ETHACRYNIC ACID INDUCED COCHLEAR DAMAGE.....	5R01 NS12808-02	52,581
BURNS, ROBERT P.....	BIOCHEMICAL CYTOLOGY OF DISEASED AND HEALING CORNEA.....	5R01 EY00753-05	71,155
BURNS, ROBERT P.....	HEREDITARY CATARACT IN PEROMYSCUS.....	5R01 EY01726-02	64,474
CONNOR, WILLIAM E.....	THE ALTERNATIVE DIET FOR CORONARY DISEASE PREVENTION.....	1R01 HL20910-01	333,486
CRITCHLOW, B VAUGHN.....	NEURAL REGULATION OF ANTERIOR PITUITARY.....	2R01 AM16794-06	62,305
FABER, JAN J.....	PLACENTAL TRANSFER OF HYDROPHILIC MATERIALS.....	5R01 HD06689-05	33,440
FAUST, CHARLES H, JR.....	GENE EXPRESSION IN NORMAL AND MALIGNANT ANIMAL CELLS.....	5R01 CA17401-02	39,128
FEENEY, LYNETTE.....	SYNTHESIS AND PHAGOCYTOSIS IN OCULAR NEUROEPITHELIA.....	2R01 EY00715-06	62,256
FEENEY, LYNETTE.....	SULFATED GLYCOLIPIDS AND AQUEOUS HUMOR SECRETION.....	5R01 EY01638-03	41,491
FELLMAN, J H.....	AROMATIC AMINO ACID METABOLISM AND AROMATIC AMINES.....	5R01 NS01572-20	95,026
FIELDS, R WAYNE.....	PHYSIOLOGICAL BASIS OF DENTAL ELECTRICAL PAIN THERAPY.....	5R01 DE04281-02	52,715
FLETCHER, WILLIAM S.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12279-05S3	26,176
GIPSON, ILENE K.....	CELL MOTILITY AND ADHESION IN CORNEAL WOUND HEALING.....	1R01 EY02118-01	75,481
GREER, MONTE A.....	NEUROENDOCRINE AND THYROID PHYSIOLOGY.....	5R01 AM01447-22	152,596
HECHT, FREDERICK.....	CYTOGENETICS OF CLONAL NEOPLASIAS.....	5R01 CA16747-03	73,911
HECHT, FREDERICK.....	HUMAN CHROMOSOME STRUCTURE, FUNCTION AND BEHAVIOR.....	2R01 HD08236-03	79,022
IGLEWSKI, WALLACE J.....	SELECTIVE INTOXICATION OF VIRUS TRANSFORMED CELLS.....	5R01 CA17271-03	44,844
JONES, RICHARD T.....	HEMOGLOBIN: STRUCTURE, FUNCTION AND GENETIC CONTROL.....	2R01 AM17850-04	85,201
JONES, RICHARD T.....	FUNCTIONAL STUDIES OF ABNORMAL HUMAN HEMOGLOBINS.....	1R01 HL20142-01	25,550
KABAT, DAVID.....	CONTROL OF GENE EXPRESSION IN DIFFERENTIATING CELLS.....	8R01 CA23032-09	64,166
KENDALL, JOHN W.....	NEURAL CONTROL OF ACTH RELEASE.....	5R01 AM08547-11	46,777
KENNAWAY, NANCY G.....	UREA CYCLE: STUDY OF NORMAL AND MUTANT GENE PRODUCTS.....	5R01 AM17906-02	50,971
KLOSTER, FRANK E.....	RANDOMIZED STUDY OF CORONARY BYPASS SURGERY.....	1R01 HL21293-01	66,976
KOLER, ROBERT D.....	GENETIC ALTERATIONS IN HUMAN RED CELLS.....	5R01 AM18006-04	38,065
KOLER, ROBERT D.....	GAS TRANSPORT IN THE FETAL AND POSTNATAL CIRCULATION.....	1R01 HD10595-01	51,890

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
KOLER, ROBERT D.....	POSTSYNTHETIC MODIFICATIONS OF HEMOGLOBIN IN DIABETICS.....	5R01 HL20393-02	17,265
KRIPPAEHN, WILLIAM W.....	EFFECT OF FUNCTION ON GRAFTS AND IMPLANTS OF COLLAGEN.....	5R01 HL14126-16	72,611
LAYMAN, DON L.....	COLLAGEN SYNTHESIS BY CULTURED HUMAN VASCULAR CELLS.....	1R01 HL21303-01	83,340
LESLIE, GERRIE A.....	REGULATOR LYMPHOCYTES OF DYSGAMMAGLOBULINEMIC CHICKS.....	1R01 CA23708-01	41,328
LINMAN, JAMES W.....	PRELEUKEMIC SYNDROME(S): STUDY GROUP PLANNING.....	1P20 CA20728-01	19,756
LITT, MICHAEL.....	CONTROL OF TRANSFER RNA LEVELS IN MAMMALIAN CELLS.....	5R01 CA16557-03	38,310
LOVRIEN, EVERETT W.....	GENETIC LINKAGE ANALYSIS IN SELECTED FAMILIES.....	5R01 HD08237-04	74,016
MAHLER, DAVID B.....	CLINICAL BEHAVIOR OF DENTAL RESTORATIVE MATERIALS.....	5R01 DE02320-12	58,054
MAHLER, DAVID B.....	MARGINAL FRACTURE OF DENTAL AMALGAM.....	2R01 DE02936-09	99,620
MASON, HOWARD S.....	MECHANISMS OF OXYGEN METABOLISM.....	5R01 AM07180-15	111,039
METCALFE, JAMES.....	RESPIRATION DURING DEVELOPMENT.....	5P01 HD10034-02	410,731
MEYER, ERNEST A.....	COMPARATIVE CHARACTERISTICS OF GIARDIA TROPHOZOITES.....	5R01 AI13300-02	19,519
MORSE, STEPHEN A.....	INTERACTION OF STEROIDS WITH NEISSERIA GONORRHOEAE.....	5R01 AI12928-02	41,448
MORSE, STEPHEN A.....	PHYSIOLOGY AND METABOLISM OF NEISSERIA GONORRHOEAE.....	5R01 AI13571-02	60,680
RIKER, WILLIAM K.....	ANTICONVULSANT NEUROPHARMACOLOGY: SITE OF DRUG ACTION.....	1R01 NS12813-01A2	52,725
RITTENBERG, MARVIN B.....	TOXIN CANCER CHEMOTHERAPY IN IMMUNOPROTECTED ANIMALS.....	5R01 CA17228-03	92,829
ROSCH, JOSEF.....	RETROGRADE PANCREATIC VENOGRAPHY—ANIMAL AUTOPSY STUDIES.....	5R26 CA19221-02	46,913
SAVARA, BHIM S.....	SIGNIFICANCE OF VARIATION DURING CHILD GROWTH.....	5R01 HD00157-16	86,963
SAVARA, BHIM S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05336-16	21,813
SEAMAN, GEOFFREY V.....	AGING ERYTHROCYTES: BIORECOGNITION AND ELIMINATION.....	5R01 HL18284-03	69,510
SHEARER, THOMAS R.....	METABOLIC EFFECTS OF SELENIUM ON DENTAL CARIES.....	2R01 DE03536-05	21,137
SHEARER, THOMAS R.....	FLUORIDE-SELENIUM INTERACTION IN DENTAL CARIES.....	2R01 DE03856-04	28,768
SIEGEL, BENJAMIN V.....	AUTOIMMUNITY AND NEOPLASIA IN NEW ZEALAND BLACK MICE.....	5R01 CA18149-02	54,240
SMITH, CATHERINE A.....	STRUCTURE AND FUNCTION OF THE INNER EAR.....	2R01 NS08813-09	98,412
STARR, ALBERT.....	LATE RESULTS OF VALVE REPLACEMENT: COMPUTER ANALYSIS.....	2R01 HL16461-04	162,144
STONE, ROBERT S.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00334-11	548,886
STONE, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05412-16	182,990
VAN BRUGGEN, JOHN T.....	ROLE OF SOLUTE DRAG IN BIOLOGICAL TRANSPORT.....	5R01 AM18038-03	43,653
VERNON, JACK A.....	INVESTIGATION OF AGENTS WHICH DAMAGE THE EAR.....	5P01 NS09889-06	181,117
WALLOCH, RICHARD A.....	BEHAVIORAL EVALUATION OF COCHLEAR IMPLANTS.....	5R01 NS12864-02	50,772
WEITLAUF, HARRY M.....	METABOLIC CHANGES IN PREIMPLANTATION EMBRYOS OF MICE.....	2R01 HD08496-04	56,128
WUEPPER, KIRK D.....	EPIDERMAL TRANSGLUTAMINASE: ROLE IN KERATINIZATION.....	2R01 AM17687-03	22,994
WUEPPER, KIRK D.....	PURIFICATION AND FUNCTION OF HUMAN HMW KININOGEN.....	5R01 HL18618-03	37,591
ORGANIZATION TOTAL	64	5,040,709	
PROVIDENCE MEDICAL CENTER ZIP CODE 97213			
SEAMAN, GEOFFREY V.....	EVALUATION OF DIAGNOSTIC CLINICAL HEMORRHOLOGY.....	5R01 HL19255-02	47,454
ORGANIZATION TOTAL	1	47,454	
REED COLLEGE ZIP CODE 97202			
ARCH, STEPHEN W.....	REGULATORY PHYSIOLOGY AND BIOCHEMISTRY IN NERVE CELLS.....	3R01 NS11149-03S1	12,989
KLEINHOLZ, LEWIS H.....	NEUROSECRETION AND ENDOCRINE PHYSIOLOGY.....	5R01 NS02606-18	57,675
KLEINHOLZ, LEWIS H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07168-01	15,754
RUBEN, LAURENS N.....	THE EVOLUTION AND DEVELOPMENT OF IMMUNE RESPONSES.....	5R01 AI12846-03	45,665
RUSSELL, PETER J.....	A RIBOSOME BIOSYNTHESIS MUTANT OF NEUROSPORA.....	5R01 GM22488-02	33,619
ORGANIZATION TOTAL	5	165,702	
STATE TOTAL	159	15,730,574	

PENNSYLVANIA

BETHLEHEM

LEHIGH UNIVERSITY ZIP CODE 18015

CHENG, THOMAS C.....	DEFENSE MECHANISMS IN MOLLUSCS IN RELATION TO BIOCONTROL.....	5R01 AI12355-03	42,249
CHENG, THOMAS C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07173-01	20,329
O'CONNOR, JOHN J.....	RETRIEVAL OF ANSWER-PASSAGES FROM BIOMEDICAL PAPERS.....	5R01 LM02603-02	79,419
SCHAFFER, STEPHEN W.....	TAURINE METABOLISM IN MAMMALIAN HEART.....	5R01 HL18554-02	34,842

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SCHRAY, KEITH J.....	ANOMERIC SPECIFICITY AND 1-EPIMERASE ACTIVITIES.....	5R01 GM22378-02	47,564
YOUNG, THOMAS E.....	ELECTROCHEMICAL STUDIES OF MELANIN PRECURSORS.....	5R01 NS12608-02	31,573
ORGANIZATION TOTAL	6 255,976		
BRYN MAWR			
BRYN MAWR COLLEGE ZIP CODE 19010			
HOFFMAN, HOWARD S.....	PSYCHOPHYSICS OF THE STARTLE REACTION.....	9R01 HD10511-04	83,915
OLDS-CLARKE, PATRICIA J.....	STUDIES OF MAMMALIAN FERTILIZATION.....	5R01 HD09156-03	19,576
POWERS, ALICE S.....	VISUAL SYSTEM STRUCTURE AND FUNCTION.....	5R01 EY01657-02	21,199
ORGANIZATION TOTAL	3 124,690		
DARBY			
MERCY CATHOLIC MEDICAL CENTER ZIP CODE 19023			
DJERASSI, ISAAC.....	LEUKEMIA CENTER (PLATELET) PROGRAM.....	2R01 CA11630-08	203,600
ORGANIZATION TOTAL	1 203,600		
HAVERFORD			
HAVERFORD COLLEGE ZIP CODE 19041			
GOFF, CHRISTOPHER G.....	MECHANISMS REGULATING GENE EXPRESSION IN YEAST.....	5R01 GM22756-02	46,168
KESSLER, DIETRICH.....	ACTOMYOSIN AND CONTROL OF CELL MOVEMENTS IN MITOSIS.....	5R01 GM22924-02	37,945
LERMAN, CHARLES L.....	ACTIVE SITE OF DELTA-AMINOLEVULINIC ACID DEHYDRATASE.....	1R01 ES01572-01	35,404
SANTER, MELVIN.....	PRIMARY STRUCTURE ANALYSIS OF RIBOSOMES.....	5R01 GM11738-11	54,531
ORGANIZATION TOTAL	4 174,048		
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033			
BAIRD, IRWIN L.....	ANATOMICAL STUDIES OF THE INTERNAL EAR.....	5R01 NS07860-11	48,422
BARDIN, C WAYNE.....	ANDROGENS IN REPRODUCTION: PRODUCTION AND ACTIONS.....	5R01 HD05276-07	78,472
BERMAN, WILLIAM, JR.....	EFFECTS OF DIGOXIN THERAPY IN NEWBORN AND ADULT SHEEP.....	1R01 HL20830-01	61,280
BHAVANANDAN, VEERASINGHAM.....	COMPLEX SACCHARIDES OF NORMAL AND CANCER CELL NUCLEI.....	5R01 CA17686-02	51,009
BULLOCK, LESLIE P.....	MECHANISM OF HORMONE ACTION IN ERYTHROPOIETIC CELL.....	5R01 AM19056-02	33,336
CARPENTER, MALCOLM B.....	VESTIBULAR SYSTEM.....	2R01 NS13747-02	52,634
CARPENTER, MALCOLM B.....	ANATOMY OF BASAL GANGLIA AND RELATED NUCLEI.....	5R01 NS13750-02	52,349
COMBS, JOHN W.....	CELL POPULATION KINETICS OF TUMOR REGRESSION.....	5R01 CA17341-03	43,961
COMBS, JOHN W.....	CELL POPULATION KINETICS OF TUMORS AND HOST TISSUES.....	5R01 CA20002-02	36,364
DAVIDSON, EUGENE A.....	BIOCHEMISTRY OF MUCOPOLYSACCHARIDES.....	5R01 CA15483-10	149,282
DEMERS, LAURENCE M.....	NUTRITION AND HORMONAL INFLUENCES ON LUNG MATURATION.....	5R01 HD06201-06	39,851
HAMMOND, JAMES M.....	PROLACTIN AND PROLACTIN RECEPTORS IN OVARIAN FUNCTION.....	5R01 HD10122-02	60,774
HARRISON, TIMOTHY S.....	CARDIOVASCULAR DETERMINANTS OF CATECHOLAMINE RELEASE.....	2R01 HL18995-03	94,743
HASS, LOUIS F.....	STUDIES ON THE CONTROL OF SICKLE CELL CRISIS.....	2R01 HL16647-04	96,252
HERNANDEZ, MILTON J.....	CEREBRAL BLOOD FLOW AND METABOLISM IN ATHEROSCLEROSIS.....	5R01 NS11958-03	51,763
HILL, CHARLES W.....	GENETICS AND BIOCHEMISTRY OF MISSENSE SUPPRESSION.....	5R01 GM16329-10	87,640
HUGHES, HOWARD C.....	ELIMINATION OF REOPERATIVE CARDIAC PACEMAKER SURGERY.....	5R01 HL13988-07	76,359
HYMAN, RICHARD W.....	MALIGNANCY AND DNA HOMOLGY AMONG THE HERPES VIRUSES.....	5R01 CA16498-03	43,693
JACOB, SAMSON T.....	MITOCHONDRIAL POLYADENYLATE POLYMERASE IN NEOPLASIA.....	3R01 CA15733-03S1	4,553
JACOB, SAMSON T.....	MITOCHONDRIAL RNA POLYMERASE OF RAT LIVER AND TUMORS.....	5R01 CA16438-05	40,144
JEFFERSON, LEONARD S, JR.....	REGULATION OF LIVER GROWTH AND FUNCTION.....	2R01 AM13499-09	73,835
JEFFERSON, LEONARD S, JR.....	REGULATION OF SKELETAL MUSCLE METABOLISM.....	2R01 AM15658-07	60,582
KREIDER, JOHN W.....	CELL DIFFERENTIATION AND NEOPLASIA.....	5R01 CA11097-08	79,337
LADDA, ROGER L.....	GROWTH FACTORS: CONTROL OF ANIMAL CELL PROLIFERATION.....	5R01 AG00421-03	52,010
LANG, C MAX.....	LABORATORY ANIMAL DIAGNOSTIC RESOURCE.....	5P40 RR00469-09	100,163
LANOUE, KATHRYN F.....	CONTROL OF ANION TRANSPORT IN MITOCHONDRIA.....	5R01 GM22158-03	49,860
LAUSCH, ROBERT N.....	STUDY OF SERUM FACTORS MODIFYING TUMOR IMMUNITY.....	2R01 CA14188-04	69,660
LAUSCH, ROBERT N.....	IMMUNOLOGY OF CYTOMEALOVIRUS TUMOR ANTIGENS.....	5R01 CA17706-02	64,617
LEAMAN, DAVID M.....	NARCOTICS AND THE CIRCULATION.....	5R01 HL17954-03	33,555

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
LEURE-DU PREE, ALPHONSE E.....	RETINAL ZINC: CELLULAR LOCATION AND VISUAL FUNCTION.....	5R01 EY01438-03	41,395
LIEDTKE, A JAMES.....	ALTERATIONS OF METABOLISM IN ISCHEMIC MYOCARDIUM.....	1R01 HL21209-01	74,476
LIPTON, ALLAN.....	CONTROL OF GROWTH OF MALIGNANT CELLS BY SERUM FACTORS.....	5R01 CA15858-04	81,527
LIU, DAI K.....	MODE OF ACTION OF ALDOSTERONE IN KIDNEY AND HEART.....	5R01 AM17644-03	49,685
LIU, DAI K.....	CHEMICAL CARCINOGEN AND NUCLEAR RNASES OF RAT LIVER.....	5R01 CA18200-02	55,683
LLOYD, THOMAS A.....	TYROSINE HYDROXYLASE: MECHANISM OF ACTIVATION.....	5R01 GM23134-02	56,885
MC CALLISTER, LAWRENCE P.....	ULTRASTRUCTURAL CORRELATES OF MYOCARDIAL ISCHEMIA.....	5R01 HL18631-02	27,770
MC PHERSON, ALEXANDER.....	X-RAY CRYSTALLOGRAPHIC ANALYSES OF PROTEIN STRUCTURE.....	5R01 GM21398-03	43,235
MORGAN, HOWARD E.....	METABOLIC REGULATION OF SUGAR TRANSPORT.....	5R01 HL13029-08	47,547
MORGAN, HOWARD E.....	REGULATION OF PROTEIN DEGRADATION IN HEART.....	5R01 HL18258-03	59,096
MORGAN, HOWARD E.....	REGULATION OF PROTEIN TURNOVER IN DIABETIC HEART.....	5R01 HL20388-02	76,145
MORTEL, RODRIGUE.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA16386-02	35,305
MUNGER, BRYCE L.....	HISTOPHYSIOLOGY AND PATHOGENESIS OF DIABETES MELLITUS.....	5R01 AM11407-11	88,672
NEELY, JAMES R.....	REGULATION OF MYOCARDIAL FATTY ACID METABOLISM.....	5R01 HL13028-08	57,482
NEELY, JAMES R.....	REGULATION OF METABOLISM IN OXYGEN DEFICIENT HEARTS.....	5R01 HL18206-03	67,308
NEELY, JAMES R.....	EFFECTS OF DIABETES ON CARDIAC FUNCTION AND METABOLISM.....	5R01 HL20484-02	44,429
NELSON, NICHOLAS M.....	PULMONARY SCOR: PATHOPHYSIOLOGY, MANAGEMENT OF IRDS.....	1P50 HL19190-01	577,540
PEGG, ANTHONY E.....	PERSISTENCE OF ALKYLATED DNA IN CARCINOGENESIS.....	5R01 CA18137-02	40,326
PEGG, ANTHONY E.....	MAMMALIAN POLYAMINE METABOLISM.....	5R01 CA18138-02	55,062
PIERCE, WILLIAM S.....	LEFT VENTRICULAR BYPASS FOR MYOCARDIAL INFARCTION.....	5R01 HL13426-08	65,633
PIERCE, WILLIAM S.....	DEVELOPMENT AND EVALUATION OF AN ARTIFICIAL HEART.....	1R01 HL20356-01	214,264
PRYSTOWSKY, HARRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05680-09	160,440
PURNELL, DALLAS M.....	PRECURSORS OF HYPERPLASTIC NODULES OF MAMMARY GLAND.....	5R01 CA18654-02	3,559
RANNELS, D EUGENE, JR.....	REGULATION OF PROTEIN TURNOVER IN LUNG TISSUE.....	1R01 HL20344-01	24,680
RAPP, FRED.....	ETIOLOGY OF PROSTATE TUMORS.....	2R26 CA16365-04	113,747
RAPP, FRED.....	SUPPORT FOR SPECIALIZED CANCER RESEARCH CENTER.....	5P30 CA18450-02	127,214
ROSE, RICHARD C.....	INTESTINAL TRANSPORT OF WATER-SOLUBLE VITAMINS.....	5R01 AM19119-02	48,610
ROSENBERG, ABRAHAM G.....	COMPLEX GLYCOLIPIDS OF BRAIN AND RELATED SYSTEMS.....	5R01 NS08258-09	127,127
SCHENGRUND, CARA-LYNNE.....	BIOLOGICAL FUNCTIONS OF PLASMA MEMBRANE SIALIDASE.....	2R01 CA14319-04A1	75,189
SCHOOLWERTH, ANTON C.....	MITOCHONDRIAL TRANSPORT AND RENAL AMMONIAGENESIS.....	1R01 AM19714-01	50,056
SEVERS, WALTER B.....	ANGIOTENSIN NEUROPHARMACOLOGY: RELATIONSHIP TO SODIUM.....	5R01 HL19320-02	51,397
SHIMAN, ROSS.....	REGULATION OF TYROSINE SYNTHESIS IN HEPATOMA CELLS.....	5R01 CA14881-05	70,100
SMITH CAMPBELL, PETER J.....	BIOMEDICAL COMPUTING RESOURCE.....	2P41 RR00576-06	78,519
ST JEOR, STEPHEN C.....	HERPES VIRUS-INDUCED MALIGNANCY.....	1R01 CA21799-01	69,526
TAYLOR, JOHN M.....	CONTROL OF ALBUMIN SYNTHESIS IN LIVER AND HEPATOMAS.....	2R01 CA16746-04	101,345
VAN BUSKIRK, E MICHAEL.....	THE VERTEBRATE EYE: STUDIES OF AQUEOUS OUTFLOW.....	5R01 EY01563-03	9,871
VANNUCCI, ROBERT C.....	OXIDATIVE METABOLISM IN BRAINS OF PERINATAL ANIMALS.....	5R01 HD09109-03	45,312
VESELL, ELLIOT S.....	DRUG METABOLISM IN HUMAN LIVER TUMORS.....	5R01 CA16536-03	47,093
WARD, WALTER F.....	LYSOSOMAL ROLE IN INSULIN AND GLUCAGON DEGRADATION.....	1R01 AM21159-01	47,228
WEISZ, JUDITH.....	STEROID METABOLITES AND LIMBIC SYSTEM FUNCTION.....	5R01 HD09542-05	86,443
WEISZ, JUDITH.....	CATECHOL-ESTROGENS, CNS AND REPRODUCTION.....	5R01 HD09734-03	82,445
WENGER, JANE I.....	REGULATION OF MYOCARDIAL ACYLCARNITINE TRANSPORT.....	1R01 HL20308-01	45,759
ZELIS, ROBERT F.....	PERIPHERAL CIRCULATION IN HEART FAILURE.....	5R01 HL17853-03	28,131
ORGANIZATION TOTAL	72	5,139,766	

LANCASTER

FRANKLIN AND MARSHALL COLLEGE ZIP CODE 17604			
KING, DAVID B.....	THYROIDAL INFLUENCE ON SKELETAL MUSCLE GROWTH.....	5R01 AM10948-08	19,237
ORGANIZATION TOTAL	1	19,237	
LANCASTER CLEFT PALATE CLINIC ZIP CODE 17602			
COOPER, HERBERT K, SR.....	STUDY OF ORAL-FACIAL-COMMUNICATIVE DISORDERS.....	5P01 DE02172-13	359,210
OKA, SEISHI W.....	A GENETIC STUDY OF HUMAN OROFACIAL CLEFTS.....	5R23 DE04537-02	30,415
ORGANIZATION TOTAL	2	389,625	
ST. JOSEPH HOSPITAL ZIP CODE 17604			
COLEMAN, MARY P.....	INVESTIGATIONS OF VITAMIN B6 IN DOWN'S SYNDROME.....	5R01 NS10720-05	19,381
EISENBERG, RITA B.....	INFANT PERCEPTION OF SPEECH AND NONSPEECH SOUNDS.....	5R01 HD00732-12	94,015

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SUNDARESAN, P RAMNATHAN.....	METABOLISM OF RETINOL AND RETINOIC ACID.....	3R01 AM13557-06S1	29,923
ORGANIZATION TOTAL	3 143,319		
LINCOLN UNIVERSITY			
LINCOLN UNIVERSITY	ZIP CODE 19352		
JOHNSON, WILLIAM T.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08002-06	88,185
ORGANIZATION TOTAL	1 88,185		
PHILADELPHIA			
ACADEMY OF NATURAL SCIENCES	ZIP CODE 19103		
DAVIS, GEORGE M.....	ANALYSIS OF MOLLUSCAN FAUNAS AND ASIAN SCHISTOSOMIASIS.....	2R22 AI11373-04	28,272
ORGANIZATION TOTAL	1 28,272		
ALBERT EINSTEIN MEDICAL CENTER	ZIP CODE 19141		
KIMBEL, PHILIP.....	STUDIES ON THE ETIOLOGY OF EXPERIMENTAL EMPHYSEMA.....	2R01 HL13787-05	82,068
KIMBEL, PHILIP.....	DYNAMICS OF NEUTROPHIL ELASTASE IN THE LUNG.....	1P01 HL20994-01	683,385
SPECTER, STEVEN C.....	IMMUNITY IN ORAL HERPES VIRUS INFECTION.....	1R23 DE04419-01A1	13,615
TABACHNICK, JOSEPH.....	SUPPRESSION OF FIBROSIS IN CHRONIC RADIODERMATITIS.....	3R01 AM15669-06S1	28,865
ORGANIZATION TOTAL	4 807,933		
CHILDREN'S HOSPITAL OF PHILADELPHIA	ZIP CODE 19104		
ASAKURA, TOSHIO.....	MECHANISM OF OXYGEN SUPPLY TO TISSUE.....	2R01 HL18226-03	70,035
BAKER, LESTER.....	HYPOGLYCEMIA IN SMALL FOR GESTATIONAL AGE NEWBORNS.....	5R01 AM13518-15	74,360
BONGIOVANNI, ALFRED M.....	HORMONAL FUNCTION IN GROWTH AND DEVELOPMENT IN CHILDHOOD.....	5R01 HD00371-24	87,105
CORTNER, JEAN A.....	GENETIC HETEROGENEITY OF ACID LIPASE-ATHEROSCLEROSIS.....	5R01 HL18723-02	70,034
CORTNER, JEAN A.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	2M01 RR00240-13	550,661
D'ANGIO, GIULIO J.....	PEDIATRIC CANCER RESEARCH CENTER.....	5P01 CA14489-05	681,842
D'ANGIO, GIULIO J.....	RADIATION ONCOGENESIS & ACTINOMYCIN-D.....	7R01 CA23111-01	53,986
EVANS, AUDREY E.....	CHILDREN'S CANCER STUDY GROUP A.....	2R10 CA11796-08A1	225,865
EVANS, AUDREY E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19372-02	132,612
GLICK, MARY C.....	MEMBRANE STRUCTURE RELATED TO ONCOGENESIS & CELL DIV.....	5R01 CA14037-04	50,411
GOLDMAN, ALLEN S.....	CRANIOFACIAL ANOMALIES AND PROTEIN RECEPTORS.....	1R01 DE04622-01	104,922
HARRIS, T N.....	AGING AND IMMUNE RESPONSES TO TRANSPLANTS AND TUMORS.....	2R01 AG00453-03	36,390
HARRIS, T N.....	EFFECTS OF ANTITUMOR ANTIBODIES ON TUMOR TRANSPLANTS.....	5R01 CA14487-05	61,338
HARRIS, T N.....	IMMUNE INJURY OF TUMOR CELLS: MECHANISM, APPLICATIONS.....	5R01 CA17181-03	41,823
HENLE, WERNER.....	RELATION OF EPSTEIN-BARR VIRUS TO HUMAN MALIGNANCIES.....	5R01 CA04568-19	165,679
HUMMELER, KLAUS.....	THE BIOLOGY OF HUMAN NEUROBLASTOMA.....	2R01 CA13451-05	95,760
HUMMELER, KLAUS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05506-15	133,916
KATZ, SOLOMON H.....	ENVIRONMENTAL LEAD AND NEUROPSYCHOLOGICAL DEVELOPMENT.....	3R01 ES01335-01S1	47,146
KATZ, SOLOMON H.....	ENVIRONMENTAL LEAD AND NEUROPSYCHOLOGICAL DEVELOPMENT.....	2R01 ES01335-02	113,497
KATZ, SOLOMON H.....	ANTECEDENTS OF ADOLESCENT HYPERTENSION.....	5R01 HL19869-02	209,250
KOLDOVSKY, OTAKAR.....	METABOLISM OF THE DEVELOPING SMALL INTESTINE.....	5R01 AM14531-07	82,468
PLOTKIN, STANLEY A.....	HUMAN CYTOMEGALOVIRUS-HOST CELL INTERACTIONS.....	5R01 AI12151-03	63,622
RASHKIND, WILLIAM J.....	NONSURGICAL TREATMENT OF CONGENITAL HEART DISEASE.....	5R01 HL12307-07	91,118
SCHWARTZ, ELIAS.....	HEME AND GLOBIN SYNTHESIS IN INFANTS AND CHILDREN.....	2R01 AM16691-06	93,445
SEGAL, STANTON.....	GENETIC METABOLIC DISEASES OF INFANCY AND CHILDHOOD.....	5R01 AM10894-12	204,249
SEGAL, STANTON.....	CELLULAR MECHANISMS IN MENTAL RETARDATION.....	5P01 HD08536-03	559,644
SOUTH, MARY A.....	SECRETORY COMPONENT IN NEOPLASIA.....	5R01 CA18578-02	48,537
STATES, BEATRICE.....	METABOLIC BASIS OF CYSTINE STORAGE DISEASE.....	2R01 AM13900-08	71,634
YAFFE, SUMNER J.....	REGULATION OF DRUG METABOLISM DURING DEVELOPMENT.....	3R01 HD10063-02S1	14,033
ORGANIZATION TOTAL	29 4,235,382		
CITY OF PHILADELPHIA NURSING HOME	ZIP CODE 19104		
BOSEE, ROLAND A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05508-15	18,996
ORGANIZATION TOTAL	1 18,996		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
DREXEL UNIVERSITY ZIP CODE 19104			
BEARD, RICHARD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07129-08	32,455
DAVIS, FRANKLIN A.....	SULFUR-NITROGEN COMPOUNDS IN CANCER CHEMOTHERAPY.....	5R01 CA14341-03	58,812
ESFAHANI, MOJTABA.....	STRUCTURE AND FUNCTION OF LIPIDS IN MEMBRANES.....	1R01 GM23558-01	56,032
FINEGOLD, LEONARD X.....	BIOPOLYMERS: THERMODYNAMICS STUDIES.....	5R01 GM22888-02	42,637
MODE, CHARLES J.....	COMPUTER MACROSIMULATION IN FAMILY PLANNING EVALUATION.....	5R01 HD09571-03	59,947
NES, WILLIAM R.....	INFLUENCE OF STRUCTURE ON ISOPENTENOID METABOLISM.....	5R01 AM12172-10	114,441
ORGANIZATION TOTAL	6 364,324		
FOX CHASE CANCER CENTER ZIP CODE 19111			
BROWN, DARRELL Q.....	LUCANTHONE AS AN ADJUVANT IN RADIOTHERAPY.....	5R01 CA20614-02	44,830
DONALDSON, MILTON H.....	CANCER CONTROL OUTREACH PROGRAM.....	7R18 CA23321-01	761,381
ENGSTROM, PAUL F.....	CLINICAL CANCER EDUCATION PROGRAM.....	7R25 CA23229-01	76,948
HAMPTON, ALEXANDER.....	CHEMISTRY AND ENZYMOLOGY OF ANTICANCER PURINE ANALOGS.....	2R01 CA11196-09	131,571
LOEB, LAWRENCE A.....	THE FIDELITY OF DNA REPLICATION IN HUMAN LYMPHOCYTES.....	2R01 CA11524-07	98,730
STRAWITZ, JOSEPH G.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA14963-02S3	10,725
ZWEIDLER, ALFRED.....	HISTONES IN CELL DIFFERENTIATION AND CARCINOGENESIS.....	2R01 CA15135-04	67,055
ORGANIZATION TOTAL	7 1,191,240		
HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
ALTEVEER, ROBERT J.....	METABOLISM OF SPLANCHNIC TISSUES DURING ENDOTOXIC SHOCK.....	5R01 GM22849-02	85,124
BRADY, LUTHER W.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12252-06	142,167
BRADY, LUTHER W.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12478-07	74,221
BRADY, LUTHER W.....	RADIATION THERAPY CLINICAL AND RESEARCH CENTER.....	5P01 CA14043-03	126,419
BRODSKY, ISADORE.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA13611-05	106,630
BRODSKY, ISADORE.....	PROGRAM PROJECT—MEDICAL ONCOLOGY.....	5P01 CA17053-03	237,317
CROWELL, RICHARD L.....	VIRAL INTERFERENCE IN CARRIER CULTURES.....	5R01 AI03771-17	82,361
DAMJANOV, IVAN.....	EMBRYO DERIVED TERATOCARCINOMA.....	7R01 CA23097-01	57,880
DI PALMA, JOSEPH R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05413-16	67,944
KAHN, SIGMUND B.....	CANCER CENTER PROGRAM IN CLINICAL EDUCATION.....	5R25 CA17963-03	129,551
KALIA, MADHU.....	PULMONARY REFLEXES—CENTRAL PATHWAYS.....	5R01 HL17800-03	21,559
LONG, CAROLE A.....	H-2 COMPLEX AND SUSCEPTIBILITY OF MAMMARY TUMOR VIRUS.....	1R01 CA22720-01	59,076
MAGUIRE, HENRY C, JR.....	REGULATION OF THE IMMUNE RESPONSE TO CONTACT ALLERGENS.....	1R01 AI13337-01A1	80,348
MELOCHE, H PAUL.....	MICROENVIRONMENTAL GEOMETRY OF C-C LYASE ACTIVE SITES.....	7R01 GM24536-01	21,643
MOORE, DAN H.....	ETIOLOGICAL STUDIES OF MAMMARY CARCINOMA.....	7R01 CA22413-01	260,066
PRICE, HENRY L.....	AUTONOMIC AND CIRCULATORY ACTIONS OF ANESTHETICS.....	5R01 HL15392-05	44,175
PRICE, HENRY L.....	EFFECT OF ANESTHETICS ON MYOCARDIAL FUNCTION.....	5R01 HL15799-03	47,544
ROBINSON, STEPHEN E.....	DEVELOPMENTAL FETAL ECG.....	5R01 HD09461-03	83,000
ROSE, LESLIE I.....	METABOLIC STUDIES OF UTERINE NEOPLASMS.....	5R01 CA18737-03	66,404
TEPLICK, STEVEN K.....	INTRAVENOUS CHOLANGIOGRAPHY IN BILE DUCT OBSTRUCTION.....	7R01 AM21335-01	30,540
VANDERLINDE, RAYMOND E.....	RELATIONSHIP OF TISSUE LEVELS OF CHROMIUM TO DIABETES.....	1R01 AM20830-01	57,310
WEIDANZ, WILLIAM P.....	MECHANISMS OF 'NONSTERILIZING IMMUNITY' IN MALARIA.....	5R01 AI12710-03	42,907
ORGANIZATION TOTAL	22 1,924,186		
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
BAYER, MANFRED E.....	MULTIFUNCTIONAL ZONES ON THE BACTERIAL SURFACE.....	5R01 AI10414-04	58,316
BERMAN, HELEN.....	STRUCTURES OF NUCLEIC ACID AND PROTEIN COMPONENTS.....	5R01 GM21589-03	40,425
BLUMBERG, BARUCH S.....	CANCER CLINICAL RESEARCH AT THE FOX CHASE CENTER.....	5P01 CA06551-14	1,031,733
BOSMA, MELVIN J.....	REGULATION OF IMMUNOGLOBULIN PRODUCTION.....	5R01 AI13323-02	98,630
BOSMA, MELVIN J.....	HIDDEN IMMUNOGLOBULIN ALLOTYPES IN MICE.....	2R01 CA04946-17	50,856
COHEN, LEONARD H.....	DEVELOPMENTAL CHANGES IN CHROMOSOMAL PROTEINS.....	1R01 GM24019-01	63,440
CREECH, RICHARD H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA18281-03	135,892
EATON, GORDON J.....	PROGRAM FOR IMPROVING ANIMAL RESOURCES FACILITY.....	1P40 RR01103-01	88,950
GLUSKER, JENNY P.....	APPLICATION OF CRYSTALLOGRAPHIC TECHNIQUES.....	5R01 CA10925-28	152,835
GUPTA, RAJ K.....	SPECTRAL STUDIES OF HEME- AND METAL PROTEINS.....	5R01 AM19454-02	34,860
KLINMAN, JUDITH P.....	ENZYME CATALYZED HYDROGEN ABSTRACTION REACTIONS.....	2R01 GM20627-04	56,164
KNUDSON, ALFRED G, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05539-15	172,810
LOEB, LAWRENCE A.....	DNA POLYMERASES IN NORMAL AND LEUKEMIC LYMPHOCYTES.....	5R01 CA12818-06	62,176
MARCUS, ABRAHAM.....	INITIATION AND PEPTIDE SYNTHESIS IN VITRO.....	5R01 GM15122-10	88,124

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
MARCUS, ABRAHAM.....	MOLECULAR REGULATION OF CELL GROWTH IN CULTURE.....	5R01 GM20664-04	52,950
MASON, WILLIAM S.....	REPLICATION OF ROUS SARCOMA VIRUS.....	5R01 CA16641-03	42,050
MASTRANGELO, MICHAEL.....	CLINICAL & LABORATORY MALIGNANT MELANOMA INTEGRATED PROG.....	5R01 CA13456-05	151,202
MILDVAN, ALBERT S.....	NMR STUDIES OF ENZYME-METAL-SUBSTRATE INTERACTIONS.....	5R01 AM13351-10	100,767
MILLMAN, IRVING.....	EFFECTS OF BACTERIA AND SUBFRACTIONS ON NEOPLASIA.....	5R01 CA17704-03	53,160
MINTZ, BEATRICE.....	GENE CONTROL OF MAMMALIAN DEVELOPMENT AND DISEASE.....	5R01 HD01646-18	197,596
NEMER, MARTIN J.....	INFORMATIONAL MACROMOLECULES IN CELLULAR DIFFERENTIATION.....	5R01 HD04367-16	55,245
PHILIPS, FREDERICK S.....	PARTIAL SUBSIDY FOR THE JOURNAL OF CANCER RESEARCH.....	5R01 CA09247-25	179,222
RIBLET, ROY.....	GENETIC ANALYSIS OF THE IMMUNE RESPONSE.....	1R01 AI13797-01	42,070
ROSE, IRWIN A.....	REGULATION OF CARBOHYDRATE METABOLISM.....	2R01 AM17320-14	58,449
ROSE, IRWIN A.....	ENZYME MECHANISMS OF C-H BOND ACTIVATION.....	5R01 GM20940-14	63,100
ROSE, ZELDA B.....	ENZYMES OF 2,3-DIPHOSPHOGLYCERATE METABOLISM.....	5R01 GM19875-06	57,565
ROSS, MORRIS H.....	REGULATION OF TUMOR SUSCEPTIBILITY.....	5R01 CA16442-03	84,113
SOROF, SAM.....	MACROMOLECULES IN LIVER CARCINOGENESIS.....	5R01 CA05945-14	83,567
SOROF, SAM.....	MAMMARY CARCINOGENESIS AND PROTEINS IN ORGAN CULTURE.....	1R01 CA21522-01	70,665
SUMMERS, JESSE W.....	CHARACTERIZATION OF VIRUS GENOMES IN TRANSFORMED CELLS.....	5R01 CA13506-06	73,382
TALBOT, TIMOTHY R, JR.....	COMPREHENSIVE CANCER CTR PROG AT FOX CHASE.....	5P30 CA06927-15	3,179,975
TARTOF, KENNETH D.....	STRUCTURE AND FUNCTION OF GENES.....	5R01 GM19194-06	83,829
WEIGERT, MARTIN G.....	GENETIC CONTROL OF ANTIBODY STRUCTURE.....	2R01 GM20964-04	123,115
ORGANIZATION TOTAL	33	6,887,233	
LANKENAU HOSPITAL ZIP CODE 19151			
CEVALLOS, WILLIAM H.....	UNSATURATED FATS—MODE OF HYPOCHOLESTEROLEMIC ACTION.....	5R01 HL17564-03	53,919
CHAO, TESSA L.....	THE ANTISICKLING EFFECTS OF IMIDOESTERS.....	1R23 HL21129-01	41,606
GABUZDA, THOMAS G.....	REGULATION IN DEVELOPING ERYTHROID CELLS.....	2R01 HL16654-05	62,927
HOLMES, WILLIAM L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05585-11	19,394
HOLROYDE, CHRISTOPHER P.....	METABOLIC STUDY OF ADULT AND PEDIATRIC CANCER PATIENTS.....	1R01 CA20960-01	112,107
REICHARD, GEORGE A, JR.....	METABOLIC SUBSTRATE UTILIZATION IN MAN.....	5R01 AM13527-07	99,505
ORGANIZATION TOTAL	6	389,458	
MARRIAGE COUNCIL OF PHILADELPHIA ZIP CODE 19104			
MILLER, WILLIAM R.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09069-01	90,481
ORGANIZATION TOTAL	1	90,481	
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129			
BANSAL, SUBHASH C.....	IMMUNE MANIPULATION IN RAT COLON TUMORS.....	3R26 CA16909-03S1	19,936
BASKIN, STEVEN I.....	REGULATION OF LEUKEMIC PROLIFERATION BY TAURINE.....	1R01 CA22170-01	29,670
CAPUZZI, DAVID M.....	LIPID AND LIPOPROTEIN SYNTHESIS IN LIVER CELLS.....	3R01 HL20370-01S1	8,725
ELFVIN, MYRA J.....	ANALYSIS OF PARAMYOSIN-CONTAINING INVERTEBRATE MUSCLE.....	5R01 GM21956-03	45,525
ESKIN, BERNARD A.....	RADIOIODINE UPTAKE & IMAGING IN THE HUMAN BREAST.....	3R01 CA14705-03S1	5,076
GABRIEL, KARL L.....	ANIMAL FACILITY IMPROVEMENT GRANT.....	5P40 RR01048-02	19,315
GOLDSTEIN, DAVID A.....	REPLICATION OF PAPOVA VIRAL DNA.....	7R01 CA22479-01	37,918
GREENE, ROLAND F.....	ANALYSIS OF M-RNA IN HEPATOMAS.....	1R01 CA20595-01	53,559
LEIGHTON, JOSEPH.....	BLADDER CANCER—MENISCUS GRADIENT AND MATRIX CULTURE.....	5R26 CA14137-06	77,323
LEIGHTON, JOSEPH.....	METAPLASIA AND NEOPLASIA IN THE HETEROTOPIC RAT BLADDER.....	5R26 CA17772-03	59,746
MARSH, JULIAN B.....	STUDIES OF THE BIOSYNTHESIS OF PLASMA LIPOPROTEIN.....	5R01 HL19168-02	54,935
PAUCKER, KURT.....	SEROLOGY OF ACTIVE SITES ON HUMAN INTERFERONS.....	1R01 AI13649-01	41,603
ROBERTS, JAY.....	ROLE OF BIOLOGICAL MEMBRANES IN AGING PROCESSES.....	5P01 AG00003-06	150,198
ROBERTS, JAY.....	PHARMACOLOGIC STUDIES ON GENESIS OF CARDIAC RHYTHMICITY.....	2R01 HL13666-05A1	49,508
ROSS, LEONARD L.....	DEVELOPMENT AND REGENERATION OF THE NERVOUS SYSTEM.....	1P01 NS13768-01	438,467
ROTHBLAT, GEORGE H.....	STEROL METABOLISM IN TISSUE CULTURE CELLS.....	5R01 HL20608-02	113,531
RUBIN, WALTER.....	A FINE STRUCTURAL STUDY OF HUMAN GASTRIC EPITHELIA.....	5R01 AM14348-08	61,132
SCHICK, PAUL K.....	ISOLATION AND IDENTIFICATION OF PLATELET MEMBRANES.....	3R01 HL18249-02S1	8,917
SCHICK, PAUL K.....	ISOLATION AND IDENTIFICATION OF PLATELET MEMBRANES.....	5R01 HL18249-03	65,251
SMITH, JANET D.....	CMV REPLICATION IN CHIMERIC AND HYBRID CELLS.....	5R01 AI12832-03	39,903
SUTNICK, ALTON I.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05418-16	86,410
WEISS, BENJAMIN.....	AGENTS INHIBITING PHOSPHODIESTERASES OF CANCER CELLS.....	3R01 CA15883-03S1	3,004
ORGANIZATION TOTAL	22	1,469,652	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
PENNSYLVANIA COLLEGE OF OPTOMETRY ZIP CODE 19141			
HIGGINS, KENT E.....	SUPRATHRESHOLD SPATIAL INTERACTION IN PHOTOPIC VISION.....	5R01 EY00986-03	9,994
HIGGINS, KENT E.....	PERIPHERAL MECHANISMS IN FUNCTIONAL AMBLYOPIA.....	5R23 EY01473-03	8,039
ORGANIZATION TOTAL	2 18,033		
PENNSYLVANIA HOSPITAL ZIP CODE 19107			
BOGGS, THOMAS R, JR.....	PREMATURITY, VITAMIN E & RETROLENTAL FIBROPLASIA.....	3R01 EY01723-01S1	36,299
BOGGS, THOMAS R, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05590-13	40,023
LERNER, HARVEY J.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA13613-05	69,951
LERNER, HARVEY J.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20187-01	40,808
LING, GILBERT N.....	NMR STUDY OF WATER IN CANCER AND IN NORMAL TISSUES.....	2R01 CA16301-03A1	76,016
LING, GILBERT N.....	CELL WATER, IONS AND CONTROL MECHANISMS.....	2R01 GM11422-13A1	123,289
SIMEONE, FREDERICK A.....	REGIONAL CEREBRAL METABOLISM AND BLOOD FLOW.....	5R01 NS11186-04	54,115
WALLACH, EDWARD E.....	INVESTIGATION OF THE MECHANICAL ASPECTS OF OVULATION.....	5R01 HD05948-04	77,139
ORGANIZATION TOTAL	8 517,640		
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC WELFARE—EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE ZIP CODE 19129			
MUELLER, PAUL.....	RECONSTITUTION AND ANALYSIS OF MEMBRANE TRANSPORT.....	3R01 GM22655-02S1	15,498
ORGANIZATION TOTAL	1 15,498		
PHILADELPHIA GERIATRIC CENTER ZIP CODE 19141			
GRANICK, SAMUEL.....	ORGANIC BRAIN SYNDROME IN ELDERLY COMMUNITY RESIDENTS.....	1R01 AG00768-01	78,757
LAWTON, M POWELL.....	ACTIVITY, MORALE AND LIVING ARRANGEMENTS OF THE AGED.....	1R01 AG00575-01	79,767
LAWTON, M POWELL.....	ASSESSMENT AND THE MENTAL HEALTH OF THE ELDERLY.....	1R01 AG00895-01	107,064
ORGANIZATION TOTAL	3 265,588		
PRESBYTERIAN-UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER ZIP CODE 19104			
BLOUGH, HERBERT A.....	TUMOR VIRUS LIPIDS: STRUCTURE AND BIOSYNTHESIS.....	5R01 CA15370-04	106,490
BLOUGH, HERBERT A.....	SURFACE CHEMISTRY OF THE CORNEA.....	3R01 EY01067-03S2	65,367
BURGESS, BENJAMIN F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05610-11	18,384
LATIES, ALAN M.....	AUTONOMIC INNERVATION OF THE EYE.....	5R01 EY01194-05	116,461
ROCKEY, JOHN H.....	PRIMARY STRUCTURAL STUDIES OF VISUAL PIGMENTS.....	3R01 EY01193-05S1	9,785
ORGANIZATION TOTAL	5 316,487		
ST. CHRISTOPHER'S HOSPITAL FOR CHILDREN ZIP CODE 19133			
PUNNETT, HOPE H.....	GENETIC CONSTITUTIONS PREDISPOSING TO CANCER.....	5R01 CA19834-02	65,000
VAUGHAN, VICTOR C, III.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00075-14	395,224
ORGANIZATION TOTAL	2 460,224		
TEMPLE UNIVERSITY ZIP CODE 19122			
ADELMAN, RICHARD C.....	BIOCHEMICAL REGULATION OF AGING PROCESSES.....	2P01 AG00368-07	284,301
ALTER, MILTON.....	CREUTZFELDT JAKOB DISEASE: A TRANSMISSIBLE DEMENTIA.....	7R01 NS13766-01	49,560
BASERGA, RENATO L.....	STUDY OF FACTORS CONTROLLING CELLULAR PROLIFERATION.....	5R01 CA08373-13	75,552
BASERGA, RENATO L.....	A CORRELATED STUDY ON THE BIOLOGY OF NEOPLASIA.....	2P01 CA12923-06	328,105
BASERGA, RENATO L.....	SYNCHRONIZATION OF CELLS IN VIVO.....	5R26 CA14907-04	86,065
BASERGA, RENATO L.....	CONFERENCE ON CONDITIONAL MUTANTS OF THE CELL CYCLE.....	1R13 CA22584-01	21,650
BASERGA, RENATO L.....	CHROMOSOMAL PROTEINS IN CELL PROLIFERATION.....	5R01 GM22359-02	73,963
BODEN, GUENTHER.....	SECRETIN: IN HEALTH, DISEASE, & MOLECULAR HETEROGENEITY.....	1R01 AM19397-01	61,516
BOVE, ALFRED A.....	CARDIAC FUNCTION IN HYPERTROPHY.....	5R01 HL19425-02	100,759
BUCKLEY, HELEN R.....	CANDIDA ALBICANS ANTIGENS AND ANTIBODIES.....	7R01 AI14695-01	45,054
CAMPO, ROBERT D.....	STUDIES ON ENDOCHONDRAL GROWTH.....	5R01 AM16270-04	50,916
CHANG, FONG N.....	BACTERIAL RIBOSOME BIOSYNTHESIS AND RNA MINOR BASES.....	5R01 GM19302-06	39,190
CHRISTENSEN, ALBERT K.....	LOCALIZATION OF RECEPTORS FOR REPRODUCTIVE HORMONES.....	1R01 HD10225-01A1	40,343
CLARK, WALLACE H, JR.....	BIOLOGY OF HUMAN CUTANEOUS MALIGNANT MELANOMA.....	3R01 CA11511-07S2	42,318
CLARK, WALLACE H, JR.....	BIOLOGY OF HUMAN CUTANEOUS MALIGNANT MELANOMA.....	2R01 CA11511-08A1	110,575
COHEN, ALLEN B.....	A BIOCHEMICAL APPROACH TO PULMONARY EMPHYSEMA.....	5R01 HL18543-03	77,174
CONGER, ALAN D.....	RADIOBIOLOGY RESEARCH PROGRAM.....	5R01 CA08231-13	57,171
COULSON, LORNE R.....	MYOCARDIAL ENERGETICS IN HYPERTROPHY AND HEART FAILURE.....	5R01 HL19461-02	85,781
DANCIS, BARRY M.....	SEQUENCE ORGANIZATION IN HELA DNA.....	5R01 GM21671-02	39,680

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
DANIEL, JAMES L.....	ATP UTILIZATION IN PLATELET CONTRACTILE MECHANISMS.....	1R23 HL21128-01	40,090
ERNST, STEPHEN A.....	LOCALIZATION OF SODIUM TRANSPORT SITES.....	1R01 GM23659-01	36,139
ERNST, SUE C.....	FUNCTION AND RENEWAL OF SURFACES IN SCHISTOSOMA.....	5R22 AI13350-02	29,088
FARBER, JOHN L.....	PATHOGENESIS OF LIVER CELL NECROSIS.....	5R01 AM19154-02	54,904
FARBER, JOHN L.....	CHROMATIN IN NORMAL AND PATHOLOGICAL LIVER CELLS.....	2R01 CA12073-06	66,001
FRIEDMAN, ROBERT D.....	GENETIC AND EPIDEMIOLOGICAL STUDY OF SALIVARY PROTEINS.....	1R01 DE04279-01	19,174
HANSON, RICHARD W.....	REGULATION OF GLUCONEOGENESIS IN MAMMALIAN LIVER.....	2R01 AM16009-06	92,140
HANSON, RICHARD W.....	HORMONE REGULATION OF ENZYME LEVELS IN MAMMALIAN TISSUE.....	5R01 AM18034-03	60,355
HANSON, THOMAS E.....	DEVELOPMENTAL TOPOLOGY OF VERTEBRATE VISUAL SYSTEMS.....	5R01 EY01469-03	26,499
HARRINGTON, GEORGE W.....	ELECTROANALYTICAL STUDIES OF N-NITROSAMINES.....	2R01 CA18618-03	55,936
HARVEY, WILLIAM R.....	PHYSIOLOGY OF INSECT DIAPAUSE AND DEVELOPMENT.....	5R01 AI09503-08	76,773
HAVAS, HELGA F.....	MECHANISM OF IMMUNOSUPPRESSION BY PLASMACYTOMAS.....	5R01 CA14300-02	59,458
HECKMAN, JAMES L.....	THE DYNAMIC FUNCTION OF THE CARDIAC VALVES.....	5R01 HL19104-02	40,198
HENNING, SUSAN J.....	REGULATION OF INTESTINAL DEVELOPMENT.....	5R01 HD10042-02	42,502
HIGGINS, MICHAEL L.....	CELL DIVISION AND SURFACE GROWTH IN A 'MODEL' SYSTEM.....	5R01 AI10971-06	48,398
HILFER, S ROBERT.....	EMBRYONIC DEVELOPMENT OF THE EYE CUP.....	1R01 EY01934-01	37,681
HILLMAN, NINA W.....	THE EFFECT OF RNA AND DNA ON CEPHALIC TERATA.....	5R01 HD00827-14	93,897
HILLMAN, NINA W.....	STUDIES OF MOUSE SPERMATOGENESIS AND FERTILIZATION.....	5R01 HD09753-02	63,308
JOHNSON, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07115-10	72,918
KIM, SANGDUK.....	ENZYMATIC MODIFICATION OF CARBOXYL RESIDUES IN PROTEIN.....	5R01 GM20594-05	61,951
KIRBY, EDWARD P.....	STRUCTURE AND FUNCTION OF BOVINE FACTOR VIII.....	5R01 HL15474-05	34,282
KUEPPERS, FRIEDRICH.....	PROTEASE INHIBITORS—PULMONARY INFLAMMATION EMPHYSEMA.....	1R01 HL21554-01	52,810
KUEPPERS, FRIEDRICH.....	THE PROTEASE INHIBITOR(S) IN HUMAN BRONCHIAL MUCUS.....	7R01 HL21567-01	46,463
KUNDEL, HAROLD L.....	EARLY RADIOLOGIC DETECTION OF LUNG CANCER.....	5R01 CA16491-03	198,253
KUNDEL, HAROLD L.....	VISUAL SEARCH AND FILM READER ERROR IN RADIOLOGY.....	5R01 GM21474-03	70,435
LINNA, T JUHANI.....	INFLUENCE OF THE IMMUNE SYSTEM ON VIRAL TUMORIGENESIS.....	5R01 CA13347-06	75,958
LITWACK, GERALD.....	REACTION BETWEEN HORMONES AND TYROSINE OXIDASE SYSTEM.....	5R01 AM08350-14	37,357
LITWACK, GERALD.....	METABOLISM OF CORTISOL IN LIVER.....	5R01 AM13531-08	50,272
LO SCIUTO, LEONARD A.....	FERTILITY-RELATED DECISION-MAKING AMONG MARRIED COUPLES.....	5R01 HD10685-02	37,814
LOTLIKAR, PRABHAKAR D.....	MECHANISM OF CHEMICAL CARCINOGENESIS.....	5R01 CA10604-10	69,389
MAGEE, PETER.....	PATHOGENESIS OF LIVER CANCER.....	5R01 CA12218-08	174,943
MAYROVITZ, HARVEY N.....	ROLE OF BIOELECTRIC POTENTIALS IN PLATELET ADHERENCE.....	5R01 HL19427-02	29,662
MC ELLIGOTT, JAMES G.....	CEREBELLAR NEURONAL ACTIVITY AND MOTOR BEHAVIOR.....	5R01 NS10488-05	35,360
MEIER, GEORGE D.....	RIGHT VENTRICULAR CONTRACTION AND RELAXATION.....	1R23 HL21197-01	44,340
MILLER, ARTHUR S.....	CLINICAL CANCER—DENTAL.....	5R25 CA19456-02	33,478
MONSTER, ARIE W.....	MOTOR UNIT BEHAVIOR IN VOLUNTARY MUSCLE CONTRACTION.....	5R01 NS11574-02	46,175
MOTE, MICHAEL I.....	CELLULAR BASIS OF VISUAL INTEGRATION.....	2R01 EY00784-07	71,088
NICOLINI, CLAUDIO A.....	COMPUTER-AIDED CELL SYNCHRONY IN ANIMALS.....	5R26 CA18258-03	93,769
NICOLINI, CLAUDIO A.....	CORRELATIONS OF NEW AND OLD CELL KINETIC PARAMETERS.....	1R01 CA20034-01	73,702
NIEMI, STEFAN.....	INTERACTION OF CELLS WITH POLYMERIZING FIBRIN.....	5R01 HL15226-05	33,098
OMAND, ELIZABETH L.....	SENSORY CONTROL OF FEEDING.....	7R01 NS14209-01	50,471
PAIK, WOON K.....	STUDIES ON PROTEIN METHYLATION IN NEOPLASTIC TISSUES.....	5R01 CA12226-07	53,337
PATEL, MULCHAND S.....	BIOCHEMICAL CHANGES IN AGING BRAIN.....	1R01 AG00146-01	47,952
PATEL, MULCHAND S.....	REGULATION OF METABOLIC PROCESSES IN DEVELOPING BRAIN.....	5R01 NS11088-05	43,791
PAUL, DIETRICH.....	GROWTH CONTROL BY SERUM FACTORS IN LIVER CELLS.....	7R01 GM24873-01	63,115
PHILLIPS, STEVEN J.....	MORPHOMETRIC ANALYSIS OF THE SINOATRIAL NODE.....	5R01 HL19009-02	48,953
PIERINGER, RONALD A.....	BACTERIAL LIPID METABOLISM.....	5R01 AI05730-13	60,866
PLAUT, GERHARD W.....	REGULATION OF PATHWAYS OF INTERMEDIARY METABOLISM.....	5R01 AM15404-07	95,922
RAJA, KODUNGALLORE G.....	IMMUNOLOGICAL STUDY OF LCAT IN MAMMALS.....	5R01 HL17431-03	43,347
REICHEL, FREDERICK A.....	PRE- AND POST-SHUNT HUMAN HEPATIC HEMODYNAMICS.....	5R01 AM18194-03	62,151
SCHRAMM, VERN L.....	REGULATION OF ADENINE NUCLEOTIDE POOLS.....	5R01 GM21083-03	33,775
SCHWARTZ, ARTHUR G.....	ACTIONS OF CHEMICAL CARCINOGENS ON CULTURED CELLS.....	5R01 CA14661-05	39,701
SCHWARTZ, ARTHUR G.....	ACTIVATION OF CHEMICAL CARCINOGENS BY DIFFERENT SPECIES.....	5R01 CA19445-02	43,124
SEVY, ROGER W.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00349-11	582,909
SEVY, ROGER W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05417-16	213,709
SHERRY, SOL.....	SPECIALIZED CENTER FOR THROMBOSIS RESEARCH SUPPORT.....	5P50 HL14217-07	1,296,167
SHOCKMAN, GERALD D.....	BIOSYNTHESIS OF BACTERIAL CELL WALLS AND MEMBRANES.....	5R01 AI05044-14	81,477
SHOCKMAN, GERALD D.....	INHIBITION OF HUMAN CARIOGENIC STREPTOCOCCI.....	5R01 DE03487-06	57,973
SMALLEY, RICHARD V.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA07961-12S1	23,639
SMALLEY, RICHARD V.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA07961-13	175,096

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SMALLEY, RICHARD V.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA21859-01	161,157
SMITH, COLLEEN M.....	REGULATION OF TOTAL COA LEVELS IN HEART AND LIVER.....	2R01 AM18045-04	63,620
SODICOFF, MARVIN.....	CHEMICAL RADIO-PROTECTION BY WR-2721 OF PAROTID GLANDS.....	2R01 DE03666-04	52,600
SPANN, JAMES F, JR.....	EXPERIMENTAL CONGESTIVE HEART FAILURE AND HYPERTROPHY.....	3R01 HL17631-03S1	25,973
SUHADOLNIK, ROBERT J.....	NUCLEOSIDE ANALOGS: BIOSYNTHESIS & ROLE IN THE CELL.....	5R01 AI12066-04	77,454
TRUEX, RAYMOND C.....	COMPARATIVE STUDY OF CARDIAC CONDUCTION SYSTEM.....	5R01 HL07047-16	64,779
URBACH, FREDERICK.....	THE BIOLOGIC EFFECTS OF ENVIRONMENTAL RADIATION.....	5P01 ES00269-11	288,142
VAN SCOTT, EUGENE J.....	CELL CONTROL IN INTEGUMENTAL CANCER.....	3P01 CA11536-08S1	116,323
WEINHOUSE, SIDNEY.....	METABOLISM OF NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA10916-16	131,026
WEINHOUSE, SIDNEY.....	CORE PROGRAM IN CARCINOGENESIS.....	5P30 CA12227-07	1,058,815
WIEDEMAN, MARY P.....	RESTORING MICROCIRCULATION AFTER PLATELET AGGREGATION.....	1R01 HL20563-01	45,680
WILLIAMS, JOHN R.....	THE SYNTHESIS OF POSTCOITAL ORAL CONTRACEPTIVES.....	5R01 HD09146-03	42,174
YAMAMOTO, NOBUTO.....	GENETIC EVOLUTION OF BACTERIOPHAGE.....	5R01 AI06429-12	73,433
ORGANIZATION TOTAL	92 9,374,382		
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107			
BRENT, ROBERT L.....	PROBLEMS IN EXPERIMENTAL EMBRYOLOGY.....	5R01 HD00630-14	151,556
BRENT, ROBERT L.....	PROBLEMS IN RADIATION EMBRYOLOGY.....	1R01 HD11038-01	101,862
BRODOVSKY, HARVEY S.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA14215-05	95,315
BURKA, EDWARD R.....	MECHANISMS IN HEMOGLOBIN SYNTHESIS AND DESTRUCTION.....	5R01 AM13431-11	96,876
ERSLEV, ALLAN J.....	FEEDBACK BETWEEN RED CELL PRODUCTION & OXYGEN TRANSPORT.....	5R01 HL04612-19	215,110
HAURANI, FARID I.....	ACUTE LEUKEMIA COOPERATIVE-STUDY GROUP B.....	3R10 CA05462-16S1	20,078
HAURANI, FARID I.....	ACUTE LEUKEMIA COOPERATIVE-STUDY GROUP B.....	2R10 CA05462-17	111,422
HERBISON, GERALD J.....	REINNERVATING MUSCLE IN ACTIVITY AND INACTIVITY.....	5R01 NS11656-03	56,873
JENSH, RONALD P.....	PRE- AND POSTNATAL EFFECTS OF MICROWAVE IRRADIATION.....	5R01 ES01121-03	106,793
KAJI, HIDEKO.....	REGULATION OF MACROMOLECULAR SYNTHESIS IN CELLULAR AGING.....	1R01 AG00691-01	67,527
KELLOW, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05414-16	187,426
KOCSIS, JAMES J.....	ROLE OF TAURINE IN THE HEART.....	1R01 HL20211-01	45,309
KOSZALKA, THOMAS R.....	EMBRYOLOGIC ASPECTS OF CREATINE METABOLISM.....	5R01 HD06360-05	63,289
KRAMER, SIMON.....	RESEARCH AND CLINICAL RADIATION THERAPY CENTER.....	5P01 CA11602-08	526,940
KRAMER, SIMON.....	NEUTRON THERAPY PROJECT.....	5P01 CA19451-02	176,543
KRAMER, SIMON.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA20235-02	94,772
LEWIS, GEORGE C, JR.....	HEADQUARTERS FOR GYNECOLOGIC ONCOLOGY GROUP.....	3R10 CA19189-02S2	40,022
LEWIS, GEORGE C, JR.....	HEADQUARTERS FOR GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA19189-03	829,204
LIBERTI, PAUL A.....	PHYSICOCHEMICAL STUDIES OF C1Q AND ITS INTERACTION.....	5R01 AI12365-03	59,556
MARTINEZ, JOSE.....	STRUCTURAL AND BIOLOGICAL PROPERTIES OF FIBRINOGEN.....	1R01 HL20092-01	60,062
MAURER, PAUL H.....	IMMUNOLOGICAL STUDIES WITH SYNTHETIC POLYPEPTIDES.....	5R01 AI07825-11	129,059
MOSKOWITZ, NORMAN.....	CONNECTIONS OF AUDITORY CORTEX.....	2R01 NS10806-04	69,152
MURPHY, SCOTT.....	PLATELET PRESERVATION AND PHYSIOLOGY.....	5R01 HL19857-02	146,380
MURPHY, SCOTT.....	PLATELET STORAGE AT 220C.....	1R01 HL20818-01	125,955
OSTERHOLM, JEWELL L.....	CATECHOLAMINES IN SPINAL CORD INJURY.....	2R01 NS12287-02A2	103,952
PANOS, CHARLES.....	HEMOLYTIC STREPTOCOCCI L-FORMS OF GROUP A, BETA.....	5R01 AI11161-06	54,788
POWERS, WILLIAM E.....	COMMITTEE FOR RADIATION ONCOLOGY STUDIES.....	5R01 CA13212-06	212,955
ROVETTO, MICHAEL J.....	MYOCARDIAL FUNCTION AND METABOLISM FOLLOWING ISCHEMIA.....	5R01 HL17895-03	35,879
SHABER, GARY S.....	LOW DOSE BREAST ELECTRON RADIOGRAPHY (IONOGRAPHY).....	5R01 CA19787-02	121,278
SHAPIRO, SANDOR S.....	CONTROL MECHANISMS IN HEMOSTASIS.....	5R01 HL09163-13	130,650
SILVER, MELVIN J.....	PLATELET PROSTAGLANDINS.....	5R01 HL14890-06	174,994
SMITH, J BRYAN.....	ISOLATION AND MECHANISM OF ACTION OF THROMBOXANE A2.....	1R01 HL21239-01	50,280
SNYDER, ROBERT.....	BENZENE TOXICITY AND METABOLISM.....	2R01 ES00322-11A2	80,013
SPATH, JAMES A, JR.....	MAINTENANCE OF CELLULAR INTEGRITY IN ISCHEMIC HEARTS.....	1R01 HL20283-01	65,915
SPATH, JAMES A, JR.....	PULMONARY CAPILLARY FILTRATION IN MYOCARDIAL ISCHEMIA.....	1R01 HL21452-01	49,472
WEISS, ARTHUR J.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12294-05S3	26,875
WHEELOCK, E FREDERICK.....	SUPPRESSION OF ESTABLISHED LEUKEMIA VIRUS INFECTIONS.....	3R01 CA12461-05S1	12,725
WHEELOCK, E FREDERICK.....	STUDIES OF TUMOR DORMANCY AND EMERGENCE.....	5R01 CA18995-02	55,162
WILPIZESKI, CHESTER R.....	EVALUATION OF LASERS FOR OTOLOGIC MICROSURGERY.....	5R01 NS11688-03	72,213
YU, FU-LI.....	RIBOSOMAL RNA SYNTHESIS IN NORMAL AND CANCER CELLS.....	3R01 CA15905-03S2	5,586
ORGANIZATION TOTAL	40 4,829,818		
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104			
KEFALIDES, NICHOLAS A.....	CHEMISTRY AND METABOLISM OF CONNECTIVE TISSUES.....	7P01 AM20553-01	427,247

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
ORGANIZATION TOTAL	1	427,247	
UNIVERSITY OF PENNSYLVANIA	ZIP CODE 19174		
AGUIRRE, GUSTAVO D.....	CONE DEGENERATION—STRUCTURAL AND FUNCTIONAL STUDIES.....	5R01 EY01244-05	91,050
AGUS, ZALMAN S.....	MECHANISMS OF HYPERCALCIURIA AND HYPERPHOSPHATURIA.....	1R01 AM19478-01	43,884
ARMSTRONG, CLAY M.....	PERMEABILITY MECHANISMS IN EXCITABLE MEMBRANES.....	2R01 NS12547-02	74,559
ASBURY, ARTHUR K.....	STUDIES OF NEUROMUSCULAR DISEASES.....	5P50 NS08075-09	513,735
BAGDASARIAN, ANDRANIK.....	KININ-FORMING PATHWAY IN NORMAL AND MALIGNANT TISSUES.....	5R01 CA16607-03	44,569
BAHN, ANITA K.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA18424-02	52,802
BAHN, ANITA K.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21183-01	116,059
BASHEY, REZA I.....	BIOCHEMISTRY OF NORMAL AND DISEASED HEART VALVES.....	3R01 HL22161-01S1	2,688
BLACK, JONATHAN.....	THE MECHANICAL PROPERTIES OF ISOLATED, VIABLE OSTEOONS.....	1R01 AM19933-01	87,449
BLASIE, J KENT.....	STRUCTURE & FUNCTION OF MEMBRANES INVOLVED IN VISION.....	2R01 EY00673-06	79,000
BOETTIGER, DAVID E.....	GENETIC ANALYSIS OF RNA TUMOR VIRUSES.....	5R01 CA16502-03	47,356
BORA, F WILLIAM, JR.....	INHIBITION OF SCARS IN TENDON AND NERVE INJURY.....	2R01 AM16186-05	90,300
BOTELHO, STELLA Y.....	LACRIMAL GLAND: FACTORS INFLUENCING SECRETION.....	5R01 EY00119-07	53,870
BRACKETT, BENJAMIN G.....	RABBIT SPERM CAPACITATION AND FERTILIZATION.....	5R01 HD09406-03	40,595
BRIGHTON, CARL T.....	STIMULATION OF EXTREMITY GROWTH BY ELECTRICAL FIELDS.....	5R01 AM13812-08	125,356
BRIGHTON, CARL T.....	ARTICULAR CARTILAGE PRESERVATION AND TRANSPLANTATION.....	2R01 AM15091-07	160,433
BRIGHTON, CARL T.....	ACCELERATION OF FRACTURE HEALING BY ELECTRICAL FIELDS.....	5R01 AM18033-04	132,726
BRINSTER, RALPH L.....	CELL DIFFERENTIATION IN THE MOUSE EMBRYO.....	5R01 HD08539-03	67,821
BROOKS, FRANK P.....	VAGAL CONTROL OF GASTRIC SECRETION.....	3R01 AM14563-06S1	37,184
BROWNELL, KELLY D.....	BEHAVIORAL CARDIOVASCULAR COMPLIANCE STRATEGIES.....	1R23 HL22345-01	43,843
BUCHANAN, JAMES W.....	PATENT DUCTUS ARTERIOSUS AND PULMONARY HYPERTENSION.....	5R01 HL17581-03	67,506
CAGAN, ROBERT H.....	MECHANISMS OF TASTE FUNCTION.....	5R01 NS08775-08	51,511
CASSILETH, PETER A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18106-03	155,124
CAVA, MICHAEL P.....	TUMOR-INHIBITORY ALKALOID STUDIES.....	1R01 CA22337-01	66,003
CHANCE, BRITTON.....	TUNNELING IN BIOLOGICAL SYSTEMS.....	1R13 GM23652-01A1	7,000
CHANCE, BRITTON.....	OXYGEN DELIVERY TO TISSUE.....	5R01 HL17826-03	36,912
CHANCE, BRITTON.....	OXYGEN, ENERGY AND CONTRACTILITY IN CARDIAC TISSUE.....	5P01 HL18708-02	493,659
CHARALAMPOUS, FRIXOS C.....	PLASMA MEMBRANES OF NORMAL AND TUMOR CELLS.....	5R01 CA02228-23	66,952
COHEN, D WALTER.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05337-16	69,802
COHEN, SIDNEY.....	COLONIC MYOELECTRIC ACTIVITY.....	1R01 AM19379-01	69,486
COHN, MILDRED.....	NMR AND EPR STUDIES OF MUSCLE-ENZYME COMPLEXES.....	5R01 GM12446-14	91,176
COLMAN, ROBERT W.....	BIOCHEMISTRY AND PATHOPHYSIOLOGY OF PLASMA KALLIKREIN.....	2R01 HL16642-04	140,736
COLMAN, ROBERT W.....	PLATELET VESSEL WALL INTERACTIONS IN THROMBOGENESIS.....	1P01 HL18827-01A1	513,827
COOPER, DAVID Y.....	AEROBIC HYDROXYLASES IN STEROID AND DRUG METABOLISM.....	5R01 AM04484-18	90,941
COOPER, DAVID Y.....	HEPATIC P-450 SYSTEMS INDUCED BY ARYL CARCINOGENS.....	5R01 CA17618-03	28,237
COOPER, RICHARD A.....	DISORDERS OF THE RED CELL MEMBRANE IN DISEASES OF MAN.....	5R01 AM15441-06	82,529
COOPER, RICHARD A.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA15488-04	178,944
COOPER, RICHARD A.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16520-03	596,525
COOPERMAN, BARRY S.....	PYROPHOSPHATASE MECHANISM—ADENYLATE AFFINITY LABELS.....	2R01 AM13212-09	64,944
COX, ROBERT H.....	ARTERIAL WALL STRUCTURE-FUNCTION RELATIONS.....	5R01 HL17840-03	57,542
COX, ROBERT H.....	ARTERIAL BARORECEPTORS IN CARDIOVASCULAR CONTROL.....	5R01 HL19256-02	57,089
D'ANGIO, GIULIO J.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA13457-05	86,063
DAUBER, JAMES H.....	IMMUNE FUNCTION AND FIBROGENESIS IN SILICOSIS.....	1R23 HL21134-01	44,018
DAVIDOVITCH, ZEEV.....	BIOCHEMICAL ASPECTS OF TOOTH ERUPTION AND RESORPTION.....	5R01 DE03619-05	81,101
DETWELLER, DAVID K.....	SUSTAINED INCREASE IN CARDIAC OUTPUT.....	1R01 HL19091-01	82,570
DONOGHUE, SUSAN.....	VITAMIN A METABOLISM IN PREGNANT AND PERINATAL LIFE.....	1R01 HD11273-01	33,036
ENGLANDER, S WALTER.....	PHYSICAL STUDIES OF BIOLOGICAL MACROMOLECULES.....	5R01 AM11295-12	118,374
EPSTEIN, ALAN N.....	THE NEUROLOGICAL BASES OF FEEDING AND DRINKING.....	5R01 NS03469-17	73,052
ERULKAR, SOLOMON D.....	PHARMACOLOGICAL STUDIES ON CENTRAL SYNAPTIC TRANSMISSION.....	5R01 NS12211-03	62,561
EWENS, WARREN J.....	STOCHASTIC PROCESSES IN GENETIC POPULATIONS.....	2R01 GM21135-04	30,200
FARRELL, JAY P.....	IMMUNOLOGICAL ASPECTS OF VISCERAL LEISHMANIASIS.....	5R01 AI12663-03	31,606
FERGUSON, JAMES J, JR.....	BIOCHEMISTRY OF SPERM AND OTHER REPRODUCTIVE TISSUES.....	5R01 HD05507-06	73,417
FERGUSON, JAMES J, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05415-16	213,709
FERRER, JORGE F.....	COMPARATIVE LEUKEMIA STUDIES UNIT.....	3P01 CA14193-04S1	45,300
FERRER, JORGE F.....	COMPARATIVE LEUKEMIA STUDIES UNIT.....	5P01 CA14193-05	334,663
FERRER, JORGE F.....	VIROLOGICAL STUDIES ON BOVINE LEUKEMIA.....	5R01 CA15195-03	67,071
FISCHER, GRACE M.....	EFFECT OF SEX HORMONES ON VASCULAR CONNECTIVE TISSUE.....	5R01 HL17721-03	56,134

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
FISCHER, GRACE M.	VASCULAR CONNECTIVE TISSUE: ROLE IN ATHEROSCLEROSIS.	1R01 HL19252-01A1	69,625
FISHER, ARON B.	LUNG OXIDATIVE METABOLISM AND ENERGY PRODUCTION.	5R01 HL15013-06	52,201
FISHMAN, ALFRED P.	REGULATION OF VENTILATION AND PULMONARY CIRCULATION.	5P01 HL08805-14	989,068
FISHMAN, ALFRED P.	IMMUNOLOGY AND INTERSTITIAL FIBROSIS OF THE LUNG.	2P50 HL15061-06	458,582
FLAKS, JOEL G.	MECHANISMS OF ANTIBIOTIC ACTION AND RIBOSOME FUNCTION.	5R01 AI03899-17	85,146
FLICKINGER, GEORGE I.	THE ROLE OF LYSOSOMES IN CORPUS LUTEUM FUNCTION.	1R01 HD10451-01	102,167
FORSMAN, WILLIAM C.	RHEOLOGY OF PULMONARY SECRETIONS.	5R01 HL15155-05	41,653
FORSTER, ROBERT E.	CELLULAR AND MOLECULAR ASPECTS OF RESPIRATORY PHYSIOLOGY.	1P01 HL19737-01	814,780
FRANKEL, FRED R.	MAMMARY CANCER AND THE NUCLEAR ESTRADIOL ACCEPTOR.	5R01 CA17301-03	64,030
GAMBETTI, PIERLUIGI	STUDIES ON SYNAPTOSOMES AND AXONS.	5R01 NS08933-08	92,934
GARFINKEL, DAVID	COMPUTER MODELING OF METABOLIC SYSTEMS.	5R01 GM16501-09	77,525
GARFINKEL, DAVID	COMPUTER SIMULATION IN CARDIOLOGY.	5R01 HL15622-04	147,044
GASIC, GABRIEL J.	ROLE OF PLATELETS AND CLOTTING IN METASTASIS.	3R01 CA15728-03S1	7,624
GASSER, DAVID L.	GENETIC CONTROL OF THE IMMUNE RESPONSE.	5R01 CA15146-05	55,509
GELMAN, ROCHEL S.	STUDIES IN COGNITIVE DEVELOPMENT.	3R01 HD04598-07S2	4,735
GIL, JOAN	PINOCTYOTIC VESICLES & PULMONARY EDEMA.	1R01 HL22463-01	46,196
GINSBERG, MYRON D.	BRAIN BLOOD FLOW AND METABOLISM IN HYPOXIA-ISCHEMIA.	5R01 NS12294-03	59,936
GOLDBERG, MARTIN	ELECTROLYTE DISTURBANCES IN CARDIORENAL DISEASE.	5R01 HL00340-29	372,628
GOLDFINE, HOWARD	STRUCTURE AND FUNCTION OF BACTERIAL LIPIDS.	5R01 AI08903-10	76,592
GOODGAL, SOL H.	TRANSFORMATION IN HAEMOPHILUS AND MAMMALIAN CELLS.	9R01 GM24915-16A1	84,257
GOTS, JOSEPH S.	BIOSYNTHESIS AND INTERCONVERSION OF PURINES.	5R01 CA02790-22	70,379
GRILL, HARVEY J.	NEURAL HIERARCHY IN THE MODULATION OF INGESTIVE BEHAVIOR.	7R01 AM21397-01	49,129
HALLIWELL, RICHARD E.	RHEUMATOID ARTHRITIS IN AN EXPERIMENTAL MODEL.	5R01 AM18666-02	13,957
HAND, PETER J.	CORTICAL-THALAMIC RELATIONSHIPS.	5R01 NS06716-11	45,585
HARRIS, HARRY	INHERITED HUMAN ENZYME DIVERSITY.	1R01 CA20296-01	132,531
HAUGAARD, NIELS	REGULATION OF METABOLISM BY DRUGS AND HORMONES.	5R01 HL01813-24	73,416
HAYES, WILSON C.	MECHANICS OF NORMAL, ARTHRITIC AND PROSTHETIC KNEES.	5R01 AM20135-02	69,420
HESS, MARILYN E.	ROLE OF CALCIUM AND THYROXINE IN HEART FUNCTION.	5R01 HL16436-03	26,435
HICKS, RICHARD E.	PLATELET FUNCTION DURING EXTRACORPOREAL PERFUSION.	5R01 HL19055-02	195,514
HIRSHFELD, JOHN W, JR.	LEFT VENTRICULAR FUNCTION IN AORTIC REGURGITATION.	5R01 HL18683-02	67,542
HOCHSTRASSER, ROBIN M.	PHOTOPROCESSES IN THE ORGANIC SOLID STATE.	2R01 GM12592-13	89,301
HOGUE-ANGELETTI, RUTH A.	STUDIES ON PROTEINS OF CATECHOLAMINE STORAGE VESICLES.	5R01 NS13201-02	48,131
HOLTZER, HOWARD	CONVERSION OF EMBRYONIC CELLS INTO TRANSFORMED CELLS.	5R01 CA18194-03	111,513
HORWITZ, ALAN F.	DETERMINANTS OF MEMBRANE PHENOMENA IN MYOGENIC CELLS.	5R01 GM23244-02	55,537
HURVICH, D JAMESON	MECHANISMS OF COLOR-CONTINGENT AFTEREFFECTS.	1R01 EY01770-01	28,886
INOUE, SHINYA	STUDIES OF SUBMICROSCOPIC STRUCTURE OF LIVING CELLS.	5R01 GM23475-12	202,774
KAJI, AKIRA	STUDIES ON THE REPLICATION OF RNA TUMOR VIRUSES.	3R01 CA19497-01S1	3,225
KAJI, AKIRA	STUDIES ON THE REPLICATION OF RNA TUMOR VIRUSES.	5R01 CA19497-02	66,299
KALLEN, ROLAND G.	MECHANISMS OF BIOCHEMICAL CATALYSIS (C-C & C-N BONDS).	5R01 GM13777-10	63,983
KALLENBACH, NEVILLE R.	PROPERTIES, FUNCTIONS AND APPLICATIONS OF RNA LIGASES.	5R01 GM22258-03	50,859
KARUSH, FRED	INTERACTIONS OF IMMUNOGLOBULINS.	5R01 AI09492-17	139,457
KAUFFMAN, STUART A.	ANALYSIS OF DETERMINATION DECISIONS IN DROSOPHILA.	5R01 GM22341-02	45,902
KENNETT, ROGER H.	GENETICS AND BIOCHEMISTRY OF HUMAN LEUKEMIA ANTIGENS.	5R01 CA18930-02	62,767
KLINMAN, NORMAN R.	CLONAL ANALYSIS OF THE IMMUNE MECHANISM.	2R01 AI08778-09	154,861
KOELLE, GEORGE B.	NEUROHUMORAL TRANSMITTERS AND RELATED DRUGS.	5R01 NS00282-25	111,196
KOZINSKI, ANDRZEJ W.	INTERACTION OF VIRUSES WITH HOST CHROMOSOMES.	2R01 CA10055-11	77,318
KRITCHEVSKY, DAVID	ACID AND ALKALINE LIPASES IN AORTAS OF VARIOUS SPECIES.	5R01 HL13722-07	29,604
KRON, REUBEN E.	FRESH BLOOD RHEOLOGY—RELATION TO CARDIOVASCULAR RISK.	5R01 HL17408-03	66,300
LAMBERTSEN, CHRISTIAN J.	TOLERANCE TO RESPIRATORY GASES IN HEALTH AND DISEASE.	5P01 HL08899-13	797,972
LANGENBERG, DONALD N.	BIOMEDICAL RESEARCH SUPPORT GRANT.	5S07 RR07083-12	133,880
LANGFITT, THOMAS W.	HEAD INJURY CLINICAL RESEARCH CENTER.	5P50 NS08803-08	651,196
LASH, JAMES W.	ANALYSIS OF CHONDROGENESIS.	5R01 HD00380-20	133,214
LEBOY, PHOEBE S.	TRNA METHYLASES IN NORMAL AND NEOPLASTIC TISSUE.	3R01 CA10586-09S1	13,666
LEHR, HERNDON B.	MICROWAVE THAWING OF FROZEN TISSUE.	5R01 AM17865-02	67,523
LIEBMAN, PAUL A.	MICROPHOTOMETRIC STUDIES ON RETINAL RODS AND CONES.	5R01 EY00012-15	111,433
LIEBMAN, PAUL A.	VISION RESEARCH CENTER.	5P30 EY01583-03	116,525
LIEF, FLORENCE S.	HUMAN WART VIRUS AS AN ONCOGENIC AGENT.	2R01 CA13007-04	68,706
LITT, MITCHELL	PHYSICO-CHEMICAL PROPERTIES OF TRACHEAL MUCUS.	2R01 HL14271-06	70,972
LO, CHAI-HO W.	STUDIES OF THE PLASMA MEMBRANES OF GUSTATORY TISSUES.	5R01 DE04348-03	55,615
LU, PONZY	NMR STUDY OF A REGULATORY PROTEIN.	5R01 GM22623-02	37,953

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
MACK, ROBERT W.....	CANCER MORTALITY WITHIN THE CHEMICAL INDUSTRY.....	1R01 CA20230-01	101,030
MARSHAK, ROBERT R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05464-15	87,246
MARSHALL, BRYAN E.....	CAUSES AND EFFECTS OF LUNG WATER ACCUMULATION.....	3R01 HL16916-03S1	20,666
MASTROIANNI, LUIGI, JR.....	A COORDINATED PROGRAM IN REPRODUCTIVE BIOLOGY.....	2P01 HD06274-06	352,032
MAULITZ, RUSSELL C.....	PROBLEMS AND PROGRAMS IN FRENCH PATHOLOGY, 1802-26.....	1R01 LM03002-01	16,708
MC DONALD, GEORGE G.....	MIDDLE ATLANTIC REGIONAL NMR FACILITY.....	5P41 RR00542-07	168,914
MELA, LEENA M.....	INTRACELLULAR CHANGES INDUCED BY SHOCK AND TRAUMA.....	5R01 GM19867-06	140,621
MELLMAN, WILLIAM J.....	HUMAN GENETICS CENTER SUPPORT.....	3P50 GM20138-03S1	47,838
MELLMAN, WILLIAM J.....	HUMAN GENETICS CENTER SUPPORT.....	5P50 GM20138-04	674,437
MELLMAN, WILLIAM J.....	BIOCHEMICAL GENETICS OF CULTURED HUMAN CELLS.....	5R01 HO00588-15	91,689
MELLMAN, WILLIAM J.....	THE GENETICS OF GALACTOSE ENZYME DETERMINANTS IN MAN.....	5R01 HD04861-08	73,699
MIKUTA, JOHN J.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA15977-04	54,642
MILLER, ANN R.....	TRENDS AND DIFFERENTIALS IN INTERNAL MIGRATION.....	1R01 HD10617-01	57,563
MITRUKA, BRIJ M.....	GAS CHROMATOGRAPHY AS AN AID IN CLINICAL PATHOLOGY.....	5R01 GM21443-04	70,472
MONTGOMERY, PAUL C.....	MOLECULAR DIVERSITY OF SECRETORY ANTIBODIES.....	5R01 AI12314-03	51,612
MOORE, E NEIL.....	ELECTROPHYSIOLOGY OF FIBRILLATION.....	5R01 HL16076-05	105,211
MORAD, MARTIN.....	ELECTROPHYSIOLOGY OF PRENATAL TO ADULT MAMMAL HEARTS.....	5R01 HL16152-05	43,767
MORAD, MARTIN.....	DYES AS ELECTROCHROMIC PROBES IN CARDIAC TISSUES.....	5R01 HL17702-03	47,329
MUELLER, PAUL.....	RECONSTITUTION AND ANALYSIS OF MEMBRANE TRANSPORT.....	7R01 GM25256-01	97,816
MULHOLLAND, STANFORD G.....	ANTIBACTERIAL DEFENSE OF THE URINARY BLADDER.....	1R01 AM19483-01	49,768
MYERS, HOWARD M.....	CENTER FOR ORAL HEALTH RESEARCH.....	5P50 OE02623-11	1,394,192
NACHMIAS, VIVIANNE T.....	CYTOPLASMIC STREAMING AND CONTRACTILE PROTEINS.....	5R01 AM17492-05	45,087
NARASIMHULU, SHAKUNTHALA.....	STEROID HORMONE SYNTHESIS AND ADRENAL MICROSOMAL P-450.....	5R01 AM18545-03	33,753
NASS, MARGIT M.....	MITOCHONDRIAL GENETIC SYSTEM IN NORMAL & CANCER CELLS.....	5R01 CA13814-05	77,771
NILSSON, ULF R.....	STRUCTURE AND FUNCTION OF HUMAN C5.....	5R01 AM13515-08	42,743
NOORDERGRAAF, ABRAHAM.....	PHYSIOLOGICAL MECHANICS OF THE HEART AND ARTERIES.....	5R01 HL10330-10	49,565
NOWELL, PETER C.....	LEUKOCYTE REGULATORY MECHANISMS.....	2R01 CA12779-06	64,428
NOWOTNY, ALOIS H.....	ROLE OF BACTERIAL PRODUCTS IN PERIODONTAL DISEASES.....	1R01 OE04777-01	80,277
OLIET, SEYMOUR.....	IMPROVEMENT IN CHARACTERISTICS AND USE OF GUTTA-PERCHA.....	5R01 OE04206-03	51,090
OPELLA, STANLEY J.....	NMR STUDIES OF BIOLOGICAL SUPRAMOLECULAR STRUCTURES.....	1R01 GM24266-01	41,326
ORKAND, RICHARD K.....	LONG-TERM INTERACTIONS OF NEURONS AND GLIA.....	5R01 NS12253-04	96,073
OSTROW, J DONALD.....	ALTERNATE PATHWAYS OF BILIRUBIN METABOLISM.....	5R01 AM14543-07	14,078
OWEN, CHARLES S.....	BIOPHYSICAL PROBES OF THE LYMPHOCYTE MEMBRANE.....	1R01 GM23700-01	44,138
PATTERSON, DONALD F.....	ETIOLOGY AND DEVELOPMENT OF CONGENITAL HEART DISEASE.....	5R01 HL18848-02	162,153
PIDDINGTON, RONALD L.....	THE ROLE OF GLUTAMINE SYNTHETASE IN NEUROGENESIS.....	5R01 HD05558-06	13,552
PIZER, LEWIS I.....	CONTROL MECHANISMS IN PRO- AND EUKARYOTIC CELLS.....	2R01 AI03957-17	79,522
PRING, MARTIN.....	MEDICAL SCHOOL COMPUTER FACILITY.....	5P41 RR00015-15	70,970
REED, GEORGE H.....	NMR OF DIGESTIVE AND METABOLIC ENZYME COMPLEXES.....	2R01 AM17517-04	84,913
REIVICH, MARTIN.....	CBF AND METABOLISM IN STROKE AND SHOCK.....	5P50 NS10939-05	672,883
RELMAN, ARNOLD.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00040-17	610,645
ROSAN, BURTON.....	MICROBIOLOGIC STUDIES OF THE HUMAN ORAL STREPTOCOCCI.....	2R01 DE03180-07	85,921
ROSENBERG, CHARLES E.....	HISTORY OF MEDICAL CARE IN AMERICA, 1790-1914.....	5R01 LM02826-02	40,580
ROSENBERG, CHARLES E.....	ATTITUDES TOWARD OLD AGE IN NINETEENTH CENTURY AMERICA.....	1R01 LM02904-01	10,991
ROSENBLOOM, JOEL.....	BIOCHEMICAL STEPS AND CONTROL OF COLLAGEN SYNTHESIS.....	7R01 AM20863-01	72,019
ROSENBLOOM, JOEL.....	BIOSYNTHESIS AND DEGRADATION OF ELASTIN IN EMPHYSEMA.....	1R01 HL21152-01	68,732
RUTMAN, ROBERT J.....	MECHANISM OF ACTION OF ALKYLATING AGENTS.....	5R01 CA05295-17	142,746
SANGER, JOSEPH W.....	FLUORESCENT PROTEIN TRACERS FOR CELL MOTILITY STUDIES.....	5R01 GM22293-03	57,125
SCANDURA, JOSEPH M.....	MECHANISMS OF PROBLEM SOLVING IN CHILDREN.....	5R01 HD09185-03	70,140
SCHAD, GERHARD A.....	ARRESTED DEVELOPMENT OF LARVAL HOOKWORMS IN THE HOST.....	5R01 AI11852-04	61,114
SCHERER, PETER W.....	DEPOSITION OF HYGROSCOPIC AEROSOLS IN BRONCHI.....	1R01 HL20105-01	71,916
SCHREIBER, ALAN D.....	MACROPHAGE RECOGNITION AND TUMOR CELL INTERACTIONS.....	2R01 CA15236-04A1	68,657
SCHWAN, HERMAN P.....	ELECTRICAL & ACOUSTIC PROPERTIES OF BIOLOGIC MATERIAL.....	3R01 HL01253-24S2	12,569
SCHWARTZMAN, ROBERT M.....	GENETIC TRAITS IN ATOPIC ANIMALS.....	3R01 AI12295-02S1	15,515
SELZER, MICHAEL E.....	EPILEPSY RELEVANT DRUGS AND CENTRAL SYNAPSES.....	7R01 NS14257-01	28,990
SHAFFER, THOMAS H.....	PULMONARY PHYSIOLOGY IN LIQUID VENTILATION.....	5R01 HL19402-02	22,185
SHATTIL, SANFORD J.....	HUMAN PLATELET MEMBRANE FLUIDITY IN THROMBOSIS.....	1R01 HL21061-01	45,300
SILBERBERG, DONALD H.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11037-05	404,711
SILVERS, WILLYS K.....	THE LYMPHOCYTE AND CELLULAR IMMUNITY.....	5R01 CA18640-08	88,371
SMITH, AMOS B, III.....	METHYLENOMYCINS A AND B: POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19033-02	42,916
SMITH, THEODORE C.....	PHYSIOLOGIC RESPONSES OF THE AGED TO ANESTHESIA.....	1R01 AG00275-01	100,316

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SNYDER, PETER J.....	CONTROL OF FSH AND LH SECRETION IN MAN.....	5R01 HD08555-03	68,189
SOLOMON, GENE B.....	FORMATION OF GRANULOMATA BY A PARASITE.....	5R01 AI10898-06	47,419
SOLOWAY, ROGER O.....	SICKLE CELL DISEASE: GALLSTONES AND LIVER DYSFUNCTION.....	3R01 AM16549-03S2	18,203
SOMLYO, ANREW P.....	STUDY OF MUSCLES RELATED TO HEART DISEASE.....	5P01 HL15835-05	1,262,508
SOULSBY, ERNEST J.....	HELMINTH IMMUNITY: IN VITRO AND IN VIVO CORRELATES.....	5R01 AI06262-13	92,107
SPEAR, JOSEPH F.....	ELECTROPHYSIOLOGY OF CARDIAC AUTOMATICITY.....	5R01 HL19045-02	50,158
SPRAGUE, JAMES M.....	BRAIN MECHANISMS OF VISUAL LEARNING AND TRANSFER.....	5R01 EY00577-12	95,341
STEIN, THOMAS P.....	NITROGEN POOLS AND TURNOVER IN SURGICAL PATIENTS.....	2R01 AM16658-04	95,342
STEIN, THOMAS P.....	SURGERY AND ADJUVANT CANCER THERAPY.....	5R01 CA18575-02	82,376
STERLING, PETER.....	ANATOMY AND PHYSIOLOGY OF VISUOMOTOR SYSTEMS.....	3R01 EY00828-05S1	9,054
STERLING, PETER.....	MICROCIRCUITRY OF THE VISUAL SYSTEM.....	2R01 EY00828-06	140,309
STEVENS, JOHN K.....	RETINAL-RETINAL AND RETINAL-LGN NEURAL INTERACTIONS.....	1R01 EY01832-01	37,536
TAICHMAN, NORTON S.....	LEUKOCYTES IN THE PATHOGENESIS OF PERIOONTAL DISEASE.....	5R01 OE03995-03	120,962
THORNTON, EDWARD R.....	GLYCOSPHINGOLIPID CHEMISTRY AND MEMBRANE STRUCTURE.....	5R01 GM22647-02	55,923
TROTMAN, BRUCE W.....	MODEL OF HUMAN PIGMENT GALLSTONES.....	1R01 AM20361-01	30,901
TSOU, KWAN C.....	NEW FLUORESCENT MARKERS FOR CANCER DIAGNOSIS.....	1R01 CA19552-01A1	27,452
UTIGER, ROBERT D.....	THYROID STIMULATING HORMONES IN PLASMA.....	5R01 AM14039-09	70,769
VANDERKOOI, JANE M.....	METAL INTOXICATION AND METALLOCYTOCHROME SYNTHESIS.....	1R01 ES01628-01	20,306
VANDERKOOI, JANE M.....	OXYGEN DIFFUSION IN BIOLOGICAL MEMBRANES.....	5R01 GM21699-03	21,949
VOET, DONALD H.....	STRUCTURAL STUDIES OF BIOMOLECULES.....	1R01 GM23766-01	44,025
WALLACE, HERBERT W.....	LIQUIO MEMBRANE BLOOO OXYGENATION.....	5R01 HL16595-03	78,978
WALLACE, HERBERT W.....	SURGERY AND PULMONARY TISSUE ALTERATIONS.....	5R01 HL18143-03	66,288
WEBER, ANNEMARIE A.....	FORCE AND SPEED IN SKELETAL AND CARDIAC MUSCLE.....	5R01 HL15692-06	92,217
WEBER, KARL T.....	VENTRICULAR MECHANICS IN THE OVERLOADED HEART.....	5R01 HL18749-02	48,060
WEBER, WILFRIED T.....	LYMPHOCYTE FUNCTIONAL CAPACITIES.....	2R01 AM11693-10	54,232
WEISS, LEON P.....	ELECTRON MICROSCOPY OF THE RETICULOENDOTHELIAL SYSTEM.....	2R01 AM19920-02	133,005
WHITAKER, LINTON A.....	EXPERIMENTAL BASES FOR CRANIOFACIAL DYSJUNCTION.....	5R01 OE04110-02	82,781
WHITNEY, VINCENT H.....	POPULATION STUDIES CENTER.....	1P30 HD10379-01	58,279
WILLIAMSON, JOHN R.....	CONTROL OF METABOLISM IN NORMAL AND DISEASED STATES.....	5R01 AM15120-07	102,454
WILLIAMSON, JOHN R.....	CARDIAC METABOLISM IN HEART FAILURE.....	5R01 HL14461-07	142,099
WILSON, DARCY B.....	LYMPHOCYTES & HISTOCOMPATIBILITY ANTIGENS.....	2R01 AI10961-06	150,845
WILSON, DARCY B.....	IMMUNOBIOLOGY OF NORMAL AND NEOPLASTIC LYMPHOCYTES.....	5P01 CA15822-04	920,232
WILSON, DAVID F.....	OXIDATIVE PHOSPHORYLATION IN BIOLOGICAL MEMBRANES.....	5P01 GM12202-14	416,342
WILSON, DAVID F.....	OXYGEN DEPENDENCE OF MITOCHONDRIAL FUNCTION.....	5R01 GM21524-03	82,272
WINEGRAD, ALBERT I.....	STUDIES RELATED TO THE COMPLICATIONS OF DIABETES.....	5R01 AM04722-17	195,981
WINEGRAO, ALBERT I.....	SUPPORT FOR DIABETES CENTER.....	1P30 AM19525-01	385,621
WINEGRAO, SAUL.....	CELLULAR BASIS OF CARDIAC CONTRACTILITY.....	3R01 HL16010-14S1	3,872
WINEGRAO, SAUL.....	CELLULAR BASIS OF CARDIAC CONTRACTILITY.....	2R01 HL16010-15A1	81,409
WINEGRAO, SAUL.....	INTERCELLULAR FACTORS IN FUNCTION OF CARDIAC CELLS.....	5R01 HL18900-02	53,635
WOLF, DON P.....	THE ROLE OF CORTICAL GRANULES IN FERTILIZATION.....	5R01 H007635-03	71,793
WOLLMAN, HARRY.....	CENTER FOR RESEARCH IN ANESTHESIA.....	5P50 GM15430-10	825,388
YONETANI, TAKASHI.....	STRUCTURE AND FUNCTION OF RESPIRATORY HEMOPROTEINS.....	2R01 HL14508-09	120,290
ZWEIMAN, BURTON.....	CELLULAR INFLAMMATORY RESPONSES IN ALLERGIC REACTIONS.....	1R01 AI14332-01	136,112
ORGANIZATION TOTAL	220	28,723,354	
WILLS EYE HOSPITAL ZIP CODE 19130			
BARBER, G WINSTON.....	LENS METABOLISM AND EXPERIMENTAL CATARACT.....	2R01 EY00225-16	106,706
FEORMAN, JAY L.....	TUMOR-ASSOCIATED ANTIBODIES AGAINST OCULAR MELANOMAS.....	5R01 EY01467-03	42,414
PELTZ, RICHARD.....	CATARACT AND LENS DETERIORATION DUE TO MATURATION.....	3R01 EY00555-06S1	5,272
SERY, THEODORE W.....	RESPONSE OF CORNEAL STROMA TO INJECTIONS OF PROTEINS.....	5R01 EY00195-20	85,045
SERY, THEODORE W.....	EXPERIMENTAL HERPES VIRUS CORNEAL INFECTIONS.....	2R01 EY01454-03	75,997
SERY, THEODORE W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05510-14	27,995
ORGANIZATION TOTAL	6	343,429	
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
BAIRD, WILLIAM M.....	MODIFIERS OF CHEMICAL CARCINOGENESIS IN CELL CULTURE.....	5R01 CA19948-02	48,661
BORUN, THADDEUS W.....	REGULATION OF HISTONE BIOSYNTHESIS IN HETEROPLD CELLS.....	5R01 CA17856-02	181,846
BRINTON, MARGO.....	GENETICALLY DETERMINED RESISTANCE TO VIRUS INFECTIONS.....	1R01 AI14238-01	84,689
BUCK, CLAYTON A.....	MEMBRANE CHANGES CAUSED BY TUMOR VIRUS TRANSFORMATION.....	5R01 CA19144-03	59,859
CRISTOFALO, VINCENT J.....	CELLULAR SENESCENCE AND CONTROL OF CELL PROLIFERATION.....	5P01 AG00378-06	521,593

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
CROCE, CARLO M.....	MAPPING OF TUMOR VIRUS GENOMES IN TRANSFORMED CELLS.....	5R01 CA16685-03	213,982
CROCE, CARLO M.....	BIOLOGY OF HUMAN FIBROSARCOMA.....	1R01 CA20741-01A1	84,982
CROCE, CARLO M.....	ENZYME MARKERS IN THE MAPPING OF HUMAN GENES.....	5R01 GM20700-03	42,317
DAMSKY, CAROLINE.....	ACTIN RELEVANCE TO MALIGNANCY AND VIRUS MORPHOGENESIS.....	1R01 CA21319-01	36,212
DIAMOND, LEILA.....	THE EFFECT OF CHEMICAL CARCINOGENS ON CELLS IN VITRO.....	2R01 CA08936-10A1	143,427
DOHERTY, PETER C.....	CELL-MEDIATED IMMUNITY IN INFLUENZA.....	1R01 AI14162-01	121,779
DOHERTY, PETER C.....	CELL-MEDIATED CYTOTOXICITY IN HUMANS.....	1R01 CA20833-01	68,964
GERHARD, WALTER.....	ANTIGENICITY OF INFLUENZA VIRUS HEMAGGLUTININ.....	1R01 AI13989-01	73,000
GOTZE, DIETRICH.....	CELLULAR ANTIGENS OF NORMAL AND MALIGNANT RAT TISSUES.....	2R01 CA10097-10	110,939
KNOWLES, BARBARA B.....	ANTIGENICITY AND TUMORIGENICITY OF SOMATIC CELL HYBRIDS.....	5R01 CA18470-02	125,246
KOPROWSKI, HILARY.....	STUDY OF RABIES AND RABIES VIRUS ANTIGENS.....	5R22 AI09706-07	339,982
KOPROWSKI, HILARY.....	CONSOLIDATED BASIC CANCER RESEARCH PROGRAM.....	5P30 CA10815-10	1,436,239
KOPROWSKI, HILARY.....	GENETICS AND VIROLOGY OF CANCER.....	1P01 CA21124-01	683,789
KOPROWSKI, HILARY.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11036-05	976,669
KOPROWSKI, HILARY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05540-15	152,344
KRITCHEVSKY, DAVID.....	LIPID METABOLISM IN AGING.....	1R01 AG00076-01	55,509
KRITCHEVSKY, DAVID.....	DIETARY EFFECTS ON CHOLESTEROL METABOLISM.....	2R01 HL03299-20	105,921
KRITCHEVSKY, DAVID.....	LIPID METABOLISM.....	2R01 HL05209-17	112,406
MANSON, LIONEL A.....	ROLE OF TRANSPLANTATION ANTIGENS IN MALIGNANT CELLS.....	5R01 CA07973-12	105,942
MAUL, GERD G.....	QUANTITATIVE STUDY OF NUCLEAR & ANNULATE LAMELLAE PORES.....	5R01 GM21615-03	37,225
PINCUS, THEODORE P.....	HUMAN SEROLOGICAL ACTIVITY WITH TYPE-C VIRUS PROTEINS.....	5R01 CA21658-02	80,544
PINCUS, THEODORE P.....	MOUSE LEUKEMIA AND AUTOIMMUNITY: HOST-VIRUS RELATIONS.....	7R01 CA21845-01	73,103
ROVERA, GIOVANNI.....	REGULATORY MECHANISMS OF ERYTHROID DIFFERENTIATION.....	5R01 CA19454-02	35,797
SOLTER, DAVOR.....	BIOLOGY OF EXPERIMENTAL TERATOCARCINOMAS.....	5R01 CA17546-03	87,683
WARREN, LEONARD.....	THE SURFACE MEMBRANES OF NORMAL AND CANCER CELLS.....	3R01 CA19130-02S1	37,999
WARREN, LEONARD.....	CELL BIOLOGY AND IMMUNOLOGY OF THE CANCER CELL.....	1P01 CA21069-01	506,648
WEINMANN, ROBERTO.....	FUNCTION, REGULATION OF ADENOVIRUS CODED SMALL RNAS.....	5R01 AI13231-02	54,195
WHITTAKER, J RICHARD.....	MELANOGENESIS-RELATED DRUG INCORPORATION BY MELANOMAS.....	5R01 CA17591-02	87,769
WHITTAKER, J RICHARD.....	EGG CYTOPLASMIC INFORMATION IN CELL DIFFERENTIATION.....	5R01 HD09201-03	117,451
ORGANIZATION TOTAL	34	7,004,711	
ZOOLOGICAL SOCIETY OF PHILADELPHIA ZIP CODE 19104			
SNYDER, ROBERT L.....	ARTERIOSCLEROSIS IN ZOO ANIMALS ON CONTROLLED DIETS.....	5R01 HL01979-21	55,580
ORGANIZATION TOTAL	1	55,580	
PITTSBURGH			
ALLEGHENY HEALTH, EDUCATION AND RESEARCH CORPORATION—ALLEGHENY-SINGER RESEARCH CORPORATION ZIP CODE 15212			
CONCANNON, JOSEPH P.....	CLINICAL RADIATION THERAPY RESEARCH CENTER.....	5P01 CA10438-11	529,275
CONCANNON, JOSEPH P.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA17722-02	44,090
LESHER, SAMUEL W.....	COLORECTAL CANCER: CELL KINETICS AND TREATMENT.....	5R26 CA20062-02	55,368
SCHENKEN, LARRY L.....	COMBINED MODE (ECMRC) STUDIES IN VIVO: TUMOR/NORMAL.....	5R01 CA20328-02	172,435
SCHIFFER, LEWIS M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05709-08	46,186
ORGANIZATION TOTAL	5	847,354	
AMERICAN CLEFT PALATE ASSOCIATION ZIP CODE 15261			
LINDSAY, WILLIAM K.....	3RD INTERNATIONAL CONGRESS—CLEFT PALATE, TORONTO, 1977.....	1R13 DE04623-01	21,650
ORGANIZATION TOTAL	1	21,650	
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
BOTHNER-BY, AKSEL A.....	NUCLEAR OVERHAUSER EFFECT IN BIOMOLECULAR COMPLEXES.....	5R01 AM16532-05	76,911
CUSSLER, EDWARD L, JR.....	RATE PROCESSES INVOLVING BILE.....	5R01 AM16143-05	99,551
FRIEDMAN, MARK B.....	SELECTIVE USE OF SPECIALIZED RETINAL REGIONS.....	1R01 EY01824-01	10,237
GOLDMAN, ROBERT D.....	NORMAL AND TUMOR-VIRUS TRANSFORMED CELL BEHAVIOR.....	5R01 CA17210-03	93,254
HARTSHORNE, DAVID J.....	BIOCHEMISTRY OF CONTRACTILE PROTEINS.....	5R01 HL09544-12	98,887
HITCHCOCK, SARAH E.....	MOLECULAR BIOLOGY OF REGULATION OF CONTRACTION.....	1R01 AM19660-01	71,694
JONES, ELIZABETH W.....	GENETIC REGULATION OF PROTEASES IN YEAST.....	2R01 AM18090-04	94,744
LONGINI, RICHARD L.....	AN OPTIMAL FETAL HEART MONITOR.....	1R01 HL20632-01	63,677
NAGLE, JOHN F.....	BIOMEMBRANE TRANSITIONS: DENSITY MEASUREMENTS.....	2R01 GM21128-03	30,290

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
POWERS, GARY J.....	COMPUTER-AIDED PLANNING OF OPTIMAL DNA SYNTHESSES.....	5R01 GM22041-03	66,789
REICHERT, THOMAS A.....	A QUANTITATIVE STUDY OF GENETIC INFORMATION TRANSFER.....	5R01 GM18712-05	37,441
RICE, ROBERT V.....	BIOPHYSICAL STUDIES ON FIBROUS PROTEINS.....	5R01 AM02809-19	107,918
SCHATZ, EDWARD R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07081-12	85,546
SCHULZ, RICHARD.....	INSTITUTIONAL ADAPTATION OF THE AGED.....	5R01 AG00525-02	47,360
SLESINSKI, RONALD S.....	MUTATION AND HYBRIDIZATION OF HUMAN LYMPHOBLAST CELLS.....	5R01 CA21030-02	43,407
WADDELL, WALTER H.....	PROTEIN-CHROMOPHORE INTERACTIONS IN VISUAL PIGMENTS.....	1R01 EY01777-01	44,760
WADDELL, WALTER H.....	PHOTOCHEMISTRY OF RHODOPSIN AND 11-CIS RETINAL.....	1R01 EY01930-01	8,795
WILLIAMS, JAMES F.....	GENETIC ANALYSIS OF ADENOVIRUSES.....	1R01 CA21375-01	110,737
WORTHINGTON, C R.....	MOLECULAR STRUCTURE OF NERVE AND PHOTORECEPTORS.....	5R01 NS09329-08	85,870
ORGANIZATION TOTAL	19	1,277,868	
CHILDREN'S HOSPITAL OF PITTSBURGH ZIP CODE 15213			
ALBO, VINCENT C.....	CHILDREN'S CANCER STUDY GROUP.....	2R10 CA07439-14	119,234
BLUESTONE, CHARLES D.....	EUSTACHION TUBE OBSTRUCTION AND MIDDLE EAR EFFUSIONS.....	1R01 NS13735-01	67,731
FETTERMAN, GEORGE H.....	A STUDY OF IMMATURE KIDNEYS BY MICRODISSECTION.....	5R01 HD00659-18	24,593
OLIVER, THOMAS K, JR.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00084-15	363,005
OLIVER, THOMAS K, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05507-15	30,205
PARADISE, JACK L.....	INDICATIONS FOR TONSILLECTOMY AND ADENOIDECTOMY.....	3R01 HD07403-04S1	58,442
STEELE, MARK W.....	GENETICS OF X-CHROMOSOMES AND MALIGNANT HYBRIDIZATION.....	3R01 CA12113-06S1	4,745
ORGANIZATION TOTAL	7	667,955	
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213			
BLACK, F OWEN.....	CONTROL OF HUMAN POSTURAL SWAY TRAJECTORIES.....	1R01 NS13286-01	57,934
BROWN, STUART I.....	PRECORNEAL TEAR FILM.....	5R01 EY01489-03	44,827
BROWN, STUART I.....	COLLAGENOLYTIC SYSTEMS IN NORMAL AND DISEASED CORNEAS.....	5R01 EY01490-04	56,391
BROWN, STUART I.....	STRUCTURAL MACROMOLECULES: NORMAL AND DISEASED CORNEA.....	1R01 EY01817-01	122,322
BROWN, STUART I.....	STUDY AND TREATMENT OF IMMUNE OCULAR DISEASES.....	1P50 EY01991-01	116,500
BROWN, STUART I.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05779-02	20,823
CHURCH, ROBERT L.....	SOMATIC CELL GENETICS OF CONNECTIVE TISSUE PROTEINS.....	5R01 HD09727-03	63,873
HOPKINSON, NORMA T.....	OTOADMITTANCE SCREENING ON PRESCHOOL CHILDREN.....	5R01 NS12210-03	12,959
SANDO, ISAMU.....	HISTOPATHOLOGY OF TEMPORAL BONES.....	7R01 NS13787-01	73,086
ORGANIZATION TOTAL	9	568,715	
MONTEFIORE HOSPITAL ZIP CODE 15213			
ADIBI, SIAMAK A.....	BRANCHED AMINO ACID METABOLISM IN ALTERED NUTRITION.....	5R01 AM15855-05	61,850
ADIBI, SIAMAK A.....	INTESTINAL TRANSPORT AND METABOLISM OF PEPTIDES.....	5R01 AM15861-06	89,676
ADLER, SHELDON.....	RELATION OF POTASSIUM, METABOLISM, HORMONES TO CELL PH.....	3R01 AM17793-06S1	5,287
FROMM, HANS.....	BILE ACID METABOLISM IN GALLSTONE DISEASE.....	1R01 AM19689-01	45,888
MENDELOW, HARVEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05592-07	33,635
SHADDUCK, RICHARD K.....	REGULATION OF GRANULOPOIESIS.....	3R01 CA15237-02S2	11,715
SHADDUCK, RICHARD K.....	REGULATION OF GRANULOPOIESIS.....	2R01 CA15237-03	72,245
WINKELSTEIN, ALAN.....	IMMUNOSUPPRESSANTS AND LYMPHOCYTE FUNCTION.....	5R01 AI11739-03	51,906
WOLFSON, SIDNEY K, JR.....	BIOAUTOFUEL CELL: IMPLANTABLE DIRECT ENERGY CONVERTER.....	5R01 GM19419-06	77,327
ORGANIZATION TOTAL	9	449,529	
MPC CORPORATION ZIP CODE 15213			
BOTHNER-BY, AKSEL A.....	NMR FACILITY FOR BIOMEDICAL STUDIES.....	5P41 RR00292-12	293,664
ORGANIZATION TOTAL	1	293,664	
UNIVERSITY OF PITTSBURGH ZIP CODE 15260			
ABOLA, JAIME E.....	X-RAY STRUCTURAL ANALYSIS OF TRANSFERRIN.....	5R01 GM23195-02	63,789
ALARIE, YVES C.....	RESPIRATORY TRACT IRRITANTS: DESENSITIZATION.....	5R01 ES00872-04	42,202
ALBIN, MAURICE S.....	GRADED BRAIN RETRACTION PRESSURE AND THERAPY.....	1R01 NS13880-01	32,532
ANDERSON, GARTH R.....	SPECIFIC CELLULAR SEQUENCES IN SARCOMA VIRUS GENOMES.....	3R01 CA19488-01S1	6,000
ANDERSON, GARTH R.....	SPECIFIC CELLULAR SEQUENCES IN SARCOMA VIRUS GENOMES.....	5R01 CA19488-02	47,766
ANDERSON, JULIUS H, JR.....	HEPATIC UPTAKE OF PROPRANOLOL-DRUG INTERACTIONS.....	5R01 HL18609-02	24,153
ARNETT, EDWARD M.....	AN ABSOLUTE METHOD FOR THE STUDY OF INTERMOLECULAR FORCE.....	5R01 GM23086-02	49,163
BATES, MARGARET W.....	CONTROL OF FATTY ACID METABOLISM IN THE INTACT ANIMAL.....	2R01 AM13988-07A1	35,244
BENTLEY, RONALD.....	BIOSYNTHESIS OF VITAMIN K.....	2R01 GM20053-13	95,202

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
BILGER, ROBERT C.....	UNDERLYING CONSTRUCTS IN AUDITORY FUNCTION.....	5R01 NS04105-14	44,914
BINGHAM, GENE A.....	IMPROVEMENT OF LABORATORY ANIMAL RESOURCES.....	5P40 RR00594-02	34,981
BLAINE, EDWARD H.....	ANGIOTENSIN, HYPERTENSION AND THE CNS.....	5R01 HL19361-02	41,177
BOGGS, DANE R.....	KINETICS AND CONTROL OF NEUTROPHILIC GRANULOCYTES.....	5R01 AM14352-09	111,120
BOGGS, DANE R.....	HEMATOPOIETIC CHIMERISM.....	5R01 HL19333-02	95,698
BYRNE, JOHN H.....	ANALYSIS OF THE NEURAL CONTROL OF BEHAVIOR.....	5R01 NS13511-02	18,975
CAMPBELL, IAIN M.....	MASS SPECTROMETRIC FACILITY FOR BIOMEDICAL RESEARCH.....	2P41 RR00273-12	106,908
CHERVENICK, PAUL A.....	GROWTH AND MATURATION OF HEMATOPOIETIC STEM CELLS.....	5R01 CA14278-04	63,146
CHIU, TEH-HSING.....	LIPOTEICHOIC ACIDS—METABOLISM AND ROLE IN DENTISTRY.....	5R01 DE04225-03	24,984
CHUNG, ALBERT E.....	ISOCITRATE DEHYDROGENASE: CONTROL, STRUCTURE, ACTIVITY.....	5R01 GM19948-07	44,818
COFFEE, CAROLE J.....	STRUCTURE AND FUNCTION OF MUSCLE REGULATORY PROTEINS.....	5R01 AM16728-05	53,208
COHEN, THEODORE.....	SYNTHETIC METHODS USING NEW COPPER-SULFUR TECHNOLOGY.....	5R01 GM22760-02	58,467
COOPER, TERRANCE G.....	SYNTHESIS AND ASSEMBLY OF ENZYMES IN EUKARYOTES.....	5R01 GM19386-06	30,537
CORDER, CLINTON N.....	KIDNEY ATPASE: ACTIVITY CONVERSION.....	5R01 AM18857-02	19,421
CRAVEN, BRYAN M.....	CRYSTAL STRUCTURAL STUDIES OF HUMAN SERUM ALBUMIN.....	5R01 GM21164-04	63,238
CRAVEN, BRYAN M.....	MOLECULES OF BARBITURATES IN CRYSTAL STRUCTURE.....	5R01 GM22548-16	54,542
CRAVEN, BRYAN M.....	CRYSTAL STRUCTURES OF LIPIDS: CHOLESTEROL.....	1R01 HL20350-01	40,142
CURTHOYS, NORMAN P.....	CHARACTERIZATION OF RAT KIDNEY GLUTAMINASE ISOENZYMES.....	5R01 AM16651-05	50,876
DANISHEFSKY, SAMUEL J.....	THE SYNTHESIS OF POTENTIAL ANTIBIOTICS.....	1R01 AI13939-01	51,763
DANISHEFSKY, SAMUEL J.....	THE SYNTHESIS OF ANTITUMOR NATURAL PRODUCTS.....	2R01 CA12107-14	148,338
DE GROAT, WILLIAM C.....	NERVOUS CONTROL OF URINARY BLADDER AND LARGE BOWEL.....	5R01 NS07923-10	60,551
DIXIT, BALWANT N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05455-14	20,432
EDMONDS, MARY P.....	BIOGENESIS OF MESSENGER RNA IN ANIMAL CELLS.....	5R01 CA18065-02	111,141
ENTERLINE, PHILIP E.....	CANCER IN ARSENIC EXPOSED POPULATIONS.....	1R01 CA20540-01	106,758
ERTEL, ROBERT J.....	MYOCARDIAL CELLS: AUTONOMIC AND RHYTHMIC MECHANISMS.....	5R01 HL14832-05	36,141
FEINGOLD, DAVID S.....	5-EPIMERIZATION IN MUCOPOLYSACCHARIDE SYNTHESIS.....	5R01 AM18160-03	61,344
FIELD, JAMES B.....	EFFECTS OF TSH ON THYROID CARBOHYDRATE METABOLISM.....	5R01 AM06865-15	115,411
FIELD, JAMES B.....	FACTORS INVOLVED IN INSULIN HOMEOSTASIS.....	5R01 AM12974-08	52,442
FISHER, BERNARD.....	BIOLOGICAL EFFECTS OF AUXILIARY LIVER TRANSPLANTS.....	5R01 AM13228-09	61,523
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12027-06	287,230
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12028-06	73,674
FISHER, BERNARD.....	SURGICAL MANAGEMENT OF THE REGIONAL LYMPH NODE.....	2R01 CA12102-07	59,854
FISHER, BERNARD.....	STUDY OF EFFECT OF REMOVAL OF PRIMARY TUMORS.....	5R01 CA14972-04	65,612
FISHER, BERNARD.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA18653-02	75,784
FLETCHER, RONALD D.....	NORMAL & ABNORMAL CELL ADHESION TO INANIMATE MATERIALS.....	2R01 DE03983-03	10,188
FORREST, EDWARD J.....	INTERDISCIPLINARY STUDIES IN CLEFT PALATE.....	5P01 DE01697-15	142,550
FORREST, EDWARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05338-16	23,549
FRIED, VICTOR A.....	BIOGENESIS AND ASSEMBLY OF THE LAC PERMEASE OF E. COLI.....	5R01 GM23288-02	25,883
FRIZZELL, RAYMOND A.....	ION TRANSPORT BY MAMMALIAN COLON, IN VITRO.....	5R01 AM18199-03	20,141
FUCHS, FRANKLIN.....	ANALYSIS OF CELLULAR CALCIUM COMPARTMENTS IN MUSCLE.....	5R01 AM10551-12	37,160
GILBERTSON, JOHN R.....	LIPID ROLE IN CARCINOGENESIS AND NORMAL TISSUE.....	3R01 CA14914-03S1	2,777
GILBERTSON, JOHN R.....	STUDIES ON THE LIPIDS OF SALIVARY GLANDS.....	5R01 DE03774-02	27,779
GILL, THOMAS J, III.....	CHEMICAL GENETIC AND CELLULAR ASPECTS OF IMMUNOGENICITY.....	5R01 CA18659-07	59,322
GILL, THOMAS J, III.....	MATERNAL-FETAL INTERACTIONS AND THE IMMUNE RESPONSE.....	5R01 HD08662-04	89,574
GILL, THOMAS J, III.....	IMMUNOLOGICAL ASPECTS OF PREGNANCY IN HUMANS.....	5R01 HD09880-02	143,850
GLEW, ROBERT H.....	GAUCHER'S DISEASE—ENZYMOLGY AND APPROACH TO THERAPY.....	2R01 AM17465-04	51,145
GLEW, ROBERT H.....	MITOCHONDRIAL GLYCOPROTEINS—BIOSYNTHESIS AND STRUCTURE.....	5R01 GM19197-07	47,291
GLEW, ROBERT H.....	GLYCOPROTEINS IN PULMONARY ALVEOLAR PROTEINOSIS.....	1R01 HL20547-01	43,139
GOLDSTEIN, E BRUCE.....	VISUAL ADAPTATION: PERIPHERAL AND CENTRAL MECHANISMS.....	5R01 EY00135-06	35,825
GOLDSTEIN, E BRUCE.....	VELOCITY PREFERENCE OF NEURONS IN LGN & RETINA.....	5R01 EY01642-02	24,497
GRIECO, PAUL A.....	TUMOR INHIBITORS: VERNOLEPIN, ERIOLANGIN, CORIOLIN.....	5R01 CA13689-06	77,725
GRIECO, PAUL A.....	FLUOROPROSTAGLANDINS.....	1R01 HD10725-01	44,532
GRIFFIN, HERSHEL E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05451-16	60,753
HENDRIX, ROGER W.....	ASSEMBLY AND STRUCTURE OF BACTERIOPHAGE LAMBDA HEADS.....	5R01 AI12227-03	46,256
HO, CHIEN.....	NMR STUDIES OF BIOLOGICAL MEMBRANES.....	5R01 GM18698-06	94,486
HO, CHIEN.....	PHYSICAL-CHEMICAL STUDY OF HEMOGLOBIN AND ERYTHROCYTE.....	2R01 HL10383-11	193,502
HO, MONTO.....	CELL IMMUNITY: NATURAL INHIBITORS OF VIRAL ACTIVITY.....	5R01 AI02953-17	75,675
HO, MONTO.....	LATENCY AND REACTIVATION OF CYTOMEGALOVIRUS INFECTION.....	5R01 AI11798-05	80,876
HOFFEE, PATRICIA A.....	DR-5-P ALDOLASE: REGULATION AND MECHANISM OF ACTION.....	5R01 AM12152-10	58,345
HOFMANN, KLAUS H.....	HORMONAL CONTROL OF THE ADRENOCORTICAL CELL.....	5R01 AM01128-22	195,964

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
HUNG, TIN-KAN.....	BIOMECHANICS OF EXPERIMENTAL SPINAL CORD INJURY.....	1R01 NS13238-01	90,483
JACOBSON, LEWIS A.....	REGULATION OF PROTEIN SYNTHESIS IN GROWTH TRANSITIONS.....	2R01 GM20114-04	65,031
JOHNSON, SHARON L.....	NUCLEOPHILIC REACTIONS OF DPN AND ITS ANALOGUES.....	5R01 GM16856-08	43,137
KAROL, MERYL H.....	RESPIRATORY ANAPHYLAXIS TO INDUSTRIAL CHEMICALS.....	1R01 ES01532-01	41,542
KNOBIL, ERNST.....	STUDIES ON REPRODUCTIVE PHYSIOLOGY IN THE MACAQUE.....	5R01 HD03968-17	124,883
KNOBIL, ERNST.....	CENTER FOR RESEARCH IN PRIMATE REPRODUCTION.....	5P30 HD08610-03	298,744
KOZIKOWSKI, ALAN P.....	SYNTHESIS OF THERAPEUTICALLY IMPORTANT ALKALOIDS.....	1R01 HL20579-01	31,037
KULLER, LEWIS H.....	BLOOD PRESSURE OF CHILDREN AND YOUNG ADULTS.....	5R01 HL19864-02	179,391
KULLER, LEWIS H.....	EPIDEMIOLOGY OF SUDDEN CARDIAC DEATH AMONG WOMEN.....	1R01 HL20179-01	49,204
LAUFFER, MAX A.....	BIOPHYSICAL STUDIES ON VIRAL STRUCTURE AND FUNCTION.....	5P01 GM10403-15	85,680
LAUFFER, MAX A.....	INTERACTIONS OF TOBACCO MOSAIC VIRUS AND ITS COMPONENTS.....	5R01 GM21619-03	79,447
LEONARD, JAMES.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00056-16	505,892
LESTER, ROGER.....	METABOLISM OF PORPHYRIN, HEME AND BILE PIGMENT.....	5R01 AM17847-04	50,644
LEWIS, JESSICA H.....	BLOOD COAGULATION AND HEMORRHAGIC DISEASE.....	5R01 HL02254-22	78,538
LIEBERMAN, IRVING.....	MECHANISMS OF CONTROL OF MAMMALIAN CELL MULTIPLICATION.....	2R01 CA06663-16	93,806
LINEBERRY, CHARLES G.....	SIGNAL DETECTION ANALYSIS OF PAIN PERCEPTION.....	5R01 GM22339-03	36,606
LIU, CHUNG-CHIUN.....	AN IMMOBILIZED ENZYMIC-FUEL CELL GLUCOSE SENSOR.....	5R01 AM19331-02	117,775
LOMBARDI, BENITO.....	PATHOGENESIS OF EXPERIMENTAL FATTY LIVER.....	3R01 AM06334-14S2	14,407
LOMBARDI, BENITO.....	ACUTE HEMORRHAGIC PANCREATITIS WITH FAT NECROSIS.....	5R01 AM18664-02	64,711
MAZUMDAR, SATI.....	ALLEGHENY COUNTY AIR POLLUTION MORBIDITY MORTALITY.....	5R01 ES01129-02	77,015
NAKADA, DAISUKE.....	CONTROL OF PLASMID GENE EXPRESSION.....	5R01 AI12630-03	34,625
NAKADA, DAISUKE.....	CONTROL OF VIRUS GENE EXPRESSION.....	5R01 GM21504-03	62,314
NORTH, A FREDERICK.....	PLANNING A MULTICENTER STUDY OF ADENOTONSILLECTOMY.....	1P20 NS13166-01A1	84,524
ONTELL, MARCIA B.....	MUSCLE SATELLITE CELL REACTION TO DISEASE AND TRAUMA.....	5R01 NS13688-02	50,615
OVE, PETER.....	CONTROL OF DNA REPLICATION IN NORMAL AND TUMOR CELLS.....	2R01 CA11637-07	64,774
OVE, PETER.....	SERUM FACTOR ON GROWTH OF TUMOR AND NORMAL CELLS.....	5R01 CA17607-03	36,251
PHILLIPS, BRUCE A.....	ROLE OF VIRAL-MODIFIED MEMBRANES IN VIRUS MATURATION.....	5R01 AI08368-10	43,656
PHILLIPS, STEPHEN L.....	MESSANGER RNA METABOLISM IN YEAST MITOCHONDRIA.....	5R01 GM23120-02	33,410
POPLE, HARRY E.....	CLINICAL DECISION SYSTEMS RESEARCH RESOURCE.....	1R24 RR01101-01	238,621
PULSINELLI, PHILLIP D.....	STRUCTURAL BASIS OF REGULATORY FUNCTION IN HEMOGLOBIN.....	5R01 AM18065-03	54,984
RABIN, BRUCE S.....	IMMUNOLOGIC STUDY OF EXPERIMENTAL ULCERATIVE COLITIS.....	5R01 AM18321-03	38,366
REBEK, JULIUS.....	A NEW TEST FOR REACTIVE INTERMEDIATES.....	5R01 GM23709-02	60,950
ROBINSON, ALAN G.....	THE PHYSIOLOGY OF NEUROPHYSIN SECRETION.....	2R01 AM16166-04	66,493
ROSENBERG, JEROME L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07084-12	133,091
SAFAR, PETER.....	TREATMENT OF POST-ISCHEMIC-ANOXIC ENCEPHALOPATHY.....	5R01 NS10974-03	76,526
SALVIN, SAMUEL B.....	TUBERCULIN HYPERSENSITIVITY AND CELLULAR IMMUNITY.....	5R22 AI08528-10	87,851
SASSOUNI, VIKEN.....	AUTOMATED PHYSIOPRINTING OF FACIAL PATTERN.....	1R01 DE04584-01	63,446
SAX, MARTIN.....	CRYSTAL STRUCTURE OF M-COMPONENTS.....	5R01 AM18827-02	51,377
SAX, MARTIN.....	THE STEREOCHEMICAL AND VALENCE STRUCTURE OF THIAMINE.....	1R01 GM23609-01	49,098
SCHULTZ, STANLEY G.....	MECHANISMS OF ION TRANSPORT BY EPITHELIAL TISSUES.....	2R01 AM16275-06	114,002
SHINOZUKA, HISASHI.....	EXPERIMENTAL PANCREATIC CARCINOGENESIS CELLULAR ANALYSIS.....	5R26 CA20116-02	53,613
SIEGEL, ALEXANDER W.....	THE DEVELOPMENT OF SPATIAL REPRESENTATIONS.....	5R01 HD09694-02	40,873
STEVENS, CHARLES L.....	THE INITIAL STAGES OF PROTEIN POLYMERIZATION.....	5R01 GM22558-02	40,150
STOLC, VIKTOR.....	ENDOCRINE FACTORS IN NORMAL AND LEUKEMIC LEUKOCYTES.....	5R01 CA13418-06	30,413
SUSSMAN, MAURICE.....	ONTOGENY AND FUNCTION OF D. DISCOIDEUM ORGANELLES.....	1R01 GM23285-01A1	59,148
TOMKO, DAVID L.....	QUANTITATION OF NEURAL ACTIVITY IN VESTIBULAR NUCLEI.....	5R01 NS12308-03	33,273
TONG, WINTON.....	METABOLISM AND ENDOCRINE FUNCTION OF THE THYROID.....	5R01 AM06439-14	63,223
VAUGHAN, MAURICE H, JR.....	METABOLISM OF ANIMAL CELL RIBOSOMES.....	5R01 CA10922-08	61,733
WALSH, CHARLES J.....	GENE REGULATION DURING DIFFERENTIATION OF NAEGLERIA.....	1R01 GM23516-01A1	70,184
WERNER, GERHARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05416-16	206,622
WIDNELL, CHRISTOPHER C.....	MEMBRANE FUNCTION IN AGING AND DEVELOPMENT.....	5R01 AG00439-06	83,125
WIDNELL, CHRISTOPHER C.....	PLASMA MEMBRANE STRUCTURE, FUNCTION AND BIOGENESIS.....	5R01 GM17724-07	77,464
YOUNGNER, JULIUS S.....	STUDIES OF CELLULAR RESISTANCE TO VIRUS INFECTIONS.....	5R01 AI06264-14	127,759
ORGANIZATION TOTAL	122	9,004,512	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 15240			
DE RUBERTIS, FREDERICK R.....	CYCLIC AMP IN CARCINOMA OF THE COLON.....	5R26 CA16908-03	22,455
ORGANIZATION TOTAL	1	22,455	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
UNIVERSITY PARK			
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802			
ALLCOCK, HARRY R.....	POLYDIAMINGPHOSPHAZENES.....	5R01 HL11418-08	38,455
ARNETT, DAVID W.....	INTERACTIONS BETWEEN MAMMALIAN RETINAL GANGLION CELLS.....	5R23 EY01652-02	10,155
ARNETT, DAVID W.....	PROTOTYPE MODEL OF THE LATERAL GENICULATE.....	5R01 NS12380-03	21,960
ARONSON, NATHAN N, JR.....	NORMAL AND PATHOLOGICAL LYSOSOMAL METABOLISM.....	5R01 AM15465-06	61,474
BALTES, PAUL B.....	COGNITIVE DEVELOPMENT AND MODIFIABILITY IN ADULTHOOD.....	5R01 AG00403-02	133,281
BARRON, GEORGE P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07082-12	129,862
BENKOVIC, STEPHEN J.....	PHOSPHATE ACTIVATION MECHANISMS.....	5R01 GM13306-12	97,500
BENKOVIC, STEPHEN J.....	THE TRANSFORMYLASE ENZYMES.....	1R01 GM24129-01	79,560
BUSKIRK, ELSWORTH R.....	OBESITY AND PHYSIOLOGICAL RESPONSE TO ENVIRONMENT.....	5R01 AM08311-13	90,104
BUSS, EDWARD G.....	INFLUENCE OF MUTANT GENE ON RIBOFLAVIN METABOLISM.....	5R01 GM07830-17	60,766
DAVIDS, NORMAN.....	ANALYSIS OF STRESS IN PULSATILE DYNAMICS.....	5R01 HL11289-11	41,899
DEERING, REGINALD A.....	DNA REPAIR IN SLIME MOLD.....	2R01 GM16620-08	86,090
FAHNESTOCK, STEPHEN R.....	RIBOSOME STRUCTURE AND FUNCTION.....	2R01 GM21080-04	70,298
GAY, CAROL V.....	ULTRASTRUCTURAL STUDIES OF BIOLOGICAL MINERALIZATION.....	1R01 AM20374-01	37,632
GESELOWITZ, DAVID B.....	SIMULATION STUDIES OF THE ECG IN ACUTE ISCHEMIA.....	1R01 HL21283-01	60,108
GUTHRIE, HELEN A.....	IRON DEFICIENCY HYPERLIPIDEMIA IN DEVELOPMENT.....	5R01 HL18712-02	43,304
HAMILTON, GORDON A.....	A MECHANISTIC STUDY OF SOME O2 OXIDOREDUCTASES.....	2R01 AM13448-09	91,006
HAMILTON, GORDON A.....	REAGENTS FOR SYNTHESIZING CARCINOGENIC ARENE OXIDES.....	3R01 CA17717-02S1	10,749
HAMMERSTEDT, ROY H.....	THE ROLE OF THE EPIDIDYMS IN SPERMATOZOA MATURATION.....	5R01 HD05859-07	67,593
HARTZELL, CHARLES R.....	STRUCTURAL ELUCIDATION OF HEART CYTOCHROME C OXIDASE.....	5R01 HL17559-03	36,185
HIBBARD, EMERSON.....	VISUAL RESTORATION.....	5R01 EY01071-05	43,226
HOLLIS, THEODORE M.....	SHEAR TO AORTIC HISTAMINE SYNTHESIS AND PERMEABILITY.....	1R01 HL19830-01	44,172
HOLLIS, THEODORE M.....	AORTIC HISTAMINE SYNTHESIS IN DIABETES.....	5R01 HL20460-02	35,839
HORROCKS, WILLIAM D, JR.....	NEW LANTHANIDE PROBES OF PROTEIN STRUCTURE.....	1R01 GM23599-01	79,296
KARAKAWA, WALTER W.....	ROLE OF SURFACE ANTIGENS IN STAPHYLOCOCCAL INFECTIONS.....	5R01 AI11598-05	55,419
LANG, L GEORGE.....	MOSSBAUER STUDIES OF RESPIRATORY HEMOPROTEINS.....	2R01 HL16860-04	104,426
MARTIN, ROY J.....	METABOLIC REGULATION OF GROWTH AND DEVELOPMENT.....	2R01 HD07090-05A1	85,627
MASTRO, ANDREA M.....	PHOSPHORYLATION OF CELL SURFACES.....	5R01 GM22953-02	37,328
MATTHEWS, CHARLES R.....	REVERSIBLE UNFOLDING OF NATIVE AND MUTANT PROTEINS.....	5R01 GM23303-02	36,499
MC CARL, RICHARD L.....	EFFECT OF AGING ON BEATING HEART CELLS IN CULTURE.....	2R01 HL10018-10	59,453
MC DONEL, JAMES L.....	MECHANISM OF ACTION OF C. PERFRINGENS ENTEROTOXIN.....	1R01 AI14161-01	44,793
MILLER, NORMAN B.....	MULTIDIMENSIONAL ECHO IMAGING OF THE ISCHEMIC HEART.....	1R01 HL20872-01	91,141
MUELLER, WERNER J.....	MECHANISMS OF BONE RESORPTION AND ACCRETION IN VIVO.....	5R01 AM04362-16	67,956
PERSON, STANLEY.....	THE MECHANISM OF VIRUS INDUCED CELL FUSION.....	2R01 AI11513-04A1	53,582
PHILLIPS, ALLEN T.....	COVALENT MODIFICATIONS REGULATING ENZYME FUNCTION.....	5R01 AM13198-09	57,303
RHEUBEN, MARY B.....	SYNAPSE FUNCTION DURING GROWTH AND DEGENERATION.....	1R01 NS13700-01	53,751
SCHRAER, HARALD.....	HORMONES, BONE CELL INTERACTIONS AND BONE MINERALIZATION.....	5R01 DE01764-15	73,581
SCHRAER, HARALD.....	CELLULAR AND MOLECULAR ASPECTS OF MINERALIZATION.....	5R01 DE04345-02	65,956
SHAMMA, MAURICE.....	ISOLATION AND SYNTHESIS OF ANTICANCER DRUGS.....	5R01 CA11450-07	59,940
SHAMMA, MAURICE.....	REACTIONS OF ALKALOIDS AND THEIR ANALOGS.....	2R01 HL12971-14	70,428
STEVENS, STANLEY E, JR.....	CONTROL OF NITROGEN ASSIMILATION IN BLUE-GREEN ALGAE.....	1R01 GM23524-01	51,452
TAYLOR, WILLIAM D.....	REACTION OF CARCINOGENS AND CELL EXTRACTS WITH RF-DNA.....	5R01 CA18970-02	63,682
TERSHAK, DANIEL R.....	DELETION MUTANTS OF POLIOVIRUS.....	1R01 AI13420-01A1	50,144
TODD, PAUL W.....	CELLULAR STUDIES RELATED TO HIGH LET RADIOTHERAPY.....	5R01 CA17536-03	52,472
TURPEN, JAMES B.....	DEVELOPMENTAL ANALYSIS OF LYMPHOPOIESIS.....	1R01 HD11179-01	73,863
ULTMAN, JAMES S.....	BOLUS-RESPONSE MEASUREMENT OF LUNG FUNCTION.....	1R01 HL20347-01	50,858
VILLAFRANCA, JOSEPH J.....	STRUCTURE AND CONTROL OF GLUTAMINE SYNTHETASES.....	1R01 GM23529-01	45,231
WARME, PAUL K.....	ACTIVITY OF CYTOCHROME ANALOGS IN HEART MITOCHONDRIA.....	5R01 GM20742-03	30,502
ORGANIZATION TOTAL	48 2,905,911		
WILKES-BARRE			
LUZERNE COUNTY MEDICAL SOCIETY ZIP CODE 18701			
SMITH, HAROLD.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	3P20 CA16067-02S3	198,451
ORGANIZATION TOTAL	1 198,451		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
STATE TOTAL	863	92,555,658	
RHODE ISLAND			
KINGSTON			
GORDON RESEARCH CONFERENCES ZIP CODE 02831			
BAER, JOHN E.....	GORDON RESEARCH CONFERENCE ON DRUG METABOLISM, 1977.....	1R13 ES01568-01	4,700
BAER, JOHN E.....	GORDON RESEARCH CONFERENCE ON DRUG METABOLISM, 1977.....	1R13 GM24050-01	2,000
DEFENDI, VITTORIO.....	GORDON RESEARCH CONFERENCE ON CANCER, 1977.....	1R13 CA22327-01	9,250
EDELMAN, ISIDORE S.....	GORDON RESEARCH CONFERENCE ON HORMONE ACTION.....	1R13 GM24018-01	4,000
FINK, GERALD R.....	GORDON CONFERENCE ON BIOLOGICAL REGULATORY MECHANISMS.....	1R13 GM24371-01	5,500
FOZZARD, HARRY A.....	GORDON CONFERENCE ON CONTROL OF MUSCLE CONTRACTION.....	1R13 HL20840-01	6,920
NICKELL, LOUIS G.....	GORDON CONFERENCE ON PLANT CELL AND TISSUE CULTURE.....	1R13 CA22494-01	5,000
PITELKA, DOROTHY R.....	GORDON RESEARCH CONFERENCE ON MAMMARY GLAND BIOLOGY.....	1R13 CA21712-01	6,079
ROSS, RUSSELL.....	GORDON RESEARCH CONFERENCE ON ATHEROSCLEROSIS.....	1R13 HL20879-01	5,000
SELL, STEWART.....	GORDON CONFERENCE ON TUMOR IMMUNOLOGY.....	1R13 CA22702-01	33,905
SHIMIZU, YUZURU.....	GORDON CONFERENCE OF MARINE NATURAL PRODUCTS.....	1R13 ES01817-01	2,000
ORGANIZATION TOTAL	11	84,354	
UNIVERSITY OF RHODE ISLAND ZIP CODE 02881			
BELL, ROBERT G.....	ANTICOAGULANTS AND METABOLISM OF VITAMIN K.....	5R01 HL14847-06	43,217
BROWN, PHYLLIS R.....	HPLC STUDY OF BLOOD NUCLEOTIDES AND NUCLEOSIDES.....	5R01 CA17603-03	36,319
DE FEO, JOHN J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05777-02	21,423
FULLER, GEORGE C.....	REGULATION OF SMOOTH MUSCLE CELLS IN ARTERIOSCLEROSIS.....	5R01 HL16904-02	26,768
SHIMIZU, YUZURU.....	MARINE BIOPOLYMERS WITH CELL SPECIFICITY.....	1R01 CA22338-01	29,253
STEPANISHEN, PETER R.....	DIAGNOSTIC ULTRASONICS WITH TWO DIMENSIONAL ARRAYS.....	5R01 GM23104-02	43,700
TREMBLAY, GEORGE C.....	PYRIMIDINE METABOLISM IN HUMAN AND RAT TISSUES.....	3R01 CA17131-09S1	12,119
TURCOTTE, JOSEPH G.....	SYNTHESIS OF RENIN INHIBITORS AND ANALOG PHOSPHATIDES.....	5R01 HL13587-06	40,722
WOOD, NORRIS P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07086-02	18,043
ORGANIZATION TOTAL	9	271,564	
PAWTUCKET			
MEMORIAL HOSPITAL ZIP CODE 02860			
MASON, REGINALD G, JR.....	ULTRASTRUCTURAL STUDY OF ENDOTHELIUM IN THROMBOSIS.....	1R01 HL20679-01	28,946
STEINER, MANFRED.....	STUDIES ON ERYTHROLEUKEMIA AND SIDEROBLASTIC ANEMIA.....	5R01 AM17327-04	32,706
STEINER, MANFRED.....	STUDIES OF PLATELET MICROTUBULE PROTEIN.....	5R01 HL19323-02	43,706
ORGANIZATION TOTAL	3	105,358	
PROVIDENCE			
BROWN UNIVERSITY ZIP CODE 02912			
BRAY, PHILIP J.....	NUCLEAR RESONANCE STUDIES OF MOLECULAR SYSTEMS.....	5R01 GM19018-13	76,982
BUTCHER, FRED R.....	ROLE OF CYCLIC NUCLEOTIDE IN PAROTID GLAND FUNCTION.....	5R01 AM18751-02	51,388
CANE, DAVID E.....	BIOSYNTHESIS OF ISOPRENOID METABOLITES.....	2R01 GM22172-03	68,985
CHAPMAN, KENT M.....	SENSORY TRANSDUCTION IN CARDIAC MECHANORECEPTORS.....	1R01 HL19995-01	47,649
CHASE, HERMAN B.....	DEVELOPMENTAL GENETICS OF ANOPHTHALMIA.....	5R01 EY01274-03	50,930
CHU, SHIH-HSI.....	BIOLOGICAL EFFECTS OF CYCLIC NUCLEOTIDE ANALOGS.....	1R01 CA20460-01	34,656
CHURCH, RUSSELL M.....	CONTROL PROCESSES IN TIMING.....	5R01 GM23247-02	35,284
CSERR, HELEN F.....	THE FUNCTIONAL SIGNIFICANCE OF CEREBROSPINAL FLUID.....	5R01 NS11050-05	33,744
CZECH, MICHAEL P.....	INSULIN ACTION ON THE FAT CELL SURFACE MEMBRANE.....	2R01 AM17893-04	68,302
DAHLBERG, ALBERT E.....	POLYSOMES & SUBUNITS: STRUCTURE-FUNCTION RELATIONSHIPS.....	5R01 GM19756-06	62,912
EBNER, FORD F.....	STRUCTURE-FUNCTION ANALYSIS OF SINGLE CORTICAL NEURONS.....	5R01 NS13031-02	65,407
EDWARDS, JOHN O.....	METHYL VIOLOGEN AND THE PHOTOSYNTHETIC PROCESS.....	5R01 GM23082-02	43,533
EIMAS, PETER D.....	DEVELOPMENTAL STUDIES OF SPEECH PERCEPTION.....	5R01 HD05331-08	63,827
FAIN, JOHN N.....	HORMONAL CONTROL OF LIPID METABOLISM.....	5R01 AM10149-12	97,679

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
RHODE ISLAND—Continued			
FAIN, JOHN N.....	ORAL ANTIDIABETIC DRUGS AND CELLULAR METABOLISM.....	3R01 AM14648-07S1	13,764
FAUSTO-STERLING, ANNE.....	EARLY EMBRYOGENESIS IN DROSOPHILA MELANOGASTER.....	5R01 HD07918-03	38,275
FAUSTO, NELSON.....	GENE EXPRESSION IN REGENERATING AND NEOPLASTIC LIVERS.....	9R01 CA23226-07	88,483
GALLETTI, PIERRE M.....	SYNTHESIS OF ARTIFICIAL LUNG AND KIDNEY SYSTEMS.....	5R01 HL11945-09	134,165
GALLETTI, PIERRE M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05664-10	71,642
GERBI, SUSAN A.....	FINE STRUCTURE OF RIBOSOMAL RNA.....	2R01 GM20261-04	85,263
GERBI, SUSAN A.....	CHROMOSOMES: GENETIC UNITS IN THE HETEROCHROMATIN.....	5R01 GM22882-02	44,500
GIBBS, JULIAN H.....	STATISTICAL MECHANICS OF BIOLOGICAL MACROMOLECULES.....	5R01 GM10906-17	45,873
GOLDSTEIN, LEON.....	RENAL AMMONIA METABOLISM.....	5R01 AM12443-09	45,475
KNOPF, PAUL M.....	PATHWAYS LEADING TO EXPRESSION OF IMMUNOGLOBULIN.....	5R01 AI11169-04	40,906
LANDY, ARTHUR.....	MECHANISMS OF SITE-SPECIFIC RECOMBINATION.....	1R01 AI13544-01A1	48,823
LANDY, ARTHUR.....	CONTROL OF SYNTHESIS AND FUNCTION OF NUCLEIC ACID.....	2R01 CA11208-09	67,444
LEDUC, ELIZABETH H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07085-12	76,876
LIEBERMAN, PHILIP.....	DEVELOPMENTAL STUDIES OF SPEECH PRODUCTION.....	5R01 HD09197-03	50,405
LUSK, JOAN E.....	MEMBRANE PERMEABILITY OF COLICIN-TREATED CELLS.....	5R01 GM20171-05	36,120
MARSHALL, JEAN M.....	PROPERTIES OF SMOOTH MUSCLE.....	5R01 HD06963-12	56,112
MASSOVER, WILLIAM H.....	FORM AND FUNCTION OF NORMAL AND NEOPLASTIC FERRITINS.....	5R01 CA18530-02	44,176
MC ILWAIN, JAMES T.....	CORTICAL CONTROL OF SUPERIOR COLLICULUS.....	5R01 NS09997-05	23,269
PARKER, KATHLYN A.....	SYNTHESIS OF HIGHLY OXYGENATED COMPOUNDS.....	2R01 CA16524-04	47,544
PARKS, ROBERT E, JR.....	COENZYMES CONTAINING PURINE AND PYRIMIDINE ANALOGS.....	2R01 CA07340-14	117,860
PIERREL-SORRENTINO, R.....	LOUDNESS SCALING.....	5R01 NS12349-03	37,532
POTTER, ROBERT G.....	MOMENTUM OF GROWTH IN HUMAN POPULATIONS.....	5R01 HD10091-02	37,357
QUEVEDO, WALTER C, JR.....	RESPONSE OF PIGMENT CELLS TO X- AND UV-RADIATIONS.....	3R01 CA06097-15S1	12,215
RIEGER, PHILIP H.....	AQUEOUS SOLUTION STUDIES OF ARSENATES AND VANADATES.....	2R01 ES00894-04	46,045
RIGGS, LORRIN A.....	HUMAN VISUAL RESPONSES IN RETINA AND CORTEX.....	2R01 EY00744-06	34,167
RIGGS, LORRIN A.....	THE ACCURACY OF RETINAL IMAGE STABILIZATION.....	5R01 EY01871-02	31,627
ROTMAN, M BORIS.....	RECESSIVE GENES CONTROLLING IMMUNOCOMPETENCE.....	5R01 AI12626-03	63,018
ROTMAN, M BORIS.....	BIOCHEMICAL COMPONENTS OF A TRANSPORT SYSTEM.....	5R01 AM11194-10	55,781
SCHRIER, ALLAN M.....	SUPPORT FOR PRIMATE LABORATORY NEWSLETTER.....	5R01 RR00419-10	20,334
SHEPP, BRYAN E.....	DEVELOPMENTAL STUDIES IN LEARNING AND ATTENTION.....	5R01 HD04320-09	57,173
SIQUELAND, EINAR R.....	EXPERIENTIAL DETERMINANTS OF EXPLORATION IN PREMATURES.....	5R01 HD03386-09	81,082
STEIM, JOSEPH M.....	BIOPHYSICAL STUDIES OF MEMBRANES AND RELATED SYSTEMS.....	2R01 GM20545-05	73,468
STRAUSS, ELLIOTT W.....	LIPID-DROPLET FORMATION DURING FAT ABSORPTION BY GUT.....	1R01 AM20392-01	55,305
WOOTEN, BILLY R.....	RETINAL MOSAICISM IN FEMALES CARRYING COLOR BLINDNESS.....	5R01 EY01512-03	24,799
ORGANIZATION TOTAL	48	2,613,156	
MIRIAM HOSPITAL ZIP CODE 02906			
MORRIS, DAVID J.....	THE METABOLISM AND ENDOCRINE ACTION OF ALDOSTERONE.....	5R01 AM19179-02	41,269
ZACKS, SUMNER I.....	CONTROL OF PROTEIN SYNTHESIS IN MED MYOPATHY.....	7R01 NS14040-01	20,410
ORGANIZATION TOTAL	2	61,679	
RHODE ISLAND HOSPITAL ZIP CODE 02902			
GLICKSMAN, ARVIN S.....	CANCER AND LEUKEMIA GROUP B RADIOTHERAPY COMMITTEE.....	1R10 CA21058-01	104,688
LEONE, LOUIS A.....	ACUTE LEUKEMIA GROUP B.....	3R10 CA08025-12S1	18,647
LEONE, LOUIS A.....	CANCER ACUTE LEUKEMIA GROUP B.....	2R10 CA08025-13	207,096
SCHWARTZ, ROBERT.....	CARBOHYDRATE METABOLISM IN THE NEWBORN.....	5R01 HD08977-04	57,575
ORGANIZATION TOTAL	4	388,006	
ROGER WILLIAMS GENERAL HOSPITAL ZIP CODE 02908			
CALABRESI, PAUL.....	SUPPORT FOR CLINICAL CANCER RESEARCH CENTER.....	5P30 CA13943-05	660,597
CALABRESI, PAUL.....	CLINICAL & PHARMACOLOGICAL ANTINEOPLASMS STUDY.....	5P01 CA20892-02	369,957
CALABRESI, PAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05765-03	38,988
CHU, MING Y.....	DRUG DEVELOPMENT—HUMAN LEUKEMIC CELL GROWTH FACTORS.....	3R01 CA15909-03S1	6,054
CUMMINGS, FRANCIS J.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	3R10 CA15947-03S1	3,940
CUMMINGS, FRANCIS J.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA15947-04	90,367
HEPPNER, GLORIA H.....	IMMUNE REACTIVITY AND MAMMARY NEOPLASIA.....	5R01 CA17074-03	94,618
ORGANIZATION TOTAL	7	1,264,521	
STATE TOTAL	84	4,788,638	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
SOUTH CAROLINA			
CHARLESTON			
AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS ZIP CODE 29401			
EARLE, KENNETH M.....	SYMPOSIUM—NEURONAL & GLIAL PROCESSES IN NEUROPATHOLOGY.....	1R13 NS13861-01	12,526
EARLE, KENNETH M.....	SYMPOSIUM ON DISORDERS OF PERIPHERAL NERVES.....	1R13 NS13862-01	13,062
EARLE, KENNETH M.....	SYMPOSIUM ON DEVELOPMENTAL NEUROPATHOLOGY.....	1R13 NS13863-01	11,675
ORGANIZATION TOTAL	3 37,263		
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401			
AINSWORTH, STERLING K.....	STRUCTURAL BASIS OF NEPHRON FILTRATION.....	2R01 HL16490-03	61,132
BAGGETT, BILLY.....	NUCLEOTIDE METABOLISM IN THE DECIDUAL UTERUS.....	5R01 HD06362-06	72,050
BANK, HARVEY L.....	CRYBIOLOGY OF ISOLATED ISLETS OF LANGERHANS.....	5R01 AM18115-03	46,606
BROSTOFF, STEVEN W.....	THE ROLE OF MYELIN PROTEINS IN EXPERIMENTAL NEURITIS.....	2R01 NS11867-04	92,347
BUSE, MARIA G.....	FACTORS THAT MODIFY INSULIN ACTION.....	5R01 AM02001-20	63,944
CANTEY, JOSEPH R.....	STUDY OF A POSSIBLE NEW MECHANISM OF E. COLI DIARRHEA.....	1R22 AI13738-01	9,921
COLES, WILLIAM H.....	TOXIC AND TRAUMATIC EFFECTS ON CORNEAL ENDOTHELIUM.....	5R01 EY01439-03	23,479
COLWELL, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05420-16	131,006
CROUCH, ROSALIE K.....	RETINAL DISEASE AND ARTIFICIAL VISUAL PIGMENTS.....	5R01 EY01612-02	22,247
CUNNINGHAM, EARLENE B.....	INTERACTIONS OF ENZYMES OF THE ERYTHROCYTE MEMBRANE.....	5R01 GM22819-02	43,349
FISH, WAYNE W.....	MECHANISM OF IRON STORAGE AND MOBILIZATION BY FERRITIN.....	5R01 HL19491-02	22,121
FUDENBERG, H HUGH.....	GENETIC MECHANISMS IN IMMUNOLOGIC DEFICIENCY STATES.....	5R01 AI13484-02	96,575
FUDENBERG, H HUGH.....	GENETIC CHILDHOOD DISEASES AND AGING.....	5P01 HD09938-03	294,973
GAFFNEY, THOMAS E.....	INTERDISCIPLINARY PROGRAM IN PHARMACOLOGY/TOXICOLOGY.....	5P50 GM20387-05	472,345
GAFFNEY, THOMAS E.....	GENERAL CLINICAL RESEARCH CENTER.....	1M01 RR01070-01	304,877
GALE, GLEN R.....	PLATINUM COMPOUNDS IN CHEMOTHERAPY OF L1210 LEUKEMIA.....	5R01 CA11811-12	44,467
HASKILL, JOHN S.....	ANALYSIS OF THE HOST RESPONSE WITHIN SOLID TUMORS.....	5R01 CA17694-03	72,778
HEMPLING, HAROLD G.....	PERMEABILITY OF THE LEUCOCYTE AND THE NEOPLASTIC CELL.....	5R01 CA12956-06	29,599
HEMPLING, HAROLD G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05767-03	18,559
HOGAN, EDWARD L.....	MOLECULAR PATHOLOGY OF LEUCODYSTROPHY.....	5R01 NS12044-03	69,753
HOHN, ARNO R.....	HYPERTENSIVE PROGENY: PHYSICAL/HUMORAL PRECURSOR SEARCH.....	5R01 HL19870-02	138,454
JOHNSON, ROBERT C.....	RADIOSENSITIZATION BY SPECIFIC DNA REPAIR CONTROL.....	5R01 CA18205-02	28,563
LE ROY, E CARWILE.....	EARLY DETECTION AND OUTCOME OF RHEUMATIC DISEASE.....	1P60 AM20571-01	162,135
LEDFORD, BARRY E.....	SERUM PROTEIN SYNTHESIS BY MOUSE HEPATOMA CELLS.....	3R01 CA17037-03S1	2,684
LEDFORD, BARRY E.....	SERUM PROTEIN SYNTHESIS BY MOUSE HEPATOMA CELLS.....	2R01 CA17037-04	53,603
LINDENMAYER, GEORGE E.....	MEMBRANE RELATIONSHIPS OF THE SODIUM-POTASSIUM PUMP.....	5R01 AM18747-02	27,927
MARGOLIUS, HARRY S.....	KALLIKREIN-KININ SYSTEM IN HYPERTENSION.....	5R01 HL17705-03	72,240
MILLS, JOHN H.....	AUDITORY EFFECTS OF LONG EXPOSURE TO LOW LEVELS OF NOISE.....	5R01 ES01301-03	61,202
MORGAN, SAMUEL K.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA16388-03	35,309
NEWMAN, WALTER H.....	MECHANICS OF COMPENSATORY VENTRICULAR HYPERTROPHY.....	5R01 HL14545-05	54,138
OGAWA, MAKIO.....	CHEMOTHERAPY OF MYELOMA WITH PLATINUM COMPOUNDS.....	5R01 CA16488-03	37,905
OGAWA, MAKIO.....	CHEMOTHERAPY & GRANULOCYTIC & LEUKEMIC CELLS IN CULTURE.....	5R01 CA17002-03	35,035
OGAWA, MAKIO.....	GRANULOCYTES AND THE INFECTED BURN WOUND.....	5R01 GM21758-03	22,398
OGAWA, MAKIO.....	CELL CULTURE STUDIES OF HEMOGLOBINOPATHIES.....	1R01 HL20913-01	53,476
ONDO, JEROME G.....	AMINO ACID NEUROTRANSMITTERS AND REPRODUCTION.....	5R01 HD10132-02	21,775
PEROT, PHANOR L, JR.....	FUNDAMENTAL STUDIES IN SPINAL CORD INJURY.....	2P50 NS11066-04	387,644
PITTMAN, FRED E.....	STUDIES OF TISSUE TOXICITY OF ENTAMOEBIA HISTOLYTICA.....	5R01 AI12649-02	50,090
PRIEST, DAVID G.....	5-FLUOROURACIL TARGET IN EUKARYOTIC CELLS.....	1R01 CA22754-01	34,396
SCHWABE, CHRISTIAN.....	PROTEIN TURNOVER IN DENTAL PULP AND PERIODONTAL TISSUES.....	5R01 DE03470-06	40,490
SCHWABE, CHRISTIAN.....	THE STRUCTURE AND FUNCTION OF RELAXIN.....	1R01 HD10540-01	40,488
SPECTOR, MYRON.....	POROUS HIGH DENSITY POLYETHYLENE TOOTH ROOTS.....	5R23 DE04414-02	29,351
SPICER, SAMUEL S.....	CELL ULTRASTRUCTURE AND FUNCTION.....	5R01 AM10956-12	67,013
SPICER, SAMUEL S.....	MORPHOCHEMICAL STUDIES, LIGHT & ELECTRON MICROSCOPY.....	2R01 AM11028-11A1	42,993
SWANSON, ARNOLD A.....	PROTEOLYSIS IN NORMAL AND SENILE CATARACT LENS.....	5R01 EY00429-09	50,029
WANG, AN-CHUAN.....	STRUCTURE, GENETICS AND EVOLUTION OF IMMUNOGLOBULINS.....	5R01 AI13388-03	31,726
WISE, WILLIAM C.....	AMINO ACID TRANSPORT IN NORMAL AND NEOPLASTIC CELLS.....	5R01 CA13529-05	34,196
ORGANIZATION TOTAL	46 3,607,388		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
SOUTH CAROLINA—Continued			
CLEMSON			
CLEMSON UNIVERSITY ZIP CODE 29631			
ABRAMOVITCH, RUDOLPH A.....	BIOLOGICALLY ACTIVE HETEROCYCLIC N-OXIDES.....	7R01 GM25242-01	50,823
COOKE, FRANCIS W.....	PMMA STRENGTH, SURGICAL TECHNIQUE & IMPLANT FRACTURE.....	1R01 AM20483-01	38,990
HILDERMAN, RICHARD H.....	STUDIES ON THE AMINOACYL-TRNA SYNTHETASE COMPLEX.....	5R01 GM22718-02	43,095
LARCOM, LYNDON L.....	BIOLOGICAL EFFECTS OF DNA-PROTEIN CROSSLINKS.....	1R01 CA21479-01	20,585
PARK, JOON B.....	PIEZOELECTRIC IMPLANTS FOR BONE FIXATION.....	1R01 AM19740-01	30,927
PARK, JOON B.....	IMPLANT FIXATION IN BONE BY ELECTRICAL STIMULATION.....	1R01 AM19828-01	19,453
PARK, JOON B.....	DENTAL IMPLANT FIXATION BY ELECTRICALLY MEDIATED PROCESS.....	1R23 DE04712-01	20,411
POWELL, GARY L.....	ACYL COA INTERACTION WITH HEART CITRATE SYNTHASE.....	5R01 GM22788-02	42,353
ORGANIZATION TOTAL	8	266,637	
COLUMBIA			
BENEDICT COLLEGE ZIP CODE 29204			
FINLAY, MARY F.....	POLLUTION ANALYSIS WITH STUDENT PARTICIPATION.....	5S06 RR08117-04	126,653
ORGANIZATION TOTAL	1	126,653	
UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29208			
ALLEN, DONALD O.....	PERFUSED FAT CELL SYSTEM.....	1R01 AM19914-01	45,945
AMMA, ELMER L.....	NATURE OF THE ACTIVE SITE OF THYMIDYLATE SYNTHETASE.....	1R01 CA17260-01A2	25,164
AMMA, ELMER L.....	MECHANISM OF DNA INHIBITION BY METAL IONS.....	5R01 GM20562-03	24,369
BAYNES, JOHN W.....	CLEARANCE OF GLYCOPROTEINS FROM THE CIRCULATION.....	1R01 AM19971-01	65,571
BRYSON, THOMAS A.....	SYNTHESIS, ACTIVITY AND REACTIVITY OF 9-BORASTEROIDS.....	5R01 AM18802-02	29,752
BRYSON, THOMAS A.....	HARRINGTONINE AND RELATED ANTICANCER DRUG SYNTHESIS.....	5R01 CA17,90-03	38,420
BRYSON, THOMAS A.....	SESQUITERPENE AND ALKALOID ANTICANCER DRUG SYNTHESIS.....	5R01 CA18349-03	23,434
DUNLAP, R BRUCE.....	THE MECHANISM OF ACTION OF THYMIDYLATE SYNTHETASE.....	5R01 CA12842-06	46,238
ENGLE, RANDALL W.....	RESEARCH ON THE AUDITORY SENSORY MEMORY IN CHILDREN.....	1R01 HD11114-01	29,812
FELDER, MICHAEL R.....	MALATE DEHYDROGENASE ISOZYMES IN HEPATOMA.....	5R01 CA16184-03	27,065
FISHER, RONALD R.....	MITOCHONDRIAL PYRIDINE DINUCLEOTIDE TRANSHYDROGENASE.....	5R01 GM22070-03	42,337
INGEBRETSEN, WILLIAM R, JR.....	GLYCOGEN METABOLISM IN ANOXIC DIABETIC MYOCARDIUM.....	1R01 HL22064-01	55,760
KISTLER, W STEPHEN.....	ROLE OF SPECIFIC PROTEINS IN MAMMALIAN SPERMATOGENESIS.....	1R01 HD10793-01	43,341
MACON, A R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07160-02	40,465
MISHRA, NAWIN C.....	GENETIC EFFECTS OF EXOGENOUS NUCLEIC ACIDS.....	5R01 GM21520-03	26,024
SARGENT, ROGER G.....	A STUDY ON PHYSICAL FITNESS AND INTRAOCULAR PRESSURE.....	3R01 EY01629-01A1S1	10,083
WUTHIER, ROY E.....	ROLE OF MATRIX VESICLES IN CALCIFICATION.....	5R01 AM18983-02	79,109
ORGANIZATION TOTAL	17	652,889	
ORANGEBURG			
SOUTH CAROLINA STATE COLLEGE ZIP CODE 29115			
DATTA-GUPTA, NIRMALENDU.....	SYNTHETIC PORPHYRINS BIOCHEMICAL & BIOLOGICAL STUDIES.....	5S06 RR08060-06	23,420
DATTA-GUPTA, NIRMALENDU.....	SYNTHETIC PORPHYRINS BIOCHEMICAL & BIOLOGICAL STUDIES.....	2S06 RR08060-07	143,889
ORGANIZATION TOTAL	2	167,309	
SPARTANBURG			
INDIVIDUAL AWARD—HUDSON, MONIE S. ZIP CODE 29302			
HUDSON, MONIE S.....	TREE SAP EXTRACTS FOR CANCER CHEMOTHERAPY SCREENING.....	5R01 CA12359-06	41,500
ORGANIZATION TOTAL	1	41,500	
STATE TOTAL	78	4,899,639	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
SOUTH DAKOTA			
BROOKINGS			
SOUTH DAKOTA STATE UNIVERSITY ZIP CODE 57006			
GRANHOLM, NELS H.....	CELL SURFACE CHANGES DURING VERTEBRATE DEVELOPMENT.....	5R01 HD06918-03	23,879
ORGANIZATION TOTAL	1	23,879	
VERMILLION			
UNIVERSITY OF SOUTH DAKOTA ZIP CODE 57069			
BRADY, FRANK O.....	FUNCTION OF METALLOTHIONEIN IN HEAVY METAL METABOLISM.....	5R01 ES01288-03	36,474
CHAN, FRANK Y.....	LENS REGENERATION IN ADULT NEWTS.....	1R01 EY01685-01A1	15,760
NEUHAUS, OTTO W.....	CONTROL OF HEPATIC BIOSYNTHESIS OF PLASMA PROTEINS.....	5R01 AM11146-10	58,172
READ, WILLARD O.....	METABOLIC PATHWAY OF TAURINE SYNTHESIS IN HEART MUSCLE.....	5R01 HL19196-02	15,812
SMALL, GARY D.....	DNA METABOLISM IN EUKARYOTES.....	5R01 GM21095-03	27,526
THOMAS, JOHN A.....	MECHANISM OF OXIDATIVE PHOSPHORYLATION.....	5R01 GM22845-02	28,809
WEGNER, KARL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05421-15	20,190
WELTY, JOSEPH D, JR.....	AMINO ACIDS OF CONTRACTILE PROTEINS OF FAILING HEARTS.....	5R01 HL09234-12	22,971
ORGANIZATION TOTAL	8	225,714	
STATE TOTAL	9	249,593	
TENNESSEE			
KNOXVILLE			
KNOXVILLE COLLEGE ZIP CODE 37921			
JAMES, JESSE.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08055-06	76,935
ORGANIZATION TOTAL	1	76,935	
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916			
BAGBY, ROLAND M.....	SMOOTH MUSCLE CELL ORGANIZATION.....	2R01 HL18077-03	51,932
BECKER, JEFFREY M.....	A NOVEL APPROACH FOR DRUGS TO CANDIDA ALBICANS.....	1R01 AI14387-01	58,160
BECKER, JEFFREY M.....	PEPTIDE TRANSPORT IN MICRO-ORGANISMS.....	5R01 GM22087-03	26,701
BRIAN, DAVID A.....	CORONAVIRUS STRUCTURE AND REPLICATION.....	1R23 AI14367-01	38,954
BRYANT, ROBERT E.....	RNA POLYMERASE MUTATIONS IN MAMMALIAN CELLS.....	1R01 GM24271-01	46,421
CHEN, JAMES P.....	RADIOIMMUNOASSAY OF HYPER- AND HYPOCOAGULABLE STATES.....	5R01 HL20014-02	28,877
CHURCHICH, JORGE E.....	FLUORESCENCE STUDIES OF PROTEIN-PROTEIN INTERACTIONS.....	1R01 EY01979-01	44,616
CLARK, JEFFREY N.....	TRACHEAL MUCIN SYNTHESIS IN EXPERIMENTAL BRONCHITIS.....	1R23 HL21369-01	35,954
FARKAS, WALTER R.....	ACCUMULATION OF GUANINE DUE TO HEAVY METALS.....	1R01 ES01323-01	53,100
FARKAS, WALTER R.....	GUANYLATION OF TRNA.....	5R01 GM20546-03	45,637
HUANG, LEAF.....	MEMBRANE TRANSPLANTATION: ENGINEERING OF CELL SURFACE.....	1R01 GM23473-01	64,635
JONES, JIMMY B.....	HEMATOPOIETIC STUDIES OF CYCLIC HEMATOPOIESIS.....	2R01 HL15647-05	64,069
KITCHEN, HYRAM.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09012-01	121,385
KRAUSS, STEPHEN.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA13237-05S1	14,108
KRAUSS, STEPHEN.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA13237-06	155,418
LANGE, ROBERT D.....	ERYTHROPOIETIN: IMMUNOASSAY AND CHARACTERIZATION.....	5R01 HL10567-12	85,047
LANGE, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05541-12	41,634
LOZZIO, BISMARCK B.....	HEREDITARILY ATHYMIC-ASPLENIC MICE: TUMOR GROWTH.....	5R01 CA18185-02	66,515
MACCABE, JEFFREY A.....	MECHANISMS IN EMBRYONIC LIMB MORPHOGENESIS.....	5R01 HD07282-04	46,046
MACHADO, EMILIO A.....	ESTABLISHMENT OF A DIAGNOSTIC PATHOLOGY LABORATORY.....	3P40 RR00874-03S1	35,965
MC DONALD, TED P.....	THROMBOPOIETIN: IMMUNOASSAY AND CHARACTERIZATION.....	3R01 HL14637-03S1	2,917
MC DONALD, TED P.....	THROMBOPOIETIN: IMMUNOASSAY AND CHARACTERIZATION.....	5R01 HL14637-04	56,230
MONTY, KENNETH J.....	MITOCHONDRIAL MAO: ROLE IN BIOGENIC AMINE METABOLISM.....	3R01 NS12747-02S1	16,151
NABELEK, ANNA K.....	BINAURAL HEARING AIDS IN NOISE AND REVERBERATION.....	5R01 NS12035-03	65,228
OLINS, DONALD E.....	PHYSICAL PROPERTIES OF ISOLATED NUCLEI AND CHROMOSOMES.....	2R01 GM19334-06	125,179
POPP, RAYMOND A.....	NON-ALPHA-CHAIN SYNTHESIS CONTROL IN THALASSEMIC MICE.....	1R01 HL20912-01	56,788
ROTH, L EVANS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07088-10	51,705

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
SAYLER, GARY S.....	BACTERIAL DEGRADATION OF PBC: CONSEQUENCES AND EFFECTS.....	1R01 ES01521-01	50,093
SHELL, FRED M.....	ALPHA-ALKYLATION OF AMINES: SYNTHETIC APPLICATIONS.....	1R01 GM23381-01	31,241
SLAGA, THOMAS J.....	METABOLISM OF POLYCYCLIC HYDROCARBONS IN SKIN.....	5R01 CA20076-02	69,866
SOLOMON, ALAN.....	PROTEINS IN MULTIPLE AND RELATED BLOOD DISEASES.....	5R01 CA10056-12	103,161
TYNDALL, RICHARD L.....	GALLIMU-67 UPTAKE IN EMBRYOGENESIS AND ONCOGENESIS.....	5R01 CA18673-03	37,152
VAN HOOK, WILLIAM A.....	AQUEOUS SOLVENT ISOTOPE EFFECTS: HYDROPHOBIC BONDING.....	5R01 GM19991-05	44,854
WUST, CARL J.....	MYELOGENOUS LEUKEMIA-ASSOCIATED ANTIGENS.....	3R01 CA17533-02S1	12,432
WUST, CARL J.....	MYELOGENOUS LEUKEMIA-ASSOCIATED ANTIGENS.....	5R01 CA17533-03	62,504
ORGANIZATION TOTAL	35	1,910,675	
MEMPHIS			
BAPTIST MEMORIAL HOSPITAL ZIP CODE 38146			
RIGHTSEL, WILTON A.....	CULTIVATION STUDIES OF MYCOBACTERIUM LEPRAE.....	5R22 AI08051-09	15,357
ORGANIZATION TOTAL	1	15,357	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
ADLER, FRANK L.....	INDUCTION OF TOLERANCE AND SUPPRESSOR CELLS IN VITRO.....	1R01 CA23709-01	57,580
ADLER, LOUISE T.....	IMMUNOGLOBULIN ALLOTYPES: SUPPRESSION AND RELEASE.....	5R01 AI13159-03	50,274
AUR, RHOMES J.....	COMBINATION THERAPY OF CHILDHOOD LEUKEMIA.....	5R01 CA13050-06	77,038
BEAN, WILLIAM J, JR.....	STUDY OF THE EVOLUTION OF INFLUENZA A VIRUSES.....	1R23 AI14293-01	39,372
BRENT, THOMAS P.....	THE ROLE OF A HUMAN CELL ENDONUCLEASE IN REPAIR OF DNA.....	3R01 CA14799-02S1	14,849
BRENT, THOMAS P.....	ENZYMES AND REACTIONS FOR REPAIR OF DNA IN HUMAN CELLS.....	2R01 CA14799-03	44,782
CHEUNG, WAI Y.....	REGULATORY ASPECTS OF CYCLIC AMP METABOLISM IN CNS.....	5R01 NS08059-09	65,878
FISHMAN, MARVIN.....	THE ROLE OF MACROPHAGE SUBCLASSES IN TUMOR IMMUNITY.....	5R01 CA18672-02	39,776
FRIDLAND, ARNOLD.....	DNA REPLICATION IN DRUG TREATED HUMAN LYMPHOBLASTS.....	5R01 CA18446-02	34,454
GANGULY, PANKAJ.....	PLATELET PROTEINS.....	3R01 HL15090-05S1	10,627
GOORHA, RAKESH M.....	DNA-BINDING PROTEINS AND LUCKE TUMOR ASSOCIATED VIRUS.....	1R01 GM23638-01	51,751
GRANOFF, ALLAN.....	STUDIES ON LUCKE TUMOR ASSOCIATED VIRUSES.....	5R01 CA07055-15	207,525
GUNASEKARAN, MUTHUKUMARAN.....	GAS CHROMATOGRAPHY FOR DETECTION OF FUNGAL INFECTION.....	5R01 CA20917-02	40,681
JACKSON, CARL W.....	EFFECTS OF ERYTHROPOIESIS ON PLATELETS AND HEMOSTASIS.....	5R01 HL19270-02	48,252
KINGSBURY, DAVID W.....	MULTIPLICATION OF PARAMYXOVIRUSES.....	5R01 AI05343-14	109,683
MARTEN, GEORGE W.....	PSYCHOLOGICAL ADAPTATIONS TO CHILDHOOD LEUKEMIA.....	5R18 CA17881-03	75,833
MAUER, ALVIN M.....	A STUDY OF LEUKOKINETICS IN ACUTE LEUKEMIA WITH DFP32.....	3R01 CA15956-03S1	15,528
MAUER, ALVIN M.....	A STUDY OF LEUKOKINETICS IN ACUTE LEUKEMIA.....	2R01 CA15956-04	136,782
MAUER, ALVIN M.....	LEUKEMIA PROGRAM PROJECT.....	1P01 CA20180-01	1,370,138
MAUER, ALVIN M.....	CANCER CENTER SUPPORT (CORE) GRANT.....	1P30 CA21765-01	873,488
MAUER, ALVIN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05584-13	100,036
MORRISON, MARTIN.....	STRUCTURE AND FUNCTION OF RED CELL MEMBRANES.....	5R01 AM18106-02	67,585
PHILLIPS, DAVID R.....	PLATELET MEMBRANE PROTEINS IN AGGREGATION.....	5R01 HL15616-03	43,488
PORTNER, ALLEN.....	BIOSYNTHESIS OF PARAMYXOVIRUSES.....	5R01 AI11949-03	60,033
ROBERTS, BUFORD D.....	PHARMACOLOGICAL RESPONSE TO ONCOLYTIC DRUGS.....	5R01 CA12732-06	59,698
THOMAS, EDWIN L.....	PEROXIDASE IN SALIVA AND PREVENTION OF ORAL DISEASE.....	5R01 DE04235-02	34,849
WALKER, WILLIAM S.....	MACROPHAGE FUNCTIONS IN TUMORIGENESIS.....	5R01 CA16652-03	51,413
WEBSTER, ROBERT G.....	STUDIES ON THE ORIGIN OF PANDEMIC INFLUENZA VIRUSES.....	5R01 AI08831-09	86,261
WELCH, ARNOLD D.....	CHEMOTHERAPY IN MICE OF HUMAN CARCINOMAS OF THE COLON.....	1R26 CA21677-01	143,384
YEH, YU-YAN.....	REGULATION OF KETONE METABOLISM IN NEWBORN RATS.....	5R01 H908568-03	41,013
ORGANIZATION TOTAL	30	4,052,051	
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE—MEMPHIS STATE UNIVERSITY ZIP CODE 38152			
HIRKO, ROBERT J.....	NONINVASIVE SICKLED CELL MONITOR DEVELOPMENT.....	1R01 HL19973-01	24,879
ORGANIZATION TOTAL	1	24,879	
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163			
ABEL, GENE G.....	SEXUAL DISORDERS RESULTING FROM DIABETES.....	1R01 AM20844-01	109,057
ABEL, GENE G.....	BEHAVIORAL TACTICS FOR CLINICAL CARDIAC CONTROL.....	2R01 HL18814-02	70,072
ARANT, BILLY S, JR.....	PATTERNS OF FUNCTIONAL MATURATION: THE NEONATAL KIDNEY.....	5R01 HD09061-03	30,524
ARNESON, RICHARD M.....	MEMBRANE LIPIDS IN NEUROBLASTOMA DIFFERENTIATION.....	3R01 CA16927-03S1	6,169
BEACHEY, EDWIN H.....	MUCOSAL CELL-BINDING OF PYOGENIC BACTERIA.....	5R01 AI13550-02	46,067

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
BLATTEIS, CLARK M.....	HYPERPYREXIA THERAPY WITH HELIUM-OXYGEN.....	1R01 AI13244-01A1	34,954
BLATTEIS, CLARK M.....	ENVIRONMENTAL STRESS AND TUMORIGENESIS.....	3R01 CA20964-01S1	7,237
BLATTEIS, CLARK M.....	ENVIRONMENTAL STRESS AND TUMORIGENESIS.....	5R01 CA20964-02	43,177
BRADHAM, LAURENCE S.....	REGULATION OF ADENYLATE CYCLASE.....	5R01 NS12122-03	28,189
BROWN, FOUNTAINE C.....	CYSTATHIONINE METABOLISM IN BRAIN.....	5R01 NS04454-15	39,609
BYRNE, WILLIAM L.....	SIZE AND SHAPE DETERMINATION OF RHODOPSIN IN SOLUTION.....	5R01 EY01701-02	34,852
CALDWELL, ROBERT W.....	THE IMPORTANCE OF AMINOSUGARS IN DIGITALIS ACTIVITY.....	2R01 HL17796-03	55,493
CHESNEY, CAROLYN M.....	PLATELET COLLAGEN INTERACTION.....	5R01 HL18650-02	33,080
COX, CLAIR E.....	BLADDER CARCINOMA PATIENT MANAGEMENT—COLLABORATIVE.....	2R26 CA15934-04	53,816
COX, CLAIR E.....	CHEMOTHERAPY FOR ADVANCED PROSTATIC CANCER.....	5R26 CA20618-02	96,492
COX, RAY.....	DNA REPAIR AND CARCINOGENESIS.....	5R01 CA15189-05	25,842
DABBOUS, MUSTAFA K.....	ENZYMATIC AND IMMUNOLOGIC STUDIES OF INVASIVE TUMORS.....	3R01 CA15677-03S1	5,055
DABBOUS, MUSTAFA K.....	GINGIVAL MATRIX PROTEINS AND PERIODONTAL DISEASE.....	5R01 DE04125-03	33,487
DIXIT, SARYU N.....	CHEMISTRY OF GLOMERULAR BASEMENT MEMBRANE COLLAGENS.....	1R01 AM20385-01	47,580
DORSETT, PRESTON H.....	MECHANISMS OF PERSISTENT RUBELLA VIRUS INFECTION.....	2R01 AI11255-04	41,574
FLEMING, IRVIN D.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17950-03	111,519
GROSVENOR, CLARK E.....	NEURAL AND HORMONAL REGULATION OF LACTATION.....	2R01 HD04358-18	51,825
IRVING, CHARLES C.....	STUDIES ON CHEMICAL CARCINOGENESIS.....	5R01 CA05490-16	29,492
IRVING, CHARLES C.....	BIOCHEMICAL MECHANISMS IN EXPERIMENTAL BLADDER CANCER.....	2R26 CA16765-04	103,405
KANE, JAMES F.....	A COMMON AMIDOTRANSFERASE SUBUNIT IN METABOLISM.....	1R01 AM19443-01A1	36,186
KANG, ANDREW H.....	CHEMISTRY AND BIOLOGY OF NORMAL AND ABNORMAL COLLAGENS.....	5R01 AM16506-05	34,787
KANG, ANDREW H.....	COLLAGEN IN INTERSTITIAL FIBROSIS OF LUNG.....	5R01 HL19731-02	57,691
KANG, ANDREW H.....	COLLAGEN-PLATELET INTERACTION AND HUMAN AORTA COLLAGEN.....	1R01 HL20114-01	45,715
KANG, ELLEN S.....	REYE'S SYNDROME: STUDIES OF MEMBRANE FUNCTION.....	7R01 HD11657-01	42,355
KATZE, JON R.....	TRNA Q-BASE: ITS RELATION TO DIFFERENTIATION.....	5R01 CA20919-02	44,919
KAUKER, MICHAEL L.....	PROSTAGLANDIN EFFECT ON RENAL TUBULAR FUNCTION.....	5R01 AM17711-03	22,611
KOSSMANN, CHARLES E.....	CARDIOVASCULAR COMPUTER PROJECT.....	5P01 HL09495-16	157,222
KRAUS, ALFRED P.....	SUPPORT FOR CENTER FOR SICKLE CELL DISEASE.....	3P60 HL15169-05S1	221,769
MALIK, KAFAT U.....	ANGIOTENSIN, PROSTAGLANDINS-ADRENERGIC INTERACTIONS.....	2R01 HL19134-03	92,076
MALIK, KAFAT U.....	CARBOHYDRATES-NUCLEOTIDES AND ADRENERGIC INTERACTIONS.....	1R01 HL20206-01	35,279
MASHBURN, THOMPSON A, JR.....	STRUCTURAL STUDIES OF LUNG PROTEOGLYCAN.....	1R01 HL21641-01	58,858
MASI, ALFONSE T.....	RHEUMATOID ARTHRITIS EXPERIMENTAL CLINICAL INVESTIGATION.....	3R01 AM12049-10S1	29,993
MC CALL, CHARLES B.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00211-13	451,396
MC CARTY, GIRD A, JR.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA19532-02	63,542
MC GIFF, JOHN C.....	REGULATION OF RENAL CIRCULATION AND SALT EXCRETION.....	5R01 HL18845-03	199,069
MIRVIS, DAVID M.....	GENERATOR PROPERTIES OF ISOLATED MAMMALIAN HEARTS.....	3R01 HL01362-24S1	13,811
MIRVIS, DAVID M.....	ELECTROPHYSIOLOGIC CORRELATES OF MYOCARDIAL ISCHEMIA.....	1R01 HL20597-01	134,348
MUIRHEAD, ERNEST E.....	THE ANTIHYPERTENSIVE FUNCTION OF THE RENAL MEDULLA.....	5R01 HL19287-02	146,119
MASJLETTI, ALBERTO.....	VASOACTIVE HORMONES AND BLOOD PRESSURE REGULATION.....	5R01 HL18579-02	46,057
NEELY, CHARLES L, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	3R10 CA17027-02S1	4,844
NEELY, CHARLES L, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	2R10 CA17027-03	157,231
NICKSON, JAMES J.....	COMMUNITY CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA16518-03	163,776
O'TOOLE, CAROL M.....	IDENTIFICATION OF ANTIGENS SPECIFIC TO BLADDER CANCER.....	5R26 CA20216-02	99,568
PALMIERI, GENARO M.....	HYDROXYPROLINE IN BONE METASTASIS FROM BREAST CANCER.....	1R01 CA20939-01	37,689
PARTRIDGE, LLOYD D.....	AN EXAMINATION OF DYNAMIC ASPECTS OF MOTOR CONTROL.....	5R01 NS08608-07	32,109
PREWITT, RUSSELL L, JR.....	HEMODYNAMIC INTERACTIONS OF VASOACTIVE CHEMICALS.....	5R01 HL18489-02	26,804
RABKIN, RALPH.....	THE KIDNEY INSULIN, PROINSULIN AND C-PEPTIDE.....	1R01 AM19774-01	56,926
REEVES, ROBERT H.....	PHAGE-HOST INTERACTIONS AT THE TRANSCRIPTIONAL LEVEL.....	7R01 GM24898-01	30,000
ROBERTSON, JAMES T.....	SUPPORT FOR CEREBROVASCULAR RESEARCH CENTER.....	2P50 NS06826-09A1	273,512
SABESIN, SEYMOUR M.....	PATHOLOGIC EFFECTS ON CELLS OF MODIFIED LIPOPROTEINS.....	5R01 AM17398-05	49,816
SABESIN, SEYMOUR M.....	DYSLIPOPROTEINEMIA IN DIABETES AND VASCULAR DISEASE.....	1R01 HL22121-01	80,320
SHARE, LEONARD.....	CONTROL OF ADH SECRETION AND METABOLISM.....	5R01 HL12990-08	45,068
SHARE, LEONARD.....	ROLE OF ADH IN EXPERIMENTAL RENAL HYPERTENSION.....	5R01 HL19209-02	63,709
SHARMA, RAMESHWAR K.....	BIOCHEMICAL CONTROL IN ADRENOCORTICAL CARCINOMA CELLS.....	3R01 CA16091-02S1	2,000
SHARMA, RAMESHWAR K.....	BIOCHEMICAL CONTROL IN ADRENOCORTICAL CARCINOMA CELLS.....	5R01 CA16091-03	54,772
SHIVELY, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05423-16	158,593
SOLOMON, SOLOMON S.....	DYNAMIC ASPECTS OF ADIPOSE TISSUE METABOLISM.....	5R01 AM18022-03	28,338
SOLOWAY, MARK S.....	EXPERIMENTAL CHEMOTHERAPY OF MURINE BLADDER CANCER.....	5R26 CA18643-03	35,198
STOLLERMAN, GENE H.....	STREPTOCOCCAL IMMUNITY, RHEUMATIC FEVER AND NEPHRITIS.....	5R01 AI10085-14	160,744
STRUVE, WILLIAM G.....	ACETYLCHOLINESTERASE: ORIENTATION ON PLASMA MEMBRANES.....	5R01 NS09564-06	32,631

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
WOOD, JOHN G.....	LOCATION AND FUNCTION OF CARBOHYDRATES IN THE BRAIN.....	5R01 NS12590-02	37,814
ORGANIZATION TOTAL	66 4,703,832		
NASHVILLE			
FISSK UNIVERSITY ZIP CODE 37203			
HULL, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S06 RR08062-06	29,225
HULL, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	2S06 RR08062-07	135,625
ORGANIZATION TOTAL	2 164,850		
GEORGE PEABODY COLLEGE FOR TEACHERS ZIP CODE 37203			
BAUMEISTER, ALFRED A.....	STIMULUS FACTORS IN VERBAL LEARNING OF RETARDATES.....	5R01 HD10662-02	86,402
HAYWOOD, H CARL.....	RESEARCH PROGRAM ON RETARDED INTELLECTUAL DEVELOPMENT.....	5P01 HD00973-14	531,109
HAYWOOD, H CARL.....	RESEARCH CENTER—HUMAN DEVELOPMENT & MENTAL RETARDATION.....	5P30 HD04510-09	429,323
HAYWOOD, H CARL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07087-12	42,870
ORGANIZATION TOTAL	4 1,089,704		
MEHARRY MEDICAL COLLEGE ZIP CODE 37208			
JOHNSON, CHARLES W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07167-02	22,970
LOWE, JAMES U.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05422-16	50,448
NAVALKAR, RAMCHANDRA G.....	IMMUNOLOGIC STUDIES ON LEPROSY.....	5R22 AI08647-10	46,358
RICHARDSON, ELISHA R.....	GROWTH AND DEVELOPMENT OF THE HUMAN HEAD.....	5R01 DE02862-12	155,538
RUSSELL, JAMES D.....	KELOIDS: AN IN VITRO MODEL OF TUMOR GROWTH REGULATION.....	5R01 CA17229-03	71,606
TOWNSEL, JAMES G.....	SYNAPTIC CHEMISTRY AND CARDIOREGULATION IN LIMULUS.....	5R01 HL17370-03	55,393
TOWNSEL, JAMES G.....	DEVELOPMENT AND EXPANSION OF BIOMEDICAL SCIENCES.....	5S06 RR08037-06	37,801
TOWNSEL, JAMES G.....	DEVELOPMENT AND EXPANSION OF BIOMEDICAL SCIENCES.....	2S06 RR08037-07	468,197
WALKER, MATTHEW.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19425-02	81,918
ORGANIZATION TOTAL	9 990,229		
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE—TENNESSEE STATE UNIVERSITY ZIP CODE 37203			
WOOD, HENDERSON K.....	A BIOMEDICAL RESEARCH PROGRAM WITH STUDENT PARTICIPATION.....	5S06 RR08092-04	152,187
ORGANIZATION TOTAL	1 152,187		
VANDERBILT UNIVERSITY ZIP CODE 37240			
ANDREWS, JOHN S.....	LENS CELL MEMBRANE SYNTHESIS AND CATARACTOGENESIS.....	1R01 EY01852-01	76,124
BOERTH, ROBERT C.....	DEVELOPMENTAL ASPECTS OF CARDIOVASCULAR FUNCTION.....	5R01 HL17629-03	49,031
BOUCEK, ROBERT J, JR.....	THE REGULATION OF CARDIAC HYPERTROPHY.....	1R23 HL21234-01	43,922
BRADY, ROBERT N.....	STUDIES OF ACETYLCHOLINE RECEPTOR PROTEIN.....	5R01 NS11439-03	66,549
BRIGHAM, KENNETH L.....	SCOR: PULMONARY EDEMA—ETIOLOGY, PATHOGENESIS.....	1P50 HL19153-01	245,185
BROQUIST, HARRY P.....	LYSINE METABOLISM IN FUNGI.....	5R01 AM14338-09	50,311
BROQUIST, HARRY P.....	DIETARY LYSINE AND CARNITINE FORMATION.....	5R01 AM16019-06	105,947
CAMPBELL, ERNEST Q.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07089-12	54,060
CARTER, CLINT E.....	ISOLATION AND PURIFICATION OF S. MANSONI EGGS.....	5R22 AI12996-02	30,599
CASAGRANDE, VIVIEN A.....	EFFECTS OF VISUAL DEPRIVATION IN PRIMATES.....	5R01 EY01778-02	52,200
CHAN, TIMOTHY M.....	GLUCOCORTICOID PERMISSIVE ACTION ON LIVER METABOLISM.....	1R01 AM20306-01	51,105
CHAN, TIMOTHY M.....	SKELETAL MUSCLE METABOLISM IN OBESE-DIABETIC MICE.....	1R01 AM21130-01	51,827
CHYTIL, FRANK.....	NUTRITIONAL ASPECTS OF PURINE METABOLISM.....	5R01 HD05384-06	71,554
CHYTIL, FRANK.....	VITAMIN A IN GROWTH AND DEVELOPMENT.....	5R01 HD09195-03	65,568
CHYTIL, FRANK.....	LUNG HORMONAL AND CHROMOSOMAL REGULATION.....	5R01 HL15341-05	47,571
COHEN, STANLEY.....	EPIDERMAL GROWTH FACTOR.....	5R01 HD00700-14	83,179
COLLEY, DANIEL G.....	IMMUNOLOGIC RESPONSES TO SCHISTOSOMA MANSONI.....	5R22 AI11289-05	55,051
COLOWICK, SIDNEY P.....	ENZYMATIC OXIDATION AND PHOSPHORYLATION.....	5R01 GM20656-20	98,997
CONIGLIO, JOHN G.....	BIOSYNTHESIS AND INTERCONVERSIONS OF FATTY ACIDS.....	5R01 AM06483-14	36,578
CONIGLIO, JOHN G.....	COMPOSITION AND METABOLISM OF LIPIDS OF HUMAN TESTES.....	5R01 HD06070-06	46,937
CONIGLIO, JOHN G.....	LIPID CHEMISTRY AND METABOLISM IN REPRODUCTIVE TISSUE.....	5R01 HD07694-05	51,043
CORBIN, JACKIE D.....	REGULATION OF METABOLISM BY CAMP-DEPENDENT KINASES.....	5R01 AM15988-06	47,746
CROFFORD, OSCAR B.....	SUPPORT FOR DIABETES-ENDOCRINOLOGY CENTER.....	5P30 AM17026-05	590,181
CUNNINGHAM, LEON W.....	COLLAGEN SYNTHESIS IN 'DIABETIC' FIBROBLASTS.....	1R01 AM19606-01	51,584
DANZO, BENJAMIN J.....	ENDOCRINE REGULATION OF EPIDIDYMAL FUNCTION.....	3R01 HD08295-02S1	13,778

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
DANZO, BENJAMIN J.....	ENDOCRINE REGULATION OF EPIDIDYMAL FUNCTION.....	2R01 HD08295-03	71,397
DAVIES, JACK.....	ENDOMETRIAL-BLASTOCYST INTERRELATIONSHIPS.....	5R01 HD05154-06	43,472
DES PREZ, ROGER M.....	PLATELET INJURY IN INFECTIOUS AND ALLERGIC DISEASES.....	2R01 HL08399-14	56,212
DETTBARN, WOLF D.....	NERVE-MUSCLE INTERACTIONS IN EXPERIMENTAL MYOPATHIES.....	5R01 NS12438-03	118,134
DI SABATO, GIOVANNI.....	LYMPHOCYTE FACTOR IN NORMAL AND LEUKEMIC MICE.....	5R01 CA16500-03	15,945
EXTON, JOHN H.....	ADRENERGIC CONTROL OF LIVER METABOLISM.....	5R01 AM18660-02	43,265
FLEISCHER, BECCA C.....	STRUCTURE AND FUNCTION OF GOLGI APPARATUS OF KIDNEY.....	2R01 AM17223-04	118,892
FLEISCHER, SIDNEY.....	MEMBRANES AND ORGANELLES—STRUCTURE AND FUNCTION.....	5R01 AM14632-14	160,934
FOX, ROBERT.....	THE SUPPRESSION MECHANISM IN BINOCULAR RIVALRY.....	5R01 EY00590-14	46,263
FOX, ROBERT.....	STEREOSCOPIC VISION IN ANIMALS.....	3R01 EY00931-04S1	6,317
FOX, ROBERT.....	STEREOSCOPIC VISION IN ANIMALS.....	2R01 EY00931-05	36,177
FREDERIKSEN, DIXIE W.....	ATHEROSCLEROSIS AND THE ARTERIAL CONTRACTILE PROTEINS.....	5R01 HL18516-02	46,667
FREEMAN, JOHN A.....	SYNAPTIC ORGANIZATION OF THE OPTIC TECTUM.....	5R01 EY01117-05	78,779
GARBERS, DAVID I.....	REGULATION OF SPERM CYCLIC NUCLEOTIDE METABOLISM.....	5R01 HD10254-02	61,820
GUENGERICH, F PETER.....	ENZYMIC ACTIVATION OF ENVIRONMENTAL TOXINS.....	1R01 ES01590-01	87,853
HARBISON, RAYMOND D.....	ENVIRONMENTAL TOXICANT EFFECTS ON PERINATAL DEVELOPMENT.....	2R01 ES00782-05A1	57,229
HARDMAN, JOEL G.....	ROLE OF CYCLIC GMP: CONTROL OF CYCLIC GMP METABOLISM.....	5R01 GM16811-08	109,351
HARRIS, THOMAS M.....	TETRACYCLINES AND RELATED PHENOLIC NATURAL PRODUCTS.....	2R01 GM12848-13	67,827
HARRIS, THOMAS M.....	VANCOMYCIN, RISTOCETIN AND RELATED ANTIBIOTICS.....	1R01 GM23593-01	43,359
HARRIS, THOMAS R.....	CORONARY CAPILLARY EXCHANGE: THE EFFECTS OF ISCHEMIA.....	5R01 HL19370-02	65,228
HARRISON, ROBERT W, III.....	PHYSIOLOGY OF PITUITARY CELL GLUCOCORTICOID BINDING.....	1R01 CA19907-01A1	37,069
HASH, JOHN H.....	BIGMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05424-16	213,709
HAWIGER, JACK J.....	PATHOBIOLOGY OF THROMBOEMBOLIC DISORDERS.....	2R01 HL16646-04	87,272
HELLERQVIST, CARL G.....	ANALYSIS OF EUKARYOTIC CELL SURFACES.....	5R01 CA16865-03	54,572
HNILICA, LUBOMIR S.....	PROTEINS OF THE CELL NUCLEUS.....	5R01 CA18389-03	89,588
HOFFMAN, LOREN H.....	UTERINE AND PLACENTAL CONTROL OF LUTEAL FUNCTION.....	5R01 HD05942-06	51,914
JENKINS, DAVID E, JR.....	HUMAN RED CELL ANTIBODY AND COMPLEMENT INTERACTIONS.....	5R01 HL18816-05	41,751
JOHNSON, ROGER A.....	REGULATION OF ADENYLATE CYCLASE & CAMP METABOLISM.....	5R01 AM18185-03	46,130
JOHNSON, ROGER A.....	ADENOSINE REGULATION OF C-AMP METABOLISM AND LIPOLYSIS.....	1R01 AM21170-01	74,113
JONES, MARK M.....	POSSIBLE NEW ANTIDOTES FOR MERCURY POISONING.....	5R01 ES01018-03	76,672
KAAS, JON H.....	VISUAL ASSOCIATION CORTEX.....	5R01 NS12377-03	47,826
KAPLAN, ALBERT S.....	METABOLISM OF CELLS INFECTED WITH NUCLEAR DNA VIRUSES.....	5R01 AI10947-06	236,232
KEELY, STANLEY L, JR.....	REGULATION OF HEART CAMP DEPENDENT PROTEIN KINASE.....	1R01 HL19181-01	45,241
KONO, TETSURO.....	ACTION OF INSULIN ON CELL MEMBRANE.....	5R01 AM06725-16	65,458
KONO, TETSURO.....	ACTION OF INSULIN ON SUGAR TRANSPORT.....	1R01 AM19925-01	44,255
KRANTZ, SANFORD B.....	ERYTHROPOIETIN AND THE REGULATION OF ERYTHROPOIESIS.....	5R01 AM15555-06	84,307
LEMBACH, KENNETH J.....	GROWTH STIMULATION OF CULTURED ANIMAL CELLS.....	5R01 CA12810-06	65,912
LIDDLE, GRANT W.....	PITUITARY-ADRENAL PHYSIOLOGY AND PHARMACOLOGY.....	5R01 AM05318-16	118,564
LILJENQUIST, JOHN E.....	GLUCONEOGENESIS: ITS ROLE AND REGULATION.....	5R01 AM18243-03	99,932
MC GEE, ZELL A.....	PATHOGENIC MECHANISMS IN GONOCOCCAL INFECTIONS.....	5R01 AI13488-02	106,374
MC KANNA, JAMES A.....	MODIFIED (COATED) MEMBRANES: STRUCTURE AND COMPOSITION.....	5R01 GM23708-02	41,763
MENG, H C.....	ESSENTIAL FATTY ACID DEFICIENCY IN MAN AND ANIMAL.....	5R01 AM18281-03	230,569
MITCHELL, WILLIAM M.....	HUMAN PROCOLLAGEN STRUCTURE AND FUNCTION.....	5R01 AM18222-03	61,567
MOSIG, GISELA.....	DNA REPLICATION AND RECOMBINATION IN BACTERIOPHAGE.....	5R01 GM13221-13	77,928
NEAL, ROBERT A.....	A STUDY OF THIAMINE METABOLISM IN MAMMALS.....	5R01 AM10297-11	35,575
NEAL, ROBERT A.....	ENZYMIC MECHANISMS OF INSECTICIDE METABOLISM.....	2R01 ES00075-13	82,599
NEAL, ROBERT A.....	CENTER IN ENVIRONMENTAL TOXICOLOGY.....	2P30 ES00267-10	523,153
NEAL, ROBERT A.....	MECHANISM(S) OF TOXICITY OF THE CHLORINATED P-DIOXINS.....	1R01 ES01552-01	40,197
NICHOALDS, GEORGE E.....	INTRAVENOUS REQUIREMENTS FOR MICRONUTRIENTS.....	5R01 AM18724-02	113,718
NUNNALLY, JUM C.....	MEANING-PROCESSING OF VISUAL DISPLAYS.....	5R01 HD99337-03	52,624
O'DAY, DENIS M.....	STUDIES IN EXPERIMENTAL FUNGAL ENDOPHTHALMITIS.....	5R01 EY01621-02	57,590
OATES, JOHN A.....	RESEARCH CENTER FOR PHARMACOLOGY AND DRUG TOXICOLOGY.....	5P50 GM15431-10	1,044,054
OATES, JOHN A.....	RENAL PROSTAGLANDINS: SYNTHESIS AND FUNCTION.....	2R01 HL16489-03	183,512
ONG, DAVID E.....	CANCER AND VITAMIN A.....	1R01 CA20850-01	52,172
ORGBIN-CRIST, MARIE.....	MALE REPRODUCTIVE PHYSIOLOGY.....	2R01 HD03820-09	58,623
ORGBIN-CRIST, MARIE.....	CENTER FOR POPULATION AND REPRODUCTIVE BIOLOGY RESEARCH.....	2P30 HD05797-06	245,637
ORTH, DAVID N.....	NEW HUMAN GROWTH-STIMULATING HORMONE: EGF/UROGASTRONE.....	1R01 AM19739-01	69,225
ORTH, DAVID N.....	TUMOR CELL SYNTHESIS & SECRETION OF PEPTIDE HORMONES.....	5R01 CA11685-08	100,575
ORTH, DAVID N.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19429-02	137,080
PARK, CHARLES R.....	HORMONAL REGULATION OF METABOLISM.....	5P01 AM07462-14	311,605

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
PARK, JANE H.....	STUDIES ON 3-PHOSPHOGLYCERALDEHYDE DEHYDROGENASE.....	5R01 GM07884-16	77,440
PATTON, JAMES A.....	EVALUATION OF A MOSAIC INTRINSIC GERMANIUM SCANNER.....	1R01 GM23627-01	68,291
PILKIS, SIMON J.....	CONTROL OF ION FLUXES AND GLUCONEOGENESIS IN LIVER.....	5R01 AM18270-03	74,407
POST, ROBERT L.....	THE ION-PUMP IN THE ERYTHROCYTE.....	2R01 HL01974-23	147,579
PUETT, J DAVID.....	STRUCTURE AND METABOLISM OF PITUITARY HORMONES.....	5R01 AM15838-06	85,169
RABINOWITZ, DAVID.....	HORMONAL CONTROL OF SPLANCHNIC AND FOREARM METABOLISM.....	1R01 AM19587-01	71,211
RABINOWITZ, DAVID.....	PITUITARY-GONADAL PHYSIOLOGY AND PHARMACOLOGY.....	5R01 HD10128-02	94,680
RAMSEY, LLOYD H.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00095-17	1,237,681
REGEN, DAVID M.....	GLUCOSE-TRANSPORT REGULATION IN THYMOCYTES.....	5R01 AM18733-02	61,782
ROBINSON, JOHN P.....	THE AMINO ACID SEQUENCE OF TETANUS TOXIN.....	3R01 AI12750-02S1	9,650
ROBINSON, JOHN P.....	THE AMINO ACID SEQUENCE OF TETANUS TOXIN.....	5R01 AI12750-03	115,178
ROSENTHAL, RONALD E.....	STUDIES OF THE SYNOVIAL RESPONSE TO ACUTE TRAUMA.....	3R01 AM17475-03S2	16,592
ROSENTHAL, RONALD E.....	STUDIES OF THE SYNOVIAL RESPONSE TO ACUTE TRAUMA.....	2R01 AM17475-04	29,051
SASTRY, B V.....	CHOLINERGIC SYSTEM, PLACENTAL TRANSPORT AND FETAL GROWTH.....	5R01 HD08561-03	50,599
SASTRY, B V.....	CHOLINERGIC SYSTEM, SPERM MOTILITY AND MALE FERTILITY.....	1R01 HD10607-01	64,440
SEAVER, SALLY S.....	THE HORMONAL REGULATION OF THE EXPRESSION OF A GENE.....	1R01 HD10610-01	48,821
SHAND, DAVID G.....	SPECIALIZED CENTER OF RESEARCH IN HYPERTENSION.....	5P50 HL14192-07	694,025
SHAND, DAVID G.....	TREATMENT OF VENTRICULAR ARRHYTHMIAS WITH PROPRANOLOL.....	1R01 HL20770-01	125,808
SLONIM, EPHRAIM A.....	REDOX CHANGES ON B CELL VIABILITY AND INSULIN RELEASE.....	1R01 AM21323-01	45,489
SODERLING, THOMAS R.....	REGULATION OF PHOSPHOPROTEIN PHOSPHATASES.....	5R01 AM17808-03	49,118
SOUPART, PIERRE.....	CYTOGENETICS OF HUMAN PREIMPLANTATION EMBRYOS.....	5R01 HD08837-03	53,810
STAHLMAN, MILDRED T.....	APNEA AND S.I.D.S. FROM THE LARYNGEAL CHEMOREFLEX.....	1R01 HD10454-01	59,029
STOLTZFUS, CONRAD M.....	SUBUNIT STRUCTURE AND FUNCTION OF ONCORNAVIRUS RNA.....	2R01 CA16262-03	87,058
TABER, DOUGLASS F.....	SYNTHESIS OF CYTOTOXIC AGENTS.....	1R01 CA22757-01	29,228
TOUSTER, OSCAR.....	BIOCHEMICAL STUDIES ON LYSOSOMES AND RELATED ENZYMES.....	5R01 CA07489-14	79,122
WAGNER, CONRAD.....	TISSUE STORES OF FOLATE: DIETARY CONTROL AND ASSAY.....	5R01 AM15289-03	38,374
WELLS, JACK N.....	PHOSPHODIESTERASE INHIBITION AND MUSCLE CONTRACTION.....	5R01 HL19325-02	41,328
WILLIAMS, ROBLEY C, JR.....	SUBUNIT ASSOCIATION OF HUMAN HEMOGLOBINS.....	5R01 HL20873-02	63,722
WILSON, BENJAMIN J.....	NATURALLY OCCURRING FOOD TOXICANTS.....	2R01 ES00569-12	90,440
WILSON, FREDERICK A.....	A PATHOPHYSIOLOGIC APPROACH TO THE DIARRHEAL STATES.....	5R01 AM18525-03	76,882
WILSON, JOHN T.....	STUDIES ON DRUG HYDROXYLATION.....	5R01 GM21949-03	75,765
ORGANIZATION TOTAL	116 12,540,174		

OAK RIDGE

OAK RIDGE ASSOCIATED UNIVERSITIES ZIP CODE 37830

GENGOZIAN, NAZARETH.....	'AUTOIMMUNE' THROMBOCYTOPENIA.....	5R01 HL16757-03	102,437
HAYES, RAYMOND L.....	CONCENTRATION OF RADIONUCLIDES BY MALIGNANT NEOPLASMS.....	5R01 CA11858-08	114,127
HAYES, RAYMOND L.....	ORAU-ORNL STUDY OF CARBON-11 IN NUCLEAR MEDICINE.....	3R01 CA14669-03S2	40,471
LITTLEFIELD, L GAYLE.....	EVALUATION OF INDUCED CYTOGENETIC LESIONS IN OOCYTES.....	5R01 HD08828-03	91,253
LUSHBAUGH, CLARENCE C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05746-05	56,910
SNYDER, FRED L.....	ETHER LIPIDS IN CANCER-ENZYME MECHANISMS & INHIBITORS.....	5R01 CA11949-08	49,994
SNYDER, FRED L.....	SURFACTANT METABOLISM: ALVEOLAR CELLS & LUNG DISEASE.....	5R01 HL18181-03	50,123
WYKLE, ROBERT L.....	LYSOPHOSPHOLIPASE D IN TUMORS AND OTHER TISSUES.....	5R01 CA17295-03	45,991
ORGANIZATION TOTAL	8 551,306		

STATE TOTAL 274 26,272,179

TEXAS

ARLINGTON

UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT ARLINGTON ZIP CODE 76010

BROWN, KENNETH L.....	MECHANISM OF B12-MEDIATED METHYL TRANSFER REACTIONS.....	5R01 GM23215-02	25,377
GATCHEL, ROBERT J.....	INVESTIGATION OF LEARNED HEART-RATE CONTROL.....	1R01 HL21426-01	42,809
ORGANIZATION TOTAL	2 68,186		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
AUSTIN			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712			
ACOSTA, DANIEL, JR.....	ISCHEMIC MYOCARDIAL INJURY IN CULTURED HEART CELLS.....	3R01 HL18647-02S1	8,498
ACOSTA, DANIEL, JR.....	ISCHEMIC MYOCARDIAL INJURY IN CULTURED HEART CELLS.....	5R01 HL18647-03	25,934
BEAN, FRANK D.....	COUPLE DECISION MAKING FOR STERILIZATION.....	5R01 HD10678-02	21,816
BERRY, L JOE.....	RETICULOENDOTHELIAL INVOLVEMENT IN ENDOTOXEMIC EFFECTS.....	5R01 AI10087-08	42,245
BERRY, L JOE.....	IMMUNITY TO CHOLERA.....	5R22 AI10466-06	42,454
BLOCH, DAVID P.....	SIMULTANEOUS FMF DETERMINATION OF DNA AND HISTONE.....	1R01 GM23331-01A1	39,119
BROWN, JAMES R.....	STUDIES ON PRIMARY AND TERTIARY STRUCTURE OF PROTEINS.....	2R01 HD02899-10	40,232
OIEHL, RANDY L.....	SELECTIVE ADAPTATION TO SPEECH SOUNDS.....	1R01 NS13764-01	33,482
DILLER, KENNETH R.....	THERAPEUTIC EFFECTIVENESS OF POST BURN COOLING.....	5R01 GM22693-02	42,565
EBERHART, ROBERT C.....	ANALYSIS OF BLOOD TRAUMA FROM MICROPOROUS OXYGENATIONS.....	5R01 HL19173-02	62,877
ELLISON, JOHN R.....	STRUCTURE AND FUNCTION OF HETEROCHROMATIN.....	7R01 GM24869-01	48,809
FOLKERS, KARL.....	TUMOR INHIBITION BY PROLACTIN INHIBITING HORMONE.....	5R01 CA14200-05	48,939
FOLKERS, KARL.....	BIOLOGICAL INVESTIGATIONS OF SUBSTANCE P.....	5R01 HL18933-02	46,184
FOX, J LAWRENCE.....	FLAVODOXIN REACTION MECHANISMS.....	5R01 GM21688-03	39,062
FREEMAN, GARY L.....	THE ROLE OF EGG ORGANIZATION DURING EARLY DEVELOPMENT.....	5R01 GM20024-04	29,004
FRISBIE, W PARKER.....	MARITAL INSTABILITY AMONG MEXICAN AMERICANS.....	5R01 HD09908-02	24,321
GALLE, OMER R.....	POPULATION RESEARCH CENTER.....	5P30 HD06160-07	151,614
GESTRIN, PHYLLIS J.....	NEURAL CONTROL OF EYE MOVEMENTS.....	5R01 EY01506-03	41,523
GIBSON, DAVID T.....	MICROBIAL DEGRADATION OF CARCINOGENIC HYDROCARBONS.....	5R01 CA19078-02	50,480
GIBSON, DAVID T.....	ENZYMATIC OXYGEN FIXATION INTO AROMATIC HYDROCARBONS.....	2R01 ES00537-07	72,385
GRANT, PHILIP G.....	CONTROL OF MUSCLE MIGRATION IN GROWING BONES.....	1R01 AM19632-01	51,213
HACKERT, MARVIN L.....	STRUCTURE AND FUNCTION OF SUPRA-MOLECULAR ASSEMBLAGES.....	5R01 GM23306-02	30,803
HAMILTON, TERRELL H.....	CONTROL MECHANISMS IN REPRODUCTION.....	5P50 HD03803-09	411,174
HARDESTY, BOYD A.....	PROTEIN SYNTHESIS IN RETICULOCYTES AND LEUKEMIC CELLS.....	5R01 CA16608-03	64,830
HATCH, THOMAS P.....	ATTACHMENT, PENETRATION, AND GROWTH OF CHLAMYDIAE.....	5R01 AI13417-02	40,510
HAWKINS, RAYMOND C, II.....	PSYCHOSOCIAL RISKS DURING PREGNANCY AND EARLY INFANCY.....	1P20 HD11113-01	32,792
HIRAIZUMI, YUICHIRO.....	MALE RECOMBINATION-MUTATOR SYSTEM IN DROSOPHILA.....	5R01 GM19770-05	81,064
JEFFERY, WILLIAM R.....	STRUCTURE AND FUNCTION OF MESSENGER RIBONUCLEOPROTEIN.....	7R01 GM25119-01	43,617
MABRY, TOM J.....	THE FUNCTION AND SYSTEMATIC ROLE OF NATURAL PRODUCTS.....	5R01 HD04488-13	49,010
MAGUIRE, MARJORIE P.....	CHROMOSOME STRUCTURES AND MEIOTIC MECHANISMS.....	5R01 GM19582-05	13,234
MANDY, WILLIAM J.....	STUDIES WITH ANTIGLOBULIN ANTIBODIES.....	2R01 AI07184-12	84,949
MC FADDEN, DENNIS.....	PSYCHOPHYSICS OF BINAURAL HEARING.....	5R01 NS08754-08	79,852
MENAKER, MICHAEL.....	REPRODUCTION, RHYTHMS AND PHOTORECEPTION.....	2R01 HD07727-03	36,457
MYERS, JACK E.....	METABOLIC CONTROLS IN LIGHT-DRIVEN METABOLISM.....	5R01 GM11300-14	45,020
PARKER, CHARLOTTE D.....	STUDY OF PATHOGENIC MECHANISMS OF VIBRIO CHOLERAЕ.....	5R22 AI12819-02	72,623
PARKER, CHARLOTTE D.....	NEW APPROACHES TO PERTUSSIS VACCINE.....	5R01 AI12955-02	44,449
POLLAK, GEORGE D.....	A SINGLE UNIT ANALYSIS OF THE AUDITORY SYSTEM.....	1R01 NS13276-01A1	46,701
POWERS, EDWARD L.....	PHYSICO-CHEMICAL STUDIES OF RADIATION EFFECTS IN CELLS.....	5R01 GM13557-11	76,491
POWERS, EDWARD L.....	CENTER FOR FAST KINETICS RESEARCH.....	3P41 RR00886-02S1	51,353
POWERS, EDWARD L.....	CENTER FOR FAST KINETICS RESEARCH.....	5P41 RR00886-03	176,490
RAVEL, JOANNE M.....	FACTORS CONTROLLING PROTEIN BIOSYNTHESIS.....	5R01 GM18775-06	48,070
REED, LESTER J.....	BIOCHEMISTRY OF ALPHA-KETO ACID DEHYDROGENASE COMPLEXES.....	5R01 GM06590-19	113,419
RICHARDSON, RICHARD H.....	SUPPORT FOR DROSOPHILA SPECIES FACILITY.....	5P40 RR00729-05	61,410
RIGGS, AUSTEN F, II.....	STRUCTURAL BIOCHEMISTRY OF HEMOGLOBINS.....	5R01 GM21314-02	62,687
ROBERTUS, JON D.....	X-RAY STRUCTURE ANALYSIS OF AN ANTIVIRAL PROTEIN.....	5R01 AI13584-02	34,361
RUBIN, ARNOLD S.....	T-CELL REGULATION OF THE HUMORAL IMMUNE RESPONSE.....	5R01 AI12752-03	44,815
SANDERS, BOB G.....	EMBRYONIC & VIRALLY INDUCED TUMOR-CELL MEMBRANE ANTIGENS.....	5R01 CA12851-06	34,740
SMITH, ROBERT V.....	METABOLISM OF APOMORPHINE AND ITS ANALOGS.....	5R01 NS12259-03	60,951
SNELL, ESMOND E.....	NUTRITION AND METABOLISM OF MICROORGANISMS.....	5R01 AI13940-02	63,219
SNELL, ESMOND E.....	CATALYTIC FUNCTIONS AND METABOLISM OF VITAMIN B6.....	5R01 AM19898-02	70,896
STARR, RICHARD C.....	CONTROL OF CELLULAR DIFFERENTIATION.....	7R01 GM24138-01	37,788
SUSSMAN, HARVEY M.....	DYNAMIC PROPERTIES OF SPEECH SENSORIMOTOR SYSTEMS.....	5R01 NS10654-03	79,356
SUTTON, H ELDON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07091-12	149,506
THOMPSON, GUY A, JR.....	THE BIOCHEMISTRY OF MEMBRANE ASSEMBLY AND STABILITY.....	5R01 GM20148-04	35,644
WADE, CHARLES G.....	NMR RELAXATION OF LIQUID CRYSTAL SYSTEMS.....	5R01 HL12528-09	29,542
WALKER, JAMES R.....	REGULATION OF BACTERIAL CELL DIVISION.....	5R01 AI08286-09	53,239

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
WANG, KUAN.....	CONTRACTILE PROTEINS AND GROWTH CONTROL OF EUKARYOTES.....	1R01 AM20270-01	67,201
WHITESSELL, JAMES K.....	THE TOTAL SYNTHESIS OF SARRACENIN.....	1R01 CA21852-01	41,065
WISSLER, EUGENE H.....	AEROSOL GROWTH IN THE RESPIRATORY SYSTEM.....	5R01 HL19722-02	28,074
ORGANIZATION TOTAL	59	3,560,158	
COLLEGE STATION			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY			ZIP CODE 77643
ADAMS, EMORY T, JR.....	BILE SALT SYSTEMS—INTERACTIONS AND CATALYSES.....	1R01 GM23877-01	91,764
COTTON, F ALBERT.....	STRUCTURE OF A MICROCOCCAL NUCLEASE.....	2R01 GM19455-06	86,648
CULLEN, DAVID L.....	STRUCTURAL INVESTIGATION OF THE BILE PIGMENTS.....	1R01 AM20051-01	25,045
FIFE, WILLIAM P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07090-12	48,751
GLOVER, GEORGE I.....	CHEMICAL AND PHYSICAL STUDIES ON PREPHENATE DEHYDRATASE.....	5R01 GM22791-02	24,625
GRANGER, HARRIS J.....	PATHOPHYSIOLOGY OF EDEMA.....	1R01 HL21498-01	50,647
HARDING, KENN E.....	SYNTHESIS OF TUMOR INHIBITORY SESQUITERPENIDS.....	5R01 CA15736-04	42,419
HOEVE, CORNELIS A.....	GUIDELINES FOR POLYMERS ACTING AS ELASTIN SUBSTITUTES.....	5R01 HL18441-02	35,150
IHLER, GARRET M.....	ROLE OF DNA IN DNA, RNA AND PROTEIN SYNTHESIS.....	7R01 GM24432-01	40,459
IPPEN-IHLER, KARIN.....	THE GENETICS OF PLASMID TRANSFER AND REPLICATION.....	7R01 AI14426-01	47,248
IRGOLIC, KURT J.....	CHARACTERIZATION OF ORGANOARSENIC COMPOUNDS IN NATURE.....	5R01 ES01125-03	46,813
JONES, CARL E.....	INTERVENTIONS TO IMPROVE CARDIAC FUNCTION IN ISCHEMIA.....	1R01 HL20286-01	28,545
MACFARLANE, RONALD D.....	BIOMEDICAL USE OF PLASMA DESORPTION MASS SPECTROMETRY.....	5R01 GM22950-02	55,575
MARTELL, ARTHUR E.....	REACTIONS OF METAL CHELATES OF VITAMIN B6.....	2R01 AM11694-12	42,649
MARTELL, ARTHUR E.....	GALLIUM (III) COMPLEXES IN AQUEOUS SOLUTION.....	1R01 CA22464-01	21,820
MC INTYRE, JOHN A.....	CONSTRUCTION OF A POSITRON CAMERA WITH 3 MM RESOLUTION.....	5R01 GM22790-02	17,548
NAGYVARY, JOSEPH J.....	STUDIES OF RNA WITH 2'-SH SUBSTITUTION.....	5R01 GM16213-09	23,610
SCOTT, A IAN.....	BROAD-SPECTRUM AND ANTITUMOR ANTIBIOTICS—BIOSYNTHESIS.....	7R01 AI14481-01	86,086
SCOTT, A IAN.....	PORPHYRIN AND CORRINOID BIOSYNTHESIS.....	1R01 AM20528-01	119,097
SCOTT, A IAN.....	ANTITUMOR ALKALOIDS BIOSYNTHESIS & BIOGENETIC SYNTHESIS.....	7R01 CA22436-01	85,278
SIS, RAYMOND F.....	A MARMOSET COLONY FOR BIOMEDICAL RESEARCH.....	1P40 RR01060-01	122,363
SUMMERS, MAX D.....	BACULOVIRUS STRUCTURE AND PATHOGENIC MECHANISMS.....	7R01 AI14755-01	37,598
WOOD, RANDALL.....	TUMOR LIPIDS: METABOLISM AND STRUCTURAL STUDIES.....	1R01 CA20136-01	68,608
ORGANIZATION TOTAL	23	1,248,346	
DALLAS			
BAYLOR COLLEGE OF DENTISTRY			ZIP CODE 75226
FRAZIER, LOY W, JR.....	PLASMA FACTOR(S) WHICH STIMULATE HO & NH4O EXCRETION.....	2R01 AM18689-03	24,235
KOLSTAD, ROBERT A.....	STREPTOCOCCUS MUTANS: STRAIN TYPING AND INHIBITION.....	5R01 DE03923-04	26,859
ORGANIZATION TOTAL	2	51,094	
BAYLOR UNIVERSITY MEDICAL CENTER			ZIP CODE 75246
COOPER, BILLY H.....	METABOLISM OF PATHOGENIC DEMATIACEOUS FUNGI.....	5R01 AI13184-03	18,099
ORGANIZATION TOTAL	1	18,099	
BISHOP COLLEGE			ZIP CODE 75241
FOWLKS, EDISON R.....	INTERDISCIPLINARY RESEARCH IN MOLECULAR BIOLOGY.....	5S06 RR08050-06	12,522
FOWLKS, EDISON R.....	INTERDISCIPLINARY RESEARCH IN MOLECULAR BIOLOGY.....	2S06 RR08050-07	110,983
WILSON, JOSEPH E.....	DEVELOPMENT OF ANTITHROMBOGENIC PLASTIC BIOMATERIALS.....	1R01 HL21194-01	23,548
ORGANIZATION TOTAL	3	147,053	
SOUTHERN METHODIST UNIVERSITY			ZIP CODE 75275
SOHAL, RAJINDAR S.....	AGE-ASSOCIATED CELLULAR ALTERATIONS IN THE HOUSEFLY.....	1R01 AG00171-01	40,176
ORGANIZATION TOTAL	1	40,176	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS			ZIP CODE 75235
ANDERSON, RICHARD G.....	DEVELOPMENT AND FUNCTION OF THE OVIDUCT BASAL BODY.....	5R01 HD08987-03	50,470
ANDREWS, PETER M.....	ULTRASTRUCTURE IN AMINONUCLEOSIDE INDUCED NEPHROSIS.....	5R01 AM18043-03	14,095
ANDREWS, PETER M.....	STUDIES ON NORMAL AND MALIGNANT CELL SURFACES.....	5R01 GM21698-03	53,885
ATKINS, JAMES M.....	CARDIOVASCULAR ADAPTATION TO STRESS IN DISEASE STATES.....	1R01 HL20678-01	52,598

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
BAXTER, CHARLES R.....	CIRCULATORY AND FLUID VOLUME CHANGES IN BURNS.....	5R01 GM21681-13	102,562
BEER, ALAN E.....	IMMUNOREGULATION OF MAMMALIAN REPRODUCTION.....	1R01 HD10413-01	137,006
BELL, WILLIAM H.....	SURGICAL-ORTHODONTICS AND BONE HEALING.....	5R01 DE03794-06	73,227
BILHEIMER, DAVID W.....	LIPOPROTEIN METABOLISM IN RELATION TO ATHEROSCLEROSIS.....	2R01 HL15949-04	61,087
BILLINGHAM, RUPERT E.....	IMMUNOBIOLOGY OF TISSUE TRANSPLANTATION AND PREGNANCY.....	3R01 AI10678-05S1	15,274
BILLINGHAM, RUPERT E.....	IMMUNOBIOLOGY OF TISSUE TRANSPLANTATION AND PREGNANCY.....	2R01 AI10678-06	380,568
BONTE, FREDERICK J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05426-16	203,191
BROWN, MICHAEL S.....	CONTROL OF CHOLESTEROL SYNTHESIS IN HYPERLIPIDEMIA.....	2R01 HL16024-04	193,990
BURK, RAYMOND F, JR.....	NUTRITIONAL AND METABOLIC SIGNIFICANCE OF SELENIUM.....	2R01 ES01017-04	97,456
BUTOW, RONALD A.....	MECHANISMS OF BIOENERGETIC REACTIONS.....	5R01 GM19090-06	57,128
BUTOW, RONALD A.....	REGULATION OF MITOCHONDRIAL BIOGENESIS IN YEAST.....	5R01 GM22525-02	45,419
CAMPBELL, WILLIAM B.....	ANGIOTENSIN AND PROSTAGLANDIN CONTROL OF ALDOSTERONE.....	1R23 HL21066-01	38,285
CAPRA, J DONALD.....	GENETIC STUDY OF IMMUNOGLOBULIN V REGION STRUCTURE.....	5R01 AI12127-03	79,675
CAPRA, J DONALD.....	RAGWEED POLLEN ALLERGENS: STRUCTURE AND FUNCTION.....	5R01 AI12796-03	34,230
CAPRA, J DONALD.....	STUDIES ON THE H-2 LINKED SS PROTEIN AND HUMAN C4.....	1R01 AI14742-01A2	75,912
COMBES, BURTON.....	PROGRAM-PROJECT IN LIVER DISEASES.....	5P01 AM19329-02	387,937
COTTAM, GENE L.....	NATURE OF THE REGULATION OF LIVER PYRUVATE KINASE.....	5R01 AM19031-02	46,155
DEMPSEY, WALTER B.....	BIOSYNTHESIS AND REGULATION OF PYRIDOXAL 5'-PHOSPHATE.....	5R01 AM14157-08	32,188
DIETSCHY, JOHN M.....	MECHANISMS OF FAT AND STEROID ABSORPTION BY THE GUT.....	5R01 AM16386-06	57,654
DIETSCHY, JOHN M.....	CONTROL OF CHOLESTEROL METABOLISM—BILE ACID TRANSPORT.....	5R01 HL09610-13	176,920
DOWBEN, ROBERT M.....	STUDIES OF M-RNA IN NORMAL AND CANCER CELLS.....	5R01 CA18633-03	61,193
DOWBEN, ROBERT M.....	FLUORESCENT PROBE STUDIES OF HEART MUSCLE PROTEINS.....	3R01 HL16678-02S1	46,595
DOWBEN, ROBERT M.....	FLUORESCENT PROBE STUDIES OF HEART MUSCLE PROTEINS.....	5R01 HL16678-03	94,496
DOWBEN, ROBERT M.....	STUDIES OF HEART ADENYL CYCLASE COMPLEX.....	5R01 HL18272-03	31,040
ERDOS, ERVIN G.....	VASOACTIVE PEPTIDES WHICH STIMULATE SMOOTH MUSCLES.....	2R01 HL16320-04	71,469
ERDOS, ERVIN G.....	RENAL ENZYMES THAT REGULATE BLOOD PRESSURE.....	1R01 HL20594-01	93,378
ESTABROOK, RONALD W.....	HEPATIC MICROSOMAL DRUG OXIDATION.....	5R01 GM16488-10	239,903
FAWCETT, C PETER.....	HYPOTHALAMIC REGULATION OF THE ENDOCRINE PANCREAS.....	1R01 AM21163-01	45,878
FETT, HOWARD.....	THE ROLE OF TUBULIN AT THE NERVE ENDING.....	5R01 NS12743-03	45,663
FINKELSTEIN, RICHARD A.....	CHOLERA EXO-ENTEROTOXIN AND IMMUNITY IN CHOLERA.....	2R22 AI08877-09	74,219
FIXLER, DAVID E.....	CARDIOVASCULAR FOLLOW-UP OF HYPERTENSIVE ADOLESCENTS.....	5R01 HL18456-02	79,886
FORDTRAN, JOHN S.....	WATER AND SOLUTE MOVEMENT IN THE HUMAN INTESTINE.....	5R01 AM06506-16	148,533
FORDTRAN, JOHN S.....	GASTRIC ACID SECRETION AND BUFFER CONTENT AFTER EATING.....	2R01 AM16816-04	88,482
FORMAN, JAMES M.....	ANALYSIS OF H-2 MUTANT STRAINS.....	5R01 AI13111-02	85,701
FOSTER, DANIEL W.....	REGULATION OF KETOGENESIS IN TISSUES.....	5R01 AM18573-16	130,521
FRENKEL, EUGENE P.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED COMMUNITY).....	5P30 CA17065-03	312,589
FRENKEL, EUGENE P.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18132-03	104,444
FRENKEL, RENE A.....	FUNCTION AND REGULATION OF MAMMALIAN MALIC ENZYMES.....	2R01 AM17983-03	33,425
GALOSY, RICHARD A.....	CARDIOVASCULAR ADJUSTMENT TO BEHAVIORAL STRESS.....	5R01 HL19257-02	46,592
GANT, NORMAN F, JR.....	PLACENTAL FUNCTION IN NORMAL AND ABNORMAL PREGNANCY.....	2R01 HD08360-04	104,246
GARRARD, WILLIAM T.....	STRUCTURE OF THE SUBUNITS OF EUKARYOTIC CHROMOSOMES.....	5R01 GM22201-03	39,407
GAULDEN, MARY E.....	CHROMOSOME MUTATIONS IN INFANTS AND CHILDREN.....	2R01 HD06832-06	89,054
GIACHETTI, ANTONIO.....	ADRENERGIC VESICLES IN EXPERIMENTAL HYPERTENSION.....	5R01 HL19300-02	24,822
GIACHETTI, ANTONIO.....	AUTONOMIC NEUROPATHY IN DIABETIC MICE.....	5R01 HL20446-02	23,818
GILLIAM, JAMES N.....	SKIN INVOLVEMENT IN SLE IN NEW ZEALAND MICE.....	5R01 AM19101-02	30,574
GOLDSTEIN, JOSEPH L.....	MOLECULAR BASIS OF CHOLESTEROL METABOLISM.....	1P01 HL20948-01	543,292
GOMEZ-SANCHEZ, CELSO E.....	ROLE OF MINERALOCORTICOIDS IN LOW RENIN HYPERTENSION.....	5R01 HL18730-02	50,504
GONYEA, WILLIAM J.....	ADAPTATION OF MUSCLE TO HIGH-INTENSITY EXERCISE.....	5R01 AM17615-03	45,301
GOYAL, RAJ K.....	PATHOPHYSIOLOGY OF ESOPHAGEAL MOTOR DISORDERS.....	5R01 AM18403-03	99,352
GRIFFIN, BRENDA W.....	HEMOPROTEIN REACTIONS WITH LIPID HYDROPEROXIDES.....	5R01 AM19027-02	36,085
GRINNELL, FREDERICK.....	ADHESION OF NORMAL AND MALIGNANT MAMMALIAN CELLS.....	5R01 CA14609-05	48,027
HERNDON, JAMES H, JR.....	PERMEABILITY OF THE EPIDERMAL-DERMAL BASEMENT ZONE.....	1R01 AM19636-01	42,804
HERSH, LOUIS B.....	METHYLAMINE METABOLISM, STUDIES OF ENZYME HOMOLOGY.....	2R01 AM13443-09	44,674
JASIN, HUGO E.....	ROLE OF IMMUNE COMPLEXES IN CHRONIC INFLAMMATION.....	5R01 AM16209-04	28,894
JOHNSON, ALICE R.....	INTERACTION OF PEPTIDES AND TARGET CELLS IN LUNG.....	5R01 HL18826-03	26,982
JOHNSTON, JOHN M.....	INTESTINAL ABSORPTION AND METABOLISM OF LIPIDS.....	2R01 AM03108-19	66,755
KANG, CHIL-YONG.....	INFECTIOUS RETICULOENDOTHELIOSIS DNA PROVIRUS.....	5R01 CA20012-02	46,474
KETTMAN, JOHN R, JR.....	THE RELATION OF HUMORAL AND CELL MEDIATED IMMUNITIES.....	2R01 AI11630-04A1	51,597
KLEIN, JAN.....	IMMUNOLOGY AND GENETICS OF THE H-2 SYSTEM.....	3R01 AI11650-03S1	71,208
KLEIN, JAN.....	POLYMORPHISM OF A MAJOR HISTOCOMPATIBILITY COMPLEX.....	2R01 AI11879-04	100,298

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
KLEIN, JAN.....	SEROLOGICAL ANALYSIS OF IR REGION OF MURINE H-2 COMPLEX.....	5R01 AI12589-03	43,754
KLEIN, JAN.....	MECHANISM OF TUMOR VARIANT FORMATION.....	5R01 CA17225-03	37,657
KOKKO, JUHA P.....	TRANSPORT PROPERTIES OF ISOLATED PERFUSED NEPHRONS.....	5R01 AM14677-08	59,122
KOKKO, JUHA P.....	REGULATION OF FLUID, ELECTROLYTE, AND ACID-BASE BALANCE.....	5P01 HL11662-10	459,605
LINN, TRACY C.....	REGULATION OF LIPOGENIC ENZYMES IN DIABETES.....	1R01 AM21287-01	33,775
LIPTON, JAMES M.....	EFFECTS OF AGING ON CENTRAL TEMPERATURE CONTROLS.....	1R01 AG00109-01A1	38,673
LIPTON, JAMES M.....	CENTRAL THERMOSENSITIVE CONTROLS OF BODY TEMPERATURE.....	5R01 NS10046-04	39,964
LOSPALLUTO, JOSEPH J.....	LYMPHOID CELL FUNCTION AND AGING.....	2R01 AG00461-03	44,945
LUBY, JAMES P.....	CYTOMEGALOVIRUS IN RENAL TRANSPLANT RECIPIENTS.....	5R01 AI12658-03	49,254
MACDONALD, PAUL C.....	ESTROGEN PRODUCTION FROM PLASMA PRECURSORS IN HUMANS.....	5R01 AM06912-15	96,663
MACDONALD, PAUL C.....	INITIATION OF HUMAN LABOR: PREVENTION OF PREMATURITY.....	1P50 HD11149-01	497,681
MARKS, JAMES F.....	THE ONTOGENY OF PUBERTY IN DIABETES MELLITUS.....	1R01 AM20777-01	54,150
MASTERS, BETTIE S.....	MICROSOMAL ELECTRON TRANSPORT IN LIVER AND HEART.....	5R01 HL13619-08	51,698
MC CANN, SAMUEL M.....	NEUROHUMORAL CONTROL OF THE ANTERIOR PITUITARY.....	2R01 AM10073-12	78,504
MC CANN, SAMUEL M.....	NEURAL CONTROL OF GONADOTROPIN AND PROLACTIN SECRETION.....	3R01 HD05151-06S1	9,936
MC CANN, SAMUEL M.....	NEURAL CONTROL OF GONADOTROPIN AND PROLACTIN SECRETION.....	1P01 HD09988-01A1	209,025
MITCHELL, JERE H.....	CARDIOVASCULAR AND PULMONARY ADAPATION TO STRESS.....	2P01 HL06296-17	324,887
MITCHELL, JERE H.....	CARDIOVASCULAR CONTROL DURING ISOMETRIC EXERCISE.....	5R01 HL19198-02	9,296
MOSS, ROBERT L.....	NEUROHUMORAL EVENTS IN CELLS ENDING IN MEDIAN EMINENCE.....	5R01 NS10434-06	33,556
PAK, CHARLES Y.....	THEORETICAL AND THERAPEUTIC ASPECTS OF CALCIFICATION.....	5R01 AM16061-06	75,860
PAK, CHARLES Y.....	FORMULATION OF RATIONAL THERAPY OF UROLITHIASIS.....	1P50 AM20543-01	259,485
PAKES, STEVEN P.....	IMPROVEMENT OF ANIMAL RESOURCES.....	1P40 RR01105-01	80,690
PARKEY, ROBERT W.....	IMAGING OF ACUTE MYOCARDIAL INFARCTION.....	5R01 HL17777-03	86,096
PETERSON, JULIAN A.....	REGULATION OF MICROBIAL OXIDATION REACTIONS.....	5R01 GM19036-09	49,993
PORTER, JOHN C.....	HORMONE DYNAMICS & TARGET ORGANS IN AGING MEN & WOMEN.....	1P01 AG00306-01	349,813
PORTER, JOHN C.....	SECRETION OF HYPOTHALAMIC AND PITUITARY HORMONES.....	2R01 AM01237-22	91,111
PRAGER, MORTON D.....	IMMUNOLOGY OF CHEMICALLY MODIFIED CANCER CELLS.....	3R01 CA12089-06S1	15,609
PRICE, KENNETH F.....	AUTONOMIC PREDICTORS OF HYPERTENSION IN CHILDREN.....	1R01 HL20655-01	72,443
PRITCHARD, JACK A.....	REPRODUCTION IN WOMEN WHOSE RED CELLS CONTAIN HEMOGLOBIN.....	5R01 HD08407-03	43,167
PRITCHARD, JACK A.....	AN ORGAN COMMUNICATION SYSTEM FOR INITIATION OF LABOR.....	5P01 HD08672-04	23,497
PROUGH, RUSSELL A.....	BIOCHEMICAL-PHARMACOLOGICAL EVALUATION OF LUNG CELLS.....	5R01 HL19654-02	34,614
RASKIN, PHILIP.....	HYPERLIPEMIA AND DIABETES: GLUCOSE LIPID INTERACTIONS.....	5R01 AM18179-03	36,716
RICHARDS, E GLEN.....	STUDIES OF CONTRACTILE PROTEINS OF HEART MUSCLE.....	5R01 HL14938-05	28,041
ROSENBERG, ROGER N.....	EXPERIMENTAL CANCER CHEMOTHERAPY OF NEUROBLASTOMA.....	5R01 CA16379-04	51,620
ROSENBERG, ROGER N.....	BIOCHEMICAL EVENTS IN DIFFERENTIATING NEUROBLASTOMA.....	1R01 CA21602-01	91,690
ROSENFELD, CHARLES R.....	STUDIES OF UTERO-PLACENTAL CIRCULATION.....	2R01 HD08783-04	111,561
SAID, SAMI I.....	VASOACTIVE INTESTINAL & LUNG POLYPEPTIDES-TUMOR.....	1R01 CA21570-01	39,826
SAID, SAMI I.....	SUPPORT FOR CENTER FOR LUNG RESEARCH.....	2P50 HL14187-06	693,937
SCHACHAR, RONALD A.....	RAMAN SPECTROSCOPY OF THE LENS OF THE EYE.....	5R01 EY01818-02	41,995
SELDIN, DONALD W.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00633-05	659,490
SHADDUCK, JOHN A.....	ANIMAL RESOURCES DISEASE LABORATORY.....	2P40 RR00890-04	103,546
SHAY, JERRY W.....	ANALYSIS OF HEART CELL CONTRACTION.....	1R01 HL20643-01	61,389
SMILEY, JAMES D.....	THE LOCAL IMMUNE RESPONSE IN RHEUMATOID SYNOVITIS.....	2R01 AM08418-14	56,456
SMITH, R GRAHAM.....	DIFFERENTIATION ANTIGENS OF HUMAN LYMPHOBLASTOID CELLS.....	1R01 CA22034-01	36,473
SMITH, THOMAS E.....	KINETICS AND CHEMISTRY OF ALLOSTERIC INTERACTIONS.....	5R01 GM21650-03	32,765
SREBRO, RICHARD.....	MOLECULAR BASIS OF PHOTORECEPTOR ACTIVITY.....	7R01 EY02373-01	73,721
SRERE, PAUL A.....	STRUCTURES AND MECHANISMS OF CITRATE ENZYMES.....	2R01 AM11313-11	57,087
STASTNY, PETER.....	MLC HISTOCOMPATIBILITY ANTIGENS IN HUMAN DISEASES.....	5R01 AI12563-03	49,547
STREILEIN, J WAYNE.....	STUDIES ON A SPLENIC ROLE IN IMMUNOREGULATION.....	5R01 AI12720-03	47,586
STREILEIN, J WAYNE.....	PRODUCTION OF SYRIAN HAMSTER CONGENEIC STRAINS.....	1R01 RR01133-01	48,734
SUTKO, JOHN L.....	NAO-CA00 INTERACTIONS IN MAMMALIAN MYOCARDIUM.....	1R23 HL21262-01	47,232
TAUROG, ALVIN M.....	THYROID FUNCTION AND IODINE METABOLISM.....	5R01 AM03612-18	89,966
TEMPLETON, GORDON H.....	CARDIAC MECHANICS MEASURED IN VITRO AND IN VIVO.....	5R01 HL18104-03	39,655
UHR, JONATHAN W.....	THE BIOLOGY AND BIOCHEMISTRY OF THE LYMPHOCYTE SURFACE.....	5P01 AI11851-04	332,566
UNGER, ROGER H.....	THE GLUCOREGULATORY PEPTIDE HORMONES.....	5R01 AM02700-18	46,116
UYEDA, KOSAKU.....	STRUCTURE AND FUNCTION OF PHOSPHOFRUCTOKINASE.....	2R01 AM16194-06	43,409
VITETTA, ELLEN S.....	THE BIOLOGY OF CELL SURFACE IGD ON MURINE LYMPHOCYTES.....	5R01 AI12789-03	53,324
VITETTA, ELLEN S.....	STRUCTURAL STUDIES OF H-2, TL AND T/T (F9) ANTIGENS.....	5R01 AI13448-02	63,619
WATERMAN, MICHAEL R.....	ROLE OF CYSTEINE RESIDUES IN HEMOGLOBINS A, F, AND S.....	5R01 AM16188-06	26,801
WEISS, GEORGE B.....	MECHANISMS OF DRUG ACTION IN VASCULAR SMOOTH MUSCLE.....	2R01 HL14775-07	64,738

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
WILDENTHAL, C KERN.....	FETAL HEARTS IN ORGAN CULTURE.....	2R01 HL14706-06	73,671
WILDENTHAL, C KERN.....	DEVELOPMENT AND REGRESSION OF CARDIAC HYPERTROPHY.....	5R01 HL18087-03	41,356
WILDENTHAL, C KERN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR07175-01	158,416
WILLERSON, JAMES T.....	INFLUENCE OF MANNITOL ON CARDIAC MUSCLE.....	5R01 HL15522-05	28,804
WILLERSON, JAMES T.....	ISCHEMIC HEART DISEASE CENTER (SCOR).....	5P50 HL17669-03	616,361
WILSON, JEAN D.....	ACTION OF HORMONES ON PROTEIN AND RNA METABOLISM.....	5R01 AM03892-19	108,496
WORTHEN, HOWARD G.....	HEAVY METALS AND THE DEVELOPING NEPHRON.....	5R01 ES00822-03	29,029
ZAHLTEN, RAINER N.....	CYTOSOLIC FUMARASE IN DIABETES.....	1R01 AM20976-01	34,411
ZIFF, MORRIS.....	IMMUNOLOGIC AND OTHER ASPECTS OF THE RHEUMATIC DISEASES.....	2P01 AM09989-13	372,455
ZIFF, MORRIS.....	AUTOANTIBODY FORMATION IN RHEUMATOID ARTHRITIS AND SLE.....	5R01 AM18505-03	62,367
ZIFF, MORRIS.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20628-01	75,866
ORGANIZATION TOTAL	135 14,000,448		
DENTON			
NORTH TEXAS STATE UNIVERSITY ZIP CODE 76203			
GRACY, ROBERT W.....	STRUCTURE AND FUNCTION OF ALDOSE KETOSE ISOMERASES.....	5R01 AM14638-07	46,729
HARRIS, BEN G.....	REGULATION OF METABOLISM IN PARASITIC HELMINTHS.....	5R01 AI12331-03	10,662
SKINNER, CHARLES G.....	OXAPTERIDINE ANALOGS OF FOLIC ACID.....	5R01 CA18610-02	31,660
ORGANIZATION TOTAL	3 89,051		
TEXAS WOMAN'S UNIVERSITY ZIP CODE 76204			
PENDERGRASS, PAULA B.....	CONTRACTILE MECHANISMS OF MAMMALIAN OVULATION.....	1R01 HD11008-01	11,317
RUDICK, MICHAEL J.....	THE MECHANISM OF GLYCOPROTEIN SECRETION.....	5R01 GM22707-02	20,710
ORGANIZATION TOTAL	2 32,027		
EDINBURG			
PAN AMERICAN UNIVERSITY ZIP CODE 78539			
SAVAGE, NORMAN L.....	MINORITY BIOMEDICAL SUPPORT PROGRAM.....	5S06 RR08038-06	56,106
SAVAGE, NORMAN L.....	MINORITY BIOMEDICAL SUPPORT PROGRAM.....	2S06 RR08038-07	183,935
ORGANIZATION TOTAL	2 240,041		
EL PASO			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT EL PASO ZIP CODE 79968			
BRISTOL, JOHN R.....	BIOMEDICAL RESEARCH INTERN PROGRAM.....	5S06 RR08012-06	49,483
BRISTOL, JOHN R.....	BIOMEDICAL RESEARCH INTERN PROGRAM.....	2S06 RR08012-07	109,083
ORGANIZATION TOTAL	2 158,566		
FORT WORTH			
TEXAS CHRISTIAN UNIVERSITY ZIP CODE 76129			
BABITCH, JOSEPH A.....	SYNAPTIC MEMBRANE STRUCTURE AND FUNCTION.....	5R01 NS12485-03	39,584
SELLS, SAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07106-03	34,064
ORGANIZATION TOTAL	2 73,648		
TEXAS COLLEGE OF OSTEOPATHIC MEDICINE ZIP CODE 76107			
TAI, HSIN-HSIUNG.....	ENZYMES IN PROSTAGLANDIN METABOLISM.....	7R01 GM25247-01	30,297
ORGANIZATION TOTAL	1 30,297		
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON ZIP CODE 77550			
ABELL, CREED W.....	BIOCHEMISTRY OF NORMAL AND LEUKEMIC LYMPHOCYTES.....	5R01 CA14525-05	73,963
BAILEY, BYRON J.....	ELECTRONIC LARYNGEAL PROSTHESIS.....	5R18 CA17961-03	71,002
BARON, SAMUEL.....	ACUTE HEMORRHAGIC CONJUNCTIVITIS AND INTERFERON.....	5R01 EY01715-02	56,009
BARRANCO, SAM C.....	DRUG SENSITIVITY OF MAMMALIAN CELLS IN PLATEAU PHASE.....	5R01 CA15397-05	57,670

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
BAUR, PAUL S.....	STRUCTURE OF BARORECEPTORS IN HYPERTENSION.....	5R01 HL19048-02	57,403
BOOR, PAUL J.....	MOLECULAR MECHANISMS OF CHEMICAL MYOCARDIOPATHIES.....	1R23 HL21327-01	44,612
BOWMAN, BARBARA H.....	GENETIC CONTROL OF THE STRUCTURE OF HUMAN PROTEINS.....	5R01 HD03321-11	102,929
BRODWICK, MALCOLM S.....	INTERNAL DIVALENT CATIONS AND MEMBRANE PROPERTIES.....	5R01 NS11963-03	34,899
BROWN, ARTHUR M.....	INNERVATION OF CORONARY ARTERIES AND HEART.....	5R01 HL16657-05	85,586
BROWN, ARTHUR M.....	NERVOUS AND IONIC FACTORS IN SUDDEN CARDIAC DEATH.....	3R01 HL18798-02S1	43,427
BROWN, ARTHUR M.....	NERVOUS AND IONIC FACTORS IN SUDDEN CARDIAC DEATH.....	5R01 HL18798-03	159,338
BROWN, ARTHUR M.....	SYMPOSIUM ON CARDIAC INNERVATION IN PHYSIOPATHOLOGY.....	1R13 HL20823-01	16,196
BROWN, ARTHUR M.....	PHOTOTRANSDUCTION IN APLYSIA NEURONS.....	5R01 NS12655-03	58,413
BRYAN, GEORGE T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05427-16	180,484
CAVALLO, TITO.....	GLOMERULAR PERMEABILITY STUDIES IN GLOMERULONEPHRITIS.....	7R01 AM21660-01	56,707
CHANG, JEFFREY P.....	CELL CYCLE & RESPONSE OF TUMOR CELLS TO CHEMOTHERAPY.....	5R01 CA16663-03	93,526
COGGESHALL, RICHARD E.....	INDIVIDUAL NEURONS IN A SIMPLE NERVOUS SYSTEM.....	5R01 NS10161-07	49,319
COSTANZI, JOHN J.....	SOUTHWEST CANCER CHEMOTHERAPY STUDY GROUP.....	5R10 CA03096-20	175,383
COSTANZI, JOHN J.....	NEW APPROACHES TO IMMUNOTHERAPY OF CANCER PATIENTS.....	5P01 CA16964-03	300,837
COSTANZI, JOHN J.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA17701-03	301,431
COULTER, JOE D.....	CENTRAL ORGANIZATION OF SOMATOSENSORY SYSTEMS.....	5R01 NS12481-03	38,788
DUNCAN, DONALD.....	FINE STRUCTURE OF THE SUBSTANTIA GELATINOSA.....	1R01 NS13171-01A1	46,744
EWERT, ADAM.....	INTERACTIONS OF BRUGIA MALAYI AND MICROORGANISMS.....	2R01 AI11871-04	35,642
FEINSTEIN, ROBERT.....	NEURAL CONTROL OF A BRADYCARDIAL REFLEX.....	5R01 NS12184-03	17,632
FISHMAN, HARVEY M.....	FLUCTUATION PHENOMENA AND ION MOVEMENTS IN MEMBRANES.....	2R01 NS11764-05	44,560
FISHMAN, HARVEY M.....	STOCHASTIC AND KINETIC PROCESSES IN MEMBRANE FUNCTION.....	1P01 NS13778-01	293,451
FULLER, GERALD M.....	STUDIES ON THE REGULATION OF FIBRINOGEN BIOSYNTHESIS.....	5R01 HL16445-04	24,009
GALLAGHER, JOEL P.....	THE PHARMACOLOGY OF A GABA RECEPTOR.....	1R01 NS13727-01	40,179
GAN, JOSE C.....	ALPHA1-ANTITRYPSIN PULMONARY FUNCTION/CHEMICAL STRUCTURE.....	3R01 HL16880-01S2	1,015
GARDNER, FRANK H.....	ANDROGENS AND 5B-H METABOLITES IN CANCER CHEMOTHERAPY.....	5R01 CA19997-02	64,341
GOLDSTEIN, ALLAN L.....	ROLE OF THE THYMUS IN CANCER INDUCTION BY VIRUSES.....	3R01 CA14108-05S1	13,741
GOLDSTEIN, ALLAN L.....	CHEMICAL & IMMUNOLOGICAL CHARACTERISTICS OF THYMOSIN.....	1R01 CA20667-01	57,568
GRANT, J ANDREW.....	COMPLEMENT-INDUCED RELEASE OF INFLAMMATORY MEDIATORS.....	5R01 AI12621-03	50,541
GROSSMAN, ROBERT G.....	A CENTER FOR THE STUDY OF NERVOUS SYSTEM INJURY.....	5P50 NS07377-08	195,677
GUCKIAN, JAMES C.....	MEDIATORS OF INFLAMMATION IN LUNG DURING PNEUMONIA.....	5R01 AI13906-02	52,845
HABER, BERNARD.....	PURIFICATION OF ENDOTHELIAL MITOGEN CNS TUMOR ORIGIN.....	1R01 CA18877-01A2	59,175
HILLMAN, GILBERT R.....	EFFECTS OF ANTICHOLINERGIC AGENTS ON SCHISTOSOMES.....	1R22 AI14103-01	57,474
HULET, WILLIAM H.....	CAPTURE AND MAINTENANCE OF THE SQUID LOLIGO PEALEI.....	5P40 RR01024-02	80,592
JENKINS, VERNON K.....	EFFECTS OF THERAPEUTIC RADIATION ON LYMPHOCYTE RESPONSE.....	5R01 CA13435-05	39,879
KLEBE, ROBERT J.....	CELL ADHESION PROTEINS AND MALIGNANCY.....	5R01 CA19017-02	57,322
KLEBE, ROBERT J.....	SOMATIC CELL GENETICS OF DIFFERENTIATED PHENOTYPES.....	5R01 GM21433-04	59,940
LEGATOR, MARVIN S.....	DETERMINATION OF GENETIC REPAIR IN HUMAN SUBJECTS.....	5R01 GM23333-02	45,267
LEVIN, WILLIAM C.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00073-15	628,398
MC ADOO, DAVID J.....	NEW APPROACHES TO 5-HYDROXYTRYPTAMINE METABOLISM.....	5R01 NS12567-03	29,685
MC ADOO, DAVID J.....	GLYCINE AS A NEUROTRANSMITTER IN IDENTIFIED NEURONS.....	1R01 NS13311-01A1	29,760
MOORE, LEE E.....	FLUCTUATION SPECTROSCOPY OF EXCITABLE MEMBRANES.....	5R01 NS13520-02	32,919
NAKA, KEN-ICHI.....	FUNCTION OF NEURON NETWORKS IN VERTEBRATE VISUAL SYSTEMS.....	5R01 EY01897-02	91,606
NANNINGA, LUDDO B.....	PLASMA INHIBITOR OF PROFIBRINOLYSIN ACTIVATION.....	3R01 HL16443-03S1	9,108
NELSON, JAMES A.....	MECHANISMS OF ACTION OF ANTITUMOR AGENTS.....	1R01 CA21413-01	50,702
NELSON, THOMAS E.....	SKELETAL MUSCLE LESION IN MALIGNANT HYPERTHERMIA.....	1R01 GM23875-01	36,030
PARKENING, TERRY A.....	OVARIAN MORPHOLOGY AND FUNCTION IN THE AGED MOUSE.....	1R23 AG00757-01	16,148
PEREZ-POLO, JOSE R.....	NEURAL DIFFERENTIATION: NERVE GROWTH FACTOR PROTEINS.....	7R01 NS14034-01	52,738
PETERSON, JOHNNY W.....	ANTIBACTERIAL IMMUNITY AGAINST VIBRIO CHOLERAE.....	5R22 AI08518-09	62,616
PINSKER, HAROLD M.....	PLASTIC CHANGES IN PACEMAKER PROPERTIES OF NEURONS.....	5R01 NS12223-03	40,115
POFFENBARGER, PHILLIP L.....	ENDOCRINOLOGY OF NONSUPPRESSIBLE INSULIN-LIKE ACTIVITY.....	5R01 AM18513-03	50,388
QUAY, WILBUR B.....	SEROTONERGIC MECHANISMS IN NEUROENDOCRINE CONTROL.....	7R01 HD11641-01	54,742
RAE, JAMES L.....	NORMAL AND CATARACTOUS LENS CELL BIOELECTRIC PROPERTIES.....	3R01 EY01207-02S1	11,900
RAE, JAMES L.....	NORMAL AND CATARACTOUS LENS CELL BIOELECTRIC PROPERTIES.....	5R01 EY01207-03	43,207
REMMERS, JOHN E.....	NEURAL MECHANISMS CONTROLLING MOTOR ACT OF BREATHING.....	2R01 HL18007-04	102,977
REYNOLDS, EDWARD S.....	DETECTION OF INJURY IN CELLULAR MEMBRANE SYSTEMS.....	5R01 AM19814-02	101,909
RUSSELL, JOHN M.....	CHLORIDE TRANSPORT IN NERVE AND MUSCLE.....	2R01 NS11946-04	57,718
SANTAMBROGIO, GIUSEPPE.....	OPERATIONAL MECHANISMS OF AIRWAY RECEPTORS.....	1R01 HL20122-01	91,558
SCHMALSTIEG, FRANK C, JR.....	A SERUM INHIBITOR OF LYMPHOCYTE MOTILITY.....	1R23 AI14245-01	44,196
SCHNEIDER, ROSE G.....	HEMOGLOBIN VARIANTS IN RELATION TO DISEASE.....	2R01 AM00780-27	70,864

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
SMITH, LELAND L.....	DERIVATION OF CARCINOGENIC EPOXIDES.....	5R01 CA17872-03	40,453
SMITH, LELAND L.....	POTENTIALLY CARCINOGENIC AND ATHEROGENIC STEROLS.....	1R01 CA21617-01	44,197
SMITH, LELAND L.....	AIR POLLUTANT-LIPID MEMBRANE INTERACTIONS.....	2R01 ES00944-04	47,741
SMITH, LELAND L.....	ORIGINS OF ATHEROSCLEROSIS.....	5R01 HL10160-12	58,414
SMITH, LELAND L.....	HUMAN BRAIN STEROLS IN AGING AND DISEASE.....	5R01 NS08106-09	33,278
SORDAHL, L A.....	REPETITIVE EXERCISE AND CARDIAC ENLARGEMENT.....	5R01 HL18839-02	93,042
SRIVASTAVA, SATISH K.....	METABOLIC STUDIES IN NORMAL AND CATARACTOUS LENSES.....	5R01 EY01677-03	25,624
SRIVASTAVA, SATISH K.....	BIOCHEMICAL GENETICS: TAY-SACHS & SANDHOFF'S DISEASES.....	5R01 GM21655-03	62,838
STEINSLAND, ODD S.....	EFFECT OF INSULIN ON NEUROVASCULAR TRANSMISSION.....	1R01 HL20439-01A1	28,831
SZABO, GABOR.....	PERMEABILITY TRANSIENTS OF CARRIERS, CHANNELS, AND HEART.....	5R01 HL19639-02	49,380
THOMPSON, JAMES C.....	SURGICAL STUDIES ON METABOLISM OF GI HORMONES.....	5R01 AM15241-07	94,277
WILLIAMS, JOHN F, JR.....	FACTORS ALTERING THE COURSE OF MYOCARDIAL DYSFUNCTION.....	2R01 HL13639-06	60,841
WILLIS, WILLIAM D, JR.....	SYNAPTIC CONNECTIONS OF SPINAL CORD NEURONS.....	5R01 NS09743-08	60,882
WILLIS, WILLIAM D, JR.....	COMPARATIVE NEUROBIOLOGY.....	5P01 NS11255-04	236,188
ORGANIZATION TOTAL	78	6,040,786	
HOUSTON			
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025			
ALFORD, BOBBY R.....	OTOPHYSIOLOGY AND OTOPATHOLOGY PROGRAM PROJECT.....	5P50 NS10940-05	228,694
ALFREY, CLARENCE P, JR.....	EFFECTS OF PHYSICAL FORCES ON BLOOD.....	5R01 HL16938-04	108,550
ANDERSON, ROBERT E.....	METABOLISM OF VISUAL CELLS.....	5R01 EY00871-06	78,988
AUNE, KIRK C.....	THE RIBOSOME: WHAT HOLDS IT TOGETHER.....	5R01 GM22244-03	47,357
AYALA, GIOVANNI F.....	EFFECT OF EPILEPTOGENIC DRUGS ON MEMBRANE PROPERTIES.....	7R01 NS14433-01	55,377
BAER, PAUL E.....	HIGH BLOOD PRESSURE IN THE YOUNG, PREVALENCE & PRECURSOR.....	5R01 HL19929-02	108,430
BAKER, CAROL J.....	HUMAN IMMUNITY TO GROUP B STREPTOCOCCUS.....	5R01 AI13249-02	66,103
BARNES, EUGENE M, JR.....	REGULATION OF TRANSPORT IN MAMMALIAN CELLS.....	2R01 AM17436-04	45,771
BASINGER, SCOTT F.....	RETINA: PHOTORECEPTOR MEMBRANE SYNTHESIS AND FUNCTION.....	3R01 EY01406-02S1	4,269
BASINGER, SCOTT F.....	RETINA: PHOTORECEPTOR MEMBRANE SYNTHESIS AND FUNCTION.....	2R01 EY01406-03	104,028
BEAUDET, ARTHUR L.....	REGULATION OF HEMOGLOBIN BIOSYNTHESIS.....	5R01 AM18507-02	35,417
BIRNBAUMER, LUTZ.....	ACTION OF GLUCAGON ON LIVER ADENYL CYCLASE.....	5R01 AM19318-02	67,791
BIRNBAUMER, LUTZ.....	GONADOTROPHIN AND PROSTAGLANDIN ACTION IN THE OVARY.....	5R01 HD09581-02	61,260
BIRNBAUMER, LUTZ.....	CATECHOLAMINE ACTION ON THE HEART.....	5R01 HL19423-02	56,808
BISHOP, STEPHEN H.....	ADENINE NUCLEOTIDE MAINTENANCE IN THE ISCHEMIC HEART.....	5R01 HL17372-03	38,378
BLACK, HOMER S.....	PHOTOCHEMICAL REACTIONS RELATED TO SKIN CANCER.....	5R01 CA13464-05	19,573
BLACK, HOMER S.....	EFFECTS OF DIETARY FACTORS ON UVL-CARCINOGENESIS.....	1R01 CA20907-01	41,172
BLATTNER, RUSSELL J.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00188-13	425,320
BOYD, AUBREY E, III.....	SOMATOSTATIN SECRETION IN DIABETES.....	1R01 AM21203-01	56,931
BRIDGES, C DAVID.....	PHOTO-AND BIOCHEMICAL REACTIONS IN THE VISUAL SYSTEM.....	7R01 EY02489-01	39,062
BRINKLEY, B R.....	STUDIES OF MITOSIS IN NORMAL AND NEOPLASTIC CELLS.....	7R01 CA23022-01	74,113
BULLOCK, DAVID W.....	UTERINE PROTEIN REGULATION IN EARLY PREGNANCY.....	5R01 HD09378-03	65,028
BURZYNSKI, STANISLAW R.....	ANTINEOPLASTIC PEPTIDES FROM URINE.....	3R01 CA15056-02S2	27,509
BUSCH, HARRIS.....	CANCER RESEARCH CENTER.....	2P01 CA10893-10	952,079
BUTLER, WILLIAM T.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00350-11	535,906
BUTLER, WILLIAM T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05425-16	213,709
CABRAL, GUY A.....	HERPES VIRUS ANTIGENS IN TRANSFORMED CELLS.....	1R01 CA21801-01	38,590
CASKEY, CHARLES T.....	LABORATORY STUDIES ON ALPHA-1-ANTITRYPSIN DEFICIENCY.....	1R01 HL20070-01	51,499
CATE, THOMAS R.....	IMMUNOLOGIC REACTIONS WITH INFLUENZA IN THE LUNG.....	5R01 AI13123-03	49,071
CLARK, JAMES H.....	MAMMARY CANCER AND HORMONE INDUCED RESPONSES.....	1R01 CA20605-01	60,570
CLARK, JAMES H.....	ESTROGEN RECEPTORS AND REPRODUCTIVE FUNCTIONS.....	5R01 HD08436-05	67,880
COATS, ALFRED C.....	HUMAN AUDITORY NERVE AND BRAINSTEM EVOKED POTENTIALS.....	5R01 NS12910-02	52,590
COURTNEY, RICHARD J.....	STUDIES OF PURIFIED HERPES SIMPLEX VIRUS GLYCOPROTEINS.....	1R01 CA21771-01	56,438
DE BAKEY, MICHAEL E.....	TAUB LABORATORIES FOR MECHANICAL CIRCULATORY SUPPORT.....	5P01 HL13330-08	604,042
DE BAKEY, MICHAEL E.....	DEMONSTRATION CENTER FOR HEART AND VESSEL DISEASE.....	5P60 HL17269-03	3,364,722
DI FERRANTE, NICOLA M.....	GLYCOSAMINOGLYCANS AND LIPOPROTEINS OF HUMAN PLASMA.....	5R01 HL18692-02	66,991
DI FERRANTE, NICOLA M.....	CONNECTIVE TISSUE AND DIABETIC VASCULAR DISEASE.....	5R01 HL20447-02	38,447
DRESDEN, MARC H.....	SCHISTOSOMA MANSONI: MECHANISMS OF PENETRATION.....	1R22 AI13802-01	28,900
ENTMAN, MARK L.....	CONTROL OF MYOCARDIAL SARCO-TUBULAR CALCIUM STORES.....	2R01 HL13870-08	72,465
FEIGIN, RALPH D.....	PROSPECTIVE EVALUATION OF CHILDHOOD MENINGITIS.....	7R01 NS14292-01	62,202

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
FERNBACH, DONALD J.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA03161-20	139,929
GLASSER, STANLEY R.....	BIOLOGICAL ROLE OF UTERINE NUCLEAR ESTROGEN BINDING.....	5R01 HD08671-03	82,783
GLEZEN, WILLIAM P.....	HOST FACTORS IN PATHOGENESIS OF RESPIRATORY DISEASE.....	5R01 HL19651-02	59,342
GORRY, G ANTHONY.....	EVALUATION OF A DIGITALIS THERAPY ADVISOR.....	1R01 HL21052-01	26,920
GRIFFITH, DONALD P.....	URINARY STONES—MEDICAL TREATMENT OF SURGICAL FAILURES.....	5R01 AM19313-02	41,898
HAZLEWOOD, CARLTON F.....	ROLE OF WATER IN CANCER CELL DIVISION.....	1R01 CA21624-01	72,147
HAZLEWOOD, CARLTON F.....	PHYSIOLOGICAL ROLE OF WATER IN TISSUES.....	5R01 GM20154-05	82,328
HOLLINGER, F BLAINE.....	CELL-MEDIATED IMMUNITY IN HEPATITIS B.....	5R01 AI12714-03	45,559
HOLLYFIELD, JOE G.....	PHAGOCYtic ACTIVITY OF THE PIGMENT EPITHELIUM.....	7R01 EY02362-01	38,736
HOLLYFIELD, JOE G.....	DEVELOPMENT AND MAINTENANCE OF PHOTORECEPTOR CELLS.....	7R01 EY02363-01	81,013
HOLMQUIST, GERALD P.....	G-BANDING MECHANISMS IN MAMMALIAN CHROMOSOMES.....	1R01 GM23905-01	70,028
HORNING, EVAN C.....	RESEARCH IN ANALYTICAL BIOCHEMISTRY FOR HUMAN STUDIES.....	5P01 GM13901-12	319,604
HUCKINS, CLAIRE.....	CONTROL OF STEM CELL SPERMATOGONIA IN RODENT TESTES.....	2R01 HD07655-04	62,152
IGARASHI, MAKOTO.....	PARTIAL ABLATION OF VESTIBULAR SYSTEM AND EQUILIBRIUM.....	2R01 NS07237-10A1	54,192
JOSHI, VASUDEV C.....	REGULATION OF FATTY ACID SYNTHESIS IN NEONATAL LIVER.....	2R01 HD07516-04A1	59,503
KAUFMAN, RAYMOND H.....	PREGNANCY AND DES ASSOCIATED UPPER GENITAL ANOMALIES.....	1R01 HD10989-01	66,436
KELLAWAY, PETER.....	EPILEPSY RESEARCH CENTER.....	5P50 NS11535-03	328,440
KIT, SAUL.....	BIOCHEMICAL ASPECTS OF VIRAL CARCINOGENESIS.....	5R01 CA06656-15	293,960
KNOX, JOHN M.....	SEXUALLY TRANSMITTED DISEASES RESEARCH PROGRAM PROJECT.....	5P01 AI12618-03	264,570
KOHLER, PETER O.....	HORMONE PRODUCTION IN CULTURED ENDOCRINE CELLS.....	2R01 AM17307-04	50,842
LAM, DOMINIC M.....	NEUROTRANSMITTERS IN THE VISUAL SYSTEM.....	1R01 EY02423-01	67,713
LANE, MONTAGUE.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA03392-20	82,400
MARTIN, R RUSSELL.....	HUMAN MACROPHAGES AND OTHER CELLS IN CARCINOGENESIS.....	5R01 CA15784-03	34,346
MAYOR, HEATHER D.....	GROWTH & MATURATION OF ADENOASSOCIATED SATELLITE VIRUSES.....	2R01 CA14618-04A1	46,312
MC CORMACK, SHIRLEY A.....	A MODEL FOR INDUCTION OF CHORIOCARCINOMA IN THE RAT.....	1R01 CA20853-01	61,206
MEANS, ANTHONY R.....	BIOLOGY OF THE TESTIS: ACTION OF FSH.....	2R01 HD07503-05	77,385
MEANS, ANTHONY R.....	LIPOPROTEIN METABOLISM AND HORMONAL REGULATION.....	5R01 HL16512-03	58,053
MEDINA, DANIEL.....	CHEMICAL CARCINOGENESIS OF MOUSE MAMMARY GLANDS.....	3R01 CA11944-06S1	8,920
MEDINA, DANIEL.....	CHEMICAL CARCINOGENESIS OF MOUSE MAMMARY GLANDS.....	2R01 CA11944-07	74,312
MEYER, JOHN S.....	CEREBROVASCULAR RESEARCH CENTER SUPPORT.....	2P50 NS09287-07	608,653
MOSES, ROBB E.....	MECHANISMS OF CHROMOSOME REPLICATION.....	5R01 GM19122-06	57,044
O'MALLEY, BERT W.....	CENTER FOR POPULATION RESEARCH AND REPRODUCTION STUDIES.....	5P30 HD07495-05	440,091
O'MALLEY, BERT W.....	SEX HORMONE RECEPTOR COMPONENTS AND THE CELL GENOME.....	2R01 HD07857-06	200,765
O'MALLEY, BERT W.....	REPRODUCTIVE HORMONES: BIOLOGICAL & MOLECULAR ACTIONS.....	5R01 HD08188-06	156,910
PECK, ERNEST J, JR.....	NEUROENDOCRINE CONTROL OF PITUITARY HORMONE SECRETION.....	3R01 HD08389-03S1	11,249
PECK, ERNEST J, JR.....	NEUROENDOCRINE CONTROL OF PITUITARY HORMONE SECRETION.....	2R01 HD08389-04	45,343
PECK, ERNEST J, JR.....	GAMMA-AMINOBUTYRIC ACID RECEPTORS OF THE CEREBELLUM.....	5R01 NS11753-03	34,518
PEREZ, FRANCISCO I.....	BEHAVIORAL ANALYSIS OF SENSORY EXTINCTION.....	1R01 NS13708-01	34,013
PERSON, DONALD A.....	VIRUSES, MYCOPLASMA AND L FORMS IN RHEUMATIC DISEASES.....	2R01 AM06450-14A1	40,874
POWELL, HENRY J.....	DYNAMICS OF ATHEROGENESIS AND LIPOPROTEIN FORMATION.....	5R01 HL19459-02	34,099
RANDERATH, KURT.....	CHEMICAL STUDIES ON TUMOR NUCLEIC ACIDS.....	2R01 CA13591-06	74,950
RANDERATH, KURT.....	SEQUENCE STUDIES ON HUMAN PHENYLALANINE-TRNAS.....	5R01 CA16840-03	20,228
RICH, ROBERT R.....	REGULATION OF CELL-MEDIATED IMMUNE RESPONSES.....	1R01 AI13810-01	104,510
ROSEN, JEFFREY M.....	HORMONAL REGULATION OF BREAST CANCER.....	5R01 CA16303-03	51,297
ROSSEN, ROGER D.....	A ROLE FOR ANTIGLOBULIN IN GLOMERULONEPHRITIS.....	2R01 AM17555-04	42,670
ROSSEN, ROGER D.....	ANTIGEN-ANTIBODY COMPLEXES IN CANCER PATIENTS SERA.....	5R01 CA20543-02	46,305
SKINNER, JAMES E.....	BRAIN REGULATION OF CARDIAC ARRHYTHMIA.....	5R01 HL17907-03	78,104
SMITH, LOUIS C.....	LIPID METABOLISM: TRANSPORT BY LATERAL DIFFUSION.....	5R01 HL15648-05	51,563
TAUNTON, OSCAR D.....	CONTROL OF LIPOPROTEIN SYNTHESIS.....	3R01 HL16544-02S1	5,946
TENG, CHING-SUNG.....	STUDY OF HORMONE-CONTROLLED SEX-ORGAN DIFFERENTIATION.....	5R01 HD08218-05	67,547
TENG, CHRISTINA T.....	MECHANISM OF AGING IN THE CHICK OVARY.....	1R01 AG00523-01	54,629
TENG, CHRISTINA T.....	REPRODUCTIVE BIOLOGY OF THE EMBRYONIC OVARY.....	5R01 HD09467-02	30,022
TERMAN, DAVID S.....	IMMUNOADSORBENTS FOR SPECIFIC IMMUNOTHERAPY.....	1R01 GM23517-01	65,829
TRENTIN, JOHN J.....	IRRADIATION PROTECTION AND HISTOCOMPATIBILITY.....	3R01 CA03367-20S1	71,305
TWOMEY, JEREMIAH J.....	RHEUMATOID FACTOR AND TUMOR-HOST INTERACTION.....	5R01 CA15333-04	40,400
TWOMEY, JEREMIAH J.....	TYPE AND REACTIVITY OF CELLS RELEASED FROM LYMPHOMAS.....	5R01 CA16108-04	40,435
TWOMEY, JEREMIAH J.....	THYMIC ACTIVITY IN PLASMA WITH THYMUS DISORDERS.....	5R01 CA19538-02	34,800
VON NOORDEN, GUNTER K.....	CLINICAL AND LABORATORY STUDIES OF AMBLYOPIA.....	5R01 EY01120-05	65,962
WAKIL, SALIH J.....	ROLE OF INSULIN IN FATTY ACID METABOLISM.....	1R01 AM21286-01	50,112
WAKIL, SALIH J.....	THE METABOLISM AND CONTROL OF FATTY ACIDS.....	2R01 GM19091-07	152,354

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
WARNER, MARLENE.....	PERINATAL HORMONE-CARCINOGEN INTERACTIONS.....	5R01 CA18285-02	62,019
WILSON, JOHN H.....	ONCOGENIC MECHANISMS: SV40 AND HOST GENETIC ANALYSIS.....	3R01 CA15743-03S1	4,564
WILSON, JOHN H.....	ONCOGENIC MECHANISMS: SV40 AND HOST GENETIC ANALYSIS.....	2R01 CA15743-04	37,481
WRAY, GRANVILLE W.....	ISOLATED CHROMOSOMES IN GENETICS AND CANCER RESEARCH.....	5R01 CA18455-02	50,872
WU, JANG-YEN.....	STUDIES OF NEURONAL AND GLIAL GLUTAMATE DECARBOXYLASES.....	5R01 NS13224-02	100,330
WYDE, PHILIP R.....	IMMUNOPATHOLOGY OF INFLUENZA VIRUS PNEUMONIA.....	5R01 AI13905-02	49,892
ORGANIZATION TOTAL	106	14,040,744	
RICE UNIVERSITY ZIP CODE 77001			
BULTMANN, HERMANN.....	SEQUENCE ORGANIZATION IN THE DROSOPHILA GENOME.....	5R01 GM21985-03	38,632
CAMPBELL, JAMES W.....	METABOLISM OF GASTROPOD MOLLUSCS.....	2R01 AI05006-14	42,664
FISHER, FRANK M, JR.....	CHEMICAL BASIS OF PARASITISM.....	5R01 AI01384-19	40,013
GORDON, W E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07103-11	63,813
HELLUMS, JESSE D.....	EFFECTS OF PHYSICAL FORCES ON PLATELETS.....	5R01 HL18584-02	46,148
HELLUMS, JESSE D.....	MASS TRANSFER IN THE MICROCIRCULATION.....	1R01 HL19824-01	26,112
MATTHEWS, KATHLEEN S.....	FLUORESCENCE STUDIES OF THE LACTOSE REPRESSOR PROTEIN.....	5R01 GM22441-02	41,928
MC INTIRE, LARRY V.....	'PERFUSION LUNG'-ROLE OF TRAUMATIZED LEUKOCYTES.....	5R01 HL17437-03	68,072
MC INTIRE, LARRY V.....	DYNAMIC STUDIES OF CLOT STRUCTURE FORMATION.....	5R01 HL18672-02	36,493
OLSON, JOHN S.....	FUNCTIONAL PROPERTIES OF HEMOGLOBIN AND ERYTHROCYTES.....	2R01 HL16093-04	77,379
PALMER, GRAHAM A.....	MOLECULAR MECHANISMS OF BIOLOGICAL REDOX REACTIONS.....	5R01 GM21337-03	102,302
QUIOCHO, FLORANTE A.....	STRUCTURE AND FUNCTION OF SUGAR BINDING PROTEINS.....	5R01 GM121371-03	36,105
RUDOLPH, FREDERICK B.....	REGULATION OF METABOLISM BY PURINE INTERCONVERSIONS.....	5R01 CA14030-05	44,584
SASS, RONALD L.....	STRUCTURAL AND CHEMICAL STUDY OF TISSUE CALCIFICATION.....	5R01 AM18582-03	40,641
SCHROEPFER, GEORGE J, JR.....	INTERMEDIARY METABOLISM OF STEROLS.....	5R01 HL15376-06	139,371
STEWART, CHARLES R.....	REGULATION OF EARLY EVENTS IN PHAGE INFECTION.....	5R01 GM17968-06	46,381
TROELSTRA, ARNE.....	QUANTITATIVE BASIS FOR CLINICAL ELECTRORETINOGRAPHY.....	5R01 EY00921-03	50,718
WALKER, WILLIAM F.....	CAVITATION PHENOMENA NEAR PROSTHETIC DEVICES.....	3R01 HL17821-02S1	8,086
WENKERT, ERNEST.....	ALKALOID SYNTHESIS.....	5R01 GM21076-05	95,032
ORGANIZATION TOTAL	19	1,044,474	
TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION—TEXAS RESEARCH INST OF MENTAL SCIENCES ZIP CODE 77025			
SMITH, ROBERT C.....	AGING AND TOXICITY OF CHRONIC NEUROLEPTIC DRUGS.....	1R23 AG00725-01	13,326
ORGANIZATION TOTAL	1	13,326	
TEXAS HEART INSTITUTE ZIP CODE 77025			
AKUTSU, TETSUZO.....	ARTIFICIAL HEART AND RELATED PROBLEMS.....	5R01 HL18084-03	183,738
REDDY, YERRADHODDI S.....	PHOSPHORYLATION OF MYOCARDIAL PROTEINS.....	2R01 HL20015-02	42,069
ORGANIZATION TOTAL	2	225,807	
TEXAS INSTITUTE FOR REHABILITATION AND RESEARCH ZIP CODE 77030			
FUHRER, MARCUS J.....	STUDIES OF THE HABITUATION PROCESS IN SPINAL MAN.....	5R01 NS07755-09	57,931
ORGANIZATION TOTAL	1	57,931	
TEXAS SOUTHERN UNIVERSITY ZIP CODE 77004			
CHAN, JARVIS T.....	ANTIOXIDANT REVERSED CYTOTOXICITY AND CARCINOGENESIS.....	7R01 CA23684-01	41,512
SESSION, JOHN J.....	BIOMEDICAL RESEARCH IMPROVEMENT PROGRAM.....	5S06 RR08061-06	127,968
SESSION, JOHN J.....	BIOMEDICAL RESEARCH IMPROVEMENT PROGRAM.....	2S06 RR08061-07	296,769
ORGANIZATION TOTAL	3	466,249	
UNIVERSITY OF HOUSTON ZIP CODE 77004			
BEAR, JOHN L.....	RHODIUM (II) COMPLEXES AS POTENTIAL ANTICANCER AGENTS.....	5R01 CA13817-06	46,657
BUCKLEY, JOSEPH P.....	MECHANISMS IN ANGIOTENSIN INDUCED HYPERTENSION.....	5R01 HL17401-03	39,348
CATES, LINDLEY A, JR.....	ORGANOPHOSPHORUS ONCOLYTIC ANALOGS AND INHIBITORS.....	5R01 CA19882-02	25,128
DONAGHEY, CHARLES E.....	CELLSIM-FMF COUPLING FOR CANCER RESEARCH.....	5R01 CA19995-02	15,705
DYCKES, DOUGLAS F.....	PROTEIN CONFORMATIONAL STUDIES BY MULTINUCLEAR NMR.....	5R01 GM22927-02	30,945
DYCKES, DOUGLAS F.....	A PROTEINASE INHIBITOR MODEL WITH CLINICAL POTENTIAL.....	5R01 HL19514-02	35,068
EICHBERG, JOSEPH.....	ROLE OF LIPIDS AND LIPOPROTEINS IN MEMBRANES.....	3R01 NS12493-01S1	15,815
EICHBERG, JOSEPH.....	ROLE OF LIPIDS AND LIPOPROTEINS IN MEMBRANES.....	2R01 NS12493-02A1	53,141
FELDMAN, STUART.....	ACETOHYDROXAMIC ACID PHARMACOKINETICS IN RATS AND MAN.....	5R01 AM19391-02	25,580
FELDMAN, STUART.....	ANTICOAGULANT DRUG ABSORPTION INTERACTIONS.....	1R01 HL21476-01	47,092

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
FRANKLIN, LUTHER E.....	MECHANISMS OF MAMMALIAN FERTILIZATION.....	3R01 HD07346-04S2	1,499
GRATCH, GERALD.....	PIAGET'S THEORY OF INFANTS' OBJECT CONCEPTS.....	1R01 HD10252-01	45,091
GRAY, HORACE B, JR.....	HYDRODYNAMICS OF CIRCULAR DNA FORMS.....	2R01 CA11761-07A1	51,554
GRAY, HORACE B, JR.....	INTERACTION OF HISTONES WITH NONHISTONE PROTEINS.....	5R01 GM21508-03	15,344
GRAY, HORACE B, JR.....	NUCLEIC ACID MODIFICATION WITH SPECIFIC ENDONUCLEASES.....	5R01 GM21839-03	38,986
KIMBALL, AUBREY P.....	MECHANISMS OF ACTION OF ANTICANCER DRUGS.....	3R01 CA12327-06S1	2,874
KIMBALL, AUBREY P.....	MECHANISMS OF ACTION OF ANTICANCER DRUGS.....	2R01 CA12327-07	55,887
KIMBALL, AUBREY P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07147-05	41,887
KOHN, HAROLD L.....	AN 'IRREVERSIBLE ACID' TEST OF BIOCHEMICAL MECHANISMS.....	5R01 GM21790-03	33,654
LEVI, DENNIS M.....	CONTRAST SENSITIVITY IN AMBLYOPIA.....	5R01 EY01728-02	25,871
MAILMAN, DAVID S.....	CARDIOVASCULAR AND HORMONE EFFECTS ON GUT TRANSPORT.....	5R01 AM18964-02	51,319
VESTAL, MARVIN L.....	CROSSED-BEAM LC-MS INVOLATILE BIOLOGICAL SAMPLES.....	7R01 GM24031-01	110,657
ORGANIZATION TOTAL	22 809,102		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025			
BLATTI, STANLEY P.....	MOLECULAR BASIS OF GENE EXPRESSION IN EUKARYOTES.....	5R01 GM19494-06	45,357
BOOTH, FRANK W.....	BIOCHEMICAL ADAPTATIONS OF DISUSE AND REHABILITATION.....	5R01 AM19393-02	40,598
BOYAN-SALYERS, BARBARA D.....	THE ROLE OF LIPOPROTEINS IN MICROBIAL CALCIFICATION.....	5R23 DE04212-03	20,287
BROWN, LEE R.....	STUDY OF THE ANTIMICROBIAL EFFECTS OF FLUORIDE.....	5R01 DE04542-02	53,807
BULLOCK, WESLEY W.....	REGULATION OF CUTANEOUS BASOPHIL HYPERSENSITIVITY.....	1R01 DE04602-01	32,185
CASTRO, GILBERT A.....	PHYSIOLOGIC BASIS OF IMMUNITY IN TRICHINOSIS.....	3R01 AI11361-04S1	4,430
CUTTER, GARY R.....	THE IMPACT OF HYPERTENSION INFORMATION.....	1R01 HL20244-01	117,414
DE MOSS, JOHN A.....	ASSEMBLY OF A MEMBRANE-BOUND MULTI-ENZYME COMPLEX.....	5R01 GM19511-06	68,864
DOWHAN, WILLIAM.....	STRUCTURE AND FUNCTION OF MEMBRANE PROTEINS.....	5R01 GM20478-05	54,928
DUPONT, HERBERT L.....	A STUDY OF THE ETIOLOGY OF ACUTE DIARRHEA.....	5R01 AI12699-03	119,976
EVANS, DOLORES G.....	VIRULENCE FACTORS OF E. COLI ENTEROTOXIGENIC FOR MAN.....	5R22 AI13385-02	50,086
FRIEDMANN, NAOMI.....	ROLE OF ION FLUXES IN THE HYPOGLYCEMIC RESPONSE.....	2R01 AM18083-04	48,552
FRIEDMANN, NAOMI.....	GLUCOCORTICOID CONTROL OF HEPATIC METABOLISM.....	1R01 AM19751-01	44,666
GUYNN, ROBERT W.....	REDOX CONTROL OF PTERIN-HYDROXYLASE SYSTEMS IN VIVO.....	5R01 NS12153-03	25,628
JOHNSON, LEONARD R.....	ROLE OF FOOD IN THE GUT IN MAINTAINING GI FUNCTION.....	5R01 AM18164-03	51,038
KAHAN, BARRY D.....	ANTIGENIC STIMULUS IN HUMAN COLON CARCINOMA IMMUNITY.....	7R26 CA22370-01	95,994
LANDERS, TERRY A.....	ROLE OF TUMOR VIRUS STRUCTURAL PROTEINS IN INFECTION.....	1R01 CA21350-01	48,425
MACKLER, BRUCE F.....	MIF LYMPHOKINE INVOLVEMENT IN PERIODONTAL DISEASE.....	5R01 DE04172-03	43,723
MAILMAN, MARY L.....	GINGIVAL COLLAGEN METABOLISM IN HEALTH AND DISEASE.....	1R23 DE04691-01	14,586
MINER, MICHAEL E.....	SYSTEMIC EFFECTS OF INCREASING INTRACRANIAL PRESSURE.....	1R01 NS13251-01	25,819
NEI, MASATOSHI.....	POPULATION DYNAMICS OF MUTANT GENES.....	5R01 GM20293-05	39,648
O'NEILL, PEGGY A.....	LYMPHOCYTE-MEDIATED CYTOTOXICITY IN PERIODONTAL DISEASE.....	5R01 DE04210-03	53,620
OLSON, JOHN V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05344-15	19,592
OVERTURF, MERRILL L.....	LIPID VASODEPRESSORS FROM HUMAN TISSUES.....	5R01 HL15171-05	43,008
RAMASWAMY, KRISHNAMURTHY.....	EFFECT OF DIABETES MELLITUS ON INTESTINAL FUNCTION.....	1R01 AM19876-01	42,126
RAY, TUSHAR K.....	BIOCHEMICAL ASPECTS OF HO TRANSPORT FROM STOMACH.....	1R01 AM19531-01	52,144
REDBURN, DIANNA A.....	IDENTIFICATION OF TRANSMITTER AGENTS IN RETINA.....	5R01 EY01655-02	55,619
ROSE, GEORGE G.....	HUMAN GINGIVAL LYSOSOMES IN VIVO AND IN VITRO.....	1R01 DE04337-01	28,012
ROSE, GEORGE G.....	HISTOTYPIC LUNG TISSUE CULTURE IN CIRCUMFUSION SYSTEMS.....	5R01 HL19684-02	28,538
SCHULL, WILLIAM J.....	HEREDITY & OXYGEN: EFFECTS ON HEALTH OF HEART-LUNGS.....	5R01 HL15614-04	46,802
SHAW, MARGERY W.....	STUDY OF HUMAN GENETICS.....	5P50 GM19513-05	711,563
SHAW, MARGERY W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07148-04	51,561
SIMPSON, JOHN W.....	COLLAGENOLYTIC ACTIVITY IN PERIODONTAL DISEASE.....	5R01 DE04485-02	35,680
SPERLING, HARRY G.....	EXCITABILITY OF VISUAL PATHWAYS.....	3R01 EY00381-08S1	18,535
SPERLING, HARRY G.....	EFFECTS OF LIGHT ON THE RETINA.....	9R01 EY02388-04	64,368
STANCEL, GEORGE M.....	ESTROGEN CONTROL OF UTERINE GROWTH AND CELL DIVISION.....	3R01 HD08615-03S1	9,951
STANCEL, GEORGE M.....	ESTROGEN CONTROL OF UTERINE GROWTH AND CELL DIVISION.....	2R01 HD08615-04	48,189
STEINBERGER, EMIL.....	APPROACHES TO THE CONTROL OF MALE REPRODUCTION.....	5P50 HD08338-03	520,320
STROBEL, HENRY W.....	GASTROINTESTINAL HORMONES AND COLONIC CARCINOMA.....	5R26 CA19105-02	49,150
STROBEL, HENRY W.....	DRUG METABOLISM IN LIVER TUMORS.....	5R01 CA19621-02	35,566
THOMPSON, W JOSEPH.....	BIOLOGICAL ROLE OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASES.....	2R01 GM21361-04	88,256
TSUCHITANI, CHIYEKO.....	SINGLE UNIT ANALYSIS OF THE SUPERIOR OLIVARY COMPLEX.....	2R01 NS11218-05	89,011
TUTTLE, ROBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05745-05	111,220
VAHN, LEWIS.....	THE CENTRAL MECHANISMS OF DENTAL PAIN AND ANALGESIA.....	1R23 DE04646-01	9,990
WARNER, RAYMOND L.....	THE ROLE OF MONOAMINES IN SEXUAL DIFFERENTIATION.....	1R01 HD10848-01	27,030

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
WEEMS, WILLIAM A.....	RENAL AND VASCULAR CONTROL BY SYMPATHETIC GANGLIA.....	1R01 HL21351-01	29,035
WEISBRODT, NORMAN W.....	ADAPTIVE CHANGES IN INTESTINAL SMOOTH MUSCLE.....	1R01 AM19886-01	22,502
WEISS, KENNETH M.....	GENETIC EPIDEMIOLOGY OF CANCER.....	1R01 CA19311-01	158,072
WRIGHT, ANTHONY A.....	HUE DISCRIMINATION STUDIES.....	5R01 EY01256-03	26,887
ORGANIZATION TOTAL	49 3,522,358		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
ALEXANIAN, RAYMOND.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA03195-20	65,825
ANSEVIN, ALLEN T.....	A PHYSICAL APPROACH TO GENOMIC ANALYSIS.....	5R01 GM23067-02	42,468
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF ONCORNAVIRUS PROTEINS.....	5R01 CA15495-03	18,006
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF RAUSCHER MURINE LEUKEMIA VIRAL PROTEINS.....	5R01 CA18248-02	39,950
BECKER, FREDERICK F.....	ANALYSIS OF CHROMATIN DURING CHEMICAL CARCINOGENESIS.....	5R01 CA20131-02	86,290
BECKER, FREDERICK F.....	PHENOTYPIC ANALYSIS OF CHEMICAL CARCINOGENESIS.....	5R01 CA20657-02	78,477
BECKER, FREDERICK F.....	ANALYSIS OF CELLULAR EVENTS IN CHEMICAL CARCINOGENESIS.....	2R01 CA20659-02	75,075
BLUMENSCHNEIN, GEORGE R.....	CLINICAL CANCER EDUCATION GRANT.....	5R25 CA19808-02	165,712
BLUMENSCHNEIN, GEORGE R.....	CONFERENCE—IMMUNOTHERAPY OF HUMAN CANCER.....	1R13 CA22493-01	22,014
BOWEN, JAMES M.....	STUDY OF ONCOGENIC VIRUSES IN HUMAN PROSTATE CANCER.....	5R26 CA15438-05	143,034
BOWEN, JAMES M.....	IMMUNOLOGY OF ANIMAL AND HUMAN BREAST CARCINOMA.....	5R01 CA16789-02	99,327
CLARK, R LEE.....	CANCER CLINICAL RESEARCH.....	5P01 CA05831-16	1,180,777
CLARK, R LEE.....	1978 ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH.....	2R13 CA19261-02	31,246
CLARK, R LEE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05511-15	213,709
COPELAND, MURRAY M.....	NATIONAL STUDY OF LARGE BOWEL CANCER.....	5R26 CA14140-05	390,532
CORRY, PETER M.....	PREFERENTIAL KILLING OF MELANIZED TISSUES.....	5R01 CA17891-03	54,770
DREWINKO, BENJAMIN.....	BIOLOGICAL STUDIES OF HUMAN MULTIPLE MYELOMA.....	5R01 CA16021-03	73,638
DREWINKO, BENJAMIN.....	ANTITUMOR AGENTS ON HUMAN COLON CARCINOMA CELLS.....	5R26 CA16763-04	43,607
DREWINKO, BENJAMIN.....	EVALUATION OF THE IMMUNE RESPONSE TO LYMPHOMA ANTIGENS.....	5R01 CA17072-03	54,821
EAST, JAMES L.....	RELATEDNESS OF RNA TUMOR VIRUSES AND HUMAN NEOPLASIA.....	5R01 CA16781-03	66,444
FLETCHER, GILBERT H.....	EVALUATION OF SUPERVOLTAGE THERAPY.....	5R01 CA05654-17	80,484
FLETCHER, GILBERT H.....	EXTENSION OF RADIOTHERAPY RESEARCH.....	5P01 CA06294-16	1,452,971
FLETCHER, GILBERT H.....	FAST NEUTRON THERAPY WITH TAMVEC CYCLOTRON.....	5P01 CA12542-06	909,626
FREIREICH, EMIL J.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA10376-10	217,052
FREIREICH, EMIL J.....	THERAPEUTIC RESEARCH IN CANCER.....	5P01 CA11520-08	668,637
FREIREICH, EMIL J.....	DEVELOPMENTAL THERAPEUTICS.....	5P01 CA14528-05	780,926
FREIREICH, EMIL J.....	INFECTIONS IN CANCER PATIENTS.....	5R01 CA19806-02	249,633
GEHAN, EDMUND A.....	SOUTHWEST ONCOLOGY GROUP (STATISTICS).....	5R10 CA12014-08	565,351
GEHAN, EDMUND A.....	DECISION MAKING FOR PATIENTS WITH ACUTE LEUKEMIA.....	3R01 CA15250-03S1	32,804
GRDINA, DAVID J.....	RADIATION RESPONSE OF CELLS SEPARATED FROM TUMORS.....	5R01 CA18628-02	53,227
GUINEE, VINCENT F.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21784-01	93,634
HAIDLE, CHARLES W.....	INTERACTION OF ANTICANCER DRUGS WITH MACROMOLECULES.....	5R01 CA13246-06	50,540
HERSH, EVAN M.....	IMMUNOLOGICAL ASPECTS OF CANCER PROGNOSIS.....	5R01 CA14984-04	85,078
HEWITT, ROGER R.....	ORIGIN AND DIAGNOSTIC VALUE OF HUMAN SERUM DNASES.....	5R26 CA20142-02	40,491
HICKEY, ROBERT C.....	CORE SUPPORT GRANT—COMPREHENSIVE.....	5P30 CA16672-03	687,617
HSU, T C.....	MONITORING MUTAGENS WITH MAMMALIAN CHROMOSOMES.....	5R01 ES01304-02	116,863
HUMPHREY, RONALD M.....	DNA REPAIR AND RECOVERY IN THE MAMMALIAN CELL CYCLE.....	2R01 CA04484-19	177,733
HUMPHREY, RONALD M.....	CELL CYCLE RELATED DNA REPAIR MECHANISMS.....	5R01 CA19281-02	57,103
JACKSON, CARMAULT B, JR.....	CANCER CONTROL DEVELOPMENT.....	5R18 CA16413-03	251,227
JOHNSON, DOUGLAS E.....	CHEMOTHERAPY FOR THE NATIONAL PROSTATIC CANCER PROJECT.....	5R26 CA15107-04	55,539
LOTZOVA, EVA.....	GROWTH CONTROL OF HUMAN HEMOPOIETIC CELLS.....	5R01 CA21062-02	44,682
MAVLIGIT, GIORA M.....	ADJUVANT IMMUNOTHERAPY TO SURGERY IN COLORECTAL CANCER.....	5R26 CA15458-04	170,591
MC KELVEY, EUGENE M.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA10379-09	109,638
MEISTRICH, MARVIN L.....	MUTAGENIC ACTION OF CANCER THERAPY ON TESTIS CELLS.....	5R01 CA17364-03	60,680
MURGOLA, EMANUEL J.....	MISSENSE SUPPRESSION AND MUTATIONALLY ALTERED TRNAS.....	5R01 GM21499-03	25,010
NISHIOKA, KENJI.....	SERUM POLYAMINE ANALYSIS IN COLON & RECTAL CARCINOMA.....	3R26 CA18041-02S1	15,350
PETERS, LESTER J.....	ANTITUMOR ACTIVITY OF CORYNEBACTERIUM PARVUM.....	5R01 CA17769-03	59,229
RAO, POTU N.....	DRUG SCHEDULES & CELL CYCLE KINETICS IN ANIMAL TUMORS.....	5R01 CA19856-02	69,020
RAO, POTU N.....	THE MOLECULAR BASIS OF CHROMOSOME ABERRATIONS.....	5R01 GM23252-02	61,491
RICHIE, ELLEN S.....	LYMPHOID CELL SUBPOPULATIONS IN LYMPHOCYTIC LEUKEMIA.....	5R01 CA20763-02	32,477
ROBBERSON, DONALD L.....	REGULATION OF MITOCHONDRIAL DNA REPLICATION.....	5R01 CA16527-03	51,715
SAUNDERS, GRADY F.....	INSULIN GENE EXPRESSION DURING PANCREAS DEVELOPMENT.....	1R01 AM20383-01	59,200
SAUNDERS, GRADY F.....	MESSANGER RNA OF NORMAL AND MALIGNANT HUMAN CELLS.....	1R01 CA20124-01	73,521

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
SAUNDERS, PRISCILLA P.....	MOLECULAR MECHANISMS OF DRUG ACTION.....	5R01 CA12429-06	60,077
SCHLAMOWITZ, MAX.....	CELL MEMBRANE RECEPTORS FOR MATERNOFETAL TRANSFER OF IGG.....	2R01 HD07752-04	55,094
SHALEK, ROBERT J.....	RADIOLOGICAL PHYSICS CENTER.....	3R10 CA10953-09S1	7,506
SHALEK, ROBERT J.....	RADIOLOGICAL PHYSICS CENTER.....	5R10 CA10953-10	312,900
SHAW, CHARLES R.....	GENETIC AND COMPARATIVE STUDIES OF ENZYMES.....	5R01 GM15597-10	76,987
SICILIANO, MICHAEL J.....	MULTIPLE LOCI SCREEN FOR MUTATIONS IN MAMMALIAN CELLS.....	5R01 ES01287-03	97,322
TRUJILLO, JOSE M.....	CYTOLOGICAL STUDIES IN HUMAN LEUKEMIA.....	5R01 CA12687-06	147,339
VAN EYS, JAN.....	SOUTHWEST ONCOLOGY GROUP (PEDIATRIC).....	5R10 CA03713-20	138,410
WALBORG, EARL F, JR.....	PLASMA MEMBRANE GLYCOPROTEINS: ALTERATIONS IN NEOPLASIA.....	5R01 CA18829-02	34,435
WARD, DARRELL N.....	CHEMISTRY OF LUTEINIZING AND RELATED HORMONES.....	5R01 AM09801-13	108,056
WITHERS, H RODNEY.....	THE RADIOBIOLOGY OF NORMAL TISSUES.....	5R01 CA11138-09	91,659
WRAY, VIRGINIA P.....	THE NUCLEAR ENVELOPE: ITS ROLE IN DRUG RESISTANCE.....	7R01 CA23527-01	44,803
ZERMENO, ALFONSO.....	RADIOMAMMOGRAPHY WITH LESS THAN 150 MR PER EXPOSURE.....	5R01 CA19976-02	86,594
ZIMMERMAN, STUART O.....	BIOMATHEMATICS AND COMPUTING IN A CANCER INSTITUTE.....	5R01 CA11430-12	379,048
ORGANIZATION TOTAL	67	12,045,092	

KINGSVILLE

TEXAS AGRICULTURAL AND INDUSTRIAL UNIVERSITY ZIP CODE 78363

PEREZ, JOHN C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08107-04	174,581
ORGANIZATION TOTAL	1	174,581	

LUBBOCK

TEXAS TECH UNIVERSITY ZIP CODE 79409

ANDERSON, JOHN A.....	CLAVINE ALKALOID BIOSYNTHESIS.....	5R01 GM17830-06	22,573
BARTHOLOMEW, BRUCE A.....	CELL MEMBRANES AND GLYCOSIDASE ACTIVITY IN ARTHRITIS.....	5R01 AM17670-03	17,916
BARTSCH, RICHARD A.....	IONOPHORIC STABILIZATION OF CARCINOGEN INTERMEDIATES.....	1R01 CA21421-01	19,193
BEHAL, FRANCIS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05773-03	27,431
FRALICK, JOE A.....	ROLE OF THE BACTERIAL MEMBRANE IN DNA REPLICATION.....	5R01 GM22238-03	26,233
HUGHES, MAYSIE J.....	THE CARDIAC HISTAMINE RECEPTOR.....	2R01 HL16240-04	51,062
KENNY, ALEXANDER D.....	CALCIUM HOMEOSTASIS: ENDOCRINE AND COMPARATIVE ASPECTS.....	5R01 AM19475-03	61,478
MARKWALD, ROGER R.....	MUCOPOLYSACCHARIDE METABOLISM IN CARDIAC ANOMALIES.....	5R01 HL19136-02	48,613
NATHAN, RICHARD D.....	VOLTAGE CLAMP OF EMBRYONIC HEART CELL AGGREGATES.....	1R01 HL20708-01	59,385
OREM, JOHN M.....	BREATHING IN SLEEP: AIRWAY CONTROL AND BLOOD GASES.....	1R01 HL21257-01	24,622
POTTER, DAVID E.....	OCULAR EFFECTS OF SELECTIVE BETA-ADRENERGIC DRUGS.....	1R01 EY02156-01	34,094
ROBERTS, LOU A.....	RESPONSE OF ATRIA TO HYPEROSMOLALITY-MECHANISMS.....	1R01 HL21145-01	35,531
ROBINSON, G WILSE.....	SUBNANOSECOND PRIMARY EVENTS IN BIOLOGY.....	1R01 GM23765-01	40,999
SEVALL, JACK S.....	ANALYSIS OF DNA BINDING NONHISTONE CHROMOSOMAL PROTEINS.....	5R01 GM22653-02	29,564
SONG, PILL-SOON.....	INTERACTIONS BETWEEN DNA AND SKIN-SENSITIZING COUMARINS.....	5R01 CA13598-06	21,848
SONG, PILL-SOON.....	CONFIGURATION ANALYSIS/ELECTRON EXCITATION/BIOMOLECULES.....	5R01 GM23089-02	34,418
YEE, JOHN A.....	CYTODIFFERENTIATION OF PERIODONTAL LIGAMENT FIBROBLASTS.....	5R23 DE04371-02	11,507
ORGANIZATION TOTAL	17	566,467	

PRAIRIE VIEW

TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—PRAIRIE VIEW AGRI. AND MECH. UNIVERSITY ZIP CODE 77445

BERRY, JEWEL E.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08094-03	47,039
ORGANIZATION TOTAL	1	47,039	

RICHARDSON

UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT DALLAS ZIP CODE 75080

BREMER, HANS.....	REGULATION OF BACTERIAL GROWTH.....	5R01 GM15142-09	91,398
CLOWES, ROYSTON C.....	INFECTIOUS DRUG RESISTANCE PLASMIDS.....	2R01 AI10468-06	87,355
GRAY, DONALD M.....	SEQUENCE-DEPENDENCE OF POLYNUCLEOTIDE CONFORMATION-II.....	5R01 GM19060-06	64,548
HARM, WALTER F.....	BACTERIA & PHAGE RECOVERY FROM ULTRAVIOLET DAMAGE.....	5R01 GM12813-11	53,727
JAGGER, JOHN.....	ACTION OF NEAR-ULTRAVIOLET RADIATION ON CELLS.....	5R01 AM14893-08	105,071
JAGGER, JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07133-08	48,732

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
MARSH, ROBERT C.....	STRUCTURE OF BACTERIAL CHROMOSOME REPLICATION ORIGIN.....	1R01 GM23608-01	60,157
MOUSHEGIAN, GEORGE.....	BINAURAL NEUROPHYSIOLOGY.....	5R01 NS07925-07	73,957
ROESER, ROSS J.....	CENTRAL AUDITORY PROCESSING IN COMMUNICATION DISORDERS.....	1R01 HD10422-01	101,821
RUPERT, CLAUD S.....	REPAIR OF RADIATION-DAMAGED NUCLEIC ACID.....	2R01 GM16547-12	94,337
SHERRY, ALLAN D.....	LANTHANIDE IONS AS PROBES OF CON A-CELL INTERACTIONS.....	2R01 AM16947-04	69,087
ORGANIZATION TOTAL	11 850,190		
SAN ANTONIO			
SOUTHWEST FOUNDATION FOR RESEARCH AND EDUCATION ZIP CODE 78284			
GELLER, IRVING.....	EFFECTS OF ATMOSPHERIC POLLUTANTS ON BEHAVIOR.....	1R01 ES01246-01A1	83,711
GOLAND, MARTIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05519-15	70,331
KALTER, SEYMOUR S.....	REFERENCE CENTER FOR THE STUDY OF VIRUSES.....	2P40 RR00361-11	285,095
KUNTZ, ROBERT E.....	BLADDER CANCER IN SCHISTOSOMIASIS HAEMATOBIA.....	5R01 CA13208-05	113,866
SHAIKH, ABUBAKAR A.....	CONTRACEPTION BY INDUCTION OF LUTEOLYSIS.....	5R01 HD09964-03	114,808
SHAIN, SYDNEY A.....	PROSTATIC SENESCENCE: A STEROID HORMONE MODEL.....	1R01 AG00090-01	81,734
SHAIN, SYDNEY A.....	PROSTATIC CARCINOGENESIS: DISDIFFERENTIATION IN AGING.....	1R01 CA21864-01	85,225
ORGANIZATION TOTAL	7 834,770		
TEXAS DEPARTMENT OF HEALTH RESOURCES—SAN ANTONIO CHEST HOSPITAL ZIP CODE 78223			
COX, REBECCA A.....	C-ASWS: A COCCIDIODES CELL WALL ANTIGEN.....	1R01 AI13573-01A1	75,118
ORGANIZATION TOTAL	1 75,118		
TRINITY UNIVERSITY ZIP CODE 78284			
ESPEY, LAWRENCE L.....	DYNAMICS OF OVULATION.....	5R01 HD06371-05	45,651
ORGANIZATION TOTAL	1 45,651		
UNITED COLLEGES OF SAN ANTONIO ZIP CODE 78285			
HEALY, SISTER MARY D.....	MULTIDISCIPLINARY BIOMEDICAL RESEARCH PROGRAM.....	5S06 RR08077-05	199,033
ORGANIZATION TOTAL	1 199,033		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT SAN ANTONIO ZIP CODE 78285			
AYLING, JUNE E.....	INHIBITION OF PTERIDINE ENZYMES IN CANCER CHEMOTHERAPY.....	2R01 CA20708-02	80,463
LUDUENA, MARILYN A.....	PLASMA MEMBRANE PROTEINS OF DEVELOPING NEURONS.....	1R01 NS13501-01	61,853
PHILLIPS, JERRY L.....	ROLE OF ZINC TRANSFERRIN IN LYMPHOCYTE TRANSFORMATION.....	2R01 HL19132-03	64,214
ORGANIZATION TOTAL	3 206,530		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284			
ADRIAN, ERLE K, JR.....	CELL PROLIFERATION IN INJURED NERVOUS TISSUE.....	2R01 NS08949-08	33,843
AUST, J BRADLEY.....	PRIMARY BREAST CANCER THERAPY GROUP.....	2R10 CA12029-06	21,241
AUST, J BRADLEY.....	CENTRAL ONCOLOGY GROUP.....	3R10 CA12275-05S3	7,491
BECK, NAMA.....	CATECHOLAMINES AND CYCLIC AMP IN CARDIOVASCULAR SYSTEM.....	5R01 HL19057-02	87,279
BISHOP, VERNON S.....	EVALUATION OF LEFT VENTRICULAR FUNCTION.....	5R01 HL12415-09	69,144
BRIGGS, ARTHUR H.....	MECHANISM OF DRUG-INDUCED SUPERSENSITIVITY.....	5R01 HL17899-03	34,588
BROOKS, BARBARA A.....	VISUAL PROCESSING DURING EYE MOVEMENT.....	5R01 EY01497-04	37,418
BRUNELL, PHILIP A.....	STUDIES OF VARICELLA-ZOSTER VIRUS INFECTION.....	5R01 AI12863-03	36,417
CAMERON, IVAN L.....	PARENTERAL NUTRITION AND CANCER THERAPY.....	5R01 CA16831-03	47,564
CHAMNESS, GARY C.....	MECHANISM OF ANTIESTROGEN ACTION IN BREAST CANCER.....	1R01 CA22343-01	56,588
CHATKOFF, MARVIN L.....	MECHANICS OF OVUM TRANSPORT IN RABBIT OVIDUCT ISTHMUS.....	5R01 HD10194-02	27,069
DRUTZ, DAVID J.....	GONOCOCCAL ARTHRITIS.....	1R01 AI14272-01	59,975
ELBEIN, ALAN D.....	COMPLEX CARBOHYDRATES: STRUCTURE, FUNCTION, SYNTHESIS.....	5R01 HL17783-03	32,428
FRIEDBERG, SAMUEL J.....	O-ALKYL LIPIDS IN SURFACE MEMBRANES OF TUMOR CELLS.....	5R01 CA15047-03	44,414
GATES, GEORGE A.....	COMPREHENSIVE REHABILITATION OF THE LARYNGECTOMEE.....	5R18 CA18629-03	82,029
GEORGE, JAMES N.....	THE ROLE OF MEMBRANE PROTEINS IN PLATELET FUNCTION.....	1R01 HL19996-01	34,876
GOLDSMITH, RALPH S.....	VITAMIN D METABOLISM IN MAN.....	3R01 AM18349-03S1	11,337
GOLDSMITH, RALPH S.....	VITAMIN D METABOLISM IN MAN.....	2R01 AM18349-04	67,400
HAGINO, NOBUYOSHI.....	EXTEROCEPTIVE AND NEUROENDOCRINE REGULATION OF OVULATION.....	5R01 HD10071-03	57,257
HANAHAN, DONALD J.....	BIOCHEMICAL STUDIES ON THE BLOOD COAGULATION PROCESS.....	5R01 HL18852-02	81,982
HARRISON, FRANK.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05654-10	155,138

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
HODGSON, BARRIE J.....	OVIOLCTAL TRANSPORT OF PREIMPLANTATION EMBRYOS.....	5R01 H009339-03	29,690
HORWITZ, LAWRENCE O.....	LEFT VENTRICULAR FUNCTION IN EXERCISE.....	2R01 HL16656-05	112,294
JOHANSON, WALOEMAR G, JR.....	DETERMINANTS OF LUNG BACTERIAL CLEARANCE.....	5R01 HL17890-03	38,764
JOHNSON, JOHN M.....	REGULATION OF SKIN BLOOD FLOW IN MAN.....	1R01 HL20663-01	33,503
KEENAN, ROY W.....	THE METABOLISM AND FUNCTION OF THE POLYPRENOLS.....	5R01 AM17897-03	23,044
KING, RICHARD J.....	PHYSIOLOGICAL REGULATION OF PULMONARY SURFACTANT.....	2R01 HL16725-02	51,056
KING, RICHARD J.....	PHYSICO-CHEMICAL INTERACTIONS IN PULMONARY SURFACTANT.....	1R01 HL19676-01	38,376
KNIKER, WILLIAM T.....	IMMUNOTHERAPY OF CANCER AND INFECTION IN PRIMATES.....	3R01 CA15842-02S3	12,285
KOLB, WILLIAM P.....	C-RECEPTOR DEPENDENT LYSIS OF MALIGNANT CELLS.....	7R01 CA23049-01	37,296
KUNAU, ROBERT T, JR.....	EFFECT OF PERFUSION PRESSURE & PGE2 ON NAO EXCRETION.....	2R01 HL18875-02	58,587
LEE, JOHN C.....	REGULATION OF FETAL HEMOGLOBIN SYNTHESIS IN HUMANS.....	1R01 HL20939-01	30,200
LEVINSON, CHARLES.....	PHOSPHATE TRANSPORT AND METABOLISM IN CARCINOMA CELLS.....	5R01 CA10917-09	34,639
MASORO, EDWARD J.....	AN APPROACH TO THE BIOCHEMICAL BASIS OF AGING.....	5R01 AG00166-03	92,461
MASORO, EDWARD J.....	PHYSIOLOGIC REGULATION OF LIPID METABOLISM.....	2R01 AM17476-04	69,465
MATTINGLY, STEPHEN J.....	GROWTH CHARACTERISTICS OF STREPTOCOCCUS MUTANS.....	5R23 DE04444-02	28,630
MC GILL, HENRY C, JR.....	A/S SCOR: ATHEROSCLEROSIS IN NONHUMAN PRIMATES.....	1P50 HL19362-01	1,002,636
MC GUIRE, WILLIAM L.....	MECHANISM OF HORMONAL CONTROL OF MAMMARY CARCINOMA.....	5R01 CA11378-08	95,877
MC NAY, JOHN L, JR.....	METABOLISM AND PHARMACOKINETICS OF AMPHOTERICIN B.....	5R01 GM23734-02	63,125
NISHIMURA, JONATHAN S.....	MECHANISM OF ACTION OF SUCCINIC THIOKINASE.....	5R01 GM17534-07	48,585
NORLING, BARRY K.....	HARD COATING OF DENTAL ROTARY CUTTING INSTRUMENTS.....	5R23 OE04407-02	23,500
OLSON, MERLE S.....	REGULATION OF ENERGY METABOLISM IN LIVER.....	5R01 AM19473-02	25,683
OLSON, MERLE S.....	INTEGRATED REGULATION OF MYOCARDIAL ENERGY METABOLISM.....	5R01 HL20544-02	54,769
PAQUE, RONALD E.....	IMMUNOTHERAPY OF TUMORS WITH CELL LYSATES.....	5R01 CA17958-02	61,022
PAUERSTEIN, CARL J.....	PHYSIOLOGY OF TUBAL OVUM TRANSPORT.....	5R01 H009309-02	32,123
PAUERSTEIN, CARL J.....	CENTER FOR RESEARCH IN REPRODUCTIVE BIOLOGY.....	1P30 HO10202-01A1	423,705
PINCKARO, ROBERT N.....	COMPLEMENT ACTIVATION BY HEART SUBCELLULAR MEMBRANES.....	5R01 HL20394-02	57,492
PROPPE, DUANE W.....	CONTROL OF THE CIRCULATION IN HEAT-STRESS.....	1R01 HL20766-01	42,388
RENNELS, EDWARD G.....	IMMUNOCYTOLOGIC STUDIES ON PITUITARY GONADOTROPHINS.....	5R01 AM12583-09	35,307
SEARS, DAVID A.....	STUDIES OF ERYTHROCYTE AND PLATELET MEMBRANE PROTEIN.....	5R01 AM17137-03	46,669
SERWER, PHILIP.....	BIOPHYSICS AND GENETICS OF VIRAL DNA PACKAGING.....	1R01 GM24365-01	48,549
SHEPHERD, ALBERT P, JR.....	EXTRINSIC CONTROL OF INTESTINAL MICROCIRCULATION.....	5R01 HL18080-03	33,440
SHERIDAN, PETER J.....	ANDROGEN RECEPTORS IN THE BRAIN.....	5R01 NS12933-02	67,512
STEIN, JAY H.....	PHYSIOLOGY AND PATHOPHYSIOLOGY OF KIDNEY FUNCTION.....	5P01 AM17387-05	471,954
WEINER, MARC H.....	IMMUNODIAGNOSIS OF SYSTEMIC CANCER.....	1R01 AI13770-01	53,899
WHARTON, DAVID C.....	PROPERTIES OF CYTOCHROME OXIDASE.....	2R01 HL16686-03	82,318
WILLIAMS, VICK F.....	ULTRASTRUCTURAL ASPECTS OF INJURED CEREBRAL CORTEX.....	5R01 NS09693-07	22,413
WINBORN, WILLIAM B.....	ELECTRON MICROSCOPIC STUDIES OF PARIETAL CELLS.....	5R01 AM12950-09	40,490
WINTERS, WENDELL O.....	ANALYSIS OF IMMUNE RESPONSE IN LYMPHOSARCOMAS.....	5R01 CA20555-02	54,162
ORGANIZATION TOTAL	59	4,663,386	

TEMPLE

SCOTT AND WHITE MEMORIAL HOSPITAL ZIP CODE 76501

BONNET, JOHN D.....	SOUTHWEST ONCOLOGY GROUP.....	5R10 CA10187-09	38,100
COULTER, JOHN B, III.....	MEASUREMENT OF INSULIN IN AQUEOUS AND VITREOUS OF RABBIT.....	3R01 EY00404-06S1	28,000
ORGANIZATION TOTAL	2	66,100	

STATE TOTAL 690 65,751,924

UTAH

LOGAN

UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY ZIP CODE 84322

HANSEN, ROGER G.....	PANTOTHENIC ACID NUTRITIONAL STATUS OF HUMANS.....	5R01 AM18746-02	44,230
JOHNSON, RALPH M.....	BIOMEDICAL RESEARCH SUPPORT GROUP.....	5S07 RR07093-11	22,172
LANGERMAN, NEAL R.....	THERMODYNAMIC STUDIES OF PROTEIN REACTIONS: LUCIFERASE.....	5R01 GM22049-03	38,034
SPENCE, JACK T.....	THE FUNCTION OF MOLYBDENUM IN BIOLOGICAL SYSTEMS.....	5R01 GM08347-17	37,650

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
ORGANIZATION TOTAL	4	142,086	
PROVO			
BRIGHAM YOUNG UNIVERSITY		ZIP CODE 84602	
DALLEY, N KENT	X-RAY STUDY OF METAL-CYCLIC POLYETHER COMPLEXES	5R01 GM18811-05	37,753
GUBLER, CLARK J	PHYSIOLOGICAL FUNCTIONS AND METABOLISM OF THIAMINE	5R01 AM02448-18	43,441
ORGANIZATION TOTAL	2	81,194	
SALT LAKE CITY			
LATTER-DAY SAINTS HOSPITAL SYSTEM		ZIP CODE 84143	
BEAN, LEE L	POPULATION STUDIES OF MORMON GENEALOGIES	2R01 HD10267-02	77,324
ORGANIZATION TOTAL	1	77,324	
LATTER-DAY SAINTS HOSPITAL SYSTEM—LATTER-DAY SAINTS HOSPITAL		ZIP CODE 84143	
ALTMAN, STANLEY J	CENTRAL ONCOLOGY GROUP	3R10 CA12273-05S3	6,509
PLENK, HENRY P	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA17906-02	39,376
PRYOR, T ALLAN	COMPUTER CONTROLLED TWO-DIMENSIONAL ECHOCARDIOGRAPHY	5R01 HL16487-04	46,954
SKOLNICK, MARK H	CANCER INCIDENCE AND RISK FACTORS BY KINSHIP	5R01 CA16573-03	110,440
ORGANIZATION TOTAL	4	203,279	
LATTER-DAY SAINTS HOSPITAL SYSTEM—PRIMARY CHILDREN'S MEDICAL CENTER		ZIP CODE 84103	
CLARK, JUSTIN S	A SELF-CALIBRATING IN VIVO BLOOD GAS MONITOR	1R01 HL20351-01	100,589
ORGANIZATION TOTAL	1	100,589	
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH		ZIP CODE 84112	
ABILDSKOV, J A	CARDIAC ELECTROPHYSIOLOGY	5P01 HL13480-08	482,503
ABILDSKOV, J A	DEFINITION OF HIGH RISK CARDIAC STATES	5R01 HL18788-03	37,818
ANDRADE, JOSEPH D	SYNTHETIC HYDROGELS AS BLOOD TOLERABLE MATERIALS	5R01 HL16921-03	30,298
ANDRADE, JOSEPH D	SYNTHETIC HYDROGELS AS BLOOD TOLERABLE MATERIALS	2R01 HL16921-04	99,448
ANDRADE, JOSEPH D	ALBUMIN, ENDOTHELIUM, AND HEMOCOMPATIBILITY	5R01 HL18519-02	97,020
ATHENS, JOHN W	SOUTHWEST ONCOLOGY GROUP	5R10 CA13238-06	85,624
BAKER, WILLIAM K	GENETIC CONTROL OF DIFFERENTIAL CELL FUNCTION	1R01 GM23707-01	56,513
BENTRUDE, WESLEY G	GEOMETRIES OF C-AMP AND CYCLOPHOSPHAMIDE ANALOGS	5R01 CA11045-09	76,891
BOEHM, ROBERT F	DEVELOPMENT OF NEW PROCESSES FOR PREVENTIVE DENTISTRY	5R01 DE03554-05	57,048
BROOM, ARTHUR D	POLYRIBONUCLEOTIDES AS TUMOR AND VIRUS INHIBITORS	5R01 CA11935-07	76,919
BROOM, ARTHUR D	PYRIDOPYRIMIDINES AS ANTITUMOR AGENTS	5R01 CA12823-06	44,039
BROWN, HAROLD M	TRANSDUCTION MECHANISM OF PHOTORECEPTORS	5R01 EY00762-06	112,526
BURGESS, MARY J	BASIC AND CLINICAL STUDIES OF THE ST-T DEFLECTION	5R01 HL12611-09	85,660
BURGESS, PAUL R	GROWTH AND INFORMATION SIGNALLING IN A SENSORY SYSTEM	5R01 NS08769-08	57,369
BURKE, JOHN P	CONTROL OF HOSPITAL-ACQUIRED URINARY TRACT INFECTIONS	5R01 AI11950-04	55,146
CAPECCHI, MARIO R	THE CONTROL, ASSEMBLY AND TERMINATION OF PROTEINS	2R01 GM21168-04	105,564
CARDINAL, JOHN R	CONTROLLED RELEASE OF PROGESTINS IN POLYMERIC SYSTEMS	5R01 HD09791-02	27,681
CARROLL, DANA	DEVELOPMENTAL REGULATION OF SPECIFIC EUKARYOTIC GENES	5R01 GM22232-03	52,097
CASJENS, SHERWOOD R	BACTERIOPHAGE P22 ASSEMBLY AND ITS GENETIC CONTROL	5R01 GM21975-03	66,731
CHRISTENSEN, DOUGLAS A	BIOLOGICAL TEMPERATURE SENSOR USING OPTICAL ETALONS	5R01 GM23373-02	36,484
COHEN, ARTHUR M	LYSOSOMES AND CANCER CHEMOTHERAPY-INDUCED CELL DEATH	5R01 CA16492-03	45,726
COLE, BARRY C	ROLE OF MYCOPLASMAS IN ANIMAL AND HUMAN DISEASE	5R01 AM02255-19	56,623
CUELLAR, ORLANDO	MEIOSIS IN PARTHENOGENETIC VERTEBRATES	5R01 GM19533-03	15,601
DAVERN, CEDRIC I	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05428-16	213,709
DAYNES, RAYMOND A	ULTRAVIOLET LIGHT RADIATION AND IMMUNOREGULATION	1R01 CA22126-01	124,686
DETHLEFSEN, LYLE A	OPTIMIZATION OF RADIATION THERAPY	5R01 CA14165-05	96,016
DICKINSON, WILLIAM J	THE CONTROL OF ENZYME EXPRESSION IN DEVELOPMENT	1R01 HD10723-01	55,772
DURNEY, CARL H	MICROWAVE METHODS OF LUNG WATER MEASUREMENT	1R01 HL20110-01	68,962
DUSTMAN, ROBERT E	ELECTROPHYSIOLOGICAL INDICES OF AGING	1R01 AG00568-01	72,477
EDMUNDSON, ALLEN B	IMMUNOGLOBULINS IN MULTIPLE MYELOMA AND AMYLOIDOSIS	5R01 CA19616-02	174,797
EHRENFELD, ELVERA R	VIRUS-HOST CELL INTERACTIONS	5R01 AI12387-03	59,103
EPSTEIN, WILLIAM W	STUDIES ON FARNESYL PYROPHOSPHATE COUPLING	5R01 GM20196-05	52,847

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
EYRING, HENRY.....	EFFECTS OF STRUCTURE ON BIOLOGICAL MECHANISMS.....	5R01 GM12862-13	50,595
EYZAGUIRRE, CARLOS E.....	CHEMORECEPTOR ACTIVITY OF THE CAROTID BODY.....	5R01 NS05666-13	71,496
EYZAGUIRRE, CARLOS E.....	NEUROPHYSIOLOGY PROGRAM PROJECT (PERIPHERAL AND CNS).....	5P01 NS07938-09	377,724
FANG, SEN-MAW.....	GONADAL HORMONE RECEPTORS AND HUMAN PROSTATIC CANCER.....	5R01 CA13228-06	40,417
FANG, SEN-MAW.....	PHARMACODYNAMICS OF CONTRACEPTIVE PROGESTINS.....	5R01 HD09420-03	40,451
FIDONE, SALVATORE J.....	CHEMICAL TRANSMISSION IN SENSORY RECEPTORS.....	5R01 NS12636-03	35,075
FRANKLIN, MICHAEL R.....	MODIFICATION OF PROCARCINOGEN ENZYMATIC ACTIVATION.....	2R01 CA15760-04	49,834
GANDHI, OM P.....	NONTHERMAL EFFECTS OF MICROWAVES ON LIVING TISSUE.....	5R01 CA20419-02	187,101
GELFAND, DONNA M.....	STUDY OF CHILDREN'S CHARITY BEHAVIOR.....	5R01 HD06914-05	43,579
GEORGOPOULOS, CONSTANTINE.....	BACTERIAL FUNCTIONS IN PHAGE DEVELOPMENT.....	1R01 GM23917-01	74,506
GIBBS, FREDERIC A, JR.....	HYPERTHERMIA—A DIFFERENTIAL RADIOSENSITIZER IN VIVO.....	1R01 CA20333-01	81,187
GIDDINGS, J CALVIN.....	BIOMEDICAL SEPARATIONS: OPTIMIZATION AND NEW METHODS.....	5R01 GM10851-20	92,239
GLASGOW, LOWELL A.....	INTERFERON AND HOST RESISTANCE TO VIRAL INFECTIONS.....	5R01 AI10217-08	79,429
GOLDEN, CAROLE A.....	MACROPHAGE FATTY ACIDS IN TUMOR CELL CYTOTOXICITY.....	5R01 CA19537-02	57,319
GRANT, DAVID M.....	CARBON-13 MAGNETIC RESONANCE—METHODS AND THEORY.....	5R01 GM08521-17	80,394
GRANT, DAVID M.....	REGIONAL RESEARCH FACILITY IN NMR.....	5P41 RR00574-07	199,378
GURNEY, ELIZABETH T.....	GROWTH CONTROL AND VIRAL GENE EXPRESSION.....	1R01 CA21797-01	56,933
HIBBS, JOHN B, JR.....	TRYPAN BLUE TUMOR ENHANCEMENT: STUDY OF MECHANISMS.....	5R01 CA14045-05	54,181
HILL, HARRY R.....	MECHANISM OF HOST RESISTANCE TO GROUP B STREPTOCOCCI.....	1R01 AI13150-01A1	37,402
HORCH, KENNETH W.....	SPECIFICITY IN REGENERATING SENSORY NEURONS.....	1R01 NS13283-01	37,075
HUANG, WAI M.....	STUDIES ON T4 DNA REPLICATION.....	5R01 GM21960-03	37,205
JACOBSEN, STEPHEN C.....	A UNIFIED CONTROL THEORY FOR ARTIFICIAL LIMBS.....	1R01 GM23499-01	123,708
JARCHO, LEONARD W.....	STROKE ACUTE CARE RESEARCH UNIT.....	5P17 NS11098-03	57,383
JOHANSON, CONRAD E.....	ONTOGENY OF HOMEOSTATIC TRANSPORT IN CHOROID PLEXUS.....	1R01 NS13988-01	24,020
KIM, SUNG-WAN.....	INITIAL EVENTS IN THROMBUS FORMATION ON SURFACES.....	2R01 HL17623-04	37,085
KIM, SUNG-WAN.....	A NOVEL APPROACH TO NONTHROMBOGENIC POLYMER SURFACES.....	1R01 HL20251-01	35,845
KOLAKOFSKY, DANIEL.....	REPLICATION OF PARAINFLUENZA VIRUSES.....	5R01 AI12921-02	33,700
KOLFF, WILLEM J.....	CARDIAC ASSIST DEVICES AND ARTIFICIAL HEARTS.....	5P01 HL13738-07	442,459
KOLFF, WILLIAM J.....	INTRA-AORTIC BALLOON PUMPING.....	1R01 HL20803-01	52,711
KRALIOS, FANY A.....	FUNCTIONAL SYMPATHETIC DEVELOPMENT IN NEONATAL HEARTS.....	2R01 HL17367-04	54,751
KRIPKE, BERNARD R.....	ORGANIZATION OF STRIATE CORTEX.....	3R01 EY01316-03S1	6,946
KUBY, STEPHEN A.....	STUDIES ON ADENOSINE TRIPHOSPHATE TRANSPHOSPHORYLASES.....	5R01 AM07824-15	64,495
KUEHL, LEROY R.....	INTRACELLULAR SITE OF SYNTHESIS OF SPECIFIC PROTEINS.....	5R01 GM13864-12	54,874
KUSHNER, JAMES P.....	PORPHYRIN BIOSYNTHESIS IN NORMAL AND DISEASE STATES.....	1R01 AM20503-01	102,262
LAHEY, M EUGENE.....	CHILDREN'S CANCER STUDY GROUP A.....	2R10 CA10198-10	59,280
LARK, CYNTHIA A.....	THE ROLE OF METHYLATION IN DNA REPLICATION AND REPAIR.....	5R01 GM19703-04	46,050
LARK, KARL G.....	CELLULAR REGULATION OF GROWTH AND DNA SYNTHESIS.....	5R01 AI10056-08	116,797
LARK, KARL G.....	DETECTING MUTATIONS INDUCED BY ENVIRONMENTAL POLLUTANTS.....	1R01 ES01498-01	118,002
LAZARUS, HARRISON M.....	EFFECTS OF ORGAN STORAGE ON RENAL RNA METABOLISM.....	5R01 AM16184-06	66,151
LEE, G RICHARD.....	STUDIES IN COPPER AND IRON METABOLISM.....	1R01 AM20207-01	195,993
LINKER, ALFRED.....	STRUCTURE AND FUNCTION OF MUCOPOLYSACCHARIDES.....	5R01 AM13412-17	43,301
LYON, JOSEPH L.....	EPIDEMIOLOGY OF CERVICAL CANCER IN AREA OF LOW INCIDENCE.....	5R01 CA19871-02	80,708
LYON, JOSEPH L.....	DIET AND COLON CANCER IN A LOW RISK POPULATION.....	5R01 CA21007-02	196,783
MC CLOSKEY, JAMES A.....	MASS SPECTROMETRY OF NUCLEIC ACIDS AND THEIR ANALOGS.....	5R01 CA18024-03	84,192
MC CLOSKEY, JAMES A.....	MASS SPECTROMETRY OF NUCLEIC ACIDS AND THEIR ANALOGS.....	5R01 GM21584-03	137,981
MICHL, JOSEF.....	DIRECTIONAL OPTICAL PROPERTIES OF BIOMOLECULES.....	5R01 GM19450-05	41,232
MICHL, JOSEF.....	MAGNETIC CIRCULAR DICHROISM OF ORGANIC MOLECULES.....	5R01 GM21153-04	21,646
MILLHOUSE, O EUGENE.....	STRUCTURAL SUBSTRATES OF HYPOTHALAMIC FUNCTIONS.....	5R01 NS09001-06	31,167
MOODY, FRANK G.....	MECHANISMS OF GASTRIC ULCEROGENESIS.....	5R01 AM16233-07	79,634
MOODY, FRANK G.....	TRAUMA AND BURN RESEARCH CENTER.....	5P50 GM23095-02	342,880
MOSS, STANLEY D.....	SENSITIVE FIELD-EFFECT TRANSDUCERS.....	5R01 GM22952-02	154,239
NICHOLS, WILLIAM K.....	INSULIN REGULATION OF LEUKOCYTE METABOLISM.....	5R01 AM16330-05	37,470
NICHOLS, WILLIAM K.....	CYCLIC NUCLEOTIDES AND ALVEOLAR MACROPHAGE ACTIVATION.....	1R01 HL20125-01	45,697
O'NEILL, FRANK J.....	CONTROL OF NUCLEAR EVENTS IN NORMAL & NEOPLASTIC CELLS.....	2R01 CA15141-04	53,787
OHLSEN, JOEL D.....	STUDIES ON INTERACTIONS OF DRUGS AND X-RAYS IN VIVO.....	1R01 CA22188-01	84,055
OLIVERA, BALDOMERO M.....	DISCONTINUOUS DNA SYNTHESIS IN VITRO.....	5R01 CA12096-07	62,205
PARKINSON, JOHN S.....	GENETICS OF CHEMOTACTIC BEHAVIOR IN ESCHERICHIA COLI.....	5R01 GM19559-05	49,394
PARMA, DAVID H.....	THE GENETICS OF STRUCTURALLY ALTERED PHAGE T4 GENOMES.....	5R01 AI09943-08	31,999
POULTER, C DALE.....	NUCLEIC ACIDS CONTAINING ANTITUMOR ANTIMETABOLITES.....	5R01 CA16824-03	36,201
POULTER, C DALE.....	SUBSTRATE ANALOGS FOR TERPENE CONDENSATION REACTIONS.....	2R01 GM21328-03	92,291

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
PRAHL, JAMES W.....	STRUCTURAL BASIS OF THE FUNCTIONS OF HUMAN COMPLEMENT.....	5R01 AI13483-02	65,922
RECHSTEINER, MARTIN C.....	MICROINJECTION OF MACROMOLECULES AND GENE EXPRESSION.....	5R01 GM23052-02	47,163
REED, OONAL J.....	ROLE OF THE CHOROID PLEXUS IN REGULATING THE CSF.....	5R01 NS12869-02	48,665
RENZETTI, ATTILIO O, JR.....	ROLE OF INFECTION IN EMPHYSEMA.....	5R01 HL14703-11	58,260
RILLING, HANS C.....	MECHANISMS AND ENZYMES OF TERPENE BIOSYNTHESIS.....	3R01 AM13140-16S1	16,976
RILLING, HANS C.....	MECHANISMS AND ENZYMES OF TERPENE BIOSYNTHESIS.....	2R01 AM13140-17	90,821
RINGHAM, GARY L.....	CALCIUM AND TRANSMITTER RELEASE AT A CENTRAL SYMAPSE.....	1R01 NS13884-01	51,535
ROTH, JOHN R.....	AN ANALYSIS OF GENES INVOLVED IN TRNA PRODUCTION.....	1R01 GM23408-01	112,224
ROTI ROTI, JOSEPH L.....	RADIATION INDUCED ALTERATIONS OF CHROMOSOMAL PROTEINS.....	5R01 CA16465-03	33,793
SAMUELS, LEO T.....	STEROID HORMONE METABOLISM AND TUMOROGENIC ACTION.....	3R01 CA10935-14S1	11,455
SAMUELS, LEO T.....	STEROID HORMONE METABOLISM AND TUMOROGENIC ACTION.....	2R01 CA10935-15	41,053
SAMUELS, LEO T.....	STEROID TRANSFER IN NORMAL AND MALIGNANT ENDOCRINE CELLS.....	5R01 CA13291-06	56,228
SANDBERG, LAWRENCE B.....	BIOCHEMICAL STUDIES OF BLOOD VESSEL FORMATION & OISEASE.....	5R01 HL11963-09	93,082
SANDBERG, LAWRENCE B.....	CHEMICAL ANALYSIS OF HUMAN ARTERIAL ELASTIN.....	1R01 HL20546-01	36,752
SCHAFFER, SUSAN A.....	CELL POPULATIONS COMPETENT TO FORM AND RESORB BONE.....	5R23 DE03906-03	23,538
SMITH, CHARLES B.....	THE INFECTIOUS ETIOLOGY OF RHEUMATOID ARTHRITIS.....	5R01 AM13463-08	72,471
SORENSEN, JAMES A.....	IMPROVED TECHNIQUE FOR IODINE QUANTITATION.....	5R01 GM22983-02	25,412
SORENSEN, JAMES A.....	MOVING-SLIT RADIOGRAPHY: X-RAY CONTRAST ENHANCEMENT.....	1R01 GM24029-01	107,700
SPIKES, JOHN D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07092-12	124,773
SUMMERS, DONALD F.....	COMPOSITION, ASSEMBLY AND REPLICATION OF RNA VIRUSES.....	5R01 AI12316-03	127,926
SWANSON, JOHN L.....	STUDIES ON GONOCOCCUS INFECTION.....	5R01 AI11073-05	55,225
SWEAT, FLOYD W.....	BIOCHEMICAL STUDY OF LIVER RETICULOENOTHELIAL CELLS.....	5R01 AM18208-03	40,455
SYNHORST, DAVID P.....	EFFECT OF VASOACTIVE AGENTS ON LEFT-TO-RIGHT SHUNTS.....	1R23 HL21203-01	51,034
TOWNSEND, LEROY B.....	BICYCLIC, PYRIMIOINE-LIKE AND PYRIMIDINE NUCLEOSIDES.....	5R01 CA11147-09	40,098
TOWNSEND, LEROY B.....	THE SYNTHESIS OF C-NUCLEOSIDES RELATED TO SHOWDOMYCIN.....	5R01 CA14252-05	30,920
TOWNSENO, LEROY B.....	CELLULAR-BIOCHEMICAL STUDIES ON ANTIMETABOLITES.....	1R01 CA20581-01	68,212
TYLER, FRANK H.....	THE STUDY OF METABOLIC AND HEREDITARY DISORDERS.....	5P01 AM00002-31	287,488
TYLER, FRANK H.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00064-13	490,431
UCHIC, JOHN T.....	SYNTHETIC POLYNUCLEOTIDES IN CANCER CHEMOTHERAPY.....	5R01 CA16548-03	47,725
VELICK, SIDNEY F.....	THE PROPERTIES AND METABOLISM OF INDIVIOUAL PROTEINS.....	5R01 AM13115-14	56,614
WALKER, JOHN L.....	INTRACELLULAR IONIC ACTIVITIES IN HEART MUSCLE.....	5R01 HL18053-02	39,823
WARNER, HOMER R.....	BIOMEDICAL ENGINEERING RESOURCE.....	2P41 RR00012-16	136,465
WILLIAMS, ROGER R.....	GENETIC PATTERNS IN DEATHS FROM MI AND STROKE IN UTAH.....	1R01 HL21088-01	95,647
WILSON, DANA E.....	LIPOPROTEIN LIPASE AND LIPOPROTEIN REMOVAL MECHANISMS.....	5R01 HL13626-06	62,728
WOLF, HAROLD H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05738-06	79,462
WOLSTENHOLME, DAVID R.....	STRUCTURE OF MITOCHONDRIAL DNA.....	2R01 GM18375-07	96,189
ORGANIZATION TOTAL	128	10,886,857	
WESTMINSTER COLLEGE ZIP CODE 84105			
MILES, DANIEL W.....	MCD STUDY OF TAUTOMERISM OF NUCLEIC ACID BASES.....	5R01 GM20765-03	16,366
ORGANIZATION TOTAL	1	16,366	
STATE TOTAL	141	11,507,695	
VERMONT			
BENNINGTON			
PUTNAM MEMORIAL HOSPITAL ZIP CODE 05201			
ELLEM, KAY A.....	REPLICATION CONTROL: NORMAL VS. TRANSFORMEO HUMAN CELLS.....	5R01 CA17749-03	92,087
ELLEM, KAY A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	1S07 RR05793-01	17,096
RHODE, SOLON L, III.....	REPLICON CONTROL IN NORMAL AND TRANSFORMING CELLS.....	2R01 CA13414-04A2	40,205
TOOLAN, HELENE W.....	VIRUSES AND CANCER—ROLE OF LATENT VIRUSES IN RESISTANCE.....	5R01 CA07826-13	125,378
TOOLAN, HELENE W.....	STUDY OF A VIRUS-INDUCED CRANIOFACIAL ANOMALY.....	5R01 DE04512-02	40,397
ORGANIZATION TOTAL	5	315,163	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VERMONT—Continued			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
ALBERTINI, RICHARD J.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19381-02	122,648
ALPERT, NORMAN R.....	ACTIVATION AND CONTRACTION HEAT IN ENLARGED HEARTS.....	5R01 HL17592-02	86,042
ALPERT, NORMAN R.....	CONFERENCE-WORKSHOP ON MUSCLE ENERGETICS.....	1R13 HL21569-01	10,130
BRESNICK, EDWARD.....	POLYCYCLIC HYDROCARBON METABOLISM AND CARCINOGENESIS.....	5R01 CA20711-02	65,587
BRESNICK, EDWARD.....	IN VIVO-IN VITRO MODEL FOR IDENTIFICATION OF CARCINOGENS.....	1R01 CA21258-01	52,989
BROWN, G STEPHEN.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA17571-02	43,324
CLEMMONS, JACKSON J.....	EMBRYONIC RENAL INJURY: A FACTOR IN PULMONARY DISEASE.....	5R01 HD08864-03	57,009
COIL, JAMES A, JR.....	STUDIES OF PULMONARY INFECTION IN SPLENECTOMIZED ANIMALS.....	1R01 HL20170-01	53,095
CRAIGHEAD, JOHN E.....	DIABETES MODELS INDUCED BY VIRAL AND IMMUNE INSULTS.....	1R01 AM20790-01	113,949
CRAIGHEAD, JOHN E.....	LUNG CENTER SUPPORT.....	3P60 HL17292-02S1	65,709
CRAIGHEAD, JOHN E.....	LUNG CENTER SUPPORT.....	5P60 HL17292-03	1,270,736
CUTRONEO, KENNETH R.....	ANTI-INFLAMMATORY STEROIDS AND COLLAGEN SYNTHESIS.....	5R01 AM19808-02	52,237
DANFORTH, ELLIOT, JR.....	EFFECTS OF OVER- AND UNDERNUTRITION ON THYROID HORMONE.....	5R01 AM18535-03	85,504
DIONNE, VINCENT E.....	CHEMICAL RECEPTOR MECHANISMS.....	1R01 NS13581-01	50,643
DUNN, MICHAEL J.....	PROSTAGLANDINS, THE KIDNEY AND HYPERTENSION.....	1R01 HL20224-01	57,150
EVANS, JOHN N.....	MECHANICAL PROPERTIES OF ISOLATED SMALL BRONCHIOLES.....	1R23 HL21539-01	44,457
FOSTER, ROGER S, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20203-01	36,868
GANS, JOSEPH H.....	ADAPTATION TO CHEMICAL INJURY.....	1R01 CA21863-01	48,847
GIBBONS, WALTER R.....	VOLTAGE CONTROL OF CONTRACTION IN HEART.....	5R01 HL14614-06	46,614
HALPERN, WILLIAM.....	CONTRACTILE PROPERTIES OF HYPERTENSIVE ARTERIOLES.....	2R01 HL17335-04	73,585
HAMRELL, BURT B.....	ACTIVE TENSION AND SHORTENING IN CARDIAC HYPERTROPHY.....	1R01 HL21182-01	65,422
JAFFE, JULIAN J.....	ANTIMETABOLITE TARGETS IN SCHISTOSOMES AND FILARIAE.....	5R22 AI12060-03	79,806
JOHNSON, ROBERT J.....	KNEE LIGAMENTOUS INJURIES IN SPORTING ACTIVITIES.....	5R01 AM18499-03	102,997
JOHNSTONE, DONALD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07125-08	41,256
KELLEHER, PHILIP C.....	ALPHA-FETOPROTEIN SYNTHESIS BY HEPATOMA CELLS IN VITRO.....	1R01 CA22099-01	47,959
KELLEHER, PHILIP C.....	ALPHA-FETOPROTEIN IN FETUSES WITH NEURAL TUBE DEFECTS.....	5R01 HD08802-03	65,176
KELLEY, JASDN.....	COLLAGEN SYNTHESIS IN PULMONARY FIBROSIS CELLS.....	1R23 HL21504-01	43,085
KRAKOFF, IRWIN H.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	2P20 CA16209-03	121,238
KUEHNE, MARTIN E.....	TOTAL SYNTHESIS OF INDOLE ALKALOID.....	5R01 CA12010-15	92,554
KUNIN, ARTHUR S.....	CONTROL FACTORS IN RENAL MITOCHONDRIAL NH ₃ PRODUCTION.....	5R01 AM18251-03	84,608
LAMBERT, LLOYD M, JR.....	MAGNETOSONIC IMAGE CONVERTER.....	5R01 GM20226-04	40,729
LEPESCHKIN, EUGENE.....	QUANTITATIVE STUDY OF T-WAVE MECHANISMS.....	5R01 HL01486-23	79,574
LOW, ROBERT B.....	BIOLOGICAL FUNCTION OF MYOSIN LIGHT CHAINS.....	5R01 AM15594-06	44,353
LDW, ROBERT B.....	CORRELATED STUDIES OF PULMONARY FIBROSIS.....	2P50 HL14212-06	757,741
LUGINBUHL, WILLIAM H.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00109-14	303,037
LUGINBUHL, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05429-16	150,424
MOEHRING, THOMAS J.....	MAMMALIAN CELL RESPONSE TO DIPHTHERIA TOXIN.....	5R01 AI09100-08	79,546
MORELAND, MOREY S.....	MORPHOLOGIC CHANGES AFTER FEMORAL ROTATION OSTEOTOMY.....	5R01 AM17608-04	39,391
NYBORG, WESLEY L.....	BIOPHYSICAL BASIS FOR THRESHOLDS IN BIO-ULTRASOUND.....	2R01 GM08209-13	115,012
PARSONS, RODNEY L.....	DESENSITIZATION OF SYMPATHETIC POSTGANGLIONIC NEURONS.....	5R01 NS12306-03	41,681
PHILLIPS, CHARLES A.....	STUDIES OF A TRANSMISSIBLE AGENT IN CROHN'S DISEASE.....	3R01 AM17837-03S1	22,338
RUSH, STANLEY.....	EFFECT OF RESISTIVITY VARIATIONS ON ELECTROCARDIOGRAM.....	5R01 HL09831-11	64,720
SAYER, JANE M.....	TIMING OF PROTON TRANSFER IN CARBONYL ADDITIONS.....	5R01 GM22938-02	25,363
SCHAEFFER, WARREN I.....	STUDIES OF IN VITRO CARCINOGENESIS WITH AFLATOXIN B ₁	5R01 CA12056-06	57,190
SIMS, ETHAN A.....	METABOLIC INTERRELATIONSHIPS OF OBESITY AND DIABETES.....	5R01 AM10254-12	129,824
SMITH, CAROL J.....	HEPATOMA ALPHA FETOPROTEIN: CHEMISTRY AND METABOLISM.....	3R01 CA15222-03S1	8,039
SOYKA, LESTER F.....	ONTOGENETIC STUDIES OF DRUG METABOLISM.....	5R01 CA19647-05	62,787
WEBB, GEORGE D.....	EFFECT OF INSECTICIDES ON CATION TRANSPORT AND ATPASE.....	3R01 ES00885-03S1	8,291
YATES, JEROME W.....	CANCER CARE AND REHABILITATION IN A RURAL SETTING.....	5R18 CA17868-03	433,903
ORGANIZATION TOTAL	49 5,645,167		
STATE TOTAL	54 5,960,330		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA			
ARLINGTON			
ARCTIC INSTITUTE OF NORTH AMERICA ZIP CODE 22201			
HOUSTON, CHARLES S.....	HUMAN PHYSIOLOGY AT 17,500 FEET IN MOUNTAIN ENVIRONMENT.....	5R01 HL14102-06	41,700
ORGANIZATION TOTAL	1 41,700		
BLACKSBURG			
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY ZIP CODE 24061			
BUNCE, GEORGE E.....	CATARACT FROM A VEGETABLE PROTEIN BASED DIET.....	5R01 EY01060-07	49,121
CUMMINS, CECIL S.....	TUMOR-INHIBITORY PROPERTY OF ANAEROBIC CORYNEFORMS.....	5R01 CA17790-03	62,075
FALKINHAM, JOSEPH O, III.....	MEMBRANE INVOLVEMENT IN BACTERIAL CONJUGATION.....	1R01 AI14086-01	31,318
GOOD, IRVING J.....	PROBABILITY ESTIMATION.....	5R01 GM18770-06	71,025
KINGSTON, DAVID G.....	PLANT TUMOR INHIBITORS.....	5R01 CA12831-06	39,061
LIGHTFOOT, HAIDEN N.....	CONTROL OF DIPHTHERIA TOXIN SYNTHESIS BY IRON.....	1R01 AI14091-01	37,277
MC NABB, ROGER A.....	THE EXCRETION OF URIC ACID.....	5R01 AM14991-06	39,627
MOORE, WALTER E.....	ANAEROBIC BACTERIOLOGICAL RESEARCH SUPPORT.....	5P01 GM14604-12	301,158
NIEHAUS, WALTER G, JR.....	STRUCTURE AND FUNCTION OF AMIDINATED HUMAN HEMOGLOBIN.....	1R01 HL20074-01	39,046
RUTHERFORD, CHARLES L.....	ALTERNATE PATHWAYS IN CELLULAR AGING.....	1P01 AG00677-01	40,139
SCHMIDT, ROBERT R.....	GENE-ENZYME CONTROL IN EUCARYOTIC CELL CYCLE.....	2R01 GM19871-05	72,476
SMIBERT, ROBERT M.....	T. PALLIDUM CULTIVATION AND TREPONEME LIPID STUDIES.....	5R01 AI12726-03	53,637
TAYLOR, LARRY T.....	MANGANESE-DIOXYGEN COMPLEXES.....	5R01 GM21844-03	19,349
WILKINS, TRACY D.....	BACTERIOPHAGES OF BACTEROIDES FRAGILIS.....	5R01 AI12137-03	54,119
WILSON, COYT T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07095-10	50,463
ORGANIZATION TOTAL	15 959,891		
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
BARENHOLZ, YECHESKEL.....	ROLE OF SPHINGOMYELIN IN BIOMEMBRANES AND BILAYERS.....	5R01 HL17576-03	50,030
BARNES, DENNIS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07094-12	96,103
BENJAMIN, DAVID C.....	CELLULAR AND STRUCTURAL BASIS OF IMMUNOLOGICAL TOLERANCE.....	5R01 AI10225-06	51,636
BERNE, ROBERT M.....	BLOOD FLOW AND NUCLEOTIDE METABOLISM.....	3R01 HL10384-11S1	2,059
BERNE, ROBERT M.....	BLOOD FLOW AND NUCLEOTIDE METABOLISM.....	5R01 HL10384-12	81,508
BERNE, ROBERT M.....	STUDY OF VASCULAR SMOOTH MUSCLE.....	1P01 HL19242-01	525,354
BILTONEN, RODNEY L.....	THERMODYNAMIC STUDIES OF TRANSFER RIBONUCLEIC ACIDS.....	3R01 GM20637-05S1	7,185
BILTONEN, RODNEY L.....	THERMODYNAMICS OF TRNA AND AMINOACYL SYNTHETASES.....	2R01 GM20637-06	64,995
BLIZZARD, ROBERT M.....	STUDIES OF PITUITARY HORMONES AND HYPOPITUITARISM.....	5R01 HD08926-04	81,437
BRADBEER, CLIVE.....	STUDIES ON THE TRANSPORT OF VITAMIN B12.....	5R01 AM12653-09	40,279
BRILL, ARTHUR S.....	ROLE OF WATER IN RESPIRATORY PROTEIN STRUCTURE.....	3R01 HL13989-05S1	7,990
BROOKER, GARY.....	METABOLIC AND HORMONAL CONTROL OF CARDIAC CONTRACTION.....	5R01 HL15985-05	54,179
BROWN, JAY C.....	ROLE OF THE CELL SURFACE IN CANCER AND DEVELOPMENT.....	5R01 HD06390-06	40,734
BRYAN, ROBERT F.....	X-RAY DETERMINATIONS OF STRUCTURE OF TUMOR INHIBITORS.....	3R01 CA11760-06S2	32,053
CARDELL, ROBERT R, JR.....	SUBCELLULAR EFFECTS OF METABOLIC HORMONES ON RAT LIVER.....	5R01 AM11854-10	81,853
CAREY, FRANCIS A.....	CHEMISTRY OF TUMOR-INHIBITORY NATURAL PRODUCTS.....	5R01 CA11718-08	93,732
CAREY, FRANCIS A.....	CHEMISTRY OF BIOLOGICALLY-ACTIVE NATURAL PRODUCTS.....	5R01 CA12059-08	68,646
CURNOW, RANDALL T.....	NEURAL CONTROL OF HEPATIC CARBOHYDRATE METABOLISM.....	5R01 AM18471-03	40,152
CURNOW, RANDALL T.....	PROTEIN PHOSPHATASE IN NORMAL AND DIABETIC LIVER.....	1R01 AM20787-01	77,083
DAVIS, JOHN S, IV.....	IMMUNOLOGICAL MECHANISMS IN RHEUMATIC DISEASES.....	5R01 AM11766-09	103,558
DECK, J DAVID.....	TISSUE ORGANIZATION AND TURNOVER IN SEMILUNAR VALVES.....	5R01 HL16935-04	38,391
DRUCKER, WILLIAM R.....	METABOLIC BASIS FOR HOMEOSTASIS IN SHOCK.....	2R01 GM21075-04	69,213
DRUCKER, WILLIAM R.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00847-04	353,064
DRUCKER, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05431-16	166,357
DULING, BRIAN R.....	LOCAL REGULATION OF MICROVASCULAR FUNCTION.....	5R01 HL12792-08	51,414
EDWARDS, STEPHEN B.....	PROJECTIONS OF THE MIDBRAIN RETICULAR FORMATION.....	5R01 NS11254-05	36,490
EMERSON, CHARLES P, JR.....	CONTROL OF MUSCLE PROTEIN SYNTHESIS DURING MYOGENESIS.....	5R01 HD07796-05	84,873
EMERSON, SUZANNE U.....	VESICULAR STOMATITIS VIRUS RNA SYNTHESIS.....	2R01 AI11722-04	71,114
FAGER, ROGER S.....	PREPARATION AND CHARACTERIZATION OF CONE PIGMENTS.....	2R01 EY01505-03	68,713

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
Flickinger, Charles J	STRUCTURE AND FUNCTION OF MALE SEX ACCESSORY ORGANS	5R01 HD10073-02	68,597
Garfield, Sanford A	STRUCTURE AND FUNCTION OF HEPATIC CELLULAR COMPONENTS	1R01 AM21253-01	67,470
Garrett, Reginald H	THE ENZYMOLOGY OF NITRATE ASSIMILATION	5R01 GM18955-09	38,268
Garrett, Reginald H	THE REGULATION OF NITRATE ASSIMILATION	5R01 GM22738-02	48,012
Garrison, James C	REGULATION OF GLUCONEOGENIC ENZYMES BY HORMONES	1R01 AM19952-01	50,235
Gilman, Alfred G	REGULATION OF CYCLIC NUCLEOTIDE METABOLISM	5R01 NS10193-06	83,594
Goldstein, Gerald	SOUTHWEST ONCOLOGY GROUP (ADULT)	5R10 CA13643-05	33,193
Grisham, Charles M	MECHANISMS OF MEMBRANE TRANSPORT ENZYMES	5R01 AM19419-02	41,145
Hammer, Charles E, JR	OVIDUCT ROLE IN BLASTOCYST DEVELOPMENT	5R01 HD06573-06	40,634
Harbert, Guy M, JR	STUDIES OF PRIMATE UTERINE PHYSIOLOGY	5R01 HD02798-10	59,398
Harrison, Willard W	BIOLOGICAL TRACE ANALYSIS BY HOLLOW CATHODE DISCHARGE	5R01 GM14569-10	36,595
Haynes, Robert C, JR	HORMONAL CONTROL OF HEPATIC GLUCONEOGENESIS	5R01 AM14347-09	78,385
Heimer, Lennart	BASAL FOREBRAIN ORGANIZATION	5R01 NS10972-05	76,538
Hendley, J Owen	CHARACTERIZATION OF THE CAPSULE ON NEISSERIA GONORRHOEA	1R01 AI14240-01	43,828
Holloway, Caroline T	UNSATURATED FATTY ACID BIOSYNTHESIS IN THE AORTA	1R01 HL19936-01	62,697
Howards, Stuart S	MICROFUNCTURE STUDIES OF TESTIS AND EPIDIDYMS	5R01 HD09490-03	64,333
Huang, Ching-Hsien	PHOSPHOLIPID VESICLES—MODEL FOR BIOLOGICAL MEMBRANES	2R01 GM17452-06	84,177
Huang, Ching-Hsien	PROTEIN KINASE: PHYSICAL STRUCTURE & BIOLOGICAL ACTIVITY	5R01 GM22430-02	43,667
Huang, Laura C	EFFECTS ON INSULIN ON PHOSPHOPROTEIN PHOSPHATASE	1R01 AM20983-01	36,797
Ivey, Hallam H	THE USE OF NEBULIZED SURFACTANTS IN TREATMENT OF RDS	1R01 HD11192-01	80,390
Johnson, Lewis B	COMPOSITION CHANGES IN DENTAL ALLOY	5R01 DE03965-04	56,156
Jones, Warren C, JR	HIRUDIN ISOLATION AND UTILIZATION	5R01 HL19331-02	30,740
Kadner, Robert J	GENE AMPLIFICATION AND MEMBRANE PROTEINS	5R01 GM19078-06	40,622
Khalifah, Raja G	HUMAN ERYTHROCYTE CARBONIC ANHYDRASE	5R01 HL17963-03	37,034
Komp, Diane M	SOUTHWEST ONCOLOGY GROUP (PEDIATRICS)	5R10 CA08223-11	89,765
Komp, Diane M	CLINICAL CANCER EDUCATION	5R25 CA17990-03	93,197
Konigsberg, Irwin R	CONTROL OF PROLIFERATION DURING MUSCLE DEVELOPMENT	5R01 HD07083-05	98,293
Kretsinger, Robert H	STRUCTURE AND FUNCTION OF TROPONIN AND ITS HOMOLOGUES	5R01 AM16253-06	50,506
Kuehl, Karen S	CHARACTERIZATION OF THE B PROTEINS OF SERUM LIPOPROTEINS	1R01 HL20712-01	61,062
Kuehl, W Michael	CONTROL OF IMMUNOGLOBULIN SYNTHESIS IN MYELOMA CELLS	5R01 AI12525-03	44,483
Kupe, Donald W	MAGNETIC SUSPENSION BALANCES	5R01 GM19682-06	17,237
Kutchai, Howard C	RED CELLS AND CHICK HEART: TRANSPORT AND FLUIDITY	1R01 GM24168-01	24,139
Kutchai, Howard C	LIMITING FACTORS IN OXYGEN UPTAKE IN THE LUNG	5R01 HL17967-03	22,877
Langdon, Robert G	BIOLOGICAL MEMBRANES AND PLASMA LIPOPROTEINS	5R01 GM19319-05	41,245
Langman, Jan	CLOSURE OF THE CRANIOFACIAL SUTURES	5R01 DE04402-02	51,723
Langman, Jan	ABNORMAL DEVELOPMENT OF THE NERVOUS SYSTEM	5R01 NS06188-13	98,404
Larner, Joseph	CHEMICAL MECHANISM OF ACTION OF INSULIN	5R01 AM14334-09	114,741
Larner, Joseph	DIABETES RESEARCH CENTER SUPPORT	2P30 AM17042-03	436,556
Litman, Burton J	EFFECT OF MICROENVIRONMENT ON DISC MEMBRANE FUNCTION	2R01 EY00548-06	48,285
Longnecker, David E	ANESTHETICS AND MICROVASCULAR RESPONSE TO HEMORRHAGE	2R01 HL17091-04	52,374
Looney, William B	THE EFFECT OF RADIOTHERAPY ON EXPERIMENTAL SOLID TUMORS	5R01 CA20516-02	123,951
Macleod, Robert M	INFLUENCE OF HORMONES ON TISSUE METABOLISM	5R01 CA07535-14	69,837
Macleod, Robert M	THYROID AND PITUITARY FUNCTION IN BREAST CANCER	5R01 CA16664-03	59,462
Mandell, Gerald L	MECHANISMS OF LEUKOCYTE BACTERICIDAL ACTIVITY	5R01 AI09504-08	51,362
Mellon, De Forest, JR	EVOLUTIONARY MODIFICATION OF A MOTOR CONTROL SYSTEM	5R01 NS04989-14	31,004
Miller, Edward D	ANESTHETICS INFLUENCE/RENIN-SYMPATHETIC NERVOUS SYSTEM	1R23 GM24313-01	43,304
Murad, Ferid	FACTORS WHICH REGULATE THE ACTION OF CYCLIC AMP	5R01 AM15316-07	103,811
Murad, Ferid	CYCLIC NUCLEOTIDE METABOLISM IN LUNG TISSUES	5R01 HL18260-03	57,554
Nolan, Stanton P	FUNCTION AND STRUCTURE OF SEMILUNAR VALVES	5R01 HL17969-03	73,232
Odessey, Richard	CONTROL OF AMINO ACID METABOLISM IN SKELETAL MUSCLE	5R01 AM19120-02	29,076
Oliphant, Edward E	MECHANISM OF INDUCTION OF THE SPERM ACROSOME REACTION	5R01 HD08573-03	34,063
Parsons, J Thomas	AVIAN RNA TUMOR VIRUS REPLICATION AND TRANSCRIPTION	5R01 CA16553-03	52,526
Paulsen, Elsa P	COMPARATIVE STUDIES OF THREE FORMS OF CHILDHOOD DIABETES	1R01 AM20520-01	54,865
Pohl, Stephen L	CELL BIOLOGY OF THE ADIPOCYTE	1R01 AM19361-01	31,840
Rall, Theodore W	CYCLIC AMP IN ACTIONS OF NEUROHORMONES	5R01 NS12764-03	68,962
Rebhun, Lionel I	THE ANTICANCER AGENT MAYTANSINE: MECHANISM OF ACTION	9R01 CA21732-04	168,919
Rebhun, Lionel I	CALCIUM SULFHYDRYLS AND THE MITOTIC APPARATUS	5R01 GM22407-02	41,927
Rinalducci, Edward J	PHOTOPIC MECHANISMS OF DARK ADAPTATION	5R01 EY00353-09	17,488
Ritchie, Wallace P, JR	REFLUX OF BILE ACID AS A FACTOR IN GASTRIC DISEASE	2R01 AM17591-04	38,548
Rochester, Dudley F	PERFORMANCE OF RESPIRATORY MUSCLES UNDER STRESS	1R01 HL21500-01	78,993

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
RODEWALD, RICHARD D.....	TRANSCELLULAR TRANSPORT OF IMMUNOGLOBULINS.....	2R01 AI11937-03	45,961
RODEWALD, RICHARD D.....	ULTRASTRUCTURAL BASIS OF GLOMERULAR PERMEABILITY.....	5R01 HL19316-02	24,973
ROGOL, ALAN D.....	STRUCTURE AND PROPERTIES OF DIABETOGENIC PEPTIDES.....	1R01 AM19271-01A1	38,591
SANDERS, DONALD B.....	MYASTHENIA GRAVIS: PHYSIOLOGICAL STUDIES.....	5R01 NS12905-02	79,568
SCHNAITMAN, CARL A.....	CELL SURFACE MEMBRANE PROTEINS.....	5R01 GM18006-06	45,430
SCHWARTZ, EDITH R.....	METABOLISM OF OSTEOARTHRITIC ARTICULAR CARTILAGE.....	2R01 AM16606-04A1	126,016
SHERMAN, S MURRAY.....	EFFECTS OF VISUAL DEPRIVATION ON THE VISUAL SYSTEM.....	3R01 EY01565-02S1	1,400
SHERMAN, S MURRAY.....	EFFECTS OF VISUAL DEPRIVATION ON THE VISUAL SYSTEM.....	5R01 EY01565-03	68,865
SPERELAKIS, NICK.....	ELECTROPHYSIOLOGY OF HEART CELLS.....	5R01 HL18711-02	57,389
STEWART, OSWALD.....	POST-LESION PLASTICITY OF NEURONAL CIRCUITRY.....	5R01 NS12333-03	40,796
THOMPSON, THOMAS E.....	A STUDY OF PHOSPHOLIPID BILAYER MEMBRANES.....	2R01 GM14628-12	96,087
THOMPSON, THOMAS E.....	PROPERTIES OF BILAYERS CONTAINING GLYCOSPHINGOLIPIDS.....	1R01 GM23573-01	45,750
VILLAR-PALASI, CARLOS.....	CONTROL AND PHYSIOLOGICAL ACTIONS OF PROTEIN KINASES.....	5R01 AM14436-06	69,830
WAGNER, ROBERT R.....	CELLULAR RESISTANCE TO VIRAL INFECTION.....	5R01 AI11112-11	145,800
WAGNER, ROBERT R.....	CANCER CELL AND VIRUS MEMBRANES: STRUCTURE AND FUNCTION.....	5P01 CA18701-02	107,079
WAWNER, FRANKLIN E.....	A STUDY OF REINFORCEMENTS IN DENTAL COMPOSITES.....	2R01 DE03925-03	42,865
WESTFALL, THOMAS C.....	ROLE OF CHOLINERGIC AGENTS IN ADRENERGIC TRANSMISSION.....	5R01 NS10260-04	54,329
WINFIELD, JOHN B.....	ANTILYMPHOCYTE ANTIBODIES IN LUPUS ERYTHEMATOSUS.....	5R01 AM19096-02	59,758
WINKLER, HERBERT H.....	PERMEABILITY OF THE EPIDEMIC TYPHUS RICKETTSIA.....	5R01 AI10164-07	61,165
WINKLER, HERBERT H.....	SUGAR AND SUGAR-PHOSPHATE TRANSPORT.....	5R01 AM13449-08	31,993
WRIGHT, THEODORE R.....	ONTOGENY AND THE GENETIC CONTROL OF ENZYME ACTIVITY.....	2R01 GM19242-06	102,861
WYANDT, HERMAN E.....	SOMATIC STUDIES OF HUMAN RING CHROMOSOMES.....	1R01 GM25244-01	76,552
YAMAZAKI, RUSSELL K.....	HORMONAL REGULATION OF MITOCHONDRIAL FUNCTION.....	5R01 AM17849-03	32,095
ORGANIZATION TOTAL	112	7,873,474	

HAMPTON

HAMPTON INSTITUTE ZIP CODE 23668

BONNER, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S06 RR08074-06	24,930
ORGANIZATION TOTAL	1	24,930	

NORFOLK

EASTERN VIRGINIA MEDICAL AUTHORITY—EASTERN VIRGINIA MEDICAL SCHOOL ZIP CODE 23507

CASTLE, MANFORD C.....	PHARMACOKINETICS OF DIGOXIN AND DIGITOXIN IN HUMANS.....	1R23 HL21083-01	37,787
COOKE, WILLIAM J.....	HEPATIC EXCRETION OF ANIONIC DRUGS.....	1R01 AM21374-01	39,789
MC COMBS, ROBERT M.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09028-01	99,729
PORTER, STANLEY F.....	STUDIES OF IRON LOADING IN SICKLE CELL DISEASE.....	5R01 AM19466-02	35,635
ROSATO, FRANCIS E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18067-03	100,020
SABET, SOHAIR F.....	COLICINS AND MEMBRANE FUNCTIONS.....	7R01 AI14997-01	21,950
SOMERS, KENNETH D.....	GENETICS OF MURINE SARCOMA VIRUS.....	5R01 CA19714-02	44,921
SPANGENBERG, DOROTHY B.....	STATOLITH DIFFERENTIATION IN AURELIA (JELLYFISH).....	7R01 DE05048-01	36,253
WILLIAMS, PATRICIA B.....	CHARACTERIZATION OF COLLATERAL BLOOD VESSELS.....	5R01 HL19275-02	35,543
ORGANIZATION TOTAL	9	451,627	

NORFOLK STATE COLLEGE ZIP CODE 23504

BEMPONG, MAXWELL A.....	INHIBITORS OF DNA AND RENIN IN HUMAN TISSUES.....	5S06 RR08033-06	31,149
BEMPONG, MAXWELL A.....	BIOLOGICAL EFFECTS OF MUTAGENS AND ANTICANCER DRUGS.....	2S06 RR08033-07	167,188
ORGANIZATION TOTAL	2	198,337	

OLD DOMINION UNIVERSITY ZIP CODE 23508

SONENSHINE, DANIEL E.....	SEX PHEROMONES IN DISEASE TRANSMITTING TICKS.....	5R01 AI10986-05	20,121
ORGANIZATION TOTAL	1	20,121	

PETERSBURG

VIRGINIA STATE COLLEGE ZIP CODE 23803

DIVERS, FRED C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08090-05	114,484
ORGANIZATION TOTAL	1	114,484	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
RICHMOND			
UNIVERSITY OF RICHMOND	ZIP CODE 23173		
TOPHAM, RICHARD W.....	PHYSIOLOGICAL SIGNIFICANCE OF FERROXIDASE-II.....	1R01 AM20148-01	31,368
ORGANIZATION TOTAL	1 31,368		
VIRGINIA COMMONWEALTH UNIVERSITY	ZIP CODE 23284		
ARCHER, GORDON L.....	ENDOCARDITIS ON PROSTHETIC HEART VALVES.....	1R01 HL19818-01	29,447
BECKER, DONALD P.....	HEAD INJURY CLINICAL RESEARCH CENTER.....	5P50 NS12587-02	429,945
BIBER, THOMAS U.....	SOLUTE AND WATER TRANSPORT ACROSS MEMBRANES.....	5R01 AM19166-02	47,425
BLACKARD, WILLIAM G.....	PATHOGENESIS OF DIABETES MELLITUS.....	5R01 AM18903-03	58,303
BOGDANOVE, EMANUEL M.....	ENDOCRINE-INFLUENCING CENTERS IN THE HYPOTHALAMUS.....	2R01 HD06600-07	75,908
BOND, JUDITH S.....	INTRACELLULAR PROTEIN CATABOLISM IN DIABETES MELLITUS.....	1R01 AM19691-01	46,908
BRIGGS, F NORMAN.....	CA UPTAKE BY NORMAL AND FAILED CARDIAC (CAOMG)ATPASE.....	5R01 HL19485-02	33,689
CAMPBELL, ROBERT L.....	OUTPATIENT DENTAL ANESTHESIA—BALANCED TECHNIQUE.....	7R01 DE04979-01	40,210
CLAMANN, H PETER.....	MOTOR POOL ORGANIZATION IN SYNERGISTIC INTERACTION.....	5R01 NS11677-03	37,666
COHEN, IRWIN K.....	COLLAGEN METABOLISM IN WOUND REPAIR AND KELOID.....	2R01 GM20298-04	73,842
COLLINS, JAMES M.....	DNA SYNTHESIS: STRUCTURAL CHANGES DURING THE CELL CYCLE.....	5R01 CA17177-03	37,636
CORLEY, KARL C, JR.....	BEHAVIORAL STRESS AND CARDIOMYOPATHY.....	2R01 HL13454-07	49,944
DE PAOLA, DOMINICK P.....	THE ROLE OF GLYCOPROTEINS IN PALATAL FUSION.....	5R23 DE04148-03	34,002
DE VRIES, GEORGE H.....	CHEMISTRY AND METABOLISM OF CNS MYELIN FREE AXONS.....	5R01 NS10821-05	39,510
DIEGELMANN, ROBERT F.....	COLLAGEN METABOLISM IN BREAST CANCER.....	5R01 CA17297-03	41,031
ECKBERG, DWAIN L.....	BARORECEPTOR REFLEX MECHANISMS IN MAN.....	7R01 HL22546-01	34,135
ECKBERG, DWAIN L.....	NEUROCIRCULATORY CONTROL IN DIABETES MELLITUS.....	1R01 HL22581-01	39,348
ELFORD, HOWARD L.....	RIBONUCLEOTIDE REDUCTASE AND CANCER CHEMOTHERAPY.....	1R01 CA21305-01	55,246
ELZAY, RICHARD P.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA19294-02	29,930
FABIATO, ALEXANDRE.....	CONTRACTILE ACTIVATION OF SKINNED CARDIAC CELLS.....	5R01 HL19138-02	72,536
FALLON, HAROLD J.....	LIVER METABOLISM PROGRAM PROJECT.....	5P01 AM18976-02	462,884
FORD, GEORGE D.....	REGULATION OF VASCULAR SMOOTH MUSCLE CONTRACTILITY.....	3R01 HL15829-03S1	1,410
FRANSON, RICHARD C.....	MECHANISMS OF MEMBRANE AND TISSUE DAMAGE IN LUNG.....	1R23 HL21116-01	44,730
FREER, RICHARD J.....	CIRCULATORY SYSTEM EFFECTS OF ANGIOTENSIN ANALOGS.....	5R01 HL19653-02	30,955
FRIEDMAN, MARVIN A.....	EFFECTS OF PIPERONYL BUTOXIDE ON CHEMICAL CARCINOGENESIS.....	5R01 ES00701-04	14,284
GLAUSER, FREDERICK L.....	PULMONARY ALVEOLAR-CAPILLARY PERMEABILITY CHARACTERISTIC.....	1R01 HL22435-01	35,017
GOLDBERG, STEPHEN J.....	INPUTS TO ABDUCENS NEURONS: AN INTRACELLULAR STUDY.....	5R23 EY01442-03	10,151
GOLDMAN, I DAVID.....	CELLULAR PHARMACOKINETICS OF ANTICANCER AGENTS.....	5R01 CA16906-04	120,864
GUZELIAN, PHILIP S, JR.....	PHARMACOKINETICS & TOXICITY OF KEPONE R.....	1R01 ES01519-01	93,277
HAAR, JACK L.....	IN VITRO YOLK SAC AND THYMIC LYMPHOGENESIS.....	1R01 AI13486-01	33,936
HARD, RICHARD C, JR.....	EARLY IMMUNODEFICIENCY AND LATE ONCOGENESIS.....	3R01 CA16112-03S1	14,315
HAZRA, TAPAN A.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA22032-01	158,199
HUF, ERNST G.....	METABOLISM AND ACTIVE ION TRANSPORT IN SKIN.....	5R01 GM03545-23	17,805
HYLEMON, PHILLIP B.....	BILE SALT CATABOLISM REGULATION BY INTESTINAL BACTERIA.....	5R01 CA17747-03	23,248
JAMES, G WATSON, III.....	ACUTE LEUKEMIA GROUP B CHEMOTHERAPY PROGRAMS.....	3R10 CA03735-19S1	9,785
JAMES, G WATSON, III.....	CANCER AND LEUKEMIA GROUP B CHEMOTHERAPY PROTOCOLS.....	2R10 CA03735-20	105,351
JOHNSON, JAMES H.....	NEUROENDOCRINE CONTROL OF GONADOTROPINS AT PUBERTY.....	1R01 HD11247-01	45,731
KAPLAN, ALAN M.....	THE CELLULAR BASIS OF ACQUIRED IMMUNOLOGIC TOLERANCE.....	5R01 AI11561-03	39,193
KNAUER, THOMAS E.....	ACYL COENZYME A HYDROLASE(S) OF RAT SALIVARY GLANDS.....	7R23 DE05000-01	27,633
KONTOS, HERMES A.....	INTRACELLULAR OXYGEN TENSION IN MUSCLE.....	5R01 HL18453-03	65,896
KOONTZ, WARREN W, JR.....	EVALUATION AND MANAGEMENT OF BLADDER CARCINOMA.....	2R26 CA15492-04	61,060
LAWRENCE, WALTER, JR.....	COOPERATIVE CANCER CENTER CORE SUPPORT.....	5P30 CA16059-02	286,815
LAWRENCE, WALTER, JR.....	BIOCHEMICAL CORRELATES WITH HUMAN BREAST CANCER.....	5R01 CA17116-03	57,313
LAWRENCE, WALTER, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20195-01	22,651
LEE, HYUNG M.....	CLINICAL STUDIES OF RABBIT ANTITHYMOCYTE GLOBULIN.....	5R01 AI12822-03	94,048
LIBERTI, JOSEPH P.....	PURIFICATION AND BIOCHEMISTRY OF SULFATION FACTOR.....	5R01 AM16457-04	34,974
LITTMAN, BRUCE H.....	REGULATION OF CELLULAR COOPERATION BY SOLUBLE FACTORS.....	1R01 AM20317-01	36,811
LORIA, ROGER M.....	VASCULAR INJURY AND ATHEROSCLEROSIS.....	5R01 HL18152-03	63,498
MACRINA, FRANCIS L.....	STUDIES ON THE GENETICS OF ORAL MICROFLORA.....	5R23 DE04224-03	22,064
MAKHLOUF, GABRIEL M.....	HORMONAL INTEGRATION OF EXOCRINE AND ENDOCRINE ORGANS.....	5R01 AM15564-05	87,014
MARTINEZ-CARRION, MARINO.....	PROBES OF MOLECULAR FUNCTION IN PYRIDOXAL ENZYMES.....	1R01 GM24885-01	67,748
MARTINEZ-CARRION, MARINO.....	ISOZYMES OF HEART GLUTAMATE ASPARTATE TRANSAMINASE.....	7R01 HL22265-01	68,341

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
MOORE, EDWARD W.....	NH3 ELECTRODE STUDIES OF AMMONIA METABOLISM.....	5R01 AM18887-02	90,050
MULLINAX, PERRY F.....	IMMUNOGLOBULINS, DIABETES AND MICROVASCULAR DISEASE.....	5R01 AM18901-03	97,130
MULLINAX, PERRY F.....	IMMUNOGLOBULINS AS GLYCOPROTEINS.....	5R01 CA20174-02	71,941
MURRAY, BYRON K.....	TRANSFORMATION BY DEFECTIVE HERPES SIMPLEX VIRUSES.....	5R01 CA19238-02	52,949
MURRAY, BYRON K.....	VACCINATION AGAINST ORAL HERPETIC LESIONS.....	1R01 DE04700-01	75,232
NANCE, WALTER E.....	OVARIAN CANCER IN UNLIKE SEXED DIZYGOTIC TWINS.....	1R01 CA20453-01	30,769
NANCE, WALTER E.....	MEDICAL COLLEGE OF VIRGINIA HUMAN TWIN PANEL.....	5P01 HD10291-02	350,474
NANCE, WALTER E.....	SECOND INTERNATIONAL CONGRESS OF TWIN STUDIES.....	1R13 HD10663-01	22,292
OKEN, DONALD E.....	MICROPUNCTURE STUDY OF RENAL PROTEIN TRANSPORT.....	7R01 AM20132-01	97,167
OKEN, DONALD E.....	PATHOPHYSIOLOGY OF ACUTE RENAL FAILURE.....	1R01 HL19463-01A1	83,672
PANG, DAVID C.....	CONTRACTILITY IN CARDIAC FAILURE.....	1R01 HL21493-01	54,445
PITTMAN, ROLAND N.....	VASODILATION AND MICROVASCULAR OXYGEN DELIVERY.....	2R01 HL18292-03	53,409
PRICE, STEVEN.....	A MOLECULAR GENETIC APPROACH TO OLFACTION.....	5R01 DE04271-02	56,067
RANNEY, RICHARD R.....	SEVERE PERIODONTITIS: IMMUNOLOGIC STUDIES.....	5R01 DE04397-02	200,019
RANNEY, RICHARD R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05724-06	45,486
REGELSON, WILLIAM.....	COMPARATIVE USE OF SUPPORTIVE DRUGS IN CANCER PATIENTS.....	5R18 CA19378-02	103,111
RIDGWAY, ELLIS B.....	CALCIUM MOVEMENTS DURING E-C COUPLING IN MUSCLE.....	5R01 NS10919-05	38,317
ROSENBLUM, WILLIAM I.....	CEREBRAL MICROCIRCULATION.....	5R01 HL12775-08	63,765
ROSENBLUM, WILLIAM I.....	BRAIN MICROCIRCULATION OBSERVED IN VIVO AFTER TRAUMA.....	5R01 HL18932-02	33,864
RUBIN, RONALD P.....	THE ACTION OF CALCIUM ON SECRETION.....	2R01 AM18066-04	51,350
RUDDY, SHAUN.....	CELLULAR INTERACTIONS WITH COMPLEMENT AND PROPERDIN.....	5R01 AI13049-02	81,606
SCOTT, ROBERT B.....	DIFFERENTIATION AND FUNCTION OF HEMATOPOIETIC CELLS.....	5R01 CA08482-12	82,884
SHELTON, KEITH R.....	NONHISTONE PROTEINS OF REACTIVATED ERYTHROCYTE NUCLEI.....	3R01 CA15923-03S1	14,069
STEINFELD, JESSE.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00065-15	476,634
STEINFELD, JESSE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05430-16	183,220
STILL, WILLIAM J.....	PATHOGENESIS OF ATHEROSCLEROSIS.....	5R01 HL09622-13	40,419
SWELL, LEON.....	MECHANISM OF CHOLESTEROL GALLSTONE FORMATION IN MAN.....	2R01 AM14668-07	54,055
TAUB, ROBERT N.....	ANTISERA TO HUMAN LEUKEMIA-ASSOCIATED ANTIGENS.....	1R01 CA22128-01	94,407
TAUB, ROBERT N.....	IMMUNOTHERAPY OF HUMAN LEUKEMIA.....	7R01 CA22359-01	84,803
TEW, JOHN G.....	REGULATION OF THE IMMUNE RESPONSE BY PERSISTING ANTIGEN.....	5R01 AI11101-05	35,249
THOMAS, JUDITH M.....	ACTION OF RABBIT ANTIHUMAN THYMOCYTE GLOBULIN.....	5R01 AI12586-03	72,238
THOMAS, JUDITH M.....	CELLULAR IMMUNITY IN RENAL TRANSPLANT RECIPIENTS.....	1R01 AM19644-01	60,698
VAN TUYLE, GLENN C.....	MEMBRANE-BINDING AND FOLDING OF MITOCHONDRIAL DNA.....	5R01 GM22597-02	24,193
WAMPLER, GALEN L.....	EASTERN COOPERATIVE ONCOLOGY GROUP/VIRGINIA UNIT.....	2R10 CA10572-09	70,335
WEAVER, WARREN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05697-08	19,295
WEGLICKI, WILLIAM B.....	MYOCARDIAL ORGANELLE LIPID STRUCTURE AND FUNCTION.....	3R01 HL19148-02S1	28,815
WEIR, GORDON C.....	STUDIES OF PANCREATIC SOMATOSTATIN.....	1R01 AM19343-01	40,296
WEIR, GORDON C.....	MECHANISMS OF PANCREATIC GLUCAGON SECRETION.....	7R01 AM20349-01	9,806
WEIR, GORDON C.....	MECHANISMS OF PANCREATIC GLUCAGON SECRETION.....	5R01 AM20349-02	34,676
YOUNG, HAROLD F.....	HOST-NEOPLASIA INTERACTIONS OF GLIOMAS.....	5R01 CA16096-03	31,792
ORGANIZATION TOTAL	92	6,774,661	
VIRGINIA UNION UNIVERSITY ZIP CODE 23220			
BRADLEY, WALTER O.....	PESTICIDE RESEARCH SUPPORT GRANT.....	5S06 RR08007-06	17,207
ORGANIZATION TOTAL	1	17,207	
WILLIAMSBURG			
COLLEGE OF WILLIAM AND MARY ZIP CODE 23185			
BRADLEY, ERIC L.....	ENDOCRINE BASES OF REPRODUCTIVE INHIBITION IN DEER MICE.....	5R01 HD03906-03	36,269
ORGANIZATION TOTAL	1	36,269	
STATE TOTAL	237	16,544,069	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON			
BELLINGHAM			
WESTERN WASHINGTON UNIVERSITY ZIP CODE 98225			
CVETKOVICH, GEORGE T.....	ADOLESCENT DEVELOPMENT AND CONTRACEPTIVE USE.....	5R01 HD09813-02	71,331
KLEINKNECHT, RONALD A.....	THE ASSESSMENT AND TREATMENT OF FEAR OF DENTISTRY.....	5R01 DE04014-03	91,999
ORGANIZATION TOTAL	2 163,330		
ISSAQUAH			
ISSAQUAH GROUP FOR HEALTH AND ENVIRONMENTAL RESEARCH ZIP CODE 98027			
SHEARER, RUTH W.....	MOLECULAR GENETICS OF TUMORS.....	5R01 CA20781-02	77,459
STUART, KENNETH D.....	MITOCHONDRIAL DNA OF NORMAL AND MUTANT TRYPANOSOMES.....	3R01 AI14102-01S1	8,000
STUART, KENNETH D.....	MITOCHONDRIAL DNA OF NORMAL AND MUTANT TRYPANOSOMES.....	5R01 AI14102-02	52,465
ORGANIZATION TOTAL	3 137,924		
PULLMAN			
WASHINGTON STATE UNIVERSITY ZIP CODE 99163			
BURGER, DIETER.....	ISOLATION OF VIRUS-ANTIBODY COMPLEXES.....	5R01 AI11714-04	33,522
BUSTAD, LEO K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05465-15	36,105
CAMPBELL, KENNETH B.....	MECHANICAL INTERACTIONS BETWEEN VENTRICLE ARTERIES.....	1R23 HL21462-01	40,400
CARLSON, JAMES R.....	TRYPTOPHAN-INDUCED PULMONARY EMPHYSEMA.....	5R01 HL13645-10	66,211
CRAWFORD, TIMOTHY B.....	STUDIES OF VIRAL PERSISTENCE IN EQUINE INFECTIOUS ANEMIA.....	5R01 AI07471-11	78,693
CRAWFORD, TIMOTHY B.....	VIRAL ARTHRITIS-LEUKOENCEPHALITIS OF ANIMALS.....	5R01 AM18801-02	75,054
DAVIS, WILLIAM C.....	MODEL OF BLOCKING CELL-MEDIATED TUMOR IMMUNITY.....	5R01 CA17075-03	37,789
GOLLNICK, PHILIP D.....	SUBCELLULAR RESPONSE OF HEART TO FUNCTIONAL OVERLOAD.....	5R01 HL18527-02	105,252
GRISWOLD, MICHAEL D.....	HORMONAL REGULATION OF SERTOLI CELL MATURATION.....	1R01 HD10808-01	51,872
HARDING, JOSEPH W.....	CONTROL OF OLFACTORY NEURON REPLACEMENT.....	1R01 NS13976-01	45,250
HAYTON, WILLIAM L.....	EFFECTS OF AGING ON DRUG BIOAVAILABILITY.....	1R23 AG00674-01	15,691
HEGREBERG, GERALD A.....	AGING AND COLLAGEN EHLERS-DANLOS SYNDROME.....	5R01 AG00030-03	71,539
HOSICK, HOWARD L.....	CULTURE OF PRENEOPLASTIC MAMMARY CELLS OF THE MOUSE.....	3R01 CA16392-03S1	8,317
HOSICK, HOWARD L.....	CULTURE OF PRENEOPLASTIC MAMMARY CELLS OF THE MOUSE.....	2R01 CA16392-04	39,100
KIRSCHNER, LEONARD B.....	MECHANISM OF ACTIVE ION MOVEMENT ACROSS MEMBRANES.....	5R01 GM04254-22	43,314
KOLATTUKUDY, P E.....	BIOCHEMISTRY OF NATURAL PRODUCTS.....	2R01 GM18278-07	117,837
KRAMER, JOHN W.....	A NEW ANIMAL MODEL OF INHERITED DIABETES MELLITUS.....	1R01 AM20462-01A1	54,435
LEGG, JOHN I.....	SUBSTITUTION-INERT METAL IONS AS BIOLOGICAL PROBES.....	5R01 GM23081-02	52,432
LOEWUS, FRANK A.....	INOSITOL METABOLISM.....	5R01 GM22427-03	99,992
MAGNUSON, JAMES A.....	METAL ION ACTIVATION OF CONCAVALIN A.....	5R01 CA14496-05	45,152
MAGNUSON, JAMES A.....	NAONMR: A PROBE FOR MALIGNANCY.....	5R01 CA18452-02	26,107
MC FADDEN, BRUCE A.....	BIOCHEMISTRY OF MEMBRANE AND CATALYTIC PROTEINS.....	5R01 GM19972-08	69,661
NYMAN, C J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07097-12	63,755
PERRYMAN, LANCE E.....	!NVESTIGATIONS OF COMBINED IMMUNODEFICIENCY.....	2R01 HD08886-04	92,344
REEVES, JERRY J.....	OVULATION, OVIDUCT MOTILITY AND HORMONAL RELATIONSHIPS.....	2R01 HD09257-03	40,055
STEVENS, CARL M, II.....	MECHANISMS OF CHAIN ELONGATION IN ALPHA-KETO ACIDS.....	5R01 GM21996-03	24,265
WAY, JAMES L.....	CYANIDE LIBERATION BY ALKYLPHOSPHATE ANTAGONISTS.....	1R01 ES00945-01A5	39,770
WILSON, ROBERT B.....	DIABETES AND ATHEROSCLEROSIS.....	5R01 HL20441-02	39,663
WILSON, ROBERT B.....	ANIMAL MODELS FOR COMPARATIVE MEDICAL RESEARCH.....	3P40 RR00515-08S1	60,073
YOUNG, FRANCIS A.....	GROWTH ENVIRONMENTAL REFRACTIVE CHANGES.....	3R01 EY00284-11S1	15,287
YOUNT, RALPH G.....	INTERACTION OF ATP ANALOGS WITH MYOSIN.....	5R01 AM05195-17	65,161
ORGANIZATION TOTAL	31 1,654,098		
RICHLAND			
BATTELLE MEMORIAL INSTITUTE-PACIFIC NORTHWEST LABORATORIES ZIP CODE 99352			
SIKOV, MELVIN R.....	EFFECT OF EXPOSURE OF THE PRENATAL RAT TO ULTRASOUND.....	2R01 GM20661-04	116,484
SULLIVAN, MAURICE F.....	EFFECTS OF INTRACAVITARY IRRADIATION WITH CF-252.....	5R01 CA13127-06	55,136
WESTERMAN, RICHARD E.....	POROUS METAL DENTAL ANCHORS IN LONG-TERM FUNCTION.....	5R01 DE03938-03	72,736
ORGANIZATION TOTAL	3 244,356		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
SEATTLE			
BATTELLE MEMORIAL INSTITUTE ZIP CODE 98105			
DAVIDSON, ANDREW R.....	PREDICTION OF COUPLE DECISION MAKING AND BEHAVIOR.....	5R01 HD10683-02	64,923
MARINI, MARGARET M.....	SEX DIFFERENCES IN OUTCOMES OF ADOLESCENT EXPERIENCE.....	3R01 HD09637-01S1	8,807
ORGANIZATION TOTAL	2 73,730		
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER ZIP CODE 98105			
BLEYER, WERNER A.....	CLINICAL PHARMACOLOGY OF INTRATHECAL METHOTREXATE.....	5R01 CA16525-03	23,233
CHARD, RONALD L, JR.....	CHILDREN'S CANCER STUDY GROUP A.....	2R10 CA10382-11	147,578
HARTMANN, JOHN R.....	CLINICAL CANCER EDUCATION PROGRAM (PEDIATRIC).....	5R25 CA18039-03	85,520
STREETER, DANIEL D, JR.....	FIBER GEOMETRY IN HYPERTROPHY AND CARDIOMYOPATHY.....	1R01 HL20883-01	57,011
ORGANIZATION TOTAL	4 313,342		
FRED HUTCHINSON CANCER RESEARCH CENTER ZIP CODE 98104			
BERNSTEIN, IRWIN D.....	MECHANISMS OF BCG-MEDIATED SUPPRESSION OF TUMOR GROWTH.....	5R01 CA19170-02	55,155
EISENMAN, ROBERT N.....	CONTROL MECHANISMS IN AVIAN ONCORNAVIRUS REPLICATION.....	1R01 CA20525-01	70,986
FLETCHER, T LLOYD.....	APPROACHES TO CHEMICAL CARCINOGENESIS MECHANISMS.....	1R01 CA19279-01	49,335
HAKOMORI, SEN-TIROH.....	RELATION OF BLOOD GROUP AND HUMAN TUMOR ANTIGENS.....	5R01 CA19224-02	43,905
HAKOMORI, SEN-TIROH.....	IMMUNOSPECIFIC GLYCOLIPIDS OF NORMAL AND CANCER CELLS.....	5R01 CA20026-02	37,966
HAKOMORI, SEN-TIROH.....	ANTICARBOHYDRATE ANTIBODY IN CELL BIOLOGY.....	5R01 GM23100-02	41,767
HELLSTROM, INGEGERD E.....	TRANSPLANTATION ANTIGENICITY OF VIRUS INDUCED TUMORS.....	5R01 CA19149-03	103,145
HELLSTROM, KARL E.....	LYMPHOCYTE ALLCGENEIC INHIBITION AND TUMOR IMMUNITY.....	5R01 CA19148-03	152,700
HUTCHINSON, WILLIAM B.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	2P30 CA15704-04	1,968,723
HUTCHINSON, WILLIAM B.....	CANCER CONTROL DEVELOPMENT GRANT.....	2R18 CA16404-03	508,203
HUTCHINSON, WILLIAM B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05761-03	123,690
LINIAL, MAXINE L.....	VIRAL CODED FUNCTIONS IN ROUS SARCOMA.....	5R01 CA18282-02	55,930
NEIMAN, PAUL E.....	MOLECULAR MECHANISMS IN NEOPLASIA.....	5R01 CA20068-02	97,607
NOWINSKI, ROBERT C.....	IMMUNOLOGICAL ASPECTS OF MOUSE LEUKEMIAS.....	5R01 CA18074-03	128,251
NOWINSKI, ROBERT C.....	IMMUNOBIOLOGY OF PRELEUKEMIC LYMPHOCYTES.....	1R01 CA22961-01	10,500
POLLACK, SYLVIA B.....	SPECIFIC ANTITUMOR ACTIVITY BY 'ARMED' LYMPHOID CELLS.....	5R01 CA18647-03	48,090
PRENTICE, ROSS L.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	1R10 CA21193-01	82,467
ROHRSCHEIDER, LARRY R.....	MECHANISMS OF ONCORNAVIRUS-INDUCED TRANSFORMATION.....	1R01 CA20551-01	45,038
SCRIBNER, JOHN D.....	EARLY AND CRITICAL EVENTS IN CHEMICAL CARCINOGENESIS.....	3R01 CA18632-02S1	10,484
SCRIBNER, JOHN D.....	EARLY AND CRITICAL EVENTS IN CHEMICAL CARCINOGENESIS.....	5R01 CA18632-03	90,634
STORB, RAINER F.....	MARROW GRAFTING IN TREATMENT OF HEMATOLOGIC MALIGNANCIES.....	5P01 CA18221-03	340,489
THOMAS, E DONNALL.....	PROTECTIVE ENVIRONMENT IN INTENSIVE CANCER THERAPY.....	5R01 CA17117-03	536,777
THOMAS, E DONNALL.....	ADULT LEUKEMIA RESEARCH CENTER.....	5P01 CA18029-02	2,092,565
THOMAS, E DONNALL.....	SEPARATION OF BLOOD BY CONTINUOUS CENTRIFUGE.....	5R01 CA18579-03	110,247
WEIDEN, PAUL L.....	IMMUNOTHERAPY STUDIES OF SPONTANEOUS MALIGNANCY.....	5R01 CA18105-02	87,655
WEISS, NOEL S.....	EPIDEMIOLOGY OF GYNECOLOGIC CANCER.....	5R01 CA18764-02	55,103
WEISS, NOEL S.....	EPIDEMIOLOGY OF LARGE BOWEL CANCER IN WOMEN.....	1R01 CA22495-01	18,935
WRIGHT, PETER W.....	MECHANISMS OF ALLOGRAFT TOLERANCE.....	5R01 CA17481-03	60,327
ORGANIZATION TOTAL	28 7,026,674		
INSTITUTE OF APPLIED PHYSIOLOGY AND MEDICINE ZIP CODE 98122			
SPENCER, MERRILL P.....	ULTRASONIC DETECTION OF THE ATHEROSCLEROTIC PLAQUE.....	5R01 HL19341-02	68,376
ORGANIZATION TOTAL	1 68,376		
PACIFIC NORTHWEST RESEARCH FOUNDATION ZIP CODE 98104			
BAKKE, JOHN L.....	THYROTROPIN ASSAY OF BODY FLUIDS AND TISSUES.....	5R01 AM05638-17	103,508
HUTCHINSON, WILLIAM B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05520-15	15,729
JOHNSTONE, MURRAY A.....	FACTORS REGULATING AQUEOUS OUTFLOW IN GLAUCOMA.....	1R01 EY01906-01	54,537
SANTISTEBAN, GEORGE A.....	SOCIAL STIMULATION, RNA, AND CARDIOVASCULAR DISEASE.....	5R01 HL20384-09	60,291
SPACKMAN, DARREL H.....	FREE AMINO ACIDS IN NORMAL AND TUMOR-BEARING MICE.....	3R01 CA16308-03S1	6,017
ORGANIZATION TOTAL	5 240,082		
PROVIDENCE MEDICAL CENTER ZIP CODE 98122			
REID, JOHN M.....	ULTRASONIC SCATTERING STUDY FOR TISSUE CHARACTERIZATION.....	5R01 HL14785-06	73,210

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
SAUVAGE, LESTER R.....	PROSTHESES FOR AORTOCORONARY BYPASS.....	5R01 HL18644-02	181,239
ORGANIZATION TOTAL	2 254,449		
PUGET SOUND BLOOD CENTER ZIP CODE 98104			
DONOHUE, DENNIS M.....	A COMMUNITY BLOOD RESOURCE CENTER.....	5P60 HL17265-03	756,545
ORGANIZATION TOTAL	1 756,545		
SWEDISH HOSPITAL MEDICAL CENTER ZIP CODE 98104			
RIVKIN, SAUL E.....	SOUTHWEST ONCOLOGY GROUP.....	1R10 CA20319-01	29,525
ORGANIZATION TOTAL	1 29,525		
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ADAMSON, JOHN W.....	STUDIES OF IN VITRO ERYTHROPOIETIC REGULATION.....	5R01 AM19410-02	40,826
AFROMOWITZ, MARTIN A.....	IMPLANTABLE SOLID-STATE HYBRID ION-SENSITIVE DEVICE.....	1R01 GM23417-01	51,330
ALBERS, JOHN J.....	LECITHIN-CHOLESTEROL ACYLTRANSFERASE.....	5R01 HL15263-05	24,074
ALMERS, WOLFARD.....	ELECTRIC STUDIES OF MUSCLE EXCITATION AND CONTRACTION.....	2R01 AM17803-04	73,238
ANDERSEN, NIELS H.....	SESQUITERPENE BIOGENESIS: EVOLUTION OF ECOLOGIC ROLES.....	5R01 GM18143-06	36,468
ANDERSEN, NIELS H.....	THE MOLECULAR BASIS OF PROSTAGLANDIN BIOCHEMISTRY.....	5R01 GM20848-03	33,399
AREND, WILLIAM P.....	STUDIES ON MONONUCLEAR PHAGOCYTES.....	5R01 AI10825-06	48,443
BAGDADE, JOHN D.....	HOST DEFENSE IN DIABETES MELLITUS.....	5R01 AM17939-03	65,276
BAGDADE, JOHN D.....	MECHANISMS OF ATHEROGENESIS IN CHRONIC UREMIA.....	2R01 HL16219-04	89,028
BAKER, DONALD W.....	NONINVASIVE CARDIOVASCULAR MEASUREMENTS.....	2P01 HL07293-16A1	694,515
BASSINGTHWAIGHTE, JAMES B.....	HETEROGENEITY OF REGIONAL MYOCARDIAL BLOOD FLOW.....	5R01 HL19135-03	69,484
BASSINGTHWAIGHTE, JAMES B.....	DISPERSION OF DIFFUSIBLE INDICATORS IN THE BODY.....	5R01 HL19139-02	74,900
BENDICH, ARNOLD J.....	REPEATED DNA SEQUENCES AND LAND PLANT EVOLUTION.....	5R01 GM22870-02	71,999
BENDITT, EARL P.....	CELLULAR AND MOLECULAR PATHOLOGY.....	5P01 GM13543-12	209,918
BENDITT, EARL P.....	MECHANISMS OF ACUTE VASCULAR REACTION TO INJURY.....	5P01 HL03174-22	307,634
BIERMAN, EDWIN L.....	AGING, METABOLISM AND ATHEROSCLEROSIS.....	5P01 AG00299-07	256,769
BIERMAN, EDWIN L.....	PATHOBIOLOGY OF DIABETES MELLITUS.....	3P01 AM02456-18S1	1,727
BIERMAN, EDWIN L.....	PATHOBIOLOGY OF DIABETES MELLITUS.....	5P01 AM02456-19	371,803
BLANDAUI, RICHARD J.....	PROGRAM PROJECT ON GAMETE TRANSPORT IN MAMMALS.....	5P50 HD03752-08	187,009
BOATMAN, EDWIN S.....	EFFECT OF OZONE ON LUNG GROWTH AND DEVELOPMENT.....	3R01 ES01049-03S1	4,902
BOATMAN, EDWIN S.....	EFFECT OF OZONE ON LUNG GROWTH AND DEVELOPMENT.....	2R01 ES01049-04	54,658
BOLENDER, ROBERT P.....	ANALYTICAL MORPHOLOGY AND BIOCHEMISTRY OF HEPATOCYTES.....	5R01 GM22759-02	38,707
BONICA, JOHN J.....	ANESTHESIA RESEARCH CENTER.....	5P50 GM15991-10	836,539
BORNSTEIN, PAUL.....	BIOGENESIS AND FUNCTION OF CONNECTIVE TISSUE PROTEINS.....	5R01 AM11248-11	72,286
BRUNZELL, JOHN D.....	PATHOPHYSIOLOGY OF GENETIC HYPERTRIGLYCERIDEMIAS.....	5R01 HL18687-02	54,377
BUCHANAN, THOMAS M.....	IMMUNOCHEMISTRY & PATHOGENIC ROLE OF GONOCOCCAL PILI.....	5R01 AI13149-02	51,212
BUNT, ANN H.....	PROTEIN TRANSPORT IN RETINAL PHOTORECEPTORS AND AXONS.....	2R01 EY01311-04	70,347
BUTLER, JOHN.....	PULMONARY HEMODYNAMICS IN LUNG EDEMA DURING PEEP.....	1R01 HL20690-01	83,716
BYERS, BRECK E.....	MOLECULAR CYTOLOGY OF THE YEAST CELL CYCLE.....	2R01 GM18541-06	80,663
CALVIN, WILLIAM H.....	NEURON REPETITIVE FIRING MECHANISMS.....	2R01 NS09677-07	33,700
CAMERMAN, ARTHUR.....	STEREOCHEMICAL PRINCIPLES FOR ANTICANCER DRUGS.....	3R01 CA15879-03S1	8,684
CARRICO, C JAMES.....	PROGRAM STUDY OF THE TRAUMATIZED PATIENT.....	5P50 GM21797-03	356,910
CARRICO, C JAMES.....	BURN RESEARCH CENTER SUPPORT.....	5P50 GM22550-02	305,759
CHAMPOUX, JAMES J.....	BIOCHEMICAL STUDIES ON THE DNA UNTWISTING ENZYME.....	5R01 GM23224-02	50,864
CHANDLER, JOHN W, JR.....	IMMUNOPATHOLOGY AND THERAPY OF CORNEAL DISEASE.....	3R01 EY01282-03S1	28,357
CHAPMAN, C RICHARD.....	ACUPUNCTURE AND PERCEPTION OF DENTAL PAIN IN MAN.....	5R01 DE04004-03	58,868
CHAPMAN, WARREN H.....	EXPERIMENTAL BLADDER TUMORS.....	2R01 CA03842-19	37,031
CHAPMAN, WARREN H.....	IMMUNOLOGY OF BLADDER TUMORS.....	5R26 CA14135-05	126,766
CHENEY, FREDERICK W, JR.....	CHRONIC ANIMAL MODEL OF PULMONARY VASCULAR INJURY.....	1R01 HL20612-01	52,823
CHRISTENSEN, GERALD M.....	RESIDUAL POSTNATAL INJURY FROM PRENATAL X-IRRADIATION.....	5R01 CA15844-03	56,807
CHRISTENSEN, GERALD M.....	RADIATION INDUCED FIBROSIS.....	5R01 CA17042-03	64,863
CHRISTIAN, GARY D.....	A NEW CONCEPT IN FLUORESCENCE ANALYSIS.....	5R01 GM22311-02	36,965
CLOPTON, BEN M.....	DEVELOPMENT OF NEURAL MECHANISMS IN HEARING.....	2R01 NS13052-03	63,799
COHEN, M MICHAEL, JR.....	CRANIOFACIAL ANOMALY SYNDROMES.....	1R01 DE04502-01	64,505
COOKER, HARRY S.....	NEUROMUSCULAR MECHANISMS UNDERLYING SPEECH PRODUCTION.....	5P50 NS11780-04	143,076
CRILL, WAYNE F.....	PANCREATIC ISLET ELECTRICAL ACTIVITY AND SECRETION.....	1R01 AM21185-01	12,246
DALE, BEVERLY A.....	KERATOHYALIN IN KERATINIZATION: ORAL MUCOSA AND SKIN.....	5R01 DE04660-02	65,582
DALE, DAVID C.....	MARROW REGULATION IN CYCLIC HEMATOPOIESIS.....	5R01 AM18951-02	36,756

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
DAVIDSON, ERNEST R.....	ELECTRONIC STRUCTURE OF BIOCARBONYLS.....	5R01 GM22937-02	51,560
DAVIE, EARL W.....	PROTEINS OF BLOOD COAGULATION.....	5R01 HL16919-04	321,503
DAY, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05714-07	86,733
DETWILER, PETER B.....	A STUDY OF ELECTRICAL COUPLING IN VERTEBRATE RETINA.....	1R01 EY02048-01	55,146
DILLARD, DAVID H.....	SURGICAL APPROACH TO CONGENITAL HEART DISEASES.....	5R01 HL19203-02	124,153
DODGE, HAROLD T.....	SUDDEN CARDIAC DEATH AND ONSET OF MYOCARDIAL INFARCTION.....	5R01 HL18805-03	369,944
DODGE, HAROLD T.....	FUNCTIONAL CHARACTERISTICS OF THE LEFT HEART.....	5R01 HL19451-02	140,525
DOERMANN, AUGUST H.....	INVESTIGATION OF GENETIC PROBLEMS WITH BACTERIOPHAGES.....	5R01 GM13280-14	98,511
DOERMANN, AUGUST H.....	MOLECULAR CONTROL OF CAPSID FORM IN BACTERIOPHAGE T4.....	3R01 GM21340-02S1	16,492
DONALDSON, SUE K.....	CARDIAC CONTRACTILITY: ROLE OF INTRACELLULAR MG2 PLUS.....	3R01 HL17373-03S1	7,731
DOUGLAS, ROBERT J.....	AGING AND INHIBITION.....	1R01 AG00013-01	28,840
EDWARDS, JOHN S.....	NEURAL DEVELOPMENT.....	2R01 NS07778-10	81,950
EMANUEL, IRVIN.....	RESEARCH IN MENTAL RETARDATION AND CHILD DEVELOPMENT.....	2P30 HD02274-12	768,235
ENSINCK, JOHN W.....	THE REGULATION OF GLUCAGON SECRETION IN THE PRIMATE.....	5R01 AM16008-05	52,932
FALKOW, STANLEY.....	NATURE OF ENTEROTOXIN PRODUCTION BY E. COLI AND V. COMMA.....	5R22 AI10885-06	34,719
FANGMAN, WALTON L.....	EUKARYOTIC CHROMOSOME STRUCTURE AND REPLICATION.....	5R01 GM18926-06	88,286
FEFER, ALEXANDER.....	ADOPTIVE CHEMOIMMUNOTHERAPY OF TUMORS IN MICE.....	2R01 CA10777-09	101,679
FETZ, EBERHARD E.....	NEURAL CONTROL OF MUSCLE ACTIVITY.....	5R01 NS12542-03	29,253
FIALKOW, PHILIP J.....	HUMAN CANCER—ORIGIN AND GENETIC MARKERS.....	5R01 CA16448-03	52,870
FINCH, CLEMENT A.....	KINETIC STUDIES OF THE BLOOD.....	5R01 HL06242-17	338,753
FINK, B RAYMOND.....	LARYNGEAL BIOMECHANICS IN PULMONARY THERAPY.....	1R01 HL19975-01	30,561
FISCHER, EDMOND H.....	RELATION OF STRUCTURE TO FUNCTION OF ENZYMES.....	3R01 AM07902-14S1	14,383
FISCHER, EDMOND H.....	RELATION OF STRUCTURE TO FUNCTION OF ENZYMES.....	5R01 AM07902-15	108,208
FOX, JOHN P.....	FAMILY STUDY OF INFLUENZA AND RHINOVIRUS EPIDEMIOLOGY.....	5R01 AI12269-03	173,605
FOY, HJORDIS M.....	IMMUNITY TO MYCOPLASMA PNEUMONIAE INFECTIONS.....	5R01 AI10695-06	65,494
FOY, HJORDIS M.....	INFLUENZA—EPIDEMIOLOGY AND IMMUNITY.....	5R01 AI13500-02	61,391
FRANK, ROBERT.....	INHALED AEROSOLS: BEHAVIOR, EFFECTS, AND CLEARANCE.....	1P01 ES01478-01	249,153
FRANK, ROBERT.....	OZONE EFFECTS ON OVERALL AND REGIONAL LUNG FUNCTION.....	5R01 HL18925-03	40,762
FUCHS, ALBERT F.....	NEUROPHYSIOLOGICAL STUDIES OF THE OCULOMOTOR SYSTEM.....	5R01 EY00745-07	43,940
FUJIMOTO, WILFRED Y.....	CELL CULTURE STUDY OF DIABETES AND VASCULAR DISEASE.....	5R01 AM15312-06	34,273
FUTTERMAN, SIDNEY.....	RETINAL METABOLISM.....	5R01 EY00343-12	52,166
FUTTERMAN, SIDNEY.....	INTERDISCIPLINARY VISION AND OPHTHALMIC RESEARCH CENTER.....	5P30 EY01730-02	95,462
GALLANT, JONATHAN A.....	CONTROL OF RNA SYNTHESIS.....	5R01 GM13626-11	50,938
GELLERT, RONALD J.....	VITAMIN A AND REPRODUCTIVE FUNCTION.....	5R01 HD08716-03	60,455
GERDES, ARTHUR J.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12260-06	44,689
GLOMSET, JOHN A.....	PLASMA CHOLESTEROL METABOLISM.....	2R01 HL10642-17	46,040
GOODNER, CHARLES J.....	CNS REGULATION OF FUEL MOBILIZATION AND STORAGE.....	3R01 AM10866-11S1	15,376
GOODNER, CHARLES J.....	CNS REGULATION OF FUEL MOBILIZATION AND STORAGE.....	2R01 AM10866-12	89,470
GORBMAN, AUBREY.....	HORMONE ACTION ON CENTRAL NERVOUS FUNCTION.....	5R01 NS11343-04	109,670
GORDON, ALBERT M.....	CONTROL OF CONTRACTION IN STRIATED MUSCLE.....	5R01 NS08384-09	43,456
GOULD, KENNETH L.....	MEASUREMENT OF REGIONAL CORONARY FLOW RESERVE IN MAN.....	5R01 HL18492-03	57,332
GRAYSTON, J THOMAS.....	PREVENTION OF TRACHOMA & RELATED INFECTIONS.....	5R01 EY00219-17	170,228
GRAYSTON, J THOMAS.....	REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00166-17	2,210,590
GREEN, WILLIAM L.....	STUDIES OF THYROID HORMONE METABOLISM.....	5R01 AM15810-05	69,683
GREENLEE, THEODORE K, JR.....	TENDON REGENERATION AND DEVELOPMENT.....	5R01 AM15762-06	58,727
GROMAN, NEAL B.....	PHAGE-BACTERIAL EFFECTS ON VIRULENCE OF C DIPHTHERIAE.....	5R01 AI10492-06	60,846
GUNTHEROTH, WARREN G.....	HYPOXIA IN SUDDEN INFANT DEATH SYNDROME.....	1R01 HD10340-01	64,166
HALBERT, SHERIDAN A.....	ANALYSIS OF THE MECHANISMS OF OVIDUCTAL TRANSPORT.....	1R01 HD10988-01	72,872
HALL, BENJAMIN D.....	EXPRESSION AND REGULATION OF EUKARYOTIC GENES.....	5R01 GM11895-14	98,867
HARKER, LAURENCE A.....	PLATELET MECHANISMS IN DISEASE.....	5R01 HL11775-10	107,950
HARKINS, STEPHEN W.....	BRAIN ELECTRICAL POTENTIALS IN AGING AND DEMENTIA.....	1R01 AG00573-01	56,072
HARRIS, A BASIL.....	ANATOMY OF EXPERIMENTAL SEIZURES.....	5R01 NS09037-08	43,874
HARRIS, FREDRIC A.....	DENTAL CARE OF THE CEREBRAL PALSIED CHILD.....	5R01 DE04179-03	38,705
HARTWELL, LELAND H.....	GENETIC ANALYSIS OF THE EUKARYOTIC CELL CYCLE.....	5R01 GM17709-08	100,782
HASCHKE, RICHARD H.....	RETROGRADE AXONAL TRANSPORT IN THE VISUAL SYSTEM.....	5R01 EY01756-02	72,893
HAUSCHKA, STEPHEN D.....	CLONAL ANALYSIS OF SKELETAL MUSCLE DEVELOPMENT.....	5R01 AM18860-02	99,123
HAZZARD, WILLIAM R.....	ESTROGEN EFFECTS ON LIPIDS, ARTERIES AND PLATELETS.....	5R01 HL18291-03	30,795
HENDRICKSON, ANITA E.....	PRIMATE VISUAL SYSTEM DEVELOPMENT AND DEPRIVATION.....	2R01 EY01208-04	67,539
HILLE, BERTIL.....	MOLECULAR PROPERTIES OF IONIC PERMEABILITY IN NERVE.....	5R01 NS08174-09	56,607
HILLE, MERRILL B.....	ACTIVATION OF PROTEIN SYNTHESIS IN ECHINOIDEA EMBRYOS.....	1R01 HD11070-01	38,973

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
HILLMAN, ROBERT S.....	FOLATE AND PYRIDOXINE METABOLISM.....	1R01 AM20192-01	68,206
HLASTALA, MICHAEL P.....	VENTILATION: PERFUSION DISTRIBUTION IN THE LUNG.....	2R01 HL12174-10	107,724
HOGNESS, JOHN R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07096-12	200,028
HOHL, THOMAS H.....	SURGICAL EFFECTS ON CRANIOFACIAL GROWTH AND DEVELOPMENT.....	5R01 DE04478-02	22,582
HOLMES, KING K.....	VENEREAL DISEASE RESEARCH PROGRAM PROJECT.....	5P01 AI12192-03	220,086
HORBETT, THOMAS A.....	CELLULAR INTERACTIONS WITH FOREIGN MATERIALS.....	5R01 HL19419-02	124,319
HUNTSMAN, LEE L.....	NONINVASIVE DETERMINATION OF AORTIC BLOOD VELOCITIES.....	2R01 HL16830-04	57,691
HUNTSMAN, LEE L.....	MECHANICAL PROPERTIES OF ISOLATED MYOCARDIUM.....	1R01 HL20613-01	21,930
HUTCHINSON, THOMAS E.....	A STUDY OF FROZEN HYDRATED BIOLOGICAL MATERIAL.....	3R24 RR01080-01S1	575
ISHIMARU, AKIRA.....	OPTICAL DETECTION OF PLATELET AGGREGATES.....	1R01 HL19993-01	54,677
JENSEN, LYLE H.....	MOLECULAR STRUCTURE.....	5R01 AM03288-19	42,707
JENSEN, LYLE H.....	STRUCTURE OF BIOLOGICALLY IMPORTANT COMPOUNDS.....	2R01 GM10828-23	29,330
JENSEN, LYLE H.....	CRYSTALLOGRAPHIC STUDY OF PROTEINS.....	5R01 GM13366-13	77,723
JOHNSON, DALE E.....	ENERGY LOSS MICROANALYSIS OF MYOCARDIAL CATIONS.....	1R01 HL21371-01	56,551
JOHNSON, DORTHEA A.....	EFFECT OF PAROTID FUNCTION ON SALIVA AND CELLS.....	1R01 DE04468-01	45,912
JONES, ROBERT F.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA21880-01	90,786
JUCHAU, MONT R.....	METABOLISM OF DRUG SUBSTRATES BY HUMAN PLACENTA.....	3R01 HD04839-06S1	7,372
JUCHAU, MONT R.....	METABOLISM OF DRUG SUBSTRATES BY HUMAN PLACENTA.....	2R01 HD04839-07	76,761
KEHL, THEODORE H.....	SUPPORT FOR PHYSIOLOGY AND BIOPHYSICS COMPUTER.....	2P41 RR00374-11	345,758
KELLER, PATRICIA J.....	STUDIES ON THE BYSSUS OF MYTILUS CALIFORNIANUS.....	5R01 DE03681-03	31,530
KLEBANOFF, SEYMOUR J.....	ANTIMICROBIAL EFFECT OF PEROXIDASE—ROLE IN LEUKOCYTES.....	5R01 AI07763-11	62,722
KLEBANOFF, SEYMOUR J.....	TUMOR CELL CYTOTOXICITY OF PHAGOCYtic CELLS.....	5R01 CA18354-02	75,154
KLEBANOFF, SEYMOUR J.....	UTERINE EOSINOPHIL STRUCTURE AND FUNCTION.....	5R01 HD02266-12	57,621
KREBS, EDWIN G.....	THE REGULATORY ENZYMES OF GLYCOGEN METABOLISM.....	7R01 AM21409-01	20,996
KREBS, EDWIN G.....	THE REGULATORY ENZYMES OF GLYCOGEN METABOLISM.....	5R01 AM21409-02	146,482
KUO, CHO-CHOU.....	IMMUNOLOGY OF CHLAMYDIA TRACHOMATIS GENITAL INFECTION.....	1R01 AI14180-01	66,962
KWIRAM, ALVIN L.....	CHEMICAL PATHOLOGY OF MACROMOLECULES IN CARCINOGENESIS.....	5R01 CA19101-02	58,437
KWIRAM, ALVIN L.....	ODMR OF FLAVINS AND FLAVOPROTEINS.....	5R01 GM22603-02	49,478
LABBE, ROBERT F.....	METABOLIC ABNORMALITIES IN MENTAL RETARDATION.....	5P01 HD04665-07	205,201
LAIRD, CHARLES D.....	NUCLEOTIDE SEQUENCE CHANGES IN EVOLUTION.....	5R01 GM19179-06	58,041
LOCKARD, ROBERT B.....	PERIODIC BEHAVIOR IN FIELD AND LABORATORY.....	3R01 HD00942-13S1	3,277
LOCKARD, ROBERT B.....	PERIODIC BEHAVIOR IN FIELD AND LABORATORY.....	5R01 HD00942-14	39,205
LOWE, MICHAEL C.....	MORPHOLOGICAL ASPECTS OF MYOCARDIAL AMINE METABOLISM.....	5R01 HL18150-02	37,363
LUND, JENNIFER S.....	STRUCTURAL BASIS FOR PROCESSING VISUAL INFORMATION.....	5R01 EY01086-05	89,389
LUND, RAYMOND D.....	DEVELOPMENT AND PLASTICITY OF VISUAL CONNECTIONS.....	5R01 EY00596-09	55,272
LUND, RAYMOND D.....	TRANSPLANTATION STUDIES OF THE RAT VISUAL SYSTEM.....	1R01 EY01950-01	93,875
LUSCHEI, ERICH S.....	NEURAL PROCESSES IN SOMATIC MOVEMENT.....	9R01 DE04884-09	64,829
MACKLER, BRUCE.....	STUDIES OF BIOLOGICAL OXIDATIONS.....	5R01 GM23006-18	55,261
MACKLER, BRUCE.....	STUDIES OF HUMAN AND MAMMALIAN DEVELOPMENT.....	5P01 HD05961-07	316,274
MAKOUS, WALTER L.....	DUPLICITY THEORY AND THE STILES-CRAWFORD EFFECT.....	5R01 EY00788-05	43,267
MANNIK, MART.....	STUDIES ON THE RENAL DISEASE OF SYSTEMIC LUPUS.....	5R01 AM11476-11	80,238
MANNIK, MART.....	RHEUMATOID ARTHRITIS IMMUNOLOGY STUDIES.....	5R01 AM12849-09	60,002
MARTIN, GEORGE M.....	CLONAL SENEESCENCE OF SOMATIC CELLS.....	3R01 AG00257-02S1	53,983
MARTIN, GEORGE M.....	CLONAL SENEESCENCE OF SOMATIC CELLS.....	5R01 AG00257-03	159,186
MARTIN, GEORGE M.....	ABNORMAL PROTEINS IN THE PATHOGENESIS OF DISEASE.....	9R01 AG00592-17	87,345
MARTIN, JOAN C.....	CONSEQUENCE OF IN UTERO TREATMENT.....	3R01 AG00466-02S1	16,081
MARTIN, ROY.....	BLOOD FLOW MEASUREMENT BY ULTRASONIC CATHETER TIP METHOD.....	5R01 HL14645-06	73,467
MATSEN, FREDERICK A, III.....	INCREASED PRESSURE IN COMPARTMENTS OF THE EXTREMITIES.....	1R01 AM18642-01A1	44,157
MILLER, JOSEF M.....	AUDITORY THALAMO-CORTICAL PROJECTIONS.....	2R01 NS08181-06A1	80,955
MILLER, JOSEF M.....	STUDIES OF THE COCHLEAR PROSTHESIS.....	5P50 NS13056-02	187,220
MOFFETT, BENJAMIN C, JR.....	CRANIOFACIAL ARTICULATIONS AND MASTICATORY FUNCTION.....	5R01 DE02931-11	63,575
MOORE, ALTON W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05346-16	26,448
MORITZ, WILLIAM E.....	ULTRASONIC MEASUREMENT OF CARDIAC GEOMETRY AND FLOW.....	2R01 HL16759-04	53,883
MORRIS, DAVID R.....	BIOSYNTHESIS AND BIOLOGICAL FUNCTION OF POLYAMINES.....	5R01 GM13957-11	56,306
MOTTET, N KARLE.....	METHYLMERCURY EMBRYOPATHY.....	2R01 ES00677-07	175,270
MOTULSKY, ARNO G.....	SUPPORT FOR STUDY OF INHERITED DISEASES.....	2P50 GM15253-11	1,135,040
NESTER, EUGENE W.....	MOLECULAR BASIS OF CROWN GALL TUMORIGENESIS.....	5R01 CA13015-06	93,309
NEURATH, HANS.....	BIOLOGICAL CONTROL BY LIMITED PROTEOLYSIS.....	2P01 GM15731-10	320,554
NUTE, PETER E.....	HEMOGLOBIN Y-CHAIN GENES: EVOLUTION AND INDUCIBILITY.....	1R01 HL20961-01	63,409
PAGE, ROY C.....	SUPPORT FOR ORAL BIOLOGY RESEARCH CENTER.....	5P50 DE02600-11	1,241,493

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
PAGE, ROY C.....	CONNECTIVE TISSUE OF THE PERIODONTIUM.....	5R01 DE03301-07	62,522
PALMITER, RICHARD D.....	HORMONAL CONTROL OF DIFFERENTIATION AND GENE ACTION.....	5R01 HD09172-03	61,747
PAVLIN, DOROTHY J.....	MECHANISMS OF RE-EXPANSION PULMONARY EDEMA.....	1R23 HL21050-01	39,704
PETERSDORF, ROBERT G.....	EXPERIMENTAL ENDOCARDITIS.....	5R01 HL17751-03	63,681
PETERSON, DONALD R.....	GENETIC SUSCEPTIBILITY TO SUDDEN INFANT DEATH.....	5R01 HD09297-03	55,259
PETRA, PHILIP H.....	STRUCTURE-FUNCTION OF STEROID BINDING PROTEINS.....	5R01 HD07190-06	44,775
PINTER, ROBERT B.....	QUANTITATIVE DETERMINATION OF RETINAL FUNCTION.....	5R01 EY01285-03	27,593
PIOUS, DONALD A.....	GENETIC STRUCTURE AND FUNCTION IN HUMAN CELLS.....	5R01 GM15883-13	69,896
POCKER, YESHAYAU.....	PHYSICO-CHEMICAL STUDIES OF ENZYMIC HYDRATION.....	5R01 AM09221-13	72,736
POLLACK, GERALD H.....	MYOCARDIAL SARCOMERE MECHANICS.....	5R01 HL18676-03	72,355
PORTE, DANIEL, JR.....	NEURAL REGULATION OF PANCREATIC HORMONE SECRETION.....	5R01 AM12829-09	74,826
PORTE, DANIEL, JR.....	DIABETES-ENDOCRINOLOGY RESEARCH CENTER.....	2P30 AM17047-03	392,662
PRESTON, SAMUEL H.....	CENTER FOR STUDIES IN DEMOGRAPHY AND ECOLOGY.....	5P30 HD09397-02	99,422
PRINZ, PATRICIA N.....	SLEEP AND OTHER NEUROBIOLOGICAL CHANGES WITH AGING.....	1R01 AG00667-01	41,022
RASEY, JANET S.....	CYTOKINETIC APPROACH TO EMT-6 SOLID TUMOR THERAPY.....	5R01 CA19899-02	53,291
REICHENBACH, DENNIS D.....	ELECTROCARDIOGRAPHIC QUANTIFICATION OF INFARCT SIZE.....	1R01 HL21750-01	22,067
RICHMOND, VIRGINIA L.....	LUNG ELASTIC TISSUE CHARACTERISTICS.....	1R01 HL18931-01A1	43,619
RIDDIFORD, LYNN M.....	STUDIES OF JUVENILE HORMONE ACTION.....	5R01 AI12459-03	52,267
ROMAN, HERSHEL L.....	GENETIC INVESTIGATIONS IN YEAST-SACCHAROMYCES.....	5R01 AI00328-26	99,907
ROSS, RUSSELL.....	WOUND REPAIR, INFLAMMATION AND CONNECTIVE TISSUE.....	5R01 AM13970-16	60,239
ROSS, RUSSELL.....	BIOLOGY OF THE ARTERY WALL AND ATHEROSCLEROSIS.....	5P01 HL18645-02	445,561
ROSSE, CORNELIUS.....	LYMPHOCYTE PRODUCTION AND TRAFFIC IN THE BONE MARROW.....	5R01 CA20823-02	51,596
RUBIN, CYRUS E.....	THE PATHOGENESIS OF HUMAN ALIMENTARY MUCOSAL DISEASE.....	5R01 AM16059-19	179,695
RUSHMER, ROBERT F.....	SUPPORT FOR BIOENGINEERING RESEARCH CENTER.....	3P50 GM16436-08S1	13,896
SAARI, JOHN C.....	BIOCHEMISTRY OF THE RETINA AND PIGMENT EPITHELIUM.....	1R01 EY02317-01	25,674
SACKETT, GENE P.....	PREMATURITY IN PRIMATES: CAUSES, EFFECTS, PREVENTION.....	3R01 HD08633-03S1	14,511
SACKETT, GENE P.....	PREMATURITY IN PRIMATES: CAUSES, EFFECTS, PREVENTION.....	2P01 HD08633-04	278,325
SANDLER, LAURENCE M.....	CYTOGENETICS OF MEIOSIS AND DEVELOPMENT IN DROSOPHILA.....	5R01 GM09965-15	85,410
SCHER, ALLEN M.....	REGULATION OF THE PERIPHERAL CIRCULATION.....	5P01 HL16910-04	562,503
SCHER, ALLEN M.....	CARDIAC FIBER DIRECTION AND THE QRS COMPLEX.....	1R01 HL20273-01	71,542
SCHROEDER, THOMAS E.....	ULTRASTRUCTURE AND BIOCHEMISTRY OF THE CONTRACTILE RING.....	5R01 GM19464-06	71,651
SCOTT, C RONALD.....	BIOCHEMICAL CAUSES OF CHILD IMMUNE DEFICIENCY STATES.....	5R01 AI12617-03	67,177
SHAPIRO, BENNETT M.....	FERTILIZATION: MOLECULAR EVENTS OF CORTICAL REACTION.....	1R01 GM23910-01	49,946
SHEPARD, THOMAS H.....	LABORATORY FOR THE STUDY OF HUMAN EMBRYOS AND FETUSES.....	5R01 HD00836-14	39,000
SIMKIN, PETER A.....	STUDIES OF URIC ACID TRANSPORT.....	5R01 AM13925-08	76,784
SMITH, LYNWOOD S.....	PATHOGENESIS OF BUBBLE AND CLOT FORMATION.....	2R01 HL16254-04	70,341
SMITH, ORVILLE A, JR.....	ORAL-FACIAL GROWTH AND DEVELOPMENT IN PRIMATES.....	5R01 DE02918-09	127,724
SMITH, PHILLIP H.....	NEURAL CONTROL OF ISLET MASS IN OBESE/DIABETIC RATS.....	1R01 AM20284-01	28,922
SPENCE, ALEXANDER M.....	IMMUNITY AGAINST NITROSUREA-INDUCED RAT BRAIN TUMORS.....	5R01 CA18385-02	42,314
STAMATOYANNPOPOULOS, GEORGE.....	CELLULAR MECHANISMS OF HEMOGLOBIN F REGULATION.....	1R01 HL20899-01	98,160
STIRLING, CHARLES E.....	ACTIVE TRANSPORT IN EPITHELIA.....	5R01 AM13182-09	31,007
STORB, URSULA B.....	CONTROL OF IMMUNOGLOBULIN SYNTHESIS.....	5R01 AI10685-06	59,659
STRANDNESS, DONALD E, JR.....	LONG-TERM STUDY OF DIABETIC VASCULAR DISEASE.....	5R01 HL20381-02	113,557
STRANDNESS, DONALD E, JR.....	ULTRASONIC EVALUATION IN DIRECT ARTERIAL SURGERY.....	1R01 HL20898-01	102,619
SU, JUDY Y.....	MECHANISM OF ANESTHETIC-INDUCED MYOCARDIAL DEPRESSION.....	1R01 HL20754-01	52,870
TELLER, DAVID C.....	STUDIES OF ASSOCIATION REACTIONS OF ENZYMES.....	5R01 GM13401-12	54,862
TELLER, DAVIDA Y.....	VISION IN HUMAN INFANTS.....	5R01 EY01695-02	14,728
THOMAS, E DONNALL.....	IRRADIATION AND MARROW TRANSPLANTATION IN LARGE ANIMALS.....	5R01 CA18047-14	130,050
TORNYAY, RHEBA DE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05758-04	25,713
TOWE, ARNOLD L.....	SINGLE UNIT ANALYSIS IN THE SOMATOSENSORY SYSTEM.....	5R01 NS00396-25	55,371
TOWE, ARNOLD L.....	HIGH-SPEED DATA ACQUISITION AND COMPUTER ANALYSIS.....	5R01 NS05136-14	66,634
TRUMAN, JAMES W.....	HORMONE ACTION ON THE CENTRAL NERVOUS SYSTEM.....	5R01 NS13079-02	60,635
VAN CITTERS, ROBERT L.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00037-17	837,424
VAN CITTERS, ROBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05432-16	213,709
VAN HASSEL, HENRY J.....	TOOTH REPLANTATION STUDIES.....	5R01 DE03800-03	3,664
VAN HOOSIER, GERALD L, JR.....	ANIMAL RESOURCES DEVELOPMENT.....	1P40 RR01095-01	437,484
VERDUGO, PEDRO.....	CILIARY ACTIVITY OF THE LUNG STUDIED BY LASER SCATTERING.....	1R01 HL20192-01	65,100
VINCENZI, FRANK F.....	RED BLOOD CELL CALCIUM IN HEALTH AND DISEASE.....	5R01 AM16436-04	46,385
WARD, ARTHUR A, JR.....	EPILEPSY RESEARCH SUPPORT.....	3P50 NS04053-15S1	236,111
WARD, ARTHUR A, JR.....	EPILEPSY RESEARCH SUPPORT.....	5P50 NS04053-16	492,547

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
WARD, RICHARD H.....	GENETIC EPIDEMIOLOGY OF PRECURSORS OF HYPERTENSION.....	5R01 HL20159-02	71,315
WEDGWOOD, RALPH J.....	DEVELOPMENTAL AND GENETIC DEFECTS OF IMMUNITY.....	5R01 AI07073-11	55,877
WHISLER, HOWARD C.....	BIOLOGY OF ENTOMOGENOUS FUNGI.....	5R01 AI05882-15	63,509
WHITE, THOMAS T.....	PANCREATIC DUCTAL VERSUS DUODENAL SECRETIONS.....	5R01 CA14380-05	79,054
WHITELEY, ARTHUR H.....	BLOCKED TRANSLATION IN ECHINOID EGGS AND EMBRYOS.....	5R01 HD10312-02	49,528
WHITELEY, HELEN R.....	REGULATION OF RNA SYNTHESIS.....	5R01 GM20784-03	63,487
WHORTON, JAMES C.....	HYGIENIC REFORM IN JACKSONIAN AMERICA.....	5R01 LM02360-03	2,200
WILKIE, FRANCES L.....	AGE RELATED RESPONSES TO CATECHOLAMINE INFUSION.....	1R01 AG00896-01	55,764
WILLSON, RICHARD A.....	ACUTE HEPATIC FAILURE STUDY.....	5R01 AM17813-03	29,179
WISE, JOHN A.....	VIRAL ANTIGENICITY AND ITS RELATION TO VIRAL IMMUNITY.....	5R01 AI12827-03	46,658
WOODRUM, DAVID E.....	ETIOLOGY OF RECURRENT APNEA AND SIDS.....	1R01 HD10356-01	84,618
WOODS, STEPHEN C.....	NEURAL CONTROL OF BODY WEIGHT.....	5R01 AM17844-03	44,223
WOOTTON, PETER.....	FAST NEUTRON BEAM RADIOTHERAPY.....	3P01 CA12441-06S1	145,662
YOUNG, ELTON T, II.....	CONTROL OF FUNCTIONAL MESSENGER RNA SYNTHESIS.....	2R01 AI09456-08	63,627
ZICK, GREGORY L.....	DIRECT DETERMINATION OF PO2 IN THE CLINICAL ENVIRONMENT.....	1R01 HL20354-01	33,218
ORGANIZATION TOTAL	243	28,767,184	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 98108			
HALTER, JEFFREY B.....	THE PATHOGENESIS OF IMPOTENCE IN DIABETES MELLITUS.....	1R01 AM20754-01	39,893
ORGANIZATION TOTAL	1	39,893	
VIRGINIA MASON RESEARCH CENTER ZIP CODE 98101			
BEAN, MICHAEL A.....	CELLULAR IMMUNE RESPONSES TO HUMAN BLADDER CARCINOMA.....	5R26 CA19165-03	76,199
CUMMINGS, KENNETH B.....	MANAGEMENT OF PATIENTS WITH BLADDER CARCINOMA.....	2R26 CA17466-03	60,223
CUMMINGS, KENNETH B.....	IMMUNE RESPONSES IN PATIENTS WITH BLADDER CANCER.....	5R26 CA18667-02	44,877
D'AOUST, BRIAN G.....	VASCULAR BUBBLES IN DECOMPRESSION SICKNESS.....	5R01 HL17503-03	78,532
GIBBONS, ROBERT P.....	CHEMOTHERAPY FOR ADVANCED PROSTATIC CANCER.....	5R26 CA15421-04	103,931
GLEISNER, JOHN M.....	ENZYMES OF M. TUBERCULOSIS & OBSTRUCTIVE LUNG DISEASE.....	1R01 HL21095-01	58,296
HILDEBRANDT, JACOB.....	LUNG AND TISSUE MECHANICS.....	2R01 HL14854-06	55,662
HILDEBRANDT, JACOB.....	SURFACTANT, PULMONARY EDEMA, AND LUNG MECHANICS.....	1R01 HL20773-01	39,304
HILDEBRANDT, JUDITH R.....	CARDIORESPIRATORY CONTROL IN EXERCISE.....	5R01 HL13233-08	16,712
HOUCK, JOHN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05588-11	32,476
LAI, YIH-LOONG.....	RESPIRATION DURING PROLONGED HYPERCAPNIA.....	5R01 HL20568-02	31,915
SUTTON, DWIGHT.....	LIMBIC AND NEOCORTEX MECHANISMS IN PHONATION.....	5R01 NS12165-03	57,879
TAYLOR, EUGENE M.....	HYPOXEMIA IN INFANT PRIMATES.....	1R01 HD10761-01	127,389
ORGANIZATION TOTAL	13	783,395	
STATE TOTAL	340	40,552,903	
WEST VIRGINIA			
HUNTINGTON			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 25701			
BURCH, ROBERT E.....	AGING: TISSUE TRACE ELEMENTS AND ENZYMATIC ACTIVITY.....	1R01 AG01003-01	33,394
ORGANIZATION TOTAL	1	33,394	
MORGANTOWN			
WEST VIRGINIA UNIVERSITY ZIP CODE 26506			
BLAIR, JAMES B.....	HORMONAL REGULATION OF GLUCONEOGENESIS.....	2R01 AM17664-04	56,764
BROWN, PAUL B.....	ORGANIZATION OF CUTANEOUS NEURONS OF THE DORSAL HORN.....	5R01 NS12061-04	40,794
BUTCHER, ROY L.....	ALTERATIONS IN THE OOCYTE DURING PREEVULATORY AGING.....	1R01 HD11679-01	48,658
COLASANTI, BRENDA K.....	ADRENERGIC AND CHOLINERGIC INTERACTIONS IN THE EYE.....	2R01 EY01217-04	28,023
COLBY, HOWARD D.....	ADRENAL CARCINOGEN METABOLISM.....	1R01 CA22152-01	54,109
FLEMING, WILLIAM W.....	MECHANISM OF NONSPECIFIC SUPERSENSITIVITY TO DRUGS.....	5R01 NS08300-09	73,768
FRIST, RAMSEY H.....	COMOVIRUS RIBONUCLEIC ACIDS: STRUCTURE AND FUNCTION.....	5R01 AI09934-05	36,390
HAINES, DUANE E.....	CEREBELLAR EVOLUTION AND FUNCTION.....	5R01 NS11327-04	27,025

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WEST VIRGINIA—Continued			
HARRIS, CHARLES L.....	RNA SULFURTRANSFERASE IN NORMAL AND CANCER TISSUES.....	5R01 CA16567-03	31,940
HEDGE, GEORGE A.....	NEUROENDOCRINE REGULATION OF ACTH AND TSH SECRETION.....	1R01 AM21348-01	49,420
JONES, BARBARA.....	ACUTE LEUKEMIA GROUP B.....	3R10 CA07757-12S1	15,404
JONES, BARBARA.....	ACUTE LEUKEMIA GROUP B (CANCER AND LEUKEMIA GROUP B).....	2R10 CA07757-13	185,933
JONES, JOHN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05433-16	46,517
LEE, PING.....	ERYTHROCYTES DURING EARLY DEVELOPMENT.....	5R01 HL13237-08	46,040
MAWHINNEY, MICHAEL G.....	METABOLISM AND INHIBITION OF PROSTATIC CANCER.....	5R01 CA13103-06	43,154
MORAN, WALTER H, JR.....	THE REGULATION OF ELECTROLYTE BALANCE IN SURGERY.....	5R01 GM20085-18	51,718
REYER, RANDALL W.....	LENS AND NEURAL RETINA DEVELOPMENT AND REGENERATION.....	5R01 EY00196-20	24,523
ROBINSON, ROBERT L.....	CNS CONTROL OF ADRENAL MEDULLARY SECRETION.....	5R01 NS12861-02	38,010
SANDER, EUGENE G.....	BIOCHEMICAL MECHANISMS OF PYRIMIDINE ALKYLATION.....	5R01 CA21167-02	50,495
WATNE, ALVIN L.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19530-02	109,966
ORGANIZATION TOTAL	20	1,058,651	
SHEPHERDSTOWN			
SHEPHERD COLLEGE ZIP CODE 25443			
FIALA, SILVIO E.....	THE ROLE OF CARCINOGEN IN NUCLEIC ACID METABOLISM.....	3R01 CA14084-04S1	6,340
FIALA, SILVIO E.....	THE ROLE OF CARCINOGEN IN NUCLEIC ACID METABOLISM.....	2R01 CA14084-05	30,786
ORGANIZATION TOTAL	2	37,126	
STATE TOTAL	23	1,129,171	
WISCONSIN			
KENOSHA			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-PARKSIDE ZIP CODE 53140			
CHEN, CHONG-MAW.....	MOLECULAR CONTROL OF CELL DIVISION AND DIFFERENTIATION.....	1R01 GM22543-01A2	20,568
ORGANIZATION TOTAL	1	20,668	
MADISON			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706			
ADLER, JULIUS.....	BEHAVIOR OF BACTERIA—BIOCHEMISTRY AND GENETICS.....	5R01 AI08746-09	98,907
ALLEN, JAMES R.....	HEPATOCELLULAR METABOLISM OF CHLORINATED HYDROCARBONS.....	5R01 ES00472-07	42,625
ALLEN, JAMES R.....	PATHOBIOLOGICAL RESPONSE OF PRIMATES TO BIPHENYLS.....	5R01 ES00958-03	49,676
ALLEN, JAMES R.....	IMPLICATIONS OF LOW LEVEL EXPOSURE TO DIOXINS.....	1R01 ES01339-01A1	70,668
ALLEN, JAMES R.....	DIOXIN INDUCED TOXICITY AND CARCINOGENICITY.....	1R01 ES01839-01	43,694
ALLEN, JAMES R.....	PATHOGENESIS OF HEPATIC VENO-OCCLUSIVE DISEASE.....	3R01 HL10941-10S1	8,986
ANDERSON, LAURENS.....	CHEMICAL SYNTHESIS OF OLIGOSACCHARIDES.....	5R01 AM10588-12	48,194
AZEN, EDWIN A.....	GENETIC POLYMORPHISMS OF SALIVA.....	5R01 DE03658-13	30,604
BACH, FRITZ H.....	GENETIC FACTORS IN TRANSPLANT SURVIVALS.....	5R01 AI08439-10	159,131
BACH, FRITZ H.....	PROGRAM PROJECT IN LYMPHOCYTE BIOLOGY.....	5P01 AI11576-05	291,772
BACH, FRITZ H.....	PROGRAM PROJECT IN TUMOR & ALLOGRAFT IMMUNITY.....	5P01 CA16836-03	312,172
BASS, PAUL.....	FLOW AND ELECTRIC MEASUREMENTS OF STOMACH-INTESTINE.....	5R01 AM18108-03	51,873
BEINERT, HELMUT.....	COMPONENTS AND PATHWAYS IN BIOLOGICAL OXIDATIONS.....	5R01 GM12394-14	120,190
BELZER, FOLKERT O.....	STUDIES IN ORGAN PRESERVATION.....	5R01 AM18624-02	73,980
BENEVENGA, NORLIN J.....	EFFECT OF AGE ON SULFUR AMINO ACID METABOLISM.....	2R01 AM15227-06	39,956
BENJAMIN, ROBERT M.....	OLFACTORY PROJECTIONS TO THALAMUS AND NEOCORTEX.....	5R01 NS12721-03	66,884
BERGDOLL, MERLIN S.....	PURIFICATION AND CHEMISTRY OF THE ENTEROTOXINS.....	2R01 AI07615-12	87,561
BERKOFF, HERBERT A.....	RELATION OF MITOCHONDRIAL CHANGES TO CARDIAC FAILURE.....	5R01 HL19378-02	56,540
BITTAR, NEVILLE.....	STUDIES OF MYOCARDIAL REACTIVE HYPEREMIA.....	5R01 HL17759-03	61,654
BLATTNER, FREDERICK R.....	REGULATORY SITES IN PRO- AND EUKARYOTIC GENOMES.....	2R01 GM21812-03	99,550
BOCK, ROBERT M.....	DETERMINATION OF TRANSFER RIBONUCLEIC ACID STRUCTURE.....	5R01 GM12395-13	63,363
BOCK, ROBERT M.....	REGIONAL PRIMATE RESEARCH CENTER SUPPORT.....	5P40 RR00167-17	2,224,808
BOCK, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07098-12	213,709

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
BORISY, GARY G.....	MECHANISM OF MICROTUBULE ASSEMBLY.....	5R01 GM21963-03	55,577
BOUSH, GEORGE M.....	HEALTH HAZARDS OF PESTICIDE TERMINAL RESIDUES.....	5R01 ES00877-03	23,004
BOWMAN, ROBERT E.....	EFFECTS OF LEAD ON FETAL AND NEONATAL DEVELOPMENT.....	5R01 ES01062-03	128,855
BOWMAN, ROBERT E.....	BEHAVIORAL AND NEUROPATHOLOGICAL EFFECTS OF HALOTHANE.....	5R01 GM22685-03	79,707
BOWNDS, M DERIC.....	MOLECULAR BIOLOGY OF VISUAL RECEPTOR OUTER SEGMENTS.....	2R01 EY00463-09	74,329
BREMEL, ROBERT D.....	OXYTOCIN IN EXCITATION-CONTRACTION COUPLING.....	5R01 HD09764-02	31,606
BRIDSON, WILLIAM E.....	HYPOTHALAMIC-PITUITARY-TESTICULAR DEVELOPMENT.....	1R01 HD10533-01A1	63,579
BRILL, WINSTON J.....	STUDIES OF A FACTOR COMMON TO MOLYBDONENZYMES.....	5R01 GM22130-03	39,041
BROWN, RAYMOND R.....	EFFECT OF FAT SATURATION ON CANCER INCIDENCE IN MICE.....	5R01 CA20908-02	128,512
BRYAN, GEORGE T.....	CARCINOGENICITY AND METABOLISM OF 5-NITROFURANS.....	5R01 CA11946-08	62,493
BUCHLER, DOLORES A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18397-03	144,470
BUCKNER, CARL K.....	BRONCHODILATING SUBSTANCES FROM VERBASCUM THAPSUS.....	5R01 HL19061-02	29,627
BURKHOLDER, PETER M.....	CELLULAR SYNTHESIS OF COMPLEMENT COMPONENTS.....	5R01 AM16440-04	48,585
BURKHOLDER, PETER M.....	IN VITRO CULTURE STUDIES OF RENAL GLOMERULAR DISEASES.....	5R01 AM18640-02	31,648
BURRIS, ROBERT H.....	BIOLOGICAL FIXATION OF NITROGEN BY MICROORGANISMS.....	5R01 AI00848-22	47,427
CALDWELL, WILLIAM L.....	MULTIDISCIPLINARY PROGRAM IN RADIATION ONCOLOGY.....	5P01 CA19278-02	706,691
CARBONE, PAUL P.....	CLINICAL ONCOLOGY (MULTIDISCIPLINARY).....	1P01 CA20432-01	688,481
CARBONE, PAUL P.....	ONCOLOGY STUDIES: EASTERN COOPERATIVE ONCOLOGY GROUP.....	1R10 CA21076-01	237,936
CARBONE, PAUL P.....	EASTERN COOPERATIVE ONCOLOGY GROUP OPERATIONS OFFICE.....	1R10 CA21115-01	624,845
CARLSON, STANLEY D.....	NEUROPILE RECONSTRUCTION BY HVEM AND OTHER METHODS.....	5R01 EY01686-02	34,150
CHU, FUN S.....	IMMUNOCHEMICAL STUDIES ON CARCINOGENIC MYCOTOXINS.....	5R01 CA15064-05	52,244
CLELAND, W WALLACE.....	DETERMINATION OF ENZYME MECHANISMS BY KINETIC STUDIES.....	2R01 GM18938-06	96,788
CLIFTON, KELLY H.....	RADIATION IN VITRO & MAMMARY CELL SURVIVAL & NEOPLASIA.....	5R01 CA13881-05	124,429
COATES, PENELOPE W.....	SHEEP THIRD VENTRICLE, LH AND GONADAL STEROIDS.....	5R01 HD10010-02	37,482
COHEN, PHILIP P.....	ENZYME BIOSYNTHESIS AND REGULATION: UREA BIOSYNTHESIS.....	5R01 CA03571-21	104,671
CRAVEN, GARY R.....	THE STRUCTURE AND ASSEMBLY OF THE 30S RIBOSOME.....	1R01 GM24109-01	119,206
CRIPPS, OEREK J.....	ACTION SPECTRA AND BIOCHEMISTRY OF PHOTODERMATOSES.....	5R01 AM09995-12	33,117
CROW, JAMES F.....	THE EFFECT OF MUTATION ON FITNESS.....	5R01 GM22038-03	77,373
CROWLEY, JOHN J.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA.....	1R10 CA21077-01	88,159
CROWLEY, LAWRENCE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05435-16	213,709
D'ALESSIO, DONN J.....	EPIDEMIOLOGY AND COURSE OF VIRAL MYOPERICARDITIS.....	5R01 HL18535-02	61,272
DAHLBERG, JAMES E.....	SMALL RNAs OF RNA TUMOR VIRUSES.....	2R01 CA15166-04	102,801
DAVENPORT, JOHN W.....	THYROID FUNCTION, LEARNING, AND MOTIVATION.....	5R01 HD06060-06	82,884
DAVIES, JULIAN E.....	MECHANISMS OF ANTIBIOTIC RESISTANCE IN MICROORGANISMS.....	5R01 AI10076-11	54,835
DAVIES, JULIAN E.....	MACROMOLECULAR SYNTHESIS IN YEAST—GENETICS/BIOCHEMISTRY.....	5R01 AI12448-04	49,679
DAVIS, LARRY D.....	CELLULAR POTENTIAL CHANGES CAUSING CARDIAC ARRHYTHMIA.....	5R01 HL13375-08	11,497
DE FOLIART, GENE R.....	TRANSMISSION AND CONTROL OF CALIFORNIA-GROUP VIRUSES.....	5R01 AI07453-11	46,806
DE LUCA, HECTOR F.....	METABOLISM AND FUNCTION OF THE FAT-SOLUBLE VITAMINS.....	5P01 AM14881-07	367,837
DE LUCA, PAUL M.....	NEUTRON RADIATION CANCER THERAPY SOURCE.....	5R01 CA13469-06	164,588
DE MARS, ROBERT I.....	GENETIC STUDIES WITH CULTIVATED MAMMALIAN CELLS.....	5R01 GM06983-18	133,534
DE VENECIA, GUILLERMO B.....	THE EYE IN MALIGNANT HYPERTENSION.....	3R01 EY01007-03S1	13,967
DE VENECIA, GUILLERMO B.....	THE EYE IN MALIGNANT HYPERTENSION.....	2R01 EY01007-04	44,852
DE VENECIA, GUILLERMO B.....	PRIMATE RETINA AND CHOROID IN MALIGNANT HYPERTENSION.....	1R01 EY02034-01	65,411
DEMLING, ROBERT H.....	LUNG FLUID, PROTEIN EXCHANGE AFTER HEMORRHAGIC SHOCK.....	1R01 HL21076-01	45,362
DEMPSEY, JEROME A.....	HUMAN VENTILATORY ADAPTATION.....	2R01 HL15469-05	60,829
DEMPSEY, JEROME A.....	VALIDATION OF INDIRECT TESTS OF SMALL AIRWAYS FUNCTION.....	1R01 HL20815-01	39,110
DEUTSCH, HAROLD F.....	HUMAN BLOOD PROTEINS.....	5R01 CA01786-23	115,922
OURAND, RALPH E.....	INTERCELLULAR CONTACT & CELLULAR RADIOBIOLOGY.....	5R01 CA17522-03	5,216
ENGERMAN, RONALD L.....	STUDY OF DIABETIC RETINOPATHY.....	3R01 EY00300-12S1	36,132
ENSGIN, JERALD C.....	EXPLANATION OF WHY STREPTOMYCES PRODUCE ANTIBIOTICS.....	1R01 AI13948-01	41,860
FALLON, JOHN F.....	AN ANALYSIS OF CELL DEATH DURING LIMB DEVELOPMENT.....	5R01 HD07402-03	31,267
FERRY, JOHN D.....	VISCOELASTIC PROPERTIES OF BIOLOGICAL MACROMOLECULES.....	5R01 GM21652-03	42,042
FILLINGAME, ROBERT H.....	CHARACTERIZATION OF A MEMBRANE PROTON-TRANSLOCASE.....	5R01 GM23105-02	42,689
FISCHER, MILTON H.....	METABOLIC DISORDERS AND BRAIN DEVELOPMENT.....	5R01 HD08488-03	30,064
FOLTS, JOHN D.....	CORONARY FLOW STUDIES OF PARTIALLY OBSTRUCTED VESSELS.....	5R01 HL15681-05	58,941
GANTHER, HOWARD E.....	ORGANOSELENIUM COMPOUNDS: BIOSYNTHESIS AND FUNCTION.....	5R01 AM14184-08	49,534
GARTLAN, JOHN S.....	SURVEYS & CENSUSES OF WEST AFRICAN RAIN-FOREST PRIMATES.....	1R01 RR01055-01	22,731
GIBBONS, WILLIAM A.....	STRUCTURE, SPECTROSCOPY AND FUNCTION OF NEUROPEPTIDES.....	2R01 AM18604-03	78,538
GILBERT, ENID F.....	MICROCINEMATOGRAPHIC STUDY OF ABNORMAL CARDIOGENESIS.....	5R01 HL18050-03	31,196
GILBOE, DAVID D.....	METABOLISM OF THE BRAIN.....	2R01 NS05961-12	140,266

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
GOLDFARB, STANLEY.....	CHOLESTEROL METABOLISM IN HEPATIC NEOPLASMS.....	3R01 CA15664-03S1	4,587
GOLDFARB, STANLEY.....	CHOLESTEROL METABOLISM IN HEPATIC NEOPLASMS.....	2R01 CA15664-04	57,201
GOLDSTEIN, ROBERT.....	AUTOMATED THRESHOLD AUDIOMETRY.....	5R01 NS09278-06	98,706
GOODFRIEND, THEODORE L.....	KININ INHIBITORS DETECTED BY USE OF RECEPTORS.....	5R01 HL19836-02	60,673
GORSKI, JACK.....	PROLACTIN IN NORMAL AND NEOPLASTIC PITUITARY TISSUE.....	5R01 CA18110-03	50,147
GORSKI, JACK.....	ESTROGEN REGULATION OF UTERINE GROWTH AND FUNCTION.....	5R01 HD08192-05	100,025
GRAHAM, FRANCES K.....	SHORT-TIME AND ORIENTING SYSTEMS IN INFANCY.....	5R01 HD01490-10	42,138
GREASER, MARION L.....	THIN FILAMENT CONTROL OF HEART CONTRACTION.....	5R01 HL18612-02	49,700
GREEN, DAVID E.....	MOLECULAR BIOLOGY OF MEMBRANE SYSTEMS.....	3P01 GM12847-12S1	170,648
HALL, TIMOTHY C.....	INFECTIVE ROLE OF AMINO ACID BINDING BY VIRAL RNA.....	5R01 AI11572-05	71,029
HANSON, ROBERT P.....	TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES.....	5R01 AI11250-05	99,141
HARPER, ALFRED E.....	EFFECTS OF ALTERED DIET AND PLASMA AMINO ACID PATTERN.....	5R01 AM10747-12	89,671
HARPER, ALFRED E.....	EFFECT OF DIET AND HORMONES ON ENZYMES AND METABOLISM.....	2R01 AM10748-11	55,242
HARTING, JOHN K.....	CORTICAL EFFECTS OF SENSORY DEPRIVATION.....	2R01 EY01277-03	48,548
HEBER, RICK F.....	WISCONSIN CENTER ON MENTAL RETARDATION - CORE SUPPORT.....	5P30 HD03352-10	562,330
HIND, JOSEPH E.....	CENTER FOR RESEARCH IN CEREBRAL LOCALIZATION.....	5P01 NS06225-13	383,331
HIND, JOSEPH E.....	RESEARCH PROGRAM ON THE NEURAL BASIS OF HEARING.....	5P01 NS12732-03	333,891
HINZE, HARRY C.....	VACCINATION AGAINST AN ONCOGENIC HERPES VIRUS.....	1R01 CA21195-01	63,332
HOKIN, LOWELL E.....	BIOCHEMISTRY OF NAK ATPASE AND CARDIOACTIVE DRUGS.....	5R01 HL16318-20	104,286
HOKIN, MABEL R.....	CONTROL OF MEMBRANE ACTIVITY BY NEUROTRANSMITTERS.....	1R01 NS13878-01	80,130
HONG, RICHARD.....	CLINICAL AND EXPERIMENTAL STUDIES OF CULTURED THYMUS.....	1R01 AI14354-01	74,656
HONG, RICHARD.....	STUDY AND THERAPY OF IMMUNE DEFICIENCY.....	5R01 HD07778-05	77,558
HOWE, MARTHA M.....	ANALYSIS OF INTEGRATION MECHANISM OF BACTERIOPHAGE MU.....	5R01 AI12731-03	36,081
HUTCHINSON, C RICHARD.....	METABOLISM OF NATURALLY OCCURRING ANTITUMOR COMPOUNDS.....	5R01 CA17127-04	72,320
HUTCHINSON, C RICHARD.....	THE BIOSYNTHESIS OF BREFELDIN A AND JASMONIC ACID.....	5R01 GM20057-03	28,813
INMAN, ROSS B.....	STRUCTURE AND REPLICATION OF DNA.....	2R01 GM14711-11	129,565
JEFCOATE, COLIN R.....	ANGIOTENSIN, ACTH, AND MINERALCORTICOID SYNTHESIS.....	5R01 AM18585-03	25,907
JEFCOATE, COLIN R.....	CYTOCHROME P450, CHEMICAL CARCINOGENESIS BENZO(A)PYRENE.....	2R01 CA16265-03	55,761
KAESBERG, PAUL J.....	STRUCTURE OF BIOLOGICAL MACROMOLECULES.....	2R01 AI01466-21	87,505
KAESBERG, PAUL J.....	TRANSLATION OF RNA VIRUS MESSENGERS.....	5R01 CA15613-04	79,585
KAHAN, BRENDA.....	DEVELOPMENTAL POTENTIALITIES OF TERATOMA CELLS.....	5R01 CA18994-02	56,618
KAHAN, LAWRENCE.....	IMMUNOCHEMICAL ANALYSIS OF 30S RIBOSOME STRUCTURE.....	5R01 GM22150-03	29,694
KALIL, RONALD E.....	DEVELOPMENTAL STUDIES OF THE VISUAL SYSTEM.....	3R01 EY01331-04S1	2,875
KAO, CHUN C.....	STUDIES OF REGENERATED AXONS IN GRAFTED SPINAL CORDS.....	1R01 NS13438-01	40,913
KARAVOLAS, HARRY J.....	STEROID BIOCHEMISTRY OF THE HYPOTHALAMIC-OVARIAN AXIS.....	5R01 HD05414-06	71,645
KASPER, CHARLES B.....	NUCLEAR & MICROSOMAL MEMBRANES FROM NORMAL & TUMOR CELLS.....	5R01 CA17300-03	69,627
KEESEY, RICHARD E.....	PHYSIOLOGICAL REGULATION OF BODY WEIGHT.....	9R01 AM19944-13A1	61,813
KENT, RAYMOND D.....	SPEECH SOUND IMITATION SKILLS OF CHILDREN AND ADULTS.....	5R01 NS12281-03	16,554
KUBINSKI, HENRY A.....	INTERMOLECULAR CROSS-LINKS IN CHEMICAL TUMORIGENESIS.....	5R01 CA16989-03	37,531
KUNG, CHING.....	GENETIC DISSECTION OF BEHAVIOR IN PARAMECIUM.....	2R01 GM22714-03	97,159
LARDY, HENRY A.....	CONTROL PROCESSES IN MAMMALIAN CELLS.....	5R01 AM10334-12	236,655
LARDY, HENRY A.....	REGULATION OF GLUCONEOGENESIS IN DIABETES.....	1R01 AM20678-01	40,364
LARDY, HENRY A.....	P-ENOLPYRUVATE CARBOXYKINASE AND SUDDEN INFANT DEATH.....	5R01 HD10183-02	51,974
LEMANSKI, LARRY F.....	GENETIC CARDIOMYOPATHIES.....	7R01 HL22550-01	32,415
LIPTON, BRUCE H.....	DEVELOPMENTAL ANALYSIS OF MUSCULAR DYSTROPHY.....	5R01 NS12171-03	24,063
LOWER, GERALD M, JR.....	METABOLIC FACTORS INVOLVED IN BLADDER CARCINOGENESIS.....	5R26 CA14524-05	89,144
MACK, EBERHARD A.....	BILE ACIDS: LIVER INJURY AND GALLSTONE DISSOLUTION.....	5R01 AM19245-02	52,765
MADSEN, PAUL O.....	PATHOGENESIS AND THERAPY OF BACTERIAL PROSTATITIS.....	1R01 AM20474-01	46,239
MANNING, DEAN D.....	MECHANISM AND USES OF ANTI-IG IMMUNOSUPPRESSION.....	5R01 CA17531-03	27,762
MATSUMIJRA, FUMIO.....	MECHANISMS OF INSECTICIDE DEGRADATION.....	5R01 ES00857-03	44,427
MAZESS, RICHARD B.....	TOTAL BODY ABSORPTIOMETRY.....	2R01 AM17892-03	44,121
MAZESS, RICHARD B.....	MULTIWIRE PROPORTION COUNTER FOR AREA ABSORPTIOMETRY.....	1R01 AM20364-01	23,868
MC CLAIN, WILLIAM H.....	GENETIC ANALYSIS OF TRNA'S CODED BY PHAGE T4.....	5R01 AI10257-06	49,718
MERTZ, JANET E.....	SV40-HOST INTERACTIONS: ANALYSIS WITH VIRAL MUTANTS.....	1R01 CA21464-01	53,496
METZENBERG, ROBERT L, JR.....	THE GENETIC CONTROL OF PROTEIN SYNTHESIS.....	5R01 GM08995-16	68,838
MILLER, JAMES A.....	METABOLIC ACTIVATION OF CHEMICAL CARCINOGENS.....	5R01 CA15785-04	75,558
MUELLER, GERALD C.....	MOLECULAR EVENTS CONTROLLING CELL DIVISION.....	5R01 GM21262-03	24,020
MUNKRES, KENNETH D.....	MOLECULAR BIOLOGY OF AGING OF FUNGI AS MODELS.....	5R01 GM21205-03	42,173
NELSON, DAVID L.....	FUNCTIONAL DIFFERENTIATION IN BACTERIAL MEMBRANES.....	5R01 GM19499-06	41,702
NETSELL, RONALD W.....	NEUROGENIC SPEECH DISORDERS.....	1P50 NS13274-01	335,703

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
NOMURA, MASAYASU	GENETICS AND BIOCHEMISTRY OF RIBOSOME BIOSYNTHESIS	5R01 GM20427-05	177,983
NORBACK, DIANE H.	CARCINOGENIC ACTION OF POLYCHLORINATED BIPHENYLS	1R01 CA22140-01	46,106
NORTHROP, DEXTER B.	KINETIC MECHANISMS OF ANTIBIOTIC INACTIVATING ENZYMES	5R01 AI11603-02	36,425
O'BRIEN, JOHN F.	BIOSYNTHESIS OF FRACTIONATED PROTEOGLYCANS OF LUNG	1R01 HL21646-01	44,233
O'LEARY, MARION H.	MECHANISM OF ACTION OF ASPARAGINASE	5R01 CA16980-03	17,314
O'LEARY, MARION H.	COENZYME BINDING AND NERVOUS DISORDERS	5R01 NS07657-10	63,148
ODELL, GERARD B.	MATURATION OF LIVER FOR THE METABOLISM OF BILIRUBIN	3R01 HD10932-01S1	13,225
OLSEN, WARD A.	INTESTINAL MUCOSAL FUNCTION IN DIABETES	5R01 AM13927-08	27,226
OLSON, CARL	PATHOGENESIS OF VIRUS (BOVINE) INDUCED LYMPHOSARCOMA	3R01 CA13628-04S1	5,779
OLSON, CARL	PATHOGENESIS OF VIRUS (BOVINE) INDUCED LYMPHOSARCOMA	5R01 CA13628-05	85,654
OPITZ, JOHN M.	PROGRAM PROJECT IN CLINICAL GENETICS	5P01 GM20130-04	477,265
ORME-JOHNSON, WILLIAM, III.	EPR AND X-RAY STUDIES OF ELECTRON-TRANSFER ENZYMES	5R01 GM17170-06	88,625
OSBORN, JUNE E.	VIRULENCE AND ATTENUATION OF CYTOMEGALOVIRUSES	5R01 AI12515-03	28,607
PAMUKCU, A M.	URINARY BLADDER CARCINOGENESIS BY BRACKEN FERN	5R26 CA14523-04	163,904
PATAU, REVA THERMAN	HUMAN CYTOGENETICS: SELECTED PROBLEMS	5R01 GM22881-02	79,165
PATE, JACK L.	BIOLOGY OF ASTICCACAULIS BIPROSTHECUM	5R01 GM19859-05	37,616
PERLMAN, DAVID.	MICROBIAL METABOLITE INHIBITION OF TUMOR B12 BINDING	2R01 CA16904-04	52,306
PETERSON, RICHARD E.	ENVIRONMENTAL POLLUTANTS AND TOXICOLOGY OF THE LIVER	5R01 ES01332-03	36,122
PITOT, HENRY C.	CANCER RESEARCH AT THE MC ARDLE LABORATORY	5P01 CA07175-15	3,077,365
POLAND, ALAN P.	TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS	7R01 ES01884-01	47,802
PORTER, JOHN W.	ENZYMATIC SYNTHESIS OF FATTY ACIDS AND CHOLESTEROL	2R01 AM01383-21	98,743
PORTER, JOHN W.	REGULATION OF LIPOGENESIS BY INSULIN AND GLUCAGON	1R01 AM21148-01	51,960
PORTER, JOHN W.	REGULATION OF LIPID BIOSYNTHESIS AND TRANSPORT	5R01 HL16364-03	38,416
POTTER, VAN R.	ONCOGENY AS BLOCKED ONTOGENY: STUDIES OF LIVER CANCER	5R01 CA17334-02	116,756
RAETZ, CHRISTIAN R.	SYNTHESIS AND FUNCTION OF MEMBRANE PHOSPHOLIPIDS	1R01 AM19551-01	55,557
RAMIREZ, GUILLERMO.	CENTRAL ONCOLOGY GROUP	3R10 CA12272-05S3	10,316
RANKIN, JOHN H.	REGULATION OF TUMOR BLOOD FLOW	5R01 CA18756-02	39,301
RANKIN, JOHN H.	THE REGULATION OF THE UTERINE BLOOD FLOW	2R01 HD06736-04A2	47,905
RANKIN, JOHN H.	METABOLISM IN PERFUSED FETAL AND NEWBORN RABBIT LUNGS	5R01 HL18952-02	28,190
RAPER, KENNETH B.	GROWTH AND DEVELOPMENT IN CELLULAR SLIME MOLDS	5R01 AI04915-22	45,233
RECORD, M THOMAS, JR.	ION EFFECTS ON INTERACTIONS OF RNA POLYMERASE AND DNA	1R01 GM23467-01	49,894
REED, CHARLES E.	ALLERGIC DISEASE CENTER	5P50 AI10404-07	141,074
REZNIKOFF, WILLIAM S.	RECOGNITION OF TRANSCRIPTION REGULATORY SIGNALS	5R01 GM19670-06	63,779
RIBELIN, WILLIAM E.	CREATION OF RESEARCH ANIMAL RESOURCES PROGRAM	5P40 RR00952-03	75,857
RICH, DANIEL H.	TENTOXIN: SYNTHESIS, CONFORMATION AND MODE OF ACTION	5R01 GM19311-06	53,515
RICH, DANIEL H.	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05456-15	51,423
RICHARDSON, THOMAS	MACROMOLECULES IMMOBILIZED IN VIVO AND CANCER THERAPY	5R01 CA16817-03	28,216
RIS, HANS	SUBMICROSCOPIC ORGANIZATION OF CHROMOSOMES	5R01 GM04738-22	66,386
RIS, HANS	ELECTRON MICROSCOPE FACILITY FOR BIOMEDICAL RESEARCH	5P41 RR00570-07	114,506
ROBINSON, JOSEPH R.	QUANTITATION OF PRECORNEAL DRUG MOVEMENT IN THE EYE	5R01 EY01332-03	17,550
ROBINSON, JOSEPH R.	OCULAR DRUG PHARMACOKINETICS FROM MULTIPLE DOSES	5R01 EY01681-02	20,911
ROSE, DAVID P.	PITUITARY AND THYROID FUNCTION IN BREAST CANCER	5R01 CA17579-03	28,304
ROSS, JEFFREY	SYNTHESIS AND PROCESSING OF GLOBIN MRNA	1R01 CA21510-01	43,595
ROSS, LEONARD E.	DEVELOPMENTAL PROCESSES IN CHILDREN AT RISK FOR MR.	2P01 HD08240-04	138,464
ROWND, ROBERT H.	THE CONTROL OF THE REPLICATION OF BACTERIAL EPISOMES	2R01 GM14398-12	120,120
ROYCE, GEORGE J.	THALAMIC CONNECTIONS	1R01 NS13453-01A1	36,340
RUECKERT, ROLAND R.	STRUCTURE OF PICORNAVIRUSES AND LEUKOVIRUSES	3R01 CA08662-11S1	21,314
RUOHO, ARNOLD E.	MOLECULAR CHARACTERIZATION—BETA-ADRENERGIC RECEPTORS	5R01 NS12392-03	63,047
RUSCH, HAROLD P.	CLINICAL CANCER CENTER SUPPORT (COMPREHENSIVE)	5P30 CA14520-05	1,355,171
RUSCH, HAROLD P.	DEVELOPMENT OF REGIONAL CANCER CONTROL PROGRAM	2R18 CA16405-02	506,527
RUSY, BEN F.	CARDIAC ENERGY UTILIZATION DURING ANESTHESIA	7R01 HL21552-01	23,563
SHAHIDI, NASROLLAH T.	CHILDREN'S CANCER STUDY GROUP A	2R10 CA05436-17A1	55,189
SHRAGO, EARL S.	REGULATION OF LIPID METABOLISM IN HUMAN ADIPOSE TISSUE	5R01 AM15893-04	47,270
SHRAGO, EARL S.	CONTROL MECHANISMS IN GLUCONEOGENESIS	5R01 GM14033-11	48,146
SHUG, AUSTIN L.	METABOLIC CHANGE DURING CARDIAC ISCHEMIA	5R01 HL17736-03	58,569
SIEGEL, FRANK L.	BRAIN PROTEIN AND RNA SYNTHESIS IN HYPERAMINOACIDEMIAS	5R01 HD09045-03	45,975
SIEGEL, FRANK L.	CALCIUM-BINDING PROTEINS IN NERVOUS TISSUE	5R01 NS11652-04	63,093
SIH, CHARLES J.	BIOSYNTHESIS OF PENICILLINS AND CEPHALOSPORINS	5R01 AI10519-06	67,556
SIH, CHARLES J.	CHEMISTRY AND SYNTHESIS OF BIO-ACTIVE SUBSTANCES	5R01 AM04874-17	69,962
SIH, CHARLES J.	PROSTAGLANDINS AND OTHER PHYSIOLOGICALLY-ACTIVE LIPIDS	5R01 AM09688-13	56,830

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
SIH, CHARLES J.....	SYNTHESIS OF ANTICANCER ANTHRACYCLINE ANTIBIOTICS	1R01 CA21387-01A1	21,793
SIMPSON, DAVID P.....	ACID-BASE BALANCE REGULATION OF RENAL METABOLISM.....	5R01 AM18351-04	118,545
SMITH, DEAN O.....	MECHANISMS OF AXON CONDUCTION BLOCK.....	1R01 NS13600-01	74,269
SMITH, DONALD W.....	IMMUNITY IN EXPERIMENTAL AIRBORNE TUBERCULOSIS.....	5R22 AI07485-10	52,476
SMITHIES, OLIVER.....	DNA CONTROLLING THE SYNTHESIS OF HUMAN HBF AND HBA.....	1R01 AM20120-01	134,564
SMITHIES, OLIVER.....	GENETIC CONTROL OF PROTEIN STRUCTURE AND SYNTHESIS.....	5R01 GM20069-05	155,737
SOBKOWICZ, HANNA M.....	DEVELOPMENT OF CENTRAL NERVOUS TISSUE IN CULTURE.....	5R01 NS08626-09	51,942
SPEAR, PETER D.....	VISUAL INTEGRATION IN THE BRAIN.....	5R01 EY01916-02	51,928
STONE, WILLIAM H.....	IMMUNOGENETICS AND REPRODUCTION IN RHESUS MONKEYS.....	5R01 HD07385-04	69,655
SUGDEN, BILL.....	NUCLEOCAPSID PROTEINS OF EPSTEIN-BARR VIRUS.....	5R01 CA19236-02	35,568
SUGIYAMA, HIROSHI.....	STRUCTURE-TOXICITY RELATIONSHIP OF BOTULINUM TOXIN.....	9R01 ES01822-04	28,507
SUNDARALINGAM, MUTTAIYA.....	X-RAY STUDIES ON NUCLEIC ACID CONSTITUENTS.....	5R01 GM17378-08	84,822
SUTTIE, JOHN W.....	NUTRITIONAL AND METABOLIC EFFECTS OF FLUORIDES.....	2R01 AM15521-06	43,978
SWEET, JAMES A.....	CENTER FOR POPULATION RESEARCH.....	5P30 HD05876-06	354,526
SWICK, ROBERT W.....	PROTEIN TURNOVER IN PROTEIN AND CALORIE DEPRIVATION.....	5R01 AM14704-07	45,426
SWICK, ROBERT W.....	ISOZYME INTERRELATIONSHIPS IN GLUCONEOGENESIS.....	1R01 AM19215-01	28,980
TAKAYAMA, KUNI K.....	MECHANISM OF ACTION OF ISONIAZID ON TUBERCLE BACILLUS.....	5R01 AI11297-05	65,178
TAKAYAMA, KUNI K.....	ANTITUMOR ACTIVITY OF GLYCOLIPID-ENDOTOXIN MIX.....	1R01 CA21790-01	55,589
THOMPSON, WAYNE H.....	LA CROSSE ARBOVIRUS STUDIES IN FORESTED AREAS.....	5R01 AI11547-05	107,869
TROST, BARRY M.....	NOVEL SYNTHETIC APPROACHES TO ANTITUMOR AGENTS.....	1R01 CA20916-01	54,073
TROST, BARRY M.....	STEROIDS, PROSTAGLANDINS, ETC: SYNTHETIC DESIGNS.....	5R01 GM13598-12	59,371
TULUNAY-KEESEY, ULKER.....	VISUAL PROCESSES WITH A MOTIONLESS RETINAL IMAGE.....	5R01 EY00308-10	79,358
UPDIKE, STUART J.....	IMMOBILIZED ENZYMES TO ALTER AND ANALYZE METABOLISM.....	5R01 GM16133-10	61,557
UPDIKE, STUART J.....	EXTRACORPOREAL RESPIRATORY GAS EXCHANGE: NEW APPROACH.....	5R01 HL15668-05	84,436
VAN RYZIN, JOHN R.....	STATISTICAL PROBLEMS IN CLINICAL CANCER RESEARCH.....	5R01 CA18332-03	51,546
VAN RYZIN, JOHN R.....	BAYESIAN ESTIMATORS AND TESTS FOR CENSORED SURVIVAL DATA.....	5R01 GM23129-02	16,526
VEDEJS, EDWIN.....	SYNTHESIS OF CYTOCHALASINS OF VARIABLE RING SIZE.....	5R01 CA17918-03	50,434
WALKER, DUARD L.....	STUDY OF A NEW HUMAN PAPOVA VIRUS.....	5R01 AI11217-05	94,933
WALLOW, INGOLF H.....	THE BLOOD-RETINAL BARRIER IN DIABETIC RETINOPATHY.....	5R01 EY01634-02	60,633
WANG, CHING Y.....	PREVENTION OF FANFT URINARY BLADDER TUMORIGENESIS.....	5R26 CA17449-03	69,459
WEBSTER, JOHN G.....	ELECTRODE MOTION ARTIFACT REDUCTION.....	5R01 GM21567-02	10,091
WEN, SUNG-FENG.....	MICROPUNCTURE STUDY OF RENAL GLUCOSE TRANSPORT.....	3R01 AM17503-03S1	6,146
WOLBERG, WILLIAM H.....	NONINVASIVE MONITORING OF FLUID LOSSES BY PHOTON SCAN.....	5R01 HL18556-02	21,150
WOODSON, ROBERT D.....	EFFECT OF ALTERED OXYGEN AFFINITY ON OXYGEN TRANSPORT.....	5R01 HL17808-03	49,153
YATVIN, MILTON B.....	RADIATION EFFECT ON PROTEIN AND NUCLEIC ACID METABOLISM.....	5R01 CA08318-09	41,474
YATVIN, MILTON B.....	RADIATION & DRUG EFFECTS IN NORMAL & NEOPLASTIC TISSUE.....	5R01 CA16577-03	26,574
YATVIN, MILTON B.....	REPAIR AND SURVIVAL IN IRRADIATED CELLS.....	5R01 CA16579-03	37,710
YODA, ATSUNOBU.....	INTERACTION OF CARDIAC AGLYCONES WITH NAK-ATPASE.....	2R01 HL16549-03	50,524
YU, HYUK.....	MEMBRANE FLUIDITY AND PHOTORECEPTOR FUNCTION.....	2R01 EY01483-04	57,630
YUILL, THOMAS M.....	WILDLIFE RESERVOIRS OF ARBOVIRUSES.....	5R01 AI00771-22	54,831
ZACHMAN, RICHARD D.....	ENZYMES FOR LECITHIN SYNTHESIS IN HUMAN NEONATAL LUNG.....	3R01 HL17239-03S1	12,837
ZARLING, JOYCE M.....	CELLULAR IMMUNITY TO TUMORS AND HERPES INFECTIONS.....	1R01 CA20409-01	61,619
ZIMMERMAN, HOWARD E.....	PHOTOCHEMISTRY OF ORGANIC MOLECULES.....	5R01 GM07487-17	93,601
ZIMMERMAN, STEPHEN W.....	NEPHROTOXIC EFFECTS OF ENVIRONMENTAL HYDROCARBONS.....	1R01 ES01480-01	48,980
ZOGRAFI, GEORGE.....	INTERFACIAL LIPID-LIPID INTERACTIONS.....	5R01 GM22478-02	26,484
ZU RHEIN, GABRIELE M.....	MORPHOLOGY OF CHRONIC VIRAL INFECTIONS OF THE BRAIN.....	5R01 NS11129-05	57,882
ORGANIZATION TOTAL	249	27,288,592	
MILWAUKEE			
MARQUETTE UNIVERSITY ZIP CODE 53233			
ABRAMOWITZ, JOSEPH.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09016-01	78,836
KRISHNAKUMARAN, ALAPATI.....	CHANGES IN HORMONE METABOLISM AND DIFFERENTIATION.....	5R01 GM22429-02	39,316
KRISHNAKUMARAN, ALAPATI.....	REPROGRAMMING AND DNA SYNTHESIS IN EPIDERMAL CELLS.....	5R01 HD08089-03	31,715
UNSWORTH, BRIAN R.....	BIOCHEMICAL PARAMETERS OF AGING BRAIN.....	5R01 NS12334-03	73,893
ORGANIZATION TOTAL	4	223,760	
MEDICAL COLLEGE OF WISCONSIN ZIP CODE 53233			
AMMON, HELMUT V.....	BILE ACIDS, FATTY ACIDS AND INTESTINAL FUNCTION.....	5R01 AM17941-03	30,435

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
ANKEL, HELMUT K.....	ENZYMATIC INTERCONVERSIONS OF SUGAR NUCLEOTIDES.....	5R01 GM20331-09	49,526
ANTHOLINE, WILLIAM E.....	ESR CHARACTERIZATION OF IMMOBILIZED FREE RADICALS.....	5R01 CA20737-02	41,869
BARBORIAK, JOSEPH J.....	LIPEMIAS AND RECONSTRUCTIVE CARDIAC SURGERY.....	2R01 HL14378-06	80,342
BONCHEK, LAWRENCE I.....	MECHANISMS OF HYPERTENSION IN COARCTATION OF THE AORTA.....	1R01 HL21071-01	44,280
BORELLA, LUIS D.....	IMMUNOCOMPETENT CELLS IN ACUTE LYMPHOCYtic LEUKEMIA.....	5R01 CA18602-03	72,656
CATLIN, B WESLEY.....	DEOXYRIBONUCLEIC ACIDS AND NUCLEASES OF BACTERIA.....	5R01 AI02353-20	52,576
CURTIS, ROBIN L.....	TRANSFER OF NEUROMUSCULAR MUTANTS TO STANDARD STRAINS.....	5R01 NS07680-10	48,747
DAVIS, STARKEY D.....	EXPERIMENTAL PSEUDOMONAS KERATITIS.....	3R01 EY01665-02S1	6,333
DAVIS, STARKEY D.....	EXPERIMENTAL PSEUDOMONAS KERATITIS.....	5R01 EY01665-03	43,368
DAWSON, CHRISTOPHER A.....	PULMONARY HEMODYNAMICS.....	5R01 HL19298-02	26,948
DAWSON, CHRISTOPHER A.....	ABSORPTION OF ANTIGEN THROUGH INFLAMED LUNGS.....	5R01 HL19733-02	18,244
DODDS, WYLIE J.....	ESOPHAGEAL MOTION IN HEALTH AND DISEASE.....	5R01 AM15540-06	26,869
EDELHAUSER, HENRY F.....	PATHOGENESIS OF CORNEAL EDEMA AFTER INTRAOCULAR SURGERY.....	5R01 EY00933-05	48,706
FINK, JORDAN N.....	SUPPORT FOR PULMONARY DISEASE RESEARCH CENTER.....	2P50 HL15389-06	858,788
FRERMAN, FRANK E.....	STUDIES ON LIPID TRANSPORT.....	5R01 AM15527-07	42,425
FUJIMOTO, JAMES M.....	ALTERATION IN DRUG METABOLISM BY CERTAIN CARBAMATES.....	5R01 GM16503-09	55,086
GHAZARIAN, JACOB G.....	CONTROL OF ENZYMES IN THE VITAMIN D3 ENDOCRINE COMPLEX.....	5R01 AM19145-02	26,992
GIROTTI, ALBERT W.....	PHOTOCHEMISTRY OF BILIRUBIN AND BLOOD COMPONENTS.....	5R01 HD07753-04	38,483
GLICK, DAVID M.....	MOLECULAR BASIS FOR CONTROL OF GASTRIC ACID SECRETION.....	5R01 AM18095-02	43,121
GROSSBERG, SIDNEY E.....	MOLECULAR MECHANISMS OF ANTIVIRAL RESISTANCE.....	1R01 AI13818-01A1	92,966
HARDMAN, HAROLD F.....	EFFECTS OF DRUGS UPON MYOCARDIAL HYPOXIA.....	5R01 HL08311-13	55,431
HEBERT, LEE A.....	INTRARENAL PRESSURE AND RENAL FUNCTION.....	2R01 HL13323-07A1	92,230
HOLCENBERG, JOHN S.....	PROGRAM FOR RESEARCH WITH ENZYMES AS ANTITUMOR AGENTS.....	1R01 CA20061-01A1	40,639
HYDE, JAMES S.....	PHYSICAL PROPERTIES OF NITROXIDE RADICAL SPIN LABELS.....	5R01 GM22923-02	71,215
ITSKOVITZ, HAROLD D.....	SURGICAL AND PHYSIOLOGIC STUDIES OF ISOLATED KIDNEYS.....	5R01 HL12677-09	130,675
JORDON, ROBERT E.....	IMMUNOPATHOLOGY OF BULLOUS SKIN DISEASES.....	1R01 AI14550-01	71,854
KALKHOFF, RONALD K.....	METABOLIC EFFECTS OF INSULIN ANTAGONISM AND DEFICIENCY.....	5R01 AM10305-12	39,005
KAMPINE, JOHN P.....	SYMPATHETIC AFFERENT ACTIVITY OF CARDIAC ORIGIN.....	5R01 HL16511-03	37,707
KASSELL, BEATRICE.....	GASTRIC ZYMOGENS, PROTEASES AND INHIBITORS.....	2R01 AM09826-12	66,344
KERRIGAN, GERALD A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05434-16	147,587
KLITGAARD, HOWARD M.....	EFFECTS OF THYROID HORMONES ON CARTILAGE METABOLISM.....	5R01 HD09991-02	22,102
LECH, JOHN J.....	ADRENERGIC COMPONENTS OF LIPID METABOLISM.....	5R01 AM07681-12	39,557
LECH, JOHN J.....	METABOLISM OF ENVIRONMENTAL CONTAMINANTS BY FISH.....	5R01 ES01080-03	21,924
LECH, JOHN J.....	STUDIES ON EXPERIMENTAL SHOCK.....	5R01 HL07564-16	39,830
LEMANN, JACOB, JR.....	SUGAR INGESTION, CALCUIRIA, CRYSTALLURIA, AND STONES.....	5R01 AM15089-08	89,939
LENNON, EDWARD J.....	CLINICAL CANCER EDUCATION GRANT.....	5R25 CA17986-03	107,017
LONG, SALLY Y.....	CRANIAL BASE AND PALATE DEVELOPMENT.....	5R01 DE04041-03	37,429
MC CARTY, DANIEL J.....	STUDIES OF CRYSTAL DEPOSITION DISEASE.....	2R01 AM18074-04	72,639
MC CARTY, DANIEL J.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00058-16	501,451
MEHLER, ALAN H.....	STRUCTURAL AND BIOLOGICAL PROPERTIES OF TRNA.....	5R01 GM13037-13	87,092
MURRAY, M PATRICIA.....	KINEMATIC STUDIES OF NORMAL AND ABNORMAL LOCOMOTION.....	5R01 AM13854-14	66,067
PINKEL, DONALD P.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	3P30 CA17700-02S1	42,615
PINKEL, DONALD P.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	2P30 CA17700-03	343,667
PINKEL, DONALD P.....	COMBINATION CHEMOTHERAPY IN CHILDHOOD LEUKEMIA.....	5R01 CA17851-03	52,809
SKOGERSON, LAWRENCE E.....	GENETIC CONTROL OF MACROMOLECULAR SYNTHESIS.....	7R01 GM24454-01	26,440
SOERGEL, KONRAD H.....	PATHOPHYSIOLOGY OF DIARRHEA.....	5R01 AM18526-03	71,280
STEKIEL, WILLIAM J.....	VASCULAR SMOOTH MUSCLE REACTIVITY IN HYPOTENSIVE STRESS.....	5R01 GM23594-02	32,618
STEKIEL, WILLIAM J.....	VASCULAR MUSCLE REACTIVITY IN HYPERTENSION.....	5R01 HL16454-03	28,282
STOWE, DAVID F.....	INTRINSIC CONTROL OF CORONARY BLOOD FLOW BY CHEMICALS.....	1R23 HL21434-01	37,987
SWARTZ, HAROLD M.....	EFFECT OF PARTIAL HEPATECTOMY ON RADIATION TOLERANCE.....	5R01 CA16088-03	41,966
SWARTZ, HAROLD M.....	BIOMEDICAL ESR SPECTROSCOPY CENTER.....	3P41 RR01008-01S1	42,808
SWARTZ, HAROLD M.....	BIOMEDICAL ESR SPECTROSCOPY CENTER.....	5P41 RR01008-02	268,884
TAKETA, FUMITO C.....	STRUCTURE AND FUNCTION OF HEMOGLOBIN.....	5R01 AM15770-09	47,911
VAN HORN, DIANE L.....	REGENERATIVE CAPACITY OF CORNEAL ENDOTHELIUM.....	3R01 EY01436-02S1	1,695
VAN HORN, DIANE L.....	REGENERATIVE CAPACITY OF CORNEAL ENDOTHELIUM.....	2R01 EY01436-03	73,116
VAN HORN, DIANE L.....	OPHTHALMIC RESEARCH CENTER.....	1P30 EY01931-01	207,630
WINKELHAKE, JEFFREY L.....	ANTIBODY METABOLISM DURING AGING.....	1R23 AG00648-01	13,397
ORGANIZATION TOTAL	58	4,919,599	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
MILWAUKEE BLOOD CENTER ZIP CODE 53233			
ASTER, RICHARD H.....	HEMORRHAGIC DISEASES.....	5R01 HL13629-07	97,213
ORGANIZATION TOTAL	1 97,213		
MILWAUKEE CHILDREN'S HOSPITAL ZIP CODE 53233			
PINKEL, DONALD P.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17997-03	50,960
ORGANIZATION TOTAL	1 50,960		
MOUNT SINAI MEDICAL CENTER ZIP CODE 53233			
BORTIN, MORTIMER M.....	SPECIFIC ADOPTIVE IMMUNOTHERAPY OF AKR LEUKEMIA.....	5R01 CA20484-02	48,092
DEE, THOMAS H.....	EARLY DIAGNOSIS OF CANDIDIASIS IN COMPROMISED HOSTS.....	5R01 CA21652-02	23,364
GUTMANN, FRANK D.....	STUDIES OF UNILATERAL KIDNEY MODELS.....	5R01 AM20076-02	32,100
TRUITT, ROBERT L.....	GERMFREE TECHNIQUES APPLIED TO ADOPTIVE IMMUNOTHERAPY.....	2R01 CA18440-03	33,599
TRUITT, ROBERT L.....	ADOPTIVE IMMUNOTHERAPY USING ENDOTOXIN-TREATED DONORS.....	1R01 CA21998-01	36,109
ORGANIZATION TOTAL	5 173,264		
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MILWAUKEE ZIP CODE 53201			
BALMER, ROBERT T.....	ENTROPY AND METABOLISM: A MACROSCOPIC VIEW OF AGING.....	1R01 AG00498-01	50,652
COOK, JAMES M.....	SYNTHESIS OF ALPHA AND BETA ADRENERGIC ANTAGONISTS.....	5R01 HL17897-02	34,815
MC FARLAND, JAMES T.....	RESONANCE RAMAN PROBE STUDIES OF BIOMOLECULES.....	5R01 GM21916-03	35,095
PETERING, DAVID H.....	METALS AND ANTITUMOR ACTIVITY OF THIOSEMICARBAZONES.....	5R01 CA16156-04	51,727
PETERING, DAVID H.....	METAL COMPLEXES OF KNOWN ANTITUMOR AGENTS.....	1R01 CA22184-01	48,321
PETERING, DAVID H.....	METALLOTHIONEIN: STRUCTURE-FUNCTION RELATIONSHIPS.....	1R01 ES01504-01	71,088
PHILLIPS, RUTH B.....	CYTOGENETIC MARKERS IN SICKLE CELL FAMILIES.....	5R01 AM16886-03	23,796
WARREN, RICHARD M.....	SPEECH PERCEPTION STUDIES.....	5R01 HD07855-03	46,722
ORGANIZATION TOTAL	8 362,216		
STATE TOTAL	327 33,136,272		
WYOMING			
LARAMIE			
UNIVERSITY OF WYOMING ZIP CODE 82070			
HALEY, BOYD E.....	APPLICATION OF PHOTO AFFINITY NUCLEOTIDE ANALOGS.....	5R01 GM21998-03	25,055
JENKINS, ROBERT A.....	INTRANUCLEAR SPINDLE AS A MODEL FOR MITOSIS.....	1R01 GM23878-01	42,915
JI, TAE H.....	CROSSLINKS OF BINDING PROTEINS TO RECEPTORS.....	1R01 GM23586-01	35,694
KAISER, IVAN I.....	NUCLEOTIDE ANALOGS AS STRUCTURAL & FUNCTIONAL PROBES.....	2R01 GM20326-04	45,178
KAISER, IVAN I.....	SELENIUM IN BIOLOGICAL MACROMOLECULES.....	5R01 GM22093-03	28,432
MEYER, E GERALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07157-02	15,712
ROSE, JAMES D.....	ELECTROPHYSIOLOGY OF THE GENITAL SENSORY SYSTEM.....	5R01 NS13748-02	30,182
SMITH, DAVID V.....	ADAPTATION AND SENSORY CODING IN TASTE.....	5R01 NS10211-05	18,786
ORGANIZATION TOTAL	8 241,954		
STATE TOTAL	8 241,954		
PUERTO RICO			
MAYAGUEZ			
UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS ZIP CODE 00798			
MISKIMEN, GEORGE W.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08103-04	78,751
ORGANIZATION TOTAL	1 78,751		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
PUERTO RICO—Continued			
PONCE			
CATHOLIC UNIVERSITY OF PUERTO RICO		ZIP CODE 00731	
CARRASQUILLO, ARNALDO	BIOMEDICAL RESEARCH SUPPORT GRANT	5S06 RR08067-06	22,205
CARRASQUILLO, ARNALDO	BIOMEDICAL RESEARCH SUPPORT GRANT	2S06 RR08067-07	151,943
ORGANIZATION TOTAL	2	174,148	
SAN JUAN			
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS		ZIP CODE 00936	
DE MELLO, WALMOR C	EFFECTS OF HORMONES ON CARDIAC ELECTROGENESIS	5R01 HL10897-12	34,687
DEL CASTILLO, JOSE	LABORATORY OF NEUROBIOLOGY	3P01 NS07464-10S1	56,099
DEL CASTILLO, JOSE	LABORATORY OF NEUROBIOLOGY	5P01 NS07464-11	107,654
EBBESSON, SVEN O	ORGANIZATION OF THE VERTEBRATE VISUAL SYSTEM	7R01 EY02024-01	96,049
HABEEB, AHMED F	DETERMINATION OF THE ANTIGENIC STRUCTURE OF LYSOZYME	1R01 AI14791-01	32,512
JERING, HELMUT	PLASMA INHIBITORS OF INSULIN PROTEASE	1R01 AM20050-01	26,162
KICLITER, E EARL, JR	RETINAL PROJECTIONS FOR WAVE LENGTH DISCRIMINATION	7R01 EY02500-01	17,130
MAHGOUB, AHMED	EFFECTS OF VITAMIN D3 METABOLITES ON BONE, IN VITRO	1R01 AM19989-01	48,952
MARCIAL, VICTOR A	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA12258-06	96,621
MARCIAL, VICTOR A	CONTROLLED RADIATION INJURY TO THE LIVER	5R01 CA16810-03	10,985
PEREZ-SANTIAGO, ENRIQUE	CANCER CENTER SUPPORT GRANT	5P30 CA16598-03	727,159
PEREZ-SANTIAGO, ENRIQUE	CLINICAL CANCER EDUCATION PROGRAM	5R25 CA18927-02	186,120
PEREZ-SANTIAGO, ENRIQUE	GENERAL CLINICAL RESEARCH CENTER	5M01 RR00063-15	357,191
PEREZ-SANTIAGO, ENRIQUE	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05419-16	32,310
VELEZ-GARCIA, ENRIQUE O	SOUTHEASTERN CANCER STUDY GROUP	3R10 CA12223-05S1	13,044
VELEZ-GARCIA, ENRIQUE O	SOUTHEASTERN CANCER STUDY GROUP	2R10 CA12223-06	185,968
ORGANIZATION TOTAL	16	2,028,643	
UNIVERSITY OF PUERTO RICO RIO PIEDRAS CAMPUS		ZIP CODE 00931	
ADAM, WALDEMAR	BIOGENESIS AND SYNTHESIS OF PROSTANOID ENDOPEROXIDES	5R01 GM22119-03	53,832
HILLYER, GEORGE V	BIOMEDICAL RESEARCH SUPPORT GRANT	5S06 RR08102-05	247,031
ORGANIZATION TOTAL	2	300,863	
STATE TOTAL	21	2,582,405	
OTHER COUNTRIES			
ARGENTINA			
BUENOS AIRES			
INSTITUTE OF BIOLOGY AND EXPERIMENTAL MEDICINE			
GUTNISKY, ABRAHAM	HUMAN URINARY ERYTHROPOIETIN COLLECTION	5R01 HL16675-03	21,921
GUTNISKY, ABRAHAM	HUMAN URINARY ERYTHROPOIETIN COLLECTION	2R01 HL16675-04	47,786
ORGANIZATION TOTAL	2	69,707	
INSTITUTO DE INVESTIGACIONES BIOQUIMICAS 'FUNDACION CAMPCMAR'			
LELOIR, LUIS F	POLYPRENOLS AND POLYSACCHARIDES	5R01 GM19808-05	50,000
ORGANIZATION TOTAL	1	50,000	
NAVAL INSTITUTE OF SCIENTIFIC AND TECHNICAL RESEARCH			
CASTRO, JOSE A	MECHANISM OF CARBON TETRACHLORIDE HEPATOTOXICITY	5R01 AM13195-08	17,160
ORGANIZATION TOTAL	1	17,160	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ARGENTINA—Continued			
UNIVERSITY OF BUENOS AIRES			
FRYDMAN, BENJAMIN.....	BIOSYNTHETIC INTERMEDIATES OF PORPHYRINS.....	5R01 GM11973-12	13,833
ORGANIZATION TOTAL	1 13,833		
COUNTRY TOTAL	5 150,700		
AUSTRALIA			
CANBERRA			
AUSTRALIAN NATIONAL UNIVERSITY			
WHITE, MICHAEL J.....	CYTOGENETICS—CHROMOSOME REARRANGEMENTS.....	5R01 GM22710-02	14,940
ORGANIZATION TOTAL	1 14,940		
KENSINGTON			
UNIVERSITY OF NEW SOUTH WALES			
WICKEN, ANTHONY J.....	VARIATIONS IN THE SURFACE STRUCTURES OF ORAL BACTERIA.....	5R01 DE04175-03	63,677
ORGANIZATION TOTAL	1 63,677		
MELBOURNE			
WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH			
ADAMS, JERRY M.....	STRUCTURE OF IMMUNOGLOBULIN AND OTHER MYELOMA MRNAS.....	5R01 CA12421-06	34,147
METCALF, DONALD.....	REGULATION OF B-LYMPHOCYTE COLONIES.....	1R01 CA22492-01	38,839
MITCHELL, GRAHAM F.....	IMMUNE RESPONSES INDUCED IN MICE BY ASCARIS SUUM.....	5R01 AI12677-03	31,686
NOSSAL, GUSTAV J.....	MECHANISMS OF LYMPHOCYTE-ANTIGEN INTERACTIONS.....	5R01 AI03958-17	67,500
ORGANIZATION TOTAL	4 172,172		
MURDOCH			
MURDOCH UNIVERSITY			
RENFREE, MARILYN B.....	DELAYED IMPLANTATION AND DEVELOPMENT IN MARSUPIALS.....	1R01 HD09387-01A1	39,125
ORGANIZATION TOTAL	1 39,125		
PARKVILLE			
UNIVERSITY OF MELBOURNE			
AUGUSTEYN, ROBERT C.....	THE MECHANISM OF SENILE CATARACT FORMATION.....	5R01 EY01525-03	14,527
MATHEWS, JOHN D.....	BLOOD PRESSURE AND IMMUNOGENETIC FACTORS IN THE YOUNG.....	5R01 HL19984-02	82,523
MC KENZIE, IAN F.....	IA ANTIGENIC SPECIFICITIES IN MOUSE AND MAN.....	1R01 CA21224-01	44,881
ORGANIZATION TOTAL	3 141,931		
PRAHRAN			
BAKER MEDICAL RESEARCH INSTITUTE			
MALONEY, JOHN E.....	RESPIRATORY SYSTEM DEVELOPMENT & SUDDEN INFANT DEATH.....	5R01 HD10135-02	37,002
ORGANIZATION TOTAL	1 37,002		
SYDNEY			
INSTITUTE OF DENTAL RESEARCH			
KNOX, KENNETH W.....	VARIATIONS IN THE SURFACE STRUCTURES OF ORAL BACTERIA.....	5R01 DE04174-03	61,610
ORGANIZATION TOTAL	1 61,610		
COUNTRY TOTAL	12 530,457		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
BELGIUM			
BRUSSELS			
CATHOLIC UNIVERSITY OF LOUVAIN			
BAZIN, HERVE.....	PHYSIOLOGY OF THE RAT IGE.....	5R01 AI12840-03	29,498
HERS, HENRI-GERY.....	INBORN ERRORS OF CARBOHYDRATE METABOLISM.....	2R01 AM09235-12	35,000
ORGANIZATION TOTAL	2 64,498		
EUROPEAN ORGANIZATION FOR RESEARCH ON TREATMENT OF CANCER			
TAGNON, HENRI J.....	COOPERATIVE CLINICAL CANCER STUDY (COORDINATING/DATA).....	5R10 CA11488-08	264,014
ORGANIZATION TOTAL	1 264,014		
FREE UNIVERSITY OF BRUSSELS			
CHRISTOPHE, JEAN P.....	MOLECULAR BASIS OF SECRETION IN THE EXOCRINE PANCREAS.....	5R01 AM17010-03	13,000
ORGANIZATION TOTAL	1 13,000		
LIEGE			
UNIVERSITY OF LIEGE			
GHUYSEN, JEAN-MARIE.....	BACTERIAL TRANSPeptIDASES AND PENICILLIN ACTION.....	5R01 AI13364-02	24,715
ORGANIZATION TOTAL	1 24,715		
COUNTRY TOTAL	5 366,227		
CANADA			
CALGARY			
UNIVERSITY OF CALGARY			
TAN, YIN-HWEE.....	HUMAN INTERFERON PRODUCTION FOR ANTITUMOR STUDIES.....	5R01 CA19721-02	45,171
ORGANIZATION TOTAL	1 45,171		
EDMONTON			
UNIVERSITY OF ALBERTA			
LOWN, J WILLIAM.....	THE MODE OF ANTITUMOR ACTION OF NITROSOUREAS.....	1R01 CA21488-01	23,300
ORGANIZATION TOTAL	1 23,300		
GUELPH			
UNIVERSITY OF GUELPH			
BROWN, R GLENN.....	TRACE MINERAL METABOLISM IN GENETIC CHONDRODYSPLASIA.....	5R01 AM18758-02	39,115
ORGANIZATION TOTAL	1 39,115		
KINGSTON			
QUEEN'S UNIVERSITY AT KINGSTON			
WYATT, GERARD R.....	BIOCHEMISTRY OF DEVELOPMENT AND REGULATION.....	2R01 HD07951-04	42,050
ORGANIZATION TOTAL	1 42,050		
LONDON			
UNIVERSITY OF WESTERN ONTARIO			
BANTING, DAVID W.....	LONGITUDINAL STUDY OF DENTAL ROOT SURFACE CARIES.....	5R01 DE04465-02	10,886
BARNETT, HENRY J.....	EXTRACRANIAL/INTRACRANIAL ARTERIAL ANASTOMOSIS STUDY.....	1R10 NS14164-01	526,552
CHERIAN, M GEORGE.....	NATURE OF LEAD AND MERCURY BINDING NUCLEAR PROTEINS.....	1R01 ES01535-01	12,512
MORRIS, VINCENT L.....	CONTROL OF EXPRESSION OF MOUSE MAMMARY TUMOR VIRUS.....	1R01 CA21311-01	45,783

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CANADA—Continued			
PERCY, DEAN H.....	HERPETIC OPHTHALMITIS	1R01 EY01833-01	14,480
TREVITHICK, JOHN R.....	EYE LENS EPITHELIAL CELL DIFFERENTIATION AND CATARACT.....	1R01 EY01927-01	41,460
ORGANIZATION TOTAL	6 651,673		
MONTREAL			
CLINICAL RESEARCH INSTITUTE OF MONTREAL			
HAMET, PAVAL.....	GROWTH OF VASCULAR SMOOTH MUSCLE IN DIABETES MELLITUS.....	1R01 AM21299-01	33,282
ORGANIZATION TOTAL	1 33,282		
JEWISH GENERAL HOSPITAL			
MARGOLESE, RICHARD G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	1R10 CA20156-01	23,456
PERDUE, JAMES F.....	CONTROL OF CELL GROWTH BY MITOGEN RECEPTORS.....	1R01 GM23763-01	53,402
ORGANIZATION TOTAL	2 76,858		
MAISONNEUVE HOSPITAL			
GAGNAN-BRUNETTE, MICHELE.....	PHYSIOLOGY OF MAGNESIUM IN THE PAPILLA OF RAT KIDNEY.....	1R01 AM20136-01	24,950
ORGANIZATION TOTAL	1 24,950		
MC GILL UNIVERSITY			
LALA, PEEYUSH K.....	SPONTANEOUS FUSION BETWEEN TUMOR CELLS AND HOST CELLS.....	3R01 CA17111-02S1	3,062
LALA, PEEYUSH K.....	SPONTANEOUS FUSION BETWEEN TUMOR CELLS AND HOST CELLS.....	5R01 CA17111-03	36,924
LEBLOND, CHARLES P.....	LOCALIZATION OF FOUR PROCOLLAGENS IN DENTAL TISSUES.....	5R01 DE04547-02	31,242
LEWIS, MARTIN G.....	TUMOR-SPECIFIC ANTIGENS IN HUMAN BLADDER CANCER.....	5R26 CA17458-03	39,870
MC KENZIE, JOHN M.....	PATHOGENESIS OF HYPERTHYROIDISM	2R01 AM04121-16A1	46,966
POSNER, BARRY I.....	POLYPEPTIDE HORMONE RECEPTORS	1R01 AM19573-01	41,250
SOLOMON, SAMUEL.....	FORMATION, METABOLISM AND ROLE OF HORMONES IN PREGNANCY.....	2R01 HD04365-16	53,923
ORGANIZATION TOTAL	7 253,237		
MOTRE DAME HOSPITAL			
BAND, PIERRE R.....	EASTERN COOPERATIVE ONCOLOGY GROUP	7R10 CA21653-01	31,082
ORGANIZATION TOTAL	1 31,082		
ROYAL VICTORIA HOSPITAL			
SHIBATA, HENRY R.....	PRIMARY BREAST CANCER THERAPY GROUP	1R10 CA20321-01	24,955
ORGANIZATION TOTAL	1 24,955		
TORONTO			
UNIVERSITY OF TORONTO			
CAMERMAN, NORMAN.....	STEREOCHEMICAL BASIS OF ANTICONVULSANT DRUG ACTIVITY.....	2R01 NS09839-07	17,000
ELLEN, RICHARD P.....	LONGITUDINAL STUDY OF DENTAL ROOT SURFACE CARRIES.....	5R01 DE04464-02	51,163
FARBER, EMMANUEL.....	PATHOGENESIS OF LIVER CANCER INDUCED BY CHEMICALS.....	1R01 CA21157-01	67,620
SCHACHTER, HARRY.....	GLYCOPROTEIN-GLYCOLIPID METABOLISM IN SPERMATOGENESIS.....	2R01 HD07889-04	43,129
ORGANIZATION TOTAL	4 178,912		
VANCOUVER			
UNIVERSITY OF BRITISH COLUMBIA			
BEGG, IAIN S.....	A STUDY OF RETINAL CIRCULATION IN THE DIABETIC.....	1R01 EY02102-01	15,650
CANDIDO, E PETER.....	BIOCHEMICAL STUDIES IN DROSOPHILA MELANOGASTER.....	5R01 GM22753-02	26,000
DENNIS, PATRICK P.....	REGULATION OF TRANSCRIPTION AND TRANSLATION ELEMENTS.....	1R01 GM24010-01	39,000
DOLPHIN, DAVID H.....	PORPHYRIN IONS AND RADICALS IN METABOLIC PROCESSES.....	5R01 AM17989-03	45,753
SLEMMER, GLENN L.....	CELL BIOLOGY OF MAMMARY GLAND NEOPLASIA.....	5R01 CA18987-02	45,629
WADA, JUHN A.....	CHRONIC FOCAL EPILEPTOGENIC LESION AND DEEP STRUCTURE	5R01 NS02812-17	36,261
ORGANIZATION TOTAL	6 208,293		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
CANADA—Continued			
WINNIPEG			
UNIVERSITY OF MANITOBA			
FRIESEN, HENRY G.....	PLACENTAL & PITUITARY PROTEIN & POLYPEPTIDE HORMONES.....	2R01 HD07843-04	67,660
SEHON, ALEC.....	IMMUNOLOGIC DESTRUCTION OF TUMOR CELLS.....	5R01 CA13192-05	60,509
ORGANIZATION TOTAL	2	128,169	
COUNTRY TOTAL	35	1,761,047	
DENMARK			
AARHUS			
UNIVERSITY OF AARHUS			
MAGNUSSON, STAFFAN M.....	PROTEIN STRUCTURE IN COAGULATION AND FIBRINOLYSIS.....	2R01 HL16238-04	49,403
ORGANIZATION TOTAL	1	49,403	
COPENHAGEN			
CARLSBERG LABORATORY			
VON WETTSTEIN, DITER H.....	GENETIC CONTROL OF MACROMOLECULAR CELL STRUCTURES.....	5R01 GM22051-03	21,400
ORGANIZATION TOTAL	1	21,400	
UNIVERSITY OF COPENHAGEN			
EBBESEN, PETER.....	CANCER OF OLD SKIN GRAFTS AGING ON YOUNG RECIPIENTS.....	5R01 CA17039-03	21,783
ORGANIZATION TOTAL	1	21,783	
COUNTRY TOTAL	3	92,586	
FINLAND			
HELSINKI			
UNIVERSITY OF HELSINKI			
KONTIAINEN, SIRKKA K.....	STIMULATION OF T-CELLS WITH PROTEIN ANTIGENS.....	5R01 AI13145-02	19,700
VAHERI, ANTTI.....	FIBROBLAST SURFACE ANTIGEN LOSS IN TRANSFORMATION.....	5R01 CA17373-03	57,394
ORGANIZATION TOTAL	2	77,094	
TURKU			
UNIVERSITY OF TURKU			
HARTIALA, KAARLO J.....	GASTROINTESTINAL AND PULMONARY METABOLIC FUNCTIONS.....	9R01 ES01684-16	46,300
ORGANIZATION TOTAL	1	46,300	
COUNTRY TOTAL	3	123,394	
FRANCE			
BOBIGNY			
GROUP FOR THE STUDY AND RESEARCH IN CANCER			
ISRAEL, LUCIEN I.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA19273-02	38,515
ORGANIZATION TOTAL	1	38,515	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
FRANCE—Continued			
NANTES			
UNIVERSITY OF NANTES			
LE DOUARIN, NICOLE M.....	MIGRATION AND DIFFERENTIATION OF NEURAL CREST CELLS.....	5R01 DE04257-02	26,000
ORGANIZATION TOTAL	1	26,000	
PARIS			
PASTEUR INSTITUTE			
JACOB, FRANCOIS.....	STUDIES OF REGULATORY MECHANISMS.....	5R01 CA16355-03	14,978
ORGANIZATION TOTAL	1	14,978	
ST. LOUIS HOSPITAL			
BERNARD, JEAN.....	COOPERATION WITH ACUTE LEUKEMIA GROUP B.....	3R10 CA13239-04S1	22,050
BERNARD, JEAN.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	2R10 CA13239-05	31,740
ORGANIZATION TOTAL	2	53,790	
UNIVERSITY OF PARIS VII			
DAUSSET, JEAN.....	SURFACE LEUCOCYTE ANTIGENS AND SKIN GRAFTS.....	5R01 AI09293-17	22,500
ORGANIZATION TOTAL	1	22,500	
COUNTRY TOTAL	6	155,783	
GERMANY FED R			
ESSEN			
UNIVERSITY OF ESSEN			
RAJEWSKY, MANFRED F.....	NERVOUS SYSTEM-SPECIFIC CHEMICAL CARCINOGENESIS.....	1R01 CA20017-01A1	39,280
ORGANIZATION TOTAL	1	39,280	
COUNTRY TOTAL	1	39,280	
ICELAND			
REYKJAVIK			
ICELAND CANCER SOCIETY			
BJARNASON, OLAFUR.....	GENEALOGICAL RESOURCE FOR MEDICAL RESEARCH.....	5R01 GM22370-02	35,110
ORGANIZATION TOTAL	1	35,110	
COUNTRY TOTAL	1	35,110	
ISRAEL			
HAIFA			
TECHNION-ISRAEL INSTITUTE OF TECHNOLOGY			
BRANDON, DAVID G.....	EPITAXIAL SANDWICHING OF BIOPOLYMERS.....	5R01 GM22264-02	21,155
GERSHON, DAVID.....	STUDY OF FAULTY PROTEIN MOLECULES IN SENESCENCE.....	2R01 AG00459-04	41,270
ORGANIZATION TOTAL	2	62,425	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ISRAEL—Continued			
JERUSALEM			
HEBREW UNIVERSITY OF JERUSALEM			
BERMAN, ELAINE R.....	STUDIES ON THE PIGMENT EPITHELIUM OF THE RETINA.....	3R01 EY01131-02S2	700
BERMAN, ELAINE R.....	STUDIES ON THE PIGMENT EPITHELIUM OF THE RETINA.....	5R01 EY01131-03	16,600
CEDAR, HOWARD.....	TRANSCRIPTION AND MODIFICATION OF CHROMATIN DNA.....	2R01 GM20483-04	38,970
COHEN, ARTHUR M.....	CHANGE OF THE HORMONAL STATUS IN DIABETIC RETINOPATHY.....	1R01 EY01837-01	39,485
FRIEDLANDER, DOV.....	FERTILITY CHANGE AND VARIATION IN ISRAEL.....	2R01 HD06721-05	18,769
GATT, SHIMON.....	METABOLISM OF THE SPHINGOLIPIDS AND C24 FATTY ACIDS.....	2R01 NS02967-17	44,680
SCHRAMM, MICHAEL.....	ENZYME SECRETION AND ITS METABOLIC CONTROL.....	5R01 AM10451-12	60,260
SHAFRIR, ELEAZAR.....	METABOLISM OF LOW INSULIN RESPONDING SPINY MOUSE.....	1R01 AM21228-01	37,770
WERMAN, ROBERT.....	THE MOTONEURON IN SPINAL CORD SLICES.....	1R01 NS13935-01	46,535
ORGANIZATION TOTAL	9	303,769	
REHOVOTH			
WEIZMANN INSTITUTE OF SCIENCE			
ALONI, YOSEF.....	CONTROL OF GENE EXPRESSION IN TUMOR VIRUSES AND CELLS.....	2R01 CA14995-04	48,746
BERENBLUM, ISAAC.....	NEW APPROACHES TO SYSTEMIC TWO-STAGE CARCINOGENESIS.....	1R01 CA21088-01	30,833
COHEN, IRUN R.....	RECRUITMENT OF T CELL IMMUNITY TO ANTIGENS AND TUMORS.....	1R01 CA21329-01	47,950
GIVOL, DAVID.....	CHARACTERIZATION OF SPECIFIC T-CELL FACTORS.....	5R01 AI13200-02	45,020
PATCHORNIK, ABRAHAM.....	NONENZYMATIC MODIFICATIONS AND CLEAVAGES OF PROTEINS.....	5R01 AM05098-15	59,300
SCHECHTER, ISRAEL.....	STRUCTURE AND FUNCTION OF IG GENES AND IG PRECURSORS.....	5R01 CA20817-02	70,389
SELA, MICHAEL.....	SYNTHETIC ANTIGENS.....	5R01 AI11405-05	50,063
SILBERBERG, ALEXANDER.....	MUCUS CLEARANCE IN SECRETORY OTTIS MEDIA.....	2R01 NS10048-07	47,720
YAFFE, DAVID.....	CONTROL OF DIFFERENTIATION IN ESTABLISHED CELL LINES.....	5R01 GM22767-02	44,000
ORGANIZATION TOTAL	9	444,021	
TEL AVIV			
TEL AVIV UNIVERSITY			
WITZ, ISAAC P.....	TUMOR-BOUND IG—AN EXPRESSION OF ANTITUMOR IMMUNITY.....	1R01 CA20088-01	43,660
ORGANIZATION TOTAL	1	43,660	
COUNTRY TOTAL	21	853,875	
ITALY			
MILAN			
MARIO NEGRI INSTITUTE FOR PHARMACOLOGICAL RESEARCH			
GARATTINI, SILVIO.....	TREATMENT OF CANCER DISSEMINATION AND METASTASIS.....	5R01 CA12764-06	63,250
ORGANIZATION TOTAL	1	63,250	
UNIVERSITY OF MILAN			
SCHWARTZ, PETER J.....	EXPERIMENTAL REPRODUCTION OF LONG QT SYNDROME AND SIDS.....	5R01 HD08796-03	3,216
ORGANIZATION TOTAL	1	3,216	
PISA			
UNIVERSITY OF PISA			
POMPEIANO, OTTAVIO.....	SENSORY MECHANISMS AND MOTOR CONTROL.....	5R01 NS07685-09	15,000
ORGANIZATION TOTAL	1	15,000	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
ITALY—Continued			
ROME			
UNIVERSITY OF ROME			
MONACO, FABRIZIO.....	COMPARATIVE ROLE OF CARBOHYDRATES IN THYROGLOBULIN.....	2R01 AM16932-04	22,050
ORGANIZATION TOTAL	1 22,050		
COUNTRY TOTAL	4 103,516		
JAPAN			
OSAKA			
KINKI UNIVERSITY			
OKAMOTO, KOZO.....	PATHOGENESIS AND PREVENTION OF HYPERTENSION SEQUELAE.....	5R01 HL17754-03	34,900
ORGANIZATION TOTAL	1 34,900		
TOKYO			
KITASATO INSTITUTE			
OKADA, HIDECHIKA.....	NONIMMUNOLOGIC COMPLEMENT ACTIVATION BY TUMOR CELL.....	5R01 CA19229-02	42,740
ORGANIZATION TOTAL	1 42,740		
SCIENCE UNIVERSITY OF TOKYO			
SATO, KENSHI.....	CALCIUM-INDUCED AGGREGATION OF HUMAN LENS PROTEIN.....	1R01 EY01879-01	13,400
ORGANIZATION TOTAL	1 13,400		
COUNTRY TOTAL	3 91,040		
KOREA REP OF			
SEOUL			
KOREA ADVANCED INSTITUTE OF SCIENCE			
SHIM, SANG C.....	PHOTOCHEMISTRY OF DIMETHOXYCOUMARIN.....	1R01 CA21729-01	10,590
ORGANIZATION TOTAL	1 10,590		
COUNTRY TOTAL	1 10,590		
MEXICO			
MEXICO			
NATIONAL POLYTECHNIC INSTITUTE			
RUDOMIN, PEDRO.....	DISCHARGE PATTERNS OF MOTONEURONS.....	2R01 NS09196-06	56,701
ORGANIZATION TOTAL	1 56,701		
COUNTRY TOTAL	1 56,701		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
NETHERLANDS			
LEIDEN			
STATE UNIVERSITY OF LEIDEN			
SOBELS, FREDERIK H.....	INDUCTION OF GENETIC DAMAGE BY CHEMICAL MUTAGENS.....	2R01 ES01027-04	116,000
ORGANIZATION TOTAL	1 116,000		
COUNTRY TOTAL	1 116,000		
NEW ZEALAND			
DUNEDIN			
UNIVERSITY OF OTAGO			
SIMPSON, FREDERIC O.....	STUDY OF GENETIC HYPERTENSION IN RATS.....	5R01 HL10942-09	15,372
ORGANIZATION TOTAL	1 15,372		
PALMERSTON NORTH			
MASSEY UNIVERSITY			
JOLLY, ROBERT D.....	MANNOSIDOSIS—A MODEL FOR LYSOSOMAL STORAGE DISEASES.....	5R01 NS11238-04	36,495
ORGANIZATION TOTAL	1 36,495		
COUNTRY TOTAL	2 51,867		
PORTUGAL			
LISBON			
UNIVERSITY OF LISBON			
DA SILVA HORTA, JORGE.....	TOXICITY OF ALPHA-EMITTING HEAVY ELEMENTS—INT. CONF.....	1R13 CA20671-01	36,200
ORGANIZATION TOTAL	1 36,200		
COUNTRY TOTAL	1 36,200		
S AFR REP OF			
PRETORIA			
UNIVERSITY OF PRETORIA			
FALKSON, GEOFFREY.....	EASTERN COOPERATIVE ONCOLOGY GROUP STUDIES.....	1R10 CA21692-01	43,813
ORGANIZATION TOTAL	1 43,813		
COUNTRY TOTAL	1 43,813		
SPAIN			
MADRID			
AUTONOMOUS UNIVERSITY OF MADRID			
GOSALVEZ, MARIO.....	BIOLOGICAL AND BIOCHEMICAL ANALYSIS OF ROTENONE TUMOR.....	5R01 CA16776-03	22,000
ORGANIZATION TOTAL	1 22,000		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
SPAIN—Continued			
COUNTRY TOTAL	1	22,000	
SWEDEN			
GOTHENBURG			
GOTHENBURG UNIVERSITY			
ABRAHAMSSON, SIXTEN	MOLECULAR ARRANGEMENT IN COMPLEX LIPIDS	5R01 GM11653-17	50,000
EKHOLM, RAGNAR E.	THYROID FUNCTIONAL MORPHOLOGY	1R01 AM18842-01A1	25,000
ORGANIZATION TOTAL	2	75,000	
LUND			
UNIVERSITY OF LUND			
FALCK, BENGT O.	NEW METHODS FOR THE STUDY OF AMINE TRANSMITTERS	5R01 NS06701-11	33,399
SIESJO, BO K.	PATHOPHYSIOLOGY OF HYPOXIC BRAIN DAMAGE	5R01 NS07838-09	40,146
SJOGREN, HANS O.	IMMUNITY TO BOWEL NEOPLASMS IN RATS AND MAN	5R26 CA14924-05	81,858
ORGANIZATION TOTAL	3	155,403	
STOCKHOLM			
CAROLINE INSTITUTE			
BLOMBACK, BIRGER E.	STRUCTURE AND FUNCTION OF FIBRINOGEN	2R01 HL07379-12	52,485
KLEIN, GEORGE	MALIGNANT BEHAVIOR AND CELLULAR ANTIGEN EXPRESSION	5R01 CA14054-05	108,000
PERNOW, BENGT B.	SUBSTANCE P: OCCURRENCE, PHARMACOLOGY AND PHYSIOLOGY	5R01 HL18994-02	26,870
ORGANIZATION TOTAL	3	187,355	
UPPSALA			
UNIVERSITY OF UPPSALA			
BARANY, ERNST H.	COMPARATIVE STUDIES OF GLAUCOMA	2R01 EY00231-13	79,200
BILL, ANDERS A.	STUDIES ON THE NUTRITION OF THE EYE	5R01 EY00475-11	54,300
HAZELBAUER, GERALD L.	THE MECHANISM OF CHEMORECEPTION IN ESCHERICHIA COLI	3R01 AI12858-02S1	3,000
HAZELBAUER, GERALD L.	THE MECHANISM OF CHEMORECEPTION IN ESCHERICHIA COLI	5R01 AI12858-03	19,169
WIGZELL, HANS L.	ISOLATION AND USE OF ANTIGEN-BINDING T CELL RECEPTORS	5R01 AI13485-02	56,000
ORGANIZATION TOTAL	5	211,669	
COUNTRY TOTAL	13	629,427	
SWITZERLAND			
BASEL			
UNIVERSITY OF BASEL			
SHOWE, MICHAEL K.	SYNTHESIS AND FUNCTION OF ORGANIZED ELEMENTS IN CELLS	5R01 AI13165-02	41,496
ORGANIZATION TOTAL	1	41,496	
GENEVA			
INTERNATIONAL UNION AGAINST CANCER			
CANONICO, ABEL N.	THE 12TH INTERNATIONAL CANCER CONGRESS (UICC)	1R13 CA20904-01	250,000
DELAFRESNAYE, JOHN F.	CANCER CENTER SUPPORT GRANT	5R01 CA05096-16	93,320
ORGANIZATION TOTAL	2	343,320	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
SWITZERLAND—Continued			
LAUSANNE			
WORLD HEALTH ORGANIZATION—INTERNATIONAL REFERENCE CENTRE IMMUNOGLOBULINS			
MAUEL, JACQUES	PROTECTIVE IMMUNITY IN LEISHMANIASIS	5R01 AI13126-02	27,500
ORGANIZATION TOTAL	1 27,500		
COUNTRY TOTAL	4 412,316		
THAILAND			
BANGKOK			
MAHIDOL UNIVERSITY			
BHAMARAPRAVATI, NATTH.....	PATHOGENESIS OF DENGUE SHOCK SYNDROME.....	5R22 AI12358-03	9,590
LAMB, ADRIAN J.....	METABOLISM AND FUNCTION OF CAROTENOIDS AND VITAMIN A	3R01 AM11367-09S1	7,250
LAMB, ADRIAN J.....	METABOLISM AND FUNCTION OF CAROTENOIDS AND VITAMIN A	2R01 AM11367-10	41,600
VALYASEVI, AREE.....	STUDIES OF BLADDER STONE DISEASE IN THAILAND.....	5R22 AM13066-08	52,200
WASI, PRAWASE	THALASSEMIAS, HEMOGLOBINOPATHIES AND RELATED PROBLEMS.....	2R01 AM09805-10	20,000
ORGANIZATION TOTAL	5 130,640		
COUNTRY TOTAL	5 130,640		
UNITED KINGDOM			
BRISTOL			
UNIVERSITY OF BRISTOL			
PURVES, MICHAEL J.....	THE CONTROL OF BREATHING BEFORE AND AFTER BIRTH.....	5R01 HD09457-02	51,932
SALMON, PAUL R.....	LAPAROSCOPY IN THE DIAGNOSIS OF PANCREATIC CANCER	5R26 CA19167-02	12,719
ORGANIZATION TOTAL	2 64,651		
CAMBRIDGE			
AGRICULTURAL RESEARCH COUNCIL—INSTITUTE OF ANIMAL PHYSIOLOGY			
HOWARD, JONATHAN C.....	GENETICS OF RESPONSE TO HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI13162-02	25,664
ORGANIZATION TOTAL	1 25,664		
GLASGOW			
UNIVERSITY OF GLASGOW			
NIAS, ANTHONY H.....	COMBINATION OF PLATINUM COMPLEXES WITH RADIOTHERAPY.....	1R01 CA20593-01	36,955
ORGANIZATION TOTAL	1 36,955		
LEEDS			
UNIVERSITY OF LEEDS			
COOPER, EDWARD H.....	CHEMOTHERAPY OF TRANSPLANTABLE MURINE COLON TUMORS.....	5R26 CA18126-03	51,573
ORGANIZATION TOTAL	1 51,573		
LONDON			
UNIVERSITY OF LONDON			
BELOFF-CHAIN, ANNE.....	REGULATION OF INSULIN SECRETION BY THE PITUITARY.....	1R01 AM19488-01	26,920
CARTER, NICHOLAS D.....	GENETIC ISOLATES WITH HIGH INCIDENCE OF LYMPHOMA.....	5R01 CA19821-02	24,600
PAULING, PETER J.....	THE CONFORMATIONS OF CHOLINERGIC MOLECULES.....	5R01 NS12921-03	26,715

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1977—Continued

Principal investigator	Project title	Grant number	Dollars
UNITED KINGDOM—Continued			
SIMS, PETER	METABOLIC ACTIVATION OF THE POLYCYCLIC HYDROCARBONS.....	1R01 CA21959-01	53,830
STEEL, G GORDON	THERAPEUTIC RESPONSE OF HUMAN TUMOR XENOGRAFTS	1R01 CA20519-01	76,998
WALL, PATRICK D.....	INEFFECTIVE SYNAPSES RESPIRATION	5R01 NS07710-09	16,102
WILLS, E D.....	EFFECTS OF RADIATION AND HYPERTHERMIA ON TUMOR LYSOSOME.....	5R01 CA18286-02	18,515
ORGANIZATION TOTAL	7 243,680		
NORTHWOOD			
GRAY LABORATORY			
ADAMS, GERALD E.....	CONFERENCE: HYPOXIC-CELL SENSITIZERS IN RADIOTHERAPY.....	1R13 CA21336-01	34,475
ORGANIZATION TOTAL	1 34,475		
OXFORD			
UNIVERSITY OF OXFORD			
KREBS, HANS A.....	REGULATION OF METABOLIC PROCESSES.....	5R01 AM11748-10	35,500
PIRIE, ANTOINETTE.....	STUDIES OF SERIOUS CORNEAL XEROPHTHALMIA.....	1R01 EY01937-01	39,571
VAN HEYNINGEN, RUTH E.....	CATARACT IN RATS DUE TO DIETARY DEFICIT OF TRYPTOPHAN.....	5R01 EY01548-03	22,319
WEATHERALL, DAVID J.....	SYNTHESIS OF FETAL HEMOGLOBIN IN HUMAN ERYTHROID CELLS.....	1R01 HL20905-01	57,532
ORGANIZATION TOTAL	4 154,922		
COUNTRY TOTAL	17 611,920		
URUGUAY			
MONTEVIDEO			
BIOLOGICAL SCIENCES RESEARCH INSTITUTE			
TRUJILLO-CENOZ, OMAR.....	NEURON DIFFERENTIATION AND SPECIFICATION IN THE EYE.....	5R01 EY01674-02	6,860
ORGANIZATION TOTAL	1 6,860		
COUNTRY TOTAL	1 6,860		
YUGOSLAVIA			
BELGRADE			
UNIVERSITY OF BELGRADE			
LUKATELA, GEORGJE L.....	CROSS-LANGUAGE STUDIES OF PROCESSES BASIC TO READING.....	5R01 HD08495-03	38,665
ORGANIZATION TOTAL	1 38,665		
COUNTRY TOTAL	1 38,665		

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977

Awardee	Project title	Grant number
ALABAMA		
BIRMINGHAM		
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294		
CASSELL, GAIL H.....	MURINE CRD: A MODEL OF CHRONIC PULMONARY INFLAMMATION.....	1K04 HL00387-01
KLEINSTEIN, ROBERT N.....	EYE DISORDERS IN AN URBAN POPULATION.....	3K07 EY00026-01A1S1
LAMON, EDDIE W.....	VIRAL TUMOR IMMUNOLOGY.....	5K04 CA00059-03
LAWTON, ALEXANDER R, III.....	DIFFERENTIATION OF B-LYMPHOCYTES.....	5K04 AI70780-04
LEBOWITZ, JACOB.....	CIRCULAR DNA—IMPLICATIONS FOR CANCER & DRUG RESISTANCE.....	5K04 CA00141-05
NAVAR, LUIS G.....	INTRINSIC REGULATION OF RENAL HEMODYNAMICS.....	5K04 HL00143-04
OYSTER, CLYDE W.....	NEURAL INTERACTIONS IN THE RETINA AND VISUAL PATHWAYS.....	5K04 EY00033-03
PRETLOW, THOMAS G, II.....	RELATIONSHIPS BETWEEN CANCER, STROMAL, AND NORMAL CELLS.....	5K04 CA70584-05
MOBILE		
UNIVERSITY OF SOUTH ALABAMA ZIP CODE 36688		
BASS, JOHN B, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00125-03
ARIZONA		
TUCSON		
UNIVERSITY OF ARIZONA ZIP CODE 85721		
CUSANOVICH, MICHAEL A.....	BIOLOGICAL ELECTRON TRANSPORT/VISUAL PROCESS.....	5K04 EY00013-03
KIM, HYUN D.....	MEMBRANE-LIMITED METABOLISM IN MAMMALIAN RED CELLS.....	1K04 AM00316-01
MEEZAN, ELIAS.....	GLYCOPROTEIN STRUCTURE AND METABOLISM IN DIABETES.....	1K04 AM00256-01
MENDELSON, NEIL H.....	GENETIC REGULATION OF THE BACILLUS SUBTILIS CELL CYCLE.....	5K04 GM70555-05
RUSSELL, DIANE H.....	POLYAMINES IN GROWTH—NORMAL AND NEOPLASTIC.....	5K04 CA00072-03
ARKANSAS		
LITTLE ROCK		
UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201		
BURNS, E ROBERT.....	CHRONOBIOLOGICAL STUDY OF CELL GROWTH.....	5K04 CA70594-04

NOTE.—Grants are listed according to the State and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
CALIFORNIA		
BERKELEY		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720		
FREEMAN, RALPH D.....	VISUAL DEVELOPMENT AND DEPRIVATION.....	1K04 EY00092-01
DAVIS		
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616		
CROSS, CARROLL E.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70820-04
GERSHWIN, M ERIC.....	THE PATHOGENESIS OF AUTOIMMUNITY IN NEW ZEALAND MICE.....	1K04 AI00193-01
KING, BARRY F.....	FUNCTIONAL CYTOLOGY OF THE PLACENTA & FETAL MEMBRANES.....	7K04 HD00238-01
TROY, FREDERIC A.....	MEMBRANE-BOUND ENZYME INTERACTIONS AND GROWTH CONTROL.....	5K04 CA00095-03
IRVINE		
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664		
CUNNINGHAM, DENNIS D.....	INITIATION OF FIBROBLAST DIVISION BY GLUCOCORTICOID.....	5K04 CA00171-02
HAMKALO, BARBARA A.....	ULTRASTRUCTURAL ASPECTS OF GENE REGULATION.....	5K04 GM00233-02
LYNCH, GARY S.....	AXONAL GROWTH AND BRAIN PLASTICITY.....	5K04 NS00043-03
SUTHERLAND, BETSY M.....	PHOTOREACTIVATING ENZYMES.....	5K04 CA00009-03
WATSON, JAMES D.....	MECHANISM REGULATING INDUCTION OF ANTIBODY SYNTHESIS.....	5K04 AI00182-02
WHITE, STEPHEN H.....	MODEL STUDIES OF MYELIN STABILITY.....	5K04 NS00146-02
LA JOLLA		
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037		
KIDOKORO, YOSHIKI.....	MUSCLE DIFFERENTIATION AND SYNAPSE FORMATION IN VITRO.....	5K04 NS00102-03
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037		
CHISARI, FRANCIS V.....	IMMUNOBIOLOGY AND PATHOGENESIS OF HEPATITIS B.....	5K04 AI00174-02
EDWARDS, DAVID L.....	REGULATION OF MITOCHONDRIAL MEMBRANE ASSEMBLY.....	7K04 GM00413-03
GINSBERG, MARK H.....	MEDIATOR CELL ACTIVATION BY IMMUNE COMPLEXES AND LPS.....	1K08 AM00393-01
GRIFFIN, JOHN H.....	BIOCHEMISTRY AND REGULATION OF HUMAN FACTOR XII.....	5K04 HL00192-02
HOCH, SALLIE O.....	MOLECULAR INTERACTIONS IN DIFFERENTIATION.....	5K04 CA00004-03
MORGAN, WILLIAM T.....	MECHANISMS OF SERUM PROTEIN FUNCTIONS.....	5K04 AM00110-03
MORRISON, DAVID C.....	BIOCHEMICAL PARAMETERS OF LPS-MEDIATED DIC AND SHOCK.....	5K04 AI00081-03
RUSSELL, STEPHEN W.....	CAUSES OF SPONTANEOUS TUMOR REGRESSION.....	5K04 CA00228-02
TAVASSOLI, MEHDI.....	STRUCTURAL BASIS OF HEMOPOIESIS.....	5K04 AM70551-04
THEOFILOPOULOS, ARGYRIOS N.....	CIRCULATING IMMUNE COMPLEXES—CANCER/IMMUNOLOGIC DIS.....	1K04 CA00303-01
WEIGLE, WILLIAM O.....	ANTIBODY PRODUCTION AND IMMUNOLOGICAL TOLERANCE.....	5K06 GM06936-16
WHITELEY, JOHN M.....	THE BIOCHEMISTRY OF PTERIDINE AND FOLATE COENZYMES.....	5K04 CA00106-03
ZINKERNAGEL, ROLF M.....	STUDIES OF RECEPTORS OF VIRUS IMMUNE T CELLS.....	1K04 AI00248-01
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093		
ASHRAF, MUHAMMAD.....	ISCHEMIC HEART ULTRASTRUCTURE: MODIFICATION BY THERAPY.....	5K04 HL00190-02
BAUGH, ROBERT F.....	BIOCHEMICAL CHARACTERIZATION OF HEMOPHILIA.....	1K04 HL00271-01
BRODY, STUART.....	DEVELOPMENTAL GENETICS OF NEUROSPORA.....	5K04 GM70761-04
FOSTER, MARGARET C.....	BIOPHYSICAL STUDIES OF VISUAL RECEPTORS.....	5K07 EY00027-03
HIGGINS, CHARLES B.....	EFFECTS OF CONTRAST MEDIA & HEART FAILURE ON CHEMOREFLEX.....	5K04 HL00201-02
KAGNOFF, MARTIN F.....	INDUCTION OF INTESTINAL ANTIGEN-SENSITIVE CELLS.....	5K04 AM00021-03
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE OUABAIN SENSITIVE ATPASE.....	3K04 HL00206-01S1
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE OUABAIN SENSITIVE ATPASE.....	5K04 HL00206-02
MENDELSON, JOHN.....	CONTROL OF IMMUNE AND MALIGNANT LYMPHOCYTE GROWTH.....	5K04 CA70891-04
MILLER, ARNOLD L.....	I-CELL DISEASE AND MENTAL RETARDATION.....	5K04 NS00050-03
NESBITT, MURIEL N.....	CELLULAR MAPPING OF BEHAVIOR TRAITS IN MICE.....	5K04 GM00138-03
NINNEMANN, JOHN L.....	IMMUNE RESPONSE DURING THERMAL INJURY.....	5K04 GM00264-02
OKAMURA, MELVIN Y.....	ELECTRON TRANSPORT IN BACTERIAL MEMBRANES.....	5K04 GM00106-03
ROBB, JAMES A.....	MOLECULAR MECHANISMS IN VIRAL (SV40) CARCINOGENESIS.....	5K04 CA70567-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
CALIFORNIA—Continued		
ROSENFELD, MICHAEL G.....	MECHANISM OF HORMONAL AND CAMP REGULATORY ACTION.....	5K04 AM00078-03
SAIER, MILTON H, JR.....	REGULATION OF MEMBRANE FUNCTION IN C-6 RAT GLIOMA CELLS.....	5K04 CA00138-03
SELVERSTON, ALLEN I.....	NEURAL GEOMETRY AND INTEGRATION IN GANGLIA.....	5K04 NS70490-05
SHIBEL-CONRIQUE, ELAINE M.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00126-02
WAGNER, PETER D.....	VENTILATION AND BLOOD FLOW IN CARDIOPULMONARY DISEASE.....	5K04 HL00111-03
WOO, SAVIO L.....	BIOMECHANICS OF NORMAL & REPAIRED LIGAMENTS AND TENDONS.....	1K04 AM00304-01
LOMA LINDA		
LOMA LINDA UNIVERSITY ZIP CODE 92354		
QUILLIGAN, JAMES J, JR.....	VIRUSES, VACCINATION AND ANTIVIRAL IMMUNITY.....	5K06 AI20517-15
LOS ANGELES		
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LOS ANGELES ZIP CODE 90032		
BROWN, COSTELLO L.....	NEGATIVE IONIZATION OF BIOORGANIC MOLECULES.....	5K04 GM00131-03
ONAK, THOMAS P.....	BIOLOGICALLY ACTIVE DERIVATIVES OF BORON COMPOUNDS.....	5K04 CA28028-05
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027		
BENEDICT, WILLIAM F.....	CYTOGENETICS OF HUMAN CANCER AND CHEMICAL TRANSFORMATION.....	5K04 CA70996-04
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024		
BARNARD, R JAMES.....	EFFECT OF ACUTE AND CHRONIC EXERCISE ON THE HEART.....	5K04 HL00052-03
CLARK, WILLIAM R.....	MECHANISMS OF GENERATION OF CYTOTOXIC EFFECTOR T CELLS.....	5K04 AI00009-03
GOLUB, SIDNEY H.....	IN VITRO LYMPHOCYTE SENSITIZATION TO TUMOR ANTIGENS.....	5K04 CA70970-04
GONG, HENRY, JR.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00340-01
HEIDNER, ELIZABETH G.....	X-RAY & EM STUDIES—RNA-POLYMERASE & GLYCOGEN SYNTHESIS.....	5K04 GM00085-02
HOLLISTER, DAVID W.....	BIOCHEMICAL STUDIES OF THE CHONDRODYSROPHIES.....	1K04 AM00293-01
HOMSHER, EARL.....	ENERGY LIBERATION AND TRANSDUCTION IN CONTRACTING MUSCLE.....	5K04 AM70792-04
HORWITZ, JOSEPH.....	HUMAN LENS, BIOCHEMICAL AND BIOPHYSICAL PROPERTIES.....	1K04 EY00058-01
JENKINS, HERMAN A.....	OPTOKINETIC AND VESTIBULAR INTERACTIONS.....	1K07 NS00294-01
LETINSKY, MICHAEL S.....	STRUCTURE AND FUNCTION OF DEVELOPING SYNAPSES.....	1K04 NS00282-01
MEAD, JAMES F.....	METABOLISM OF BRAIN FATTY ACIDS.....	5K06 GM19177-15
MEYERS, ROBERTA L.....	IMMUNOLOGY AND IMMUNOPATHOLOGY OF CORNEAL DISEASE.....	5K04 EY00014-03
MUSTAFA, MOHAMMAD G.....	PULMONARY OXIDANT INJURY AND METABOLIC ADAPTATION.....	5K04 HL00301-02
PESKOFF, ARTHUR.....	MATH DESCRIPTION OF ELECTRICAL PROPERTIES OF CELLS.....	5K04 GM00222-02
QUINTON, PAUL M.....	PHYSIOLOGY OF ISOLATED SWEAT GLANDS: CYSTIC FIBROSIS.....	1K04 AM00324-01A1
RIVIERE, GEORGE R.....	TOOTH TRANSPLANTATION GENETICS AND IMMUNOLOGY.....	1K04 DE00044-01
SEEGER, ROBERT C.....	IMMUNE RESPONSE OF CHILDREN TO NEUROBLASTOMA.....	5K04 CA00069-03
SHOME, BASUDEV.....	STRUCTURE OF HUMAN PITUITARY FSH AND LH.....	5K04 HD70636-04
SIMMONS, NORMAN S.....	ORAL MEDICINE AND BIOPHYSICS.....	3K06 DE01094-13S1
SIMMONS, NORMAN S.....	ORAL MEDICINE AND BIOPHYSICS.....	5K06 DE01094-14
STRELIOFF, DAVID.....	NEURAL EXCITATION IN THE COCHLEA.....	1K04 NS00255-01
WISNIESKI, BERNADINE J.....	PHYSICAL STRUCTURE OF ANIMAL CELL MEMBRANES.....	5K04 GM00228-02
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007		
APPLEMAN, M MICHAEL.....	CYCLIC NUCLEOTIDES AS MEDIATORS OF PHYSIOLOGICAL CONTROL.....	5K04 AM70518-03
BAU, ROBERT.....	THE MOLECULAR BASIS OF ANTITUMOR PLATINUM DRUG ACTIVITY.....	5K04 CA00015-03
BEIERLE, JOHN W.....	CELL EXUDATES: EFFECTS ON ORAL AND OTHER TUMORS.....	5K04 CA70675-04
MEISELMAN, HERBERT J.....	HEMORRHOLOGY: MICROCIRCULATORY & PATHOLOGIC STUDIES.....	5K04 HL70569-05
SOBIN, SIDNEY S.....	STUDIES OF THE MICROCIRCULATION.....	5K06 HL07064-17
PALO ALTO		
PALO ALTO MEDICAL RESEARCH FOUNDATION ZIP CODE 94301		
KRAHENBUHL, JAMES L.....	CELLULAR IMMUNITY TO OPPORTUNISTIC PATHOGENS AND TUMORS.....	5K04 AI70931-04

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
CALIFORNIA—Continued		
PASADENA		
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125		
ALLMAN, JOHN M.....	FUNCTIONAL ORGANIZATION OF VISUAL CORTEX.....	5K04 NS00178-02
LESTER, HENRY A.....	NICOTINIC SYNAPSES.....	1K04 NS00272-01
RIVERSIDE		
UNIVERSITY OF CALIFORNIA AT RIVERSIDE ZIP CODE 92502		
FURLONG, CLEMENT E.....	BACTERIAL AND HUMAN MEMBRANE TRANSPORT SYSTEMS.....	5K04 GM00001-03
OLSEN, RICHARD W.....	BIOCHEMISTRY OF NEUROTRANSMITTER RECEPTOR MECHANISMS.....	1K04 NS00224-01
SAN FRANCISCO		
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN FRANCISCO STATE UNIVERSITY ZIP CODE 94132		
WALKER, FRANCES A.....	HEME & HEMOPROTEIN MODELS—SPECTRA & REDOX STUDIES.....	5K04 GM00227-02
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143		
ADLER, RONALD D.....	BILIARY LIPID SECRETION AND LIPOPROTEIN METABOLISM.....	5K08 AM00132-03
BERGER, ALBERT J.....	NEURAL REGULATION OF RESPIRATION.....	1K04 NS00238-01
BISSELL, DWIGHT M, JR.....	REGULATION OF HEPATIC HEMOPROTEIN METABOLISM.....	5K04 GM00149-03
BOUSHEY, HOMER A, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00130-03
COFFINO, PHILIP.....	GENETIC ANALYSIS OF C-AMP ACTION IN LYMPHOMA CELLS.....	1K04 GM00308-01
DALLMAN, MARY F.....	BRAIN-PITUITARY-ADRENAL INTERRELATIONSHIPS.....	5K04 AM00072-03
FIELDS, HOWARD L.....	NEUROPHYSIOLOGY OF PAIN.....	5K04 NS70777-04
GLANTZ, STANTON A.....	EXTERNAL CONSTRAINTS EFFECTS ON LEFT VENTRICLE MECHANICS.....	1K04 HL00345-01
GOLDBERG, HENRY I.....	RADIOGRAPHIC EVALUATION OF MALDIGESTION.....	5K04 GM70582-05
GOLDSTEIN, GARY W.....	METABOLIC ACTIVITY OF ISOLATED BRAIN CAPILLARIES.....	1K04 NS00278-01
KAUFMAN, LEON.....	SOLID STATE DEVICES, POSITION SENSITIVE CHAMBERS.....	5K04 GM70598-05
KENYON, GEORGE L.....	PROBING THE ACTIVE SITE OF CREATINE KINASE.....	5K04 AM00014-03
KOLLMAN, PETER A.....	INTERMOLECULAR INTERACTIONS IN CHEMISTRY AND BIOLOGY.....	5K04 GM70718-04
KOROBKIN, MELVYN T.....	UROGRAPHIC AND HEMODYNAMIC CHANGES IN RENAL ISCHEMIA.....	5K04 GM00055-03
KUN, ERNEST.....	BIOCHEMICAL REGULATORY MECHANISMS.....	5K06 GM04615-14
KUNTZ, IRWIN D, JR.....	MACROMOLECULAR STRUCTURE AND HYDRATION.....	5K04 GM00042-03
LA VAIL, MATTHEW M.....	CELLULAR MECHANISMS OF INHERITED RETINAL DEGENERATION.....	5K04 EY70871-03
LEVY, JAY A.....	ROLE OF C-TYPE VIRUS IN AUTOIMMUNE DISEASE AND CANCER.....	5K04 CA70990-04
LIPTON, MARTIN J.....	CARDIAC RECONSTRUCTION USING COMPUTERIZED TOMOGRAPHY.....	1K04 HL00360-01
MARTON, LAURENCE J.....	DIAGNOSIS AND EVALUATION OF BRAIN TUMOR CHEMOTHERAPY.....	5K04 CA00112-03
MENTZER, WILLIAM C, JR.....	RBC METABOLISM IN SICKLEMLIA AND OTHER CHILDHOOD ANEMIAS.....	5K04 HL00086-03
NICOLL, ROGER A.....	BARBITURATES: ACUTE AND CHRONIC SYNAPTIC EFFECTS.....	1K04 NS00287-01
PICTET, RAYMOND L.....	MECHANISM OF REGULATION OF GROWTH & CYTODIFFERENTIATION.....	5K04 HD70682-05
REID, IAN A.....	SYMPATHETIC REGULATION OF RENIN SECRETION.....	5K04 HL09104-03
ROSEN, STEVEN D.....	BIOCHEMISTRY OF CELL ADHESION.....	1K04 GM00322-01
SANTI, DANIEL V.....	STUDIES OF TMP SYNTHETASE & THE GLUCOCORTICOID RECEPTOR.....	5K04 CA00123-03
SCHARSCHMIDT, BRUCE F.....	MECHANISM OF BILE FORMATION AND ORGANIC ANION EXCRETION.....	1K04 AM00323-01
SCHINDLER, ROBERT A.....	PROJECTION ORGANIZATION TO/FROM SUPERIOR OLIVARY COMPLEX.....	5K07 NS00175-02
SEVERINGHAUS, JOHN W.....	RESPIRATORY CHEMORECEPTOR SENSITIVITY CONTROL MECHANISMS.....	5K06 HL19412-15
SIEGEL, ROBERT C.....	PATHOGENESIS OF CONNECTIVE TISSUE DISEASE.....	5K04 AM00114-03
TYBERG, JOHN V.....	AN ANALYSIS OF ISCHEMIC DYSFUNCTION.....	5K04 HL00016-03
WEINKAM, ROBERT J.....	CHEMICAL IONIZATION MASS SPECTROMETRY—BIOMEDICAL.....	5K04 GM00007-03
WIKMAN-COFFELT, JOAN.....	CONTRACTILE PROTEINS IN ISCHEMIA.....	7K04 HL00466-01
WILLIAMS, MARY C.....	LUNG SURFACTANT: SYNTHESIS, SECRETION, AND STRUCTURE.....	5K04 HL00221-02
YAMAMOTO, KEITH R.....	MECHANISM OF GENE REGULATION BY STEROID RECEPTOR PROTEIN.....	1K04 CA00347-01
SANTA BARBARA		
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106		
GERIG, JOHN T.....	STRUCTURAL STUDIES OF PROTEINS IN VARIOUS PHASES.....	5K04 GM70373-05
PURICH, DANIEL L.....	ENZYME REGULATION BY COVALENT MODIFICATION.....	1K04 GM00250-01A1

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
CALIFORNIA—Continued		
SANTA CRUZ		
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ ZIP CODE 95064		
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF CARDIAC AGLYCONES.....	5K04 CA00163-02
STANFORD		
STANFORD UNIVERSITY ZIP CODE 94305		
CHOW, KAO I.....	NEUROBIOLOGY OF LEARNING AND VISION.....	4K06 NS18512-16
COOPER, ALLEN D.....	REGULATION OF HEPATIC CHOLESTEROL SYNTHESIS.....	5K08 AM00137-03
EPSTEIN, HENRY F.....	GENETIC & MOLECULAR BASIS OF MUSCLE DEVELOPMENT.....	1K04 HD00182-01
GLADER, BERTIL E.....	PATHOPHYSIOLOGY OF HEMOLYSIS: ROLE OF RBC DEHYDRATION.....	7K04 AM00435-02
HELLER, H CRAIG.....	CENTRAL NERVOUS SYSTEM REGULATION OF BODY TEMPERATURE.....	5K04 NS00041-03
HUDSON, BRUCE S.....	MEMBRANES: NEW TECHNIQUES.....	1K04 GM00284-01
HUESTIS, WRAY H.....	NEUROTRANSMITTER RECEPTORS IN HUMAN ERYTHROCYTES.....	1K04 HL00258-01
LUETSCHER, JOHN A, JR.....	SECRETION AND METABOLISM OF ADRENAL HORMONES.....	4K06 AM14176-16
PEDLEY, TIMOTHY A.....	EPILEPTOGENESIS AND NEURAL PLASTICITY.....	5K07 NS11075-03
PERKINS, DAVID D.....	GENETICS OF NEUROSPORA.....	5K06 GM04899-14
SAKITT, BARBARA.....	PHYSICAL AND NEURAL BASIS OF SENSATION AND PERCEPTION.....	5K04 EY00004-03
SIMONI, ROBERT D.....	STRUCTURE-FUNCTION RELATIONSHIPS IN MEMBRANES.....	5K04 GM00225-02
THEODORE, JAMES.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00129-03
TORRANCE		
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL ZIP CODE 90509		
EDWARDS, JOHN E.....	HEMATOGENOUS CANDIDA ENDOPHTHALMITIS.....	5K07 EY00030-03
EFFROS, RICHARD M.....	NEW INDICATOR DILUTION TECHNIQUES.....	5K04 HL00132-05
SERLING, MARK A.....	ENDOCRINE REGULATION OF CARBOHYDRATE METABOLISM.....	5K04 HD00029-03
COLORADO		
BOULDER		
UNIVERSITY OF COLORADO AT BOULDER ZIP CODE 80302		
CARLSON, LAWRENCE E.....	MULTI-MODE CONTROL OF UPPER-LIMB PROSTHESES.....	5K04 AM00166-02
CARUTHERS, MARVIN H.....	BIOCHEMICAL AND BIOLOGICAL STUDIES OF DNA CONTROL REGION.....	5K04 GM00076-03
GOLD, LAWRENCE M.....	GENE EXPRESSION: BIOCHEMISTRY/GENETICS OF TWO CISTRONS.....	5K04 GM00103-03
HALLICK, RICHARD B.....	GENE EXPRESSION IN ORGANELLES DURING CELL DEVELOPMENT.....	1K04 GM00372-01
JONES, RICHARD E.....	ENDOCRINE CONTROL OF OVARIAN FOLLICULAR GROWTH—REPTILES.....	5K04 HD70165-04
DENVER		
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206		
CHILLER, JACQUES M.....	CELLULAR BASIS OF IMMUNOREGULATORY MECHANISMS.....	5K04 AI00133-02
PACE, NORMAN R.....	SYNTHESIS AND REGULATION OF RIBOSOMAL RNA.....	5K04 GM00189-02
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262		
ANDERSON, ROBERT J.....	WATER METABOLISM IN HEART FAILURE AND EDEMATOUS STATES.....	1K04 HL00316-01
FINK, LOUIS M.....	TRANSFORMATION OF CELLS BY CHEMICAL CARCINOGENS.....	5K04 CA00050-03
GAENSBAUER, THEODORE J.....	REGULATION OF AFFECT EXPRESSION IN INFANCY.....	1K04 HD00214-01
KIMBERLING, WILLIAM J.....	GENE LOCALIZATION IN MAN.....	5K04 HD70659-05
MOORHEAD, JOHN W.....	INTERACTION OF T-CELLS IN IMMUNITY AND TOLERANCE.....	5K04 AI00125-02
MURPHY, ROBERT C.....	APPLICATION OF MASS SPECTROMETRY TO BIOMEDICAL RESEARCH.....	5K04 HD00128-02
NEVILLE, MARGARET C.....	ROLE OF INTRACELLULAR COMPARTMENTS IN NUTRIENT TRANSPORT.....	5K04 AM00038-03
PATTERSON, DAVID.....	GENETIC BIOCHEMICAL REGULATION IN MAMMALIAN CELLS.....	5K04 AM00044-03
SIMON, FRANCIS R.....	SURFACE MEMBRANE REGULATION OF BILE ACID TRANSPORT.....	1K04 AM00347-01
WENGER, DAVID A.....	BETA-GALACTOSIDASE DEFICIENCY NEURODEGENERATIVE DISEASE.....	5K04 NS00108-02

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
COLORADO—Continued		
ZWILLICH, CLIFFORD W.....	VENTILATORY CONTROL AND RESPIRATORY FAILURE.....	5K04 HL00225-02
FORT COLLINS		
COLORADO STATE UNIVERSITY ZIP CODE 80521		
HILL, GEORGE C.....	DNA AND CYTOCHROMES IN KINETOPLASTIDAE.....	5K04 AI70813-04
CONNECTICUT		
FARMINGTON		
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032		
CATALANOTTO, FRANK A.....	SENSORY PHYSIOLOGY IN HEALTH & DISEASE.....	5K04 DE00012-03
HOCK, JANET M.....	MICROCIRCULATORY FUNCTION IN EARLY GINGIVAL INFLAMMATION.....	5K04 DE00035-02
KOLAKOWSKI, DONALD L.....	GENETICS OF THE HUMAN DENTITION IN SEVERAL POPULATIONS.....	5K04 DE00015-03
PAPPANO, ACHILLES J.....	PHARMACOLOGY OF DEVELOPING CARDIAC TISSUES.....	5K04 HL00027-03
YOSHIDA, TAKESHI.....	LYMPHOKINE MEDIATORS OF CELLULAR IMMUNITY IN VIVO.....	5K04 AI00082-03
MIDDLETOWN		
WESLEYAN UNIVERSITY ZIP CODE 06457		
ALLEWELL, NORMA M.....	THERMODYNAMICS OF MEMBRANE-LIGAND INTERACTIONS.....	1K04 AM00283-01
WOLFE, JASON S.....	THE DIVISION/DIFFERENTIATION DECISION—FOCUS ON G1.....	5K04 GM00140-03
NEW HAVEN		
YALE UNIVERSITY ZIP CODE 06520		
ASKENASE, PHILIP W.....	ALLERGIC DISEASES ACADEMIC AWARD.....	5K07 AI70829-04
CANELLAKIS, EVANGELO S.....	MECHANISMS OF BIOSYNTHESIS OF NUCLEIC ACIDS.....	5K06 GM03070-14
DE LORENZO, ROBERT J.....	PROTEIN PHOSPHORYLATION, ANTICONVULSANTS, & EPILEPSY.....	1K04 NS00245-01
DOBBINS, JOHN W.....	LITHIUM AND INTESTINAL ABSORPTION AND SECRETION.....	5K08 AM00232-02
GREGORY, DOUGLAS S.....	CONTROL OF AQUEOUS HUMOR FORMATION.....	5K07 EY00037-03
HIGGINS, JOAN A.....	BIOGENETIC STUDY OF CELLULAR MEMBRANES.....	5K04 GM70729-04
HOWARD-FLANDERS, PAUL.....	MECHANISMS FOR THE PERSERVATION OF THE GENOME.....	5K06 AM09397-15
MANUELIDIS, LAURA M.....	BIOCHEMISTRY/ULTRASTRUCTURE: CNS TUMORS, DEVELOPING CELL.....	5K04 NS00101-03
MILSTONE, LEONARD M.....	DIFFERENTIATION OF EPIDERMIS: ROLE OF KERATINOSOMES.....	1K08 AM00389-01
MITCHELL, MALCOLM S.....	CHEMOTHERAPY AND TUMOR IMMUNOLOGY.....	5K04 CA70982-04
NEUFELD, ARTHUR H.....	REGULATION OF AQUEOUS HUMOR DYNAMICS.....	5K04 EY00029-02
PAPERMASTER, DAVID S.....	MEMBRANE BIOSYNTHESIS IN RETINA.....	5K04 EY00017-03
POWLEY, TERRY L.....	HYPOTHALAMIC CONTROL OF BODY WEIGHT AND FEEDING.....	1K04 AM00363-01
SHERWIN, ROBERT S.....	INSULIN, GLUCAGON, SOMATOSTATIN AND BODY FUEL METABOLISM.....	1K04 AM00334-01
SOMAN, VIJAY R.....	GLUCAGON AND INSULIN RECEPTORS IN GLUCOSE HOMEOSTASIS.....	1K08 AM00356-01
VARGA, JANOS M.....	SPECIFICITY AND EXPRESSION OF CELL SURFACE RECEPTORS.....	5K04 AI00154-02
WADE, JAMES B.....	PHYSIOLOGY OF EPITHELIA AND MEMBRANE STRUCTURE.....	5K04 AM00217-02
ZIEGLER, FREDERICK E.....	NATURAL PRODUCTS & DEVELOPMENT OF SYNTHETIC METHODOLOGY.....	5K04 GM70577-05
STORRS		
UNIVERSITY OF CONNECTICUT ZIP CODE 06268		
ROTH, JAY S.....	NUCLEASES AND DNA METABOLISM STUDIES.....	4K06 CA18379-16
ZEAMAN, DAVID.....	RETARDATE DISCRIMINATION LEARNING AND ATTENTION.....	5K06 HD20325-15

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
DELAWARE		
NEWARK		
UNIVERSITY OF DELAWARE ZIP CODE 19711		
WAGNER, ROGER C.....	MICROPINOCYTIC TRANSPORT IN CAPILLARY ENDOTHELIUM.....	1K04 HL00270-01
WHITE, HAROLD B, III.....	GLYCEROL 3-P DEHYDROGENASE AND EGG YOLK AVIDIN.....	1K04 AM00152-01
DIST OF COL		
WASHINGTON		
AMERICAN NATIONAL RED CROSS ZIP CODE 20006		
INGHAM, KENNETH C.....	PRECIPITATION OF PROTEINS WITH POLYETHYLENE GLYCOL.....	1K04 HL00325-01
GEORGETOWN UNIVERSITY ZIP CODE 20007		
GILLIS, RICHARD A.....	NEUROPHARMACOLOGY OF THE CARDIOVASCULAR SYSTEM.....	5K04 HL70678-05
HOWARD UNIVERSITY ZIP CODE 20001		
STORM, CARLYLE B.....	MECHANISM OF ACTION OF PHENYLALANINE HYDROXYLASE.....	5K04 GM70586-05
FLORIDA		
GAINESVILLE		
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611		
BIRDELL, DALE C.....	PATHOGENICITY OF BACTERIAL TEICHOIC ACIDS.....	5K04 DE00030-02
CATON, DONALD.....	HORMONAL CONTROL OF UTERINE BLOOD FLOW IN PREGNANCY.....	5K04 HD70552-05
DUCKWORTH, DONNA H.....	BACTERIOPHAGE AND CELL SURFACE PHENOMENON.....	5K04 AI00054-02
DUNN, BEN M.....	CONTROL OF PEPSIN BY ACTIVATION PEPTIDE ANALOGS.....	1K04 AM00303-01
GASSET, ANTONIO R.....	TERATOGENIC & TOXIC EFFECTS OF OPHTHALMIC DRUGS.....	5K04 EY00002-03
HARTY, RICHARD F.....	GASTROINTESTINAL PEPTIDE HORMONE SYNTHESIS AND SECRETION.....	1K08 AM00298-01
KARLAN, MARC S.....	PHYSIOLOGY & PATHOPHYSIOLOGY OF HEARING.....	1K07 NS00281-01
MC CAREY, BERNARD E.....	CORNEAL ENDOTHELIAL MORPHOLOGY AND FUNCTION.....	5K07 EY00031-02
WYNNE, JAMES W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00122-02
MIAMI		
UNIVERSITY OF MIAMI ZIP CODE 33152		
BOLOOKI, HOOSHANG.....	CARDIAC PERFORMANCE BEFORE AND AFTER HEART SURGERY.....	5K04 HL70670-05
BRADY, AL H.....	STRUCTURE OF ENZYME COMPLEXES IN NEOPLASMS.....	5K04 CA00100-03
BREW, KEITH.....	CHEMICAL STUDIES OF ENZYMES AND PROTEINS.....	5K04 GM00147-03
DOWNNEY, KATHLEEN M.....	RNA-DEPENDENT RNA POLYMERASE OF ERYTHROID CELLS.....	5K04 HL00031-03
FINE, LEON G.....	FUNCTIONAL PROFILE OF THE ISOLATED UREMIC NEPHRON.....	1K04 AM00314-01
PENNEYS, NEAL S.....	CUTANEOUS INHIBITORS OF PROSTAGLANDIN SYNTHESIS.....	5K04 AM00203-02
THET, LYN A.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00374-01
TALLAHASSEE		
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306		
BERKLEY, KAREN J.....	NEUROANATOMY OF SOMATIC PATHWAYS AFFERENT TO THALAMUS.....	5K04 NS00118-03
MARZLUFF, WILLIAM F, JR.....	SPECIFIC GENE EXPRESSION IN ANIMAL CELLS IN VITRO.....	5K04 CA00178-02
RILL, RANDOLPH L.....	THE STRUCTURE OF CHROMATIN AND MODEL NUCLEOPROTEINS.....	5K04 GM00087-03

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
GEORGIA		
ATHENS		
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601		
COLE, RONALD S.....	REPAIR OF DNA CONTAINING INTERSTRAND CROSS-LINKS.....	5K04 CA00046-03
KUSHNER, SIDNEY R.....	BIOCHEMISTRY OF GENETIC RECOMBINATION AND DNA REPAIR.....	5K04 GM00048-03
PROENZA, LUIS M.....	ELECTROPHYSIOLOGY OF RETINAL CELLS IN VISION.....	5K04 EY00042-02
VAPNEK, DANIEL.....	MOLECULAR STUDIES ON R-PLASMIDS IN E. COLI.....	5K04 GM00090-03
ATLANTA		
ATLANTA UNIVERSITY ZIP CODE 30314		
LUMB, JUDITH R.....	A THEORETICAL AND BIOCHEMICAL STUDY OF LEUKEMIA.....	5K04 CA00067-03
EMORY UNIVERSITY ZIP CODE 30322		
BRESSACK, MICHAEL A.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	5K08 HL00313-02
ELSAS, LOUIS J, II.....	GENETIC CONTROL OF MEMBRANE TRANSPORT AND METABOLISM.....	5K04 HD35615-05
HONIG, ERIC G.....	PULMONARY MEDICINE.....	1K08 HL00314-01
NOE, BRYAN D.....	ROLE OF PROGLUCAGON IN GLUCAGON BIOSYNTHESIS.....	1K04 AM00142-01
SMITH, P DENNIS.....	RECOMBINATION PROFICIENCY IN DROSOPHILA MELANOGASTER.....	5K04 GM70758-04
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332		
YU, NAI-TENG.....	NEW METHODS FOR BIOMEDICAL RESEARCH.....	5K04 EY00073-02
AUGUSTA		
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902		
OKABE, TORU.....	KINETICS OF AMALGAMATION.....	5K04 DE00039-02
SPEIR, WILLIAM A, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70057-04
HAWAII		
HONOLULU		
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822		
HALLENBORG, CARL P.....	MEDICAL SCHOOL PULMONARY TRAINING AWARD.....	5K08 HL00312-02
MORISHIGE, WALTER K.....	HORMONAL REGULATION OF LUNG FUNCTION.....	5K04 HL00216-02
SMITH, RICHARD M.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	1K08 HL00303-01
IDAHO		
MOSCOW		
UNIVERSITY OF IDAHO ZIP CODE 83843		
WILLET, JAMES D.....	HORMONES & HORMONAL SYSTEMS IN NEMATODES.....	5K04 AG00011-03
ILLINOIS		
CHICAGO		
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616		
DIAMOND, RICHARD D.....	CELLULAR IMMUNITY IN OPPORTUNISTIC MYCOSES.....	5K04 AI00055-03
SCHNEIDER, ARTHUR B.....	HORMONE STRUCTURE & SECRETION: NORMAL GLANDS & TUMORS.....	5K04 AM00103-03
STACHURA, MAXIMILLIAN E.....	SYNTHESIS STORAGE AND RELEASE OF PITUITARY GH AND PRL.....	1K04 AM00288-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
ILLINOIS—Continued		
NORTHWESTERN UNIVERSITY ZIP CODE 60611		
ANDERSON, BYRON E.....	STUDY OF RHEUMATOID ARTHRITIS; GLYCOPROTEIN ANTIGENS.....	5K04 AM70787-04
HINKLEY, ROBERT E, JR.....	VOLATILE ANESTHETICS ON NERVE CELL STRUCTURE & FUNCTION.....	5K04 GM00173-02
LIPTON, HOWARD L.....	THEILER'S VIRUS-INDUCED DEMYELINATION.....	1K04 AI00228-01
RUBIN, DAVID B.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	1K08 HL00310-01
SLADE, HUTTON D.....	STREPTOCOCCI—STRUCTURE AND BIOCHEMICAL ACTIVITY.....	5K06 GM16284-16
TEN EICK, ROBERT E.....	ELECTROPHYSIOLOGICAL BASIS OF HUMAN DYSRHYTHMIAS.....	5K04 HL00033-03
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER ZIP CODE 60612		
GOTTLIEB, GERALD L.....	EXPERIMENTAL INVESTIGATION OF HUMAN MOTOR MECHANISMS.....	5K04 NS00196-02
SCHAUF, CHARLES L.....	KINETIC STUDIES OF MYXICOLA AXONS/DRUGS FOR M.S. THERAPY.....	5K04 NS00004-03
UNIVERSITY OF CHICAGO ZIP CODE 60637		
AGARWAL, KAN L.....	NUCLEIC ACID-PROTEIN INTERACTIONS.....	5K04 GM00224-02
ARNSDORF, MORTON F.....	ELECTROPHARMACOLOGY OF ANTIARRHYTHMIC DRUGS.....	5K04 HL00196-02
BOYER, JAMES L.....	ACADEMIC CAREER DEVELOPMENT AWARD IN DIGESTIVE DISEASES.....	5K07 AM70218-04
DAWSON, GLYN.....	METABOLISM OF GLYCOLIPIDS AND GLYCOPROTEINS.....	5K04 NS00029-03
ERNEST, J TERRY.....	PATHOGENESIS OF GLAUCOMATOUS OPTIC NERVE DISEASE.....	5K04 EY70633-05
FRIED, JOSEF.....	STEROIDS, PROSTAGLANDINS AND CARCINOGENIC HYDROCARBONS.....	5K06 AM21846-14
GEPPERT, EUGENE F.....	PULMONARY DISEASES.....	5K08 HL00252-02
GROBSTEIN, PAUL.....	DEVELOPMENT OF CONNECTIVITY IN ANURAN VISUAL SYSTEMS.....	1K04 EY00057-01
GUNN, ROBERT B.....	MOLECULAR MECHANISMS OF ION TRANSPORT IN HUMAN RBC.....	5K04 HL00208-02
HORWITZ, DAVID L.....	RESIDUAL BETA-CELL FUNCTION IN DIABETES MELLITUS.....	5K04 AM00181-02
HUNTER, ROBERT L.....	IMMUNOPATHOLOGY OF HUMAN AND ANIMAL CANCER.....	5K04 CA00032-03
KANE, EILEEN S.....	CENTRAL AUDITORY SYSTEM CONNECTIONS IN MAMMALS.....	5K04 NS00008-03
KOHLER, HEINZ.....	MYELOMA, ANTIBODIES AND RECEPTORS IN IMMUNE RESPONSE.....	5K04 AI70559-05
MAUSOLF, FREDERICK A.....	EXPERIMENTAL HYPERVISCOSITY RETINOPATHY.....	1K07 EY00074-01
POKORNY, JOEL M.....	AN ANALYSIS OF NORMAL AND DEFECTIVE COLOR VISION.....	5K04 EY70652-03
RECKARD, CRAIG R.....	EFFECTS OF PANCREATIC ISLET TRANSPLANTATION.....	1K08 AM00401-01
ROTHMAN-DENES, LUCIA B.....	NOVEL TRANSCRIBING ACTIVITIES IN N4-INFECTED E. COLI.....	5K04 AI00078-03
SCHERBERG, NEAL H.....	VARIATIONS IN MESSENGER RNA IN ENDOCRINE TISSUES.....	1K04 AM00179-01
SCHNEIDER, JOHN F.....	CLINICAL APPLICATION OF STABLE ISOTOPE TRACERS.....	5K04 AM00133-03
SHAPIRO, JAMES A.....	PSEUDOMONAS ALKANE METABOLISM; C. GLUTAMICUM GENETICS.....	5K04 AI00118-02
SLATKIN, MONTGOMERY W.....	POPULATION RESPONSE TO SPATIAL AND TEMPORAL VARIATIONS.....	5K04 GM00118-03
SPARGO, BENJAMIN H.....	STUDIES OF ULTRASTRUCTURAL RENAL CHANGES.....	5K06 HL04418-14
SPEAR, PATRICIA G.....	MEMBRANE PROTEINS SPECIFIED BY HERPES VIRUSES.....	5K04 CA00035-03
TAGER, HOWARD S.....	BIOSYNTHESIS AND SECRETION OF PEPTIDE HORMONES.....	5K04 AM00145-02
TRIMBLE, JOHN L.....	NONLINEAR ANALYSIS OF THE HUMAN VER.....	1K07 EY00079-01
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE ZIP CODE 60680		
OSCAL, LAWRENCE B.....	EXERCISE AND LIPID METABOLISM.....	5K04 AM00216-02
SCHULTZ, ALBERT B.....	BIOCHEMICAL STUDIES OF IDIOPATHIC SCOLIOSIS.....	5K04 AM00029-03
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612		
BELL, CLARA G.....	FOREIGN RNA FOR ANTIBODY SYNTHESIS BY LYMPHOID CELLS.....	5K04 AI70235-04
FRIEDENSON, BERNARD A.....	IGG ANTIBODIES WITH THE SAME H OR L CHAIN.....	5K04 AI00147-02
DE KALB		
NORTHERN ILLINOIS UNIVERSITY ZIP CODE 60115		
ERMAN, JAMES E.....	ELECTRON TRANSFER AND HEME PROTEIN REACTIVITY.....	5K04 GM00249-02
EVANSTON		
NORTHWESTERN UNIVERSITY ZIP CODE 60201		
DUMAS, LAWRENCE B.....	ROLE OF HOST CELL PROTEINS IN VIRUS DNA REPLICATION.....	5K04 AI70632-04
KERTESZ, ANDREW E.....	INVESTIGATION OF HUMAN FUSIONAL RESPONSE.....	5K04 EY70887-03
LEWIS, JACK L.....	MECHANICAL PROPERTIES OF BONE AND IMPLANT DESIGN.....	5K04 AM00081-03
LORAND, LASZLO.....	BLOOD, MUSCLE AND PROSTATE CHEMISTRY.....	5K06 HL03512-15

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
ILLINOIS—Continued		
WIGHTMAN, FREDERIC L.....	PITCH PERCEPTION.....	5K07 NS11072-03
WU, TAI T.....	STRUCTURES OF THE VARIABLE REGIONS OF ANTIBODIES.....	5K04 AI70497-04
MAYWOOD		
LOYOLA UNIVERSITY MEDICAL CENTER	ZIP CODE 60153	
STODOLSKY, MARVIN.....	BACTERIAL GENE ACQUISITION BY PROPHAGE P1.....	5K04 GM00113-03
URBANA		
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN	ZIP CODE 61801	
BROWN, ANN L.....	MEMORY FOR STORIES IN CHILDREN.....	5K04 HD00111-02
EBREY, THOMAS G.....	MECHANISM OF VISUAL EXCITATION.....	5K04 EY00025-03
GENNIS, ROBERT B.....	LIPID-REQUIRING MEMBRANE ENZYMES.....	5K04 HL00040-03
GLASER, MICHAEL.....	ROLE OF PHOSPHOLIPIDS IN MEMBRANES AND CELL GROWTH.....	5K04 GM00193-02
KONISKY, JORDAN.....	MECHANISM OF ACTION OF I-COLICINS ON ESCHERICHIA COLI.....	5K04 AI00049-03
ORDAL, GEORGE W.....	CHEMOTAXIS AND PHOTOTAXIS IN BACTERIA.....	5K04 GM00160-02
SHERWOOD, ORRIN D.....	RELAXIN: STRUCTURAL AND PHYSIOLOGICAL STUDIES.....	5K04 HD00019-02
STORM, DANIEL R.....	FUNCTIONAL ASPECTS OF BACTERIAL & MAMMALIAN MEMBRANES.....	5K04 AI00120-02
WEBER, MICHAEL J.....	EARLY CELL-SURFACE CHANGES IN VIRAL ONCOGENESIS.....	5K04 CA00092-03
INDIANA		
BLOOMINGTON		
INDIANA UNIVERSITY AT BLOOMINGTON	ZIP CODE 47401	
BLUMENTHAL, THOMAS.....	QBETA REPLICASE & PROTEIN SYNTHESIS ELONGATION FACTORS.....	5K04 GM00016-03
ELIZONDO, REYNALDO S.....	THERMOREGULATION IN THE RHESUS MONKEY.....	5K04 AM00061-03
MAHLER, HENRY R.....	RESPIRATORY ENZYMES—STRUCTURE, FUNCTION, BIOSYNTHESIS.....	4K06 GM05060-16
RAFF, RUDOLF A.....	REGULATION OF PROTEIN SYNTHESIS IN EARLY DEVELOPMENT.....	5K04 HD00047-03
INDIANAPOLIS		
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS	ZIP CODE 46202	
KARN, ROBERT C.....	AMYLASE LOCI: BIOCHEMICAL AND GENETIC DIFFERENTIATION.....	1K04 AM00284-01
RHOADES, RODNEY A.....	SUBSTRATE METABOLISM AND LUNG FUNCTION.....	7K04 HL00317-02
NOTRE DAME		
UNIVERSITY OF NOTRE DAME	ZIP CODE 46556	
CASTELLINO, FRANCIS J.....	PLASMINOGEN AND PLASMIN: STRUCTURE AND FUNCTION.....	5K04 HL70717-04
WEST LAFAYETTE		
PURDUE UNIVERSITY	ZIP CODE 47907	
BRENCHLEY, JEAN E.....	ROLE OF T-RNA IN REGULATING ENZYME SYNTHESIS.....	7K04 GM00449-02
CRANE, FREDERICK L.....	ORGANIZATION AND FUNCTION OF SUBCELLULAR PARTICLES.....	5K06 GM21839-14
DIXON, JACK E.....	THYROTROPIN RELEASING HORMONE BIOSYNTHESIS; DEGRADATION.....	5K04 AM00218-02
HARTL, DANIEL L.....	EVOLUTION OF NEW GENES, DYNAMICS OF GENE SUBSTITUTION.....	5K04 GM00023-03
KEENAN, THOMAS W.....	MEMBRANE CHANGES ACCOMPANYING MAMMARY TUMORIGENESIS.....	5K04 GM70596-05
MARKLEY, JOHN L.....	THE USE OF NMR TO SOLVE PROBLEMS IN PROTEIN CHEMISTRY.....	5K04 HL00061-03
PINTO, LAWRENCE H.....	PHOTORECEPTOR SIGNAL GENERATION.....	5K04 EY00009-03
WINFREE, ARTHUR T.....	PRINCIPLES OF TEMPORAL ORGANIZATION.....	5K04 GM70660-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
IOWA		
IOWA CITY		
UNIVERSITY OF IOWA ZIP CODE 52242		
ARNONE, ARTHUR.....	X-RAY STUDIES OF HEMOGLOBIN AND REGULATORY ENZYMES.....	5K04 AM00099-03
AUTOR, ANNE P.....	STUDIES ON MECHANISM OF OXYGEN AND FREE RADICAL TOXICITY.....	5K04 HD00068-03
BARON, JEFFREY.....	MECHANISMS AND CONTROL OF MAMMALIAN STERIOGENESIS.....	5K04 AM00091-03
ERENBERG, ALLEN P.....	THYROID HORMONES AND THE FETAL AND NEONATAL LUNG.....	1K04 HD00155-01
HALMI, NICHOLAS S.....	INVESTIGATION OF THE THYROID AND PITUITARY.....	4K06 AM13576-16
HEISTAD, DONALD D.....	STUDIES ON CARDIOVASCULAR EFFECTS OF HYPOXEMIA.....	5K04 HL00041-03
HERMSMEYER, R KENT.....	MEMBRANE ELECTRICAL PROPERTIES OF VASCULAR MUSCLE.....	5K04 HL00073-03
MARCUS, MELVIN L.....	MYOCARDIAL PERFUSION AND CARDIAC HYPERTROPHY.....	1K04 HL00328-01
NEWLON, CAROL S.....	YEAST DNA REPLICATION.....	5K04 GM00265-02
OWEN, WHYTE G.....	BIOCHEMISTRY-ANTIHEMOPHILIC FACTOR & HEPARIN CO-FACTOR.....	1K04 HL00348-01
PETITH, M MICHAEL.....	ROLE OF CECUM AND COLON IN CALCIUM HOMEOSTASIS.....	5K08 AM00242-02
PITKIN, ROY M.....	ACADEMIC CAREER DEVELOPMENT AWARD IN NUTRITION.....	5K07 AM70694-05
WELSH, MICHAEL J.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	1K08 HL00362-01
KANSAS		
KANSAS CITY		
UNIVERSITY OF KANSAS ZIP CODE 66103		
BELMONT, JOHN M.....	CHILDREN'S INFORMATION-PROCESSING STRATEGY DECISIONS.....	5K04 HD00026-03
KERBY, GERALD R.....	SUPPORT FOR IMPROVEMENT OF PULMONARY DISEASE CURRICULUM.....	5K07 HL70073-04
LIU, CHIEN.....	PATHOGENETIC STUDY & DIAGNOSIS OF INFECTIOUS DISEASES.....	5K06 AI01826-15
PAZDERNIK, THOMAS L.....	PHARMACOLOGICAL MANIPULATION OF HEMO/IMMUNOPOIESIS.....	5K04 CA00006-03
WOOD, JACKIE D.....	FUNCTION OF ENTERIC NEURONS.....	5K04 AM70726-04
LAWRENCE		
UNIVERSITY OF KANSAS ZIP CODE 66045		
BELL, WILLIAM J.....	BEHAVIORAL MECHANISMS IN CHEMO-ORIENTATION.....	5K04 NS00190-02
CRAWFORD, MICHAEL H.....	DENTITION GENETIC ANALYSES OF ESKIMOS AND MEXICANS.....	5K04 DE00028-02
HOUSTON, L LUGENE.....	PROTEIN INTERACTIONS.....	5K04 CA00114-03
MC CHESNEY, JAMES D.....	GROWTH/DEVELOPMENT AND BIOLOGICALLY ACTIVE TERPENOID.....	5K04 GM00102-03
MANHATTAN		
KANSAS STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE ZIP CODE 66506		
RODKEY, L SCOTT.....	AUTOREGULATION OF IMMUNE PROCESSES.....	1K04 AI00217-01
ROUFA, DONALD J.....	GENETICS OF DNA REPLICATION IN ANIMAL CELLS.....	5K04 GM00245-02
KENTUCKY		
LEXINGTON		
UNIVERSITY OF KENTUCKY ZIP CODE 40506		
JOKL, ERNST.....	THE THIRD CULTURE—A TEXT ON SPORTS MEDICINE.....	1K10 LM00009-01
LOUISVILLE		
UNIVERSITY OF LOUISVILLE ZIP CODE 40208		
WESTPHAL, ULRICH F.....	STEROID-PROTEIN INTERACTIONS.....	5K06 GM14138-16

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
LOUISIANA		
COVINGTON		
TULANE UNIVERSITY ZIP CODE 70433		
SU-CHEN, LI C.....	BIOCHEMICAL STUDIES ON SPHINGOLIPIDOSES.....	5K04 AM00016-03
NEW ORLEANS		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119		
LOPEZ-S, ALFREDO.....	ACADEMIC CAREER DEVELOPMENT AWARD IN NUTRITION.....	5K07 AM70349-04
RAWLS, HENRY R.....	ANTICARIES THERAPIES—POLYMER & PHYSICAL CHEMISTRY.....	1K04 DE00050-01
REEVES, RICHARD E.....	THE NUTRITION & METABOLISM OF ANAEROBIC ORGANISMS.....	5K06 GM14023-14
TULANE UNIVERSITY ZIP CODE 70118		
IGNARRO, LOUIS J.....	BIOREGULATION OF LYSOSOMAL ENZYME SECRETION.....	5K04 AM00076-03
KLAWITTER, JEROME J.....	DESIGN CRITERIA FOR DENTAL IMPLANTS.....	1K04 DE00041-01
MALEK, EMILE A.....	EPIDEMIOLOGY AND CONTROL OF SCHISTOSOMIASIS.....	5K06 AI18424-15
TOU, JEN-SIE H.....	PHOSPHOLIPID METABOLISM BY LEUKEMIC LEUKOCYTES.....	5K04 CA00013-03
WEINSTEIN, ALLAN M.....	IMPLANT PERFORMANCE EVALUATION AND ATTACHMENT TO BONE.....	5K04 AM00222-02
MAINE		
PORTLAND		
MAINE MEDICAL CENTER ZIP CODE 04102		
NELSON, CLIFFORD V.....	ACCURATE MEASUREMENTS OF HEART DIPOLE MOMENT.....	4K06 HL01932-16
MARYLAND		
BALTIMORE		
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218		
BAYLIN, STEPHEN B.....	BIOGENIC AMINES AND HORMONE RELEASE IN ENDOCRINE TUMORS.....	5K04 CA00027-03
BECKER, MARSHALL H.....	ENHANCING COMPLIANCE WITH MEDICAL RECOMMENDATIONS.....	5K04 HD00061-03
BENBOW, ROBERT M.....	CONTROL OF DNA REPLICATION IN XENOPUS LAEVIS EMBRYOS.....	1K04 GM00366-01
CHILDS, BARTDN.....	STUDIES IN HUMAN GENETICS.....	4K06 HD01104-16
CDLVIN, MICHAEL O.....	PHARMACOLOGY OF CYCLOPHOSPHAMIDE AND NITROSOUREAS.....	5K04 CA00103-03
CDMSTOCK, GEORGE W.....	FOLLOW-UP STUDIES OF CARDIORESPIRATORY DISEASE.....	5K06 HL21670-14
DE LONG, MAHLON R.....	NEUROLOGY AND NEUROPHYSIOLOGY.....	5K07 NS11069-04
FLAHERTY, JOHN T.....	PATHOPHYSIOLOGY OF MYOCARDIAL ISCHEMIA.....	5K04 HL00019-03
GAFFNEY, BETTY J.....	PHYSICAL PROPERTIES OF MEMBRANE PROTEINS.....	5K04 CA00168-02
GILLESPIE, ELIZABETH.....	ROLE OF MICROTUBULES IN ALLERGY.....	5K04 AI00043-03
JAKAB, GEORGE J.....	BRONCHOPULMONARY RESISTANCE TO BACTERIAL INFECTIONS.....	1K04 HL00415-01
KAO, LUKE I.....	DEVELOPMENT AND DISORDERS OF NERVE-MUSCLE INTERACTION.....	5K07 NS00192-02
KAZAZIAN, HAIG H, JR.....	GENETIC CONTROL OF HEMOGLOBIN SYNTHESIS.....	5K04 AM70669-05
KRISTT, DONALD A.....	BIRTH DEFECTS OF THE CEREBRAL CORTEX.....	1K07 NS00279-01
LEVIN, LESLIE S.....	LINKAGE AND HERITABLE DISORDERS OF CONNECTIVE TISSUE.....	5K04 DE00021-02
LILIENTELD, ABRAHAM M.....	RESEARCH IN PUBLIC HEALTH ASPECTS OF CHRONIC DISEASES.....	5K06 GM13901-16
LIN, SHIN.....	SUGAR TRANSPORT AND CELL MOVEMENT IN MAMMALIAN CELLS.....	5K04 GM00241-02
MENKES, HAROLD A.....	PULMONARY INTERDEPENDENCE.....	5K04 HL00058-03
MIGEON, CLAUDE J.....	RELATION OF HORMONES TO GROWTH AND DEVELOPMENT.....	5K06 AM21855-14
MITCH, WILLIAM E.....	NUTRITIONAL THERAPY OF UREMIA.....	5K08 AM00214-02
MURPHY, PATRICK A.....	CHEMISTRY AND PHYSIOLOGY OF LEUCOCYTE PYROGEN.....	5K04 AI00089-03
PIRKLE, J CARL, JR.....	ANALYSIS AND EXPERIMENTATION IN BLOOD VOLUME CONTROL.....	5K04 HL00068-03
PLAUT, MARSHALL.....	CELL-MEDIATED IMMUNITY: MODULATION BY HISTAMINE.....	1K04 AI00231-01
ROTH, STEPHEN A.....	MORPHOGENESIS IN EMBRYONIC AND MALIGNANT SYSTEMS.....	5K04 HD00148-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
MARYLAND—Continued		
ROYALL, RICHARD M.....	STATISTICAL INFERENCE IN FINITE POPULATIONS.....	5K04 GM70432-05
SACHS, MURRAY B.....	PHYSIOLOGY OF ANIMAL COMMUNICATION BY SOUND.....	5K04 GM70588-05
SCOCCA, JOHN J.....	MOLECULAR MECHANISMS IN DNA TRANSPORT.....	5K04 GM70663-05
SHOUKAS, ARTIN A.....	SYSTEMIC CIRCULATION: CAPACITY AND RESISTIVE PROPERTY.....	5K04 HL00219-02
TSAN, MIN-FU.....	STUDY OF NEUTROPHIL METABOLISM AND FUNCTION.....	1K04 AI00194-01
ZEE, DAVID S.....	MECHANISMS OF HUMAN VESTIBULAR AND OCULOMOTOR DISORDERS.....	5K07 NS11071-03
SINAI HOSPITAL OF BALTIMORE ZIP CODE 21215		
HAUSWIRTH, JUDITH W.....	RELATIONSHIP BETWEEN NUTRITION AND CARCINOGENESIS.....	5K04 CA70560-05
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201		
KOSKI, CAROL L.....	GLYCOPROTEINS AND NEUROMUSCULAR INTERACTIONS.....	5K07 NS00172-02
PADMANABHAN, RADHAKRISHNAN.....	DNA SEQUENCE ANALYSIS ON HUMAN ADENOVIRUS GENOMES.....	5K04 CA00235-03
CATONSVILLE		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND BALTIMORE COUNTY CAMPUS ZIP CODE 21228		
LOVETT, PAUL S.....	CONSTRUCTION OF PLASMIDS FOR BACILLUS SUBTILIS.....	5K04 AI00119-02
COLLEGE PARK		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742		
PENNER, MERRILYNN J.....	TEMPORAL ANALYSIS OF AUDITORY STIMULI.....	1K04 NS00241-01
MASSACHUSETTS		
AMHERST		
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE 01002		
LEVIN, BRUCE R.....	SELECTION IN BACTERIA AND THEIR VIRUSES AND PLASMIDS.....	5K04 GM00112-03
WADE, GEORGE N.....	HORMONES, BRAIN FUNCTION AND BEHAVIOR.....	5K04 NS00090-03
ZIMMERMANN, ROBERT A.....	STRUCTURE OF PROTEIN BINDING SITES IN RIBOSOMAL RNA.....	5K04 GM00129-03
BOSTON		
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE D2115		
LA MONT, JOHN T.....	GLYCOPROTEIN METABOLISM IN COLON CANCER.....	5K08 AM00138-03
BETH ISRAEL HOSPITAL ZIP CODE D2215		
FROMM, DAVID G.....	GASTRIC MUCOSAL PERMEABILITY AND ION TRANSPORT.....	5K04 AM00053-03
STEER, MICHAEL L.....	REGULATION OF ADENYLATE CYCLASE AND CELL FUNCTION.....	5K04 NS00160-02
BOSTON UNIVERSITY ZIP CODE 02215		
BENNETT, MICHAEL.....	IMMUNOBIOLOGY OF VIRAL LEUKEMIA AND ITS TREATMENT.....	5K04 CA70879-04
BERMAN, MARLENE O.....	NORMAL AND PATHOLOGICAL HUMAN BRAIN FUNCTION.....	5K04 NS00161-02
BRECHER, PETER I.....	ANGIOTENSIN ACTION ON TARGET TISSUES.....	5K04 HL00050-03
COUSER, WILLIAM G.....	IMMUNOLOGIC MECHANISMS OF GLOMERULAR INJURY.....	5K04 AM00102-03
FELDMAN, MARTIN L.....	NEURONAL AGING IN THE AUDITORY AND VISUAL SYSTEMS.....	1K04 AG00016-01
GAENSLER, EDWARD A.....	APPLIED PULMONARY PHYSIOLOGY.....	5K06 HL01173-14
LAING, RONALD A.....	MEASUREMENT OF RETINAL A-VO ₂ DIFFERENCE.....	5K04 EY28936-03
MAKE, BARRY J.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00246-02
MONETTE, FRANCIS C.....	REGULATION OF STEM CELL PROLIFERATION/DIFFERENTIATION.....	1K04 AM00200-01
OPPENHEIM, FRANK G.....	CHEMISTRY OF SALIVARY PROTEINS.....	5K04 DE00004-03
SULLIVAN, ALBERT L.....	CHARACTERIZATION OF MEMBRANE TRANSFERRIN RECEPTOR SITES.....	5K04 AM00054-03
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115		
ABELSON, HERBERT T.....	REGULATION OF RNA METABOLISM IN MAMMALIAN CELLS.....	5K04 CA00075-03

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
ALTER, BLANCHE P.....	HEMOGLOBIN REGULATION/DIFFERENTIATION DURING DEVELOPMENT.....	5K04 HL00177-03
COLTEN, HARVEY R.....	MEDIATORS OF HYPERSENSITIVITY: GENETIC ASPECTS.....	5K04 HD70558-05
ELLISON, ROBERT C.....	PRIMARY PREVENTION OF HYPERTENSION AND ATHEROSCLEROSIS.....	1K04 HL00265-01
FOX, THOMAS O.....	STEROID RECEPTOR MECHANISMS IN DEVELOPING MOUSE BRAIN.....	1K04 HD00221-01
LATT, SAMUEL A.....	HUMAN CHROMOSOME STRUCTURE AND REPLICATION.....	5K04 GM00122-03
MC CAFFREY, RONALD P.....	ANALYZE KINDS OF DNA POLYMERASES IN HUMAN LEUKEMIA.....	5K04 CA00099-03
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114		
ADOLPH, ALAN R.....	SYNAPTIC TRANSMITTERS IN VERTEBRATE RETINAE.....	1K07 EY00053-01A1
CHAKRABARTI, BIRESWAR.....	THE STRUCTURE AND INTERACTION OF VITREOUS COMPONENTS.....	1K04 EY00070-01
FORSYTH DENTAL CENTER ZIP CODE 02115		
SKOBE, ZIEOONIS.....	ULTRASTRUCTURE OF AMELOGENESIS & ODONTOPATHIC BACTERIA.....	5K04 OE00018-02
SMITH, DANIEL J.....	EFFECTS OF IMMUNIZATION ON EXPERIMENTAL DENTAL CARIES.....	5K04 OE00024-02
HARVARD UNIVERSITY ZIP CODE 02138		
ALEXANDER, R WAYNE.....	VASCULAR SMOOTH MUSCLE: RECEPTORS AND PROSTAGLANDINS.....	1K04 HL00332-01
BEEUWKES, REINIER, III.....	RENAL MECHANISMS OF SALT AND WATER BALANCE.....	5K04 AM00224-02
BERSON, ELIOT L.....	ELECTROPHYSIOLOGICAL STUDIES OF RETINAL DEGENERATIONS.....	5K04 EY70800-04
BING, OSCAR H.....	COMPUTER FEEDBACK STUDY OF CAROTID MUSCLE MECHANICS.....	5K04 HL00072-03
CAREY, MARTIN C.....	ALIMENTARY TRACT LIPOIDS IN HEALTH AND DISEASE.....	5K04 AM00195-02
CHERNIN, ELI.....	STUDY OF PATHOGENS BY IN VITRO AND RELATED METHODS.....	5K06 AI02455-14
CHURCHILL, WINTHROP H, JR.....	THE ROLE OF MACROPHAGES & BASOPHILS IN TUMOR IMMUNITY.....	5K04 CA001116-03
CHYLACK, LEO T, JR.....	LENS METABOLISM AND CATARACT FORMATION.....	5K04 EY00034-03
COHEN, JONATHAN B.....	MECHANISM OF CHOLINERGIC POSTSYNAPTIC RESPONSE.....	5K04 NS00155-02
CRUMPACKER, CLYDE S, II.....	HERPES VIRUS NUCLEIC ACIDS IN HUMAN TUMORS.....	5K04 CA00139-03
DICHTER, MARC A.....	CNS CELL CULTURE PHYSIOLOGY & MECHANISMS OF EPILEPSY.....	5K04 NS00130-03
DOORF, MARTIN E.....	COMPLEMENTATION STUDIES ON H-LINKED IR GENES.....	5K04 AI00152-02
DRAGER, URSULA C.....	DEVELOPMENTAL ABNORMALITIES IN MOUSE VISUAL SYSTEM.....	1K07 EY00067-01
EVANS, CARLA A.....	EXPERIMENTAL FACIAL GROWTH.....	1K04 OE00051-01
FALCHUK, Z MYRON.....	GASTROINTESTINAL IMMUNOLOGY AND FUNCTION.....	5K04 AM00210-02
FEARON, DOUGLAS T.....	ALTERNATIVE COMPLEMENT PATHWAY.....	1K04 AI00245-01
FRANK, ERIC.....	DEVELOPMENT OF IA SYNAPSES IN THE SPINAL CORD.....	1K07 NS00212-01
FRIEDMAN, PAUL A.....	PLACENTAL TRANSPORT OF VITAMIN B12.....	5K04 HD00023-03
GOLDMAN, MICHAEL D.....	NEUROMUSCULAR CONTROL OF BREATHING.....	1K04 HL00256-01
GOLDSTEIN, RICHARD N.....	MORPHOGENESIS AND GENE CONTROL OF SATELLITE PHAGE P4.....	5K04 AI00084-03
GOODENOUGH, DANIEL A.....	STRUCTURE & FUNCTION OF LIVER & HEART GAP JUNCTIONS.....	5K04 GM00231-02
HARTLEY, LOREN H.....	CORONARY HEART DISEASE, HYPERTENSION, AND FITNESS.....	5K04 HL32645-05
HAUSCHKA, PETER V.....	CONTROL OF CALCIUM BINDING BY PROTEIN CARBOXYLATION.....	5K04 DE00049-02
HAYES, KENNETH C.....	ATHEROGENESIS AND LIPID METABOLISM.....	5K04 HL70285-05
HEGSTED, OAVIO M.....	QUANTITATION OF NUTRITION REQUIREMENTS.....	4K06 AM18455-16
HENNEKENS, CHARLES H.....	RISK FACTORS FOR CORONARY HEART DISEASE.....	1K04 HL00286-01
KASPER, DENNIS L.....	IMMUNOCHEMISTRY OF BACTERIAL ANTIGENS.....	5K04 AI00126-02
KUSHMERICK, MARTIN J.....	MUSCLE ENERGY METABOLISM.....	5K04 AM00178-02
LE VAY, SIMON.....	DEVELOPMENT AND PLASTICITY OF THE VISUAL SYSTEM.....	1K04 EY00090-01
MARTZ, ERIC.....	T LYMPHOCYTE DIFFERENTIATION AND EFFECTOR FUNCTION.....	1K04 AI00233-01
MC FADDEN, EDWARD R, JR.....	PATHOPHYSIOLOGY OF EXERCISE-INDUCED ASTHMA.....	5K04 HL00013-03
MC MAHAN, UEL J, II.....	STRUCTURE AND FUNCTION OF SYNAPSES.....	5K04 NS70606-05
MC NEIL, BARBARA J.....	MEASURES OF EFFICACY IN RADIOLOGY AND NUCLEAR MEDICINE.....	5K04 GM00194-02
MOORE-EDD, MARTIN C.....	ORGANIZATION OF CIRCADIAN TIMING SYSTEM.....	1K04 NS00247-01
MOSKOWITZ, MICHAEL A.....	AMPHETAMINE TOXICITY AND BRAIN PROTEIN SYNTHESIS.....	5K07 NS11081-03
MURPHY, JOHN R.....	VIRULENCE FACTORS OF CORYNEBACTERIUM DIPHTHERIAE.....	5K04 AI00146-02
NEUFELD, ARTHUR H.....	REGULATION OF AQUEOUS HUMOR DYNAMICS.....	7K04 EY00114-02
PATTERSON, PAUL H.....	CELLULAR INTERACTION IN TISSUE CULTURE.....	5K04 NS70806-04
PERLMAN, ROBERT L.....	ACTIONS OF CYCLIC AMP IN ANIMAL CELLS AND BACTERIA.....	5K04 AM70648-05
POLLARD, THOMAS D.....	THE MOLECULAR MECHANISM OF CELLULAR MOTILITY.....	5K04 GM70755-04
RANDO, ROBERT R.....	SUBSTRATE INDUCED IRREVERSIBLE INHIBITION OF ENZYMES.....	5K04 GM00014-03
ROCKLIN, ROSS E.....	MECHANISMS OF CELLULAR IMMUNITY IN MAN.....	5K04 AI70796-04
SAKAMOTO, SEIZABURO.....	COLLAGENASE IN THE DEGRADATION OF BONE COLLAGEN.....	1K04 OE00048-01
SCHNITTMAN, PAUL A.....	RADIOISOTOPE SCAN OF BONE AROUND DENTAL IMPLANTS.....	5K04 DE00006-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
SHAW, JAMES H.....	BIOCHEMISTRY OF ORAL TISSUES, SECRETIONS AND DISEASES.....	5K06 DE22634-14
STROM, TERRY B.....	REGULATION OF THE CELLULAR EVENTS IN TRANSPLANT IMMUNITY.....	5K04 AI00155-02
STUART, ANN E.....	SYNAPTIC TRANSMISSION.....	5K04 EY70985-04
THENEN, SHIRLEY W.....	EXPERIMENTAL OBESITY—GENETIC AND ACQUIRED.....	5K04 AM00106-03
WASSERMAN, STEPHEN I.....	BIOLOGY OF MEDIATORS OF IMMEDIATE HYPERSENSITIVITY.....	1K07 AI00254-01
WAXMAN, STEPHEN G.....	ORGANIZATION OF MYELINATED AND DEMYELINATED AXONS.....	5K04 NS00010-03
WEINER, HOWARD L.....	IMMUNOLOGY OF MEASLES VIRUS.....	1K07 NS00237-01
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE D2114		
NADOL, JOSEPH B, JR.....	STUDY OF SENSORINEURAL HEARING LOSS.....	5K07 NS00174-02
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE D2114		
AUSIELLO, DENNIS A.....	PROTEIN PHOSPHORYLATION AND HORMONE ACTION.....	1K04 AM00342-01
BETINS, INESE Z.....	GONADOTROPIN HETEROGENEITY.....	5K04 HD00132-02
CROWELL, ROBERT M.....	NEUROSURGERY—CEREBROVASCULAR DISEASE.....	5K07 NS11001-04
GOITEIN, MICHAEL.....	DOSE AND TUMOR LOCALIZATION PROTONS THERAPY.....	5K04 CA00251-02
KAPLAN, JOAN C.....	INDUCTION OF SV40 VIRUS FROM TRANSFORMED MAMMALIAN CELLS.....	5K04 CA00198-02
LINSENMAYER, THOMAS F.....	BIOSYNTHESIS AND ROLE OF MATRIX IN DEVELOPMENT.....	5K04 AM00031-03
LIPSON, LOREN G.....	MECHANISMS OF INSULIN RELEASE.....	1K08 AM00320-01
MASLAND, RICHARD H.....	NEUROTRANSMISSION IN MAMMALIAN RETINA.....	1K04 EY00072-01
MATHIS, RICHARD K.....	ROLE OF PROTEASES AND ANTIPROTEASES IN THE LIVER.....	5K08 AM00136-02
MILLER, KEITH W.....	MOLECULAR PHARMACOLOGY OF GENERAL ANESTHETIC ACTION.....	5K04 GM00199-02
SEGRE, GINO V.....	PHYSIOLOGY AND METABOLISM OF PARATHYROID HORMONE.....	1K04 AM00070-01A1
WALKER, W ALLAN.....	ANTIBODY CONTROL OF ANTIGEN UPTAKE IN SMALL INTESTINE.....	5K04 AM00025-03
WANDS, JACK R.....	IMMUNITY IN ACUTE AND CHRONIC HEPATITIS.....	5K08 AM00127-03
NEW ENGLAND DEACONESS HOSPITAL ZIP CODE D2215		
KNOX, W EUGENE.....	CONTROL OF ENZYME CONCENTRATIONS IN ANIMAL CELLS.....	5K06 AM02018-15
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE D2111		
AGNELLO, VINCENT.....	STUDIES ON HUMAN IMMUNE COMPLEX DISEASES.....	5K04 AI70968-04
DWYER, JOHANNA T.....	NEW DIETARY TREATMENTS IN DIABETES AND OBESITIES.....	1K04 AM00272-01
FURIE, BARBARA C.....	METAL-DEPENDENT COMPLEX FORMATION IN BLOOD COAGULATION.....	5K04 HL00235-02
PAUKER, STEPHEN G.....	CLINICAL DECISION MAKING.....	1K04 GM00349-01
PLAUT, ANDREW G.....	IMMUNOCHEMISTRY AND FUNCTION OF HUMAN MACROGLOBULIN.....	5K04 AI70420-05
RABEN, MAURICE S.....	HORMONAL & METABOLIC ASPECTS OF CARDIOVASCULAR FUNCTION.....	5K06 AM02758-15
SOKOL, SAMUEL.....	ELECTROPHYSIOLOGICAL INDICES OF PHOTOPIC MECHANISMS.....	5K04 EY70275-03
TUFTS UNIVERSITY ZIP CODE D2111		
COOPER, AMIEL G.....	BLOOD-GROUP ANTIGENS ON TUMOR CELL MEMBRANES.....	5K04 CA70680-05
SONNENSCHNEN, CARLOS.....	ESTROGEN, ANDROGEN TARGET CELLS IN CANCER AND REPROD BIO.....	5K04 CA47410-05
UNIVERSITY HOSPITAL ZIP CODE D2118		
CHIDECKEL, ELLIOTT W.....	FUEL AND AMINO ACID METABOLISM IN PRIMATE BRAIN.....	1K08 AM00339-01
CAMBRIDGE		
HARVARD UNIVERSITY ZIP CODE D2138		
ELGIN, SARAH C.....	CHROMOSOMAL PROTEINS AND GENE EXPRESSION IN DROSOPHILA.....	5K04 GM00234-02
KESSIN, RICHARD H.....	CONTROL OF AGGREGATION IN D. DISCOIDEUM.....	1K04 HD00220-01
TAYLOR, D LANSING.....	MUSCLE CONTRACTION AND CYTOPLASMIC STREAMING.....	1K04 AM00292-01
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE D2139		
ARCHER, MICHAEL C.....	NITROSAMINES AS ENVIRONMENTAL CARCINOGENS.....	1K04 ES00033-01A1
HECHT, SIDNEY M.....	THE TOTAL SYNTHESIS OF BLEOMYCIN.....	5K04 CA00021-03
WEISS, THOMAS F.....	MECHANICAL TO NEURAL TRANSDUCTION IN THE COCHLEA.....	5K04 NS00113-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
CHESTNUT HILL		
BOSTON COLLEGE ZIP CODE D2167		
KELLY, T ROSS.....	SYNTHESIS OF THE ANTITUMOR AGENT HARRINGTONINE.....	5K04 CA00040-03
SHREWSBURY		
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545		
CHANG, MIN C.....	FERTILIZABILITY OF MAMMALIAN EGGS.....	4K06 HD18334-16
WALTHAM		
BRANDEIS UNIVERSITY ZIP CODE D2154		
HALL, JEFFREY C.....	DEVELOPMENT AND BEHAVIOR OF NEUROLOGICAL MUTANTS.....	1K04 GM00297-01
HONG, JEN-SHIANG.....	BIOCHEMISTRY AND GENETICS OF MEMBRANE FUNCTIONS.....	5K04 GM00092-03
HUDSON, ROBERT B.....	AGING AND HEALTH POLICY: CRITICAL POLICY LINKAGES.....	1K04 AG00005-01
LATTMAN, EATON E.....	X-RAY DIFFRACTION STUDY OF MUSCLE REGULATORY PROTEINS.....	5K04 HL00161-02
PARRY, RONALD J.....	BIOSYNTHESIS OF CEPHALOTAXUS AND SECURINEGA ALKALOIDS.....	5K04 GM00143-03
ROSBASH, MICHAEL M.....	MACROMOLECULES IN OOGENESIS AND DEVELOPMENT.....	5K04 HD00134-02
VAN VUNAKIS, HELEN.....	STRUCTURE & ACTIVITY OF BIOLOGICALLY IMPORTANT MOLECULES.....	5K06 AI02372-15
WENSINK, PIETER C.....	SEQUENCE ARRANGEMENT IN EUKARYOTIC DNA AND CHROMOSOMES.....	5K04 GM00212-02
EUNICE KENNEDY SHRIVER CENTER FOR MENTAL RETARDATION ZIP CODE 02154		
JUNGALWALA, FIROZE B.....	EXPERIMENTAL NEUROTUMORS AND MYELIN METABOLISM.....	5K04 CA00144-03
WORCESTER		
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605		
FAY, FREDRIC S.....	GENERATION AND REGULATION OF FORCE IN SMOOTH MUSCLE.....	5K04 HL00048-03
KANE, EILEEN S.....	CENTRAL AUDITORY SYSTEM CONNECTIONS IN MAMMALS.....	7K04 NS00290-03
MILLER, THOMAS B, JR.....	DIABETES AND REG. OF GLYCOGEN METAB. IN LIVER AND HEART.....	1K04 AM00375-01
MICHIGAN		
ANN ARBOR		
UNIVERSITY OF MICHIGAN ZIP CODE 48104		
BECKER, MARSHALL H.....	ENHANCING COMPLIANCE WITH MEDICAL RECOMMENDATIONS.....	7K04 HD00237-03
CLEWELL, DON B.....	STRUCTURE, MAINTENANCE, AND EXPRESSION OF PLASMID DNA.....	5K04 AI00061-03
NIEDERHUBER, JOHN E.....	IMMUNE RESPONSES IN VITRO-H-2(IR) REGION FUNCTIONS.....	5K04 AI00237-04
OLSON, GARY M.....	INFANT MEMORY PROCESSES.....	1K04 HD00169-01
WHITFIELD, HARVEY J, JR.....	EPISOMAL DNA: CONTROL OF REPLICATION AND SEGREGATION.....	5K04 GM70565-05
DETROIT		
WAYNE STATE UNIVERSITY ZIP CODE 48202		
BENJAMINS, JOYCE A.....	ASSEMBLY OF MYELIN AND OTHER NEURAL MEMBRANES.....	1K04 NS00220-01
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF BIOLOGICALLY ACTIVE NATURAL PRODUCTS.....	5K04 CA00273-02
ENUETI, SURESH.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	1K08 HL00306-01
GORELIC, LESTER S.....	RADIATION-INDUCED CARCINOGENESIS; MRNA TURNOVER.....	5K04 CA70999-04
KAPLAN, JOSEPH.....	TUMOR IMMUNOLOGY OF CHILDHOOD LEUKEMIA AND LYMPHOMA.....	5K04 CA00188-02
LEWIS, BENJAMIN M.....	PHYSIOL & PATHOL REACTIONS OF PULMONARY CAPILLARY BED.....	5K06 HL02182-15
ZWAS, FRED.....	PSYCHOPHYSICAL STUDIES OF RETINITIS PIGMENTOSA.....	5K07 EY00045-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
MICHIGAN—Continued		
EAST LANSING		
MICHIGAN STATE UNIVERSITY ZIP CODE 48823		
ROMSOS, DALE R.....	METABOLIC EFFECTS OF DIET AND MEAL PATTERN.....	5K04 AM00112-03
VELICER, LELAND F.....	MOLECULAR BIOLOGY OF RNA TUMOR VIRUSES.....	5K04 CA70808-04
ROCHESTER		
OAKLAND UNIVERSITY ZIP CODE 48063		
ROY, ARUN K.....	REGULATION OF ALPHA2U GLOBULIN IN THE RAT.....	5K04 AM00141-02
MINNESOTA		
MINNEAPOLIS		
UNIVERSITY OF MINNESOTA ZIP CODE 55455		
BACHE, ROBERT J.....	THE RESPONSE OF THE CORONARY VASCULATURE TO ISCHEMIA.....	7K04 HL00367-02
DILLMAN, WOLFGANG H.....	CARDIAC EFFECTS OF THYROID HORMONES & PROTEIN SYNTHESIS.....	7K04 HL00315-02
DRAGE, CHARLES W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70063-04
GILLUM, RICHARD F.....	SODIUM INTAKE AND HYPERTENSION.....	1K04 HL00329-01
HALBERG, FRANZ.....	TEMPORAL PARAMETERS OF PHYSIOL FUNCTIONS IN HLTH/DISEASE.....	4K06 GM13981-16
HOWARD, RICHARD J.....	VIRUS-IMMUNE INTERACTION IN MICE & TRANSPLANT PATIENTS.....	5K04 AI00167-02
JACOBS, DAVID R, JR.....	EPIDEMIOLOGY AND PREVENTION OF CARDIOVASCULAR DISEASE.....	1K04 HL00287-01
KRONENBERG, RICHARD S.....	RESPIRATORY REGULATION; REGIONAL LUNG FUNCTION.....	5K04 HL70356-05
LEE, CHING Y.....	GONADOTROPIN RECEPTORS IN OVARIES & GRANULOSA CELLS.....	1K04 HD00191-01
SCHEINMAN, JON I.....	SMOOTH MUSCLE PROTEINS IN DIABETIC VASCULAR DISEASE.....	5K04 AM00126-03
SCHWARTZ, SAMUEL.....	BIOLOGICAL AND BIOCHEMICAL EFFECTS OF PORPHYRINS.....	5K06 GM14086-15
SPINK, WESLEY W.....	CONTROL OF INFECTIOUS DISEASES IN TWENTIETH CENTURY.....	2K10 LM26415-04
SUTHERLAND, DAVID E.....	ISOLATION AND TRANSPLANTATION OF PANCREATIC ISLETS.....	5K04 AM00161-03
ROCHESTER		
MAYO FOUNDATION ZIP CODE 55901		
GREENLEAF, JAMES F.....	3-D DISTRIBUTION OF BLOOD FLOW USING RECONSTRUCTION.....	5K04 HL00060-03
JOHNSON, STEVEN A.....	X-RAY AND ULTRASOUND MEDICAL 3-D IMAGE FORMATION.....	5K04 HL00170-03
RODARTE, JOSEPH R.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70816-04
YUNGINGER, JOHN W.....	ISOLATION AND CHARACTERIZATION OF MOLD ALLERGENS.....	5K07 AI00107-03
MAYO FOUNDATION—MAYO MEDICAL SCHOOL ZIP CODE 55901		
BRIMUOIN, WILLIAM S.....	AXONAL TRANSPORT IN ADRENERGIC NERVES.....	5K04 NS00119-03
SAINT PAUL		
UNIVERSITY OF MINNESOTA ZIP CODE 55455		
MUNCK, ECKARD.....	PROPERTIES OF NITROGENASE SYSTEMS/HEMES.....	5K04 GM00057-04
MISSISSIPPI		
JACKSON		
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216		
YOUNG, DAVID B.....	CONTROL, CARDIOVASCULAR AND RENAL EFFECTS OF POTASSIUM.....	1K04 HL00373-01

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
MISSOURI		
COLUMBIA		
UNIVERSITY OF MISSOURI-COLUMBIA	ZIP CODE 65201	
FORTE, LEONARD R.....	STUDIES OF KIDNEY HORMONE RECEPTORS.....	5K04 AM70756-04
FREEMAN, RONALD H.....	EXPERIMENTAL TWO-KIDNEY RENOVASCULAR HYPERTENSION.....	1K04 HL00257-01
GERHARDT, H CARL.....	ACOUSTIC PATTERN RECOGNITION.....	1K04 NS00217-01
HARRIS, PATRICK D.....	MICROVASCULAR MECHANISMS IN HYPER- AND HYPOTENSION.....	5K04 HL20422-05
SAINT LOUIS		
JEWISH HOSPITAL OF ST. LOUIS	ZIP CODE 63110	
BIRGE, STANLEY J.....	MECHANISMS OF CALCIUM TRANSPORT.....	5K04 AM00109-03
ST. LOUIS UNIVERSITY	ZIP CODE 63103	
GREEN, MAURICE.....	BIOCHEMISTRY OF VIRAL REPLICATION.....	4K06 AI04739-16
MARRS, BARRY L.....	MEMBRANE DEVELOPMENT: A BIOCHEMICAL GENETICS APPROACH.....	5K04 GM00098-03
SECKER-WALKER, ROGER H.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00251-02
UNIVERSITY CITY		
WASHINGTON UNIVERSITY	ZIP CODE 63130	
AGRAWAL, HARISH C.....	STUDIES ON MYELIN PROTEIN IN DEVELOPING BRAIN.....	5K04 NS70090-04
BAUER, EUGENE A.....	CONTROL OF COLLAGENASE BIOSYNTHESIS IN CELL CULTURE.....	5K04 AM00077-03
BOIME, IRVING.....	BIOSYNTHESIS OF PROTEIN HORMONES.....	1K04 AM00174-01
CSAPO, ARPAD I.....	PHYSIOLOGY OF PREGNANCY AND PARTURITION STUDIES.....	5K06 HD20169-15
CULLEN, SUSAN E.....	STRUCTURAL AND SEROLOGICAL STUDIES ON IA AND H-2 ANTIGEN.....	1K04 CA00348-01
DODSON, WILLIAM E.....	METABOLISM OF ANTICONVULSANTS.....	5K07 NS11074-03
GOTTLIEB, DAVID I.....	STUDIES ON MOLECULAR BASIS OF MEMBRANE RECOGNITION.....	5K04 NS00185-02
HAHN, THEODORE J.....	DRUG AND HORMONALLY-INDUCED ALTERATIONS IN VITAMIN D.....	5K04 NS70540-05
HILLMAN, RICHARD E.....	MEMBRANE TRANSPORT OF AMINO ACIDS.....	5K04 AM00080-03
HOCHMUTH, ROBERT M.....	RED CELL MEMBRANE: ADHESION AND ELASTICITY.....	5K04 HL70612-05
KIM, DUCK O.....	INNER EAR AND COCHLEAR NUCLEUS MECHANISMS.....	5K04 NS00162-02
KRUPIN, THEODORE.....	CENTRAL NERVOUS SYSTEM INFLUENCE ON OCULAR DYNAMICS.....	1K04 EY00082-01
LIN, HSIU-SAN.....	EFFECT OF CYTOTOXIC DRUGS ON LYMPHOMA CELLS.....	5K04 CA70730-04
MC KEEL, DANIEL W, JR.....	HORMONE SECRETION BY NORMAL AND NEOPLASTIC HYPOPHYSIS.....	5K04 AM00184-02
PERMUTT, MARSHALL A.....	STUDIES OF INSULIN BIOSYNTHESIS.....	1K04 AM00333-01
ROEDER, ROBERT G.....	MOLECULAR BASIS OF DIFFERENTIATION.....	5K04 GM70661-05
ROOS, ALBERT.....	PULMONARY BLOOD FLOW AND TRANSMEMBRANE IONIC FLUX.....	5K06 HL19608-15
ROVAINEN, CARL M.....	ORGANIZATION OF SPINAL CORD.....	5K04 NS70391-05
SCHARP, DAVID W.....	ISLET TRANSPLANTATION IN DIABETES MELLITUS.....	1K04 AM00318-01
SILBERT, DAVID F.....	BIOCHEMICAL GENETIC STUDY OF BACTERIAL FATTY ACIDS.....	5K04 GM70654-05
SULLIVAN, TIMOTHY J.....	BIOCHEMISTRY OF MAST CELL SECRETION.....	5K07 AI00190-02
SWEET, FREDERICK.....	STEROID BIOSYNTHESIS, TRANSPORT AND MECHANISM OF ACTION.....	5K04 HD70788-04
VOLPE, JOSEPH J.....	REGULATION OF FATTY ACID SYNTHESIS DURING DEVELOPMENT.....	5K04 HD70608-04
WEDNER, H JAMES.....	CYCLIC NUCLEOTIDES AND LYMPHOCYTE ACTIVATION.....	5K04 AI00041-03
WILLARD, MARK B.....	AXONALLY TRANSPORTED PROTEINS IN THE VISUAL SYSTEM.....	5K04 NS00170-02
MONTANA		
MISSOULA		
UNIVERSITY OF MONTANA	ZIP CODE 59801	
LARSON, CARL L.....	SPECIFIC AND NONSPECIFIC RESISTANCE CAUSED BY T. BACILLI.....	5K06 AI16502-15

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NEW HAMPSHIRE		
HANOVER		
DARTMOUTH COLLEGE ZIP CODE 03755		
CULP, WILLIAM J.....	SODIUM CHANNEL COMPONENTS OF EXCITABLE MEMBRANES.....	5K04 NS00058-02
DAUBENSPECK, JOHN A.....	DYNAMICS OF BREATHING PATTERN RESPONSES TO LOADING.....	1K04 HL00280-01
GILBERT, JOHN J.....	VITAMIN E: NEW BIOASSAY, ROLE IN ROTIFERS, NEW COMPOUND.....	5K04 GM70557-05
KILHAM, LAWRENCE.....	RELATION OF VIRUSES TO CANCER.....	5K06 CA22652-14
NATTIE, EUGENE E.....	BRAIN METABOLISM/ACID-BASE BALANCE/RESPIRATION CONTROL.....	1K04 HL00364-01
ST JOHN, WALTER M.....	BRAINSTEM INTEGRATION OF CHEMORECEPTOR ACTIVITY.....	1K04 HL00346-01
NEW JERSEY		
NEWARK		
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103		
REICHMAN, LEE B.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00124-03
NEW BRUNSWICK		
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903		
NIEDERMAN, ROBERT A.....	MOLECULAR ASPECTS OF MEMBRANE DEVELOPMENT.....	5K04 GM00093-03
OLSON, WILMA K.....	NUCLEIC ACID CONFORMATION AND PROPERTIES.....	5K04 GM00155-03
PIECZENIK, GEORGE.....	GENOTYPIC SELECTION: SYNTAX AND STRUCTURE.....	1K04 GM00281-01
VALENTINE, JOAN S.....	THE CHEMISTRY AND BIOCHEMISTRY OF SUPEROXIDE ANION.....	5K04 AM00194-02
PISCATAWAY		
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL ZIP CODE 08854		
DOYLE, BARBARA B.....	X-RAY DIFFRACTION OF CONNECTIVE TISSUE.....	5K04 AM00168-02
PRINCETON		
PRINCETON UNIVERSITY ZIP CODE 08540		
KIRSCHNER, MARC W.....	MECHANISM OF MICROTUBULE ASSEMBLY AND MITOSIS.....	5K04 GM00063-03
WORCEL, ABRAHAM.....	STRUCTURE OF PROKARYOTIC AND EUKARYOTIC CHROMOSOMES.....	5K04 GM00101-03
NEW MEXICO		
ALBUQUERQUE		
UNIVERSITY OF NEW MEXICO ZIP CODE 87131		
SCHADE, DAVID S.....	COUNTER REGULATORY HORMONES IN DIABETIC KETOACIDOSIS.....	1K04 AM00260-01
SCHMIDT-NOWARA, WOLFGANG W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70833-04
VANDER JAGT, DAVID L.....	ROLE OF GLYOXALASE AND GLUTATHIONE IN CARCINOGENESIS.....	5K04 CA70939-04
WATERMAN, ROBERT E.....	NORMAL AND CLEFT PALATE DEVELOPMENT IN MAMMALS.....	5K04 DE00013-03
NEW YORK		
ALBANY		
STATE UNIVERSITY OF NEW YORK AT ALBANY ZIP CODE 12222		
SCHOLES, CHARLES P.....	PROBING HEME AND HEMOPROTEINS BY ENDOR.....	1K04 AM00274-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
STRATTON, HOWARD H.....	MARKOV CHAIN PROBABILISTIC FUNCTIONS—CLINICAL MODELING.....	5K04 GM00082-03
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE ZIP CODE 12208		
ABRAHAM, RAJENDER	LYSOSOMAL CHANGES AS MANIFESTATIONS OF TOXIC CELL DAMAGE.....	5K04 ES70607-05
MALIK, ASRAR B	PULMONARY VASCULAR ADJUSTMENTS IN CIRCULATORY COLLAPSE.....	1K04 HL00363-01
BUFFALO		
CHILDREN'S HOSPITAL ZIP CODE 14222		
RATTAZZI, MARIO C	LYSOSOMAL ACID HYDROLASE DEFICIENCIES IN MAN.....	5K04 GM70638-05
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263		
HUI, SEK W	ELECTRON DIFFRACTION OF CANCER CELL MEMBRANES.....	5K04 CA00084-03
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260		
ALTSCHULER, MARTIN D	DIVERGING-BEAM 3-D IMAGE RECONSTRUCTION	1K04 GM00381-01
APICELLA, MICHAEL A	NEISSERIAL ANTIGENS.....	5K04 AI70747-04
EDWARDS, JOHN A	INHERITED HYPOCHROMIC ANEMIAS & FAMILIAL HYPERLIPEMIA.....	5K04 GM70556-05
FOURTNER, CHARLES R	NEURAL CONTROL OF RHYTHMIC BEHAVIOR PATTERNS.....	5K04 NS00141-02
LAGAKOS, STEPHEN W	STATISTICAL PROBLEMS IN CANCER RESEARCH	1K04 CA00357-01
LI, HSUEH-JEI	PROTEIN-DNA INTERACTION AND CHROMATIN STRUCTURE	5K04 GM00262-02
REED, MICHAEL J	ROLF OF CELL-MEDIATED IMMUNITY IN PERIODONTAL DISEASE.....	5K04 DE70859-03
SALTZMAN, ALAN R	PULMONARY ACADEMIC AWARD.....	1K07 HL00342-01
COLD SPRING HARBOR		
COLD SPRING HARBOR LABORATORY ZIP CODE 11724		
BUKHARI, AHMAD I	THE LIFE CYCLE OF MUTATOR PHAGE MU.....	5K04 GM00127-03
ITHACA		
CORNELL UNIVERSITY ZIP CODE 14850		
CORRADINO, ROBERT A	ORGAN CULTURED DUODENUM: CA ABSORPTIVE MECHANISM, ETC.....	5K04 AM00115-03
CYPRESS, RAYMOND H	PARASITIC DISEASES AS A MODEL FOR IMMUNE RESPONSES.....	7K04 AI00301-01
LEVITSKY, DAVID A	NUTRITION AND BEHAVIOR.....	5K04 HD70510-04
ROBERTS, JEFFREY W	GENE CONTROL IN INFECTION & LYSOGENY BY PHAGE LAMBDA.....	5K04 GM00185-02
WRIGHT, LEMUEL D	NEW BIOLOGICALLY ACTIVE COMPOUNDS.....	5K06 AM16612-15
MANHASSET		
NORTH SHORE UNIVERSITY HOSPITAL ZIP CODE 11030		
BIRNBAUM, GARY.....	STUDIES ON MULTIPLE SCLEROSIS.....	5K04 NS00099-03
NEW YORK		
AMERICAN HEALTH FOUNDATION ZIP CODE 10019		
HECHT, STEPHEN S.....	ISOLATION AND CHEMISTRY OF ENVIRONMENTAL CARCINOGENS.....	5K04 CA00124-03
CITY UNIVERSITY OF NEW YORK—COLLEGE OF STATEN ISLAND ST. GEORGE CAMPUS ZIP CODE 10301		
NAIDER, FRED R	PEPTIDE TRANSPORT IN MICROORGANISMS AND MAMMALIAN CELLS.....	5K04 GM00025-03
CITY UNIVERSITY OF NEW YORK—KUNTER COLLEGE ZIP CODE 10021		
CHAPPELL, RICHARD L	STUDY OF NEURAL INTERACTIONS OF THE RETINA.....	5K04 EY00040-02
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029		
AARONSON, ROBERT P.....	STRUCTURE AND FUNCTION OF THE NUCLEAR ENVELOPE.....	5K04 GM00278-02
BENDER, ADAM N	LOCALIZATION OF NICOTINIC ACETYLCHOLINE RECEPTOR.....	1K07 NS00207-01
DESNICK, ROBERT J.....	THERAPY OF METABOLIC DISEASES.....	7K04 AM00451-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
GERBER, MICHAEL A.....	ANTIGENIC STRUCTURE AND MORPHOLOGY OF HB AG.....	5K04 AI00035-03
KEUSCH, GERALD T.....	SHIGELLOSIS: EXOTOXIN, PATHOGENESIS & TOXOID VACCINE.....	5K04 AI70847-04
KIRCHBERGER, MADELEINE A.....	REGULATION OF CARDIAC SR CA20-PUMP BY PROTEIN KINASE.....	5K04 HL00053-03
KRULWICH, TERRY A.....	TRANSPORT IN MEMBRANE VESICLES AND RELATED METABOLISM.....	5K04 GM00020-03
MINDEL, JOEL S.....	OCULAR CHOLINERGIC SYSTEMS.....	5K04 EY70959-03
RAYFIELD, ELLIOT J.....	CARBOHYDRATE METABOLISM-INFECTION INTERRELATIONSHIPS.....	5K04 AM00089-03
REINACH, PETER S.....	COUPLING BETWEEN METABOLISM/IONIC TRANSPORT IN CORNEAS.....	1K07 EY00077-01
SMITH-WRIGHT, MOYRA.....	CONTROL OF IMMUNOGLOBULIN SYNTHESIS IN CELL HYBRIDS.....	1K04 AI00249-01
COLUMBIA UNIVERSITY ZIP CODE 10027		
BENESCH, REINHOLD.....	RELATION BETWEEN STRUCTURE & FUNCTION IN PROTEINS.....	4K06 HL01137-16
BILEZIKIAN, JOHN P.....	THE BETA ADRENERGIC CATECHOLAMINE RECEPTOR.....	1K04 HL00383-01
BRASEL, JO ANNE.....	NUTRITION AND CELL GROWTH.....	5K04 HD70760-04
BRAUN, NORMA M.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00371-01
COLE, PATRICIA E.....	BIOPHYSICAL STUDIES OF GENE EXPRESSION.....	5K04 GM00209-02
FISCHBARG, JORGE.....	WATER & ELECTROLYTE TRANSPORT BY CORNEAL ENDOTHELIUM.....	5K04 EY00006-03
HARVEY, REJANE M.....	CONTROL OF PULMONARY CIRCULATION.....	5K06 HL16603-15
HENDERSON, ANN S.....	HUMAN GENE SITE LOCALIZATION USING HYBRIDIZATION IN SITU.....	5K04 GM00017-03
HOCHBERG, RICHARD B.....	MECHANISMS IN STEROID HORMONE BIOSYNTHESIS.....	5K04 CA00174-02
JAN, KUNG-MING.....	RHEOLOGY OF RBC INTERACTION IN HEALTH AND DISEASE.....	5K04 HL00036-03
KHANNA, SHYAM M.....	PERIPHERAL AUDITORY FUNCTION.....	1K04 NS00292-01
KILCOYNE, MARGARET M.....	ADOLESCENT HYPERTENSION-NATURAL HISTORY AND DYNAMICS.....	5K04 HL00183-02
KOOPMANS, HENRY S.....	THE REGULATION OF FOOD INTAKE AND BODY FAT.....	5K04 AM00198-02
LO GERFO, PAUL.....	IMMUNOLOGY OF BREAST NEOPLASIA IN MICE AND WOMEN.....	5K04 CA00192-02
ROSSO, PEDRO P.....	MATERNAL MALNUTRITION AND TRANSFER OF NUTRIENTS.....	5K04 HD00116-03
THOMPSON, ELIZABETH B.....	MORPHOLOGY OF IDENTIFIED SYNAPSES.....	5K04 NS00122-03
TONNDORF, JUERGEN.....	PHYSIOLOGY OF THE EAR.....	5K06 NS21691-14
WILNER, GEORGE D.....	BASIC MECHANISMS OF INITIATION OF THROMBOSIS.....	5K04 HL70447-05
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021		
GARDNER, DANIEL.....	SYNAPTIC ORGANIZATION OF IDENTIFIED NEURAL NETWORKS.....	5K04 NS00003-03
JAFFE, ERIC A.....	BIOLOGY OF ENDOTHELIAL CELLS.....	5K04 HL00237-02
JONES, THOMAS C.....	MECHANISMS OF MICROBIAL SURVIVAL IN PHAGOCYtic CELLS.....	5K04 AI70754-04
NATHAN, MARC A.....	A MODEL OF SUSTAINED ARTERIAL HYPERTENSION.....	5K04 HL00222-02
PETERSON, RALPH E.....	METABOLISM AND REGULATION OF ADRENOCORTICAL SECRETIONS.....	4K06 AM14241-16
WEKSLER, MARC E.....	LYMPHOBLAST-ASSOCIATED ANTIGENS.....	5K04 CA32102-04
FORDHAM UNIVERSITY ZIP CODE 10458		
WEINREB, STEVEN M.....	TOTAL SYNTHESIS OF THE CYTOCHALASINS.....	5K04 HL00176-03
HOSPITAL FOR SPECIAL SURGERY ZIP CODE 10021		
BOSKEY, ADELE L.....	MECHANISM OF TOOTH & BONE MINERALIZATION.....	5K04 DE00002-03
LANE, JOSEPH M.....	MOLECULAR BIOLOGY OF FRACTURE HEALING.....	1K04 AM00295-01
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021		
ROTTENBERG, DAVID A.....	INVESTIGATION OF CSF DYNAMICS IN MAN.....	1K07 NS00286-01
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467		
COHEN, MICHAEL V.....	EFFECT OF EXERCISE ON CORONARY COLLATERAL FUNCTION.....	1K04 HL00281-01
SURKS, MARTIN I.....	THYROID HORMONE ACTION & CONTROL OF PITUITARY NEOPLASIA.....	5K04 AM19502-05
NEW YORK BLOOD CENTER ZIP CODE 10021		
STEVENS, CLADD E.....	POST-TRANSFUSION HEPATITIS IN CHILDREN.....	1K04 HL00261-01
NEW YORK UNIVERSITY ZIP CODE 10993		
BERNHEIMER, ALAN W.....	STAPHYLOCOCCAL AND STREPTOCOCCAL PROTEINS.....	4K06 AI14198-16
FINKELSTEIN, MARTIN S.....	PLANT LECTIN-INDUCED VIRAL RESISTANCE.....	5K04 AI35028-04
FINLAY, THOMAS H.....	STRUCTURE-FUNCTION STUDIES-OF AHF, VWF AND AT III.....	1K04 HL00277-01
FREEDMAN, MICHAEL L.....	TRANSLATIONAL CONTROL OF HUMAN HEMOGLOBIN SYNTHESIS.....	5K04 AM49358-04
GARDNER, ESTHER P.....	NEURAL MECHANISMS OF CUTANEOUS SPATIAL INTEGRATION.....	5K04 NS00142-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
GUNNISON, ALBERT F.....	MAMMALIAN TOXICOLOGY OF SO ₂ AND SULFITE SALTS.....	5K04 ES00005-03
HOFFSTEIN, SYLVIA T.....	LYSOSOMAL ENZYME RELEASE AND TISSUE INJURY.....	1K04 HL00356-01
KREIBICH, GERT.....	ORGANIZATION AND BIOSYNTHESIS OF ER MEMBRANE PROTEINS.....	5K04 GM00232-02
MAAS, WERNER K.....	ENZYME REPRESSION, PLASMIDS GENETICS, E COLI ENTEROTOXIN.....	5K06 GM15129-14
MEISS, HARRIET K.....	ISOLATION AND ANALYSIS OF TS DNA MUTANTS OF BHK CELLS.....	5K04 CA00020-03
PHILLIPS-QUAGLIATA, JULIA.....	FACTORS AFFECTING IMMUNE RESPONSIVENESS AND TOLERANCE.....	5K04 AI70653-05
TSAI, JIR-SHIONG.....	THYROID HORMONE EFFECTS ON THE HEART.....	5K04 HL00178-03
POLYTECHNIC INSTITUTE OF NEW YORK ZIP CODE 11201		
TOONEY, NANCY M.....	FIBRINOGEN: STRUCTURE AND MOLECULAR INTERACTIONS.....	5K04 HL00062-03
ROCKEFELLER UNIVERSITY ZIP CODE 10021		
ALVARES, ALVITO P.....	TOXICOLOGY OF ENVIRONMENTAL POLLUTANTS.....	5K04 ES00010-03
ANDERSON, KARL E.....	NUTRITION AND DRUG METABOLISM IN MAN.....	1K04 GM00330-01
BEERS, WILLIAM H.....	THE ROLE OF PLASMINOGEN ACTIVATOR IN OVULATION.....	1K04 HD00189-01
CHUA, NAM-HAI.....	STRUCTURE AND BIOGENESIS OF THYLAKOID MEMBRANE.....	5K04 GM00223-02
FISCHETTI, VINCENT A.....	PROPERTIES OF STREPTOCOCCAL M PROTEIN.....	1K04 AI00259-01
GILULA, NORTON B.....	CELL MEMBRANE INTERACTIONS AND COMMUNICATION.....	5K04 HL00110-03
GOLDBERG, ALLAN R.....	RSV FUNCTIONS INVOLVED IN TRANSFORMATION.....	5K04 CA70992-04
LIZARDI, PAUL M.....	BIOGENESIS OF SILK FIBROIN MESSENGER RNA.....	1K04 GM00316-01
SHAPLEY, ROBERT M.....	SPATIAL INTERACTIONS IN VISUAL NEURONS.....	1K04 EY00087-01
WINCHESTER, ROBERT J.....	HUMAN B LYMPHOCYTE ALLOANTIGENS AND SURFACE MAKERS.....	1K04 AI00216-01
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021		
ARTZI, KAREN.....	TERATOCARCINOMA AND EMBRYONAL TUMORS: SURFACE ANTIGENS.....	5K04 CA00276-02
MARQUARDT, HANS W.....	CHEMICALLY INDUCED MALIGNANT TRANSFORMATION IN VITRO.....	5K04 CA00127-03
STEWART, WILLIAM E, II.....	CHARACTERIZATIONS OF INTERFERONS AND THEIR ACTIONS.....	1K04 AI00219-01
WACHTEL, STEPHEN S.....	SEROLOGY OF HY & SK ANTIGENS.....	1K04 HD00171-01
YESHIVA UNIVERSITY ZIP CODE 10033		
BREWER, CURTIS F.....	NMR STUDIES OF HAPTEN-ANTIBODY INTERACTIONS.....	5K04 CA00184-03
DAS, KIRON M.....	PATHOGENESIS OF INFLAMMATORY BOWEL DISEASE.....	5K08 AM00237-02
FEIN, JACK M.....	OXIDATIVE METABOLISM IN CEREBRAL ISCHEMIA.....	5K04 NS00198-02
FROSOLONO, MICHAEL F.....	BIOCHEMISTRY OF PULMONARY SURFACTANT SYSTEM.....	5K04 HL00105-03
GASKIN, FELICIA A.....	NEUROTUBULE, NEUROFILAMENT, & TWISTED TUBULE ASSEMBLY.....	5K04 AG00002-03
HENRY, SUSAN A.....	GENETICS AND DEVELOPMENT OF YEAST MEMBRANE MUTANTS.....	5K04 GM00024-03
HIGHSTEIN, STEPHEN M.....	OCULOMOTOR SYNAPTIC LINKAGE CNS SYNAPTIC TRANSMISSION.....	5K04 EY00003-03
KEISER, HAROLD D.....	IMMUNOCHEMISTRY OF CARTILAGE PROTEOGLYCAN.....	5K04 AM00024-03
LEE, KWANG-SUN.....	PLASMA FREE FATTY ACIDS AND BILIRUBIN TOXICITY.....	5K08 AM00219-02
LEVENSON, STANLEY M.....	PROBLEMS OF SURGICAL METABOLISM.....	5K06 GM14208-16
NOVIKOFF, ALEX B.....	BIOCHEMICAL CYTOLOGY OF NORMAL AND MALIGNANT CELLS.....	5K06 CA14923-16
RUBIN, CHARLES S.....	CYCLIC AMP AND PROTEIN KINASES IN CELL REGULATION.....	5K04 AM00190-02
RUBIN, MERYL S.....	REGULATION OF MEMBRANE PERMEABILITY: MOLECULAR BASIS.....	5K04 AM00010-03
SHAFRITZ, DAVID A.....	PROTEIN SYNTHESIS IN NORMAL AND REGENERATING LIVER.....	5K04 AM00027-03
SOEIRO, RUY.....	RNA IN HUMAN CANCER AND IN FLV INFECTED CELLS.....	5K04 CA70580-05
WITTENBERG, JONATHAN B.....	OXYGEN METABOLISM.....	5K06 HL00733-14
WOLKOFF, ALLAN W.....	HEPATIC ORGANIC ANION TRANSPORT.....	5K08 AM00236-02
ROCHESTER		
UNIVERSITY OF ROCHESTER ZIP CODE 14627		
ABRAHAM, GEORGE N.....	SUPPORT FOR IMPROVEMENT OF ALLERGIC-DISEASE CURRICULUM.....	5K07 AI70834-04
BRAND, JOHN S.....	SEPARATION & CHARACTERIZATION OF ISOLATED BONE CELLS.....	5K04 AM00101-03
COHEN, NICHOLAS.....	LYMPHOCYTE PHYLOGENY—DIVERSE REACTIONS TO H-ANTIGENS.....	5K04 AI70736-04
CONNETT, RICHARD J.....	CONTROL OF ENERGY TURNOVER IN SKELETAL MUSCLE.....	5K04 AM00155-02
EMERSON, ROBERT C.....	IMAGE MOVEMENT: NEURAL PROCESSING MECHANISMS.....	1K04 EY00081-01
FORBES, GILBERT E.....	CHEMICAL STUDIES IN GROWTH AND DEVELOPMENT.....	4K06 HD18454-16
GOROVSKY, MARTIN A.....	ORGANIZATION AND FUNCTION OF THE EUKARYOTIC GENOME.....	5K04 GM00238-02
HALL, WILLIAM J.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70822-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
HINKLE, DAVID C.....	ENZYMATIC MECHANISM OF DNA REPLICATION.....	5K04 GM00221-02
KIRKPATRICK, FRANCIS H, JR.....	RED CELL DEFORMABILITY: ROLE OF SPECTRIN AND ACTIN.....	5K04 HL00146-03
KRUGH, THOMAS R.....	PHYSICOCHEMICAL STUDIES OF INTERCALATION DRUGS.....	5K04 CA00257-02
PRAKASH, LOUISE.....	REPAIR OF DAMAGED DNA AND MUTAGENESIS IN YEAST.....	5K04 GM00004-03
SCHNEIDER, MARTIN F.....	CALCIUM CONCENTRATION CHANGES IN MUSCLE FIBERS.....	5K04 NS00078-03
SEGEL, GEORGE B.....	PHYSIOLOGY AND CELL DIVISION IN NORMAL & LEUKEMIC CELLS.....	5K04 CA00019-03
SHRAGER, PETER G.....	BIOCHEMICAL PROBES OF EXCITABLE MEMBRANES.....	1K04 NS00133-01A1
SLADEK, CELIA D.....	MECHANISMS CONTROLLING VASOPRESSIN SECRETION.....	1K04 NS00259-01
TABER, HARRY W.....	CONTROL OF BACTERIAL MEMBRANE SYNTHESIS.....	5K04 AI70655-04
WAAG, ROBERT C.....	COMPUTER-BASED CARDIAC ULTRASOUND IMAGING.....	5K04 HL00067-03
WILHELM, JAMES M.....	STUDIES OF VIRUS REPLICATION AND TRANSFORMATION.....	5K04 CA00061-03
SARANAC LAKE		
TRUDEAU INSTITUTE ZIP CODE 12983		
CARTER, PHILIP B.....	HOST RESPONSE TO INTESTINAL FLORA.....	5K04 AM00073-03
STONY BROOK		
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794		
DALTON, LARRY R.....	NEW INSTRUMENTAL TECHNIQUES FOR BIOMEDICAL RESEARCH.....	7K04 GM00374-02
DUDOCK, BERNARD S.....	TRNA: SYNTHETASE RECOGNITION; ROLE IN DEVELOPMENT.....	5K04 CA70681-05
SIMON, SANFORD R.....	CONFORMATION STUDIES ON MODIFIED HEMOGLOBINS.....	5K04 HL00088-03
SYRACUSE		
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER ZIP CODE 13210		
HAMERNIK, ROGER P.....	NOISE EXPOSURE—AUDIOMETRIC & ULTRASTRUCTURAL CORRELATES.....	1K04 ES00011-01A1
TROY		
RENSSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181		
KRAUSE, SONJA.....	ELECTRO-OPTIC STUDIES OF BIOPOLYMERS.....	5K04 AM00048-04
VALHALLA		
NEW YORK MEDICAL COLLEGE ZIP CODE 10595		
THEIS, GAIL A.....	MAREK'S DISEASE: AN IMMUNOGENETIC STUDY.....	5K04 CA70812-04
NORTH CAROLINA		
CHAPEL HILL		
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514		
BASEMAN, JOEL B.....	METABOLISM OF TREPONEMES: PATHOGENESIS OF RESP DISEASE.....	5K04 AI00178-02
BRIGGAMAN, ROBERT A.....	EPIDERMAL-DERMAL JUNCTION AND BULLOUS DISEASES.....	5K04 AM00119-03
BUTLER, THOMAS C.....	STUDIES OF DRUG METABOLISM AND OF INTRACELLULAR PH.....	5K06 GM19429-15
COFFEY, JAMES C, JR.....	ACTION OF ANDROGEN ON SUBMAXILLARY GLAND FUNCTION.....	5K04 DE00014-03
COOPER, HERBERT A.....	HEMOPHILIA AND VON WILLEBRAND'S DISEASE.....	5K04 HL00081-03
DREYER, DUANE A.....	ANATOMOPHYSIOLOGICAL BASES OF OROFACIAL SENSATION.....	5K04 DE00011-03
EDGELL, MARSHALL H.....	EUKARYOTIC GENE ORGANIZATION.....	5K04 GM00126-03
HARRISON, JOHN H.....	STUDY OF MALATE DEHYDROGENASE FROM PORCINE HEART.....	5K04 HL70728-04
HUTCHISON, CLYDE A, III.....	PHAGE PHI-X-174: GENETICS AND DNA CHEMISTRY.....	5K04 AI70604-05
KAFER, ENID R.....	NEURAL AND VENTILATORY RESPONSES TO MECHANICAL LOADS.....	5K04 HL00218-02
KUPPER, LAWRENCE L.....	STATISTICAL MODELS FOR ENVIRONMENTAL HEALTH DATA.....	5K04 ES00003-03
KUSY, ROBERT P.....	NOVEL USES OF MATERIALS FOR HEALTH RESEARCH.....	1K04 DE00052-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
NORTH CAROLINA—Continued		
MANN, JOHN D.....	METABOLIC ENCEPHALOPATHY BRAIN BARRIER SYSTEMS—UREMIA.....	5K07 NS00244-02
PIMMEL, RUSSELL L.....	ANALYSIS OF RESPIRATORY MECHANICS AND SOUNDS.....	5K04 HL00207-02
POWELL, DON W.....	MECHANISM OF INTESTINAL SECRETION.....	5K04 AM70454-05
RHEINGOLD, HARRIET L.....	SOCIAL AND EXPLORATORY BEHAVIOR IN THE HUMAN INFANT.....	5K06 HD23620-14
SOBSEY, MARK D.....	ENTERIC VIRUS CONTAMINATION OF WATER AND SHELLFISH.....	1K04 ES00026-01
VAN WYK, JUDSON J.....	ENDOCRINOLOGIC AND METABOLIC PROBLEMS IN CHILDREN.....	4K06 AM14115-16
DURHAM		
DUKE UNIVERSITY ZIP CODE 27706		
ADELMAN, MARK R.....	BIOLOGICAL MOTILITY AND RIBOSOME-MEMBRANE INTERACTION.....	5K04 GM70581-05
AMOS, D BERNARD.....	FUNDAMENTALS OF THE MECHANISMS OF HOMOGRAFT IMMUNITY.....	4K06 AI18399-16
BIGNER, DARELL D.....	NEUROPATHOLOGY—IMMUNOLOGY AND VIROLOGY.....	5K07 NS11063-04
BUCKLEY, REBECCA H.....	ALLERGIC DISEASES ACADEMIC AWARD.....	5K07 AI70830-04
CARTMILL, MATTHEW.....	COMPARATIVE ANATOMY OF ANTERIOR CAROTID ARTERY.....	5K04 HD00083-03
CORLESS, JOSEPH M.....	X-RAY, EM AND FREEZE-FRACTURE STUDIES ON DISK MEMBRANES.....	5K04 EY00016-02
COSTELLO, MARTIN J, III.....	X-RAY AND FREEZE-FRACTURE STUDIES ON DISK MEMBRANES.....	5K07 EY00035-03
EVANS, EVAN A.....	MATERIAL BEHAVIOR AND VIABILITY OF PLASMA MEMBRANES.....	5K04 HL00063-03
GERMAN, VICTOR F.....	PATHOGENESIS OF ACUTE AND CHRONIC CHEMICAL PNEUMONITIS.....	1K08 HL00309-01
GOLDSMITH, LOWELL A.....	STRUCTURAL PROTEINS IN GENETIC DEFECTS OF EPIDERMIS.....	5K04 AM00008-03
HACKEL, DONALD B.....	PATHOLOGIC, PHYSIOLOGIC, AND METABOLIC HEART STUDIES.....	4K06 HL14188-16
HANDWERGER, STUART.....	THE CHEMISTRY AND PHYSIOLOGY OF PLACENTAL LACTOGEN.....	5K04 HD00065-03
HEYMAN, ALBERT.....	CIRCULATORY CHANGES IN CEREBROVASCULAR DISEASE.....	5K06 NS16677-15
HYLANDER, WILLIAM L.....	BIOMECHANICS OF THE PRIMATE CRANIOFACIAL REGION.....	5K04 DE00027-02
KIM, SUNG-HOU.....	CRYSTALLOGRAPHIC STUDIES OF TRNA-'LIGAND' COMPLEXES.....	1K04 CA00352-01
LEIS, JONATHAN P.....	MECHANISM OF RNA TUMOR VIRUS REPLICATION.....	5K04 CA70876-04
PORTER, NED A.....	LIPID OXIDATION IN PG SYNTHESIS AND MEMBRANE DAMAGE.....	1K04 HL00324-01
RICHARDSON, DAVID C.....	X-RAY CRYSTALLOGRAPHY OF SUPEROXIDE DISMUTASES.....	5K04 GM00041-03
SCHMIDT-NIELSEN, KNUT.....	COMP. PHYSIOLOGY OF HEAT, WATER METABOLISM, & EXCRETION.....	5K06 GM21522-14
SCOTT, DAVID W.....	MANIPULATION OF THE IMMUNE RESPONSE AND TOLERANCE.....	5K04 AI00093-03
STRAUSS, HAROLD C.....	CHARACTERIZATION OF CARDIAC PACEMAKER ACTIVITY.....	1K04 HL00268-01
TANFORD, CHARLES.....	THE STRUCTURE OF PROTEINS.....	4K06 GM14222-16
ZWEERINK, HENDRIK J.....	MORPHOGENESIS OF REOVIRUS AND THE AGENT OF SSPE.....	5K04 NS00086-03
WINSTON-SALEM		
WAKE FOREST UNIVERSITY ZIP CODE 27109		
MC CALL, CHARLES E.....	FUNCTIONAL & METABOLIC PROPERTIES OF TOXIC NEUTROPHILS.....	5K04 AI70767-04
WAITE, MOSELEY.....	METABOLISM OF LIVER MEMBRANE PHOSPHOLIPIDS.....	5K04 AM17392-05
OHIO		
CINCINNATI		
UNIVERSITY OF CINCINNATI ZIP CODE 45221		
ARMENTROUT, RICHARD W.....	SELECTIVE REPLICATION OF PARVOVIRUS IN TUMOR CELLS.....	5K04 CA00134-03
CORBIN, RICHARD P.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70068-04
KNOWLES, HARVEY C, JR.....	CARBOHYDRATES & MINERAL METABOLISM GENERAL STUDIES.....	4K06 AM02364-16
CLEVELAND		
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106		
ALLEY, KEITH E.....	ONTOGENESIS OF BRAIN STEM VISUO-MOTOR SYSTEMS.....	5K04 NS00147-02
BLACKWELL, JOHN.....	STRUCTURE AND INTERACTIONS OF MACROMOLECULES.....	5K04 AM70642-05
CHISOLM, GUY M, III.....	MACROMOLECULAR TRANSPORT IN ARTERIAL TISSUE.....	1K04 HL00359-01
CULP, LLOYD A.....	SURFACE PROPERTIES OF CANCER AND REVERTANT CELLS.....	5K04 CA70709-04
GOLDTHWAIT, DAVID A.....	NUCLEIC ACIDS STUDIES.....	5K06 GM21444-14

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
OHIO—Continued		
HARRIS, JOHN W.....	A STUDY OF NUTRITIONAL AND HEMOLYTIC ANEMIAS.....	4K06 AM14370-16
HIRSCHMANN, HANS.....	CHEMISTRY AND METABOLISM OF STEROIDS.....	4K06 AM14367-16
HOPFER, ULRICH.....	INTESTINAL NUTRIENT AND ELECTROLYTE TRANSPORT.....	5K04 AM00199-02
COLUMBUS		
OHIO STATE UNIVERSITY ZIP CODE 43210		
ALTMAN, MICHAEL.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00128-03
COPELAND, JAMES C.....	CHROMOSOME: REGULATION, ORGANIZATION & FUNCTION.....	5K04 GM70300-05
KLAPPER, MICHAEL H.....	PROTEIN STRUCTURE-FUNCTION, PHEROMONES IN LOWER PLANTS.....	7K04 GM00428-04
MARZLUF, GEORGE A.....	GENE EXPRESSION & ENZYME SYNTHESIS IN NEUROSPORA.....	7K04 GM00431-03
ROYER, GARFIELD P.....	ENZYME IMMOBILIZATION FOR CONFORMATION CHANGE DETECTION.....	7K04 GM00430-03
SCOTT, ROY A, III.....	MONTE CARLO CALCULATIONS OF POLYPEPTIDE AND NUCLEIC ACID.....	7K04 GM00429-04
KENT		
KENT STATE UNIVERSITY ZIP CODE 44242		
ROE, BRUCE A.....	THE ROLE OF MODIFIED NUCLEOTIDES IN HUMAN TRNA.....	5K04 GM00178-02
TOLEDO		
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614		
HORTON, FRANK O, III.....	PULMONARY DISEASES.....	5K08 HL00244-02
OKLAHOMA		
NORMAN		
UNIVERSITY OF OKLAHOMA ZIP CODE 73069		
FUNG, BING-MAN.....	THE STATE OF WATER IN BIOLOGICAL SYSTEMS.....	5K04 AM00058-03
OKLAHOMA CITY		
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190		
COALSON, JACQUELINE J.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00250-02
OREGON		
CORVALLIS		
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY ZIP CODE 97331		
CARDENAS, MARY J.....	PYRUVATE AND PROTEIN KINASES IN METABOLIC REGULATION.....	1K04 AM00191-01A1
SCHAUP, HENRY W.....	MACROMOLECULAR INTERACTIONS WITHIN THE RIBOSOME.....	5K04 GM00073-03
WHITE, JAMES D.....	SYNTHESIS OF MACROLIDE ANTIBIOTICS.....	5K04 AI00180-02
EUGENE		
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON ZIP CODE 97403		
HERSKOWITZ, IRA.....	GENE REGULATORY MECHANISMS IN YEAST AND PHAGE LAMBDA.....	5K04 AI00163-02
MATTHEWS, BRIAN W.....	STRUCTURE AND THERMOSTABILITY OF PROTEINS.....	5K04 GM70585-05
POSTLETHWAIT, JOHN H.....	GENETIC/HORMONE CONTROL OF OOGENESIS & MORPHOGENESIS.....	5K04 GM00119-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
OREGON—Continued		
PORTLAND		
GOOD SAMARITAN HOSPITAL AND MEDICAL CENTER ZIP CODE 97210		
NASHNER, LEWIS M	STUDIES ON CONTROL OF HUMAN POSTURE	5K04 NS00148-02
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201		
BISSONNETTE, JOHN M	MECHANISMS OF PLACENTAL TRANSFER	5K04 HD00139-02
BUIST, A SONIA	SMOKING AND CHRONIC AIRWAYS OBSTRUCTION	5K04 HL00115-03
BUXMAN, MELODIE M	EPIDERMAL TRANSGLUTAMINASE—ROLE IN KERATINIZATION	1K08 AM00391-01
FAUST, CHARLES H, JR	GENE EXPRESSION IN NORMAL AND MALIGNANT ANIMAL CELLS	5K04 CA00117-03
GREER, MONTE A	NEUROENDOCRINOLOGY & THYROID PHYSIOLOGY	4K06 AM02122-16
HOLDEN, WILLIAM E	MEDICAL SCHOOL PULMONARY TRAINING AWARD	5K08 HL00304-02
KABAT, DAVID	CONTROL OF GENE EXPRESSION IN DIFFERENTIATING CELLS	5K04 CA00264-02
MORSE, STEPHEN A	PHYSIOLOGY OF NEISSERIA GONORRHOEAE	5K04 AI00140-02
WETLAUF, HARRY M	METABOLIC CHANGES IN THE PREIMPLANTATION EMBRYO	5K04 HD00020-03
WELEBER, RICHARD G	LINKAGE STUDIES IN OCULAR DISEASE	5K07 EY00022-03
PENNSYLVANIA		
HERSHEY		
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033		
BARTLETT, GERALD L	ANTIGENIC STRENGTH OF NONVIRAL TUMORS	5K04 CA70948-04
BULLOCK, LESLIE P	ANIMAL MODELS OF GENETIC REPRODUCTIVE ABNORMALITIES	5K04 HD00137-02
LADDA, ROGER L	GROWTH FACTORS: CONTROL OF ANIMAL CELL PROLIFERATION	1K04 AG00006-01
MC CALLISTER, LAWRENCE P	ULTRASTRUCTURAL CORRELATES OF MYOCARDIAL ISCHEMIA	5K04 HL00204-02
PAGE, ROBERT B	VASCULAR/VENTRICULAR RELATIONS OF THE MEDIAN EMINENCE	5K07 NS00179-02
RANNELS, D EUGENE, JR	REGULATION OF PROTEIN TURNOVER IN LUNG TISSUE	1K04 HL00294-01
TENSER, RICHARD B	LATENT VIRUS INFECTIONS OF THE TRIGEMINAL GANGLION	1K07 NS00248-01
VAN BUSKIRK, E MICHAEL	THE VERTEBRATE EYE: STUDIES IN AQUEOUS OUTFLOW	5K04 EY00051-02
PHILADELPHIA		
CHILDREN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104		
COHN, ROBERT M	METABOLIC DERANGEMENTS FROM GALACTOSE TOXICITY	5K04 HD00008-03
PARKS, JOHN S	HORMONAL INTERACTIONS WITH CULTURED HUMAN LYMPHOCYTES	5K04 AM00005-03
SHAPIRO, BERNARD H	PERINATAL IMPRINTING OF BRAIN AND SEXUAL FUNCTION	5K04 HD00095-02
HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102		
KALIA, MADHU	CENTRAL MECHANISMS IN PULMONARY REFLEXES	5K04 HL00103-03
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111		
GUPTA, RAJ K	SPECTRAL STUDIES OF HEME- AND METAL PROTEINS	5K04 AM00231-02
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129		
CAPUZZI, DAVID M	LIPID AND LIPOPROTEIN METABOLISM IN LIVER CELLS	7K04 HL00333-02
CULPEPPER, ROBERT L	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD	1K08 HL00349-01
LEVINE, RHEA J	STUDY OF LIMULUS MUSCLE	5K04 NS70476-04
TEMPLE UNIVERSITY ZIP CODE 19122		
COHEN, ALLEN B	BIOCHEMICAL MECHANISM OF ALPHA-1-ANTITRYPSIN	5K04 HL00153-05
ERNST, STEPHEN A	CYTOCHEMICAL LOCALIZATION OF TRANSPORT ATPASE	5K04 GM00072-03
KIRBY, EDWARD P	STRUCTURE AND FUNCTION OF FACTORS VIII AND XII	1K04 HL00275-01
TRUJEX, RAYMOND C	COMPARATIVE CARDIOLOGY	5K06 GM14092-16
WALSH, PETER N	PLATELETS IN COAGULATION, HEMOSTASIS AND THROMBOSIS	5K04 HL70545-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
PENNSYLVANIA—Continued		
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107		
LIBERTI, PAUL A.....	PHYSICAL BIOCHEMISTRY OF ANTIGEN-ANTIBODY INTERACTIONS.....	5K04 AI70731-04
ROVETTO, MICHAEL J.....	MYOCARDIAL ENERGY AND ADENINE NUCLEOTIDE METABOLISM.....	1K04 HL00289-01
WESSON, LAURENCE G.....	RENAL RESEARCH.....	4K06 HL15447-16
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104		
CLARK, CHARLES C.....	STRUCTURE AND BIOSYNTHESIS OF CONNECTIVE TISSUE.....	7K04 AM00360-01
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174		
AGUS, ZALMAN S.....	REGULATION OF RENAL CALCIUM AND PHOSPHATE TRANSPORT.....	1K04 AM00258-01
BARCHI, ROBERT L.....	STRUCTURE AND FUNCTION OF MUSCLE MEMBRANE ION CHANNELS.....	1K04 NS00112-01A1
COHEN, SIDNEY.....	NEUROHUMORAL CONTROL OF GASTROINTESTINAL MOTILITY.....	5K04 AM70576-05
CRANDALL, EDWARD D.....	GAS EXCHANGE AND PH: INTERACTIONS AND IMPORTANCE.....	5K04 HL00134-03
DANIELE, RONALD P.....	STRUCTURE AND FUNCTION OF THE LUNG'S IMMUNE SYSTEM.....	5K04 HL00210-02
DONAWICK, WILLIAM J.....	HEART TRANSPLANTATION & ANTILYMPHOCYTIC SERUM TREATMENT.....	5K04 HL70589-05
DUTTON, PETER L.....	MEMBRANE BIOENERGETICS BY SPECTROPHOTOMETRY.....	5K04 GM70771-04
EPPEL, GISELA M.....	PHEROMONES IN PRIMATE REPRODUCTION AND SOCIAL BEHAVIOR.....	5K04 HD70575-04
EPSTEIN, PAUL E.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00354-01
GIL, JOAN.....	PINOCYTOTIC VESICLES AND PULMONARY EDEMA.....	1K04 HL00436-01
HASSELBACHER, PETER.....	EFFECT OF PROTEIN-CRYSTAL INTERACTIONS IN ARTHRITIS.....	1K08 AM00385-01
HENLE, WERNER.....	ANTIGENIC STRUCTURE HOST-VIRUS INTERACTIONS.....	5K06 AI22683-14
HOGUE-ANGELETTI, RUTH A.....	STUDIES ON PROTEINS OF CATECHOLAMINE STORAGE VESICLES.....	1K04 NS00201-01
KARUSH, FRED.....	IMMUNOLOGY AND IMMUNOCHEMISTRY.....	4K06 AI14012-16
KIM, SEUNG U.....	EXPERIMENTAL NEUROPATHOLOGY IN TISSUE CULTURE.....	5K04 NS00151-02
LEIGH, JOHN S, JR.....	KINETICS AND STRUCTURE IN BIOLOGICAL MEMBRANES.....	5K04 GM00142-03
LU, PONZY.....	MECHANISM OF GENE REGULATION.....	1K04 GM00354-01
MILLER, MICHAEL F.....	ORAL DISEASE LONGITUDINAL STUDY/RECURRENT APHTHOUS ULCER.....	5K04 DE00025-02
OWEN, CHARLES S.....	BIOPHYSICAL PROBES OF IMMUNE RESPONSE & HEMEPROTEINS.....	1K04 GM00318-01
PALMER, LARRY A.....	FUNCTIONAL CONNECTIVITY IN VISUAL CORTEX.....	1K04 EY00060-01
SELZER, MICHAEL E.....	SYNAPTIC TRANSMISSION IN THE CENTRAL NERVOUS SYSTEM.....	5K07 NS11083-03
STERLING, PETER.....	MICROCIRCUITRY OF THE VISUAL SYSTEM.....	1K04 EY00080-01
TROTMAN, BRUCE W.....	UNCONJUGATED HYPERBILIRUBINEMIA IN A MODEL.....	5K08 AM00235-02
VANDERKOOI, JANE M.....	LATERAL DIFFUSION IN MEMBRANES.....	5K04 GM00053-03
WEBER, KARL T.....	MECHANICS OF RIGHT AND LEFT VENTRICULAR CONTRACTION.....	5K04 HL00187-02
WILLS EYE HOSPITAL ZIP CODE 19130		
FELBERG, NORMAN T.....	IMMUNOLOGIC INVESTIGATION OF OCULAR MALIGNANCIES.....	5K07 EY00032-03
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104		
BORUN, THADDEUS W.....	HISTONE M-RNA TRANSCRIPTION/TRANSITION MECHANISM CONTROL.....	5K04 CA00088-03
CROCE, CARLO M.....	GENETICS OF CELL TRANSFORMATION.....	5K04 CA00143-03
KNOWLES, BARBARA B.....	IMMUNOMANIPULATION OF SOMATIC CELL HYBRIDS.....	5K04 AI00053-03
KRITCHEVSKY, DAVID.....	CHOLESTEROL METABOLISM.....	4K06 HL00734-16
PITTSBURGH		
MONTEFIORE HOSPITAL ZIP CODE 15213		
FROMM, HANS.....	BILE ACID METABOLISM IN GALLSTONE DISEASE.....	1K04 AM00290-01
UNIVERSITY OF PITTSBURGH ZIP CODE 15260		
BLAINE, EDWARD H.....	RELATION OF RENAL ENDOCRINE FUNCTION TO HYPERTENSION.....	5K04 HL00003-03
COOPER, TERRANCE G.....	SYNTHESIS AND ASSEMBLY OF ENZYMES IN EUKARYOTES.....	5K04 GM00091-03
CURTHOYS, NORMAN P.....	GLUTAMINASE ISOENZYMES AND RAT RENAL AMMONIAGENESIS.....	5K04 AM00068-02
FRIZZELL, RAYMOND A.....	ION TRANSPORT BY MAMMALIAN COLON, IN VITRO.....	5K04 AM00173-02
GLEW, ROBERT H.....	METABOLISM OF MAMMALIAN GLYCOPROTEINS AND GLYCOLIPIDS.....	5K04 AM00036-03
HENDRIX, ROGER W.....	ASSEMBLY AND STRUCTURE OF BACTERIOPHAGE LAMBDA HEADS.....	5K04 AI00023-03
ROBINSON, ALAN G.....	PHYSIOLOGY OF NEUROPHYSIN SECRETION.....	5K04 AM00093-03

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
PENNSYLVANIA—Continued		
UNIVERSITY PARK		
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802		
KEITH, ALEC D.....	BIOLOGICAL MEMBRANES: SPIN LABELS AND LIPID MUTANTS.....	5K04 GM70593-05
PHILLIPS, WINFRED M.....	RHEOLOGY OF BIOLOGICAL FLUIDS, BLOOD FLOW.....	5K04 HL00085-03
RHODE ISLAND		
PROVIDENCE		
BROWN UNIVERSITY ZIP CODE D2912		
BUTCHER, FRED R.....	CYCLIC NUCLEOTIDES IN PAROTID GLAND METABOLISM.....	5K04 AM00032-03
CSERR, HELEN F.....	PHYLOGENY AND ONTOGENY OF BRAIN-BARRIER SYSTEMS.....	5K04 NS70500-05
CZECH, MICHAEL P.....	INSULIN ACTION ON FAT CELL METABOLISM.....	5K04 AM00249-02
DAHLBERG, ALBERT E.....	RIBOSOME STRUCTURE AND FUNCTION.....	5K04 GM00044-03
GERBI, SUSAN A.....	FINE STRUCTURE OF RRNA.....	5K04 GM00036-03
LUSK, JOAN E.....	MEMBRANE PERMEABILITY AND TRANSPORT.....	5K04 GM00257-02
SOUTH CAROLINA		
CHARLESTON		
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401		
KARAM, JIM D.....	DNA REPLICATION AND REPAIR OF T4 PHAGE.....	5K04 GM70725-04
WISE, WILLIAM C.....	AMINO ACID TRANSPORT IN NORMAL AND NEOPLASTIC CELLS.....	5K04 CA70412-04
SOUTH DAKOTA		
VERMILLION		
UNIVERSITY OF SOUTH DAKOTA ZIP CODE 57069		
BRADY, FRANK O.....	METALLOENZYMES: IN VIVO REGULATION IN RAT ORGANS.....	5K04 ES00022-02
TENNESSEE		
KNOXVILLE		
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916		
BECKER, JEFFREY M.....	PEPTIDE TRANSPORT IN YEAST AND TISSUE CULTURE.....	5K04 GM00094-03
FUHR, JOSEPH E.....	CONTROL OF PROTEIN BIOSYNTHESIS.....	5K04 AM00085-02
MEMPHIS		
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101		
PHILLIPS, DAVID R.....	PLATELET MEMBRANE PROTEINS IN AGGREGATION.....	5K04 HL00080-03
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163		
BURGHEN, GEORGE A.....	STUDY OF INSULIN AND PROINSULIN IN JUVENILE DIABETES.....	5K04 HD70462-04
DUCKWORTH, WILLIAM C.....	MECHANISMS OF INSULIN AND GLUCAGON DEGRADATION.....	5K04 AM00187-02
MALIK, KAFAIT U.....	ANGIOTENSIN-PROSTAGLANDINS-ADRENERGIC INTERACTIONS.....	5K04 HL00142-03
NASILETTI, ALBERTO.....	VASOACTIVE HORMONES AND BLOOD PRESSURE REGULATION.....	5K04 HL00163-03

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
TENNESSEE—Continued		
REEVES, ROBERT H.....	THE BIOLOGICAL SIGNIFICANCE OF TRNA MODIFICATIONS.....	7K04 GM00420-03
VAN MIDDLESWORTH, LESTER V.....	IODINE METABOLISM AND THE BASIC CAUSE OF GOTTER.....	4K06 AM00040-16
NASHVILLE		
MEHARRY MEDICAL COLLEGE ZIP CODE 37208		
RUSSELL, JAMES D.....	KELOIDS: AN IN VITRO MODEL OF TUMOR GROWTH REGULATION.....	5K04 CA00122-03
STINSON, JOSEPH M.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00341-01
VANDERBILT UNIVERSITY ZIP CODE 37240		
CASAGRANDE, VIVIEN A.....	EFFECTS OF VISUAL DEPRIVATION IN PRIMATES.....	1K07 EY00061-01
FRANCIS, SHARRON H.....	METABOLIC REGULATION IN NORMAL & DYSTROPHIC MUSCLE.....	5K04 AM00205-02
MANN, GEORGE V.....	MECHANISM OF ATHEROGENESIS.....	4K06 HL08288-16
PUETT, J DAVID.....	GONADOTROPINS: STRUCTURE, METABOLISM, AND MECHANISMS.....	5K04 AM00055-03
ROELOFS, ROBERT I.....	A STUDY OF HUMAN SKELETAL MUSCLE IN TISSUE CULTURE.....	5K04 NS70793-04
STOLTZFUS, CONRAD M.....	SUBUNIT STRUCTURE AND FUNCTION OF ONCORNAVIRUS RNA.....	5K04 CA00205-02
WATSON, JACK T.....	ANALYTICAL TECHNIQUES FOR INFLAMMATION-DRUG INTERACTIONS.....	5K04 GM50290-05
TEXAS		
AUSTIN		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712		
BIESELE, JOHN J.....	CHROMOSOMES AND MITOSIS IN HEALTH AND DISEASE.....	4K06 CA18366-16
BITTNER, GEORGE D.....	REGENERATION IN INVERTEBRATE NERVOUS SYSTEMS.....	5K04 NS00070-03
MYERS, JACK E.....	PHYSIOLOGY AND BIOCHEMISTRY OF ALGAE.....	4K06 GM18373-16
PEREZ-POLO, JOSE R.....	NEURAL DIFFERENTIATION: NERVE GROWTH FACTOR PROTEIN.....	1K04 NS00213-01
COLLEGE STATION		
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 77843		
MATIS, JAMES H.....	STOCH COMP ANAL: MODELLING, ESTIMATION, APPLICATION.....	5K04 GM00033-03
DALLAS		
BISHOP COLLEGE ZIP CODE 75241		
FOWLKS, EDISON R.....	STRUCTURE-FUNCTION OF MULTIPLE COMPONENT VIRAL RNA.....	5K04 AI00175-02
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS ZIP CODE 75235		
COHEN, PHILIP L.....	IN VITRO STUDIES OF B LYMPHOCYTE FUNCTION.....	1K08 AM00378-01
GILLIAN, JAMES N.....	IMMUNOLOGIC INVESTIGATION OF SLE SKIN DISEASE.....	1K04 AM00278-01
JASIN, HUGO E.....	CHRONIC INFLAMMATION PRODUCED BY IMMUNE COMPLEXES.....	5K04 AM70297-05
MC GARRY, J DENIS.....	REGULATION AND TREATMENT OF DIABETIC KETOACIDOSIS.....	5K04 AM70763-04
MC KELVY, JEFFERY F.....	CONTROL OF HYPOTHALAMIC RELEASING FACTOR METABOLISM.....	1K04 AM00331-01
MOSS, ROBERT L.....	NEURAL CONTROL OF HORMONE RELEASE AND SEX BEHAVIOR.....	5K04 HD00146-02
PROUGH, RUSSELL A.....	METABOLISM OF FOREIGN COMPOUNDS IN LIVER AND LUNG.....	5K04 HL00255-02
TAUROG, ALVIN M.....	BIOSYNTHESIS AND MECHANISM OF ACTION OF THYROXINE.....	5K06 AM15276-15
ZIFF, MORRIS.....	CLINICAL AND BASIC IMMUNOLOGY.....	4K06 AM14155-16
DENTON		
NORTH TEXAS STATE UNIVERSITY ZIP CODE 76203		
HARRIS, BEN G.....	PROTEIN STRUCTURE AND FUNCTION IN PARASITIC HELMINTHS.....	5K04 AI00057-02

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
TEXAS—Continued		
GALVESTON		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON ZIP CODE 77550		
BLANKENSHIP, JAMES E.....	INTEGRATIVE MECHANISMS IN APLYSIA.....	5K04 NS70613-05
FULLER, GERALD M.....	REGULATION OF FIBRINOGEN BIOSYNTHESIS.....	5K04 HL00162-03
GRANT, J ANDREW.....	COMPLEMENT-INDUCED RELEASE OF INFLAMMATORY MEDIATORS.....	5K07 AI00110-03
REMMERS, JOHN E.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00131-03
HOUSTON		
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025		
AUNE, KIRK C.....	INTERPRETATIONS OF MACROMOLECULAR INTERACTIONS.....	5K04 GM00071-03
BARNES, EUGENE M, JR.....	MECHANISMS OF TRANSPORT IN MEMBRANE VESICLES.....	5K04 AM00052-03
GOLDSTEIN, MARGARET A.....	Z BANDS, MICROTUBULES AND RELATED HEART STRUCTURES.....	1K04 HL00321-01
HARTLEY, CRAIG J.....	CARDIOVASC APPLICATIONS OF PULSED DOPPLER TECHNIQUES.....	5K04 HL00181-02
HOLLYFIELD, JOE G.....	DEVELOPMENT OF RETINA AND PIGMENT EPITHELIUM.....	7K04 EY00112-03
KIT, SAUL.....	BIOCHEMICAL ASPECTS OF VIROLOGY.....	5K06 AI02352-15
LAM, DONINIC M.....	SYNAPTIC CHEMISTRY IN THE VISUAL SYSTEM.....	1K04 EY00123-01
MARTIN, R RUSSELL.....	INFLAMMATION: LEUKOCYTES & MACROPHAGES IN HOST DEFENSE.....	5K04 AI70335-04
MEANS, ANTHONY R.....	REPRODUCTIVE TISSUE: HORMONES AND DEVELOPMENT.....	5K04 HD30939-05
PECK, ERNEST J, JR.....	NEUROENDOCRINE CONTROL OF REPRODUCTION.....	5K04 HD00022-02
RICH, ROBERT R.....	REGULATORY FUNCTIONS OF ACTIVATED T-LYMPHOCYTES.....	5K04 AI00006-03
ROSEN, JEFFREY M.....	HORMONAL REGULATION OF BREAST CANCER.....	5K04 CA00154-02
TRENTIN, JOHN J.....	TISSUE TRANSPLANTATION, RADIOBIOLOGY, AND CANCER BIOLOGY.....	4K06 CA14219-16
WILSON, JOHN H.....	ONCOGENIC MECHANISMS: SV40 AND HOST GENETIC ANALYSIS.....	5K04 CA00058-03
TEXAS HEART INSTITUTE ZIP CODE 77025		
REDDY, YERRADHODDI S.....	ROLE OF PHOSPHORYLATION IN MYOCARDIAL CONTRACTION.....	1K04 HL00337-01
UNIVERSITY OF HOUSTON ZIP CODE 77004		
HARWERTH, RONALD S.....	STUDIES OF BINOCULAR VISION.....	5K07 EY00052-02
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025		
CASTRO, GILBERT A.....	IMMUNOLOGY & PATHOPHYSIOLOGY OF INTESTINAL PARASITISM.....	5K04 AI00087-03
KAGELER, WOODY V.....	MEDICAL SCHOOL PULMONARY FACULTY ACADEMIC AWARD.....	1K08 HL00351-01
MILLER, WARREN C.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00245-02
RAY, TUSHAR K.....	SECRETION FROM GASTRIC MUCOSA.....	1K04 AM00312-01
REDBURN, DIANNA A.....	CHARACTERIZATION OF NEUROTRANSMITTERS IN RETINA.....	1K04 EY00088-01
SANBORN, BARBARA M.....	MOLECULAR ACTIONS OF STEROID AND POLYPEPTIDE HORMONES.....	5K04 HD00126-02
STANCEL, GEORGE M.....	ESTROGEN CONTROL OF UTERUS AND PITUITARY FUNCTION.....	5K04 HD00099-02
WEISS, KENNETH M.....	EVOLUTIONARY MODELS OF HUMAN HEALTH PATTERNS.....	5K04 GM00230-02
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025		
ANDERSON, JAMES H.....	NEW AND IMPROVED TECHNIQUES OF INTERVENTION RADIOLOGY.....	5K04 CA00083-03
GUTTERMAN, JORDAN U.....	TUMOR IMMUNITY AND IMMUNOTHERAPY OF HUMAN CANCER.....	5K04 CA71007-04
MAVLIGIT, GIORA M.....	IMMUNOLOGICAL APPROACHES TO CANCER THERAPY.....	5K04 CA00130-03
MURGOLA, EMANUEL J.....	MISSENSE SUPPRESSION AND MUTATIONALLY ALTERED TRNAS.....	5K04 GM00047-03
SUTOW, WATARU W.....	CHEMOTHERAPY IN MALIGNANT DISEASES IN CHILDREN.....	5K06 CA02501-15
LUBBOCK		
TEXAS TECH UNIVERSITY ZIP CODE 79409		
MARKWALD, ROGER R.....	MATRICAL MACROMOLECULAR EFFECTS ON CARDIOGENESIS.....	5K04 HL00228-02
SAN ANTONIO		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284		
KOLB, WILLIAM P.....	CANCER CELL DESTRUCTION B LYMPHOCYTES AND COMPLEMENT.....	7K04 CA00412-04
PETERSON, DONALD F.....	BEAT-TO-BEAT REGULATION OF THE CIRCULATION.....	5K04 HL00230-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
TEXAS—Continued		
SHERIDAN, PETER J.....	ANDROGEN RECEPTORS IN THE BRAIN.....	5K04 NS00164-02
SMITH, JAN D.....	PULMONARY ACADEMIC AWARD.....	1K07 HL00384-01
UTAH		
SALT LAKE CITY		
LATTER-DAY SAINTS HOSPITAL SYSTEM—LATTER-DAY SAINTS HOSPITAL ZIP CODE 84143		
WARNER, HOMER R.....	MATHEMATICAL ANALYSIS OF THE CIRCULATION.....	4K06 HL18344-16
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112		
CASJENS, SHERWOOD R.....	BACTERIOPHAGE P22 ASSEMBLY AND ITS GENETIC CONTROL.....	5K04 GM00237-02
GRAY, WILLIAM R.....	STRUCTURE-FUNCTION RELATIONS IN ARTERIAL ELASTIN.....	5K04 GM70647-05
HUANG, WAI M.....	STUDIES ON T4 DNA REPLICATION.....	5K04 GM00148-03
JOHANSON, CONRAD E.....	ONTOGENY OF HOMEOSTATIC SYSTEMS IN CHOROID PLEXUS.....	1K04 NS00302-01
KIM, SUNG-WAN.....	PLATELET INTERACTIONS/INTERFACE INDUCED THROMBOSIS.....	1K04 HL00272-01
MARCUS, STANLEY.....	RESISTANCE TO INFECTIOUS AND NEOPLASTIC DISEASE.....	5K06 AI14924-16
MILLAR, CONNIE K.....	NEURAL EFFECTS OF HEART ELECTROPHYSIOLOGY & HEMODYNAMICS.....	5K04 HL70644-05
NELSON, JAMES A.....	FACTORS INFLUENCING HEPATIC CONTRAST MEDIA KINETICS.....	5K04 GM00164-02
PARMA, DAVID H.....	GENETICS OF CHROMOSOMAL ABERRATIONS IN PHAGE T4D.....	5K04 AI00024-03
POULTER, C DALE.....	SUBSTRATE ANALOGS FOR TERPENE CONDENSATION REACTIONS.....	5K04 HL00084-03
ROTI ROTI, JOSEPH L.....	MITOTIC DELAY MECHANISMS AND CELL KINETICS MODELS.....	5K04 CA00234-02
TYLER, FRANK H.....	MUSCLE, STEROID, AND CARBOHYDRATE METABOLISM.....	4K06 AM14913-16
WILLIAMS, ROGER R.....	GENETICS AND EPIDEMIOLOGY OF CORONARY ARTERY DISEASES.....	1K04 HL00379-01
WOODBURY, DIXON M.....	PHARMACOLOGY AND CELLULAR BIOCHEMISTRY OF THE CNS.....	4K06 NS13838-16
VERMONT		
BURLINGTON		
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401		
CUTRONEO, KENNETH R.....	ANTI-INFLAMMATORY STEROIDS AND COLLAGEN SYNTHESIS.....	5K04 AM00120-04
LEPESCHKIN, EUGENE.....	BASIC STUDIES IN CARDIAC ELECTROPHYSIOLOGY.....	4K06 HL00440-16
SCHUMACHER, GEORGE A.....	INVESTIGATIONS IN THE NEUROSCIENCES.....	4K06 NS17045-16
STRAUSS, MICHAEL J.....	SYNTHESIS OF NEW PHARMACEUTICALS.....	5K04 GM70714-04
VIRGINIA		
CHARLOTTESVILLE		
UNIVERSITY OF VIRGINIA ZIP CODE 22903		
BENJAMIN, DAVID C.....	CELLULAR AND STRUCTURAL BASIS OF IMMUNOLOGIC TOLERANCE.....	5K04 AI00029-03
BROOKER, GARY.....	METABOLIC AND HORMONAL CONTROL OF CARDIAC CONTRACTION.....	5K04 HL00098-03
DAMMANN, JOHN F.....	CARDIOPULMONARY PHYSIOLOGY IN CRITICALLY ILL PATIENTS.....	4K06 HL14213-16
DANIELSON, DONALD A.....	MATHEMATICAL MODELS FOR PROBLEMS IN PHYSIOLOGY.....	5K04 GM70733-04
EMERSON, CHARLES P, JR.....	PROTEINS SYNTHESIS IN DEVELOPING AND DYSTROPHIC MUSCLE.....	1K04 HD00177-01
EMERSON, SUZANNE U.....	FUNCTIONS AND BIOCHEMISTRY OF RHABDOVIRUS PROTEINS.....	5K04 AI00013-03
GEAR, ADRIAN R.....	PLATELET SURVIVAL AND FUNCTION: ROLE OF MITOCHONDRIA.....	5K04 HL70759-04
GILMAN, ALFRED G.....	REGULATION OF CYCLIC AMP IN CULTURED CELLS.....	5K04 NS00026-03
HAUSFATER, GLENN.....	LONGITUDINAL STUDIES OF PRIMATE SOCIOBIOLOGY.....	1K04 HD00160-01
HOWARDS, STUART S.....	MICROPUNCTURE STUDIES OF TESTIS AND EPIDIDYMIS.....	5K04 HD00108-02
HUANG, LAURA C.....	STRUCTURE & REGULATION OF PROTEIN KINASES.....	1K04 AM00212-01
KADNER, ROBERT J.....	GENETIC CONTROL OF MEMBRANE TRANSPORT IN E. COLI.....	5K04 GM00019-03
KUTCHAI, HOWARD C.....	RED CELL O2 TRANSPORT AND TRANSPORT SYSTEMS IN HEART.....	5K04 HL00014-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
VIRGINIA—Continued		
LEE, JEN-SHIH	ENGINEERING STUDY OF PULMONARY MECHANICS AND EDEMA.....	5K04 HL00004-03
LONGNECKER, DAVID E.....	ANESTHETICS AND MICROVASCULAR RESPONSE TO HEMORRHAGE.....	5K04 HL00037-03
POHL, STEPHEN L.....	MECHANISMS OF POLYPEPTIDE HORMONE ACTION.....	5K04 AM00183-04
ROGOL, ALAN D.....	HETEROGENEITY OF PLASMA HORMONES.....	5K04 AM00153-02
SHERMAN, S MURRAY.....	MAMMALIAN VISUAL DEVELOPMENT AND AMBLYOPIA.....	5K04 EY00020-03
TAYLOR, RONALD P.....	QUANTITATIVE STUDIES OF BIOLOGICAL RECOGNITION.....	5K04 AI00062-03
VAUGHAN, DARRACOTT, JR.....	DES-ASP I-ANGIOTENSIN II: FORMATION AND ACTION.....	5K04 HL00140-02
NORFOLK		
EASTERN VIRGINIA MEDICAL AUTHORITY—EASTERN VIRGINIA MEDICAL SCHOOL ZIP CODE 23507		
WRIGHT, GEORGE L, JR.....	ISOLATION OF TUMOR ANTIGENS.....	5K04 CA00012-03
RICHMOND		
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284		
ARCHER, GORDON L.....	ENDOCARDITIS ON PROSTHETIC CARDIAC VALVES.....	1K04 HL00285-01
GUZELIAN, PHILIP S, JR.....	REGULATION OF MICROSOMAL HEMOPROTEINS IN THE LIVER.....	5K08 AM00128-03
LIBERTI, JOSEPH P.....	BIOCHEMISTRY OF SOMATOMEDIN.....	5K04 AM00125-03
LITTMAN, BRUCE H.....	REGULATION OF CELLULAR COOPERATION BY SOLUBLE FACTORS.....	1K04 AM00336-01
MORAHAN, PAGE S.....	VIRAL DISEASE—IMMUNITY AND RESISTANCE INDUCING AGENTS.....	5K04 AI70863-04
PATTERSON, JOHN L, JR.....	NORMAL & PATHOPHYSIOLOGY OF CIRCULATION & RESPIRATION.....	4K06 HL18678-16
TEW, JOHN G.....	REGULATION OF THE IMMUNE RESPONSE BY PERSISTING ANTIGEN.....	5K04 AI00008-03
WEIR, GORDON C.....	STUDIES OF GLUCAGON AND SOMATOSTATIN SECRETION.....	1K04 AM00255-01
WASHINGTON		
PULLMAN		
WASHINGTON STATE UNIVERSITY ZIP CODE 99163		
PRIEUR, DAVID J.....	CHARACTERIZATION OF NEW GENETIC ANIMAL DISEASE MODELS.....	5K04 RR00003-02
SEATTLE		
UNIVERSITY OF WASHINGTON ZIP CODE 98195		
AFROMOWITZ, MARTIN A.....	IMPLANTABLE SOLID-STATE HYBRID ION-SENSITIVE DEVICE.....	1K04 GM00323-01
ALVARES, OLAV F.....	NUTRITION AND THE ORAL MUCOUS MEMBRANES.....	5K04 DE00037-02
ANDERSEN, NIELS H.....	THE MOLECULAR BASIS OF PROSTAGLANDIN BIOCHEMISTRY.....	5K04 GM00134-03
CAMERMAN, ARTHUR.....	STEREOCHEMICAL BASIS OF DRUG AND HORMONE ACTION.....	5K04 NS70801-04
CLARK, ROBERT A.....	ANTITUMOR ACTIVITY OF PHAGOCYTTIC CELLS.....	5K04 CA00164-02
CULVER, BRUCE H.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00248-02
GARTLER, STANLEY M.....	STUDIES IN MAMMALIAN SOMATIC CELL GENETICS.....	5K06 GM03874-14
HENDRICKSON, ANITA E.....	DEVELOPMENT OF PRIMATE RETINA.....	5K04 EY39039-03
HLASTALA, MICHAEL P.....	TOTAL BODY GAS EXCHANGE.....	5K04 HL00182-02
HOHL, THOMAS H.....	SURGICAL EFFECTS ON GROWTH OF CRANIOFACIAL COMPLEX.....	5K04 DE00040-02
HUNTSMAN, LEE L.....	MECHANICAL PROPERTIES OF ISOLATED MYOCARDIUM.....	1K04 HL00344-01
JOHNSON, DAVID G.....	THE REGULATION OF INSULIN RELEASE.....	5K04 AM70727-04
OUADRACCI, LEONARD J.....	IMMUNOLOGIC RENAL DISEASE AND TRANSPLANTATION.....	5K04 AM70637-04
RUBIN, CYRUS E.....	HUMAN MUCOSAL STRUCTURE AND FUNCTION.....	4K06 CA03449-16
RUSHMER, ROBERT F.....	HEALTH RESEARCH & DEVELOPMENT PRIORITIES—SPECIAL.....	1K10 LM00010-01
SAARI, JOHN C.....	RETINOL BINDING PROTEINS: METABOLISM AND FUNCTION.....	5K07 EY00043-02
SLATKIN, MONTGOMERY W.....	SPATIAL AND TEMPORAL PATTERNS IN NATURAL POPULATIONS.....	7K04 GM00396-03
THOMAS, EDWARD D.....	TRANSPLANTATION OF MARROW AND MARROW METABOLISM.....	5K06 AI02425-14
TRÄGER, WILLIAM F.....	ASPECTS OF THE METABOLISM OF ORAL ANTICOAGULANTS.....	5K04 GM00211-02
TRUMAN, JAMES W.....	HORMONE ACTION ON THE CENTRAL NERVOUS SYSTEM.....	5K04 NS00193-02
WEISS, NOEL S.....	MENOPAUSAL ESTROGENS AND THE EPIDEMIOLOGY OF CANCER.....	5K04 CA00048-03
WHITELEY, HELEN R.....	METABOLISM OF ANAEROBIC MICROCOCCI.....	5K06 GM00442-15

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1977—Continued

Awardee	Project title	Grant number
WASHINGTON—Continued		
WILLSON, RICHARD A.....	ACUTE LIVER INJURY AND FAILURE.....	5K04 AM00151-02
VIRGINIA MASON RESEARCH CENTER	ZIP CODE 98101	
HILDEBRANDT, JUDITH R.....	CONTROL OF LUNG FUNCTION AND RESPIRATION IN EXERCISE.....	5K04 HL00047-03
WEST VIRGINIA		
MORGANTOWN		
WEST VIRGINIA UNIVERSITY	ZIP CODE 26506	
ALBRINK, MARGARET J.....	SERUM TRIGLYCERIDES AND VASCULAR DISEASE.....	5K06 HL00486-15
COLASANTI, BRENDA K.....	ADRENERGIC AND CHOLINERGIC INTERACTIONS IN THE EYE.....	1K07 EY00075-01
WISCONSIN		
MADISON		
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON	ZIP CODE 53706	
BEINERT, HANS H.....	BASIC MECHANISMS IN BIOLOGICAL OXIDATIONS.....	4K06 GM18442-16
BLATTNER, FREDERICK R.....	REGULATORY SITES IN PRO- AND EUKARYOTIC GENOMES.....	5K04 GM00150-03
BORISY, GARY G.....	MICROTUBULE ASSEMBLY AND FUNCTION.....	5K04 GM00066-03
DAVIS, LARRY D.....	CELLULAR POTENTIAL CHANGES CAUSING CARDIAC ARRHYTHMIA.....	5K04 HL70740-04
DEMPSEY, JEROME A.....	PULMONARY ADAPTATION TO CHRONIC HYPOXIA.....	5K04 HL00149-03
DUNCAN, CHARLES L.....	STUDY OF ENTEROTOXIN OF C. PERFRINGENS TYPE A.....	5K04 AI70721-04
HUTCHINSON, C RICHARD.....	METABOLISM OF NATURALLY OCCURRING ANTITUMOR COMPOUNDS.....	5K04 CA00253-02
JEFCOATE, COLIN R.....	CYTOCHROME P450 CARCINOGENESIS AND STEROID SYNTHESIS.....	5K04 CA00250-02
KAESBERG, PAUL J.....	STRUCTURE AND SYNTHESIS OF VIRUSES.....	5K06 AI21942-14
LAGE, GARY L.....	CARDIAC GLYCOSIDE DISPOSITION AND TOXICITY.....	5K04 HL00095-03
MC CLAIN, WILLIAM H.....	BIOSYNTHESIS & FUNCTION OF MOLECULAR GENETICS OF T-RNA.....	5K04 AI00020-03
MUELLER, GERALD C.....	STUDIES ON GROWTH REGULATING MECHANISMS.....	5K06 CA00685-17
NELSON, DAVID L.....	SPATIAL DIFFERENTIATION OF ION CONDUCTANCE.....	5K04 NS00025-03
NICKLES, ROBERT J.....	RADIOTRACER DEVELOPMENT FOR CARDIOVASCULAR STUDIES.....	5K04 HL00217-02
NORTHROP, DEXTER B.....	MECHANISMS OF DEHYDROGENASES/ANTIBIOTIC INACTIVATION.....	5K04 GM00254-02
OLSON, E B, JR.....	METABOLISM IN PERFUSED FETAL & NEWBORN RABBIT LUNGS.....	1K04 HL00438-01
POLAND, ALAN P.....	DRUG METABOLISM AND ENZYME INDUCTION.....	7K04 ES00039-03
RHODE, WILLIAM S.....	MECHANICAL AND ELECTRICAL STUDIES OF THE INNER EAR.....	5K04 NS00107-03
RIS, HANS.....	STRUCTURE & MOLECULAR ORGANIZATION OF GENETIC SYSTEMS.....	5K06 GM21948-14
RUOHO, ARNOLD E.....	MOLECULAR CHARACTERIZATION OF ADRENERGIC RECEPTORS.....	5K04 NS00158-02
SPEAR, PETER D.....	VISUAL INTEGRATION IN THE BRAIN.....	1K04 EY00089-01
MILWAUKEE		
MEDICAL COLLEGE OF WISCONSIN	ZIP CODE 53233	
GHAZARIAN, JACOB G.....	CONTROL OF ENZYMES IN THE VITAMIN D3 ENDOCRINE COMPLEX.....	5K04 AM00220-02
LECH, JOHN J.....	METABOLISM AND DISPOSITION OF FOREIGN COMPOUNDS BY FISH.....	5K04 ES00002-03
SWARTZ, HAROLD M.....	CELL KILLING AND MUTATION BY COMBINED HEAT AND X-RAYS.....	1K04 CA00283-01
WYOMING		
LARAMIE		
UNIVERSITY OF WYOMING	ZIP CODE 82070	
BARDEN, ROLAND E.....	KINETICS AND AFFINITY LABELLING OF LIPID ENZYMES.....	5K04 GM00246-02

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1977—Continued**

Awardee	Project title	Grant number
PUERTO RICO		
SAN JUAN		
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS ZIP CODE 00936		
CORCINO, JOSE J.....	ACADEMIC CAREER DEVELOPMENT AWARD IN NUTRITION.....	5K07 AM70696-05
DEL CASTILLO, JOSE.....	PHYSIOLOGY AND PHARMACOLOGY OF EXCITATION.....	4K06 NS14938-16
UNIVERSITY OF PUERTO RICO RIO PIEDRAS CAMPUS ZIP CODE 00931		
ADAM, WALDEMAR.....	SYNTHESIS OF ENDOPEROXIDE PRECURSORS TO PROSTAGLANDIN.....	5K04 GM00141-03

APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetical sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization. The tables in which the organizations may be found are shown in parentheses following their locations.

United States

- Affiliated Hospitals Center--Boston (3 units), Mass. (2,3)
Allegheny Health, Education and Research Corporation (formerly shown as Allegheny General Hospital)--Pittsburgh, Pa. (2)
AMC Cancer Research Center and Hospital (formerly shown as American Medical Center at Denver, Spivak, Colo.)--Lakewood, Colo. (2)
American College of Radiology--Chicago, Ill.; Chevy Chase, Md. (2)
Battelle Memorial Institute--Columbus, Ohio; Richland, Seattle, Wash. (2)
Boston Health and Hospitals Department (may include awards to Mallory Institute of Pathology Foundation)--Boston, Mass. (2)
California State Health and Welfare Agency--Berkeley, Sacramento, Calif. (2)
California State University and Colleges System--Arcata, Bakersfield, Dominguez Hills, Long Beach, Los Angeles, Northridge, San Diego, San Francisco, Calif. (2,3)
Chicago Health Department (may include awards to Chicago Health Research Foundation)--Chicago, Ill. (2)
Children's Hospital of Michigan (formerly shown as Child Research Center of Michigan)--Detroit, Mich. (2)
City of Philadelphia Nursing Home (formerly known and shown as Philadelphia General Hospital)--Philadelphia, Pa. (2)
City University of New York--New York (9 units), N.Y. (2,3)
Claremont Colleges System--Claremont (3 units), Calif. (2)
College of Medicine and Dentistry of New Jersey--Newark, Piscataway, N.J. (2,3)
Cornell University--Ithaca, New York, N.Y. (2,3)
Denver Health and Hospitals Department (may include awards to Denver Health Research Foundation)--Denver, Colo. (2)
Gulf South Research Institute--Baton Rouge, New Iberia, New Orleans, La. (2)
Harvard University--Boston, Cambridge, Mass. (2,3)
Illinois Department of Mental Health and Developmental Disabilities--Chicago, Ill. The Illinois Mental Health Institute was formerly shown as the Illinois Institute for Developmental Disabilities. (2)
Indiana University--Bloomington, Indianapolis, Ind. (2,3)

Johns Hopkins University--Baltimore, Silver Spring, Md. (2,3)
 Latter-Day Saints Hospital System--Salt Lake City (3 units),
 Utah (2,3)
 Los Angeles County Health Services Department--Downey, Los
 Angeles (2 units), Torrance, Calif. (2,3)
 Louisiana State University--Baton Rouge, New Orleans (2 units),
 Shreveport, La. (2,3)
 Loyola University of Chicago--Chicago, Maywood, Ill. (2,3)
 Masonic Foundation for Medical Research and Human Welfare--New York,
 Utica, N.Y. (2)
 Massachusetts General Hospital--Belmont, Boston, Mass. (2,3)
 Massachusetts Office of Human Services (may include awards to
 Massachusetts Mental Health Research Corporation)--Boston,
 Mass. (2)
 Mayo Foundation--Rochester (2 units), Minn. (2,3)
 New York Blood Center (formerly shown as Community Blood Council of
 Greater New York)--New York, N.Y. (2,3)
 New York Medical College--New York, Valhalla, N.Y. (2,3)
 New York State Department of Health (may include awards to Health
 Research, Inc.)--Albany, Buffalo, N.Y. (2,3)
 New York State Department of Mental Hygiene (may include awards to
 New York State Research Foundation for Mental Hygiene, Inc.)--
 Albany, Buffalo, New York (3 units), Orangeburg, N.Y. (2)
 North Carolina Department of Human Resources (may include awards to
 North Carolina Foundation for Mental Health Research, Inc.)--
 Morganton, Raleigh (2 units), N.C. (2)
 Northwestern University--Chicago, Evanston, Ill. (2,3)
 Oregon Optometric Center (formerly shown in Portland, Oreg.)--
 Forest Grove, Oreg. (2)
 Oregon State Higher Education System--Corvallis, Eugene, Portland
 (2 units), Oreg. (2,3)
 Pennsylvania State University--Hershey, University Park, Pa. (2,3)
 Rutgers The State University--New Brunswick, Newark, N.J. (2,3)
 Southern Illinois University System--Carbondale, Edwardsville, Ill.
 (2)
 Southern University and Agricultural and Mechanical College--Baton
 Rouge, New Orleans, La. (2)
 SRI International (formerly shown as Stanford Research Institute)--
 Menlo Park, Calif. (2)
 State University and Community College System of Tennessee--Memphis,
 Nashville, Tenn. (2)
 State University of New York--Albany, Binghamton, Brockport, Buffalo
 (2 units), New York, Oneonta, Plattsburgh, Purchase, Stony Brook,
 Syracuse (2 units), N.Y. (2,3)
 State University System of Florida--Gainesville, Jacksonville,
 Tallahassee (2 units), Tampa, Fla. (2,3)
 Texas Agricultural and Mechanical University System--College Station,
 Prairie View, Texas (2,3)
 Texas Department of Mental Health and Mental Retardation (may include
 awards to Texas Foundation for Mental Health Research)--Houston,
 Texas (2)
 Tufts University--Boston, Medford, Mass. (2,3)
 Tulane University--Covington, New Orleans, La. (2,3)
 U.S. Department of Health, Education, and Welfare--San Francisco,
 Calif.; New York, N.Y. (2)
 University of Alabama System--Birmingham, University, Ala. (2,3)
 University of Arkansas--Fayetteville, Little Rock, Ark. (2,3)

University of California--Berkeley, Davis, Irvine, La Jolla, Los Angeles, Riverside, San Francisco, Santa Barbara, Santa Cruz, Calif. The unit in La Jolla may include awards to the Friends of Psychiatric Research of San Diego. (2,3)

University of Colorado--Boulder, Denver (2 units), Colo. (2,3)

University of Connecticut--Farmington, Storrs, Conn. (2,3)

University of Hawaii System--Hilo, Honolulu, Hawaii (2,3)

University of Illinois--Chicago (2 units), Peoria, Urbana, Ill. (2,3)

University of Kansas--Kansas City, Lawrence, Kans. (2,3)

University of Maine--Orono, Portland, Me. (2)

University of Maryland System--Baltimore, Catonsville, College Park, Princess Anne, Md. (2,3)

University of Massachusetts--Amherst, Boston, Worcester, Mass. (2,3)

University of Miami--Coral Gables, Miami, Fla. (2,3)

University of Minnesota--Austin, Duluth, Minneapolis, Saint Paul, Minn. (2,3)

University of Mississippi--Jackson, University, Miss. (2,3)

University of Missouri--Columbia, Kansas City, Mo. (2,3)

University of Nebraska System--Lincoln, Omaha, Nebr. (2)

University of North Carolina System--Chapel Hill, Cullowhee, Durham, Elizabeth City, Greensboro, Greenville, Raleigh, Winston-Salem, N.C. (2,3)

University of Oklahoma--Norman, Oklahoma City, Okla. (2,3)

University of Puerto Rico--Mayaguez, San Juan (2 units), P.R. (2,3)

University of Tennessee System--Knoxville, Memphis, Tenn. (2,3)

University of Texas System--Arlington, Austin, Dallas, El Paso, Galveston, Houston (2 units), Richardson, San Antonio (2 units), Texas (2,3)

University of the District of Columbia (formerly shown as District of Columbia Board of Higher Education--Federal City College)--Washington, D.C. (2)

University of Wisconsin System--Kenosha, Madison, Milwaukee, Wisc. (2,3)

University System of Georgia--Albany, Athens, Atlanta (2 units), Augusta, Fort Valley, Savannah, Statesboro, Ga. (2,3)

Utah State Higher Education System--Logan, Salt Lake City, Utah (2,3)

Veterans Administration--Phoenix, Ariz.; Little Rock, Ark.; Hines, Ill.; Lexington, Ky.; Boston, Mass.; Durham, N.C.; Pittsburgh, Pa.; Seattle, Wash.; Huntington, W. Va. (2)

Wright State University--Dayton, Ohio (Includes awards made to Fels Research Institute, Yellow Springs, Ohio, formerly shown separately.) (2)

Other Countries

Group For The Study And Research In Cancer (formerly shown in Paris, France)--Bobigny, France (2)



DHEW Publication No. (NIH) 78-1042

NATIONAL INSTITUTES OF HEALTH

Grants
for
Training
Construction
Medical Libraries

Fiscal Year 1977 Funds



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Prepared by
NATIONAL INSTITUTES OF HEALTH
DIVISION OF RESEARCH GRANTS
Statistics and Analysis Branch

PREFACE

The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents the fellowships, training grants, cancer research facilities construction, and medical library grants awarded by the National Institutes of Health from fiscal year 1977 funds. Awards for training and construction made by other constituent agencies of the Public Health Service are not included in this volume.

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TECHNICAL NOTE

Organization Identification

In the presentation of grants made from fiscal year 1977 funds, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the principal investigator lies. Study of the structure of grantee organizations in the United States (primarily universities and colleges, and State Departments of Mental Health or their equivalents) has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education is comprised of two or more campuses reporting directly to the central administration, each campus is listed separately.
2. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and the organization is listed as many times within a given city as there are components of the organization receiving grants.
3. If a foundation has been established for the purpose of receiving and administering funds for grants, the name and location of the organization having professional responsibility for the grant are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
4. If an association receiving a grant has a fixed national headquarters, the grants are listed at the headquarters location. If however, the association does not have a fixed headquarters, the grants are listed in the city shown for this organization in either the Encyclopedia of Associations (1) or the Research Centers Directory (2).

These qualifications do not apply to foreign institutions or to some domestic organizations, because a systematic study of their organizational structure has not been made. Organizations which require a clarifying comment, or which appear in more than one geographical location are listed alphabetically in the Appendix.

Supplemental Awards

In this publication, supplemental awards are combined with the parent grant, or with other supplements, when both awards are made from the same fiscal year funds. Supplemental grants awarded in fiscal year 1977 to parent grants awarded in a previous fiscal year are

shown separately; if two or more such supplements were made during fiscal year 1977, these supplements are combined.

-
- (1) Fiske, M. (Ed.): Encyclopedia of Associations. Gale Research Co., Detroit, Mich., 11 ed., Vol. 1, 1977.
 - (2) Palmer, A.M. (Ed.): Research Centers Directory. Gale Research Co., Detroit, Mich., 6 ed., 1977.

ABBREVIATIONS

The NIH component supporting a grant is indicated by the code letters in the left-hand column. These code letters form part of the identification of the grant number.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, Metabolism, and Digestive Diseases.....	NIAMDD
CA	National Cancer Institute.....	NCI
DE	National Institute of Dental Research.....	NIDR
ES	National Institute of Environmental Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences.....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RR	Division of Research Resources.....	DRR
TW	Fogarty International Center.....	FIC
LM	National Library of Medicine.....	NLM
	National Institutes of Health.....	NIH

TABLE 1.—SUMMARY OF NIH TRAINING, CONSTRUCTION, AND MEDICAL LIBRARY GRANTS, BY SUPPORTING COMPONENT, FISCAL YEAR 1977

Supporting Component	Total Training Dollars	Training						Construction Grants		Medical Library Grants	
		Research Training Grants		Fellowships and Nat'l. Research Service Awards*		No.	Dollars	No.	Dollars	No.	Dollars
		No.	Dollars	No.	Dollars						
Total National Institutes of Health.....	131,550,596	1,210	104,279,984	1,975	27,270,612	10	15,999,970	66	1,772,712		
Institutes and Research Divisions.....	130,343,006	1,200	103,072,394	1,975	27,270,612	10	15,999,970	--	--		
Division of Research Resources.....	471,906	8	439,506	2	32,400	--	--	--	--		
Fogarty International Center.....	2,903,360	--	--	192	2,903,360	--	--	--	--		
National Cancer Institute.....	19,790,594	117	15,231,594	335	4,559,000	10	15,999,970	--	--		
National Eye Institute.....	4,631,003	57	3,364,077	95	1,266,926	--	--	--	--		
National Heart, Lung, and Blood Institute.....	16,987,721	190	14,310,071	190	2,677,650	--	--	--	--		
National Institute of Allergy and Infectious Diseases.....	6,569,970	69	4,598,682	144	1,971,288	--	--	--	--		
National Institute of Arthritis, Metabolism, and Digestive Diseases.....	9,756,151	144	7,293,011	179	2,463,140	--	--	--	--		
National Institute of Child Health and Human Development.....	9,399,126	89	7,847,268	113	1,551,858	--	--	--	--		
National Institute of Dental Research.....	3,324,230	39	2,746,206	42	578,024	--	--	--	--		
National Institute of Environmental Health Sciences.....	4,179,236	34	3,748,714	33	430,522	--	--	--	--		
National Institute of General Medical Sciences.....	43,840,002	402	39,524,424	323	4,315,578	--	--	--	--		
National Institute of Neurological and Communicative Disorders and Stroke.....	6,297,638	31	2,188,402	299	4,109,236	--	--	--	--		
National Institute on Aging.....	2,192,069	20	1,780,439	28	411,630	--	--	--	--		
National Library of Medicine.....	1,207,590	10	1,207,590	--	--	--	--	--	--	66	1,772,712

*Supplemental and supply allowances for an award made in a previous year are not included in the count, although dollars are included. Thus, an organization receiving only a supply allowance will have an entry under dollars but no entry under number.

NOTE: For information as to how this table is structured, see Technical Note, p.vii. Also, for comments on organizations, see Appendix.

Table 2.—Starts on next page.

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
GRAND TOTAL	1,975	27,270,612	1	2,400	227	227	4	19,535	41	729,403	192	2,903,360	1,737	23,615,687
UNITED STATES*	1,916	26,437,674	1	2,400	227	227	4	19,535	39	689,129	191	2,882,795	1,681	22,843,588
OTHER COUNTRIES	59	832,938							2	40,274	1	20,565	56	772,099
ALABAMA														
AUBURN														
AUBURN UNIVERSITY.....	2	28,598							2	28,598				
BIRMINGHAM														
UNIVERSITY OF ALABAMA SYSTEM--UNIVERSITY OF ALABAMA IN BIRMINGHAM	8	124,777								1,000	1	16,077	7	107,700
STATE TOTAL.....	10	153,375							2	29,598	1	16,077	7	107,700
ARIZONA														
TEMPE														
ARIZONA STATE UNIVERSITY.....	1	10,800											1	10,800
TUCSON														
UNIVERSITY OF ARIZONA.....	7	86,166											7	86,166
STATE TOTAL.....	8	96,966											8	96,966

ARKANSAS

FAYETTEVILLE

UNIVERSITY OF ARKANSAS

1 19,500

LITTLE ROCK

UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS.....

18,100

STATE TOTAL

18,100

CALIFORNIA

BERKELEY

CALIFORNIA STATE HEALTH AND WELFARE AGENCY-DEPARTMENT OF HEALTH

13,400

UNIVERSITY OF CALIFORNIA AT BERKELEY

537,449

DAVIS

UNIVERSITY OF CALIFORNIA AT DAVIS.....

200,200

DUARTE

CITY OF HOPE NATIONAL MEDICAL CENTER

35,400

IRVINE

UNIVERSITY OF CALIFORNIA AT IRVINE.....

133,400

LA JOLLA

SALK INSTITUTE FOR BIOLOGICAL STUDIES

77,900

SCRIPPS CLINIC AND RESEARCH FOUNDATION

216,500

UNIVERSITY OF CALIFORNIA AT SAN DIEGO

588,266

*Includes Puerto Rico.

NOTE 1: Supplemental and supply allowances for an award made in a previous year are not included in the count, although the dollars are included. Thus, an organization receiving only supply allowance will have an entry under dollars but no entry under number.

NOTE 2: For information as to how this table is structured, see Technical Note, p. vii. Also, for comments on organizations, see appendix.

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
CALIFORNIA—Con.														
LOS ANGELES														
UNIVERSITY OF CALIFORNIA AT LOS ANGELES.....	61	851,517									7	113,551	54	737,966
UNIVERSITY OF SOUTHERN CALIFORNIA.....	8	110,818									1	3,118	7	107,700
MENLO PARK														
SRI INTERNATIONAL.....	1	14,200											1	14,200
OAKLAND														
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA.....		3,000												3,000
PALO ALTO														
PALO ALTO MEDICAL RESEARCH FOUNDATION.....	1	13,200											1	13,200
PASADENA														
CALIFORNIA INSTITUTE OF TECHNOLOGY.....	26	355,340							1	22,245	1	15,595	24	317,500
RIVERSIDE														
UNIVERSITY OF CALIFORNIA AT RIVERSIDE.....	2	22,000											2	22,000
SAN DIEGO														
VETERANS ADMINISTRATION HOSPITAL.....	1	15,470									1	15,470		
ZOOLOGICAL SOCIETY OF SAN DIEGO.....	1	10,800												10,800
SAN FRANCISCO														
CHILDREN'S HOSPITAL OF SAN FRANCISCO.....	1	14,900											1	14,900
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO.....	60	806,658						1	7,035		3	47,956	56	751,667
SANTA BARBARA														
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA.....	4	50,600											4	50,600

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
CONNECTICUT—Con.														
STORRS														
UNIVERSITY OF CONNECTICUT.....	5	75,300											5	75,300
STATE TOTAL.....	71	1,004,311							2	39,302	7	108,479	62	856,530
DELAWARE														
NEWARK														
UNIVERSITY OF DELAWARE.....	1	9,708											1	9,708
STATE TOTAL.....	1	9,708											1	9,708
DIST OF COL														
WASHINGTON														
GEORGE WASHINGTON UNIVERSITY.....	3	43,123							1	18,222	1	1,701	1	23,200
GEORGETOWN UNIVERSITY.....	2	28,700											2	28,700
HOWARD UNIVERSITY.....	2	37,242							1	21,042			1	16,200
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—ST. ELIZABETH'S HOSPITAL.....	1	10,764											1	10,764
STATE TOTAL.....	8	119,829							2	39,264	2	12,465	4	68,100

FLORIDA

GAINESVILLE

STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA.....	8	116,762					2	22,462	6	94,300
U.S. DEPARTMENT OF AGRICULTURE—INSECT ATTRACTANTS, BEHAVIOR, AND BASIC BIOLOGY RESEARCH LAB	2	29,670				1	14,280	15,390		

MIAMI

PAPANICOLAOU CANCER RESEARCH INSTITUTE	1	16,000							1	16,000
UNIVERSITY OF MIAMI	7	104,100							7	104,100

TALLAHASSEE

STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY	1	16,400							1	16,400
STATE TOTAL	19	282,932				1	14,280	37,852	15	230,800

GEORGIA

ATHENS

UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA	2	31,200							1	14,500
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ATLANTA

ATLANTA UNIVERSITY	3	19,598								
EMORY UNIVERSITY	11	146,556			1	5,500		39,489	8	101,567
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—CENTER FOR DISEASE CONTROL		1,938						1,938		

AUGUSTA

UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA	2	29,600							2	29,600
STATE TOTAL	18	228,892				1	5,500	41,427	11	145,667

HAWAII

HONOLULU

UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA	5	73,779							1	21,279
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Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowships awards		Postdoctoral fellowships awards		Special fellowships awards		Minority institutions fellowship awards		International fellowships awards		Individual research fellowship awards		
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	
HAWAII—CON.															
STATE TOTAL	5	73,779							1	21,279			4	52,500	
ILLINOIS															
ARGONNE															
U.S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION	1	10,000											1	10,000	
CARBONDALE															
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE	1	14,200											1	14,200	
CHICAGO															
NORTHWESTERN UNIVERSITY	4	70,987										1	20,987	3	50,000
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER	1	13,400												1	13,400
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER—RUSH UNIVERSITY	1	17,600												1	17,600
UNIVERSITY OF CHICAGO	29	384,465							2	12,533		2	25,307	25	346,625
UNIVERSITY OF HEALTH SCIENCES	2	35,545									1	21,045	1	14,500	
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE		3,000												3,000	
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER	8	127,368									3	58,268	5	69,100	
EVANSTON															
NORTHWESTERN UNIVERSITY	8	107,850											8	107,850	
URBANA															
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN	15	190,286										3	39,019	12	151,267
STATE TOTAL	70	974,701							2	12,533	10	164,626	58	797,542	

INDIANA										
BLOOMINGTON										
INDIANA UNIVERSITY AT BLOOMINGTON.....	5	68,500							5	68,500
INDIANAPOLIS										
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS.....	5	81,608					4	68,608	1	13,000
NOTRE DAME										
UNIVERSITY OF NOTRE DAME.....		9,000								9,000
WEST LAFAYETTE										
PURDUE UNIVERSITY.....	9	118,856			1	16,000	1	15,756	7	87,100
STATE TOTAL.....	19	277,964			1	16,000	5	84,364	13	177,600
IOWA										
IOWA CITY										
UNIVERSITY OF IOWA.....	14	184,219					2	21,419	12	162,800
STATE TOTAL.....	14	184,219					2	21,419	12	162,800
KANSAS										
KANSAS CITY										
UNIVERSITY OF KANSAS.....	5	78,603					2	38,003	3	40,600
LAWRENCE										
UNIVERSITY OF KANSAS.....		3,000								3,000
STATE TOTAL.....	5	81,603					2	38,003	3	43,600

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
KENTUCKY														
LEXINGTON														
UNIVERSITY OF KENTUCKY	4	53,500											4	53,500
LOUISVILLE														
UNIVERSITY OF LOUISVILLE	1	13,400											1	13,400
STATE TOTAL	5	66,900											5	66,900
LOUISIANA														
NEW ORLEANS														
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS	2	32,960							1	19,960			1	13,000
TULANE UNIVERSITY	6	75,938							1	6,138			5	69,800
SHREVEPORT														
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT SHREVEPORT	1	13,800											1	13,800
STATE TOTAL	9	122,698							2	26,098			7	96,600
MAINE														
BAR HARBOR														
JACKSON LABORATORY	1	13,000											1	13,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
MARYLAND—Con.														
STATE TOTAL.....	148	1,967,990			227	4,250	1	146,094	5	604,882	39	1,212,537	103	
MASSACHUSETTS														
AMHERST														
UNIVERSITY OF MASSACHUSETTS AT AMHERST.....	3	40,000											3	40,000
BOSTON														
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL.....	14	205,936											13	203,200
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL.....	9	134,673											7	103,980
BETH ISRAEL HOSPITAL.....	4	60,100											4	60,100
BOSTON BIOMEDICAL RESEARCH INSTITUTE.....	1	16,800											1	16,800
BOSTON UNIVERSITY.....	6	83,510											6	83,510
CENTER FOR BLOOD RESEARCH.....	2	33,700											2	33,700
CHILDREN'S HOSPITAL MEDICAL CENTER.....	5	83,400											5	83,400
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION.....	5	84,000											5	84,000
FORSYTH DENTAL CENTER.....	1	13,800											1	13,800
HARVARD UNIVERSITY.....	86	1,197,709							1	23,700	9	1,052,646	76	
JOSLIN DIABETES FOUNDATION.....	2	29,800											2	29,800
MASSACHUSETTS EYE AND EAR INFIRMARY.....	2	23,200											2	23,200
MASSACHUSETTS GENERAL HOSPITAL.....	25	363,540											22	308,850
NEW ENGLAND MEDICAL CENTER HOSPITAL.....	2	29,400											2	29,400
SIDNEY FARBER CANCER INSTITUTE.....	7	101,895											6	85,000
TUFTS UNIVERSITY.....	4	43,891											4	43,800
VETERANS ADMINISTRATION OUTPATIENT CLINIC.....	1	10,000											1	10,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
MINNESOTA														
AUSTIN														
UNIVERSITY OF MINNESOTA.....	2	31,800											2	31,800
MINNEAPOLIS														
UNIVERSITY OF MINNESOTA.....	29	438,521										90	29	438,431
ROCHESTER														
MAYO FOUNDATION.....	5	67,500											5	67,500
MAYO FOUNDATION—MAYO MEDICAL SCHOOL.....	2	26,600											2	26,600
SAINT PAUL														
UNIVERSITY OF MINNESOTA.....	3	37,125											3	37,125
STATE TOTAL.....	41	601,546										90	41	601,456
MISSISSIPPI														
JACKSON														
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER.....	2	23,800											2	23,800
UNIVERSITY														
UNIVERSITY OF MISSISSIPPI.....	1	6,500							1	6,500				
STATE TOTAL.....	3	30,300							1	6,500			2	23,800

MISSOURI**COLUMBIA**

UNIVERSITY OF MISSOURI-COLUMBIA.....

5 83,853

21,253

62,600

SAINT LOUIS

JEWISH HOSPITAL OF ST. LOUIS.....

1 14,500

1 14,500

ST. LOUIS UNIVERSITY.....

4 55,500

4 55,500

UNIVERSITY CITY

WASHINGTON UNIVERSITY.....

31 450,887

54,987

395,900

STATE TOTAL.....

41 604,740

76,240

528,500

NEW HAMPSHIRE**DURHAM**

UNIVERSITY SYSTEM OF NEW HAMPSHIRE-UNIVERSITY OF NEW HAMPSHIRE.....

3,000

3,000

HANOVER

DARTMOUTH COLLEGE.....

2 27,600

2 27,600

STATE TOTAL.....

2 30,600

30,600

NEW JERSEY**NEW BRUNSWICK**

RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK.....

1 16,600

16,600

PISCATAWAY

COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY-RUTGERS MEDICAL SCHOOL.....

1 16,800

16,800

PRINCETON

PRINCETON UNIVERSITY.....

12 146,083

12 146,083

STATE TOTAL.....

14 179,483

16,600

162,883

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellow-ship awards		Postdoctoral fellow-ship awards		Special fellow-ship awards		Minority insti-tutions fellow-ship awards		International fellow-ship awards		Individual research fellow-ship awards		
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	
NEW MEXICO															
ALBUQUERQUE															
UNIVERSITY OF NEW MEXICO	1	16,000											1	16,000	
UNIVERSITY PARK															
NEW MEXICO STATE UNIVERSITY LAS CRUCES CAMPUS	1	15,800											1	15,800	
STATE TOTAL	2	31,800											2	31,800	
NEW YORK															
ALBANY															
UNION COLLEGE AND UNIVERSITY-ALBANY MEDICAL COLLEGE	1	17,014									1	17,014			
BINGHAMTON															
STATE UNIVERSITY OF NEW YORK AT BINGHAMTON	1	13,800											1	13,800	
BUFFALO															
NEW YORK STATE DEPARTMENT OF HEALTH-ROSWELL PARK MEMORIAL INSTITUTE	10	143,200											10	143,200	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE-RESEARCH INSTITUTE ON ALCOHOLISM		6,000												6,000	
STATE UNIVERSITY OF NEW YORK AT BUFFALO	8	103,686									1	11,086	7	92,600	
COLD SPRING HARBOR															
COLD SPRING HARBOR LABORATORY	4	47,600											4	47,600	
ITHACA															
CORNELL UNIVERSITY	26	352,255							1	20,888		1	17,395	24	313,972

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellow-ship awards		Postdoctoral fellow-ship awards		Special fellow-ship awards		Minority insti-tutions fellow-ship awards		International fellow-ship awards		Individual research fellow-ship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
NEW YORK—Con.														
VALHALLA														
NEW YORK MEDICAL COLLEGE.....	1	11,500											1	11,500
STATE TOTAL.....	225	3,056,357							1	20,888	17	270,834	207	2,764,635
NORTH CAROLINA														
CHAPEL HILL														
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL.....	23	314,245							2	31,947	1	17,281	20	265,017
DURHAM														
DUKE UNIVERSITY.....	28	378,466									1	16,200	27	362,266
RALEIGH														
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH.....	1	10,000											1	10,000
RESEARCH TRIANGLE PARK														
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—NIEHS ENVIRONMENTAL HEALTH SCIENCES CENTER.....	1	13,722											1	13,722
STATE TOTAL.....	53	716,433							2	31,947	2	33,481	49	651,005

OHIO

CINCINNATI

U.S. ENVIRONMENTAL PROTECTION AGENCY-NATIONAL ENVIRONMENTAL

RESEARCH CENTER.....

1 15,175

1 15,175

UNIVERSITY OF CINCINNATI.....

6 84,000

6 84,000

CLEVELAND

CASE WESTERN RESERVE UNIVERSITY.....

10 135,180

9 114,100

CLEVELAND CLINIC HOSPITAL.....

825

825

COLUMBUS

OHIO STATE UNIVERSITY.....

5 70,100

5 70,100

DAYTON

WRIGHT STATE UNIVERSITY.....

3,000

3,000

TOLEDO

MEDICAL COLLEGE OF OHIO AT TOLEDO.....

1 21,004

1 21,004

STATE TOTAL.....

23 329,284

20 271,200

OKLAHOMA

NORMAN

UNIVERSITY OF OKLAHOMA.....

1 13,400

1 13,400

OKLAHOMA CITY

OKLAHOMA MEDICAL RESEARCH FOUNDATION.....

1 15,200

1 15,200

STILLWATER

OKLAHOMA STATE UNIVERSITY AT STILLWATER.....

1 10,800

1 10,800

STATE TOTAL.....

3 39,400

3 39,400

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
OREGON														
CORVALLIS														
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY.....	6	90,400											6	90,400
EUGENE														
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON.....	10	143,200											10	143,200
PORTLAND														
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER.....	2	29,800											2	29,800
STATE TOTAL.....	18	263,400											18	263,400
PENNSYLVANIA														
BETHLEHEM														
LEHIGH UNIVERSITY.....	1	10,800											1	10,800
HERSHEY														
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER.....	13	194,875											2	38,975
PHILADELPHIA														
CHILDREN'S HOSPITAL OF PHILADELPHIA.....	4	54,500											4	54,500
DREXEL UNIVERSITY.....	1	4,475											1	4,475
HANNEWMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.....	1	13,800											1	13,800
INSTITUTE FOR CANCER RESEARCH.....	6	77,000											6	77,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards		
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	
TENNESSEE															
KNOXVILLE															
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE	2	22,186							1	8,386				1	13,800
MEMPHIS															
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	1	13,800												1	13,800
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES	3	45,000							1	15,000				2	30,000
NASHVILLE															
GEORGE PEABODY COLLEGE FOR TEACHERS	1	14,900												1	14,900
MEHARRY MEDICAL COLLEGE	3	59,079							3	59,079					
VANDERBILT UNIVERSITY	11	165,040										2	22,440	9	142,600
OAK RIDGE															
OAK RIDGE ASSOCIATED UNIVERSITIES	1	10,800												1	10,800
STATE TOTAL	22	330,805							5	82,465		2	22,440	15	225,900
TEXAS															
AUSTIN															
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN	7	90,300												7	90,300
COLLEGE STATION															
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY	2	24,600												2	24,600

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards		
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	
VERMONT—Con.															
STATE TOTAL	2	29,000											2	29,000	
VIRGINIA															
BLACKSBURG															
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	1	13,000											1	13,000	
CHARLOTTESVILLE															
UNIVERSITY OF VIRGINIA	20	217,652	1	2,400			1	2,750					18	212,434	
RICHMOND															
VIRGINIA COMMONWEALTH UNIVERSITY	3	52,700											3	52,700	
STATE TOTAL	24	283,352	1	2,400			1	2,750					22	278,134	
WASHINGTON															
SEATTLE															
FRED HUTCHINSON CANCER RESEARCH CENTER	2	29,700											2	29,700	
UNIVERSITY OF WASHINGTON	48	672,416										7	116,524	41	555,892
VIRGINIA MASON RESEARCH CENTER	1	15,200											1	15,200	
STATE TOTAL	51	717,316										7	116,524	44	600,792

WEST VIRGINIA										
MORGANTOWN										
WEST VIRGINIA UNIVERSITY.....	1	12,823						1	12,823	
STATE TOTAL.....	1	12,823						1	12,823	
WISCONSIN										
MADISON										
UNIVERSITY OF WISCONSIN SYSTEM-UNIVERSITY OF WISCONSIN-MADISON.....	46	608,785						2	17,550	44
MILWAUKEE										
MARQUETTE UNIVERSITY.....	1	15,600								1
MEDICAL COLLEGE OF WISCONSIN.....	2	30,900								2
UNIVERSITY OF WISCONSIN SYSTEM-UNIVERSITY OF WISCONSIN-MILWAUKEE.....	1	13,800								1
STATE TOTAL.....	50	669,085						2	17,550	48
PUERTO RICO										
SAN JUAN										
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS.....	1	14,880						1	14,880	
STATE TOTAL.....	1	14,880						1	14,880	
AUSTRALIA										
CANBERRA										
AUSTRALIAN NATIONAL UNIVERSITY.....	4	52,972								4
KENSINGTON										
UNIVERSITY OF NEW SOUTH WALES.....	1	15,000								1
COUNTRY TOTAL.....	5	67,972								5

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
AUSTRIA														
INNSBRUCK														
UNIVERSITY OF INNSBRUCK.....	1	14,900											1	14,900
COUNTRY TOTAL.....	1	14,900											1	14,900
BELGIUM														
BRUSSELS														
CATHOLIC UNIVERSITY OF LOUVAIN.....		3,000												3,000
CENTRE D ENSEIGNEMENT ET DE RECHERCHES DES INDUS ALIMENT (CERIA)	1	3,180											1	3,180
COUNTRY TOTAL.....	1	6,180											1	6,180
CANADA														
EDMONTON														
UNIVERSITY OF ALBERTA.....		3,000												3,000
HAMILTON														
MC MASTER UNIVERSITY.....		3,000												3,000
LONDON														
UNIVERSITY OF WESTERN ONTARIO.....	2	28,000											2	28,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellow-ship awards		Postdoctoral fellow-ship awards		Special fellow-ship awards		Minority insti-tutions fellow-ship awards		International fellow-ship awards		Individual research fellow-ship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
GERMANY FED R—CON.														
COUNTRY TOTAL.....	1	17,953											1	17,953
ISRAEL														
JERUSALEM														
HEBREW UNIVERSITY OF JERUSALEM.....	1	10,800											1	10,800
REHOVOTH														
WEIZMANN INSTITUTE OF SCIENCE.....		838												838
COUNTRY TOTAL.....	1	11,638											1	11,638
ITALY														
NAPLES														
NATIONAL RESEARCH COUNCIL OF ITALY—ZOOLOGICAL STATION OF NAPLES.....	1	24,338							1	24,338				
COUNTRY TOTAL.....	1	24,338							1	24,338				
NETHERLANDS														
EINDHOVEN														
INSTITUTE FOR PERCEPTION RESEARCH.....		3,000												3,000
COUNTRY TOTAL.....		3,000												3,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1977—Continued

Area and organization	Total		Predoctoral fellowship awards		Postdoctoral fellowship awards		Special fellowship awards		Minority institutions fellowship awards		International fellowship awards		Individual research fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
UNITED KINGDOM														
BRIGHTON														
UNIVERSITY OF SUSSEX.....		3,000												3,000
BRISTOL														
UNIVERSITY OF BRISTOL.....	1	13,400											1	13,400
CAMBRIDGE														
MEDICAL RESEARCH COUNCIL.....	8	113,441											8	113,441
UNIVERSITY OF CAMBRIDGE.....	5	64,339											5	64,339
EDINBURGH														
MEDICAL RESEARCH COUNCIL—MOLECULAR GENETICS UNIT.....	1	13,400											1	13,400
GLASGOW														
UNIVERSITY OF GLASGOW.....	2	25,200											2	25,200
GUILDFORD														
UNIVERSITY OF SURREY.....		3,000												3,000
KEELE														
UNIVERSITY OF KEELE.....	1	13,400											1	13,400
LONDON														
AGRICULTURAL RESEARCH COUNCIL.....	1	13,871											1	13,871
IMPERIAL CANCER RESEARCH FUND.....	1	17,400											1	17,400
MEDICAL RESEARCH COUNCIL.....	1	13,000											1	13,000
UNIVERSITY OF LONDON.....	4	56,510											4	56,510

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977

Program director	General area of training	Grant number	Dollars
TOTAL, 1,210 GRANTS.....			<u>104,279,984</u>

ALABAMA

BIRMINGHAM

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM		ZIP CODE 35204		
ACTON, RONALD T.....	TUMOR BIOLOGY—MULTIDISCIPLINARY.....	1T32 CA09128-01A1		178,578
ACTON, RONALD T.....	PATHOLOGY OF MEMBRANES AND ORGANELLES.....	1T32 GM07561-01		70,444
ANDREOLI, THOMAS E.....	PHYSIOLOGY AND PATHOLOGY OF TRANSPORT PROCESSES.....	5T32 GM07195-03		103,169
CHRISTENSEN, JERRY.....	VISUAL SCIENCES.....	5T32 EY07033-02		43,369
CURTISS, ROY, III.....	INFECTIOUS DISEASES.....	5T32 AI07041-02		109,183
CURTISS, ROY, III.....	MOLECULAR, CELLULAR AND MEDICAL GENETICS.....	5T32 GM07090-03		58,973
CURTISS, ROY, III.....	MOLECULAR CELL BIOLOGY.....	5T32 GM07164-03		90,584
DIETHELM, ARNOLD G.....	CLINICAL SURGERY.....	5T01 GM01924-10		59,933
HIRAMOTO, RAYMOND N.....	MOLECULAR AND CELLULAR AGING.....	1T32 AG00042-01		68,795
LINDSEY, J RUSSELL.....	LABORATORY ANIMAL MEDICINE/COMPARATIVE PATHOLOGY.....	1T32 RR07003-01		56,473
MACY, JOSIAH, JR.....	COMPUTER APPLICATIONS FOR HEALTH PROFESSIONALS.....	1T15 LM07015-01		161,492
MAVIA, JUAN M.....	NUTRITION AND ORAL HEALTH.....	5T32 DE07020-03		63,847
RODEN, LEMNART.....	BIOCHEMISTRY AND IMMUNOLOGY OF JOINTS, BONE AND SKIN.....	5T32 AM07069-03		76,603
SHIOTA, TETSUO.....	CARIES RESEARCH.....	1T32 DE07026-01A2		33,731
STROUD, ROBERT M.....	ALLERGIC AND IMMUNOLOGIC DISEASES AND BASIC IMMUNITY.....	5T32 AI07051-02		109,480
ORGANIZATION TOTAL	15	1,284,654		

TALLADEGA

TALLADEGA COLLEGE		ZIP CODE 35160		
BACON, ARTHUR L.....	MARC HONORS RESEARCH.....	1T32 GM07660-01		95,440
ORGANIZATION TOTAL	1	95,440		

TUSKEGEE INSTITUTE

TUSKEGEE INSTITUTE		ZIP CODE 36088		
BOWIE, WALTER C.....	HEALTH RELATED SCIENCES.....	5T01 GM02264-04		72,755
ORGANIZATION TOTAL	1	72,755		

UNIVERSITY

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN UNIVERSITY		ZIP CODE 35486		
ELLIS, NORMAN R.....	MENTAL RETARDATION.....	5T01 HD00124-12		63,285
ORGANIZATION TOTAL	1	63,285		
STATE TOTAL	18	1,516,134		

NOTE: Grants are listed according to the State or country and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
ARIZONA			
TUCSON			
UNIVERSITY OF ARIZONA ZIP CODE 85721			
BERNSTEIN, HARRIS.....	MOLECULAR AND CELLULAR ASPECTS OF BIOLOGICAL FUNCTION.....	5T32 GM07239-03	39,151
BRESSLER, RUBIN.....	CLINICAL PHARMACOLOGY.....	1T32 GM07533-01	82,806
JOHNSON, PAUL C.....	PHYSIOLOGY.....	1T32 HL07249-01	95,327
KNUDSON, RONALD J.....	RESPIRATORY DISEASES.....	1T32 HL07243-01	74,860
WELLS, MICHAEL A.....	BIOCHEMISTRY.....	5T01 GM01982-09	51,582
ORGANIZATION TOTAL 5	343,726		
STATE TOTAL 5	343,726		
CALIFORNIA			
BERKELEY			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY—DEPARTMENT OF HEALTH ZIP CODE 94784			
LENNETTE, EDWIN H.....	MICROBIOLOGY.....	5T01 A100457-14	45,928
ORGANIZATION TOTAL 1	45,928		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
FOGEL, SEYMOUR.....	GENETICS.....	5T32 GM07127-03	117,437
FORTE, GERTRUDE M.....	LIPOPROTEIN METHODOLOGY, STRUCTURE AND FUNCTION.....	1T32 HL07279-01	36,691
FOSTER, GEORGE M.....	ANTHROPOLOGY.....	5T01 GM01224-14	141,443
KEPPEL, GEOFFREY.....	PSYCHOLOGY.....	5T01 GM01207-14	66,049
KNIGHT, C ARTHUR.....	CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07232-01A1	131,129
KOSHLAND, DANIEL E, JR.....	BIOCHEMISTRY.....	5T01 GM00031-20	242,618
MACEY, ROBERT I.....	PHYSICAL BIOCHEMISTRY.....	5T01 GM01021-15	73,760
MARGEN, SHELDON.....	HUMAN NUTRITION.....	1T32 AM07155-01A1	40,890
MEL, HOWARD C.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	1T32 GM07379-01	233,895
MENDELSON, MORTIMER L.....	CELL CYCLE ANALYSIS: NORMAL AND MALIGNANT CELLS.....	5T32 CA09133-02	17,550
MORTIMER, ROBERT K.....	RADIATION BIOPHYSICS.....	5T32 CA09272-02	128,786
MUSSEN, PAUL H.....	DEVELOPMENTAL PSYCHOLOGY.....	5T01 HD00153-09	49,882
NANDI, SATYABRATA.....	EXPERIMENTAL BIOLOGY OF CANCER AND ALLIED AREAS.....	5T32 CA09041-03	159,137
SHORE, BERNARD.....	NUTRITION IN HEART AND VASCULAR DISEASE.....	5T32 HL07058-03	25,267
STARK, LAWRENCE.....	PHYSIOLOGICAL OPTICS.....	1T32 EY07043-01A1	82,728
WERBLIN, FRANK S.....	NEUROBIOLOGY.....	5T32 GM07048-03	46,643
WOFSY, LEON.....	IMMUNOLOGY.....	5T32 CA09179-03	180,865
ORGANIZATION TOTAL 17	1,774,770		
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
CROSS, CARROLL E.....	PULMONARY DISEASES.....	5T32 HL07013-03	71,600
DUNGWORTH, DONALD L.....	ENVIRONMENTAL PATHOLOGY.....	1T32 ES07055-01	52,527
GESCHWIND, IRVING I.....	PHYSIOLOGY.....	5T01 GM01934-09	54,065
HANSCH, PAUL.....	GENETICS.....	1T32 GM07467-01	139,161
HURLEY, LUCILLE S.....	NUTRITION IN RELATION TO PROBLEMS OF ORAL BIOLOGY.....	5T32 DE07001-03	37,900
INGRAHAM, JOHN L.....	MICROBIOLOGY.....	5T01 GM01041-15	50,106
KILGORE, WENDELL W.....	ENVIRONMENTAL TOXICOLOGY.....	5T01 ES00125-10	97,596
KILGORE, WENDELL W.....	ADVANCED TRAINING IN ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07059-01	110,512
MASON, DEAN T.....	CARDIOVASCULAR MEDICINE.....	5T01 HL05901-07	98,458
OSEBOLD, JOHN W.....	MICROBIOLOGY.....	5T01 GM00762-15	43,158
PREISS, JACK.....	BIOCHEMISTRY.....	5T01 GM00119-19	112,984
PREISS, JACK.....	MOLECULAR AND CELLULAR BIOLOGY.....	1T32 GM07377-01	14,627
RENKIN, EUGENE M.....	INTEGRATIVE FUNCTIONS OF HIGHER ORGANISMS.....	1T32 GM07416-01	43,997

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
WELLINGS, SEFTON R.....	COMPARATIVE TUMOR BIOLOGY.....	5T01 CA05245-08	116,268
ORGANIZATION TOTAL 14	1,042,959		
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
GRANGER, GALE A.....	CARCINOGENESIS.....	5T32 CA09054-03	106,133
SCHNEIDERMAN, HOWARD A.....	DEVELOPMENTAL MECHANISMS UNDERLYING CONGENITAL DEFECTS.....	5T32 HD07029-03	75,342
SYMPHERD, PAUL S.....	REGULATION OF BIOLOGICAL PROCESSES.....	5T32 GM07134-03	70,992
SYMPHERD, PAUL S.....	INFECTIOUS AGENTS AND DISEASE PROCESSES.....	5T32 GM07307-03	65,146
TILLES, JEREMIAH G.....	VIRAL DISEASES.....	5T01 AI00466-04	37,282
WARNER, ROBERT C.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07311-03	81,305
ORGANIZATION TOTAL 6	436,200		
LA JOLLA			
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
COHN, MELVIN.....	ONCOLOGY RESEARCH.....	5T32 CA09254-02	96,714
ORGANIZATION TOTAL 1	96,714		
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
DIXON, FRANK J.....	IMMUNOPATHOLOGY.....	1T32 GM07437-01	134,098
FELDMAN, JOSEPH D.....	PATHOGENESIS AND IMMUNOLOGY OF DISEASE.....	1T32 AI07104-01	70,772
HUENNEKENS, FRANK M.....	BIOCHEMISTRY.....	5T32 AM07097-03	79,666
KATZ, DAVID H.....	CELLULAR AND CANCER IMMUNOLOGY.....	1T32 AI07065-01	35,443
MULLER-EBERHARD, HANS J.....	BLOOD SYSTEMS IN COAGULATION AND VESSEL DISEASE.....	5T32 HL07195-02	77,351
SPIZIZEN, JOHN.....	MICROBIOLOGY.....	5T01 GM02293-04	57,341
VAUGHAN, JOHN H.....	IMMUNOLOGY IN RHEUMATIC DISEASES.....	5T32 AM07144-03	59,396
ORGANIZATION TOTAL 7	514,067		
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
BERNSTEIN, EUGENE F.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07089-03	74,429
BLOOR, COLIN M.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07104-03	80,876
BRAUDE, ABRAHAM I.....	RESEARCH IN INFECTIOUS DISEASES.....	5T32 AI07036-02	116,013
DEFTOS, LEONARD J.....	DISEASES OF BONE AND CALCIUM METABOLISM.....	5T32 AM07048-03	33,772
DUTTON, RICHARD W.....	REGULATORY MECHANISMS IN THE IMMUNE RESPONSE.....	5T32 CA09174-03	58,489
FANESTIL, DARRELL D.....	HYPERTENSION.....	1T32 HL07261-01	56,651
GEIDUSCHEK, E PETER.....	CELL AND MOLECULAR BIOLOGY.....	5T32 GM07313-03	247,556
GOULIAN, MEHRAN.....	HEMATOLOGY.....	5T32 HL07107-03	61,709
HOFMANN, ALAN F.....	GASTROENTEROLOGY.....	5T32 AM07202-02	39,055
HOUGIE, CECIL.....	HEMATOLOGY.....	5T32 HL07059-03	34,431
KARLINER, JOEL S.....	MEDICAL OR PEDIATRIC CARDIOLOGY.....	5T01 HL05846-09	166,740
LAMPERT, PETER W.....	PATHOGENESIS OF VIRUS INDUCED BRAIN DISEASE.....	1T32 NS07078-01A1	37,578
LINDSLEY, DAN L, JR.....	GENETIC MECHANISMS AND REGULATION.....	5T32 GM07240-03	170,245
MASOUREDIS, SERAFEIM P.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07119-03	36,987
MAYER, STEVEN E.....	PHARMACOLOGY.....	5T01 GM02267-04	68,099
MOSER, KENNETH M.....	PULMONARY MEDICINE.....	5T32 HL07022-03	40,793
NESBITT, MURIEL N.....	BASIC AND MEDICAL GENETICS.....	5T32 GM07199-03	99,057
O'BRIEN, JOHN S.....	NEUROBIOLOGY.....	5T32 NS07086-02	81,071
SATO, GORDON H.....	CANCER BIOLOGY AND BIOCHEMISTRY.....	5T01 CA05274-04	92,128
SELVERSTON, ALLEN I.....	NEUROBIOLOGY.....	5T32 GM07153-03	80,387
SPOONER, CHARLES.....	MEDICAL SCIENTIST.....	5T32 GM07198-03	97,810
STEINBERG, DANIEL.....	LIPIDS, LIPOPROTEINS AND ATHEROSCLEROSIS.....	1T32 HL07276-01	68,468
TRAYLOR, TEDDY G.....	HEMOGLOBIN AND BLOOD PROTEIN CHEMISTRY.....	5T32 AM07233-02	131,564
WEST, JOHN B.....	PHYSIOLOGICAL BASIS OF PULMONARY DISEASE.....	5T32 HL07212-02	56,367
YGUERABIDE, JUAN.....	MEMBRANE BIOLOGY IN RELATION TO DISEASE.....	5T32 GM07169-03	118,947
ZETTNER, ALFRED.....	INVESTIGATIVE AND CLINICAL PATHOLOGY.....	5T01 GM02179-04	38,435
ZVAIFLER, NATHAN J.....	RHEUMATIC DISEASES.....	5T32 AM07062-03	58,586

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
ORGANIZATION TOTAL	27	2,246,243	
LOMA LINDA			
LOMA LINDA UNIVERSITY ZIP CODE 92354			
JUDKINS, MELVIN P.....	CARDIOVASCULAR MEDICINE.....	5T01 HL06013-04	42,038
KUZMA, JAN W.....	CANCER EPIDEMIOLOGY.....	5T32 CA09175-02	22,320
ORGANIZATION TOTAL	2	64,358	
LOS ANGELES			
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027			
HANSON, VIRGIL.....	PEDIATRIC RHEUMATOLOGY.....	1T32 AM07262-01	19,511
HAYS, DANIEL M.....	CLINICAL CANCER—MEDICAL PEDIATRICS.....	5T12 CA08128-11	163,506
ORGANIZATION TOTAL	2	183,017	
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
BENNETT, LESLIE R.....	NUCLEAR MEDICINE.....	5T01 GM01920-09	60,797
BROWN, JOSIAH.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07094-03	42,130
DETELS, ROGER.....	CANCER EPIDEMIOLOGY.....	5T32 CA09142-03	71,787
EISERLING, FREDERICK A.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07185-03	211,804
FAHEY, JOHN L.....	CLINICAL AND FUNDAMENTAL IMMUNOLOGY.....	1T32 AI07126-01A1	86,586
FAHEY, JOHN L.....	TUMOR IMMUNOLOGY.....	5T32 CA09120-03	178,263
FOX, CHARLES F.....	TUMOR CELL SURFACES AND CHROMOSOMES.....	5T32 CA09056-03	176,290
FOX, CHARLES F.....	STUDY AND EARLY DETECTION OF MEMBRANE DISEASE.....	5T32 GM07011-03	31,557
GORSKI, ROGER A.....	SYSTEMS AND INTEGRATIVE PHYSIOLOGY WITH COGNATE SCIENCES.....	5T32 GM07191-03	85,592
GREENFIELD, MOSES A.....	MEDICAL PHYSICS.....	5T32 CA09092-03	106,698
GROSSMAN, MORTON I.....	GASTROENTEROLOGY.....	5T32 AM07180-02	56,268
HONRUBIA, VICENTE.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07059-02	52,708
JENDEN, DONALD J.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07304-03	63,616
LONGMIRE, WILLIAM P, JR.....	SURGERY.....	5T01 GM01559-12	67,945
MOMMAERTS, WILFRIED F.....	PHYSIOLOGY.....	5T01 GM00448-17	58,381
MORTON, DONALD L.....	SURGICAL ONCOLOGY.....	5T32 CA09010-03	107,782
NIERLICH, DONALD P.....	GENETIC MECHANISMS.....	5T32 GM07104-03	116,295
ROSS, JOSEPH F.....	HEMATOLOGY AND HEMATOLOGIC ONCOLOGY.....	5T01 HL06020-20	81,019
SIMMONS, DANIEL H.....	RESPIRATORY DISEASE—BASIC AND CLINICAL RESEARCH.....	5T32 HL07014-02	81,831
SMITH, EMIL L.....	BIOCHEMISTRY.....	5T01 GM00364-18	76,983
STIEHM, E RICHARD.....	PEDIATRIC ALLERGIC DISEASES.....	5T32 AI07008-03	33,205
STRAATSMAN, BRADLEY R.....	VISION RESEARCH.....	5T32 EY07026-03	88,107
TARJAN, GEORGE.....	MENTAL RETARDATION.....	1T32 HD07032-01	141,960
VAN LANCKER, JULIEN L.....	MECHANISMS OF CARCINOGENESIS.....	5T32 CA09030-03	135,265
ORGANIZATION TOTAL	24	2,212,869	
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
BESSMAN, SAMUEL P.....	CARDIOCHEMICAL PHARMACOLOGY.....	5T01 HL05536-15	61,092
GRODINS, FRED S.....	SYSTEMS PHYSIOLOGY AND BIOMEDICAL ENGINEERING.....	5T32 GM07139-03	82,991
GRODINS, FRED S.....	CARDIOPULMONARY BIOMEDICAL ENGINEERING.....	5T32 HL07012-03	58,602
HAMMOND, G DENMAN.....	CLINICAL CANCER.....	5T12 CA08099-12	243,347
HORTON, RICHARD.....	ENDOCRINE HYPERTENSION AND ENDOCRINOLOGY—METABOLISM.....	5T32 AM07119-03	56,933
QUILLIGAN, EDWARD J.....	MATERNAL-FETAL MEDICINE.....	5T32 HD07086-02	124,131
SCHAJE, K WARNER.....	GERONTOLOGY.....	1T32 AG00037-01	93,205
SLAVKIN, HAROLD C.....	CRANIOFACIAL BIOLOGY.....	5T32 DE07006-03	96,349
ORGANIZATION TOTAL	8	816,650	
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125			
DAVIDSON, NORMAN R.....	BIOCHEMISTRY.....	5T01 GM01262-14	170,288

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
FENDER, DEREK H.....	BIOLOGICAL SYSTEMS ANALYSIS OF THE VISUAL PROCESS.....	5T01 EY00085-04	27,761
FENDER, DEREK H.....	VISUAL SYSTEM.....	5T32 EY07011-03	35,893
HOROWITZ, NORMAN H.....	BIOLOGICAL SCIENCES.....	5T01 GM00086-20	276,840
HOROWITZ, NORMAN H.....	GENETICS.....	1T32 GM07401-01	80,171
KONISHI, MASAKAZU.....	BEHAVIORAL SCIENCES.....	5T01 GM02031-09	54,569
ORGANIZATION TOTAL 6	645,522		
SAN FRANCISCO			
INSTITUTES OF MEDICAL SCIENCES ZIP CODE 94120			
SCOTT, ALAN B.....	EYE MOVEMENT DISORDERS.....	5T32 EY07027-03	9,993
ORGANIZATION TOTAL 1	9,993		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143			
BARINGER, J RICHARD.....	NEUROVIROLOGY.....	5T32 NS07073-02	42,795
BISHOP, J MICHAEL.....	THE MOLECULAR ANALYSIS OF TUMOR VIRUSES.....	5T32 CA09043-03	215,300
BLOIS, MARSDEN S, JR.....	MEDICAL INFORMATION SCIENCES.....	5T15 LM07000-03	74,600
BURKHALTER, ALAN.....	PHARMACOLOGY-TOXICOLOGY-PHARMACEUTICAL CHEMISTRY.....	1T32 GM07175-01A1	108,750
CLARK, M MARGARET.....	ANTHROPOLOGICAL GERONTOLOGY.....	1T32 AG00045-01	38,465
COLERIDGE, JOHN C.....	HEART AND VASCULAR DISEASES.....	3T32 HL07192-01S1	5,220
DIAMOND, IVAN F.....	MOLECULAR STUDIES OF AGING IN THE NERVOUS SYSTEM.....	1T32 AG00047-01	59,769
DUMPHY, J ENGLEBERT.....	SURGERY.....	5T01 GM01474-12	118,800
EPSTEIN, CHARLES J.....	POSTDOCTORAL TRAINING IN MEDICAL GENETICS.....	5T32 GM07085-02	73,943
FISKE, MARJORIE E.....	ADULT DEVELOPMENT AND AGING.....	5T01 AG00022-10	177,523
FUKUYAMA, KIMIE.....	DERMATOLOGY RESEARCH.....	5T32 AM07175-02	57,984
GANONG, WILLIAM F.....	NEURAL REGULATION OF ENDOCRINE FUNCTION.....	1T32 AM07265-01	72,540
GANONG, WILLIAM F.....	PHYSIOLOGY.....	5T01 GM00927-15	49,985
GRUMBACH, MELVIN M.....	PEDIATRIC ENDOCRINOLOGY.....	5T32 AM07161-02	39,057
HALL, ZACH W.....	NEUROBIOLOGY.....	1T32 GM07449-01A1	43,288
HALL, ZACH W.....	NEUROSCIENCES.....	1T32 NS07067-01A1	67,745
KAUFMAN, LEON.....	MEDICAL NUCLEAR PHYSICS.....	5T32 CA09158-03	16,633
MARGULIS, ALEXANDER R.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01272-13	136,990
MC CARTHY, BRIAN J.....	MOLECULAR BIOLOGY OF EUKARYOTIC CELLS AND VIRUSES.....	5T32 CA09270-02	169,329
MELMON, KENNETH L.....	CLINICAL PHARMACOLOGY AND PHARMACOKINETICS.....	5T22 GM00001-04	186,943
MELMON, KENNETH L.....	CLINICAL PHARMACOLOGY-PHARMACOKINETICS.....	1T32 GM07546-01	40,911
OCKNER, ROBERT K.....	DIGESTIVE DISEASES AND NUTRITION.....	5T32 AM07007-03	78,115
OSTLER, H BRUCE.....	OCULAR INFLAMMATORY DISEASES.....	5T01 EY00094-04	95,811
RECTOR, FLOYD C, JR.....	ACADEMIC NEPHROLOGY AND ELECTROLYTE METABOLISM.....	5T32 AM07219-02	67,466
SHELDON, GEORGE F.....	TRAUMA CENTER.....	5T32 GM07032-03	22,595
SHOHET, STEPHEN B.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07100-03	78,443
THALER, M MICHAEL.....	PEDIATRIC GASTROENTEROLOGY.....	1T32 AM07179-01A1	39,057
WILSON, CHARLES B.....	BRAIN TUMOR BIOLOGY AND THERAPY.....	1T32 CA09291-01	40,618
ORGANIZATION TOTAL 28	2,218,675		
SANTA BARBARA			
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106			
HORVATH, STEVEN M.....	PHYSIOLOGY OF EXERCISE AND STRESS.....	5T01 AG00021-09	106,689
ORGANIZATION TOTAL 1	106,689		
STANFORD			
STANFORD UNIVERSITY ZIP CODE 94305			
BERNFELD, MERTON R.....	MEDICAL SCIENTIST.....	5T05 GM01922-10	228,728
BERNFELD, MERTON R.....	MOLECULAR PATHOLOGY OF CELL MEMBRANES.....	5T32 GM07026-03	137,483
CLAYTON, DAVID.....	MEDICAL SCIENTIST.....	1T32 GM07365-01	104,624
COHEN, STANLEY M.....	CLINICAL PHARMACOLOGY.....	5T32 GM07065-03	20,988
CUTLER, ROBERT W.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07012-03	86,438

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
FARQUHAR, JOHN W.....	CARDIOVASCULAR DISEASE PREVENTION.....	5T32 HL07034-03	60,960
GRAY, GARY M.....	GASTROENTEROLOGY.....	5T32 AM07056-03	38,896
GRUMET, FRANK C.....	BLOOD BANKING AND TISSUE TYPING.....	5T32 HL07127-02	41,111
HANAWALT, PHILIP C.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07276-03	116,082
HARRISON, DONALD C.....	CARDIOVASCULAR DISEASE.....	5T01 HL05866-08	216,489
HARRISON, DONALD C.....	INVESTIGATIVE CARDIOLOGY.....	1T32 HL07265-01	127,500
HELLER, H CRAIG.....	INTEGRATIVE BIOLOGY.....	5T32 GM07181-03	111,091
KALLMAN, ROBERT F.....	CANCER ETIOLOGY, PREVENTION, DETECTION & DIAGNOSIS.....	1T32 CA09302-01	156,229
KORN, DAVID.....	TUMOR BIOLOGY.....	5T32 CA09151-03	104,781
KORN, DAVID.....	PATHOLOGY.....	5T01 GM02236-04	48,799
LEDERBERG, JOSHUA.....	GENETICS.....	5T01 GM00295-19	117,704
LEHMAN, I ROBERT.....	BIOCHEMISTRY.....	5T01 GM00196-19	119,562
MANSOUR, TAG.....	PHARMACOLOGY.....	5T32 GM07149-03	122,787
MERIGAN, THOMAS C.....	INFECTIOUS DISEASES (MICROBES, DRUGS AND HOST).....	1T32 AI07089-01	83,685
MOSES, LINCOLN E.....	MEDICAL GENETICS.....	5T01 GM00025-20	60,692
PAUL, BENJAMIN D.....	SOCIOMEDICAL ANTHROPOLOGY.....	5T01 GM01485-10	128,420
REAVEN, GERALD M.....	DIABETES, ENDOCRINOLOGY AND METABOLOGY.....	5T32 AM07217-02	37,579
ROBIN, EUGENE D.....	PULMONARY CLINICAL SCIENTIST.....	5T01 HL05929-07	20,929
ROSENTHAL, A RALPH.....	BASIC SCIENCES.....	5T01 EY00051-10	77,074
RUBINSTEIN, LUCIEN J.....	NEUROPATHOLOGY.....	1T32 NS07111-01	42,326
SUNSHINE, PHILIP.....	DEVELOPMENTAL BIOLOGY AND NEONATOLOGY.....	5T01 HD00049-17	149,648
YANOFSKY, CHARLES.....	BIOCHEMICAL GENETICS.....	5T01 GM00158-20	112,630
ORGANIZATION TOTAL	27	2,673,235	

TORRANCE

LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL		ZIP CODE 90509	
FISHER, DELBERT A.....	PERINATAL BIOLOGY.....	1T32 HD07013-01A1	40,241
IMAGAWA, DAVID T.....	PATHOGENESIS AND EPIDEMIOLOGY OF INFECTIOUS DISEASES.....	5T32 AI07014-02	59,953
RIMOIN, DAVID L.....	MEDICAL GENETICS.....	1T32 GM07414-01	19,529
WASSERMAN, KARLMAN.....	BIOLOGICAL BASIS OF RESPIRATORY DISEASE.....	5T01 HL05916-07	125,075
ORGANIZATION TOTAL	4	244,798	
STATE TOTAL	176	15,332,687	

COLORADO

BOULDER

UNIVERSITY OF COLORADO AT BOULDER		ZIP CODE 80309	
MC CLEARN, GERALD E.....	BEHAVIORAL PHARMACOGENETICS.....	5T32 GM07305-03	30,083
PORTER, KEITH R.....	BIOMEDICAL SCIENCES (NORMAL AND ABNORMAL DEVELOPMENT).....	1T32 HD07077-01	32,252
PRESCOTT, DAVID M.....	MOLECULAR AND CELLULAR BIOLOGY.....	1T32 GM07385-01	49,928
SUEOKA, NOBORU.....	MOLECULAR BIOLOGY.....	5T32 GM07135-03	54,675
ORGANIZATION TOTAL	4	166,938	

DENVER

NATIONAL ASTHMA CENTER		ZIP CODE 80204	
ALEXANDER, A BARNEY.....	RESPIRATORY DISEASES.....	5T32 HL07026-03	35,461
ORGANIZATION TOTAL	1	35,461	
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER		ZIP CODE 80206	
FARR, RICHARD S.....	ALLERGIC DISEASES.....	5T32 AI00048-03	60,896
ORGANIZATION TOTAL	1	60,896	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
COLORADO—Con.			
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
BATTAGLIA, FREDERICK C.....	PERINATAL MEDICINE.....	5T01 HD00429-04	97,631
CLAMAN, HENRY N.....	ALLERGY AND IMMUNOLOGY.....	5T01 AI00013-19	57,533
CROWLE, ALFRED J.....	CELLULAR IMMUNOLOGY.....	5T32 AI07035-02	95,609
EICKHOFF, THEODORE C.....	INFECTIOUS DISEASES.....	5T32 AI07029-02	91,959
ERIKSON, RAYMOND L.....	MOLECULAR AND CELLULAR PATHOBIOLOGY.....	1T32 GM07378-01	38,157
HENDEE, WILLIAM R.....	MEDICAL PHYSICS.....	5T32 CA09073-03	31,778
KERN, FRED, JR.....	GASTROINTESTINAL DISEASES.....	5T32 AM07038-03	39,049
NIES, ALAN.....	CLINICAL PHARMACOLOGY.....	5T32 GM07063-03	64,363
O'BRIEN, DONOUGH.....	MENTAL RETARDATION.....	1T32 HD07096-01	100,843
PETTY, THOMAS L.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07085-03	73,528
PIERCE, G BARRY.....	TUMOR BIOLOGY—DEVELOPMENT AND NEOPLASIA.....	5T32 CA09157-03	68,826
PUCK, THEODORE T.....	BIOPHYSICS.....	5T01 GM00781-19	76,011
SAUERBIER, WALTER.....	HUMAN GENETICS.....	1T32 GM07342-01	30,044
SCHRIER, ROBERT W.....	RENAL AND ELECTROLYTE DISEASE.....	5T32 AM07135-03	58,570
VERNAKAKIS, ANTONIA O.....	DEVELOPMENTAL PHARMACOLOGY.....	5T32 HD07072-02	68,816
WALKER, STROTHER H.....	BIOMETRICS.....	5T01 GM02241-04	43,665
WEINER, NORMAN.....	INFLUENCE OF DRUGS ON REGULATORY MECHANISMS.....	5T01 GM01983-09	85,530
WHITLOCK, DAVID G.....	ANATOMY.....	5T01 GM01981-09	48,628
ORGANIZATION TOTAL 18	1,170,540		
FORT COLLINS			
COLORADO STATE UNIVERSITY ZIP CODE 80521			
BEDFORD, JOEL S.....	RADIATION BIOLOGY BASIC TO TUMOR THERAPY.....	5T32 CA09236-02	112,579
NISWENDER, GORDON D.....	MAMMALIAN REPRODUCTIVE BIOLOGY.....	1T32 HD07031-01A1	58,063
ORGANIZATION TOTAL 2	170,642		
STATE TOTAL 26	1,604,477		
CONNECTICUT			
FARMINGTON			
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06832			
BECKER, ELMER L.....	BASIC IMMUNOLOGY & IMMUNOLOGIC CELL INJURY.....	1T32 AI07080-01	58,648
COHEN, STANLEY.....	IMMUNOPATHOLOGY OF NEOPLASTIC DISEASES.....	5T32 CA09205-02	128,657
KEGELES, S STEPHEN.....	PAIN CONTROL AND HUMAN MOTIVATION.....	5T32 DE07004-02	72,993
WARD, PETER A.....	PATHOGENESIS OF INFLAMMATORY LUNG DISEASES.....	5T32 HL07202-02	119,835
ORGANIZATION TOTAL 4	380,133		
NEW HAVEN			
YALE UNIVERSITY ZIP CODE 06520			
BARNETT, RUSSELL J.....	CELL BIOLOGY.....	5T01 GM00105-18	66,744
BERTINO, JOSEPH R.....	MEDICAL ONCOLOGY, HEMATOLOGY, AND PHARMACOLOGY.....	5T32 CA09200-02	159,131
BINDER, HENRY J.....	GASTROENTEROLOGY.....	1T32 AM07017-01	39,057
BLACK, FRANCIS L.....	CENTRAL NERVOUS SYSTEM—VIROLOGICAL INFECTIONS.....	5T32 NS07036-03	85,755
BOULPAEP, EMILE L.....	TRANSPORT PROCESSES IN BIOLOGICAL SYSTEMS.....	1T32 AM07259-01	38,504
CHANDLER, WILLIAM K.....	MEMBRANE BIOPHYSICS AND SENSORY MECHANISMS.....	1T32 NS07102-01	54,353
COHEN, LAWRENCE B.....	PHYSIOLOGY.....	5T01 GM01113-15	67,374
COHEN, LAWRENCE B.....	CELLULAR AND PHARMACOLOGICAL BASIS OF ORGAN FUNCTION.....	5T32 GM07527-01	49,709
COOPER, JACK R.....	GENERAL PHARMACOLOGY.....	5T32 GM07324-03	52,983
FELIG, PHILIP.....	METABOLIC DISEASES AND DIABETES.....	5T32 AM07058-03	38,896
FORGET, BERNARD G.....	RED BLOOD CELL DISEASES, HEMOSTASIS AND BLOOD BANKING.....	1T32 HL07262-01	37,454
GALL, JOSEPH G.....	CELL AND DEVELOPMENTAL BIOLOGY.....	5T01 HD00032-14	283,026

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
CONNECTICUT—Con.			
GERSHON, RICHARD K.....	INTERDISCIPLINARY IMMUNOLOGY	5T32 AI07019-02	77,195
HSIUNG, GUEH-DJEN G.....	CLINICAL VIROLOGY.....	5T32 AI07018-02	75,280
HUTCHINSON, FRANKLIN.....	MOLECULAR BIOPHYSICS AND BIOCHEMISTRY	5T01 GM00711-20	215,663
HUTCHINSON, FRANKLIN.....	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07223-03	217,762
JAMIESON, JAMES D.....	MEDICAL SCIENTIST.....	5T05 GM02044-08	124,368
JAMIESON, JAMES D.....	MEDICAL SCIENTIST.....	3T32 GM07205-02S1	27,699
JAMIESON, JAMES D.....	MEDICAL SCIENTIST.....	5T32 GM07205-03	228,382
KANTOR, FRED S.....	ALLERGY AND IMMUNOLOGY	5T01 AI00271-12	79,100
KELSEY, JENNIFER L.....	EPIDEMIOLOGY OF BONE DISEASES	1T32 AM07250-01	19,172
LERNER, AARON B.....	DERMATOLOGY.....	5T32 AM07016-03	77,962
MALAWISTA, STEPHEN E.....	INVESTIGATIVE RHEUMATOLOGY.....	5T32 AM07107-02	39,057
MARCHESI, VINCENT T.....	EXPERIMENTAL AND HUMAN PATHOBIOLOGY.....	1T32 GM07562-01	70,772
PATTON, CURTIS L.....	PARASITOLOGY (INTERDISCIPLINARY).....	1T32 AI07136-01	32,582
PRUSOFF, WILLIAM H.....	BIOCHEMICAL ASPECTS OF CANCER CHEMOTHERAPY.....	5T32 CA09085-03	153,802
ROOT, RICHARD K.....	INFECTIOUS DISEASES MICROBIAL AND IMMUNE MECHANISMS.....	5T32 AI07033-02	79,347
ROSENBERG, LEON E.....	MEDICAL GENETICS	1T32 GM07439-01	80,581
RUDDLE, FRANK H.....	PREDOCTORAL TRAINING PROGRAM IN GENETICS.....	1T32 GM07499-01	223,226
SHOPE, ROBERT E.....	VIRAL DISEASE MECHANISMS, EPIDEMIOLOGY, AND CONTROL.....	1T32 AI07098-01	54,027
STOLWUK, JAN A.....	ENVIRONMENTAL HEALTH SCIENCES.....	5T01 ES00123-09	107,609
TALNER, NORMAN S.....	POSTNATAL DEVELOPMENT OF CARDIOVASCULAR FUNCTION	1T32 HL07272-01	61,018
TOMITA, TSUNEO.....	VISUAL SCIENCES.....	5T32 EY07000-03	62,498
WARSHAW, JOSEPH B.....	RESEARCH IN PERINATAL MEDICINE.....	1T32 HD07094-01	37,709
WEISSMAN, SHERMAN M.....	MOLECULAR AND ONCOLOGIC VIROLOGY.....	5T32 CA09159-03	122,730
WHITE, COLIN.....	BIOMETRY.....	5T01 GM00047-22	51,038
ORGANIZATION TOTAL	36 3,291,565		

STORRS

UNIVERSITY OF CONNECTICUT ZIP CODE 06268			
GOETINCK, PAUL F.....	CONTROL MECHANISMS IN CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07219-01A1	32,594
MATTINGLY, IGNATIUS G.....	LANGUAGE AND PSYCHOLOGY.....	5T01 HD00321-05	91,352
ORGANIZATION TOTAL	2 123,946		
STATE TOTAL	42 3,795,644		

DIST OF COL

WASHINGTON

GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
ARMALY, MANSOUR F.....	OPHTHALMOLOGY.....	5T01 EY00047-11	37,215
ORGANIZATION TOTAL	1 37,215		
GEORGETOWN UNIVERSITY ZIP CODE 20007			
BELLANTI, JOSEPH A.....	DEVELOPMENTAL IMMUNOLOGY.....	5T01 HD00261-09	67,148
ROSE, JOHN C.....	VASCULAR CONTROL AND HYPERTENSION.....	1T32 HL07213-01A1	136,969
STANDAERT, FRANK G.....	NEUROPHARMACOLOGY.....	1T32 GM07443-01	63,995
ORGANIZATION TOTAL	3 268,112		
HOWARD UNIVERSITY ZIP CODE 20001			
CURRY, CHARLES L.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07302-01	28,958
ORGANIZATION TOTAL	1 28,958		
STATE TOTAL	5 334,285		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
FLORIDA			
GAINESVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611			
EITZMAN, DONALD V.....	GROWTH AND DEVELOPMENTAL PHYSIOLOGY.....	5T01 HD00054-16	67,948
ENNEKING, WILLIAM F.....	INVESTIGATIVE MUSCULOSKELETAL PATHOLOGY.....	5T32 AM07141-03	38,096
ENOCH, JAY M.....	VISUAL SCIENCES—CLINICAL.....	1T32 EY07046-01	32,548
FREGLY, MELVIN J.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07298-01	7,387
KAUFMAN, HERBERT E.....	OPHTHALMOLOGY.....	5T32 EY07012-03	38,729
MC GUIGAN, JAMES E.....	GASTROENTEROLOGY.....	1T32 AM07209-01A1	38,915
MOHAMMED, M HAMDI.....	RESTORATIVE BIOMATERIALS RESEARCH.....	5T32 DE07045-02	33,678
RENNERT, OWEN M.....	GENETICS, ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07164-02	36,839
SMITH, RICHARD T.....	CELL BIOLOGY AND IMMUNOBIOLOGY OF CANCER.....	5T32 CA09126-03	83,798
ORGANIZATION TOTAL	9	377,938	
MIAMI			
UNIVERSITY OF MIAMI ZIP CODE 33152			
ANDERSON, DOUGLAS R.....	OPHTHALMOLOGY.....	5T32 EY07021-03	62,034
BASSETT, ARTHUR L.....	CARDIOVASCULAR PHARMACOLOGY.....	5T32 HL07188-02	107,094
BLANK, HARVEY.....	DERMATOLOGY.....	5T32 AM07081-03	76,367
BRICKER, NEAL S.....	NEPHROLOGY.....	5T32 AM07205-02	37,891
LOEWENSTEIN, WERNER R.....	DEVELOPMENTAL NEUROSCIENCES.....	5T32 NS07044-03	165,295
MASSARO, DONALD J.....	LUNG BIOCHEMISTRY AND ANATOMY.....	1T32 HL07283-01	61,520
YUNIS, ADEL A.....	INTERNAL MEDICINE—HEMATOLOGY.....	5T32 AM07114-03	40,078
ORGANIZATION TOTAL	7	550,279	
MIAMI BEACH			
MOUNT SINAI MEDICAL CENTER ZIP CODE 33140			
SACKNER, MARVIN A.....	PULMONARY MEDICINE.....	5T01 HL05980-04	47,520
ORGANIZATION TOTAL	1	47,520	
TALLAHASSEE			
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306			
BEIDLER, LLOYD M.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07010-03	40,299
LEYSIEFFER, FREDERICK W.....	ENVIRONMENTAL HEALTH.....	5T32 ES07011-03	211,205
NAM, CHARLES B.....	POPULATION (MULTIDISCIPLINARY).....	1T32 HD07082-01	45,567
ORGANIZATION TOTAL	3	297,071	
STATE TOTAL	20	1,272,808	
GEORGIA			
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601			
GILES, NORMAN H.....	GENETICS.....	5T32 GM07103-03	78,543
PAYNE, WILLIAM J.....	MICROBIOLOGY.....	5T01 GM01968-09	17,270
ORGANIZATION TOTAL	2	95,813	
ATLANTA			
ATLANTA UNIVERSITY CENTER ZIP CODE 30310			
HARRIS, WINFRED.....	MARC HONORS RESEARCH.....	1T32 GM07666-01	187,268

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
GEORGIA—Con.			
ORGANIZATION TOTAL	1	187,268	
EMORY UNIVERSITY ZIP CODE 30322			
FREDERICKSON, EVAN L	ANESTHESIOLOGY.....	5T01 GM01508-12	34,409
MORAN, NEIL C.....	PHARMACOLOGY.....	5T01 GM00179-19	72,184
NAHMIA, ANDRE J.....	BIOLOGY OF ORO-FACIAL HERPES SIMPLEX VIRUS INFECTION.....	1T32 DE07074-01	37,251
NEILL, JIMMY D.....	GONADOTROPIC HORMONES: SECRETION AND FUNCTION.....	1T32 HD07121-01	31,068
NUTTER, DONALD O.....	MEDICAL SCIENTIST.....	1T32 GM07415-01	22,475
SHULMAN, NEIL B.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07305-01	55,021
ORGANIZATION TOTAL	6	252,408	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332			
BRUNJES, SHANNON D.....	BIOMEDICAL INFORMATION SCIENCE.....	5T15 LM07014-02	121,470
HOCHMAN, ROBERT F.....	DENTAL MATERIALS SCIENCE.....	5T32 DE07053-02	62,561
ORGANIZATION TOTAL	2	184,031	
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
MAHESH, VIRENDRA B.....	ENDOCRINE AND POPULATION ASPECTS OF REPRODUCTIVE BIOLOGY.....	5T01 HD00112-10	82,426
ORGANIZATION TOTAL	1	82,426	
STATE TOTAL	12	801,946	
HAWAII			
HONOLULU			
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822			
HUNT, JOHN A.....	HUMAN GENETICS.....	5T01 HD00400-04	91,819
ORGANIZATION TOTAL	1	91,819	
STATE TOTAL	1	91,819	
ILLINOIS			
CHICAGO			
INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH ZIP CODE 60611			
GREEN, DANIEL.....	SENIOR FOREIGN DENTAL SCIENTIST PROGRAM.....	5T01 DE00197-09	42,328
ORGANIZATION TOTAL	1	42,328	
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
FREINKEL, NORBERT.....	METABOLOGY.....	5T32 AM07169-02	67,077
GREENER, EVAN H.....	DENTAL MATERIALS SCIENCE.....	5T01 DE00125-15	60,607
GREENER, EVAN H.....	DENTAL MATERIALS SCIENCE.....	5T32 DE07042-02	66,444
LAUTENSCHLAGER, EUGENE P.....	BIOMEDICAL MATERIALS.....	1T32 AM07228-01	19,472
NARAHASKI, TOSHIO.....	PHARMACOLOGY.....	5T32 GM07263-03	73,441
PATTERSON, ROY.....	ALLERGIC AND IMMUNOLOGIC DISEASE.....	1T32 AI07075-01	39,205
STAMLER, JEREMIAH.....	CARDIOVASCULAR EPIDEMIOLOGY, BIOSTATISTICS, NUTRITION.....	5T32 HL07113-03	40,124
ORGANIZATION TOTAL	7	366,370	
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER ZIP CODE 60612			
TROBAUGH, FRANK E, JR.....	HEMATOLOGY.....	5T01 HL06021-04	62,713
ORGANIZATION TOTAL	1	62,713	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
ILLINOIS—Con.			
UNIVERSITY OF CHICAGO ZIP CODE 60637			
ARNASON, BARRY G.....	IMMUNOLOGY OF NERVOUS SYSTEM DISEASES.....	1T32 NS07113-01	56,234
BOGUE, DONALD J.....	SOCIAL SCIENCE ASPECTS OF FERTILITY AND FAMILY PLANNING.....	5T01 HD00276-08	111,664
CEITHAML, JOSEPH.....	MEDICAL SCIENTIST.....	5T32 GM07281-03	498,228
COWAN, JACK D.....	THEORETICAL BIOLOGY.....	5T01 GM02037-09	90,310
DE GROOT, LESLIE J.....	INTEGRATED CLINICAL AND BASIC ENDOCRINOLOGY.....	5T32 AM07011-03	70,851
DORFMAN, ALBERT.....	GROWTH AND DEVELOPMENT.....	5T32 HD07009-03	109,879
EPSTEIN, WOLFGANG.....	GENETICS AND REGULATION.....	5T32 GM07197-03	136,564
EPSTEIN, WOLFGANG.....	HUMAN AND BIOCHEMICAL GENETICS.....	1T32 GM07543-01	82,683
FOZZARD, HARRY A.....	MEDICAL CARDIOLOGY.....	5T01 HL05673-12	181,594
GETZ, GODFREY S.....	PATHOBIOLOGY.....	5T32 GM07190-03	126,080
GOLDBERG, LEON I.....	CLINICAL THERAPEUTICS.....	5T32 GM07019-03	71,033
HASELKORN, ROBERT.....	BIOPHYSICAL SCIENCES.....	5T01 GM00780-20	147,786
HELLER, ALFRED.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07151-03	204,646
JENSEN, ELWOOD V.....	EXPERIMENTAL ONCOLOGY.....	5T32 CA09183-03	102,868
KIEFF, ELLIOTT D.....	INFECTIOUS DISEASES.....	1T32 AI07099-01	137,933
KIRSTEN, WERNER H.....	EXPERIMENTAL AND ACADEMIC PATHOLOGY.....	5T01 GM00093-20	88,220
MC NEILL, DAVID.....	DEVELOPMENTAL PSYCHOLINGUISTICS.....	5T01 HD00419-04	58,508
NEUGARTEN, BERNICE L.....	ADULT DEVELOPMENT AND AGING.....	1T32 AG00039-01	90,457
POKORNY, JOEL M.....	ASSESSMENT OF COLOR VISION IN NORMAL/DISEASED EYES.....	5T32 EY07010-03	31,831
ROIZMAN, BERNARD.....	VIROLOGY.....	5T01 AI00238-14	104,271
ROSENBERG, IRWIN H.....	DIGESTIVE DISEASES.....	5T32 AM07074-03	58,587
SINGER, RONALD.....	ANATOMY.....	5T01 GM00094-19	89,333
STRAUSS, BERNARD S.....	GENETICS.....	5T01 GM00090-20	101,115
TAYLOR, EDWIN W.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07183-03	227,582
WISSLER, ROBERT W.....	CARDIOVASCULAR PATHOPHYSIOLOGY AND BIOCHEMISTRY.....	5T32 HL07237-02	124,321
YACHNIN, STANLEY.....	HEMATOLOGY/ONCOLOGY.....	5T32 AM07134-03	57,850
ORGANIZATION TOTAL	26	3,160,428	
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
GOLDBERG, MORTON F.....	OPHTHALMOLOGY.....	1T32 EY07038-01	80,187
NYHUS, LLOYD M.....	ACADEMIC SURGERY.....	5T01 GM01930-09	80,725
ROSEN, KENNETH M.....	CARDIOLOGY.....	5T01 HL05879-08	97,586
SCHULMAN, MARTIN P.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07115-03	55,548
ORGANIZATION TOTAL	4	314,046	
EVANSTON			
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
CANTER, GERALD J.....	SPEECH AND LANGUAGE PATHOLOGY.....	1T32 NS07100-01	64,265
ELLIOTT, LOIS L.....	NEUROBIOLOGY OF HEARING.....	1T32 NS07108-01	59,841
JACOBS, JOHN E.....	BIOMEDICAL ENGINEERING.....	1T32 GM07350-01A1	91,049
SHEMIN, DAVID.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07291-03	100,749
ORGANIZATION TOTAL	4	315,904	
MAYWOOD			
LOYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153			
MC DONALD, HUGH J.....	CLINICAL CHEMISTRY.....	5T01 GM02122-04	96,540
ORGANIZATION TOTAL	1	96,540	
URBANA			
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801			
COHEN, LESLIE B.....	NORMAL AND RETARDED DEVELOPMENT.....	5T01 HD00244-09	126,964
DUCOFF, HOWARD S.....	RADIATION BIOPHYSICS & BIOENGINEERING IN ONCOLOGY.....	5T32 CA09067-03	129,859
DUNN, FLOYD.....	BIOENGINEERING.....	5T01 GM02271-04	27,356

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
ILLINOIS—Con.			
DZIUK, PHILIP J.....	REPRODUCTIVE BIOLOGY.....	5T32 HD07028-02	84,758
EBREY, THOMAS G.....	PHYSIOLOGY AND BIOCHEMISTRY OF VISION.....	5T32 EY07005-03	45,568
FRIEDMAN, STANLEY.....	PHYSIOLOGY AND TOXICOLOGY OF INSECTS.....	5T01 GM01076-15	45,114
FRIEDMAN, STANLEY.....	COLLABORATIVE PROGRAMS IN PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07110-03	14,211
HAGER, LOWELL P.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07283-03	362,624
HEATH, JAMES E.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07143-03	68,097
LEVY, ALLAN H.....	COMPUTER SCIENCES (PHYSICIAN).....	1T15 LM07011-01	105,646
METCALF, ROBERT L.....	ENVIRONMENTAL STUDIES.....	5T32 ES07001-03	92,060
ORGANIZATION TOTAL	11	1,102,257	
STATE TOTAL	55	5,460,586	
INDIANA			
BLOOMINGTON			
INDIANA UNIVERSITY AT BLOOMINGTON		ZIP CODE 47401	
PUTNAM, FRANK W.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07227-03	111,309
RHOADES, MARCUS M.....	GENETICS.....	5T01 GM00082-19	109,374
ORGANIZATION TOTAL	2	220,683	
INDIANAPOLIS			
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS		ZIP CODE 46202	
BAEHNER, ROBERT L.....	IMMUNOLOGIC AND MORPHOLOGIC STUDY OF PHAGOCYTES.....	5T32 AM07193-02	59,769
FISCH, CHARLES.....	CARDIOVASCULAR MEDICINE.....	5T32 HL07182-02	78,707
FORNEY, ROBERT B.....	TOXICOLOGY.....	5T32 GM07097-03	12,342
MERRITT, A DONALD.....	MEDICAL GENETICS.....	5T01 GM01056-15	82,515
PALMER, CATHERINE G.....	DENTAL GENETICS.....	5T01 DE00119-15	59,916
WEINBERGER, MYRON H.....	HYPERTENSION.....	1T32 HL07181-01A1	58,587
ORGANIZATION TOTAL	6	351,836	
NOTRE DAME			
UNIVERSITY OF NOTRE DAME		ZIP CODE 46556	
BORKOWSKI, JOHN G.....	MENTAL RETARDATION.....	5T01 HD00329-04	53,861
POLLARD, MORRIS.....	TUMOR BIOLOGY IN GERMFREE ANIMALS.....	5T32 CA09021-03	16,308
WEINSTEIN, PAUL P.....	EXPERIMENTAL PARASITOLOGY AND VECTOR BIOLOGY.....	5T32 AI07030-02	80,517
ORGANIZATION TOTAL	3	150,686	
WEST LAFAYETTE			
PURDUE UNIVERSITY		ZIP CODE 47907	
ALTMAN, JOSEPH.....	RETARDATION OF NEURAL AND BEHAVIORAL DEVELOPMENT.....	5T01 HD00427-04	94,293
PAK, WILLIAM L.....	VISUAL PHYSIOLOGY AND CHEMISTRY.....	5T32 EY07008-03	70,232
TESSMAN, IRWIN.....	MOLECULAR MECHANISMS OF CELL FUNCTIONS.....	5T32 GM07211-03	147,862
UMBARGER, H EDWIN.....	REGULATION OF GENE EXPRESSION.....	5T32 GM07076-03	95,126
YIM, GEORGE K.....	PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07095-03	49,234
ORGANIZATION TOTAL	5	456,747	
STATE TOTAL	16	1,179,952	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
IOWA			
IOWA CITY			
UNIVERSITY OF IOWA ZIP CODE 52242			
ABBOUD, FRANCOIS M.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07121-03	244,523
BERG, JOHN W.....	CANCER EPIDEMIOLOGY.....	5T32 CA09000-03	33,311
BERG, JOHN W.....	CANCER EPIDEMIOLOGY.....	5T32 CA09027-03	22,777
CHALKLEY, ROGER.....	MOLECULAR BIOLOGY OF TUMOR CELLS.....	5T32 CA09119-03	113,684
CHRISTENSEN, JAMES.....	GASTROENTEROLOGY.....	5T32 AM07072-03	52,371
CONWAY, THOMAS W.....	GENETICS.....	5T32 GM07091-03	63,503
FELLOWS, ROBERT E.....	MEDICAL SCIENTIST.....	1T32 GM07337-01	28,849
GRANNER, DARYL K.....	DIABETES AND ENDOCRINOLOGY.....	5T32 AM07018-03	58,453
LONG, JOHN P.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07069-03	140,383
MACKENZIE, IAN C.....	BASIC RESEARCH IN PERIODONTOLOGY.....	5T32 DE07007-02	55,516
MENNINGER, JOHN R.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07228-03	80,825
OSBORNE, JAMES W.....	BIOMEDICAL RADIOLOGY.....	5T32 CA09125-03	57,973
PONSETI, IGNACIO V.....	OSTEOARTHROPATHY.....	5T32 AM07075-03	58,136
ROBERTS, ROBERT J.....	CLINICAL PHARMACOLOGY AND TOXICOLOGY.....	1T32 GM07442-01	41,829
STEINMETZ, PHILIP R.....	EPITHELIAL TRANSPORT AND RENAL PATHOPHYSIOLOGY.....	1T32 AM07140-01	37,851
WILLIAMS, TERENCE H.....	ANATOMICAL SCIENCES.....	5T01 GM00148-19	36,748
ORGANIZATION TOTAL	16	1,126,732	
STATE TOTAL	16	1,126,732	
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
AZARNOFF, DANIEL L.....	CLINICAL PHARMACOLOGY.....	1T32 GM07041-01	31,968
GRANTHAM, JARED J.....	IN VITRO STUDIES OF ISOLATED KIDNEY TUBULE PHYSIOLOGY.....	5T32 AM07065-03	37,795
RUTH, WILLIAM E.....	PULMONARY MEDICINE.....	5T01 HL05991-04	14,676
WALASZEK, EDWARD J.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07044-03	70,430
ORGANIZATION TOTAL	4	154,869	
LAWRENCE			
UNIVERSITY OF KANSAS ZIP CODE 66045			
GIRARDEAU, FREDERIC L.....	MENTAL RETARDATION AND OTHER DEVELOPMENTAL DISABILITIES.....	5T32 HD07066-02	149,998
HOROWITZ, FRANCES D.....	DEVELOPMENT AND CHILD PSYCHOLOGY.....	5T01 HD00247-09	72,299
MITSCHER, LESTER A.....	MEDICINAL CHEMISTRY.....	5T01 GM01341-12	123,226
STERNSON, LARRY A.....	CLINICAL DRUG ANALYSIS OF ANTICANCER AGENTS.....	5T32 CA09242-02	75,071
ORGANIZATION TOTAL	4	420,594	
MANHATTAN			
KANSAS STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE ZIP CODE 66506			
PITTINGER, THAD H.....	CELLULAR AND DEVELOPMENTAL BIOLOGY.....	5T01 HD00422-04	100,897
ORGANIZATION TOTAL	1	100,897	
STATE TOTAL	9	676,360	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
KENTUCKY			
LEXINGTON			
UNIVERSITY OF KENTUCKY ZIP CODE 40506			
MARUYAMA, YOSH.....	RADIATION ONCOLOGY.....	5T32 CA09040-02	35,929
ORGANIZATION TOTAL	1 35,929		
LOUISVILLE			
UNIVERSITY OF LOUISVILLE ZIP CODE 40208			
POTTS, ALBERT M.....	BASIC SCIENCES.....	1T32 EY07049-01	36,020
ORGANIZATION TOTAL	1 36,020		
STATE TOTAL	2 71,949		
LOUISIANA			
COVINGTON			
TULANE UNIVERSITY ZIP CODE 70433			
ROBERTS, JAMES A.....	UROLOGY.....	5T32 AM07212-02	19,482
ORGANIZATION TOTAL	1 19,482		
NEW ORLEANS			
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119			
BERLIN, CHARLES I.....	AUDITORY PHYSIOLOGY AND ANATOMY.....	1T32 NS07058-01A1	57,645
SPITZER, JOHN J.....	METABOLIC AND MICROBIAL STUDIES IN TRAUMA AND BURNS.....	5T32 GM07029-03	34,313
SPITZER, JOHN J.....	CARDIOVASCULAR DYNAMICS AND METABOLISM.....	5T32 HL07098-03	110,313
ORGANIZATION TOTAL	3 202,271		
TULANE UNIVERSITY ZIP CODE 70118			
EPPS, ANNA C.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07299-01	25,508
FISHER, JAMES W.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07177-03	68,412
FRIEDMAN, LORRAINE.....	MEDICAL MYCOLOGY.....	5T01 AI00003-19	53,429
ZISKIND, MORTON M.....	CLINICAL PULMONARY PHYSIOLOGY AND PULMONARY DISEASES.....	5T01 HL05839-09	88,770
ORGANIZATION TOTAL	4 236,119		
STATE TOTAL	8 457,872		
MAINE			
BAR HARBOR			
JACKSON LABORATORY ZIP CODE 04609			
WHITTEN, WESLEY K.....	REPRODUCTIVE BIOLOGY.....	1T32 HD07065-01	47,704
ORGANIZATION TOTAL	1 47,704		
STATE TOTAL	1 47,704		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MARYLAND			
BALTIMORE			
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218 -			
AUGUST, J THOMAS.....	PHARMACOLOGY.....	5T01 GM01183-14	76,971
BALL, WILMOT C, JR.....	PULMONARY DISEASES AND PHYSIOLOGY.....	5T01 HL05885-07	63,477
BANG, FREDERIK B.....	PARASITOLOGY AND MEDICAL ENTOMOLOGY.....	5T01 AI00020-20	84,962
BEER, MICHAEL.....	CELLULAR AND MOLECULAR BIOPHYSICS.....	5T32 GM07231-03	149,781
CONLEY, C LOCKARD.....	HEMATOLOGY.....	5T32 HL07143-03	18,601
GANN, DONALD S.....	HORMONAL AND CARDIOVASCULAR RESPONSE TO INJURY.....	5T32 GM07031-03	22,147
GANN, DONALD S.....	BIOMEDICAL ENGINEERING.....	5T32 GM07057-03	95,978
GORDIS, LEON.....	CARDIOVASCULAR EPIDEMIOLOGY.....	5T32 HL07024-03	114,699
GREEN, LAWRENCE W.....	BEHAVIORAL RESEARCH IN CARDIOVASCULAR RISK REDUCTION.....	5T32 HL07180-02	98,483
HARRINGTON, WILLIAM F.....	CHEMICAL BIOLOGY.....	5T01 GM00057-20	217,218
HARRINGTON, WILLIAM F.....	MOLECULAR AND CELLULAR ASPECTS OF DEVELOPMENT.....	1T32 HD07103-01	85,699
HENDRIX, THOMAS R.....	DIGESTIVE DISEASES.....	5T32 AM07192-02	56,345
HUGHES, WALTER T, JR.....	INFECTIOUS DISEASES—PEDIATRIC.....	5T01 AI00461-05	77,221
JOHNSON, RICHARD T.....	NEUROVIROLOGY.....	5T32 NS07000-03	99,033
KIDD, LANGFORD.....	PEDIATRIC CARDIOLOGY.....	5T01 HL06005-04	103,259
LENNARZ, WILLIAM J.....	BIOCHEMISTRY.....	5T01 GM00184-19	150,859
LENNARZ, WILLIAM J.....	BIOCHEMISTRY, CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07445-01	40,283
LILIENFELD, ABRAHAM M.....	CANCER EPIDEMIOLOGY.....	5T32 CA09002-03	117,064
MARGOLIS, SIMEON.....	ENDOCRINOLOGY, DIABETES AND METABOLOGY.....	5T32 AM07109-03	66,280
MAUMENEE, A EDWARD.....	OPHTHALMOLOGY.....	5T01 EY00025-19	119,466
MIGEON, CLAUDE J.....	PEDIATRIC ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07116-03	37,312
MONEY, JOHN.....	EPHEBOLOGY AND EPHEBIATRICS.....	1T32 HD07111-01	70,187
MURPHY, EDMOND A.....	MEDICAL GENETICS.....	1T32 GM07471-01	115,233
NATHANS, DANIEL.....	VIRAL CARCINOGENESIS.....	5T32 CA09139-03	109,334
NATHANSON, NEAL.....	NEUROVIROLOGY.....	5T32 NS07077-02	37,282
NORMAN, PHILIP S.....	BASIC AND CLINICAL IMMUNOLOGY.....	5T32 AI07056-02	120,517
ROBINSON, DAVID A.....	VISUAL SCIENCES—MULTIDISCIPLINARY.....	1T32 EY07047-01	94,797
RUBIN, ROBERT J.....	ENVIRONMENTAL TOXICOLOGY.....	3T01 ES00034-14S1	45,281
RUBIN, ROBERT J.....	ENVIRONMENTAL TOXICOLOGY.....	5T01 ES00034-15	213,586
RUBIN, ROBERT J.....	ENVIRONMENTAL BIOLOGY AND TOXICOLOGY.....	1T32 ES07067-01	219,061
STRANDBERG, JOHN D.....	LABORATORY ANIMAL MEDICINE AND PATHOLOGY.....	1T32 RR07002-01	56,367
TALALAY, PAUL.....	MEDICAL SCIENTIST.....	5T32 GM07309-03	211,860
TALAMO, RICHARD C.....	PEDIATRIC ALLERGY AND IMMUNOLOGY.....	5T32 AI07007-03	34,395
TS'O, PAUL O.....	MOLECULAR/CELLULAR STUDIES OF CHEMICAL CARCINOGENESIS.....	5T32 CA09110-03	104,933
WALKER, W GORDON.....	NUTRITIONAL AND METABOLIC ASPECTS OF RENAL DISEASE.....	5T32 AM07145-03	67,096
WEISFELDT, MYRON L.....	PATHOPHYSIOLOGY OF MYOCARDIAL DISEASES.....	5T32 HL07227-02	89,385
ZUIDEMA, GEORGE D.....	SURGERY.....	5T01 GM01541-12	46,425
ORGANIZATION TOTAL	37	3,530,877	
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
BARRACLOUGH, CHARLES A.....	REPRODUCTIVE ENDOCRINOLOGY.....	5T01 HD00435-04	79,335
WISSEMAN, CHARLES L, JR.....	VIROLOGY AND RICKETTSIOLOGY.....	5T01 AI00016-19	42,518
ORGANIZATION TOTAL	2	121,853	
ROCKVILLE			
TISSUE CULTURE ASSOCIATION ZIP CODE 20852			
CHAPPLE, PAUL J.....	CELLULAR AGING: RELATION OF IN VITRO TO IN VIVO AGING.....	1T32 AG00043-01	44,768
ORGANIZATION TOTAL	1	44,768	
STATE TOTAL	40	3,697,498	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS			
AMHERST			
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE 01002			
BLACK, DONALD L.....	MAMMALIAN REPRODUCTION.....	5T01 HD00204-09	51,326
HONIGBERG, BRONISLAW M.....	EXPERIMENTAL PARASITOLOGY.....	1T32 AI07109-01	51,388
WESTHEAD, EDWARD W, JR.....	PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY.....	1T32 GM07473-01	42,815
ORGANIZATION TOTAL 3	145,529		
BOSTON			
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
COTRAN, RAMZI S.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07066-03	82,576
INGRAM, ROLAND H, JR.....	RESPIRATORY MEDICINE.....	5T32 HL07010-03	51,771
MERRILL, JOHN P.....	NEPHROLOGY.....	1T32 AM07241-01	40,482
TRIER, JERRY S.....	ALIMENTOLOGY.....	5T32 AM07121-03	60,192
WILLIAMS, GORDON H.....	HYPERTENSION.....	5T32 HL07236-02	81,217
ORGANIZATION TOTAL 5	316,238		
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
AUSTEN, K FRANK.....	IMMUNOLOGIC BASIS OF RESISTANCE AND HYPERSENSITIVITY.....	5T01 AI00366-09	102,954
AUSTEN, K FRANK.....	MECHANISMS OF ARTHRITIC AND DERMATOLOGIC DISORDERS.....	5T32 AM07031-03	58,190
ORGANIZATION TOTAL 2	161,144		
BETH ISRAEL HOSPITAL ZIP CODE 02215			
ABELMANN, WALTER H.....	MEDICAL CARDIOLOGY.....	5T01 HL05909-07	101,243
EPSTEIN, FRANKLIN H.....	KIDNEY AND MEMBRANE TRANSPORT AND METABOLISM.....	1T32 AM07199-01A1	39,353
FREIMAN, DAVID G.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00568-16	18,677
GLICKMAN, ROBERT M.....	GASTROENTEROLOGY.....	5T32 AM07183-02	39,057
ROBINSON, STEPHEN H.....	HEMATOLOGY.....	5T32 AM07026-03	53,991
SILEN, WILLIAM.....	ACADEMIC SURGERY.....	5T01 GM02019-09	74,579
ORGANIZATION TOTAL 6	326,900		
BOSTON BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 02114			
GERGELY, JOHN.....	ENERGY METABOLISM IN MUSCLE.....	3T01 HL05811-09S1	19,440
GERGELY, JOHN.....	ENERGY METABOLISM OF CARDIAC AND SKELETAL MUSCLE.....	1T32 HL07266-01	37,579
ORGANIZATION TOTAL 2	57,019		
BOSTON UNIVERSITY ZIP CODE 02215			
BRODY, JEROME S.....	PULMONARY BIOCHEMISTRY AND CELL BIOLOGY.....	5T32 HL07035-03	154,500
CHOBANIAN, ARAM V.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07308-01	18,692
COHEN, ALAN S.....	RHEUMATOLOGY.....	5T32 AM07014-03	58,036
EGDAHL, RICHARD H.....	ACADEMIC SURGERY.....	5T01 GM01498-12	114,704
FRANZBLAU, CARL.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07052-03	61,445
HOOD, WILLIAM B, JR.....	BASIC SCIENCE CARDIOVASOLOGY.....	5T32 HL07224-02	118,097
LEIBOWITZ, HOWARD M.....	OPHTHALMOLOGY.....	5T01 EY00042-12	56,716
LEVINSKY, NORMAN G.....	NEPHROLOGY.....	5T32 AM07053-03	76,164
MELBY, JAMES C.....	ENDOCRINE AND METABOLIC RESEARCH.....	5T32 AM07201-02	37,525
PETERS, ALAN.....	ANATOMY.....	5T01 GM01979-08	47,720
SINEX, F MAROTT.....	BIOCHEMISTRY OF AGING.....	5T01 AG00020-09	92,136
SMALL, DONALD M.....	LIPOPROTEINS & ATHEROSCLEROTIC LESIONS PHYSICAL CHEM.....	1T32 HL07291-01	50,116
ORGANIZATION TOTAL 12	885,851		
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
NADAS, ALEXANDER S.....	PEDIATRIC CARDIOLOGY.....	5T01 HL05855-08	148,236
NATHAN, DAVID G.....	HEMATOLOGY.....	5T32 HL07146-03	10,192
ORGANIZATION TOTAL 2	158,428		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
DOHLMAN, CLAES H.....	PHYSIOLOGY AND BIOCHEMISTRY OF CORNEAL DISEASE.....	5T32 EY07018-03	41,128
SCHEPENS, CHARLES L.....	VISUAL SCIENCES (INTERDISCIPLINARY).....	1T32 EY07028-01	55,553
ORGANIZATION TOTAL	2 96,681		
HARVARD UNIVERSITY ZIP CODE 02138			
ABRAMS, HERBERT L.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01910-09	108,691
ABRAMS, HERBERT L.....	CLINICAL CARDIOVASCULAR RADIOLOGY.....	5T01 HL05832-09	32,328
BECKWITH, JONATHAN R.....	GENE EXPRESSION REGULATION IN PROKARYOTES & EUKARYOTES.....	5T32 GM07196-03	186,006
BENACERRAF, BARUJ.....	IMMUNOLOGY.....	5T32 CA09130-03	170,880
BJARNGARD, BENGT E.....	MEDICAL RADIOLOGICAL PHYSICS.....	5T32 CA09088-03	97,390
BUNN, H FRANKLIN.....	HEMATOLOGY.....	5T32 HL07142-03	54,264
ERBE, RICHARD W.....	GENETICS.....	5T01 GM02249-05	56,857
FISCHBACH, GERALD D.....	DEVELOPMENTAL NEUROBIOLOGY.....	5T32 NS07009-03	112,207
FITZPATRICK, THOMAS B.....	DERMATOLOGY.....	5T32 AM07098-03	55,626
GEYER, ROBERT P.....	NUTRITION IN CARDIOVASCULAR DISEASES.....	5T32 HL07064-03	12,282
GLIMCHER, MELVIN J.....	ACADEMIC ORTHOPEDICS.....	1T32 AM07112-01	39,057
GOLDBERG, IRVING H.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07306-03	98,957
GOLDHABER, PAUL.....	PERIODONTOLOGY AND ORAL MEDICINE—CLINICAL.....	5T01 DE00111-13	8,168
GOLDHABER, PAUL.....	PERIODONTIA.....	5T32 DE07010-03	121,391
HARGREAVES, J A.....	PEDIATRIC DENTISTRY—CLINICAL.....	5T01 DE00112-14	51,616
HUANG, ALICE S.....	VIRUS-HOST INTERACTIONS IN CANCER.....	5T32 CA09031-03	162,391
HUTCHISON, GEORGE B.....	CANCER EPIDEMIOLOGY.....	5T32 CA09001-03	84,800
JONES, T CARL.....	VETERINARY AND COMPARATIVE PATHOLOGY.....	5T32 RR07000-03	59,955
KARNOVSKY, MORRIS J.....	PATHOLOGY.....	5T01 GM01235-13	47,442
KARNOVSKY, MORRIS J.....	CELLULAR AND DEVELOPMENTAL BIOLOGY.....	5T32 GM07226-03	112,195
LITTLE, JOHN B.....	RADIATION BIOLOGY.....	5T32 CA09078-03	176,234
LOWN, BERNARD.....	CLINICAL AND COMMUNITY CARDIOLOGY.....	5T01 HL05242-19	116,732
MEAD, JERE.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07118-03	139,385
MONSON, RICHARD R.....	ENVIRONMENTAL EPIDEMIOLOGY.....	5T32 ES07069-01	103,893
MOORREES, COENRAAD F.....	RESEARCH IN CRANIOFACIAL ANOMALIES.....	5T32 DE07008-02	130,236
MURRAY, EDWARD S.....	RICKETTSIOLOGY AND VIROLOGY.....	5T01 AI00014-19	82,594
O'CONNOR, NICHOLAS E.....	TRAUMA AND BURN RESEARCH.....	1T32 GM07560-01	40,537
POTTER, DAVID D.....	NEUROBIOLOGY.....	1T32 NS07112-01	138,148
SHKLAR, GERALD.....	ORAL CANCER—CLINICAL.....	5T12 CA08159-04	42,276
SMITH, THOMAS W.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07049-03	161,759
SOLOMON, ARTHUR K.....	BIOPHYSICS.....	5T01 GM00782-19	115,346
SPEIZER, FRANK E.....	CLINICAL EPIDEMIOLOGY OF HEART AND LUNG DISEASE.....	5T01 HL05998-04	120,175
STARE, FREDERICK J.....	EXPERIMENTAL, MEDICAL, AND PUBLIC HEALTH NUTRITION.....	5T01 GM00333-18	100,348
SWARTZ, MORTON N.....	INFECTIOUS DISEASE AND BASIC MICROBIOLOGICAL MECHANISMS.....	5T32 AI07061-02	112,645
UNANUE, EMIL R.....	IMMUNOLOGY.....	5T32 CA09141-03	154,368
VALLEE, BERT L.....	MEDICAL SCIENTIST.....	5T05 GM02220-04	242,932
WELLER, THOMAS H.....	TROPICAL MEDICINE.....	5T01 AI00177-14	59,394
WIESEL, TORSTEN N.....	BASIC NEUROBIOLOGICAL SCIENCES.....	1T32 EY07042-01	122,638
WILSON, T HASTINGS.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07258-03	29,745
ORGANIZATION TOTAL	39 3,861,888		
MUSLIM DIABETES FOUNDATION ZIP CODE 02215			
CAHILL, GEORGE F, JR.....	DIABETES AND METABOLISM.....	1T32 AM07260-01	55,568
ORGANIZATION TOTAL	1 55,568		
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE 02114			
DOHLMAN, CLAES H.....	OPHTHALMOLOGY.....	5T01 EY00089-04	133,058
ORGANIZATION TOTAL	1 133,058		
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
ALPERT, NATHANIEL M.....	RADIOLOGICAL PHYSICS.....	5T32 CA09076-03	78,952
BLOCH, KURT J.....	IMMUNOLOGY AND IMMUNOPATHOLOGY.....	5T32 AI07040-02	81,332

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
BURKE, JOHN F.....	RESEARCH IN BURNS AND TRAUMA.....	5T32 GM07035-03	56,402
ERBE, RICHARD W.....	DEVELOPMENTAL MEDICINE.....	5T32 HD07092-02	136,951
HABER, EDGAR.....	CARDIOLOGY—MULTIDISCIPLINARY.....	5T32 HL07208-02	77,539
ISSELBACHER, KURT J.....	GASTROINTESTINAL DISEASE.....	5T32 AM07191-02	59,317
KAZEMI, HOMAYOUN.....	PULMONARY MEDICINE.....	5T01 HL05767-08	92,922
KRANE, STEPHEN M.....	CONNECTIVE TISSUE STRUCTURE, FUNCTION AND DISEASE.....	1T32 AM07258-01	39,715
POTTS, JOHN T, JR.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07028-03	78,114
RICHARDSON, EDWARD P, JR.....	NEUROPATHOLOGY.....	5T32 NS07069-02	19,710
RUSSELL, PAUL S.....	IMMUNOGENETICS, TRANSPLANTATION, AND TUMOR IMMUNOLOGY.....	5T32 AI07027-02	85,026
ORGANIZATION TOTAL	11	805,980	
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111			
COHEN, JORDAN J.....	RENAL AND ELECTROLYTE PHYSIOLOGY.....	5T32 AM07078-02	38,948
FANBURG, BARRY L.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07053-03	41,769
KAPLAN, MARSHALL M.....	BIOCHEMISTRY AND IMMUNOLOGY OF DIGESTIVE DISEASES.....	5T32 AM07024-02	38,872
NECHELES, THOMAS F.....	CHEMOTHERAPY OF CHILDHOOD MALIGNANCIES.....	5T32 CA09077-03	56,611
REICHLIN, SEYMOUR.....	CLINICAL AND BASIC NEUROENDOCRINOLOGY.....	5T32 AM07039-03	78,114
SCHWARTZ, BERNARD.....	VISUAL SCIENCES.....	1T32 EY07045-01	40,247
ORGANIZATION TOTAL	6	294,561	
NORTHEASTERN UNIVERSITY ZIP CODE 02115			
ARMINGTON, JOHN C.....	CORRELATIVE METHODS FOR STUDING VISUAL FUNCTION.....	5T32 EY07036-02	40,253
ORGANIZATION TOTAL	1	40,253	
SIDNEY FARBER CANCER INSTITUTE ZIP CODE 02115			
FREI, EMIL, III.....	CANCER CHEMOTHERAPY.....	5T32 CA09172-03	210,168
ORGANIZATION TOTAL	1	210,168	
ST. ELIZABETH'S HOSPITAL OF BOSTON ZIP CODE 02135			
EBBE, SHIRLEY N.....	HEMATOLOGY.....	5T01 HL05600-13	57,150
ORGANIZATION TOTAL	1	57,150	
TUFTS UNIVERSITY ZIP CODE 02111			
PARK, JAMES T.....	MOLECULAR BIOLOGY OF BASIC CELL FUNCTIONS.....	5T32 GM07310-03	62,914
WALLACH, DONALD F.....	MEMBRANE BIOLOGY AND MEMBRANE PATHOLOGY.....	5T32 GM07027-03	47,115
ORGANIZATION TOTAL	2	110,029	
TUFTS-NEW ENGLAND MEDICAL CENTER ZIP CODE 02111			
PIRO, ANTHONY J.....	RADIATION ONCOLOGY.....	5T32 CA09045-03	93,871
ORGANIZATION TOTAL	1	93,871	
CAMBRIDGE			
HARVARD UNIVERSITY ZIP CODE 02138			
DOWLING, JOHN E.....	MULTIBIOLOGICAL SCIENCES.....	5T01 GM00036-20	137,961
GUIDOTTI, A GUIDO.....	BIOCHEMISTRY AND MOLECULAR BIOLOGY.....	5T01 GM00138-20	191,318
JENKINS, FARISH A, JR.....	BIOLOGY OF THE MUSCULOSKELETAL SYSTEM.....	5T32 GM07117-03	59,413
ORGANIZATION TOTAL	3	388,692	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
BRAIDA, LOUIS D.....	AUDITORY PERCEPTION IN NORMAL AND IMPAIRED LISTENERS.....	1T32 NS07099-01	33,580
BROWN, GENE M.....	BIOLOGICAL SCIENCES.....	5T32 GM07287-03	633,402
BUCHI, GEORGE H.....	CARCINOGENESIS AND DRUG DEVELOPMENT.....	5T32 CA09112-03	271,009
HELD, RICHARD M.....	STUDIES OF INTEGRATIVE SYSTEMS.....	1T32 GM07484-01	125,417
LETTVIN, JEROME Y.....	PHYSIOLOGY OF VISION.....	5T01 EY00090-04	95,389
MILLER, SANFORD A.....	ORAL SCIENCE, BIOCHEMISTRY & METABOLISM.....	5T01 DE00105-15	27,362
MUNRO, HAMISH N.....	BASIC NUTRITION.....	5T32 AM07095-03	74,912
PEAKE, WILLIAM T.....	AUDITORY PHYSIOLOGY.....	1T32 NS07047-01A1	59,645

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
SCRIMSHAW, NEVIN S.....	CLINICAL NUTRITION FOR PHYSICIANS.....	5T32 AM07070-02	78,528
SHAPIRO, ASCHER H.....	BIOMEDICAL ENGINEERING.....	5T01 GM02136-08	66,042
SIEBERT, WILLIAM M.....	SYSTEM AND INTEGRATIVE BIOLOGY.....	5T32 GM07301-03	87,485
STEVENS, KENNETH N.....	SPEECH SCIENCES.....	5T32 NS07040-03	51,355
WOGAN, GERALD M.....	ENVIRONMENTAL AND FOOD TOXICOLOGY.....	5T32 ES07020-03	150,156
ORGANIZATION TOTAL 13	1,754,286		
WALTHAM			
BRANDEIS UNIVERSITY ZIP CODE 02154			
HALVORSON, HARLYN O.....	GENETIC AND BIOCHEMICAL MECHANISMS OF REGULATION.....	5T32 GM07122-03	74,478
JENCKS, WILLIAM P.....	BASIC BIOMEDICAL RESEARCH AWARD.....	1T32 AM07251-01	39,057
LEVINE, LAWRENCE.....	BIOCHEMISTRY.....	5T01 GM00212-19	167,020
MACEACHRON, ANN E.....	MENTAL RETARDATION.....	5T01 HD00146-09	113,077
NISONOFF, ALFRED.....	INVESTIGATION OF MECHANISMS IN THE IMMUNE RESPONSE.....	1T32 AI07069-01	50,354
ORGANIZATION TOTAL 5	443,986		
EUNICE KENNEDY SHRIVER CENTER FOR MENTAL RETARDATION ZIP CODE 02154			
MILUNSKY, AUBREY.....	MEDICAL GENETICS.....	5T32 GM07015-03	50,277
ORGANIZATION TOTAL 1	50,277		
WOODS HOLE			
MARINE BIOLOGICAL LABORATORY ZIP CODE 02543			
EBERT, JAMES D.....	PHYSIOLOGY AND MOLECULAR BIOLOGY.....	5T01 GM00265-18	90,185
EBERT, JAMES D.....	EMBRYOLOGY.....	1T32 HD07098-01	55,448
ORGANIZATION TOTAL 2	145,633		
STATE TOTAL 122	10,593,186		
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48104			
ALPERN, MATHEW.....	VISION RESEARCH.....	3T32 EY07022-02S1	13,534
ALPERN, MATHEW.....	VISION RESEARCH.....	5T32 EY07022-03	103,591
BEIERWALTES, WILLIAM H.....	NUCLEAR MEDICINE.....	5T32 CA09015-03	82,849
BERNSTEIN, ISADORE A.....	ENVIRONMENTAL BIOLOGY: EPIDERMAL NEO- AND HYPERPLASIA.....	5T32 AM07236-02	32,400
BOLE, GILES G, JR.....	ARTHRITIS RESEARCH SCIENTISTS.....	5T32 AM07080-02	38,977
BURCKHALTER, JOSEPH H.....	MEDICINAL CHEMISTRY.....	5T01 GM02010-09	36,406
COHEN, BENNETT J.....	LABORATORY ANIMAL SCIENCE.....	3T01 RR05001-14S1	864
COHEN, BENNETT J.....	LABORATORY ANIMAL SCIENCE AND MEDICINE.....	1T32 RR07008-01	76,641
COOMBS, CLYDE H.....	MATHEMATICAL PSYCHOLOGY.....	5T01 GM01231-14	95,820
COON, MINOR J.....	BIOCHEMISTRY.....	5T01 GM00187-19	132,684
CRAIG, ROBERT G.....	RESTORATIVE DENTAL MATERIALS.....	5T32 DE07057-02	92,960
FAJANS, STEFAN S.....	ENDOCRINOLOGY AND METABOLISM.....	1T32 AM07245-01	37,134
HAGEN, JOHN W.....	DEVELOPMENTAL PSYCHOLOGY.....	1T32 HD07109-01	118,150
HAWKINS, JOSEPH E, JR.....	AUDITORY AND VESTIBULAR MECHANISMS AND DISTURBANCES.....	1T32 NS07106-01	56,384
JACQUEZ, JOHN A.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07106-03	165,090
LA DU, BERT.....	PHARMACOLOGY.....	5T01 GM00198-19	119,699
LEE, RONALD D.....	ECONOMIC DEMOGRAPHY.....	5T32 HD07060-02	111,682
LEVINE, MYRON.....	MOLECULAR AND CELL BIOLOGY—HEALTH SCIENCES.....	5T32 GM07315-03	126,816
MIDGLEY, A REES, JR.....	REPRODUCTIVE ENDOCRINOLOGY.....	3T32 HD07048-02S1	32,741
MIDGLEY, A REES, JR.....	REPRODUCTIVE ENDOCRINOLOGY.....	5T32 HD07048-03	117,094
NEEL, JAMES V.....	GENETICS.....	5T01 GM00071-20	178,574

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MICHIGAN—Con.			
NEEL, JAMES V.....	GENETICS.....	5T32 GM07123-03	93,632
SCHORK, MICHAEL A.....	HEART AND VASCULAR DISEASES—BIOSTATISTICAL.....	5T32 HL07082-02	40,509
STRIFFLER, DAVID F.....	ORAL EPIDEMIOLOGY.....	5T01 DE00287-09	40,804
VOORHEES, JOHN J.....	CELL AND MOLECULAR DERMATOLOGY.....	1T32 AM07197-01A1	16,470
ORGANIZATION TOTAL	25 1,961,505		
DETROIT			
WAYNE STATE UNIVERSITY ZIP CODE 48202			
HARDING, CLIFFORD V.....	CELLULAR BASIS OF OCULAR DISORDERS.....	1T32 EY07034-01	37,283
MARKS, BERNARD H.....	PHARMACOLOGY.....	5T32 GM07176-03	58,741
PARRISH, CHARLES J.....	SOCIAL POLICY AND AGING.....	1T32 AG00002-01A1	69,665
POLGAR, GEORGE.....	RESEARCH TECHNIQUES AND THEIR APPLICATION.....	1T32 HL07228-01A1	36,491
ORGANIZATION TOTAL	4 202,180		
EAST LANSING			
MICHIGAN STATE UNIVERSITY ZIP CODE 48823			
BARKER, ROBERT.....	BIOCHEMISTRY.....	5T01 GM01091-15	95,645
BRODY, THEODORE M.....	PHARMACOLOGY AND TOXICOLOGY.....	1T32 GM07392-01	66,145
MICHELAKIS, ANDREW M.....	CLINICAL PHARMACOLOGY.....	5T32 GM07096-03	48,534
SADOFF, HAROLD L.....	MICROBIOLOGY.....	5T01 GM01911-10	42,451
SCOTT, JERRY B.....	CARDIOVASCULAR PHYSIOLOGY AND PATHOPHYSIOLOGY.....	5T01 HL05873-08	93,364
THOMAS, J W.....	NUTRITION.....	5T01 GM01818-09	87,575
ORGANIZATION TOTAL	6 433,714		
ROCHESTER			
OAKLAND UNIVERSITY ZIP CODE 48863			
REDDY, VENKAT N.....	OPHTHALMIC PHYSIOLOGY AND BIOCHEMISTRY.....	1T32 EY07044-01	35,287
ORGANIZATION TOTAL	1 35,287		
STATE TOTAL	36 2,632,686		
MINNESOTA			
MINNEAPOLIS			
UNIVERSITY OF MINNESOTA ZIP CODE 55455			
ACKERMAN, EUGENE.....	HEALTH COMPUTER SCIENCES.....	5T01 LM00160-04	121,366
BEVIS, RICHARD R.....	DENTISTRY.....	5T01 DE00005-17	11,247
CARPENTER, ANNA M.....	DIABETES RESEARCH.....	5T32 AM07196-02	41,905
COHN, JAY N.....	MULTIDISCIPLINARY CARDIOVASCULAR RESEARCH.....	5T32 HL07184-02	89,621
GOLTZ, ROBERT W.....	ACADEMIC DERMATOLOGY.....	5T32 AM07165-02	31,022
KJELSBERG, MARCUS O.....	BIOMETRY OF CARDIOVASCULAR CLINICAL TRIALS.....	5T32 HL07023-03	33,863
KRIVIT, WILLIAM.....	HEMATOLOGY.....	5T32 HL07145-03	42,133
KRONENBERG, RICHARD S.....	MULTIDISCIPLINARY RESEARCH FELLOWSHIP AWARD.....	5T32 HL07009-02	39,057
LUCAS, RUSSELL V, JR.....	PEDIATRIC CARDIOLOGY—CLINICAL.....	5T01 HL05996-04	98,924
MIRKIN, BERNARD L.....	DEVELOPMENTAL AND PEDIATRIC CLINICAL PHARMACOLOGY.....	1T32 GM07466-01	40,981
NAJARIAN, JOHN S.....	IMMUNOLOGY AND ITS RELATION TO SURGERY.....	5T32 CA09024-03	52,329
OPPENHEIMER, JACK H.....	DIABETES, ENDOCRINOLOGY, AND METABOLISM.....	1T32 AM07203-01	60,916
PAPARELLA, MICHAEL M.....	OTOLARYNGOLOGY.....	1T32 NS07084-01A1	43,772
PICK, HERBERT L, JR.....	HUMAN LEARNING.....	5T01 HD00098-13	176,351
PLAGEMANN, PETER G.....	MICROBIOLOGY—CANCER.....	5T32 CA09138-03	121,681
SCHACHTELE, CHARLES F.....	DENTISTRY.....	5T32 DE07014-03	176,359
SHIDEMAN, FREDERICK E.....	PHARMACOLOGY AND TOXICOLOGY.....	5T01 GM01117-15	192,037

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MINNESOTA—Con.			
SHIDEMAN, FREDERICK E.....	PHARMACOLOGY, TOXICOLOGY AND ALLIED SCIENCES.....	1T32 GM07397-01	38,819
SOINE, TAITO O.....	MEDICINAL CHEMISTRY.....	1T32 GM07480-01A1	31,050
VERNIER, ROBERT L.....	PEDIATRIC NEPHROLOGY.....	5T32 AM07087-03	58,346
WANNAMAKER, LEWIS W.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07116-03	90,602
WATSON, DENNIS W.....	MICROBIOLOGY.....	5T01 GM00966-16	49,040
WILSON, IVAN D.....	DIGESTIVE AND LIVER DISEASES.....	5T32 AM07177-02	41,552
ORGANIZATION TOTAL	23	1,682,973	
ROCHESTER			
AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY ZIP CODE 55901			
FINE, BEN S.....	OPHTHALMIC PATHOLOGY.....	1T32 EY07040-01	64,636
ORGANIZATION TOTAL	1	64,636	
MAYO FOUNDATION ZIP CODE 55901			
ARNAUD, CLAUDE D.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07147-02	38,947
BROWN, RONALD D.....	HYPERTENSION (MULTIDISCIPLINARY).....	1T32 HL07269-01	77,436
GLEICH, GERALD J.....	ALLERGIC DISEASES.....	5T32 AI07047-02	39,524
GO, VAY LIANG.....	DIGESTIVE DISEASES—MULTIDISCIPLINARY.....	5T32 AM07198-02	58,389
HYATT, ROBERT E.....	LUNG DISEASES.....	5T32 HL07222-02	75,852
KNOX, FRANKLYN G.....	KIDNEY DISEASES.....	5T32 AM07013-03	55,631
MANN, KENNETH G.....	BLOOD BANKING SCIENCES AND RELATING PROGRAMS.....	5T32 HL07069-03	55,727
MC DUFFIE, FREDERIC C.....	ARTHRITIS.....	5T32 AM07034-03	77,922
RYAN, ROBERT J.....	REPRODUCTIVE BIOLOGY.....	1T32 HD07108-01	34,322
TAMCREDI, ROBERT G.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07111-03	102,779
TOMASI, THOMAS B, JR.....	TUMOR IMMUNOLOGY.....	5T32 CA09127-03	159,956
ORGANIZATION TOTAL	11	776,485	
SAINT PAUL			
UNIVERSITY OF MINNESOTA ZIP CODE 55455			
CARR, CHARLES.....	CHEMICAL BASES OF CELL AND MOLECULAR BIOLOGY.....	5T32 GM07323-03	101,697
FORRO, FREDERICK, JR.....	GENETICS AND CELL BIOLOGY.....	5T01 GM01156-15	91,463
FORRO, FREDERICK, JR.....	GENETIC MECHANISMS AND REGULATION.....	5T32 GM07094-03	60,090
WEBER, ALVIN F.....	VETERINARY ANATOMY.....	5T01 GM00386-18	31,466
ORGANIZATION TOTAL	4	284,716	
STATE TOTAL	39	2,808,810	
MISSISSIPPI			
JACKSON			
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216			
COLEMAN, THOMAS G.....	SYSTEMS ANALYSIS: THE CIRCULATION AND HYPERTENSION.....	1T32 HL07270-01	73,824
GUYTON, ARTHUR C.....	CARDIOVASCULAR PHYSIOLOGY.....	5T01 HL05184-19	77,411
HAYES, A WALLACE.....	TOXICOLOGY.....	1T32 ES07045-01	62,776
ORGANIZATION TOTAL	3	214,011	
TOUGALOO			
TOUGALOO COLLEGE ZIP CODE 39174			
ASOKASRINIVASAN, G S.....	HONORS SCIENCE RESEARCH.....	1T32 GM07651-01	53,310
ORGANIZATION TOTAL	1	53,310	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Doll
MISSISSIPPI—Con.			
UNIVERSITY			
UNIVERSITY OF MISSISSIPPI	ZIP CODE 38677		
GILMORE, W FRANKLIN	PHARMACEUTICAL SCIENCES.....	5T32 GM07099-03	
ORGANIZATION TOTAL	1 52,625		
STATE TOTAL	5 319,946		
MISSOURI			
COLUMBIA			
UNIVERSITY OF MISSOURI-COLUMBIA	ZIP CODE 65201		
DAVIS, JAMES O	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07094-03	
EISENSTARK, ABRAHAM	GENETICS.....	1T32 GM07494-01	
LINDBERG, DONALD A.....	MEDICAL INFORMATION SCIENCE.....	5T15 LM07006-03	
MIDDLETON, CHARLES C.....	LABORATORY ANIMAL MEDICINE.....	1T32 RR07004-01	
MUSACCHIA, X J.....	CARDIOVASCULAR CONTROL IN ALTERED METABOLIC STATES.....	5T32 HL07187-02	
ORGANIZATION TOTAL	5 347,150		
KANSAS CITY			
UNIVERSITY OF MISSOURI-KANSAS CITY	ZIP CODE 64110		
PETERSON, WARREN A.....	ADULT DEVELOPMENT AND AGING.....	5T01 AG00018-10	
ORGANIZATION TOTAL	1 180,756		
SAINT LOUIS			
JEWISH HOSPITAL OF ST. LOUIS	ZIP CODE 63110		
LUBOWITZ, HERBERT	CARDIOVASCULAR-COAGULATION PROBLEMS IN NEPHROLOGY.....	5T01 HL06008-04	
OLIVER, G CHARLES.....	ACADEMIC CARDIOLOGY.....	5T01 HL06011-04	
ORGANIZATION TOTAL	2 67,037		
ST. LOUIS UNIVERSITY	ZIP CODE 63103		
GREEN, MAURICE.....	MOLECULAR AND TUMOR VIROLOGY.....	1T32 CA09222-01A1	
OLSON, ROBERT E.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07050-03	
ORGANIZATION TOTAL	2 196,003		
UNIVERSITY CITY			
WASHINGTON UNIVERSITY	ZIP CODE 63130		
ALPERS, DAVID H.....	CLINIC/LABORATORY-ACADEMIC GASTROENTEROLOGY.....	5T32 AM07130-03	
ATKINSON, JOHN P.....	IMMUNOLOGY OF CONNECTIVE TISSUE DISEASES.....	1T32 AM07279-01	
AVIOLI, LOUIS V.....	MINERAL AND SKELETAL METABOLISM.....	5T32 AM07033-03	
BALLINGER, WALTER F, II.....	SURGERY.....	5T01 GM00371-17	
BANASZAK, LEONARD J.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07067-03	
BAUER, WALTER C.....	TUMOR BIOLOGY-MULTIRESOURCE PROGRAM.....	5T32 CA09118-03	
BOTWINICK, JACK.....	AGING AND DEVELOPMENT.....	1T32 AG00030-01	
BUNGE, RICHARD P.....	NEUROBIOLOGY.....	1T32 NS07071-01A1	
COWAN, W MAXWELL.....	VISION RESEARCH.....	5T01 EY00092-04	
DAUGHADAY, WILLIAM H.....	DIABETES AND RELATED METABOLIC DISEASES.....	5T32 AM07120-03	
DAVIE, JOSEPH M.....	IMMUNOLOGY AND MEMBRANES.....	5T32 GM07157-03	
GLASER, LUIS.....	MEDICAL SCIENTIST.....	3T32 GM07200-02S1	
GLASER, LUIS.....	MEDICAL SCIENTIST.....	5T32 GM07200-03	
HUNT, CARLTON C.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07057-02	
KLAHR, SAULO.....	RENAL DISEASES.....	5T32 AM07126-03	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
MISSOURI—Con.			
KOBAYASHI, GEORGE S.....	FUNGAL DISEASES.....	5T32 AI07015-02	71,221
LACY, PAUL E.....	ENVIRONMENTAL PATHOBIOLOGY.....	3T01 ES00128-09S1	49,000
LACY, PAUL E.....	PATHOLOGY.....	5T01 GM00897-17	91,123
LIEBERMAN, MICHAEL W.....	MÉCHANISMS OF DISEASE IN ENVIRONMENTAL PATHOLOGY.....	1T32 ES07066-01	228,406
LOWRY, OLIVER H.....	BIOCHEMICAL PHARMACOLOGY.....	5T01 GM00096-19	53,194
MAJERUS, PHILIP W.....	HEMATOLOGY.....	5T32 HL07088-03	123,667
MEDOFF, GERALD.....	INFECTIOUS DISEASES.....	5T01 AI00459-04	55,792
NEEDLEMAN, PHILIP.....	BLOOD VESSELS & HEART-FUNCTION REGULATION PHARMACOLOGY.....	1T32 HL07275-01	80,567
PARKER, CHARLES W.....	ALLERGY AND IMMUNOLOGY.....	5T32 AI00112-03	26,699
PICKARD, WILLIAM F.....	ELECTRICAL ENGINEERING.....	5T01 GM01827-09	30,432
RASKAS, HESCHEL J.....	MOLECULAR VIROLOGY.....	5T32 CA09129-03	105,534
SANDEL, THOMAS T.....	BEHAVIORAL PHYSIOLOGY AND PSYCHOPHYSICS.....	5T01 GM01900-09	87,377
SHANK, ROBERT E.....	NUTRITION.....	1T32 AM07226-01	39,057
SHERMAN, LAURENCE A.....	BLOOD BANKING.....	5T32 HL07038-03	86,245
SOBEL, BURTON E.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07081-03	141,447
WIEST, WALTER G.....	REPRODUCTIVE BIOLOGY.....	5T01 HD00379-04	78,347
ORGANIZATION TOTAL	31	3,185,993	
STATE TOTAL	41	3,976,939	
NEBRASKA			
OMAHA			
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER ZIP CODE 68105			
METCALF, WILLIAM K.....	DEVELOPMENTAL BASIS OF INFANT MORBIDITY AND MORTALITY.....	1T32 HD07097-01	32,920
ORGANIZATION TOTAL	1	32,920	
STATE TOTAL	1	32,920	
NEW JERSEY			
NEW BRUNSWICK			
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903			
ABOU-SABE, MORAD A.....	GENETICS.....	5T32 GM07129-03	47,986
ORGANIZATION TOTAL	1	47,986	
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL ZIP CODE 08854			
SCHLESINGER, R WALTER.....	VIRAL AND CELLULAR GENOME FUNCTIONS IN CANCER.....	5T32 CA09069-03	153,140
ORGANIZATION TOTAL	1	153,140	
PRINCETON			
PRINCETON UNIVERSITY ZIP CODE 08540			
COALE, ANSLEY J.....	DEMOGRAPHY.....	5T01 HD00110-10	75,751
COX, EDWARD C.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07312-03	195,964
LEVINE, ARNOLD J.....	CANCER.....	5T32 CA09167-03	340,105
NEWTON, AUSTIN.....	GENETICS.....	1T32 GM07388-01	99,112
ORGANIZATION TOTAL	4	710,932	
STATE TOTAL	6	912,058	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF NEW MEXICO ZIP CODE 87131			
GRIEGO, RICHARD J.....	MATHEMATICAL MODELS AND CURRICULA IN BIOLOGY.....	1T32 GM07661-01	86,028
WILLIAMS, RALPH C, JR.....	IMMUNE MECHANISMS IN THE CONNECTIVE TISSUE DISEASES.....	5T32 AM07173-02	42,668
ORGANIZATION TOTAL 2	128,696		
UNIVERSITY PARK			
NEW MEXICO STATE UNIVERSITY LAS CRUCES CAMPUS ZIP CODE 88001			
BERNSTEIN, MARVIN H.....	BIOMEDICAL SCIENCES.....	1T32 GM07667-01	67,222
ORGANIZATION TOTAL 1	67,222		
STATE TOTAL 3	195,918		
NEW YORK			
ALBANY			
UNION COLLEGE AND UNIVERSITY-ALBANY MEDICAL COLLEGE ZIP CODE 12208			
LEE, KYU T.....	CARDIOVASCULAR DISEASE RESEARCH.....	5T32 HL07194-02	115,337
REINECKE, ROBERT D.....	ACADEMIC OPHTHALMOLOGY.....	5T32 EY07037-02	50,608
SABA, THOMAS M.....	TRAUMATOLOGY.....	5T32 GM07033-03	81,271
ORGANIZATION TOTAL 3	247,216		
BUFFALO			
NEW YORK STATE DEPARTMENT OF HEALTH-ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
BOX, HAROLD C.....	MOLECULAR BIOLOGY OF CASTASTROPHIC PROCESSES.....	1T32 ES07057-01	62,309
GRAHAM, SAXON.....	MEDICAL SOCIOLOGY, EPIDEMIOLOGY AND CANCER CONTROL.....	5T32 CA09051-03	61,478
HIGBY, DONALD J.....	CANCER CHEMOTHERAPY.....	5T32 CA09108-03	98,945
MIHICH, ENRICO.....	DRUG DEVELOPMENT AND CANCER THERAPEUTICS.....	5T32 CA09072-03	79,122
MIRAND, EDWIN A.....	CANCER.....	5T01 CA05016-21	8,831
PAIGEN, KENNETH.....	MAMMALIAN BIOCHEMICAL GENETICS.....	5T32 GM07093-03	63,639
ORGANIZATION TOTAL 6	374,324		
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
GENCO, ROBERT J.....	PERIODONTAL DISEASES.....	5T32 DE07034-03	228,201
MILGROM, FELIX.....	IMMUNOLOGY.....	1T32 AI07088-01	60,657
MURRAY, DANIEL.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07145-03	113,761
NOELL, WERNER K.....	EYE PHYSIOLOGY AND BIOCHEMISTRY.....	5T32 EY07019-03	79,233
SOLO, ALAN J.....	DEVELOPMENT OF ANTICANCER DRUGS.....	5T32 CA09166-03	114,658
ZELÉN, MARVIN.....	BIOMETRY AND CANCER.....	5T32 CA09170-02	75,312
ORGANIZATION TOTAL 6	671,822		
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
EDELSTEIN, STUART J.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07273-03	371,811
FINK, GERALD R.....	GENETICS.....	5T01 GM01035-15	102,103
MELTZER, LEO.....	SOCIAL PSYCHOLOGY AND PERSONALITY.....	5T01 GM01941-09	83,972
NESHEIM, MALDEN C.....	NUTRITION.....	5T32 AM07158-02	56,004
SALPETER, MIRIAM M.....	CELLULAR AND MOLECULAR NEUROBIOLOGY.....	1T32 GM07469-01	27,004
WILKINSON, CHRISTOPHER F.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07052-01A1	146,068
ZILVERSMIT, DONALD B.....	NUTRITIONAL ASPECTS OF ARTERIOSCLEROSIS.....	1T32 HL07245-01	49,066

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
ORGANIZATION TOTAL	7	836,028	
NEW YORK			
CITY UNIVERSITY OF NEW YORK—GRADUATE SCHOOL AND UNIVERSITY CENTER		ZIP CODE 10036	
GLICK, JOSEPH A.....	HUMAN DEVELOPMENT.....	5T01 HD00231-09	75,730
ORGANIZATION TOTAL	1	75,730	
CITY UNIVERSITY OF NEW YORK—MEDGAR EVERS COLLEGE		ZIP CODE 11225	
PAUL, DENIS F.....	SCIENCE CAREER OPPORTUNITIES.....	1T32 GM07641-01	122,320
ORGANIZATION TOTAL	1	122,320	
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE		ZIP CODE 10029	
BEATTIE, DIANA S.....	PATHOBIOLOGY OF MEMBRANES AND THEIR FUNCTIONS.....	5T32 GM07036-03	101,836
FERRY, ANDREW P.....	MULTIDISCIPLINARY EYE DISEASES.....	5T32 EY07014-03	76,064
GELLER, STEPHEN.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00115-19	29,160
HIRSCHHORN, KURT.....	MENTAL RETARDATION AND DEVELOPMENTAL DISABILITIES.....	1T32 HD07105-01	103,381
HOLLAND, JAMES F.....	CHEMOTHERAPY AND CHEMOIMMUNOTHERAPY.....	5T32 CA09102-03	109,886
KILBOURNE, EDWIN D.....	MEDICAL MICROBIOLOGY AND IMMUNOLOGY.....	5T01 AI00439-04	63,794
KRIEGER, DOROTHY T.....	ENDOCRINOLOGY (INTERDISCIPLINARY).....	1T32 AM07027-01A1	39,057
KRULWICH, TERRY A.....	MEDICAL SCIENTIST.....	1T32 GM07280-01A1	34,191
MITTAG, THOMAS W.....	BIOMEDICAL SCIENCES—PHARMACOLOGY.....	5T32 GM07163-03	62,608
SAFIR, ARAN.....	COMPUTERS AND MEDICINE.....	5T15 LM07008-03	191,813
ORGANIZATION TOTAL	10	811,790	
COLUMBIA UNIVERSITY		ZIP CODE 10027	
BALAZS, ENDRE A.....	OPHTHALMOLOGY.....	5T32 EY07002-03	60,732
BEYCHOK, SHERMAN.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07216-03	147,878
BIGGER, JOHN T, JR.....	CARDIOVASOLOGY.....	5T01 HL05864-09	92,365
BRASEL, JO ANNE.....	GROWTH AND DEVELOPMENT.....	5T32 HD07000-03	110,422
BUTLER, VINCENT P, JR.....	IMMUNOLOGY.....	1T32 AI07132-01	55,420
CALDWELL, PETER R.....	MECHANISMS OF LUNG INJURY AND RESPIRATORY FAILURE.....	5T32 HL07018-03	56,623
CHIEN, SHU.....	RHEOLOGY IN CARDIOVASCULAR DISEASES.....	5T32 HL07114-03	108,523
FRANTZ, ANDREW G.....	ENDOCRINOLOGY / AND METABOLISM.....	1T32 AM07271-01	36,987
GERSHON, MICHAEL D.....	NEUROBIOLOGY.....	5T32 NS07062-02	82,184
GREENBAUM, LOWELL M.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07182-03	122,441
GREENBAUM, LOWELL M.....	MEDICAL SCIENTIST.....	1T32 GM07367-01	69,920
HARBER, LEONARD C.....	PHOTOBIOLOGIC & ENVIRONMENTAL FACTORS IN SKIN DISEASE.....	5T32 AM07171-02	37,208
HOFFMAN, BRIAN F.....	CARDIAC ARRHYTHMIAS: MECHANISMS AND TREATMENT.....	1T32 HL07271-01	55,332
JAGIELLO, GEORGIANA M.....	GENETIC AND HORMONE CONTROL OF GAMETOGENESIS.....	5T32 HD07093-02	56,359
JAMES, L STANLEY.....	PERINATAL MEDICINE AND RESEARCH.....	5T32 HD07017-03	226,177
KING, DONALD W.....	PATHOLOGY AND PATHOBIOLOGY.....	5T01 GM02050-09	87,262
KING, DONALD W.....	PATHOBIOLOGY.....	5T32 GM07161-03	110,984
KROOTH, ROBERT S.....	GENETICS, DEVELOPMENT AND NUTRITION.....	5T32 GM07088-03	150,158
KROOTH, ROBERT S.....	POSTDOCTORAL INSTITUTIONAL FELLOWSHIP AWARD.....	1T32 GM07419-01	119,737
LIEBERMAN, SEYMOUR.....	BIOCHEMISTRY OF REPRODUCTIVE ENDOCRINOLOGY.....	5T32 HD07061-02	33,139
MELLINS, ROBERT B.....	PEDIATRIC PULMONARY DISEASE.....	5T01 HL06012-04	92,448
RIFKIND, RICHARD A.....	HEMATOLOGY.....	5T32 HL07148-03	114,628
ROSSI, HARALD H.....	RADIATION BIOPHYSICS.....	5T32 CA09053-03	36,696
STEIN, ZENA A.....	EPIDEMIOLOGY OF MENTAL RETARDATION RESEARCH.....	5T32 HD07040-02	143,244
WINTERS, ROBERT W.....	PEDIATRIC NEPHROLOGY, ALLIED FIELDS & RENAL IMMUNOLOGY.....	5T01 HD00440-04	111,902
ORGANIZATION TOTAL	25	2,318,769	
CORNELL UNIVERSITY MEDICAL CENTER		ZIP CODE 10021	
BEARN, ALEXANDER G.....	BIOMEDICAL SCIENCES.....	5T05 GM02243-04	120,567
BRISCOE, WILLIAM A.....	PULMONARY DISEASES.....	5T32 HL07233-02	78,896
ELLIS, JOHN T.....	PATHOLOGY.....	5T01 GM00078-19	42,336
HARSANYI, ZSOLT P.....	GENETICS.....	5T01 GM01918-09	61,316

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
JAVITT, NORMAN B.....	GASTROENTEROLOGY.....	5T32 AM07142-03	51,706
LEWY, JOHN E.....	DEVELOPMENTAL NEPHROLOGY.....	5T01 HD00383-04	47,831
MAACK, THOMAS M.....	PHYSIOLOGY.....	5T01 GM01737-09	34,476
NACHMAN, RALPH L.....	HEMATOLOGY.....	5T32 HL07029-03	62,752
REIDENBERG, MARCUS M.....	CLINICAL PHARMACOLOGY.....	1T32 GM07488-01	18,049
RIKER, WALTER F, JR.....	PHARMACOLOGICAL SCIENCES.....	1T32 GM07547-01	77,195
ROBERTS, RICHARD B.....	INFECTIOUS DISEASES.....	5T01 AI00465-04	43,959
ROBERTS, RICHARD B.....	RESEARCH FELLOWSHIP IN VENEREAL DISEASES.....	5T32 AI07003-02	36,640
SHIRES, GEORGE T.....	TRAUMA AND BURN RESEARCH.....	1T32 GM07381-01	17,613
WINDHAGER, ERICH E.....	RENAL FUNCTION IN HEALTH AND DISEASE.....	5T32 AM07152-02	37,579
ORGANIZATION TOTAL	14	730,915	
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
SPAET, THEODORE H.....	HEMATOLOGY.....	5T32 HL07080-03	56,510
SURKS, MARTIN I.....	INVESTIGATIVE ENDOCRINOLOGY.....	5T32 AM07004-03	29,257
ORGANIZATION TOTAL	2	85,767	
NEW YORK BLOOD CENTER ZIP CODE 10021			
HIRSCH, ROBERT L.....	HEMATOLOGY.....	5T01 HL06000-04	99,360
ORGANIZATION TOTAL	1	99,360	
NEW YORK UNIVERSITY ZIP CODE 10003			
COX, RODY P.....	MEDICAL SCIENTIST.....	5T32 GM07308-03	372,919
DEFENDI, VITTORIO.....	CANCER.....	5T32 CA09161-03	179,960
DEFENDI, VITTORIO.....	BASIC PATHOBIOLOGY.....	1T32 GM07552-01	72,570
FRANKLIN, EDWARD C.....	ARTHRITIS.....	5T32 AM07176-02	36,986
KAUFMAN, LLOYD.....	VISION RESEARCH.....	5T32 EY07003-03	54,605
KOPF, ALFRED W.....	IMMUNOLOGY, MICROBIOLOGY, DERMATOPATHOLOGY.....	5T32 AM07190-02	37,568
LAWRENCE, H SHERWOOD.....	CELLULAR IMMUNOLOGY.....	5T01 AI00005-18	42,550
LIPPMANN, MORTON.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07065-01	66,636
MC FALL, ELIZABETH.....	MICROBIOLOGY.....	5T01 GM01290-14	51,824
SABATINI, DAVID D.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07238-03	85,765
SILBER, ROBERT.....	HEMATOLOGY.....	5T32 HL07151-03	122,217
VANDERBERG, JEROME P.....	PARASITOLOGY.....	5T01 AI00361-08	45,003
YEATES, DONOVAN B.....	PHYSIOLOGY OF LUNG CLEARANCE.....	1T32 HL07263-01	19,986
ZADUNAISKY, JOSE A.....	PHYSIOLOGY AND BIOCHEMISTRY OF THE EYE.....	5T32 EY07009-03	106,597
ORGANIZATION TOTAL	14	1,295,186	
ROCKEFELLER UNIVERSITY ZIP CODE 10021			
CHOPPIN, PURNELL W.....	MECHANISMS IN VIRUS INFECTION AND TRANSFORMATION.....	5T32 CA09256-02	136,273
MC CARTY, MACLYN.....	BASIC PATHOBIOLOGY.....	5T32 GM07245-03	123,665
PFAMMANN, CARL.....	BIOLOGICAL BASIS OF BEHAVIOR.....	1T32 GM07524-01	133,543
ORGANIZATION TOTAL	3	393,481	
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021			
BURCHENAL, JOSEPH H.....	CANCER CHEMOTHERAPY.....	1T32 CA09207-01	168,698
CHOI, YONG S.....	IMMUNOLOGY RESEARCH.....	5T32 CA09149-02	326,934
HUTCHISON, DORRIS J.....	CANCER.....	5T32 CA09055-03	70,692
MURPHY, MARTIN J, JR.....	HEMATOLOGY.....	1T32 AM07266-01	92,465
ORGANIZATION TOTAL	4	658,789	
STATE UNIVERSITY OF NEW YORK—DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
FURCHGOTT, ROBERT F.....	PHARMACOLOGY.....	5T01 GM00163-20	74,440
MORSE, STEPHEN I.....	IMMUNOLOGY.....	1T32 AI07131-01	32,164
ORGANIZATION TOTAL	2	106,604	
YESHIVA UNIVERSITY ZIP CODE 10033			
ARIAS, IRWIN M.....	GASTROENTEROLOGY-HEPATOLOGY RESEARCH.....	5T32 AM07218-02	60,018

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
BARNETT, HENRY L.....	HUMAN DEVELOPMENTAL BIOLOGY.....	5T32 HD07053-03	134,158
BAUM, STEPHEN G.....	MEDICAL SCIENTIST.....	5T32 GM07288-03	521,210
EDER, HOWARD A.....	LIPID METABOLISM.....	5T01 HL05273-19	58,677
GOLDFISCHER, SIDNEY L.....	PATHOBIOLOGY OF CONNECTIVE TISSUE.....	5T32 GM07168-03	68,872
HAYS, RICHARD M.....	NEPHROLOGY—MULTIDISCIPLINARY.....	5T32 AM07089-03	76,668
HORWITZ, SUSAN B.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07260-03	103,085
HURWITZ, JERARD.....	VIRAL ONCOLOGY & TUMOR BIOLOGY.....	5T32 CA09060-03	280,384
HURWITZ, JERARD.....	BIOMEDICAL SCIENCES.....	1T32 GM07491-01	156,302
KLINGER, HAROLD P.....	MEDICAL GENETICS.....	5T32 GM07001-03	122,174
LEVENSON, STANLEY M.....	TRAUMA AND BURNS.....	5T32 GM07038-03	19,689
LILLY, FRANK.....	IMMUNOLOGY AND IMMUNOONCOLOGY.....	5T32 CA09173-03	303,476
MARCUS, DONALD M.....	ARTHRITIS & BONE DISEASES.....	1T32 AM07273-01	40,014
MARMUR, JULIUS.....	GENETICS AND BIOCHEMISTRY OF CELLULAR REGULATION.....	5T32 GM07128-03	108,070
SCARPELLI, EMILE M.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07060-03	123,905
SCHEUER, JAMES.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07071-03	151,358
SPITZER, ADRIAN.....	DEVELOPMENTAL RENAL AND ELECTROLYTE PHYSIOLOGY.....	5T32 AM07110-02	38,140
STEIGBIGEL, NEAL H.....	MICROBIOLOGY AND IMMUNOLOGY.....	5T01 AI00405-07	92,010
TERRY, ROBERT D.....	SENILE DEMENTIA—BIOLOGICAL AND BEHAVIORAL.....	5T32 AG00094-03	93,860
ORGANIZATION TOTAL	19	2,552,070	
ROCHESTER			
EASTMAN OENTAL CENTER ZIP CODE 14605			
ZANDER, HELMUT A.....	PERIODONTAL DISEASE.....	1T32 DE07061-01A1	67,443
ORGANIZATION TOTAL	1	67,443	
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
BROWN, JOHN L.....	VISUAL SCIENCES.....	5T01 EY00086-04	63,220
CHRISTENSEN, J ROGER.....	MICROBIOLOGY.....	5T01 GM00592-17	74,760
DI STEFANO, VICTOR.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07141-03	174,775
GROSS, PAUL R.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07230-03	159,697
HOROWICZ, PAUL.....	SYSTEMS & INTEGRATIVE BIOLOGY.....	5T32 GM07136-03	85,152
HYDE, RICHARD W.....	PULMONARY DISEASES—MULTIDISCIPLINARY.....	5T32 HL07216-02	103,374
KNIGGE, KARL M.....	ANATOMICAL SCIENCES.....	5T01 GM01782-09	55,018
LEDDY, JOHN P.....	ALLERGY, IMMUNOLOGY AND INFECTIOUS DISEASES.....	5T01 AI00028-19	107,598
LICHTMAN, MARSHALL A.....	HEMATOLOGY.....	5T32 HL07152-03	63,508
ROWLEY, PETER T.....	GENETICS.....	1T32 GM07098-01A1	70,800
RUBIN, PHILIP.....	RADIATION THERAPY, PHYSICS AND BIOLOGY.....	5T01 CA05102-16	149,437
SAMEROFF, ARNOLD J.....	DEVELOPMENTAL PSYCHOLOGY.....	5T01 HD00259-10	63,737
SMITH, JOHN C.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07026-01A1	224,712
YOUNG, DONALD A.....	INVESTIGATIVE ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07092-03	42,970
YOUNG, FRANK E.....	VENEREAL DISEASE.....	5T32 AI00137-03	32,090
YOUNG, FRANK E.....	PATHOBIOLOGY OF VENEREAL DISEASE.....	1T32 AI07137-01	76,816
YOUNG, FRANK E.....	MEDICAL SCIENTIST.....	5T05 GM02263-05	230,142
YOUNG, FRANK E.....	GENETICS AND REGULATION.....	5T32 GM07102-03	248,485
YOUNG, FRANK E.....	MEDICAL SCIENTIST.....	1T32 GM07356-01	74,613
YU, PAUL N.....	CARDIOLOGY.....	1T32 HL07220-01A1	55,890
ORGANIZATION TOTAL	20	2,156,794	
STONY BROOK			
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794			
ARMHEIM, NORMAN.....	MOLECULAR BIOLOGY.....	5T32 GM07212-03	77,810
GROLLMAN, ARTHUR P.....	PHARMACOLOGICAL SCIENCES.....	1T32 GM07518-01	25,077
KATES, JOSEPH R.....	VIRAL ONCOLOGY.....	5T32 CA09176-03	231,857
WITKOVSKY, PAUL.....	SENSORY TRANSDUCTION AND NEURAL PROCESSING IN VISION.....	5T32 EY07039-02	51,041
ORGANIZATION TOTAL	4	385,785	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
SYRACUSE			
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER ZIP CODE 13210			
GILBERT, ROBERT.....	PULMONARY DISEASES.....	5T01 HL05954-04	51,904
STREETEN, DAVID H.....	ENDOCRINOLOGY.....	5T32 AM07146-03	24,581
WEINER, IRWIN M.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07066-03	45,973
ORGANIZATION TOTAL 3	122,458		
SYRACUSE UNIVERSITY ZIP CODE 13210			
MEYER, WILLIAM J.....	DEVELOPMENT AND AGING.....	1T32 AG00040-01	78,000
ORGANIZATION TOTAL 1	78,000		
TROY			
RENSSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181			
KATZ, J LAWRENCE.....	BIOPHYSICS AND CRYSTALLOGRAPHY.....	5T01 DE00117-14	84,750
KATZ, J LAWRENCE.....	DENTAL MATERIALS.....	5T32 DE07054-02	56,608
ORGANIZATION TOTAL 2	141,358		
UPTON			
ASSOCIATED UNIVERSITIES—BROOKHAVEN NATIONAL LABORATORY ZIP CODE 11973			
SETLOW, RICHARD B.....	ENVIRONMENTAL AND GENETIC FACTORS IN NEOPLASIA.....	5T32 CA09121-03	117,044
ORGANIZATION TOTAL 1	117,044		
UTICA			
MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE ZIP CODE 13501			
MOE, GORDON K.....	EXPERIMENTAL CARDIOLOGY.....	1T32 HL07254-01	41,660
ORGANIZATION TOTAL 1	41,660		
STATE TOTAL 151	14,490,713		
NORTH CAROLINA			
CHAPEL HILL			
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514			
BROMBERG, PHILIP A.....	RESPIRATORY DISEASES—MULTIDISCIPLINARY.....	5T32 HL07106-03	49,396
DAVIS, C E.....	CARDIOVASCULAR DISEASE—STATISTICS AND EPIDEMIOLOGY.....	5T32 HL07005-03	103,489
GOTTSCHALK, CARL W.....	KIDNEY AND MEMBRANE PHYSIOLOGY AND DISEASE.....	5T32 AM07047-03	52,417
GRAHAM, JOHN B.....	GENETICS.....	5T32 GM07092-03	122,926
GRAHAM, JOHN B.....	GENETICS.....	5T32 GM07121-03	92,783
GRAHAM, JOHN B.....	EXPERIMENTAL HEMATOLOGY.....	1T32 HL07255-01	36,000
GREGG, JOHN M.....	MECHANISMS AND CONTROL OF CRANIOFACIAL PAIN.....	5T32 DE07018-02	67,386
GRISHAM, JOE W.....	ENVIRONMENTAL PATHOLOGY.....	5T32 ES07017-03	72,900
GRISHAM, JOE W.....	PATHOLOGY.....	5T01 GM00092-19	36,817
HALL, THOMAS L.....	POPULATION.....	5T01 HD00193-09	167,625
KUPPER, LAWRENCE L.....	BIostatistical RESEARCH—ENVIRONMENTAL HEALTH.....	1T32 ES07018-01	87,496
MANIRE, G PHILIP.....	TUMOR BIOLOGY.....	5T32 CA09057-03	67,937
MANIRE, G PHILIP.....	MICROBIOLOGY.....	5T01 GM01138-15	46,970
MC KINNEY, JAMES D.....	MENTAL RETARDATION & CHILD DEVELOPMENT.....	5T01 HD00424-04	98,554
PAGANO, JOSEPH S.....	BASIC MECHANISMS OF VIRAL AND CHEMICAL CARCINOGENESIS.....	5T32 CA09156-03	114,316
ROBERTS, HAROLD R.....	HEMATOLOGY.....	5T32 HL07149-03	38,868
SPARLING, PHILIP F.....	VENEREAL DISEASES.....	5T32 AI07001-03	1,921
STOVER, BETSY J.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07040-03	69,982

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NORTH CAROLINA—Con.			
TYROLER, HERMAN A.....	ENVIRONMENTAL EPIDEMIOLOGY.....	1T32 ES07036-01	136,956
TYROLER, HERMAN A.....	CARDIOVASCULAR EPIDEMIOLOGY AND STATISTICS.....	5T32 HL07055-03	49,639
VAN WYK, JUDSON J.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07129-03	57,741
WELLS, H BRADLEY.....	POPULATION STATISTICS.....	1T32 HD07102-01A1	66,112
ORGANIZATION TOTAL	22	1,638,231	
CHARLOTTE			
JOHNSON C. SMITH UNIVERSITY ZIP CODE 28216			
CHOPRA, BALDEO K.....	MICROBIOLOGY, BIOCHEMISTRY & BIOPHYSICS.....	1T32 GM07652-01	84,336
ORGANIZATION TOTAL	1	84,336	
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
AMOS, D BERNARD.....	TUMOR IMMUNOLOGY AND IMMUNOGENETICS.....	5T32 CA09058-03	169,550
AMOS, D BERNARD.....	INSTITUTIONAL RESEARCH FELLOWSHIPS IN MEDICAL GENETICS.....	5T32 GM07003-02	76,750
BUCKLEY, REBECCA H.....	ALLERGY AND CLINICAL IMMUNOLOGY.....	1T32 AI07062-01	80,007
GOLDSMITH, LOWELL A.....	DERMATOLOGY.....	5T32 AM07093-03	58,529
GUILD, WALTER R.....	GENETICS.....	5T01 GM02007-09	87,652
HILL, ROBERT L.....	MEDICAL SCIENTIST.....	5T32 GM07171-03	414,482
HILL, ROBERT L.....	ORGANIZATION AND FUNCTIONS OF CELLULAR STRUCTURES.....	5T32 GM07184-03	350,549
JENNINGS, ROBERT B.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00726-17	54,216
JOKLIK, WOLFGANG K.....	VIRAL ONCOLOGY.....	5T32 CA09111-03	406,634
LEBOVITZ, HAROLD E.....	ENDOCRINOLOGY AND DIABETES.....	5T32 AM07012-03	39,057
LYNN, WILLIAM S.....	ENVIRONMENT AND THE LUNGS: TOXINS AND MEDIATORS.....	1T32 ES07031-01A1	85,091
MADDOX, GEORGE L.....	BEHAVIOR & PHYSIOLOGY IN AGING.....	5T32 AG00029-02	134,263
MENZEL, DANIEL B.....	TRANSFORMATION AND BIOLOGICAL EFFECTS OF TOXICANTS.....	3T32 ES07002-02S1	40,062
MENZEL, DANIEL B.....	TRANSFORMATION AND BIOLOGICAL EFFECTS OF TOXICANTS.....	5T32 ES07002-03	202,261
MOORE, JOHN W.....	BIOLOGICAL SYSTEMS.....	5T32 GM07046-03	143,313
MYERS, GEORGE C.....	DEMOGRAPHY AND ECOLOGY.....	5T01 GM01291-14	74,338
OTTOLENGHI, ATHOS.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07105-03	100,194
PILKINGTON, THEO C.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07063-02	115,561
ROBERTSON, JAMES D.....	BIOLOGICAL MEMBRANE STUDIES.....	1T32 GM07403-01	144,717
ROBINSON, ROSCOE R.....	NEPHROLOGY.....	5T01 HL05848-09	132,124
ROSATI, ROBERT A.....	BIOMEDICAL COMMUNICATIONS.....	5T15 LM07003-03	77,165
ROSSE, WENDELL F.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07057-03	75,715
SABISTON, DAVID C, JR.....	SURGERY.....	5T01 GM01709-12	146,812
TYOR, MALCOLM P.....	DIGESTIVE DISEASES.....	5T32 AM07166-02	39,057
VOGEL, F STEPHEN.....	BIOLOGICAL APPROACHES TO DEMENTIA.....	5T32 AG00007-03	70,062
WALLACE, ANDREW G.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07101-03	231,284
WOLBARSHT, MYRON L.....	BIOMEDICAL ENGINEERING.....	5T01 GM02286-04	27,615
WYNGAARDEN, JAMES B.....	METABOLIC AND RHEUMATIC DISEASES.....	5T32 AM07015-03	57,954
ORGANIZATION TOTAL	28	3,635,014	
RALEIGH			
NORTH CAROLINA DEPARTMENT OF ADMINISTRATION ZIP CODE 27611			
SULLIVAN, RICHARD H.....	BIOMEDICAL SCIENCES.....	1T32 GM07672-01	75,246
ORGANIZATION TOTAL	1	75,246	
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH ZIP CODE 27607			
GUTHRIE, FRANK E.....	MOLECULAR AND ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07046-01	111,248
SCANDALIOS, JOHN G.....	GENETICS.....	5T01 GM00296-17	35,231
ORGANIZATION TOTAL	2	146,479	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
NORTH CAROLINA—Con.			
WINSTON-SALEM			
WAKE FOREST UNIVERSITY ZIP CODE 27109			
CLARKSON, THOMAS B.....	LABORATORY ANIMAL AND COMPARATIVE MEDICINE.....	1T32 RR07009-01	78,698
HUTCHINS, PHILLIP M.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07304-01	26,818
MYRVIK, QUENTIN N.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07117-03	83,334
RAPELA, CARLOS E.....	CARDIOVASCULAR PHYSIOLOGY.....	5T01 HL05392-18	106,052
ST CLAIR, RICHARD W.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07115-03	109,286
ORGANIZATION TOTAL	5	404,188	
STATE TOTAL	59	5,983,494	
NORTH DAKOTA			
GRAND FORKS			
UNIVERSITY OF NORTH DAKOTA ZIP CODE 58201			
BRUMLEVE, STANLEY J.....	MAMMALIAN RESPIRATORY NORMAL AND PATHOLOGIC PHYSIOLOGY.....	5T01 HL05939-04	40,743
FISCHER, ROBERT G.....	MICROBIOLOGY.....	5T01 GM01097-14	29,694
ORGANIZATION TOTAL	2	70,437	
STATE TOTAL	2	70,437	
OHIO			
CINCINNATI			
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 45229			
WEST, CLARK D.....	PEDIATRIC NEPHROLOGY RESEARCH.....	5T32 AM07051-02	34,873
ZIMMERMAN, ERNEST F.....	TERATOLOGY.....	1T32 ES07051-01	34,108
ORGANIZATION TOTAL	2	68,981	
UNIVERSITY OF CINCINNATI ZIP CODE 45221			
HAMMOND, PAUL B.....	TOXICOLOGY.....	3T01 ES00127-09S1	36,997
HAMMOND, PAUL B.....	TOXICOLOGY.....	5T01 ES00127-10	173,996
HAMMOND, PAUL B.....	TOXICOLOGY.....	1T32 ES07073-01	139,151
ORGANIZATION TOTAL	3	350,144	
CLEVELAND			
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
BILLIAR, REINHART.....	BIOLOGY OF HUMAN REPRODUCTION.....	1T32 HD07120-01	56,847
CHERNIACK, NEIL S.....	RESPIRATORY DISEASES.....	1T32 HL07288-01	50,854
COOPER, CECIL.....	MEDICAL SCIENTIST.....	5T32 GM07250-03	219,050
DE PALMA, RALPH G.....	GENERAL SURGERY.....	5T01 GM01588-11	48,769
HEIPLE, KINGSBURY G.....	APPLIED MUSCULOSKELETAL BIOMECHANICS.....	5T32 AM07188-02	42,233
KEAN, EDWARD L.....	VISUAL SCIENCES—MULTIDISCIPLINARY.....	3T32 EY07006-02S1	1,620
KEAN, EDWARD L.....	VISUAL SCIENCES—MULTIDISCIPLINARY.....	5T32 EY07006-03	15,788
KRAMPTZ, L O.....	MICROBIOLOGY.....	5T01 GM00171-19	144,990
KRAMPTZ, L O.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07225-03	150,943
LAKE, ROBIN B.....	COMPUTER TECHNOLOGY IN HEALTH SCIENCES.....	5T15 LM07001-03	101,882
LIEBMAN, JEROME.....	PEDIATRIC CARDIOLOGY—CLINICAL.....	5T01 HL05803-09	62,668
MATTHEWS, LEPOY W.....	PEDIATRIC PULMONARY DISEASES.....	5T01 HL06009-04	88,537
PLONSEY, ROBERT.....	BIOMEDICAL ENGINEERING.....	5T01 GM01090-15	109,937

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
OHIO—Con.			
PLONSEY, ROBERT	BIOMEDICAL ENGINEERING/SYSTEMS & INTERGRATIVE BIOLOGY.....	1T32 GM07535-01	86,297
RATNOFF, OSCAR D.....	HEMATOLOGY.....	5T32 HL07147-03	43,860
SINGER, MARCUS.....	NORMAL AND ABNORMAL DEVELOPMENT.....	1T32 HD07104-01	195,732
STEINBERG, ARTHUR G.....	MEDICAL GENETICS.....	5T32 GM07004-03	68,366
THOMPSON, WILMER L.....	CLINICAL PHARMACOLOGY.....	5T32 GM07022-03	57,543
UTTER, MERTON F.....	BIOCHEMISTRY.....	5T01 GM00035-20	161,470
WEBSTER, LESLIE.....	PHARMACOLOGY.....	1T32 GM07382-01	21,572
ORGANIZATION TOTAL	20 1,728,958		
CLEVELAND CLINIC HOSPITAL ZIP CODE 44106			
KHAIRALLAH, PHILIP A.....	BIOCHEMISTRY.....	5T01 HL05126-20	50,551
KHAIRALLAH, PHILIP A.....	CARDIOVASCULAR DISEASES.....	1T32 HL07242-01	102,527
ORGANIZATION TOTAL	2 153,078		
COLUMBUS			
OHIO STATE UNIVERSITY ZIP CODE 43210			
ALLEN, JAMES N.....	BIOCHEMICAL NEUROPATHOLOGY.....	5T32 NS07091-02	35,803
BALCERZAK, STANLEY P.....	ONCOLOGY.....	5T32 CA09155-03	136,645
BALCERZAK, STANLEY P.....	HEMATOLOGY.....	5T32 HL07141-03	61,101
COLE, CLARENCE R.....	COMPARATIVE PATHOLOGY.....	5T01 GM01052-15	58,960
GRANNIS, GEORGE G.....	CLINICAL CHEMISTRY.....	5T01 GM01805-10	43,682
TASSAVA, ROY A.....	DEVELOPMENTAL BIOLOGY—INTERDISCIPLINARY.....	5T01 HD00431-04	58,732
TRZEBIATOWSKI, GREGORY L.....	BIOMEDICAL COMPUTING AND INFORMATION PROCESSING.....	5T01 LM00159-03	85,057
WARREN, JAMES V.....	CARDIOVASOLOGY.....	3T01 HL05968-04S1	10,609
WITTIK, DONALD T.....	MEDICINAL CHEMISTRY.....	5T01 GM01949-09	58,678
ORGANIZATION TOTAL	9 549,267		
STATE TOTAL	36 2,850,428		
OKLAHOMA			
OKLAHOMA CITY			
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
ROGERS, ROBERT M.....	PULMONARY DISEASES—MULTIDISCIPLINARY.....	5T32 HL07210-02	57,501
SCHECHTER, ELIOT.....	CARDIOVASOLOGY.....	5T01 HL05406-18	84,188
TAYLOR, FLETCHER B, JR.....	HEMATOLOGY.....	5T32 HL07207-02	56,341
ORGANIZATION TOTAL	3 198,030		
TAHLEQUAH			
NORTHEASTERN OKLAHOMA STATE UNIVERSITY ZIP CODE 74464			
REED, LANNY J.....	PHYSICS & NATURAL SCIENCE.....	1T32 GM07694-01	36,531
ORGANIZATION TOTAL	1 36,531		
STATE TOTAL	4 234,561		
OREGON			
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY ZIP CODE 97331			
FRYER, J L.....	MICROBIOLOGY.....	5T01 GM00704-15	20,989

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
OREGON—Con.			
WEBER, LAVERN J.....	COMPARATIVE PHARMACOLOGY AND TOXICOLOGY	5T32 GM07148-03	22,273
ORGANIZATION TOTAL	2 43,262		
EUGENE			
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON ZIP CODE 97403			
FERNALD, RUSSELL.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07257-03	75,174
POSTLETHWAIT, JOHN H.....	GENETICS.....	1T32 GM07413-01	66,643
VON HIPPEL, PETER H.....	MOLECULAR BIOLOGY.....	5T01 GM00715-19	118,947
WICKELGREN, WAYNE A.....	HUMAN EXPERIMENTAL PSYCHOLOGY.....	5T01 GM02165-04	69,607
ORGANIZATION TOTAL	4 330,366		
PORTLAND			
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201			
CONNOR, WILLIAM E.....	NUTRITION AND ATHEROSCLEROSIS.....	1T32 HL07295-01	76,118
DOTTER, CHARLES T.....	ANGIOGRAPHY AND CARDIOVASCULAR RADIOGRAPHY.....	5T01 HL05828-09	47,428
JONES, RICHARD T.....	CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07336-01	31,343
WUEPPER, KIRK D.....	MULTIDISCIPLINARY DERMATOLOGY.....	5T32 AM07153-02	50,596
ORGANIZATION TOTAL	4 205,485		
STATE TOTAL	10 579,113		
PENNSYLVANIA			
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033			
LANG, C MAX.....	LABORATORY ANIMAL MEDICINE.....	1T32 RR07006-01	55,099
MORGAN, HOWARD E.....	CELLULAR BIOLOGY—HEART.....	5T32 HL07223-02	113,983
ORGANIZATION TOTAL	2 169,082		
PHILADELPHIA			
CHILDREN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104			
SCHWARTZ, ELIAS.....	HEMATOLOGY.....	5T32 HL07150-03	26,250
SEGAL, STANTON.....	MEMBRANE RESEARCH.....	5T32 GM07025-03	62,217
SEGAL, STANTON.....	MENTAL RETARDATION.....	1T32 HD07107-01	87,720
ORGANIZATION TOTAL	3 176,187		
HANNEMAN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
DEVLIN, THOMAS M.....	CLINICAL BIOCHEMISTRY.....	5T01 GM02198-04	61,605
ORGANIZATION TOTAL	1 61,605		
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
ANDERSON, THOMAS F.....	CANCER RESEARCH.....	5T32 CA09035-03	250,817
ORGANIZATION TOTAL	1 250,817		
PHILADELPHIA GERIATRIC CENTER ZIP CODE 19141			
ADELMAN, RICHARD C.....	CELLULAR AND MOLECULAR ASPECTS OF AGING.....	1T32 AG00034-01	34,657
ORGANIZATION TOTAL	1 34,657		
TEMPLE UNIVERSITY ZIP CODE 19122			
KUNDEL, HAROLD L.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01702-12	63,090
PLAUT, GERHARD W.....	BIOCHEMICAL ENDOCRINOLOGY RELATED TO DIABETES.....	1T32 AM07162-01	44,715
SHERRY, SOL.....	THROMBOSIS AND HEMOSTASIS.....	1T32 HL07248-01	75,643

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
PENNSYLVANIA—Con.			
SHOCKMAN, GERALD D.....	MICROBIOLOGY.....	5T01 GM00983-15	50,693
SPANN, JAMES F, JR.....	CARDIOLOGY.....	5T32 HL07198-02	81,369
ORGANIZATION TOTAL	5 315,510		
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107			
BRENT, ROBERT L.....	DEVELOPMENTAL BIOLOGY.....	5T32 HD07075-02	66,699
ERSLEV, ALLAN J.....	HEMATOLOGY.....	5T32 AM07084-03	60,534
KRAMER, SIMON.....	RADIATION THERAPY.....	5T32 CA09137-03	74,438
LIBERTI, PAUL A.....	IMMUNOCHEMISTRY AND IMMUNOBIOLOGY.....	5T32 AI07043-02	36,259
ORGANIZATION TOTAL	4 237,930		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174			
BAUM, STANLEY.....	NUCLEAR MEDICINE.....	5T01 GM01762-10	41,356
BRIGHTON, CARL T.....	BONE AND CARTILAGE RESEARCH.....	5T32 AM07132-02	48,621
BRINSTER, RALPH L.....	VETERINARY MEDICINE.....	5T01 GM02051-09	157,788
BRINSTER, RALPH L.....	REPRODUCTIVE PHYSIOLOGY.....	5T01 HD00239-09	76,302
BROBECK, JOHN R.....	PHYSIOLOGY.....	5T01 GM00205-19	56,912
COHEN, SIDNEY.....	GASTROENTEROLOGY.....	5T32 AM07066-03	78,115
COOPER, RICHARD A.....	HEMATOLOGY.....	5T01 HL06019-15	105,221
FERGUSON, JAMES J, JR.....	MEDICAL SCIENTIST.....	5T32 GM07170-03	427,280
FISHMAN, ALFRED P.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07000-03	83,813
FORSTER, ROBERT E.....	PULMONARY PHYSIOLOGY.....	5T32 HL07027-03	79,891
GOLDBERG, MARTIN.....	RENAL PATHOPHYSIOLOGY IN CARDIAC AND RENAL DISEASE.....	5T32 AM07006-03	79,630
HOLTZER, HOWARD.....	CELL AND MOLECULAR BIOLOGY.....	5T32 GM07229-03	236,009
HOLTZER, HOWARD.....	CELL DIFFERENTIATION.....	5T01 HD00030-15	86,288
HURVICH, LEO M.....	PSYCHOPHYSICS AND PHYSIOLOGY OF VISION.....	5T32 EY07035-02	134,049
KALLENBACH, NEVILLE R.....	GENETICS.....	5T32 GM07071-03	134,630
KARE, MORLEY R.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07068-02	69,977
KLINMAN, NORMAN R.....	THE IMMUNOBIOLOGY OF NORMAL AND NEOPLASTIC LYMPHOCYTES.....	5T32 CA09140-03	372,164
KOELLE, GEORGE B.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07302-03	100,325
KOROSTOFF, EDWARD.....	DENTISTRY—MATERIALS.....	5T01 DE00104-15	103,494
LASH, JAMES W.....	ANALYSIS OF DEVELOPMENT.....	5T32 HD07067-02	149,143
MELLMAN, WILLIAM J.....	HUMAN GENETICS.....	1T32 GM07511-01	88,792
SHIP, IRWIN I.....	SOFT TISSUE DISEASES.....	5T32 DE07036-03	169,764
SOMLYO, ANDREW P.....	PATHOLOGY OF MEMBRANES & ORGANELLES.....	5T32 GM00092-03	165,281
SPRAGUE, JAMES M.....	ANATOMICAL SCIENCES.....	5T01 GM00281-19	89,478
STELLAR, ELIOT.....	BEHAVIORAL & NEUROLOGICAL SCIENCES.....	5T01 GM01994-09	112,454
VAN DE WALLE, ETIENNE.....	DEMOGRAPHY.....	1T32 HD07113-01	43,584
WEISS, LEON P.....	EXPERIMENTAL HEMATOLOGY AND CELL BIOLOGY.....	5T32 AM07185-02	39,785
WOLLMAN, HARRY.....	DENTAL PAIN CONTROL.....	5T32 DE07009-02	66,042
WOLLMAN, HARRY.....	ANESTHESIOLOGY.....	5T01 GM00215-20	180,184
YAFFE, SUMNER J.....	PEDIATRIC CLINICAL PHARMACOLOGY AND ANESTHESIOLOGY.....	1T32 GM07514-01	35,062
YANOFF, MYRON.....	EXPERIMENTAL OPHTHALMIC PATHOLOGY.....	1T32 EY07041-01A1	41,875
ZWEIMAN, BURTON.....	ALLERGY AND IMMUNOLOGIC DISEASES.....	5T32 AI07031-02	60,197
ORGANIZATION TOTAL	32 3,713,506		
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
KOPROWSKI, HILARY.....	BASIC CANCER RESEARCH.....	5T32 CA09171-02	223,670
ORGANIZATION TOTAL	1 223,670		
PITTSBURGH			
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
REICHERT, THOMAS A.....	BIOTECHNOLOGY PROGRAM.....	1T32 GM07477-01	62,835
ORGANIZATION TOTAL	1 62,835		
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213			
BROWN, STUART I.....	OCULAR CONNECTIVE TISSUES.....	5T32 EY07032-02	35,211

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director		General area of training	Grant number	Dollars
PENNSYLVANIA—Con.				
ORGANIZATION TOTAL	1	35,211		
MAGEE-WOMEN'S HOSPITAL ZIP CODE 15213				
HAYASHI, T TERRY		REPRODUCTION AND NEONATOLOGY	5T01 HD00227-09	33,40
ORGANIZATION TOTAL	1	33,403		
UNIVERSITY OF PITTSBURGH ZIP CODE 15260				
BENTLEY, RONALD		BIOCHEMISTRY	5T01 GM00149-19	55,24
BOGGS, DANE R.		HEMATOLOGY AND ONCOLOGY	1T32 AM07040-01A1	41,90
FIELD, JAMES B.		DIABETES AND ENDOCRINOLOGY	5T32 AM07052-03	53,35
GILL, THOMAS J, III		PATHOBIOLOGY	1T32 GM07349-01	67,16
KNOBIL, ERNST		PRIMATE REPRODUCTIVE PHYSIOLOGY	1T32 HD07116-01	18,25
KULLER, LEWIS H.		CARDIOVASCULAR EPIDEMIOLOGY	5T32 HL07011-03	106,16
LESTER, ROGER		LIVER METABOLISM AND INTESTINAL TRANSPORT	5T32 AM07138-03	46,21
SPRECHER, RAYMOND L.		PHARMACOLOGY-DENTAL	5T01 DE00213-08	11,81
ORGANIZATION TOTAL	8	400,115		
UNIVERSITY PARK				
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802				
BAKER, PAUL T		ANTHROPOLOGY-HUMAN BIOLOGICAL ADAPTABILITY	5T01 GM01748-09	106,94
TAYLOR, CHARLES		GERONTOLOGY (INTERDISCIPLINARY)	1T32 AG00048-01	74,95
ORGANIZATION TOTAL	2	181,900		
STATE TOTAL	63	5,896,428		
RHODE ISLAND				
PROVIDENCE				
BROWN UNIVERSITY ZIP CODE 02912				
FAIN, JOHN N		DIABETES, ENDOCRINOLOGY, AND METABOLOGY	5T32 AM07187-02	58,46
GOLDSTEIN, SIDNEY		POPULATION CHANGE, DISTRIBUTION, AND MODERNIZATION	5T32 HD07069-02	98,55
RIGGS, LORRIN A		VISUAL PSYCHOPHYSIOLOGY	5T32 EY07029-02	30,83
ORGANIZATION TOTAL	3	187,856		
STATE TOTAL	3	187,856		
SOUTH CAROLINA				
CHARLESTON				
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401				
BAGWELL, ERVINE E		PHARMACOLOGY	1T32 GM07404-01	41,770
GAFFNEY, THOMAS E		CLINICAL PHARMACOLOGY	1T32 GM07534-01	32,665
LINDENMAYER, GEORGE E		IMPROVE CARDIOVASCULAR DRUG THERAPY	1T32 HL07260-01	37,661
ORGANIZATION TOTAL	3	112,096		
COLUMBIA				
BENEDICT COLLEGE ZIP CODE 29204				
FINLAY, MARY F		BIOLOGY AND CHEMISTRY	1T32 GM07643-01	54,839
ORGANIZATION TOTAL	1	54,839		
STATE TOTAL	4	166,935		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
TENNESSEE			
KNOXVILLE			
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916			
BARNETT, W EDGAR.....	MULTIDISCIPLINARY BIOLOGICAL SCIENCES.....	5T01 GM01974-09	151,086
BILLEN, DANIEL.....	CARCINOGENESIS.....	5T32 CA09104-03	50,930
KENNEY, FRANCIS T.....	CARCINOGENESIS.....	5T01 CA05296-04	114,515
POPP, RAYMOND A.....	GENETICS.....	1T32 GM07438-01	16,701
STULBERG, MELVIN P.....	MOLECULAR CELLULAR AGING.....	5T32 AG00028-02	97,974
WALLACE, ROBIN A.....	MACROMOLECULES IN BIOLOGICAL REGULATORY MECHANISMS.....	1T32 GM07431-01	16,960
ORGANIZATION TOTAL	6 448,166		
MEMPHIS			
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
MAUER, ALVIN M.....	CLINICAL CANCER—MEDICAL.....	5T12 CA08151-08	102,347
ORGANIZATION TOTAL	1 102,347		
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163			
ROBERTSON, G GORDON.....	ANATOMICAL SCIENCES.....	5T01 GM00202-19	64,033
ORGANIZATION TOTAL	1 64,033		
NASHVILLE			
GEORGE PEABODY COLLEGE FOR TEACHERS ZIP CODE 37203			
BROOKS, PENELOPE H.....	MENTAL RETARDATION—BEHAVIORAL.....	5T32 HD07045-03	122,102
ORGANIZATION TOTAL	1 122,102		
VANDERBILT UNIVERSITY ZIP CODE 37240			
BASS, ALLAN D.....	PHARMACOLOGY.....	5T01 GM00058-19	117,674
BRIGHAM, KENNETH L.....	RESPIRATORY DISEASES—MULTIDISCIPLINARY.....	5T32 HL07123-03	55,785
BROQUIST, HARRY P.....	NUTRITION AND GASTROENTEROLOGY.....	5T32 AM07083-03	88,482
CHAPMAN, JOHN E.....	MEDICAL SCIENTIST.....	1T32 GM07347-01	30,163
CROFFORD, OSCAR B.....	DIABETES AND ENDOCRINOLOGY.....	5T32 AM07061-03	80,887
ELLIOTT, JAMES H.....	VISUAL SCIENCES.....	5T32 EY07007-02	61,478
KRANTZ, SANFORD B.....	HEMATOLOGY.....	5T32 AM07186-02	59,103
NEAL, ROBERT A.....	ENVIRONMENTAL TOXICOLOGY.....	5T32 ES07028-03	58,113
OATES, JOHN A.....	CLINICAL PHARMACOLOGY.....	1T32 GM07569-01	59,820
PUETT, J DAVID.....	REPRODUCTIVE BIOLOGY, BIOCHEMISTRY, AND ENDOCRINOLOGY.....	5T32 HD07043-03	80,860
SCOTT, H WILLIAM, JR.....	SURGERY.....	5T01 GM01742-11	86,497
STAHLMAN, MILDRED T.....	NEWBORN PULMONARY DEVELOPMENT FUNCTION AND DISEASE.....	1T32 HL07256-01	80,825
TOUSTER, OSCAR.....	CELLULAR—MOLECULAR BIOLOGY.....	5T32 GM07319-03	226,995
ORGANIZATION TOTAL	13 1,086,682		
STATE TOTAL	22 1,823,330		
TEXAS			
AUSTIN			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712			
GALLE, OMER R.....	SOCIAL DEMOGRAPHY.....	1T32 HD07081-01	48,009
GOUGH, PHILIP B.....	PSYCHOLINGUISTICS.....	5T01 HD00439-04	55,752
HARDESTY, BOYD A.....	MEMBRANE CHANGES IN CARCINOGENESIS.....	5T32 CA09182-03	112,033
JUDD, BURKE H.....	GENETIC MECHANISMS AND THE REGULATION OF GENE ACTIVITY.....	5T32 GM07126-03	127,970
ORGANIZATION TOTAL	4 343,764		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
TEXAS—Con.			
DALLAS			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS		ZIP CODE 75235	
COMBES, BURTON.....	GASTROENTEROLOGY AND LIVER DISEASE.....	5T32 AM07100-03	74,192
FOSTER, DANIEL W.....	METABOLOGY.....	5T01 CA05200-11	45,836
JOHNSON, ROBERT L, JR.....	CARDIOPULMONARY PHYSIOLOGY AND PATHOPHYSIOLOGY.....	5T01 HL05812-09	192,293
KOKKO, JUHA P.....	RENAL CONTROL OF BODY COMPOSITION AND BLOOD PRESSURE.....	1T32 AM07257-01	39,057
MACDONALD, PAUL C.....	PHYSIOLOGY OF REPRODUCTION.....	5T01 HD00256-09	107,320
MC CANN, SAMUEL M.....	NEUROENDOCRINOLOGY.....	5T32 HD07062-02	85,402
PETTINGER, WILLIAM A.....	CLINICAL PHARMACOLOGY.....	1T32 GM07247-01A1	37,282
STREILEIN, J WAYNE.....	CANCER IMMUNOLOGY.....	5T32 CA09082-03	161,139
WEISS, GEORGE B.....	PHARMACOLOGY.....	5T32 GM07062-03	55,927
ZIFF, MORRIS.....	RHEUMATOLOGY.....	5T32 AM07055-03	47,629
ORGANIZATION TOTAL	10	846,077	
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON		ZIP CODE 77550	
BOWMAN, BARBARA H.....	GENETICS—MECHANISMS AND REGULATION.....	5T32 GM07204-03	64,987
REMMERS, JOHN E.....	RESPIRATORY DISEASES.....	5T32 HL07217-02	39,254
ORGANIZATION TOTAL	2	104,241	
HOUSTON			
BAYLOR COLLEGE OF MEDICINE		ZIP CODE 77025	
BUSCH, HARRIS.....	CANCER CHEMOTHERAPY.....	5T01 CA05154-15	126,751
CLAYTON, GEORGE W.....	PEDIATRIC ENDOCRINOLOGY.....	1T32 HD07091-01	29,197
DE BAKEY, MICHAEL E.....	ACADEMIC SURGERY.....	5T01 GM01965-09	41,596
ENTMAN, MARK L.....	CARDIOVASCULAR BIOLOGY.....	5T32 HL07219-02	109,159
HORNING, EVAN C.....	ANALYTICAL METHODS FOR HUMAN STUDIES.....	5T01 GM02055-09	56,463
KNOX, JOHN M.....	VENEREOLOGY.....	5T01 AI00462-04	42,280
LANE, MONTAGUE.....	CLINICAL CANCER—MEDICAL.....	5T12 CA08017-11	215,196
MC NAMARA, DAN G.....	DEVELOPMENTAL CARDIAC PHARMACOLOGY AND PHYSIOLOGY.....	1T32 HL07190-01A1	37,923
O'MALLEY, BERT W.....	REPRODUCTIVE BIOLOGY: REGULATORY MECHANISMS.....	5T01 HD00444-04	68,601
TRENTIN, JOHN J.....	CANCER.....	5T01 CA05021-21	11,415
VON NOORDEN, GUNTER K.....	VISUAL SCIENCES.....	5T32 EY07001-03	35,802
WAKIL, SALIH J.....	MEDICAL SCIENTIST.....	1T32 GM07330-01A1	17,967
ORGANIZATION TOTAL	12	792,350	
RICE UNIVERSITY		ZIP CODE 77001	
STEWART, CHARLES R.....	DEVELOPMENTAL GENETICS.....	5T01 GM02221-04	46,413
ORGANIZATION TOTAL	1	46,413	
TEXAS SOUTHERN UNIVERSITY		ZIP CODE 77004	
SESSION, JOHN J.....	IMMUNOBIOLOGY, BIOCHEMISTRY & PSYCHOLOGY.....	1T32 GM07659-01	87,046
ORGANIZATION TOTAL	1	87,046	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON		ZIP CODE 77025	
DE MOSS, JOHN A.....	MOLECULAR BASIS OF CELL FUNCTION.....	1T32 GM07542-01	53,105
LEVY, BARNET M.....	EXPERIMENTAL PERIODONTOLOGY/IMMUNOLOGY; BIOCHEMISTRY.....	5T32 DE07029-02	86,707
PRESLOCK, JAMES P.....	HUMORAL REGULATION OF REPRODUCTIVE SYSTEMS.....	1T32 HD07119-01	32,780
ROBISON, GEORGE A.....	HOUSTON PHARMACOLOGICAL CENTER.....	1T32 GM07405-01	47,005
SHAW, MARGERY W.....	MEDICAL GENETICS.....	5T01 GM02237-04	47,761
SPEHLING, HARRY G.....	SENSORY NEURAL SCIENCES.....	5T32 EY07024-03	54,813
ORGANIZATION TOTAL	6	322,171	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER		ZIP CODE 77025	
FREIREICH, EMIL J.....	CLINICAL PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS.....	5T32 CA09189-02	230,321

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
TEXAS—Con.			
SHULLENBERGER, C C.....	CANCER CHEMOTHERAPY.....	5T32 CA09163-03	179,715
VAN EYS, JAN.....	PEDIATRIC HEMATOLOGY-ONCOLOGY.....	5T32 CA09070-03	81,746
ORGANIZATION TOTAL	3 491,782		
LUBBOCK			
TEXAS TECH UNIVERSITY ZIP CODE 79409			
BARNES, CHARLES D.....	FACTORS MODIFYING CARDIOVASCULAR ACTIVITY.....	1T32 HL07289-01	47,901
ORGANIZATION TOTAL	1 47,901		
PRAIRIE VIEW			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—PRAIRIE VIEW AGR. AND MECH. UNIVERSITY ZIP CODE 77445			
WASHINGTON, ARTHUR C.....	BIOMEDICAL SCIENCES.....	1T32 GM07695-01	36,166
ORGANIZATION TOTAL	1 36,166		
SAN ANTONIO			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284			
JOHANSON, WALDEMAR G, JR.....	LUNG DISEASES—MULTIDISCIPLINARY.....	5T32 HL07221-02	32,696
MC GUIRE, WILLIAM L.....	MECHANISMS OF BREAST CANCER GROWTH AND REGRESSION.....	5T32 CA09042-03	21,696
MC NAY, JOHN L, JR.....	CLINICAL PHARMACOLOGY.....	5T32 GM07014-03	64,166
STEIN, JAY H.....	ACADEMIC NEPHROLOGY.....	5T32 AM07103-03	76,640
ORGANIZATION TOTAL	4 195,198		
STATE TOTAL	45 3,313,109		
UTAH			
LOGAN			
UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY ZIP CODE 84322			
GARDNER, ELDON J.....	GENETICS.....	5T01 GM01029-15	40,326
ORGANIZATION TOTAL	1 40,326		
SALT LAKE CITY			
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112			
CARTWRIGHT, GEORGE E.....	HEMATOLOGY.....	5T32 AM07115-03	43,042
DETHLEFSEN, LYLE A.....	RADIATION BIOLOGY AND EXPERIMENTAL ONCOLOGY.....	5T32 CA09097-03	43,343
GIBB, JAMES W.....	BIOCHEMICAL TOXICOLOGY.....	5T32 GM07265-03	19,739
GLASGOW, LOWELL A.....	INFECTIOUS DISEASES.....	5T32 AI07011-02	100,159
VICKERY, ROBERT K, JR.....	GENETICS.....	1T32 GM07464-01	65,671
WOODBURY, DIXON M.....	PHARMACOLOGY.....	5T01 GM00153-19	123,079
ORGANIZATION TOTAL	6 395,033		
STATE TOTAL	7 435,359		
VERMONT			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
CRAIGHEAD, JOHN E.....	RESPIRATORY DISEASES.....	5T32 HL07206-02	90,629

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
VERMONT—Con.			
PARSONS, RODNEY L.....	CARDIOVASOLOGY—MULTIDISCIPLINARY.....	5T32 HL07073-03	52,217
ORGANIZATION TOTAL	2	142,846	
STATE TOTAL	2	142,846	
VIRGINIA			
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
ATTINGER, ERNST O.....	BIOMEDICAL ENGINEERING.....	5T01 GM01919-09	59,072
BASS, NORMAN H.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07013-02	122,498
BERNE, ROBERT M.....	BASIC CARDIOVASCULAR RESEARCH.....	1T32 HL07284-01	132,395
DAVIS, JOHN S, IV.....	IMMUNOPATHOLOGY OF RHEUMATIC DISEASES.....	5T32 AM07156-02	33,372
HAYNES, ROBERT C, JR.....	MEDICAL SCIENTIST.....	1T32 GM07267-01A1	34,662
KADNER, ROBERT J.....	GENETIC CONTROL OF BIOLOGICAL REGULATORY SYSTEMS.....	5T32 GM07082-03	43,985
KOMP, DIANE M.....	PEDIATRIC ONCOLOGY.....	5T32 CA09147-02	84,033
KONIGSBERG, IRWIN R.....	DEVELOPMENTAL BIOLOGY.....	5T01 HD00430-04	43,857
LANGMAN, JAN.....	CRANIOFACIAL DEVELOPMENT.....	5T32 DE07037-03	56,400
LARNER, JOSEPH.....	PHARMACOLOGY.....	5T32 GM07055-03	78,222
LAWLESS, KENNETH R.....	DENTISTRY—MATERIALS.....	5T01 DE00115-15	23,009
LAWLESS, KENNETH R.....	CHEMICAL AND PHYSICAL PROPERTIES OF DENTAL MATERIALS.....	5T32 DE07046-02	43,173
MANDELL, GERALD L.....	INFECTIOUS DISEASES.....	1T32 AI07046-01	79,922
MILLER, OSCAR L, JR.....	GENETICS.....	5T01 GM01450-09	51,604
THOMPSON, THOMAS E.....	MEMBRANE AND MACROMOLECULAR STRUCTURE.....	5T32 GM07294-03	44,114
WAGNER, ROBERT R.....	CANCER RESEARCH—MOLECULAR BIOLOGY.....	5T32 CA09109-02	206,246
ORGANIZATION TOTAL	16	1,136,564	
RICHMOND			
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23204			
BRADLEY, S GAYLEN.....	INFECTION AND IMMUNITY.....	5T01 AI00382-07	80,594
DEWEY, WILLIAM L.....	PHARMACOLOGY AND RELATED DISCIPLINES.....	5T32 GM07111-03	59,860
FARRAR, JOHN T.....	DIGESTIVE AND LIVER DISEASES.....	5T32 AM07150-02	38,389
GOLDMAN, I DAVID.....	CARDIOVASOLOGY—MULTIDISCIPLINARY.....	5T32 HL07110-03	78,793
KENNEDY, JAMES F.....	BASIC SCIENCES.....	5T01 DE00008-19	51,261
NANCE, WALTER E.....	HUMAN GENETICS.....	1T32 GM07492-01	46,307
PHIBBS, PAUL V, JR.....	INFECTIOUS DISEASES.....	1T32 AI07086-01	46,274
RICHARDSON, DAVID W.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	1T32 HL07309-01	14,796
RUDDY, SHAUN.....	PATHOGENESIS AND TREATMENT OF RHEUMATIC DISEASES.....	1T32 AM07079-01A2	39,057
WEGLIICKI, WILLIAM B.....	MECHANISMS OF CARDIOVASCULAR INJURY.....	1T32 HL07244-01	65,180
ORGANIZATION TOTAL	10	520,511	
STATE TOTAL	26	1,657,075	
WASHINGTON			
PULLMAN			
WASHINGTON STATE UNIVERSITY ZIP CODE 99163			
CRAWFORD, TIMOTHY B.....	PATHOBIOLOGY.....	5T32 GM07160-03	76,812
HEGREBERG, GERALD A.....	COMPARATIVE GENETICS—MEDICAL.....	5T32 GM07125-03	71,609
KIRSCHNER, LEONARD B.....	ZOOLOGY.....	5T01 GM01276-14	47,866
ORGANIZATION TOTAL	3	196,287	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
WASHINGTON—Con.			
SEATTLE			
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ALEXANDER, E RUSSELL.....	EPIDEMIOLOGY OF INFECTIOUS DISEASES.....	1T32 A107125-01	66,828
BENDITT, EARL P.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00100-20	64,437
BIERMAN, EDWIN L.....	DIABETES, METABOLISM, AND ENDOCRINOLOGY.....	1T32 AM07247-01	58,587
BIERMAN, EDWIN L.....	NUTRITION, LIPID METABOLISM, AND ARTERIOSCLEROSIS.....	5T32 HL07028-02	58,882
BONICA, JOHN J.....	ANESTHESIOLOGY.....	5T01 GM01160-15	58,689
CARRICO, C JAMES.....	TRAUMA AND BURNS.....	5T32 GM07037-03	58,224
DE ROUEN, TIMOTHY A.....	CARDIOVASCULAR BIostatISTICS.....	5T32 HL07183-02	84,979
DODGE, HAROLD T.....	CARDIOVASCULAR RESEARCH.....	1T32 HL07278-01	82,361
FEIGL, ERIC O.....	CARDIOVASOLOGY—MULTIDISCIPLINARY.....	5T32 HL07090-03	105,255
FINCH, CLEMENT A.....	HEMATOLOGY AND NUTRITIONAL ANEMIAS.....	1T32 AM07237-01	17,942
FINCH, CLEMENT A.....	HEMATOLOGY.....	5T32 HL07093-03	99,791
GALE, JAMES L.....	EPIDEMIOLOGY—EYE DISEASES.....	5T32 EY07017-03	39,558
GORDON, MILTON P.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07270-03	338,101
HUITRIC, ALAIN C.....	PHARMACOKINETICS AND BIOTRANSFORMATION.....	1T32 GM07348-01	23,003
JACKSON, KENNETH L.....	RADIOLOGICAL SCIENCES.....	5T32 CA09081-02	69,994
KALINA, ROBERT E.....	VISION RESEARCH—MULTIDISCIPLINARY.....	5T32 EY07013-03	79,456
KAPLAN, ALEX.....	BIOCHEMISTRY—CLINICAL CHEMISTRY.....	5T01 GM00776-14	64,800
KELLER, PATRICIA J.....	ORAL BIOLOGY—SALIVARY SECRETIONS.....	5T32 DE07023-03	61,283
KLEBANOFF, SEYMOUR J.....	HOST DEFENSE IN ALLERGY AND INFECTIOUS DISEASE.....	5T32 A107044-02	124,073
KLEBANOFF, SEYMOUR J.....	MEDICAL SCIENTIST.....	5T32 GM07266-03	217,269
LAGUNOFF, DAVID.....	BASIC PATHOBIOLOGY.....	5T32 GM07187-03	65,114
LEE, JOHN A.....	CANCER EPIDEMIOLOGY AND BIostatISTICS.....	5T32 CA09168-03	175,767
MANNIK, MART.....	RHEUMATOLOGY.....	5T32 AM07108-03	53,726
MOTTET, N KARLE.....	ENVIRONMENTAL PATHOLOGY/PATHOPHYSIOLOGY.....	1T32 ES07032-01A1	72,412
MOTULSKY, ARNO G.....	MEDICAL GENETICS.....	1T32 GM07454-01	81,336
ODLAND, GEORGE F.....	DERMATOLOGY.....	5T32 AM07019-03	61,843
PAGE, ROY C.....	PERIODONTAL DISEASES AND CHRONIC INFLAMMATION.....	5T32 DE07063-02	108,173
PATTON, HARRY D.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07108-03	122,976
ROMAN, HERSCHEL L.....	CLINICAL PHARMACOLOGY.....	5T01 GM00182-19	171,280
RUSHMER, ROBERT F.....	CARDIOVASCULAR PHYSIOLOGY.....	3T01 HL05147-19S1	7,938
STENCHEVER, MORTON A.....	ENDOCRINOLOGY OF REPRODUCTION.....	5T01 HD00272-12	122,140
TELLER, DAVIDA Y.....	VISUAL SCIENCES.....	5T32 EY07031-02	34,441
THOMAS, E DONNALL.....	ONCOLOGY.....	5T01 CA05231-08	122,741
THOMPSON, DONOVAN J.....	BIOMETRY.....	5T01 GM01269-14	48,107
VOLWILER, WADE.....	GASTROENTEROLOGY.....	5T32 AM07113-03	38,971
WEDGWOOD, RALPH J.....	ABNORMAL BIOLOGIC DEVELOPMENT AND MENTAL RETARDATION.....	5T01 HD00404-04	99,427
WHITELEY, ARTHUR H.....	DEVELOPMENTAL BIOLOGY—INTERDISCIPLINARY.....	5T01 HD00266-09	103,995
ORGANIZATION TOTAL	37 3,263,899		
STATE TOTAL	40 3,460,186		
WEST VIRGINIA			
MORGANTOWN			
WEST VIRGINIA UNIVERSITY ZIP CODE 26506			
BURRELL, ROBERT G.....	PULMONARY IMMUNOLOGY.....	5T32 HL07170-02	35,684
FLEMING, WILLIAM W.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07039-03	83,119
ORGANIZATION TOTAL	2 118,803		
STATE TOTAL	2 118,803		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1977—Continued

Program director	General area of training	Grant number	Dollars
WISCONSIN			
MADISON			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706			
ALLEN, JAMES R.....	ENVIRONMENTAL PATHOLOGY.....	1T32 ES07071-01	72,836
ALLEN, JAMES R.....	PATHOBIOLOGY.....	5T32 GM07194-03	104,173
BACH, FRITZ H.....	CELLULAR AND TUMOR IMMUNITY.....	5T32 CA09106-02	152,117
BASS, PAUL.....	PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07107-03	85,573
BEINERT, HELMUT.....	ENZYMOLGY—MAMMALIAN METABOLISM.....	5T32 AM07049-03	40,913
DAVIS, MATTHEW D.....	OPHTHALMOLOGY.....	5T01 EYG0039-13	57,102
HARPER, ALFRED E.....	METABOLIC REGULATION AND WEIGHT CONTROL.....	1T32 GM07058-01A1	42,805
HINS DILL, RONALD D.....	ENVIRONMENTAL TOXICOLOGY.....	5T32 ES07015-03	121,990
LOEB, MARTIN B.....	AGING.....	5T01 AG00016-09	120,264
MILLER, ELIZABETH C.....	CARCINOGENESIS.....	5T32 CA09020-03	96,708
MUELLER, GERALD C.....	TUMOR BIOLOGY.....	5T32 CA09230-02	92,415
PITOT, HENRY C.....	EXPERIMENTAL ONCOLOGY.....	5T32 CA09135-03	303,378
RANKIN, JOHN.....	PULMONARY MEDICINE.....	5T32 HL07016-03	95,070
ROWND, ROBERT H.....	MOLECULAR BIOLOGY.....	5T01 GM01874-09	82,084
SIMPSON, DAVID P.....	NEPHROLOGY.....	1T32 AM07238-01	36,987
SUSMAN, MILLARD.....	MEDICAL GENETICS.....	5T32 GM07131-03	119,021
SUSMAN, MILLARD.....	GENETICS.....	5T32 GM07133-03	418,044
SUTTIE, JOHN W.....	NUTRITION.....	5T32 DE07031-03	77,434
SWEET, JAMES A.....	DEMOGRAPHY AND ECOLOGY.....	5T32 HD07014-03	114,120
TEMIN, HOWARD M.....	VIRAL ONCOLOGY.....	5T32 CA09075-03	341,263
WILSON, JOE B.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07215-03	606,962
WOLF, RICHARD C.....	ENDOCRINOLOGY-REPRODUCTIVE PHYSIOLOGY.....	1T32 HD07007-01	143,711
ORGANIZATION TOTAL 22	3,324,970		
MILWAUKEE			
MEDICAL COLLEGE OF WISCONSIN ZIP CODE 53233			
ASTER, RICHARD H.....	HEMATOLOGY AND BLOOD BANKING SCIENCES.....	5T32 HL07209-02	40,272
EDELHAUSER, HENRY F.....	EYE PHYSIOLOGY AND BIOCHEMISTRY.....	5T32 EY07016-03	27,678
FINK, JORDAN N.....	ALLERGIC DISEASES.....	5T32 AI07006-03	20,024
FUJIMOTO, JAMES M.....	PHARMACOLOGIC TOXICOLOGY OF ENVIRONMENTAL CHEMICALS.....	1T32 ES07043-01	59,704
LEMANN, JACOB, JR.....	RENAL PHYSIOLOGY, RENAL DISEASE AND HYPERTENSION.....	5T01 HL05949-04	46,734
RYTEL, MICHAEL W.....	INFECTIOUS DISEASES.....	5T01 AI00455-04	27,846
ORGANIZATION TOTAL 6	222,258		
STATE TOTAL 28	3,547,228		
PUERTO RICO			
SAN JUAN			
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS ZIP CODE 00936			
PICO, GUILLERMO.....	OPHTHALMOLOGY.....	5T01 EY00019-21	37,441
ORGANIZATION TOTAL 1	37,441		
STATE TOTAL 1	37,441		

Table 4.—Cancer Research Facilities Construction Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977

Responsible official	Construction program	Grant number	Dollars
TOTAL, 10 GRANTS.....			15,999,970

CONNECTICUT

NEW HAVEN

YALE UNIVERSITY ZIP CODE 06520

COLE, JACK W.....	NEW CANCER FACILITY.....	3C06 CA16360-01A1S2	1,064,250
ORGANIZATION TOTAL	1	1,064,250	
STATE TOTAL	1	1,064,250	

DIST OF COL

WASHINGTON

GEORGETOWN UNIVERSITY ZIP CODE 20007

POTTER, JOHN F.....	NEW CANCER FACILITY.....	1C06 CA20440-01	3,124,346
ORGANIZATION TOTAL	1	3,124,346	

HOWARD UNIVERSITY ZIP CODE 20001

HARRIS, C L, JR.....	NEW CANCER FACILITY.....	3C06 CA13563-01A1S1	749,447
ORGANIZATION TOTAL	1	749,447	
STATE TOTAL	2	3,873,793	

ILLINOIS

CHICAGO

NORTHWESTERN UNIVERSITY ZIP CODE 60611

BERLIN, NATHANIEL I.....	CANCER FACILITY CONSTRUCTION.....	3C06 CA19774-01S2	895,091
ORGANIZATION TOTAL	1	895,091	
STATE TOTAL	1	895,091	

MASSACHUSETTS

BOSTON

SIDNEY FARDER CANCER INSTITUTE ZIP CODE 02115

FREI, EMIL, III.....	NEW CANCER FACILITY.....	1C06 CA21725-01	2,866,500
ORGANIZATION TOTAL	1	2,866,500	

NOTE: For comments on organizations, see Appendix.

Table 4.—Cancer Research Facilities Construction Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

Responsible official	Construction program	Grant Number	Dollars
MASSACHUSETTS—Con.			
CAMBRIDGE			
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
FOX, JAMES G.....	CANCER FACILITY RENOVATIONS AND ALTERATIONS.....	1C06 CA19593-01A1	1,498,646
ORGANIZATION TOTAL	1 1,498,646		
STATE TOTAL	2 4,365,146		
NEW YORK			
BUFFALO			
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
PAIGEN, KENNETH.....	REMODELING CANCER FACILITY.....	1C06 CA21743-01	599,987
ORGANIZATION TOTAL	1 599,987		
COLD SPRING HARBOR			
COLD SPRING HARBOR LABORATORY ZIP CODE 11724			
UDRY, WILLIAM R.....	NEW CANCER FACILITY.....	1C06 CA21750-01	1,411,000
ORGANIZATION TOTAL	1 1,411,000		
ROCHESTER			
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
MC BRIDE, DAVID A.....	CANCER FACILITY CONSTRUCTION.....	3C06 CA18841-01S1	2,108,828
ORGANIZATION TOTAL	1 2,108,828		
STATE TOTAL	3 4,119,815		
OHIO			
COLUMBUS			
OHIO STATE UNIVERSITY ZIP CODE 43210			
YOHN, DAVID S.....	NEW CANCER FACILITY.....	1C06 CA21739-01	1,681,875
ORGANIZATION TOTAL	1 1,681,875		
STATE TOTAL	1 1,681,875		

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977

	Responsible official	Grant No.	Dollars
TOTAL, 66 GRANTS.....			1,772,712
ALABAMA			
BIRMINGHAM			
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM		ZIP CODE 35294	
MUELLER, DOROTHY A.....		3G08 LM02448-02S1	8,982
MUELLER, DOROTHY A.....		1G08 LM02863-01	34,846
ORGANIZATION TOTAL	2		43,828
STATE TOTAL	2		43,828
ARKANSAS			
SPRINGDALE			
SPRINGDALE MEMORIAL HOSPITAL		ZIP CODE 72764	
CLEVENGER, VIRGINIA.....		1G08 LM02978-01	70,539
ORGANIZATION TOTAL	1		70,539
STATE TOTAL	1		70,539
CALIFORNIA			
CAMARILLO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY—CAMARILLO STATE HOSPITAL		ZIP CODE 93010	
OATHOUT, MELVIN C.....		1G08 LM02919-01	16,795
ORGANIZATION TOTAL	1		16,795
LOMA LINDA			
LOMA LINDA UNIVERSITY		ZIP CODE 92354	
SUMMERS, GEORGE V.....		1G08 LM02786-01	24,115
ORGANIZATION TOTAL	1		24,115
LOS ANGELES			
UNIVERSITY OF CALIFORNIA AT LOS ANGELES		ZIP CODE 90024	
CHASE, MICHAEL H.....		5G08 LM02307-03	41,167
DARLING, LOUISE.....		5G08 LM02593-02	10,660
DARLING, LOUISE.....		5G08 LM02772-02	7,626
ORGANIZATION TOTAL	3		59,453

NOTE: For comments on organizations, see Appendix.

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

	Responsible official		Grant No.	Dollars
CALIFORNIA—Con.				
MERCED				
MERCED COMMUNITY MEDICAL CENTER ZIP CODE 95340				
DOBBINS, TOM			1G07 LM03107-01	2,856
ORGANIZATION TOTAL	1	2,856		
REDONDO BEACH				
SOUTH BAY HOSPITAL ZIP CODE 90277				
KLECKER, ANITA			1G07 LM03038-01	3,000
ORGANIZATION TOTAL	1	3,000		
SAN JOSE				
MEDI-SHARE ZIP CODE 95126				
SKILLICORN, STANLEY			1G08 LM02733-01	8,420
ORGANIZATION TOTAL	1	8,420		
VALLEJO				
VALLEJO GENERAL HOSPITAL ZIP CODE 94590				
QUINN, BERNICE			1G07 LM02913-01	2,535
ORGANIZATION TOTAL	1	2,535		
STATE TOTAL	9	117,174		
DIST OF COL				
WASHINGTON				
CATHOLIC UNIVERSITY OF AMERICA ZIP CODE 20017				
WAGNER, LLOYD F.			5G08 LM01738-03	20,900
ORGANIZATION TOTAL	1	20,900		
GEORGETOWN UNIVERSITY ZIP CODE 20007				
CARTER, BOBBY R.			1G08 LM02887-01	26,575
ORGANIZATION TOTAL	1	26,575		
STATE TOTAL	2	47,475		
GEORGIA				
CAIRO				
GRADY GENERAL HOSPITAL ZIP CODE 31720				
SLACK, ROBERT H.			1G07 LM02899-01	2,240
ORGANIZATION TOTAL	1	2,240		
MACON				
MERCER UNIVERSITY ZIP CODE 31207				
RANKIN, JOCELYN A.			1G07 LM03090-01	21,000
ORGANIZATION TOTAL	1	21,000		
STATE TOTAL	2	23,240		

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

		Responsible official	Grant No.	Dollars
HAWAII				
HONOLULU				
HAWAII MEDICAL LIBRARY		ZIP CODE 96813		
WINTERS, CLYDE J.....			2G08 LM02235-04	30,997
ORGANIZATION TOTAL	1	30,997		
STATE TOTAL	1	30,997		
IDAHO				
BOISE				
IDAHO STATE DEPARTMENT OF EDUCATION		ZIP CODE 83720		
MILLER, HELEN M.....			1G08 LM02880-01	43,675
ORGANIZATION TOTAL	1	43,675		
STATE TOTAL	1	43,675		
ILLINOIS				
MATTOON				
SARAH BUSH LINCOLN HEALTH CENTER		ZIP CODE 61938		
HEYDUCK, FLORENCE.....			1G07 LM02981-01	2,880
ORGANIZATION TOTAL	1	2,880		
NORMAL				
BROKAW HOSPITAL		ZIP CODE 61761		
BRADEN, FRANK.....			1G07 LM02846-01	2,903
ORGANIZATION TOTAL	1	2,903		
STATE TOTAL	2	5,783		
INDIANA				
INDIANAPOLIS				
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS		ZIP CODE 46262		
LAATZ, MARY J.....			1G08 LM02687-01	31,305
ORGANIZATION TOTAL	1	31,305		
WEST LAFAYETTE				
PURDUE UNIVERSITY		ZIP CODE 47907		
MEYER, KENNETH B.....			1G08 LM02883-01	48,023
ORGANIZATION TOTAL	1	48,023		
STATE TOTAL	2	79,328		

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

		Responsible official	Grant No.	Dollars
KENTUCKY				
ASHLAND				
KING'S DAUGHTERS' HOSPITAL		ZIP CODE 41101		
	WURTS, JAMES R.....		1G07 LM02809-01	3,000
	ORGANIZATION TOTAL	1		3,000
LEXINGTON				
UNIVERSITY OF KENTUCKY		ZIP CODE 40506		
	STITH, JANET.....		5G08 LM02520-03	43,394
	ORGANIZATION TOTAL	1		43,394
	STATE TOTAL	2		46,394
LOUISIANA				
LAFAYETTE				
LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION-LAFAYETTE CHARITY HOSPITAL		ZIP CODE 70501		
	VOORHIES, DANIEL.....		5G08 LM02363-03	15,600
	ORGANIZATION TOTAL	1		15,600
	STATE TOTAL	1		15,600
MAINE				
AUGUSTA				
AUGUSTA GENERAL HOSPITAL		ZIP CODE 04330		
	GOODWIN, CLAIRE K.....		5G08 LM02334-03	21,993
	ORGANIZATION TOTAL	1		21,993
MAINE HOSPITAL ASSOCIATION		ZIP CODE 04330		
	BINGHAM, FLETCHER H.....		1G08 LM02908-01	41,895
	ORGANIZATION TOTAL	1		41,895
LEWISTON				
ST. MARY'S GENERAL HOSPITAL		ZIP CODE 04240		
	ROUX, SISTER AURORE.....		1G08 LM02917-01	9,945
	ORGANIZATION TOTAL	1		9,945
	STATE TOTAL	3		73,833
MARYLAND				
BALTIMORE				
JOHNS HOPKINS UNIVERSITY		ZIP CODE 21218		
	FRIED, RUTH LEYS.....		1G08 LM02886-01	17,910
	ORGANIZATION TOTAL	1		17,910
	STATE TOTAL	1		17,910

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

	Responsible official		Grant No.	Dollars
MASSACHUSETTS				
CAMBRIDGE				
MOUNT AUBURN HOSPITAL	ZIP CODE 02138			
WITTE, LAWRENCE M.....			1G08 LM03024-01	49,405
ORGANIZATION TOTAL	1	49,405		
STATE TOTAL	1	49,405		
MICHIGAN				
ALPENA				
ALPENA GENERAL HOSPITAL	ZIP CODE 49707			
KLEREKOPER, WILLIAM P.....			1G07 LM02933-01	3,000
ORGANIZATION TOTAL	1	3,000		
DETROIT				
WAYNE STATE UNIVERSITY	ZIP CODE 48202			
WILLIAMS, JAMES F, II.....			3G08 LM02115-03S1	37,500
ORGANIZATION TOTAL	1	37,500		
MARQUETTE				
MARQUETTE GENERAL HOSPITAL	ZIP CODE 49855			
BUHRMAN, FLORENCE M.....			1G08 LM02874-01	35,098
ORGANIZATION TOTAL	1	35,098		
STATE TOTAL	3	75,598		
MINNESOTA				
BRAINERD				
ST. JOSEPH'S HOSPITAL	ZIP CODE 56401			
SCOTT, JERRY B.....			1G07 LM02763-01	3,000
ORGANIZATION TOTAL	1	3,000		
MINNEAPOLIS				
FAIRVIEW COMMUNITY HOSPITALS	ZIP CODE 55454			
MC INTOSH, LINDA.....			1G08 LM02682-01	32,096
ORGANIZATION TOTAL	1	32,096		
UNIVERSITY OF MINNESOTA	ZIP CODE 55455			
BRUDVIG, GLENN L.....			1G08 LM02586-01	46,835
ORGANIZATION TOTAL	1	46,835		
PRINCETON				
PRINCETON COMMUNITY HOSPITAL	ZIP CODE 55371			
GILLHAM, LANCE F.....			1G07 LM02973-01	2,999
ORGANIZATION TOTAL	1	2,999		

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

	Responsible official		Grant No.	Dollars
MINNESOTA—Con.				
ZUMBROTA				
ZUMBROTA COMMUNITY HOSPITAL ZIP CODE 55992				
CLARK, ANN.....			1G07 LM03030-01	1,225
ORGANIZATION TOTAL	1	1,225		
STATE TOTAL	5	86,155		
MISSOURI				
HANNIBAL				
ST. ELIZABETH'S HOSPITAL ZIP CODE 63401				
BRUM, JOSEPH G.....			1G07 LM03075-01	3,900
ORGANIZATION TOTAL	1	3,900		
STATE TOTAL	1	3,900		
NEBRASKA				
LINCOLN				
LINCOLN MEDICAL EDUCATION FOUNDATION ZIP CODE 68510				
BITNEY, ELIZABETH A.....			1G07 LM03103-01	4,000
ORGANIZATION TOTAL	1	4,000		
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA AT LINCOLN ZIP CODE 68508				
JONES, GARY L.....			1G08 LM02911-01	166,537
ORGANIZATION TOTAL	1	166,537		
OMAHA				
CREIGHTON UNIVERSITY ZIP CODE 68178				
WANNARKA, MARJORIE B.....			1G08 LM02878-01	65,000
ORGANIZATION TOTAL	1	65,000		
STATE TOTAL	3	235,537		
NEW JERSEY				
PATERSON				
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER ZIP CODE 07503				
ROSENSWEIG, RUTH A.....			1G08 LM02998-01	50,000
ORGANIZATION TOTAL	1	50,000		
PLAINFIELD				
MUHLENBERG HOSPITAL ZIP CODE 87061				
MC CARTHY, JANE C.....			1G08 LM02859-01	21,899
ORGANIZATION TOTAL	1	21,899		
STATE TOTAL	2	71,899		

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

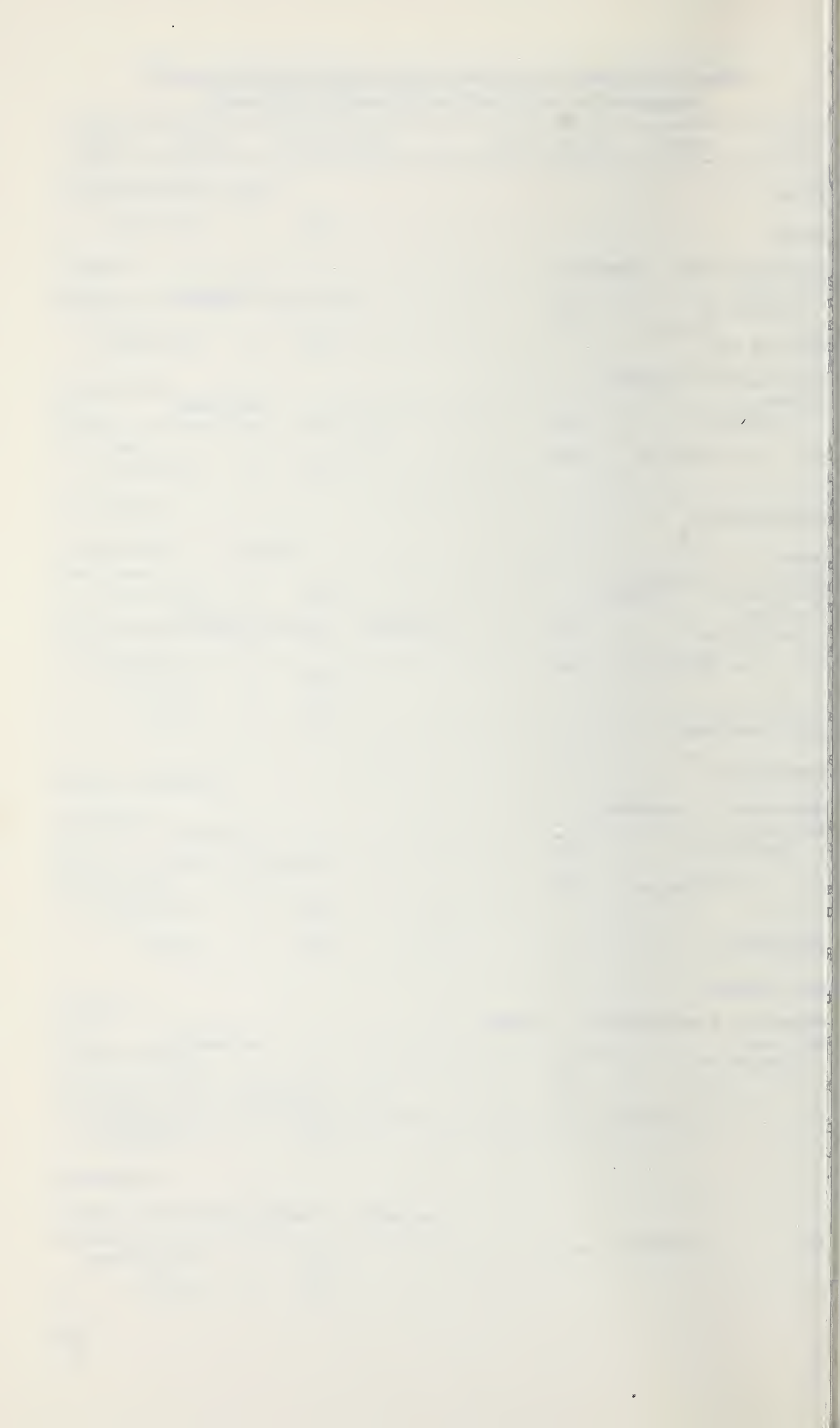
		Responsible official	Grant No.	Dollars
NEW YORK				
ALBANY				
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE		ZIP CODE 12208		
POLAND, URSULA H.....			1G08 LM02595-01	37,955
ORGANIZATION TOTAL	1	37,955		
BUFFALO				
STATE UNIVERSITY OF NEW YORK AT BUFFALO		ZIP CODE 14260		
HUANG, C K.....			1G08 LM02575-01	33,250
ORGANIZATION TOTAL	1	33,250		
NEW YORK				
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE		ZIP CODE 10029		
GOLDSTEIN, RACHAEL K.....			1G08 LM02780-01	49,732
ORGANIZATION TOTAL	1	49,732		
CORNELL UNIVERSITY MEDICAL CENTER		ZIP CODE 10021		
MEYERHOFF, ERICH.....			1G08 LM02948-01	55,000
ORGANIZATION TOTAL	1	55,000		
MEDICAL LIBRARY CENTER OF NEW YORK		ZIP CODE 10029		
MILLER, JEAN K.....			1G08 LM02693-01	34,277
ORGANIZATION TOTAL	1	34,277		
NEW YORK COLLEGE OF PODIATRIC MEDICINE		ZIP CODE 10035		
GEWIRTZ, RENA.....			1G08 LM02997-01	57,565
ORGANIZATION TOTAL	1	57,565		
PATCHOGUE				
BROOKHAVEN MEMORIAL HOSPITAL		ZIP CODE 11772		
LANE, DOROTHY S.....			1G07 LM02803-01	3,250
ORGANIZATION TOTAL	1	3,250		
SYRACUSE				
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER		ZIP CODE 13210		
HOEY, EVELYN L.....			1G08 LM02584-01	42,300
ORGANIZATION TOTAL	1	42,300		
WINGDALE				
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—HARLEM VALLEY PSYCHIATRIC CENTER		ZIP CODE 12504		
LEWANDOWSKI, VIRGINIA M.....			1G08 LM02969-01	20,892
ORGANIZATION TOTAL	1	20,892		
STATE TOTAL	9	334,221		
PENNSYLVANIA				
BRYN MAWR				
BRYN MAWR HOSPITAL		ZIP CODE 19010		
GUNDRY, LESLIE D.....			1G08 LM02774-01	50,000

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

	Responsible official	Grant No.	Dollars
PENNSYLVANIA—Con.			
ORGANIZATION TOTAL	1		50,000
CHESTER			
CROZER-CHESTER MEDICAL CENTER	ZIP CODE 19013		
BROWN, LEE C.....		1G08 LM02996-01	32,640
ORGANIZATION TOTAL	1		32,640
JOHNSTOWN			
CONEMAUGH VALLEY MEMORIAL HOSPITAL	ZIP CODE 15905		
BRICE, HEATHER W.....		1G07 LM03077-01	3,892
ORGANIZATION TOTAL	1		3,892
PHILADELPHIA			
PENNSYLVANIA HOSPITAL	ZIP CODE 19107		
MORRIS, CAROLINE S.....		2G08 LM02291-02	41,438
ORGANIZATION TOTAL	1		41,438
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE	ZIP CODE 19104		
CHASE, ELIZABETH W.....		1G08 LM03015-01	64,803
ORGANIZATION TOTAL	1		64,803
STATE TOTAL	5		192,773
SOUTH DAKOTA			
VERMILLION			
UNIVERSITY OF SOUTH DAKOTA	ZIP CODE 57069		
BRENNEN, PATRICK W.....		1G08 LM02920-01	25,726
ORGANIZATION TOTAL	1		25,726
STATE TOTAL	1		25,726
TEXAS			
CORPUS CHRISTI			
MEMORIAL MEDICAL CENTER	ZIP CODE 78485		
BROWN, CHARLES A.....		5G08 LM02519-03	33,775
ORGANIZATION TOTAL	1		33,775
TEXARKANA			
NORTHEAST TEXAS COUNCIL OF HEALTH RESOURCES	ZIP CODE 75501		
PENDERGRASS, R K.....		5G08 LM02348-02	17,312
ORGANIZATION TOTAL	1		17,312
STATE TOTAL	2		51,087

Table 5.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1977—Continued

	Responsible official		Grant No.	Dollars
UTAH				
OGDEN				
MC KAY-DEE HOSPITAL CENTER	ZIP CODE 84402			
SEEGER, MARJORIE J.....			1G08 LM02929-01	19,500
ORGANIZATION TOTAL	1	19,500		
SALT LAKE CITY				
HOLY CROSS HOSPITAL	ZIP CODE 84102			
HUTCHISON, LEIGH.....			1G07 LM02835-01	3,000
ORGANIZATION TOTAL	1	3,000		
STATE TOTAL	2	22,500		
WASHINGTON				
EVERETT				
PROVIDENCE HOSPITAL	ZIP CODE 98201			
PEDERSEN, LAVON R.....			1G07 LM02925-01	3,176
ORGANIZATION TOTAL	1	3,176		
STATE TOTAL	1	3,176		
WEST VIRGINIA				
HUNTINGTON				
MARSHALL UNIVERSITY	ZIP CODE 25701			
HOWARD, ANNA L.....			1G07 LM03093-01	1,752
ORGANIZATION TOTAL	1	1,752		
STATE TOTAL	1	1,752		
WYOMING				
ROCK SPRINGS				
MEMORIAL HOSPITAL OF SWEETWATER COUNTY	ZIP CODE 82901			
MALONEY, CAROL C.....			1G07 LM02855-01	3,207
ORGANIZATION TOTAL	1	3,207		
STATE TOTAL	1	3,207		



APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetic sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization. The tables in which the organizations may be found are shown in parentheses following their locations.

United States

- Affiliated Hospitals Center--Boston (2 units), Mass. (2,3)
California State Health and Welfare Agency--Berkeley, Camarillo, Calif. (2,3,5)
City University of New York--New York (3 units), N. Y. (2,3,5)
Cornell University--Ithaca, New York, N. Y. (2,3,5)
Harvard University--Boston, Cambridge, Mass. (2,3)
Indiana University--Bloomington, Indianapolis, Ind. (2,3,5)
Louisiana State University--New Orleans, Shreveport, La. (2,3)
Mayo Foundation--Rochester (2 units), Minn. (2,3)
New York Blood Center (formerly shown as Community Blood Council of Greater New York)--New York, N. Y. (3)
New York Medical College--New York, Valhalla, N. Y. (2)
New York State Department of Health (may include awards to Health Research, Inc.)--Buffalo, N. Y. (2,3,4)
New York State Department of Mental Hygiene (may include awards to New York State Research Foundation for Mental Hygiene, Inc.)--Buffalo, Wingdale, N. Y. (2,5)
Northwestern University--Chicago, Evanston, Ill. (2,3,4)
Oregon State Higher Education System--Corvallis, Eugene, Portland, Oreg. (2,3)
Pennsylvania State University--Hershey, University Park, Pa. (2,3)
Rush-Presbyterian-St. Luke's Medical Center--Chicago (2 units), Ill. (2,3)
SRI International (formerly shown as Stanford Research Institute)--Menlo Park, Calif. (2)
State University of New York--Binghamton, Buffalo, New York, Stony Brook, Syracuse (2 units), N. Y. (2,3,5)
State University System of Florida--Gainesville, Tallahassee, Fla. (2,3)
Texas Agricultural and Mechanical University System--College Station, Prairie View, Texas (2,3)
Tissue Culture Association--Rockville, Md.; Lake Placid, N. Y. (2,3)
Tulane University--Covington, New Orleans, La. (2,3)
U.S. Department of Agriculture--Gainesville, Fla.; Beltsville, Md. (2)

U.S. Department of Health, Education, and Welfare--Washington, D.C.; Atlanta, Ga.; Baltimore, Bethesda, Rockville, Md.; Research Triangle Park, N. C. (2)

University of Alabama System--Birmingham, University, Ala. (2,3,5)

University of Arkansas--Fayetteville, Little Rock, Ark. (2)

University of California--Berkeley, Davis, Irvine, La Jolla, Los Angeles, Riverside, San Francisco, Santa Barbara, Santa Cruz, Calif. The unit in La Jolla may include awards to the Friends of Psychiatric Research of San Diego. (2,3,5)

University of Colorado--Boulder, Denver, Colo. (2,3)

University of Connecticut--Farmington, Storrs, Conn. (2,3)

University of Illinois--Chicago (2 units), Urbana, Ill. (2,3)

University of Kansas--Kansas City, Lawrence, Kans. (2,3)

University of Maryland System--Baltimore, Cambridge, College Park, Md. (2,3)

University of Massachusetts--Amherst, Worcester, Mass. (2,3)

University of Minnesota--Austin, Minneapolis, Saint Paul, Minn. (2,3,5)

University of Mississippi--Jackson, University, Miss. (2,3)

University of Missouri--Columbia, Kansas City, Mo. (2,3)

University of Nebraska System--Lincoln, Omaha, Nebr. (3,5)

University of North Carolina System--Chapel Hill, Raleigh, N. C. (2,3)

University of Oklahoma--Norman, Oklahoma City, Okla. (2,3)

University of Tennessee System--Knoxville, Memphis, Tenn. (2,3)

University of Texas System--Austin, Dallas, Galveston, Houston (2 units), Richardson, San Antonio, Texas (2,3)

University of Wisconsin System--Madison, Milwaukee, Wisc. (2,3)

University System of Georgia--Athens, Atlanta, Augusta, Ga. (2,3)

Utah State Higher Education System--Logan, Salt Lake City, Utah (2,3)

Veterans Administration--San Diego, Calif.; Boston, Mass. (2)

Wright State University--Dayton, Ohio (Includes awards made to Fels Research Institute, Yellow Springs, Ohio, formerly shown separately.) (2)

Other Countries

Max Planck Society for the Advancement of Science--Gottingen, Tubingen, Germany, Federal Republic of (2)

Medical Research Council--Cambridge, Edinburgh, London, United Kingdom (2)

DHEW Publication No. (NIH) 78-1043

NATIONAL INSTITUTES OF HEALTH

Research and Development Contracts

Fiscal Year 1977 Funds



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service National Institutes of Health

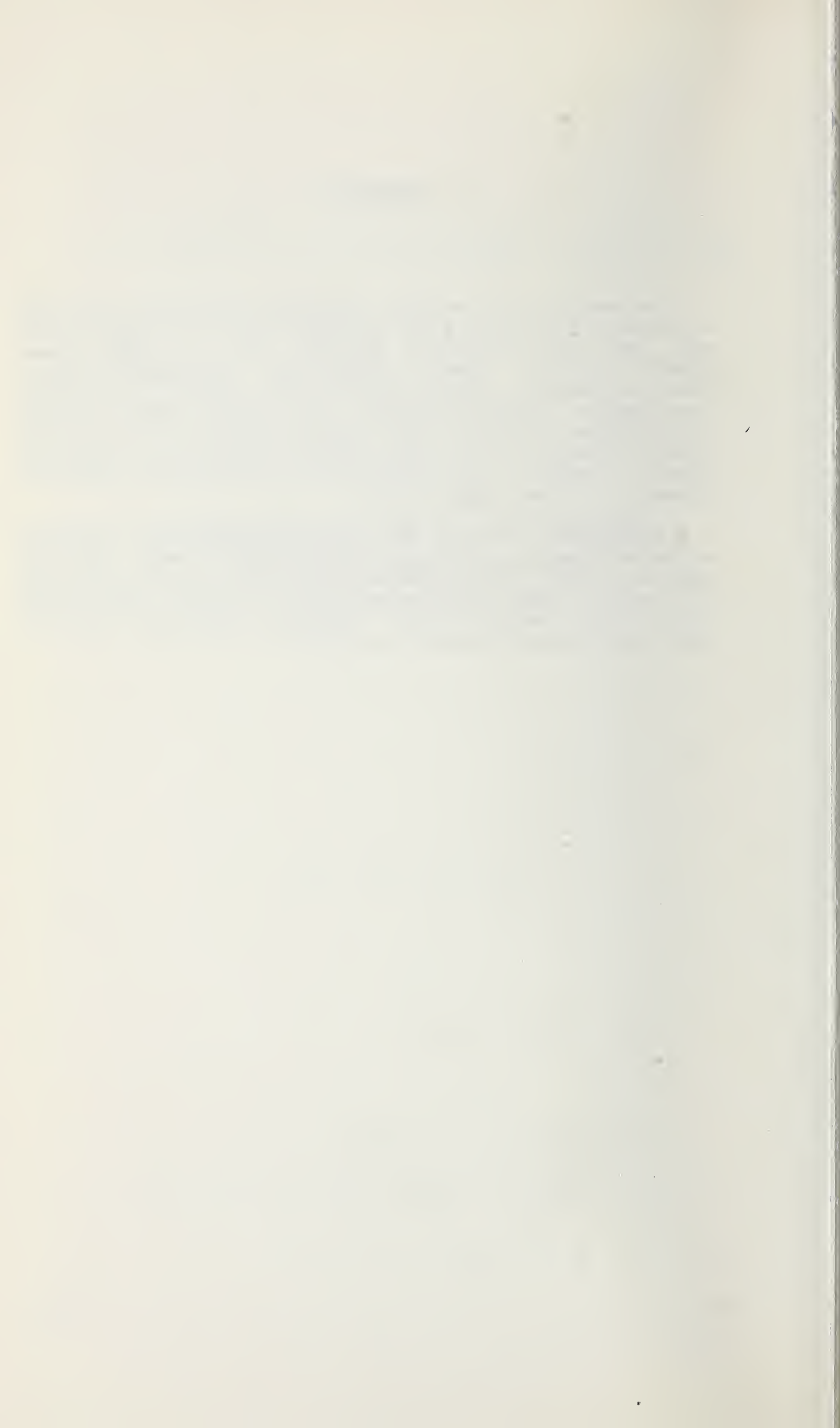
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Prepared by
NATIONAL INSTITUTES OF HEALTH
DIVISION OF RESEARCH GRANTS
Statistics and Analysis Branch

PREFACE

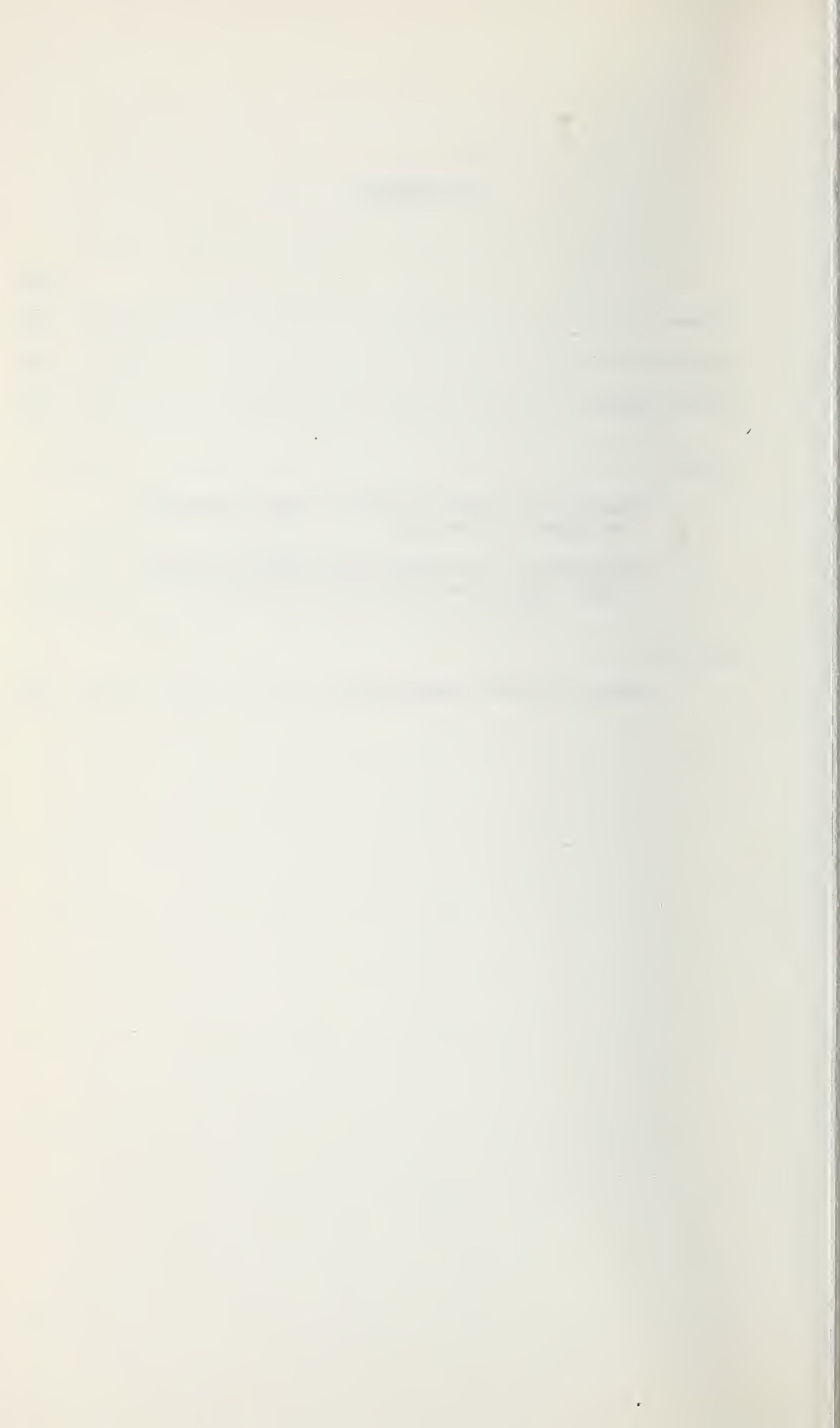
The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the research contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents a list of the contracts awarded by NIH from fiscal year 1977 funds and which were reported to the NIH central record system (IMPAC) as of December 28, 1977. Contracts reported in other systems at NIH are excluded from the report.



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TECHNICAL NOTE

Explanation of the Contract Mechanism

The increasing importance of research contracts in the NIH extramural research programs has generated considerable analysis and discussion covering, among other aspects, the development of criteria for use of the contract mechanism. These criteria as listed in the NIH Guide for Grants and Contracts, Vol. 6, No. 13, July 1, 1977 are as follows:

BASIC CRITERIA Contracts are used for procurement of research and development when the following considerations obtain:

- a. the NIH procures a specific service or defined end product, including research, development, and related activities for identified NIH program needs, e. g., evaluation studies, technical assistance, surveys, consulting services, training projects where NIH selects the individuals or specifies the content of the program, planning for NIH use, production of publications or audiovisual materials (other than as results of R & D (research and development) projects or as proceedings of scientific conferences which are not being procured for use by the Government); and
- b. the NIH exercises direction or control under terms of the agreement by specifying the scope of the work and manner of performance and requires responsiveness by the performer in the event a change in direction of the effort is necessitated by program developments; and
- c. NIH staff closely monitors technical and administrative performance during the course of the activity to ensure that work on the project is accomplished in accordance with terms of the agreement.

MANDATORY USE OF CONTRACTS Notwithstanding any of the foregoing, selection of contracts is mandatory whenever:

- a. an award is made to a commercial, i.e., profit-making, organization; or
- b. material having a security classification is involved.

Organization Identification

In this presentation of research contracts, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the project director lies. The major part of contractual activities are conducted by universities, research foundations, and commercial and industrial organizations across the Nation. Study of grantee organizations in the United States has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education belonging to a system of higher education is comprised of two or more components, and each component has equal standing in the system, the name of the component is shown after the name of the institution.
2. If a foundation has been established for the purpose of receiving and administering funds, the name and location of the organization having professional responsibility for the contract are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
3. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and there are as many listings within a given city as there are components of the organization receiving contracts.

In the case of industrial organizations and associations, professional responsibility is assumed to reside at the address of the contractor and not necessarily at the "site of performance." Divisions of parent organizations are shown if they are indicated on the contract, and subsidiaries are linked to parent organizations when the relationship is known.

These qualifications do not apply to foreign organizations or in all cases to organizations in the United States, either because of insufficient information or because of an organizational structure unique to a particular organization.

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed in the Appendix in alphabetic sequence.

ABBREVIATIONS

The component of NIH supporting a contract is indicated by the code letters in the left-hand column. These code letters form part of the identification of the research contract number in Table 2.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions*.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, Metabolism, and Digestive Diseases.....	NIAMDD
	National Cancer Institute.....	NCI
CB	Division of Cancer Biology and Diagnosis.....	DCBD
CM	Division of Cancer Treatment.....	DCT
CN	Division of Cancer Control and Rehabilitation....	DCCR
CO	Office of the Director, NCI.....	ODNCI
CP	Division of Cancer Cause and Prevention.....	DCCP
CL	Clinical Center.....	CLC
CT	Division of Computer Research and Technology.....	DCRT
DE	National Institute of Dental Research.....	NIDR
ES	National Institute of Environmental Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
HB	Division of Blood Diseases and Resources.....	DBDR
HI	Division of Intramural Research.....	DIR
HO	Office of the Director, NHLBI.....	ODHLBI
HR	Division of Lung Diseases.....	DLD
HV	Division of Heart and Vascular Diseases.....	DHVD
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RG	Division of Research Grants.....	DRG
RR	Division of Research Resources.....	DRR
RS	Division of Research Services.....	DRS
LM	National Library of Medicine.....	NLM
OD	Office of the Director, NIH.....	OD

*For convenience of presentation, includes the following service components: Clinical Center, Division of Computer Research and Technology, Division of Research Grants, Division of Research Resources, and Division of Research Services.



TABLE 1.--SUMMARY OF NIH RESEARCH AND DEVELOPMENT CONTRACTS,
BY SUPPORTING COMPONENT, FISCAL YEAR 1977

Supporting Component	Number	Dollars
Total National Institutes of Health..... (NIH)	2,237	429,903,190
Total Institutes and Research Divisions*..... (IRD)	2,148	418,122,969
Clinical Center..... (CLC)	2	2,551,588
Division of Research Resources..... (DRR)	23	4,365,613
Division of Research Services..... (DRS)	7	657,146
Fogarty International Center..... (FIC)	1	261,728
National Cancer Institute..... (NCI)	1,166	260,881,669
Division of Cancer Biology and Diagnosis.....	299	32,701,098
Division of Cancer Cause and Prevention.....	408	93,863,617
Division of Cancer Control.....	163	43,157,339
Division of Cancer Treatment.....	258	57,277,788
Officer of the Director, NCI.....	38	33,881,827
National Eye Institute..... (NEI)	32	3,516,917
National Heart, Lung, and Blood Institute.... (NHLBI) ..	334	74,796,408
Division of Blood Diseases and Resources.....	56	4,486,469
Division of Heart and Vascular Diseases.....	203	60,793,226
Division of Intramural Research.....	5	858,135
Division of Lung Diseases.....	67	8,266,624
Office of the Director, NHLBI.....	3	391,954
National Institute of Allergy and Infectious Diseases..... (NIAID) ..	124	15,924,454
National Institute of Arthritis, Metabolism, and Digestive Diseases..... (NIAMDD) .	101	11,443,922
National Institute of Child Health and Human Development..... (NICHD) ..	165	20,115,664
National Institute of Dental Research..... (NIDR) ...	54	4,331,781
National Institute of Environmental Health Sciences..... (NIEHS) ..	26	3,924,635
National Institute of General Medical Sciences..... (NIGMS) ..	4	525,631
National Institute of Neurological and Com- municative Disorders and Stroke..... (NINCDS) .	93	13,235,795
National Institute on Aging..... (NIA)	16	1,590,018
Total National Library of Medicine..... (NLM)	76	10,369,704
Total Office of the Director..... (OD)	13	1,410,517

*For convenience of presentation, includes the following service components: Clinical Center, Division of Research Resources, Division of Research Services and Fogarty International Center.



**Table 2.—NIH Research and Development Contracts,
by Area, Organization, and Project Director,
Fiscal Year 1977**

Project director	Purpose of contract	Contract No.	Dollars
GRAND TOTAL, 2,237 CONTRACTS.....			429,903,190
UNITED STATES,* 2,106 CONTRACTS.....			415,467,526
OTHER COUNTRIES, 131 CONTRACTS.....			14,435,664

UNITED STATES

ALABAMA

BIRMINGHAM

SOUTHERN RESEARCH INSTITUTE		ZIP CODE 35205		
BENNETT, L LEE, JR	BIOCHEMISTRY AND MOLECULAR BIOLOGY OF ANTITUMOR DRUGS.....	2N01 CM43784-04		300,603
CHOPRA, D P.....	CULTURE EPITHELIAL TYPES FROM COLON OF THE RAT.....	1N01 CP75914-00		90,000
COWSAR, DONALD R.....	FLUORIDE RELEASING SYSTEM FOR ORAL USE.....	3N01 DE42446-06		49,883
DAVIS, THOMAS A.....	ACTIVATED CARBON FIBERS FOR ARTIFICIAL KIDNEYS.....	3N01 AM22208-13		95,572
DENINE, PAUL E.....	PHARMACOLOGY OF POTENTIAL ANTILEUKEMIA DRUGS.....	5N01 CM57000-03		337,290
HILL, DONALD L.....	PHARMACOLOGICAL STUDIES OF ANTITUMOR AGENTS.....	2N01 CM43780-07		215,000
HILL, DONALD L.....	METABOLISM OF CARCINOGENIC COMPOUNDS.....	2N01 CP55721-05		121,197
MONTGOMERY, JOHN A.....	SYNTHESIS OF POTENTIAL ANTICANCER AGENTS.....	5N01 CM43762-04		576,659
SCHABEL, FRANK M, JR.....	ANALYSIS, TESTING & EVALUATION OF ANTICANCER AGENTS.....	5N01 CM43756-04		2,288,000
SHEALY, Y FULMER.....	PREPARATION OF 9 COMPOUNDS--TASK 1.....	1N01 CP75903-00		22,655
SHEALY, Y FULMER.....	PREPARATION OF FOUR (4) COMPOUNDS.....	1N01 CP75965-00		9,698
WILKOFF, LEE J.....	ORGAN CULTURE ASSAY OF VITAMIN A ANALOGS.....	3N01 CP22064-13		431,835
ORGANIZATION TOTAL	12	4,538,392		

UNIVERSITY OF ALABAMA SYSTEM--UNIVERSITY OF ALABAMA IN BIRMINGHAM		ZIP CODE 35294		
BUTTERWORTH, C E, JR	EFFECT OF ORAL CONTRACEPTIVE STEROIDS ON METABOLISM.....	5N01 HD42862-07		94,235
CH'EN, LAWRENCE T.....	CENTRAL FACILITY TO STUDY HERPES ZOSTER.....	5N01 AI22532-12		274,930
CLARK-CURTISS, JOSEPHINE E.....	PROCESSING RECOMBINANT DNA VECTOR-HOST SYSTEM.....	1N01 AI72533-00		171,657
CURTISS, ROY, III.....	CONSTRUCT SAFER E COLI HOSTS FOR PHAGE & PLASMID VECTORS.....	3N01 AI62508-04		57,042
HAMILTON, VIRGINIA V.....	PREPARATION OF A BIOGRAPHIC MONOGRAPH.....	5N01 LM64703-01		34,687
HUNTER, ERIC.....	IN VITRO TRANSFORMING POTENTIAL OF MPMV.....	1N01 CP71013-00		62,875
LAMON, EDDIE W.....	RELATION OF EMBRYONIC ANTIGEN TO TUMOR ANTIGENS.....	2N01 CP43394-03		75,303
LEGLER, DONALD.....	SALIVARY IMMUNOGLOBULIN A DEFICIENCY & DENTAL CARIES.....	5N01 DE52456-05		103,420
LINDSEY, J RUSSELL.....	OPERATION OF A PATHOLOGICAL MONITORING SERVICE CENTER.....	5N01 CM67083-01		105,520
MADDOX, WILLIAM A.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45129-04		139,000
NIEDERMEIER, WILLIAM.....	STUDY OF TRANSFORMED MAMMARY EPITHELIAL CELLS IN VITRO.....	1N01 CB74092-00		100,500
OBERMAN, ALBERT.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12440-14		1,051,924
RUSSELL, RICHARD O, JR.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	3N01 HV62922-04		301,363
SCHNAPER, HAROLD W.....	INTERVENTION FOR PREVENTION OF CORONARY HEART DISEASE.....	5N01 HV33107-06		459,506
SCHROHENLOHER, RALPH E.....	DETECTION OF ANTIGEN-ANTIBODY COMPLEXES IN CANCER.....	2N01 CB53893-03		92,741
SHIOTA, TETSUO.....	CARIOGENIC STREPTOCOCCI MUTANTS TO PREVENT DENTAL CARIES.....	3N01 DE62491-04		132,139

* Includes Puerto Rico.

NOTE: For information on how this table is structured, see Technical Note, p. vii. Also, for comments on organizations, see appendix.

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ALABAMA—Continued			
ORGANIZATION TOTAL	16	3,256,842	
PRATTVILLE			
SOUTHERN ANIMAL FARMS	ZIP CODE 36067		
CURLEE, JOSEPH	MAINTAIN RODENT PRODUCTION CENTER	5N01 CM53845-02	125,000
ORGANIZATION TOTAL	1	125,000	
STATE TOTAL	29	7,920,234	
ALASKA			
COLLEGE			
UNIVERSITY OF ALASKA AT COLLEGE	ZIP CODE 99701		
TISDEL, MYRON	INSTALL CTS GROUND TERMINAL	2N01 LM74706-03	79,027
ORGANIZATION TOTAL	1	79,027	
STATE TOTAL	1	79,027	
ARIZONA			
PHOENIX			
ARIZONA STATE DEPARTMENT OF HEALTH SERVICES	ZIP CODE 85007		
DANDROY, SUZANNE	CERVICAL CANCER SCREENING PROGRAM	2N01 CN65283-04	82,864
ORGANIZATION TOTAL	1	82,864	
TEMPE			
ARIZONA STATE UNIVERSITY	ZIP CODE 85281		
CADIEN, JAMES D	INVESTIGATE DIABETES MELLITUS IN THE SAND RAT	2N01 AM62206-02	15,799
PETTIT, GEORGE R	ANTINEOPLASTIC AGENT ISOLATION--VERTEBRATE/INVERTEBRATE	5N01 CM67048-02	125,019
ORGANIZATION TOTAL	2	140,818	
TUCSON			
UNIVERSITY OF ARIZONA	ZIP CODE 85721		
GROSS, JOSEPH F	MICROCIRCULATION/MOLECULAR TRANSPORT IN MAMMARY CANCER	2N01 CB63981-01	100,000
HRUBY, VICTOR J	SYNTHESIS OF SECRETIN, GLUCAGON, AND SELECTED ANALOGS	2N01 AM12125-08	10,067
LEBOWITZ, MICHAEL D	PULMONARY DISEASE RISK--INDIVIDUALS WITH MZ PHENOTYPES	1N01 HR72907-00	32,275
MEINKE, WILLIAM J	DETECT VIRAL GENOMES IN HUMAN NEUROLOGICAL DISEASES	1N01 NS72364-00	120,804
GVITT, THERON W	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS	1N01 HV72931-00	357,812
PRESENT, ARTHUR J	BREAST CANCER DETECTION DEMONSTRATION PROJECT	2N01 CN55097-05	491,866
SALMON, SYDNEY E	STAGING SYSTEM FOR PATIENTS WITH MULTIPLE MYELOMA	3N01 CM33713-09	40,888
SIPES, GLEN	EXTRAPOLATION OF PCB DEPOSITION	1N01 ES72111-00	194,355
STRUNK, ROBERT C	POTENTIAL BIOASSAY FOR CHEMICAL CARCINOGENS	2N01 CP65778-01	101,133
WOOLFENDEN, J M	DEVELOP AND EVALUATE RADIOISOTOPIC SURFACE MARKERS	5N01 CB64012-01	153,186
ORGANIZATION TOTAL	10	1,602,386	
STATE TOTAL	13	1,826,068	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ARKANSAS			
LITTLE ROCK			
ARKANSAS STATE DEPARTMENT OF HEALTH ZIP CODE 72201			
STEINKAMP, RUTH C.....	ARKANSAS CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55205-03	244,808
ORGANIZATION TOTAL	1 244,808		
UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201			
FLANIGAN, WILLIAM J.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52511-03	26,720
SUEN, JAMES Y.....	CANCER CONTROL PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55253-03	293,559
ORGANIZATION TOTAL	2 320,279		
STATE TOTAL	3 565,087		
CALIFORNIA			
BERKELEY			
ANDROS, INC. ZIP CODE 94710			
MC CLACTCHIE, EDWARD A.....	CARBONDIOXIDE ANALYZER/NONDISPERSIVE INFRARED HETERODYNE.....	3N01 GM52124-08	28,909
PORTNER, PEER M.....	FABRICATION OF A PROTOTYPE PULMONARY-FUNCTION ANALYZER.....	3N01 HR33002-08	11,775
PORTNER, PEER M.....	DEVELOPMENT OF LEFT VENTRICULAR ASSIST SYSTEM.....	5N01 HV42914-10	766,131
PORTNER, PEER M.....	ELECTRICAL ENERGY TRANSMISSION TECHNIQUE DEVELOPMENT.....	1N01 HV72933-00	163,608
PORTNER, PEER M.....	DEVELOPMENT OF A LEFT HEART ASSIST BLOOD PUMP.....	1N01 HV72938-00	204,640
ORGANIZATION TOTAL	5 1,175,063		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
DAVIS, KINGSLEY.....	STUDY OF CHILDLESSNESS AND ONE-CHILD FAMILIES.....	5N01 HD62825-01	35,005
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF NEW RETINOIDS.....	1N01 CP75934-00	55,523
HUENEMANN, RUTH L.....	DEVELOPMENT OF OBESITY IN CHILDREN.....	1N01 HD72848-00	77,331
MARTIN, G STEVEN.....	TRANSFORMATION OF DIFFERENTIATING CELLS.....	2N01 CP53537-04	69,476
PAFFENBARGER, RALPH S, JR.....	EPIDEMIOLOGY OF PRE- AND POST-MENOPAUSAL BREAST CANCER.....	2N01 CB63998-03	81,700
WILLIAMS, MICHAEL C.....	SHEAR-INDUCED HEMOLYSIS-MATERIAL & BLOOD COMPOSITION.....	2N01 HV32952-08	69,516
ORGANIZATION TOTAL	6 388,551		
CLAREMONT			
CLAREMONT COLLEGES SYSTEM-POMONA COLLEGE ZIP CODE 91711			
HANSCH, CORWIN H.....	STRUCTURE ACTIVITY STUDIES AMONG ANTICANCER AGENTS.....	5N01 CM67062-01	50,170
ORGANIZATION TOTAL	1 50,170		
CUPERTINO			
TYMSHARE, INC. ZIP CODE 95014			
NOT APPLICABLE.....	DATA COMMUNICATION SERVICES.....	3N01 LM44711-10	145,000
ORGANIZATION TOTAL	1 145,000		
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
BORHANI, NEMAT O.....	COOPERATIVE HYPERTENSION DETECTION & FOLLOW-UP STUDY.....	5N01 HV22945-10	470,160
BORHANI, NEMAT O.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	2N01 HV22977-07	513,029
BORHANI, NEMAT O.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72954-00	11,051

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
CARDIFF, ROBERT D.....	CULTIVATION OF HUMAN AND MOUSE MAMMARY TUMOR VIRUSES.....	3N01 CP61013-04	233,960
HENDRICKX, ANDREW G.....	NONHUMAN PRIMATE BREEDING COLONY.....	2N01 HD12088-13	209,735
KAWAKAMI, THOMAS G.....	COMPARATIVE LEUKEMIA AND SARCOMA VIRAL STUDIES.....	2N01 CP33242-07	448,409
KRAUS, JESS F.....	SIDS RISK FACTOR.....	1N01 HD72840-00	172,000
RUEBNER, BORIS H.....	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE.....	5N01 CP65845-03	163,110
ORGANIZATION TOTAL	8	2,221,454	
DUARTE			
CITY OF HOPE NATIONAL MEDICAL CENTER ZIP CODE 91010			
MELNYK, JOHN H.....	SEMI-AUTOMATED SYSTEM FOR CHROMOSOME PREPARATION.....	2N01 HD52843-04	134,644
MITTMAN, CHARLES.....	PULMONARY DISEASE RISK.....	1N01 HR72913-00	30,495
OHNO, SUSUMU.....	MAMMARY GLAND IN PSEUDOHERMAPHRODITIC RATS & MICE.....	2N01 CB33907-04	92,700
ORGANIZATION TOTAL	3	257,839	
EMERYVILLE			
THORATEC LABORATORIES CORPORATION ZIP CODE 94662			
BUCK, KEITH E.....	DEVELOP AND EVALUATE LEFT HEART ASSIST BLOOD PUMPS.....	1N01 HV72939-00	494,804
HARVEY, ROBERT J.....	MEASURE PULMONARY FUNCTION IN INFANTS AND CHILDREN.....	5N01 HR62904-03	51,300
ROBINSON, THOMAS C.....	FABRICATION OF IMPLANTABLE ARTIFICIAL HEART DEVICES.....	3N01 HV12035-22	494,450
ORGANIZATION TOTAL	3	1,040,554	
FULLERTON			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT FULLERTON ZIP CODE 92634			
LINDER, MARIA C.....	CLINICAL EVALUATION OF IMMUNODIAGNOSTIC TESTS.....	1N01 CB74119-00	28,435
ORGANIZATION TOTAL	1	28,435	
GILROY			
SIMONSEN LABORATORIES ZIP CODE 95020			
RUSSELL, JAMES D.....	GENETIC CENTER FOR RODENTS IN BIOCONTAINMENT ENVIRONMENT.....	1N01 CM77166-00	509,710
SIMONSEN, HARRY C.....	GENETIC CENTER OF RODENTS—BIOCONTAINMENT ENVIRONMENT.....	3N01 CM53817-04	101,942
SIMONSEN, HARRY C.....	MAINTAIN RODENT PRODUCTION CENTER.....	5N01 CM53847-03	165,000
ORGANIZATION TOTAL	3	776,652	
HUNTINGTON BEACH			
INSGROUP, INC. ZIP CODE 92647			
RITCHEY, WILLIAM.....	DESIGN & TEST INSTRUCTIONAL MATERIAL TO DETECT DIABETES.....	3N01 LM64733-04	1,281
ORGANIZATION TOTAL	1	1,281	
MC DONNELL DOUGLAS CORPORATION ZIP CODE 92647			
MARTINI, WILLIAM R.....	DEVELOP A MODIFIED STIRLING CYCLE ENGINE.....	5N01 HV42901-06	903,127
ORGANIZATION TOTAL	1	903,127	
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
HUXTABLE, ROBERT F.....	DEVELOPING SENSORS FOR CONTINUOUS BLOOD GAS MONITORING.....	5N01 HR52947-01	85,035
KINGSBURY, DAVID T.....	RELATION OF HERPES SIMPLEX VIRUS TO UROGENITAL CANCER.....	2N01 CP53560-05	118,880
NICOLSON, GARTH L.....	CELL SURFACE IMMUNOBIOLOGY OF METASTATIC TUMORS.....	1N01 CB74153-00	100,393

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
PFEFFER, ROBERT I.....	ESTROGEN USAGE BY POSTMENOPAUSAL WOMEN—CORONARY RISK.....	5N01 AG62134-01	155,346
ORGANIZATION TOTAL	4	459,654	
LA JOLLA			
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
COHN, MELVIN.....	SUPPLY OF IMMUNE-RELATED CELL LINES.....	2N01 CB23886-07	68,600
FAN, HUNG.....	CELLULAR DIFFERENTIATION AND VIRAL ONCOGENESIS.....	1N01 CP71008-00	136,650
HOLLEY, ROBERT W.....	CHEMICAL CARCINOGENESIS AND CONTROL OF THE CELL CYCLE.....	1N01 CP75970-00	22,053
ORGANIZATION TOTAL	3	227,303	
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
CALLAHAN, GERALD N.....	DETECTION OF TUMOR SPECIFIC ANTIGENS IN CIRCULATION.....	1N01 CB74126-00	73,085
CROSBY, WILLIAM H.....	RADIOISOTOPE TEST OF IRON CHELATOR SCREEN.....	1N01 AM72223-00	10,000
DANDLIKER, WALTER B.....	RESPONSIVENESS OF MAMMARY-GLAND CELLS TO HORMONES.....	2N01 CB43905-03	92,000
DIXON, FRANK J.....	IMMUNOLOGIC STUDY OF RNA (TYPE C) VIRUSES.....	3N01 CP71018-01	728,000
EDGINGTON, THOMAS S.....	HEPATITIS VIRUS ASSOC ANTIGENS IMMUNOHISTOCHEMICAL ASSAY.....	5N01 AI32509-06	28,770
FELDMAN, JOSEPH D.....	ROLE OF CIRCULATING TUMOR ANTIGENS IN IMMUNOTHERAPY.....	2N01 CB43874-03	130,589
HAMAOKA, TOSHIYUKI.....	MOUSE TUMOR IMMUNOTHERAPY/HEPTEN REACTIVE T LYMPHOCYTES.....	1N01 CB74196-00	45,000
NAKAMURA, ROBERT M.....	CEA-S IN IMMUNODIAGNOSIS OF CARCINOMA OF THE INTESTINES.....	2N01 CB53934-03	121,885
PELLEGRINO, MICHELE A.....	PURIFICATION OF HUMAN TUMOR ASSOCIATED ANTIGENS.....	3N01 CB53899-05	155,045
RUSSELL, STEPHEN W.....	CHARACTERIZATION OF IMMUNE-RELATED CELLS IN TUMOR MASSES.....	3N01 CB44001-03	6,267
THEOFILOPOULOS, ARGYRIOS N.....	DETECT CIRCULATING ANTIGEN-ANTIBODY COMPLEXES IN CANCER.....	2N01 CB53952-03	86,524
ORGANIZATION TOTAL	11	1,477,165	
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
BROWN, W VIRGIL.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV12160-13	235,700
HENDERSON, LEE W.....	BLOOD PRESSURE CONTROL WITH HEMODIAFILTRATION.....	2N01 AM52224-02	111,074
HENDERSON, LEE W.....	COMPARISON OF HEMODIALYSIS AND HEMOFILTRATION.....	1N01 AM72230-00	224,346
MARSHALL, LAWRENCE F.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER.....	1N01 NS72370-00	91,938
SATO, GORDON H.....	GROWTH/PASSAGE OF MAMMARY EPITHELIAL CELLS IN CULTURE.....	1N01 CB74188-00	55,700
SHIMKIN, MICHAEL B.....	STUDY OF PULMONARY TUMORS FOR COCARCINOGENIC BIOASSAY.....	2N01 CP33232-16	186,622
TIMMS, R M.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOVIC LUNG DISEASE.....	5N01 HR62946-03	169,867
ORGANIZATION TOTAL	7	1,075,247	
LOMA LINDA			
LOMA LINDA UNIVERSITY ZIP CODE 92354			
HODGKIN, JOHN E.....	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	3N01 HR72904-01	11,110
JUDKINS, MELVIN P.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32975-07	114,228
KNABENBAUER, ROBERT H.....	MEDICAL ILLUSTRATION SERVICES.....	1N01 LM74719-00	13,170
ORGANIZATION TOTAL	3	138,508	
LOS ANGELES			
CEDARS-SINAI MEDICAL CENTER ZIP CODE 90048			
MAXWELL, MORTON H.....	SORBENT BASED REGENERATIVE PERITONEAL ANALYSIS.....	2N01 AM32225-06	99,915
MAXWELL, MORTON H.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12436-15	1,522,655
SCHOENFIELD, LESLIE J.....	COOPERATIVE CLINICAL STUDY OF DISSOLUTION OF GALLSTONES.....	5N01 AM32216-07	1,736,031
WADE, MACLYN E.....	EFFICACY OF TWO METHODS OF NATURAL FAMILY PLANNING.....	3N01 HD62826-03	561,817
ORGANIZATION TOTAL	4	3,920,418	
CHARLES R. DREW POSTGRADUATE MEDICAL SCHOOL ZIP CODE 90059			
BLOOM, RONALD S.....	NEONATAL RESPIRATORY INSUFFICIENCY & FAILURE EDUC. PROG.....	5N01 HR52958-02	142,531
ORGANIZATION TOTAL	1	142,531	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027			
BENEDICT, WILLIAM F.....	FIBRINOLYSIS AS A PARAMETER OF IN VITRO TRANSFORMATION.....	3N01 CP55641-04	40,000
KARON, MYRON R.....	CLINICAL CHEMOTHERAPY IN CANCER CONTROL.....	3N01 CN35013-09	125,570
SIEGEL, STUART E.....	STUDIES OF NEW ANTICANCER AGENTS.....	5N01 CM43803-08	156,071
SIEGEL, STUART E.....	QUANTITATIVE EVALUATION OF PROTECTED ENVIRONMENTS.....	3N01 CM53831-06	24,402
ORGANIZATION TOTAL	4 346,043		
COMMUNITY CANCER CONTROL ZIP CODE 90036			
PICK, RUTH ANN.....	COMMUNITY-BASED CANCER CONTROL PROGRAM.....	1N01 CN75400-00	1,029,700
ORGANIZATION TOTAL	1 1,029,700		
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY—UNIV OF SO CALIFORNIA MEO CTR ZIP CODE 90033			
HODGMAN, JOAN E.....	DEVELOPMENTAL PHENOMENA AND THE OCCURRENCE OF SIDS.....	2N01 HD22777-13	140,341
WU, PAUL Y.....	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42823-08	28,132
ORGANIZATION TOTAL	2 168,473		
PACIFIC BIO-MARINE SUPPLY COMPANY—PACIFIC BIO-MARINE LABORATORIES ZIP CODE 90066			
FAY, RIMMON C.....	MARICULTURE TECH—APLYSIA/HERMISSENDA/PLEUROBRANCHAEA.....	3N01 RR42169-06	28,847
ORGANIZATION TOTAL	1 28,847		
UMF SYSTEMS ZIP CODE 90066			
NOT APPLICABLE.....	PRESERVATION MICROFILMING OF SELECTED BIOMEDICAL SERIALS.....	2N01 LM64726-03	101,000
ORGANIZATION TOTAL	1 101,000		
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
BABB, THOMAS L.....	ELECTRICAL STIMULATION OF THE CEREBELLUM.....	2N01 NS42331-04	120,000
BATZDORF, ULRICH.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM53752-03	2,802
BEUMER, JOHN, III.....	TRAINING FOR MAXILLOFACIAL PROSTHODONTISTS.....	5N01 CN75211-01	233,156
BRESLOW, LESTER.....	HISTORY OF CANCER CONTROL.....	3N01 CN55172-08	12,116
BYFIELD, JOHN E.....	COMBINED RADIOTHERAPY & CLINICALLY ESTAB ANTITUMOR DRUGS.....	2N01 CM43791-05	67,902
CHASE, MICHAEL H.....	INFORMATION CENTER—BRAIN/NEUROSCIENCES.....	2N01 NS32306-15	400,000
CHERRY, JAMES D.....	INFLUENZA STUDIES—VACCINE TRIALS, VIROLOGIC, CLINICAL.....	2N01 AI62510-02	116,073
COBURN, JACK W.....	CONTROLLED EVALUATION OF MAINTENANCE PERITONEAL DIALYSIS.....	2N01 AM52218-01	67,683
COBURN, JACK W.....	PROPHYLACTIC AGENT FOR RENAL OSTEODYSTROPHY IN DIALYSIS.....	1N01 AM72204-00	162,033
EILBER, FREDERICK R.....	IMMUNOTHERAPY AS ADJUNCT TO CHEMOTHERAPY IN CARCINOMAS.....	2N01 CB53941-02	167,177
EYMAN, RICHARD K.....	IMPACT OF FOSTER FAMILY CARE ON M R CHILDREN.....	1N01 HD72847-00	94,661
FAHEY, JOHN L.....	EVALUATE C. PARVUM IN ADVANCED BREAST AND LUNG CANCER.....	2N01 CB53939-03	139,674
FAREED, GEORGE C.....	HUMAN PAPOVAVIRUS BK AND JC AND SIMIAN VIRUS 40.....	1N01 CP71009-00	57,328
FINEGOLD, SYDNEY M.....	STUDY OF FECAL FLORA.....	5N01 CP33380-07	235,597
GALE, ROBERT P.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62971-01	136,917
GOLD, RICHARD H.....	MAMMOGRAPHY TRAINING FOR DETECTION OF BREAST CANCER.....	2N01 CN55248-05	95,182
HOLMES, CARMACK.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	3N01 CM77151-02	120,836
HOUSER, BETSY B.....	DECISION MAKING AND FERTILITY REGULATION.....	5N01 HD52807-02	62,925
KOPPLE, JOEL D.....	NITROGEN METABOLISM IN UREMIA.....	2N01 AM32210-07	112,964
LAINÉ, JANICE E.....	MEASURE OF CHILDREN'S LANGUAGE PERFORMANCE.....	3N01 NS52322-04	60,800
MASSEY, FRANK J.....	HEALTH STATUS OF VASECTOMIZED MEN—COORDINATING CENTER.....	5N01 HD62807-01	194,311
MORTON, DONALD L.....	HUMAN MELANOMA: EVALUATION OF BCG IMMUNOTHERAPY.....	3N01 CB64076-01	55,454
NEUMANN, CHARLOTTE G.....	EARLY MALNUTRITION AND IMMUNITY TO MEASLES.....	2N01 HD52851-04	110,000
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY SERVICES.....	2N01 LM34708-10	809,190
NOT APPLICABLE.....	COOPERATIVE CATALOGING.....	2N01 LM44739-03	12,445
PARMELEE, ARTHUR H.....	DIAGNOSTIC & INTERVENTION STUDIES OF HIGH-RISK INFANTS.....	2N01 HD32776-10	202,800
PORTER, DAVID D.....	RESPIRATORY SYNCYTIAL VIRUS INFECTION IN THE FERRET.....	2N01 AI52517-03	63,522
RANGEL, DECIO D.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67097-03	85,000
RAY, DAN S.....	CONSTRUCT M13 PHAGE CLONING VECTOR FOR E. COLI HOSTS.....	2N01 AI62505-03	16,404
SANSONE-BAZZANO, GAIL.....	STEROID HORMONES ON SEBACEOUS SECRETION & ACNE DEVEL.....	2N01 HD42864-07	50,984
SERCARZ, ELI E.....	GENETIC CONTROL OF IMMUNE RESPONSE TO CANCER.....	2N01 CB43972-02	90,881
SHABO, ALAN L.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72132-00	157,565

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
SPARKS, FRANK C	THERAPY OF CARCINOMA OF THE BREAST	2N01 CB43917-03	223,000
SPIVEY, GARY H	EPIDEMIOLOGY OF BENIGN BREAST DISEASE	1N01 CB74202-00	146,000
STERMAN, MAURICE B	DEVELOPMENTAL PHENOMENA & SIDS OCCURRENCE	3N01 HD42810-10	288,342
TAKASUGI, MITSUO	NORMALS CELL MEDIATED REACTIVITY TO HUMAN TUMOR ANTIGENS	1N01 CB74133-00	68,509
TERASAKI, PAUL I	HL-A TYPING FOR PLATELET & LEUKOCYTE TRANSFUSIONS	2N01 CM02092-09	403,201
TERASAKI, PAUL I	VIRUSES, GENETICS & IMMUNITY IN HUMAN CANCER ETIOLOGY	5N01 CP43211-07	285,007
WILCOX, GARY L	CONSTRUCTION OF SAFER E COLI HOST FOR M13 PHAGE VECTOR	2N01 AI62507-03	15,374
ZIGHELBOIM, JACOB	SPECIFIC IMMUNOTHERAPY IN ACUTE MYELOGENOUS LEUKEMIA	2N01 CB64006-01	77,336
ORGANIZATION TOTAL	40	5,821,151	
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
BATEMAN, JOSEPH R	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA	5N01 CM53842-05	20,085
BLANKENHORN, DAVID H	ATHEROSCLEROSIS ASSESSMENT-ANGIOGRAPHY AND ULTRASOUND	1N01 HV72930-00	282,885
BOYLEN, C THOMAS	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE	5N01 HR62947-03	125,900
CHAN, KENNETH K	DISPOSITION AND METABOLISM OF ANTINEOPLASTIC AGENTS	5N01 CM67065-02	127,495
FRELINGER, JEFFREY A	PREPARE SPECIFIC ALLOANTISERA	1N01 AI72528-00	96,609
GARDNER, MURRAY B	ETIOLOGY AND EPIDEMIOLOGY OF HUMAN CANCER	2N01 CP53500-06	2,072,773
GUISS, LEWIS	EARLY DETECTION OF BREAST CANCER	2N01 CN45098-04	371,590
HAMMOND, G DENMAN	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK	3N01 CN55235-02	22,780
HAMMOND, G DENMAN	CHILDREN'S CANCER STUDY GROUP-CANCER CONTROL PROGRAM	5N01 CN65374-01	250,000
HAYWOOD, L JULIAN	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72970-00	9,305
HEIDELBERGER, CHARLES D	SYNTHESIS OF DNA AND ENZYME BINDING COMPOUNDS	5N01 CM67084-02	131,038
HEIDELBERGER, CHARLES D	CARCINOGENESIS IN VITRO: INITIATION AND PROMOTION	3N01 CP65831-03	151,475
HODGKINSON, BERNARD J	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72133-00	114,541
KASPER, CAROL K	COOPERATIVE STUDY KF FACTOR VIII INHIBITOR IN HEMOPHILIA	5N01 HB53017-02	53,387
LIEB, MARGARET	VERIFY GENETIC CONSTITUTION OF BACTERIOPHAGE VECTORS	5N01 AI62516-02	33,350
MARMORSTON, JESSIE	STUDY OF CORONARY HEART DISEASE	5N01 HV42931-06	418,672
MASSRY, SHAUL G	ROLE OF PARATHYROID AS A UREMIC TOXIN	1N01 AM72218-00	68,890
MASSRY, SHAUL G	SEXUAL DYSFUNCTION IN END-STAGE RENAL DISEASE	1N01 AM72225-00	124,891
MOSLEY, JAMES W	PROSPECTIVE STUDY OF POST TRANSFUSION HEPATITIS	5N01 HB42972-11	716,000
RASHEED, SURAIYA	INFLUENCE OF INTERACTION BETWEEN ENVIRONMENTAL FACTORS	2N01 CP61041-01	86,752
RYAN, STEPHEN J	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY	5N01 EY52141-01	30,927
SOBIN, SIDNEY S	FIBROPROTEIN NETWORKS OF THE PULMONARY ALVEOLAR WALL	5N01 HR62910-01	87,650
TOWNSEND, DUANE E	STUDY OF GENITAL TRACT ANOMALIES	5N01 CN45122-04	363,890
VOGT, PETER K	CONDITIONAL LETHAL MUTANTS OF RNA TUMOR VIRUSES	2N01 CP53518-04	160,748
ORGANIZATION TOTAL	24	5,921,633	
MENLO PARK			
PALO ALTO RETINAL RESEARCH FOUNDATION ZIP CODE 94025			
LITTLE, HUNTER L	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72140-00	119,938
ORGANIZATION TOTAL	1	119,938	
SRI INTERNATIONAL ZIP CODE 94025			
BLOOM, JOAN	PSYCHOLOGICAL ASPECTS OF BREAST CANCER	2N01 CN55313-07	394,020
BRAUMAN, SHARON K	DEVELOPMENT OF MATERIALS FOR HEART-ASSIST DEVICES	2N01 HV32959-09	88,902
CHEUNG, ANDREW P	DETECT AND IDENTIFY MUTAGENS IN HUMAN BODY FLUIDS	1N01 CP75917-00	72,309
DAWSON, MARCIA I	SYNTHESIS OF NEW RETINOIDS	1N01 CP75931-00	128,928
DAWSON, MARCIA I	POLYMERIC INTRAVAGINAL CONTRACEPTIVES	1N01 HD72828-00	68,050
DE GRAW, JOSEPH I	SYNTHESIS OF RADIOACTIVE RETINOIDS	1N01 CP75936-00	137,370
FIELDSTEEL, A HOWARD	IN VITRO CULTIVATION KF TREPONEMA PALLIDUM	2N01 AI42536-02	138,244
FREEMAN, GUSTAVE	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS	5N01 CP55701-06	238,571
HELLER, JORGE	DEVELOP AND TEST NEW BIODEGRADABLE DRUG DELIVERY SYSTEMS	1N01 HD72826-00	149,786
HENRY, DAVID W	SYNTHESIS OF POTENTIAL ANTICANCER AGENTS	5N01 CM33742-08	508,913
JOHNSON, H L	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS	1N01 CP75930-00	101,153
KREBS, JOHN S	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER	5N01 CO65222-02	263,646
LASSITER, DONALD	CHEMICAL CARCINOGENS AND RECOMMENDED CONTROL	5N01 CN55176-02	366,536
LEAFFER, MORRIS	PREPARATION OF RADIOLABELED MATERIALS	5N01 CM63776-02	249,587

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
LIM, PETER.....	ANALYSIS OF CHEMICALS AND PHARMACEUTICAL FORMULATIONS.....	5N01 CM33723-08	363,474
MC GEE, ARTHUR A.....	STUDY OF CHEMICALS THAT AFFECT MAN AND HIS ENVIRONMENT.....	5N01 CP33285-17	749,888
MITCHELL, ANN D.....	MUTAGENESIS SYSTEM FOR CARCINOGENESIS SCREENING.....	5N01 CP65854-02	210,454
PETERS, JOHN H.....	METABOLISM OF DAPSONE IN LEPROSY PATIENTS.....	3N01 AI02283-07	19,045
PINCUS, JACK H.....	MODIFIED TUMOR CELL MEMBRANE AS IMMUNOTHERAPEUTIC AGENT.....	2N01 CB64053-01	68,997
REIST, ELMER.....	CARCINOGENESIS CONTRACT SECTION SEGMENT.....	1N01 CP75889-00	3,512
REIST, ELMER.....	PREPARATION OF 7 COMPOUNDS—TASK 2.....	1N01 CP75904-00	21,191
REIST, ELMER.....	PREPARATION OF ONE (1) COMPOUND.....	1N01 CP75966-00	4,230
SIMMON, VINCENT F.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	5N01 CP65857-02	92,372
TANABE, MASATO.....	CHEMICAL CONTRACEPTIVES FOR THE MALE AND FEMALE.....	3N01 HD52844-04	100,440
TANABE, MASATO.....	ABEO STEROIDS AS CONTRACEPTIVE AGENTS.....	1N01 HD72817-00	156,538
WEAVER, CHARLES S.....	DEVELOP WEARABLE 4 CHANNEL EEG CASSETTE RECORDING SYSTEM.....	5N01 NS32322-12	105,550
ORGANIZATION TOTAL	26	4,801,706	
MOUNTAIN VIEW			
LEE-MAC ZIP CODE 94040			
MC COY, THOMAS A.....	INCREASING YIELDS OF HUMAN INTERFERON PRODUCTION.....	3N01 AI52521-04	1,308
ORGANIZATION TOTAL	1	1,308	
TECHNICON CORPORATION—TECHNICON MEDICAL INFORMATION SYSTEMS CORPORATION ZIP CODE 94040			
TO BE APPOINTED.....	COMPUTER BASED HOSPITAL INFORMATION SYSTEM.....	3N01 CL52154-14	2,339,010
ORGANIZATION TOTAL	1	2,339,010	
OAKLAND			
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA ZIP CODE 94609			
LUBIN, BERTRAM H.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB73004-00	15,370
ORGANIZATION TOTAL	1	15,370	
KAISER FOUNDATION HOSPITALS—KAISER FOUNDATION RESEARCH INSTITUTE ZIP CODE 94612			
COOPER, J FENIMORE.....	CLINICAL EVALUATION OF IMMUNODIAGNOSTIC TESTS FOR CANCER.....	1N01 CB74169-00	88,969
FRIEDMAN, GARY D.....	DETERMINE RENAL DISEASE PREVALENCE AND RISK FACTORS.....	2N01 AM62201-01	98,100
GLASS, ANDREW G.....	STUDY CHANGE IN BREAST CANCER RISK AMONG ESTROGEN USERS.....	2N01 CP61057-02	21,933
RAMCHARAN, SAITRI.....	CONTRACEPTIVE AGENTS ON BIRTH DEFECT FREQUENCY.....	5N01 HD42861-03	148,788
WILD, J E.....	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	3N01 HV33105-08	599,819
ORGANIZATION TOTAL	5	957,609	
SAMUEL MERRITT HOSPITAL ZIP CODE 94609			
SCHWEITZER, ROBERT.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45068-08	287,391
ORGANIZATION TOTAL	1	287,391	
OXNARD			
GOULO, INC.—STATHAM INSTRUMENTS DIVISION ZIP CODE 93030			
CHAMBERS, JACK A.....	DEVELOPMENT AND TESTING OF CIRCULATORY ASSIST SYSTEM.....	5N01 HV42906-09	404,154
ORGANIZATION TOTAL	1	404,154	
PALO ALTO			
ALZA CORPORATION ZIP CODE 94304			
BUCKLES, RICHARD G.....	DEVELOP AND TEST NEW BIODEGRADABLE DRUG DELIVERY SYSTEM.....	1N01 HD72825-00	206,289
ORGANIZATION TOTAL	1	206,289	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
CHILDREN'S HOSPITAL AT STANFORD ZIP CODE 94304			
DUTCHER, JOY N.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENTS.....	5N01 CP65835-02	119,518
ORGANIZATION TOTAL	1 119,518		
DYNAPOL ZIP CODE 94304			
CROSBY, GUY.....	STUDY SENSORY PROPERTIES OF NEW DIHYDROCHALCONE ANALOGS.....	5N01 DE62479-03	248,017
ORGANIZATION TOTAL	1 248,017		
NORTHERN CALIFORNIA CANCER PROGRAM, INC. ZIP CODE 94304			
SILVERMAN, SOL, JR.....	NETWORK DEMONSTRATION PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55180-03	350,008
ORGANIZATION TOTAL	1 350,008		
PALD ALTD MEDICAL RESEARCH FOUNDATION ZIP CODE 943D1			
DONCH, JOHN J.....	VERIFICATION OF GENETIC CONSTRUCTION KF E. COLI HOSTS.....	5N01 AI62519-01	66,803
LEWIS, BERNARD I.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52911-03	93,875
ORGANIZATION TOTAL	2 160,678		
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125			
DAVIDSON, NORMAN R.....	ELECTRON MICROSCOPIC STUDY OF TUMOR VIRUS NUCLEIC ACIDS.....	5N01 CP43306-04	110,315
DAVIDSON, NORMAN R.....	RESTRICTION ENDONUCLEASE ANALYSIS.....	1N01 CP71004-00	90,240
ORGANIZATION TOTAL	2 200,555		
HUNTINGTON MEMORIAL HOSPITAL ZIP CODE 91105			
PUDENZ, ROBERT H.....	STUDY OF FEASIBILITY OF A SENSORY PROSTHESIS.....	2N01 NS02275-08	134,975
ORGANIZATION TOTAL	1 134,975		
KONIGSBERG INSTRUMENTS ZIP CODE 91107			
KONIGSBERG, EPH.....	TEST DIFFERENTIAL PRESSURE TRANSDUCER.....	3N01 HV92241-14	20,741
ORGANIZATION TOTAL	1 20,741		
PASADENA FOUNDATION FOR MEDICAL RESEARCH ZIP CODE 91101			
KAIGHN, M EDWARD.....	NORMAL, HUMAN PROSTATIC EPITHELIAL CELL-PRIMARY CULTURE.....	5N01 CP65850-01	103,807
ORGANIZATION TOTAL	1 103,807		
XEROX CORPORATION ZIP CODE 91107			
EIN-GAL, MOSHE.....	DEVELOP SOLID STATE IMAGE RECEPTORS FOR X-RAY IMAGING.....	1N01 CB74211-00	423,300
ORGANIZATION TOTAL	1 423,300		
SACRAMENTO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY ZIP CODE 95614			
AUSTIN, DONALD F.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71035-00	85,720
DUNN, JOHN E, JR.....	STUDY OF CANCER IN JAPANESE MIGRANTS.....	5N01 CP33353-11	1,052,556
FASAL, ELFRIEDE.....	CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN55263-06	375,461
ORGANIZATION TOTAL	3 1,513,737		
GENERAL TIRE AND RUBBER COMPANY--AEROJET LIQUID ROCKET COMPANY ZIP CODE 95813			
MOISE, JOHN C.....	DEVELOP ENERGY CONVERTERS TO CONTROL HEART ASSIST DEVICE.....	1N01 HV72971-00	411,033
OLSEN, ROBERT E.....	PREPARATION FOR BULK CHEMICALS AND DRUGS.....	3N01 CM57031-04	99,805
RUSO, V F.....	DEVELOP STIRLING CYCLE ENERGY-CONVERSION SYSTEM.....	5N01 HV32930-10	789,746
ORGANIZATION TOTAL	3 1,300,584		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
PLANNEO PARENTHOOD ASSOCIATION OF SACRAMENTO ZIP CODE 95614			
STEWART, GARY K.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	1N01 HD72808-00	70,000
ORGANIZATION TOTAL	1 70,000		
SAN DIEGO			
GENERAL ATOMIC COMPANY ZIP CODE 92138			
HAUBOLD, A D.....	DESIGN OF CARBON FILM DEPOSITS FOR PROSTHETIC DEVICES.....	2N01 HV42928-05	179,972
ORGANIZATION TOTAL	1 179,972		
WSA, INC. ZIP CODE 92121			
DOBSON, J.....	TECHNICAL ASSISTANCE TO THE RADIATION PROGRAM.....	1N01 C075381-00	12,525
ORGANIZATION TOTAL	1 12,525		
SAN FRANCISCO			
AMERICAN CANCER SOCIETY CALIFORNIA DIVISION ZIP CODE 94103			
BROWN, HELENE G.....	PLANNING FOR A COMMUNITY BASED CANCER CONTROL PROGRAM.....	3N01 CN55269-03	101,395
ORGANIZATION TOTAL	1 101,395		
CALIFORNIA STATE HEALTH AND WELFARE AGENCY--DEPARTMENT OF HEALTH ZIP CODE 94118			
LEONARD, ALVIN R.....	HIGH BLOOD PRESSURE CONTROL PROGRAM.....	1N01 HV72985-00	795,303
ORGANIZATION TOTAL	1 795,303		
INSTITUTES OF MEDICAL SCIENCES ZIP CODE 94120			
FALLAT, ROBERT J.....	PULMONARY DISEASE RISK--INDIVIDUALS WITH MZ PHENOTYPES.....	1N01 HR72912-00	33,445
HILL, J DONALD.....	EXTRACORPOREAL SUPPORT FOR RESPIRATORY INSUFFICIENCY.....	5N01 HR42917-03	214,805
HULLEY, STEPHEN B.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	2N01 HV22981-08	528,038
ORGANIZATION TOTAL	3 776,288		
KAISER FOUNDATION HOSPITALS--KAISER FOUNDATION RESEARCH INSTITUTE ZIP CODE 94115			
FREID, MARVIN A.....	EPIDEMIOLOGICAL STUDY OF PNEUMOCOCCAL DISEASE.....	5N01 AI22513-08	66,539
RAMCHARAN, SAI TRI.....	STUDY OF CONTRACEPTIVE DRUGS.....	5N01 HD32710-13	473,518
ORGANIZATION TOTAL	2 540,057		
RALPH K. DAVIES MEDICAL CENTER--FRANKLIN HOSPITAL ZIP CODE 94114			
GOTCH, FRANK A.....	EVALUATION OF HOLLOW-FIBER DIALYZERS.....	2N01 AM42202-10	139,760
ORGANIZATION TOTAL	1 139,760		
SAN FRANCISCO MEDICAL SOCIETY ZIP CODE 94118			
PERKINS, HERBERT A.....	REMOVAL OF HLA ANTIGENS FROM BLOOD.....	2N01 HB12408-08	9,674
ORGANIZATION TOTAL	1 9,674		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143			
ARIEFF, ALLEN I.....	ABNORMALITIES OF NERVOUS SYSTEM FUNCTION IN UREMIA.....	2N01 AM52204-03	85,224
ELASHOFF, ROBERT M.....	DEVELOPMENT OF GROUP-TESTING FOR SCREENING CARCINOGENS.....	2N01 CP33327-05	92,610
FELTS, JAMES M.....	INVESTIGATE HYPERLIPIDEMIA IN CHRONIC RENAL FAILURE.....	2N01 AM42220-03	71,528
GIRISH, VYAS W.....	STUDY ON DETECTION OF HEPATITIS BY HEMAGGLUTINATION.....	2N01 HB33000-06	31,059
GOODMAN, JOEL W.....	CHARACTERIZATION OF ANTIGEN BINDING T-CELL RECEPTORS.....	1N01 CB74178-00	70,773
HOPEWELL, PHILIP C.....	INTERMITTENT POSITIVE PRESSURE BREATHING CLINICAL STUDY.....	3N01 HR72906-01	21,887
IRVINE, ALEXANDER R.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY62139-01	66,587
LA VAIL, MATTHEW M.....	HEREDITARY DEGENERATIVE DISEASE OF THE RETINA-RAT MODEL.....	5N01 EY62147-01	46,029
LEVY, JAY A.....	ISOLATION OF HUMAN XENOTROPIC VIRUSES.....	2N01 CP43381-04	119,470
MARTIN, DAVID W, JR.....	PROPAGATION OF MUTANT SOMATIC CELLS.....	5N01 CP43239-06	120,514

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
MERZENICH, MICHAEL M.....	DEVELOP MULTICHANNEL ELECTRODES FOR AUDITORY PROSTHESIS.....	1N01 NS72367-00	83,700
MICHAELI, DOV.....	INTERACTIONS OF MODIFIED BIOPOLYMERS WITH BLOOD.....	5N01 HV42984-04	95,274
NEWBRUN, ERNEST.....	DENTAL PLAQUE OF FRUCTOSE-INTOLERANT PATIENTS.....	5N01 DE62498-01	46,694
PHILLIPS, THEODORE L.....	EARLY INTERVENTION IN REHABILITATION OF CANCER PATIENTS.....	3N01 CN55190-04	89,207
POTTER, DONALD E.....	CHRONIC PERITONEAL DIALYSIS AND HEMODIALYSIS IN CHILDREN.....	2N01 AM52219-01	48,516
SILVERSTEIN, STEVEN J.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECT.....	2N01 DE52470-04	109,082
TANAGHO, EMIL A.....	STUDY OF URINARY BLADDER EVACUATION.....	2N01 NS32307-05	41,850
TOOLEY, WILLIAM H.....	MEASURE PULMONARY FUNCTION IN INFANTS AND CHILDREN.....	5N01 HR62903-01	110,390
WARA, WILLIAM M.....	IMMUNO-STIMULANTS IN LOCALIZED RADIATION THERAPY.....	2N01 CB64004-01	95,787
WILSON, CHARLES B.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67055-02	76,933
ZIPPIN, CALVIN.....	TUMOR REGISTRY TRAINING PROGRAM AND ALLIED ACTIVITIES.....	3N01 CP43383-05	48,852
ORGANIZATION TOTAL	21 1,571,966		
WEST COAST CANCER FOUNDATION ZIP CODE 94133			
ENELOW, ALLEN J.....	PSYCHOLOGICAL ASPECTS OF BREAST CANCER.....	2N01 CN55314-06	454,471
VAETH, JEROME M.....	PROTOTYPE NETWORK DEMONSTRATION IN BREAST CANCER.....	3N01 CN45143-04	50,892
ORGANIZATION TOTAL	2 505,363		
SANTA BARBARA			
SYSTEMETRICS, INC. ZIP CODE 93105			
LUBALIN, JAMES S.....	NAT'L COMM ON DIGESTIVE DISEASES SUPPORT SERVICE.....	1N01 AM72216-00	394,752
ORGANIZATION TOTAL	1 394,752		
SANTA CRUZ			
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ ZIP CODE 95064			
TALAMANTES, FRANK J, JR.....	ESTROGEN/PROGESTIN EFFECTS ON BREAST IN NEONATAL PERIOD.....	1N01 CB74091-00	91,200
WIPKE, W TODD.....	PREDICTION OF METABOLITES FOR CARCINOGENICITY.....	1N01 CP75816-00	37,485
ORGANIZATION TOTAL	2 128,685		
SANTA MONICA			
RANO CORPORATION ZIP CODE 90406			
GRONER, GABRIEL F.....	PROTOTYPE CLINICAL RESEARCH DATA.....	5N01 RR52111-12	445,874
MORRISON, PETER A.....	CONSEQUENCES OF LATE ADOLESCENT CHILDBEARING.....	1N01 HD72819-00	120,700
ORGANIZATION TOTAL	2 566,574		
SIMI VALLEY			
PHARM-ECO LABORATORIES ZIP CODE 93065			
DRAPER, MARSHALL D.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	3N01 CM23707-11	183,725
ORGANIZATION TOTAL	1 183,725		
STANFORD			
STANFORD UNIVERSITY ZIP CODE 94305			
ALDERMAN, EDWIN L.....	CORONARY ARTERY SURGERY COLLABORATIVE STUDIES.....	2N01 HV32974-08	205,607
BERNFELD, MERTON R.....	STROMA IN NEOPLASTIC AND PRENEOPLASTIC MAMMARY GLAND.....	2N01 CB53903-02	95,000
FARQUHAR, JOHN W.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	3N01 HV12161-15	2,365,050
GLATSTEIN, ELI.....	CLASSIFICATION OF NON-HODGKIN'S LYMPHOMAS.....	5N01 CM67111-02	85,865
HARRISON, DONALD C.....	NATURAL HISTORY OF PATIENTS WITH PREINFARCTION SYNDROME.....	2N01 HV12482-06	14,130
KAPLAN, HENRY S.....	IMMUNOTHERAPY WITH IN VITRO LYMPHOCYTE SENSITIZATION.....	2N01 CB63988-02	61,930
KAPLAN, HENRY S.....	HODGKIN'S DISEASE AND OTHER HUMAN MALIGNANT LYMPHOMAS.....	2N01 CP43228-05	536,275

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CALIFORNIA—Continued			
KAPLAN, HENRY S.....	RADLY INFECTION AND LYMPHOCYTE DIFFERENTIATION IN MICE.....	1N01 CP71052-00	125,000
LEDERBERG, ESTHER M.....	ESTABLISHMENT OF PLASMID REFERENCE CENTER.....	1N01 AI72531-00	337,903
LEHMAN, I ROBERT.....	LARGE SCALE PRODUCTION OF DNA LIGASE & DNA POLYMERASE I.....	2N01 CP61026-01	58,000
LOEW, GILDA.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	1N01 CP75928-00	82,747
LUCAS, ZOLTAN J.....	STUDY OF INHIBITORS OF CELLULAR IMMUNITY.....	2N01 CB33905-04	115,000
MERIGAN, THOMAS C.....	EVALUATION OF THERAPEUTIC EFFICACY OF HUMAN INTERFERON.....	2N01 AI42527-09	419,570
MISFELDT, DAYTON S.....	GROWTH/PASSAGE OF MAMMARY EPITHELIAL CELLS IN CULTURE.....	1N01 CB74094-00	63,500
NELSON, THOMAS S.....	STUDY OF PHYSIOLOGY OF THE OVIDUCT.....	2N01 HD32774-08	20,755
ROSENBERG, SAUL.....	NONHODGKIN'S LYMPHOMAS CLASSIFICATION CENTER.....	5N01 CM67072-02	97,770
STOCKDALE, FRANK E.....	CONTROL OF DNA SYNTHESIS IN THE MAMMARY GLAND.....	2N01 CB23875-05	90,000
SUSSMAN, HOWARD H.....	BIOLOGIC MARKERS IN BREAST CANCER PATIENTS.....	1N01 CB74086-00	111,400
SWENSON, ROBERT S.....	HYPERGLYCEMIA, LIPEMIA, INSULIN RESIST. IN RENAL FAIL.....	2N01 AM42213-02	104,767
WEINER, MICHAEL W.....	ROLE OF ACETATE IN DIALYSATE FOR HEMODIALYSIS.....	2N01 AM52210-02	130,071
WHITE, ROBERT.....	DEVELOP ELECTRODES FOR AUDITORY PROSTHESIS.....	1N01 NS72366-00	104,500
ORGANIZATION TOTAL	21	5,224,840	
SUNNYVALE			
RASOR ASSOCIATES ZIP CODE 94086			
RASOR, N S.....	NONINVASIVE ASSESSMENT OF PULMONARY HYPERTENSION.....	5N01 HR62917-01	169,250
ORGANIZATION TOTAL	1	169,250	
TORRANCE			
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL ZIP CODE 90509			
BERNSTEIN, GERALD S.....	HEALTH STATUS OF AMERICAN MEN.....	1N01 HD72802-00	182,165
DAVIDSON, WARREN D.....	ROLE OF ACETATE IN DIALYSATE FOR HEMODIALYSIS.....	2N01 AM52209-02	165,000
ODELL, WILLIAM D.....	STUDY OF HORMONE MARKERS FOR DETECTING CANCER.....	2N01 CB43903-03	230,402
PARLOW, ALBERT F.....	COLLECTION OF RAT PITUITARIES AND ASSAYING HORMONES.....	3N01 AM90056-26	100,515
PARLOW, ALBERT F.....	ISOLATE PURITY AND HUMAN PITUITARY HORMONES.....	1N01 AM72220-00	149,509
PARLOW, ALBERT F.....	EXTRACTION OF RAT PITUITARY HORMONES.....	1N01 AM72221-00	147,724
SWERDLOFF, RONALD S.....	TESTOSTERONE ENANTHATE-INDUCED REVERSIBLE AZOOSPERMIA.....	5N01 HD62817-03	102,900
ORGANIZATION TOTAL	7	1,078,215	
VAN NUYS			
BIO-SCIENCE LABORATORIES ZIP CODE 91405			
GLUECK, CHARLES J.....	STUDY OF BLOOD TOXICITY.....	2N01 HV32961-05	227,370
IBBOTT, FRANK A.....	CENTRAL LABORATORY FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72950-00	14,000
ORGANIZATION TOTAL	2	241,370	
STATE TOTAL	266	54,244,208	
COLORADO			
DENVER			
COLORADO REGIONAL CANCER CENTER ZIP CODE 80206			
HOWARD, DOROTHY E.....	ONCOLOGY NURSING PROGRAMS IN COMMUNITY HOSPITALS.....	5N01 CN65185-03	53,951
ORGANIZATION TOTAL	1	53,951	
COLORADO STATE DEPARTMENT OF HEALTH ZIP CODE 80220			
REGER, ROY H.....	COMMUNITY CRIES PREVENTION DEMONSTRATION PROJECT.....	5N01 DE52472-03	35,543
ORGANIZATION TOTAL	1	35,543	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
COLORADO—Continued			
DAVIS INSTITUTE FOR THE CARE AND STUDY OF THE AGING ZIP CODE 8D204			
THOMPSON, HORACE E.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	1N01 HD72811-00	83,000
ORGANIZATION TOTAL	1 83,000		
NATIONAL ASTHMA CENTER ZIP CODE 8D204			
CREER, THOMAS.....	SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	1N01 HR72972-00	82,270
ORGANIZATION TOTAL	1 82,270		
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 8D206			
FAHEY, JOHN L.....	PROCURE SULFOLIPIIDS FROM MYCOBACTERIUM TUBERCULOSIS.....	2N01 CP65746-02	46,675
GREY, HOWARD M.....	PREPARATION OF REAGENT ANTISERA AND ANTIGENS.....	2N01 CB53912-03	70,831
MC CLATCHY, J KENNETH.....	SEROLOGY OF ATYPICAL MYCOBACTERIA.....	2N01 AI02079-11	83,321
ORGANIZATION TOTAL	3 200,827		
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
ALFREY, ALLEN C.....	TRACE ELEMENT ABNORMALITIES IN CHRONIC UREMIA.....	2N01 AM42217-04	121,200
BARKEN, ROGER.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	2N01 AI22501-12	89,784
BOREK, ERNEST.....	DEVELOPMENT OF INHIBITORS TO RNA METHYLATION.....	2N01 CM12186-09	125,000
COOPER, WILLIAM G.....	DEVELOP AND SUPPORT A CTS FACILITY.....	2N01 LM64744-04	14,271
COOPER, WILLIAM G.....	SATELLITE TECHNOLOGY IN BIOMEDICAL COMMUNICATION.....	1N01 OD72120-00	98,641
CUNHA, GERALD R.....	TISSUE INTERACTIONS-HORMONALLY INDUCED CELLULAR CHANGE.....	1N01 CP75875-00	133,688
GERNER, ROBERT E.....	COLLECTION OF SERIAL SERUM SAMPLES FROM CANCER PATIENTS.....	1N01 CB74161-00	30,478
HATHAWAY, WILLIAM E.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	5N01 HB53023-03	41,169
HENDEE, WILLIAM R.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	2N01 CN45160-07	107,690
NORA, JAMES J.....	EVALUATION OF EFFECT OF CONTRACEPTIVE AGENTS.....	5N01 HD42845-06	8,679
PETTY, THOMAS L.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	2N01 HR62942-03	163,915
REEVES, JOHN T.....	NONINVASIVE ASSESSMENT OF PULMONARY HYPERTENSION.....	5N01 HR62920-01	92,070
SINGLETON, JOHN W.....	NATIONAL COOPERATIVE STUDY OF CROHN'S DISEASE.....	3N01 AM22210-09	53,576
STEWART, JOHN M.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	5N01 HD62843-02	39,782
STEWART, JOHN M.....	SPECIFIC IMMUNIZATION AS A MALE CONTRACEPTIVE.....	5N01 HD62851-01	41,657
STEWART, JOHN M.....	DEVELOPMENT OF KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	1N01 HV72946-00	58,324
TALMAGE, DAVID W.....	ISOLATION OF HUMAN PERIPHERAL BLOOD MONOCYTES.....	2N01 CB53900-02	51,528
WEBBER, MUKTA M.....	IN VITRO CULTIVATION OF HUMAN PROSTATIC CELLS.....	5N01 CP65849-02	132,025
ORGANIZATION TOTAL	18 1,403,477		
FORT COLLINS			
COLORADO STATE UNIVERSITY ZIP CODE 8D521			
JAENKE, ROGER S.....	TOXICOLOGY OF ANTINEOPLASTIC AGENTS.....	2N01 CM12192-07	10,772
TO BE APPOINTED.....	STUDY LASSA VIRUS INFECTION IN SIERRA LEONE.....	1N01 TW72125-00	261,728
ORGANIZATION TOTAL	2 272,500		
STATE TOTAL	27 2,131,568		
CONNECTICUT			
FARMINGTON			
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06D32			
BIGAZZI, PIERLUIGI E.....	IMMUNOLOGIC STUDIES OF VASECTOMY.....	5N01 HD52842-03	150,000
DOHERTY, NEVILLE.....	COST EFFECTIVENESS OF VARIOUS CARRIES PREVENTIVE AGENTS.....	5N01 DE52449-06	129,061
GOLD, RONALD.....	CLINICAL EVALUATION OF BACTERIAL POLYSACCHARIDE VACCINES.....	2N01 AI22502-08	75,586
LINDQUIST, RICHARD R.....	EFFECT OF MAMMARY CANCER CELLS ON VASCULAR ENDOTHELIUM.....	1N01 CB74089-00	84,200
MAHER, JOHN F.....	PERITONEAL PERMEABILITY AND DRUG ENHANCEMENT IN UREMIA.....	2N01 AM52220-01	86,883

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CONNECTICUT—Continued			
MUNDY, GREGORY R.....	OSTEOTROPISM OF MAMMARY CARCINOMA.....	2N01 CB63980-02	119,100
RULE, JAMES T.....	COMMUNITY CRIES PREVENTION DEMONSTRATION PROJECT.....	2N01 DE52459-04	112,284
VIOLA, MICHAEL V.....	ETIOLOGY OF ALS AND PD IN RNA 'C' TYPE VIRUSES.....	2N01 NS52307-02	27,000
ORGANIZATION TOTAL	8 784,114		
HARTFORD			
CONNECTICUT STATE DEPARTMENT OF HEALTH ZIP CODE 06115			
HONEYMAN, MERTON S.....	CANCER END RESULTS EVALUATION.....	3N01 CP61002-05	121,911
OSTFELD, ADRIAN.....	HIGH BLOOD PRESSURE CONTROL PROGRAM.....	1N01 HV72984-00	464,169
WALKER, JAMES E.....	PLANNING FOR A COMMUNITY BASED CANCER CONTROL PROGRAM.....	2N01 CN55266-04	96,673
ORGANIZATION TOTAL	3 682,753		
NEW HAVEN			
HASKINS LABORATORIES ZIP CODE 06510			
LIBERMAN, ALVIN M.....	STUDY OF LANGUAGE DEVELOPMENT IN CHILDREN.....	2N01 HD12420-07	83,440
ORGANIZATION TOTAL	1 83,440		
HOSPICE, INC. ZIP CODE 06511			
LACK, SYLVIA.....	DEVELOPMENT AND UTILIZATION OF REHABILITATION RESOURCES.....	5N01 CN55053-04	59,932
ORGANIZATION TOTAL	1 59,932		
PLANNED PARENTHOOD LEAGUE OF CONNECTICUT ZIP CODE 06511			
BERKOWITZ, RICHARD L.....	CLINICAL STUDY OF POSTCOITAL CONTRACEPTIVE AGENTS.....	3N01 HD42809-05	4,968
ORGANIZATION TOTAL	1 4,968		
YALE UNIVERSITY ZIP CODE 06520			
BERTINO, JOSEPH R.....	SELECTION & DEVELOPMENT OF PROMISING FOLATE ANTAGONISTS.....	5N01 CM67068-01	47,760
CANELLAKIS, EVANGELO S.....	BIOCHEMICAL SCREENING FOR ANTICANCER AGENTS.....	5N01 CM57029-02	99,110
COHEN, LAWRENCE S.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	5N01 HV62925-02	131,297
COLLINS, WILLIAM F.....	DEVELOP ACUTE SPINAL CORD INJURY DATA PROTOCOLS.....	1N01 NS72361-00	105,700
FELIG, PHILIP.....	GLUCAGON AND AMINO ACIDS IN CARBOHYDRATE METABOLISM.....	2N01 AM42221-03	124,981
KELSEY, JENNIFER L.....	RELATIONSHIP OF ORAL CONTRACEPTIVES TO BREAST DISEASE.....	1N01 HD72813-00	32,737
MANDEL, HENRY R.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	3N01 CN55232-05	107,021
MATTHAY, RICHARD.....	INTRATUMORAL BCG IMMUNOTHERAPY.....	1N01 CB74191-00	62,835
MEIGS, J WISTER.....	SUPPORT FOR CANCER EPIDEMIOLOGY PROGRAM.....	2N01 CP33235-08	499,302
PEARSON, HOWARD A.....	STUDY OF SICKLE CELLS.....	3N01 HB22950-08	24,981
PEARSON, HOWARD A.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72996-00	2,250
PITLICK, FRANCES A.....	INTERACTION OF NATURAL & MODIFIED BIOPOLYMERS WITH BLOOD.....	5N01 HV42968-04	85,078
RUDDLE, FRANK H.....	PROPAGATION OF HAPLOID AND PARTIAL MONOSOMIC CELL LINES.....	2N01 CP55673-07	122,746
RUDDLE, FRANK H.....	STUDY INTEGRATION SITES OF SARC GENE OF MOLONEY VIRUS.....	1N01 CP71060-00	67,060
SARTORELLI, ALAN C.....	AGENTS AFFECTING PLASMA MEMBRANES.....	5N01 CM53824-04	69,856
SPIRO, HOWARD M.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	2N01 CM43797-04	131,179
SPIRO, HOWARD M.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM53843-05	96,449
WAKSMAN, BYRON H.....	THYMIC & OTHER AGENTS PROM. LYMPHOCYTE DIFFERENTIATION.....	2N01 CB43926-02	70,199
WHITE, COLIN.....	EPIDEMIOLOGICAL STUDY OF ANTIFERTILITY METHODS.....	3N01 HD52800-05	10,437
ORGANIZATION TOTAL	19 1,890,978		
STORRS			
UNIVERSITY OF CONNECTICUT ZIP CODE 06268			
FOX, MARTIN D.....	DEVELOP ULTRASOUND CONCEPT TO DETECT ATHEROSCLEROSIS.....	3N01 HV52963-03	11,000
FOX, MARTIN D.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM-DATA CENTER.....	1N01 HV72929-00	142,609
ORGANIZATION TOTAL	2 153,609		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CONNECTICUT—Continued			
STATE TOTAL	35	3,659,794	
DELAWARE			
WILMINGTON			
WILMINGTON MEDICAL CENTER ZIP CODE 19801			
WHITNEY, LESLIE W.....	SERUM FROM PATIENTS WITH BREAST LESIONS.....	1N01 CB74137-00	30,700
WHITNEY, LESLIE W.....	SCREENING FOR DETECTION OF BREAST CANCER.....	2N01 CN45047-03	266,246
WHITNEY, LESLIE W.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45151-03	276,072
ORGANIZATION TOTAL	3	573,018	
STATE TOTAL	3	573,018	
DIST OF COL			
WASHINGTON			
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE ZIP CODE 20036			
BROWN, JANET.....	CONFERENCE OF SCIENCE AND MATHEMATICS FACULTY.....	1N01 RR72106-00	29,963
ORGANIZATION TOTAL	1	29,963	
AMERICAN INSTITUTES FOR RESEARCH ZIP CODE 20007			
CARD, JOSEFINA JAYME.....	LONG-TERM CONSEQUENCES OF ADOLESCENT'S CHILDREN.....	1N01 HD72820-00	72,671
SHANNER, WILLIAM M.....	CONTINUING EDUCATION PROGRAMS IN PULMONARY MEDICINE.....	5N01 HR62932-01	148,175
SHANNER, WILLIAM M.....	SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	1N01 HR72974-00	158,200
ORGANIZATION TOTAL	3	379,046	
AMERICAN NATIONAL RED CROSS ZIP CODE 20006			
FRIEDMAN, LEONARD I.....	CONTINUOUS FLOW PLASMAPHERESIS SYSTEM.....	5N01 HB62928-01	291,200
NATH, NRAPENDRA.....	ESTABLISHMENT OF HEPATITIS TESTING LABORATORY.....	3N01 AI22522-05	11,000
ORGANIZATION TOTAL	2	302,200	
AMERICAN SOCIETY FOR MICROBIOLOGY ZIP CODE 20006			
ACKER, ROBERT F.....	RECOMBINANT DNA-MICROBIOLOGY TECH. & BIOHAZARD CONTROL.....	1N01 AI72527-00	28,358
ORGANIZATION TOTAL	1	28,358	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES ZIP CODE 20036			
D'COSTA, AYRES.....	FACTORS IN DEVELOPMENT OF MEDICAL FACULTY MEMBERS.....	2N01 OD62149-04	133,248
SUTER, EMANUEL.....	DEVELOP A RESOURCE FOR EDUCATING HEALTH PROFESSIONALS.....	2N01 LM64711-02	372,099
ORGANIZATION TOTAL	2	505,347	
BIO MEQ, INC. ZIP CODE 20010			
LYNCH, JOHN J.....	PROCURE LARGE VOLUMES OF SERA FROM CANCER PATIENTS.....	1N01 CB74125-00	61,687
ORGANIZATION TOTAL	1	61,687	
BROOKINGS INSTITUTION ZIP CODE 20036			
NOT APPLICABLE.....	CONFERENCE—NATIONAL HEALTH POLICIES VS HEALTH PRACTICE.....	3N01 LM74702-01	23,375
ORGANIZATION TOTAL	1	23,375	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
DIST OF COL—Continued			
CHILDREN'S HOSPITAL NATIONAL MEDICAL CENTER ZIP CODE 20010			
PARROTT, ROBERT H.....	STUDY OF RESPIRATORY DISEASE.....	2N01 AI12091-13	314,846
PARROTT, ROBERT H.....	ESTABLISH AN INFECTIOUS ENTERIC DISEASE STUDY CENTER.....	1N01 AI72535-00	193,858
ORGANIZATION TOTAL	2 508,704		
COUNCIL ON LIBRARY RESOURCES ZIP CODE 20036			
COLE, FRED.....	MEDICAL LIBRARY MANAGEMENT INTERN PROGRAM.....	1N01 LM74715-00	123,910
ORGANIZATION TOTAL	1 123,910		
COURTESY ASSOCIATES ZIP CODE 20006			
TO BE APPOINTED.....	PROGRAM REVIEW MEETING.....	3N01 CP65851-01	1,216
TO BE APPOINTED.....	11TH JOINT WORKING CONFERENCE OF VIRUS CANCER PROGRAM.....	3N01 CP65852-01	40,932
TO BE APPOINTED.....	PROGRAM REVIEW MEETING.....	3N01 CP65860-01	2,290
TO BE APPOINTED.....	CARCINOGENESIS AND MUTAGENESIS OF POLYCYCLIC HYDROCARBON.....	3N01 CP75874-01	18,483
TO BE APPOINTED.....	PROGRAM REVIEW MEETINGS.....	3N01 CP75878-01	8,968
ORGANIZATION TOTAL	5 71,889		
EBON RESEARCH SYSTEMS ZIP CODE 20011			
HORN, WILLIAM.....	STATISTICAL SUPPORT FOR NCI SERUM PANEL.....	1N01 CB74210-00	49,832
ORGANIZATION TOTAL	1 49,832		
GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
DAVIS, DAVID O.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	3N01 CB43981-05	43,288
DIEHL, CHARLES E.....	ESTABLISHMENT OF REGION IV JOURNAL CLEARINGHOUSE.....	2N01 LM64719-02	19,811
HOLLINSHEAD, ARIEL C.....	PURIFICATION OF ANTIGENS; PREPARATION OF ANTIBODIES.....	2N01 CB64022-01	179,704
KOERING, MARILYN J.....	FOLLICULOGENESIS DURING THE MENSTRUAL CYCLE.....	1N01 HD72835-00	45,999
KRUEGER, DEAN E.....	MYOCARDIAL INFARCTION & THE ROLE OF ORAL CONTRACEPTIVES.....	2N01 HD62808-04	290,000
KRUEGER, DEAN E.....	INTERMITTENT POSITIVE PRESSURE BREATHING-DATA STUDY.....	3N01 HR72901-01	70,410
LA ROSA, JOHN C.....	SUPPORT FOR LIPID RESEARCH CLINIC CENTER.....	5N01 HV32931-09	1,512,431
LESSIN, LAWRENCE S.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72994-00	6,862
MOLINARI, GAETANO F.....	BRAIN DEATH MONOGRAPH.....	1N01 NS72356-00	69,797
RIOS, JORGE.....	ECG CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	2N01 HV52941-03	73,870
WAXMAN, BENNY.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD62806-02	53,250
ORGANIZATION TOTAL	11 2,365,422		
GEORGETOWN UNIVERSITY ZIP CODE 20007			
ABERNATHY, MARGARET R.....	EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45062-04	313,250
ABERNATHY, MARGARET R.....	MAMMOGRAPHY TRAINING FOR DETECTION OF BREAST CANCER.....	2N01 CN65251-04	75,251
HENKIN, ROBERT I.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENT.....	5N01 CP65836-02	39,986
KATZ, EDWARD.....	PREPARATION OF ACTINOMYCIN ANALOGS.....	2N01 CM43732-05	59,985
MUSHKIN, SELMA J.....	TRENDS IN COST OF DISEASE RELATED TO BIOMEDICAL RESEARCH.....	2N01 OD52121-07	233,252
RIDLEY, JEANNE C.....	A STUDY OF LOW FERTILITY COHORTS IN THE UNITED STATES.....	2N01 HD62818-02	424,410
RUBIN, MARTIN.....	DEVELOP LABORATORY SAMPLE IDENTIFICATION SYSTEM.....	3N01 GM62131-02	2,800
SCHEIN, PHILIP S.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67094-02	88,609
SCHEIN, PHILIP S.....	GASTROINTESTINAL CANCER RESEARCH PROGRAM.....	3N01 CM67110-05	242,152
SHNIDER, BRUCE I.....	SUPPORT SERVICES FOR EASTERN COOPERATIVE ONCOLOGY GROUP.....	2N01 CM33745-08	175,314
SLOTKOFF, LAWRENCE M.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV72915-01	283,120
SVERHA, SUSAN.....	ONCOLOGY NURSING PROGRAMS IN MEDICAL CENTERS.....	5N01 CN55240-03	138,357
ORGANIZATION TOTAL	12 2,076,486		
HERNER & COMPANY ZIP CODE 20037			
HERNER, MARY.....	INDEXING JOURNAL ARTICLES IN THE BIOMEDICAL SCIENCES.....	2N01 LM64707-01	91,760
ORGANIZATION TOTAL	1 91,760		
HOWARD UNIVERSITY ZIP CODE 20001			
AHLUWALIA, BALWANT S.....	CASE STUDY OF HYPERTENSIVE ORAL CONTRACEPTIVE USERS.....	3N01 HD62861-01	11,690

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
DIST OF COL—Continued			
HASTINGS, ALICIA E.....	DEMONSTRATION OF CANCER REHABILITATION FACILITY.....	2N01 CN55300-03	355,743
KAPADIA, GOVIND J.....	POTENTIAL CARCINOGENS FROM PLANTS.....	5N01 CP33266-11	132,234
SCOTT, ROLAND B.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72991-00	7,890
WHITE, JACK E.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55230-04	95,222
ORGANIZATION TOTAL	5 602,779		
NATIONAL ACADEMY OF SCIENCES ZIP CODE 20418			
FRANK, CHARLES B.....	SUPPORT WORK OF INSTITUTE OF LABORATORY ANIMAL RESOURCES.....	3N01 RR52128-04	116,000
GARDNER, PHYLLIS A.....	SUPPORT COMMITTEE ON COUNCIL OF SOCIETIES OF PATHOLOGY.....	3N01 C065280-02	20,606
GARDNER, PHYLLIS A.....	SUPPORT ISCP AND WHO INTERNATIONAL REFERENCE CENTERS.....	9N01 C075279-00	147,625
GARDNER, PHYLLIS A.....	SUPPORT U.S. COMMITTEE FOR THE IUAC.....	2N01 C075384-02	489,328
GROGAN, EARL W.....	SURVEY OF ANIMAL MODELS FOR RESEARCH ON AGING.....	1N01 AG72118-00	99,400
GROGAN, EARL W.....	NATIONAL SURVEY OF ANIMAL FACILITIES AND RESOURCES.....	1N01 RR72114-00	125,000
HRUBEC, ZDENEK.....	NAS-NRC TWIN REGISTRY.....	2N01 HV53010-02	71,700
JABLON, SEYMOUR.....	EPIDEMIOLOGICAL STUDIES.....	2N01 CP53573-03	91,945
JABLON, SEYMOUR.....	VIETNAM REGISTRY OF HEAD AND SPINAL CORD INJURIES.....	5N01 NS62346-02	35,910
JABLON, SEYMOUR.....	CONTINUATION OF THE MEDICAL FOLLOW-UP AGENCY STUDIES.....	2N01 OD52138-03	147,200
JOHNSON, PAUL E.....	EVALUATION OF HUMAN NUTRIENT REQUIREMENTS.....	3N01 AM42209-06	65,060
KELLY, WILLIAM C.....	NEED FOR BIOMEDICAL AND BEHAVIORAL RESEARCH PERSONNEL.....	3N01 OD52109-09	299,886
NIGHTINGALE, ELEANA O.....	COMPARATIVE VALUE OF LIVE KILLED POLIOMYELITIS VACCINE.....	1N01 OD72105-00	75,390
NOT APPLICABLE.....	ADVISORY SERVICE TO NLM TOXICOLOGY INFORMATION PROGRAM.....	2N01 LM64714-01	39,900
NOT APPLICABLE.....	REVIEW AND EVALUATION REPORTS OF ANIMAL DATA BANK.....	2N01 LM64720-02	25,052
POLLARD, MICHAEL R.....	KNOWLEDGE ON HUMAN AGING IN MEDICAL EDUCATION.....	1N01 AG72123-00	145,000
ROSS, PHILIP.....	SUPPORT OF AD HOC DIOXIN ADVISORY GROUP.....	1N01 ES72103-00	8,750
WHITE, ROBERT R.....	ACADEMY FORUM ON RECOMBINANT DNA RESEARCH.....	3N01 OD72104-02	49,035
YAGER, ROBERT H.....	SUPPORT OF INSTITUTE OF LABORATORY ANIMAL RESOURCES.....	5N01 CM53850-03	20,000
YAGER, ROBERT H.....	CONFERENCES ON LABORATORY ANIMAL RESOURCES.....	5N01 CM57013-06	24,000
ORGANIZATION TOTAL	20 2,096,787		
PAN AMERICAN HEALTH ORGANIZATION ZIP CODE 20037			
GILLESPIE, GEORGE W.....	INVESTIGATE PLAQUE IN MEDELLIN, COLOMBIA, SOUTH AMERICA.....	2N01 DE62457-04	30,073
KLEIN, ROBERT E.....	A STUDY OF NUTRITION AND DEVELOPMENT.....	2N01 HD50640-27	325,039
LITVAK, JORGE.....	LATIN AMERICAN CANCER RESEARCH INFORMATION PROJECT.....	3N01 C065332-03	223,140
MORO, MANUEL.....	ESTABLISH A NONHUMAN PRIMATE PROGRAM.....	3N01 RS52151-06	159,000
ORGANIZATION TOTAL	4 737,252		
PORTER, NOVELLI AND ASSOCIATES ZIP CODE 20007			
NOVELLI, WILLIAM.....	OFFICE OF CANCER COMMUNICATIONS PROGRAM SUPPORT SERVICES.....	5N01 C075360-01	881,692
ORGANIZATION TOTAL	1 881,692		
RESOURCES FOR THE FUTURE ZIP CODE 20036			
RIDKER, RONALD G.....	ENVIRONMENTAL CONSEQUENCES OF POPULATION GROWTH.....	1N01 HD72815-00	221,448
ORGANIZATION TOTAL	1 221,448		
TELE SEC ZIP CODE 20006			
BOSMA, PATRICIA.....	BINDING PREPARATION AND STACK MAINTENANCE.....	2N01 LM64735-09	130,254
HILTON, BEVERLY.....	POST INVENTORY FILE MAINTENANCE.....	2N01 LM64752-02	18,586
TARVER, HELGA.....	CATALOGING OF SERIALS.....	3N01 LM64749-01	10,286
ORGANIZATION TOTAL	3 159,126		
TELENET COMMUNICATIONS CORPORATION ZIP CODE 20036			
NOT APPLICABLE.....	TELECOMMUNICATIVE SERVICE.....	4N01 LM74722-00	20,000
ORGANIZATION TOTAL	1 20,000		
U.S. SMALL BUSINESS ADMINISTRATION ZIP CODE 20416			
BUFFINGTON, THOMAS.....	SERVICES FOR THE OFFICE OF CANCER COMMUNICATIONS.....	3N01 C055316-04	99,515

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
DIST OF COL—Continued			
BUFFINGTON, THOMAS.....	DEVELOP NCP PROGRAM ACTIVITIES--HARD-TO-REACH AUDIENCES	1N01 C075352-00	88,505
TING, ROBERT C.....	SUPPORTIVE SERVICES IN VIROLOGY AND TISSUE CULTURE	5N01 CM43719-06	150,485
ORGANIZATION TOTAL	3 338,505		
U.S. SMALL BUSINESS ADMINISTRATION WASHINGTON DISTRICT OFFICE ZIP CODE 20417			
WOODCOCK, KENNETH H.....	RESEARCH DATA MICROFILMING.....	1N01 CP71012-00	133,839
ORGANIZATION TOTAL	1 133,839		
U.S. SMITHSONIAN INSTITUTION ZIP CODE 20560			
HOPE, W DUANE.....	REGISTRY OF TUMORS IN LOWER ANIMALS.....	2N01 CB33874-04	132,000
ORGANIZATION TOTAL	1 132,000		
U.S. SMITHSONIAN INSTITUTION-SMITHSONIAN SCIENCE INFORMATION EXCHANGE ZIP CODE 20036			
NOT APPLICABLE.....	DEVELOP INFORMATION SYSTEM ON TOXICOLOGY PROGRAMS	2N01 LM64739-02	78,200
ORGANIZATION TOTAL	1 78,200		
URBAN INSTITUTE ZIP CODE 20037			
MOORE, KRISTIN A.....	ANALYZE SELECTED PARENTAL OUTCOMES--LONGITUDINAL DATA.....	5N01 HD62829-01	122,190
ORGANIZATION TOTAL	1 122,190		
STATE TOTAL	86 12,141,797		

FLORIDA

FORT LAUDERDALE

LEO GOODWIN INSTITUTE FOR CANCER RESEARCH ZIP CODE 33314			
SACKSTEDER, MIRIAM R.....	RESOURCE FOR SYRIAN HAMSTERS.....	2N01 CP65804-03	91,311
WARREN, JOEL.....	OPERATE A PRIMARY GENETIC CENTER FOR GERMFREE RODENTS.....	1N01 CM77165-00	457,920
ORGANIZATION TOTAL	2 549,231		

GAINESVILLE

STATE UNIVERSITY SYSTEM OF FLORIDA--UNIVERSITY OF FLORIDA ZIP CODE 32611			
BERG, WILLIAM K.....	AUDITORY SENSITIVITY & DISCRIMINATION IN YOUNG CHILDREN.....	5N01 NS52313-05	84,200
DAWSON, WILLIAM W.....	STUDY OF MATERIALS FOR A SENSORY PROSTHESIS.....	2N01 NS12286-08	104,600
LOTZKAR, STANLEY.....	USE OF MOUTHRINSE ON DENTAL CARIES PREVENTION	1N01 DE72404-00	75,746
MORELAND, ALVIN F.....	VIRAL INDUCED MALFORMATIONS IN RHESUS MONKEYS	2N01 NS52318-03	93,208
WEINER, ROY S.....	CRYOPRESERVATION OF HUMAN MONOCYTES.....	1N01 CB74131-00	87,267
ORGANIZATION TOTAL	5 445,021		

JACKSONVILLE

ST. VINCENT'S MEDICAL CENTER ZIP CODE 32204			
MC CLAW, MARVIN V.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55210-02	271,865
ORGANIZATION TOTAL	1 271,865		

MELBOURNE

OBA SYSTEMS, INC. ZIP CODE 32901			
BROWN, DUANE C.....	DEVELOPMENT OF A PHOTOGRAMMETRIC FUNDUS CAMERA.....	3N01.EY52156-03	30,145
ORGANIZATION TOTAL	1 30,145		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
FLORIDA—Continued			
MIAMI			
FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES—DADE COUNTY HEALTH DEPARTMENT		ZIP CODE 33125	
SASLAN, MILTON S.....	STUDY OF MULTIPLE-RISK FACTOR IN CORONARY HEART DISEASE.....	2N01 HV42933-08	434,230
ORGANIZATION TOTAL	1 434,230		
PAPANICOLAOU CANCER RESEARCH INSTITUTE		ZIP CODE 33136	
ALTMAN, NORMAN H.....	BREEDING RHESUS AND SQUIRREL MONKEYS.....	5N01 RS52131-06	183,378
ALTMAN, NORMAN H.....	CONSIGNEE AND HOLDING FUNCTIONS FOR NEW WORLD PRIMATES.....	1N01 RS72107-00	96,000
ORGANIZATION TOTAL	2 279,378		
UNIVERSITY OF MIAMI		ZIP CODE 33152	
BAUER, CHARLES.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF RDS.....	5N01 HR62951-04	431,092
BLANK, HARVEY.....	DRUG EFFICACY STUDY—MUCOCUTANEOUS HERPES INFECTIONS.....	2N01 AI52531-03	105,086
BREW, KEITH.....	COMPOSITION OF RESPIRATORY MUCUS.....	5N01 HR52953-02	85,749
GORDON, MICHAEL S.....	CARDIOLOGY PATIENT SIMULATOR EVALUATION.....	3N01 HV62969-01	23,183
HAINES, HAROLD G.....	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION.....	1N01 CB74096-00	120,000
HARKNESS, DONALD R.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72992-00	4,373
KALSER, MARTIN H.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	2N01 CM43800-09	163,119
LAZZARA, RALPH.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52928-03	50,745
LESSNER, HOWARD E.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67093-02	106,843
MACHEMER, ROBERT.....	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY52142-01	43,540
PEREZ, GUIDO O.....	SERUM CHOLESTEROL BINDING RESERVE IN UREMIA.....	1N01 AM72224-00	15,000
ROSOMOFF, HUBERT L.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS.....	1N01 NS72368-00	100,155
SIGEL, M MICHAEL.....	IMMUNODEPRESSANT ACTIVITY OF ANTICANCER DRUGS.....	5N01 CM57041-02	106,157
SIGEL, M MICHAEL.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67077-01	137,508
SIGEL, M MICHAEL.....	IMMUNOLOGICAL STUDIES ON ANIMAL BREAST CARCINOMA.....	2N01 CP53532-02	142,464
WEINSTEIN, GERALD D.....	CLINICAL EVALUATION OF TOPICAL DRUGS FOR PSORIASIS.....	3N01 AM52223-02	21,567
ORGANIZATION TOTAL	16 1,656,581		
MIAMI BEACH			
MIAMI HEART INSTITUTE		ZIP CODE 33140	
GOSSELIN, ARTHUR J.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	5N01 HV32979-08	64,521
ORGANIZATION TOTAL	1 64,521		
SAINT PETERSBURG			
LIFE SCIENCES, INC.		ZIP CODE 33710	
BEARD, JOSEPH W.....	STUDY OF AVIAN LEUKOSIS VIRUSES.....	2N01 CP33291-05	532,740
FARROW, WENDALL M.....	PRODUCE SELECTED REAGENT GRADE SPF ANIMALS.....	2N01 CP61005-02	403,763
NONOYAMA, MEIHAN.....	STUDY OF THE MAREK'S DISEASE HERPES VIRUS.....	3N01 CP33205-09	535,285
ORGANIZATION TOTAL	3 1,471,788		
TALLAHASSEE			
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY		ZIP CODE 32306	
BRANSON, ROBERT K.....	MANUALS USING COMPREHENSIVE CURRICULUM PLAN.....	1N01 LM74721-00	111,473
ORGANIZATION TOTAL	1 111,473		
TAMPA			
ST. JOSEPH'S HOSPITAL		ZIP CODE 33607	
SZAKACS, JENO E.....	STUDY OF HUMAN SARCOMA AND THEIR POSSIBLE VIRAL ETIOLOGY.....	5N01 CP33393-06	61,427

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
FLORIDA—Continued			
ORGANIZATION TOTAL	1	61,427	
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF SOUTH FLORIDA ZIP CODE 33620			
MASON, R G	ANTITHROMBOGENIC SURFACES: PLATELET-INTERFACE REACTIONS.....	1N01 AM72237-00	89,953
ORGANIZATION TOTAL	1	89,953	
STATE TOTAL	35	5,465,613	
GEORGIA			
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601			
MC CALL, JOHN W	FILARIASIS REPOSITORY RESEARCH SERVICE.....	2N01 AI52519-02	84,172
MC CALL, JOHN W	CRYOPRESERVATION OF FILARIAE.....	2N01 AI62503-01	21,686
ORGANIZATION TOTAL	2	105,858	
ATLANTA			
BILL ORATH ILLUSTRATIONS ZIP CODE 30309			
DRATH, WILFRED H	MISCELLANEOUS GRAPHIC ILLUSTRATION SERVICES.....	1N01 LM74716-00	18,000
ORGANIZATION TOTAL	1	18,000	
EMORY UNIVERSITY ZIP CODE 30322			
BROWN, ROBERT L	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55277-03	198,458
HALL, DALLAS W	EFFECTS OF CONTRACEPTIVE STEROIDS ON BLOOD PRESSURE.....	5N01 HD52831-04	275,100
HALSTEAD, CHARLES L	DENTAL CURRICULUM—OSSEOUS TISSUE PATHOSIS.....	1N01 LM74705-00	60,039
HATCHER, ROBERT	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	1N01 HD72812-00	70,000
HERSH, THEODORE	EVALUATION OF ASSAYS OF ASSOCIATED ANTIGENS.....	2N01 CB43887-04	8,508
HUGULEY, CHARLES M, JR	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN55131-04	256,608
HUGULEY, CHARLES M, JR	METROPOLITAN ATLANTA SEER PROGRAM.....	5N01 CP61027-02	321,522
JONES, HENRY E	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71034-00	123,469
MC CLURE, HAROLD M	SUPPORT FOR COLONY OF MONKEYS.....	2N01 CP33343-04	26,890
MC CLURE, HAROLD M	INDUCE ORAL FACIAL MALFORMATIONS IN THE RHESUS MONKEY.....	5N01 DE52452-06	45,151
MC LAREN, JOHN R	STUDY IMMUNE STIMULANTS IN RADIATION THERAPY.....	2N01 CB64061-01	172,806
MURRAY, DOUGLAS R	SUPPLY HUMAN TUMOR SPECIMENS AND RELATED MATERIALS.....	5N01 CP61051-02	24,327
NAHMIAS, ANDRE J	CELLULAR IMMUNITY STUDIES TO HERPES SIMPLEX ANTIGENS.....	2N01 CP43393-02	70,000
NIXON, DANIEL W	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65873-01	31,444
NOT APPLICABLE	REGIONAL MEDICAL LIBRARY FOR THE SOUTHEASTERN REGION.....	5N01 LM24712-07	241,410
PREEDY, JOHN R	ENDOCRINE EVENTS AT THE TIME OF FIRST PREGNANCY.....	1N01 CB74101-00	114,650
SCHLANT, ROBERT C	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52917-03	76,604
ORGANIZATION TOTAL	17	2,116,986	
GEORGIA DEPARTMENT OF HUMAN RESOURCES ZIP CODE 30334			
STEINER, CAROL B	EXPANSION OF GEORGIA CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55204-04	141,209
ORGANIZATION TOTAL	1	141,209	
NATIONAL CYSTIC FIBROSIS RESEARCH FOUNDATION ZIP CODE 30326			
CHERNOFF, AMOZ I	REPORTS FOR ASSESSING DIRECTIONS OF CYSTIC FIBROSIS.....	1N01 AM72205-00	289,226
ORGANIZATION TOTAL	1	289,226	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332			
CRENSHAW, J W	POLYGENIC ASSAY FOR INDUCED POINT MUTATIONS IN MICE.....	5N01 ES52135-03	85,988
ORGANIZATION TOTAL	1	85,988	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
GEORGIA—Continued			
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
BLACK, OWEN, JR.....	POTENTIAL FOR METABOLIC ACTIVATION IN ANIMAL PANCREAS.....	5N01 CP55656-02	54,209
BURNETT, GEORGE A.....	SCREENING ANTIPLAQUE AGENTS AND FOOD ADDITIVES.....	3N01 DE52483-06	97,038
GREEN, JOSEPH B.....	COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS62340-04	493,895
MAHESH, VIRENDRA B.....	STUDY OF STEROIDAL ORAL CONTRACEPTIVES.....	2N01 HD12297-13	66,860
MILNER, PAUL F.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB73000-00	3,500
ORGANIZATION TOTAL	5	715,502	
CLAXTON			
EVANS COUNTY HEALTH DEPARTMENT ZIP CODE 30417			
HAMES, CURTIS G.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12434-10	468,062
ORGANIZATION TOTAL	1	468,062	
DECATUR			
INDIVIDUAL AWARD—ATKINSON, FRANCIS D. ZIP CODE 30035			
ATKINSON, FRANCIS D.....	WORKSHOP ON SIMULATION IN HEALTH SCIENCE EDUCATION.....	1N01 LM74724-00	72,440
ORGANIZATION TOTAL	1	72,440	
STATE TOTAL	30	4,013,271	
HAWAII			
HONOLULU			
KAPIOLANI HOSPITAL ZIP CODE 96814			
HALE, RALPH W.....	WOMEN'S HEALTH SURVEY (IUD COLLABORATIVE PROJECT).....	1N01 HD72809-00	71,782
ORGANIZATION TOTAL	1	71,782	
KUAKINI MEDICAL CENTER ZIP CODE 96817			
NOMURA, ABRAHAM M.....	JAPAN-HAWAII CANCER STUDY.....	2N01 CP61060-02	370,835
STEMMERMANN, GRANT N.....	DATA COLLECTION IN CLINICAL PATHOLOGY AND MORBID ANATOMY.....	5N01 HV62955-02	181,975
ORGANIZATION TOTAL	2	552,810	
PACIFIC HEALTH RESEARCH INSTITUTE ZIP CODE 96813			
GILBERT, FRED I, JR.....	SCREENING FOR DETECTION OF BREAST CANCER.....	2N01 CN45046-03	235,364
MC NAMARA, J JUDSON.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52936-04	80,838
MC NAMARA, J JUDSON.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72956-00	10,699
ORGANIZATION TOTAL	3	326,901	
QUEEN'S MEDICAL CENTER ZIP CODE 96813			
OISHI, NOBORU.....	DEVELOP AND EVALUATE CANCER CARE COORDINATING TEAM.....	5N01 CN65197-03	86,572
ORGANIZATION TOTAL	1	86,572	
ST. FRANCIS HOSPITAL ZIP CODE 96817			
LAU, THOMAS K.....	AT-HOME REHABILITATION PROGRAMS.....	2N01 CN55201-02	133,815
ORGANIZATION TOTAL	1	133,815	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
HAWAII—Continued			
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822			
CHUNG, CHIN S.....	EFFECTS OF ABORTION ON SUBSEQUENT REPRODUCTIVE FUNCTION.....	5N01 HD62801-03	142,929
DEAN, ANDREW G.....	STUDY OF INFECTIOUS DISEASES IN THE PACIFIC.....	2N01 AI02228-11	224,512
LANCE, EUGENE M.....	TUMOR AVOIDANCE OF DESTRUCTION BY THE IMMUNE SYSTEM.....	2N01 CB63978-02	53,642
LIU, ROBERT S.....	SYNTHESIS OF NEW RETINOIDS.....	1N01 CP75933-00	41,507
MATSUMOTO, HIROMU.....	CYCASIN AND MACROZAMIN AS POTENTIAL CARCINOGENS.....	1N01 CP75915-00	36,091
MI, MING PI.....	OCCUPATIONAL CANCER RISK IN HAWAII.....	1N01 CP7(+//)-00	66,849
NOMURA, ABRAHAM M.....	DIET AND NONCONTRACEPTIVE ESTROGENS IN BREAST CANCER.....	3N01 CB53884-04	125,000
PIETTE, LAWRENCE H.....	PLANNING FOR A COMMUNITY BASED CANCER CONTROL PROGRAM.....	3N01 CN55267-04	118,248
PIETTE, LAWRENCE H.....	COMMUNITY BASED CANCER CONTROL PROGRAM.....	4N01 CN75399-00	129,500
PIETTE, LAWRENCE H.....	OPERATION OF A GERMFREE RODENT COLONY.....	5N01 CP53511-06	526,761
SAGAWA, YONEO.....	COLLECTION OF INDIGENOUS AND EXOTIC PLANTS.....	5N01 CM33747-11	82,246
WORTH, ROBERT M.....	COLLECTION AND ANALYSIS OF DATA ON LEPROSY.....	2N01 AI52507-02	8,385
ORGANIZATION TOTAL	12 1,555,670		
STATE TOTAL	20 2,727,550		
IDAHO			
BOISE			
ST. LUKE'S HOSPITAL ZIP CODE 83702			
DAWSON, JOHN J.....	PSYCHOSOCIAL PROBLEMS, REHABILITATION OF CANCER PATIENTS.....	5N01 CN55189-03	67,649
WARD, ELIZABETH.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55305-03	261,639
ORGANIZATION TOTAL	2 329,288		
STATE TOTAL	2 329,288		
ILLINOIS			
CHICAGO			
AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE ZIP CODE 60601			
MEURK, MARY LOUISE.....	COORD. COMTTE FOR CANCER CONTROL RADIOL. PHYSICS CENTER.....	2N01 CN45162-05	104,029
ORGANIZATION TOTAL	1 104,029		
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 60606			
KRAMER, SIMON.....	CANCER CONTROL PROGRAM-RADIATION THERAPY GROUP.....	1N01 CN75355-00	491,040
LESTER, RICHARD G.....	COORDINATION OF MAMMOGRAPHY EDUCATION PROGRAMS.....	3N01 CN55177-05	4,523
PRESENT, ARTHUR J.....	METHOD OF PREPARATION PREPARATORY TO COLONOSCOPY.....	2N01 CB43974-04	42,394
ORGANIZATION TOTAL	3 537,957		
AMERICAN COLLEGE OF SURGEONS ZIP CODE 60611			
MAYER, ANDREW.....	NATIONAL CANCER CONSULTATIVE PROGRAMS FOR HOSPITALS.....	2N01 CN65282-05	280,484
ORGANIZATION TOTAL	1 280,484		
BLUE CROSS ASSOCIATION ZIP CODE 60614			
BERMAN, HOWARD J.....	DEMONSTRATION FOR REIMBURSEMENT IN CANCER CONTROL.....	3N01 CN65371-02	113,674
KLEIN, DAVID H.....	DESIGN AND IMPLEMENT HIGH BLOOD PRESSURE CONTROL SERVICE.....	1N01 HV72990-00	497,949
ORGANIZATION TOTAL	2 611,623		
HEKTOEN INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 60612			
SZANTO, PAUL B.....	SUPPLY OF MATERIALS FROM NEOPLASTIC SUBJECTS.....	2N01 CP43344-03	139,330

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ILLINOIS—Continued			
ORGANIZATION TOTAL	1	139,330	
IIT RESEARCH INSTITUTE ZIP CODE 60616			
BAXTER, DAVIO W.....	SUPPLY OF HAMSTERS TREATED WITH RESPIRATORY CARCINOGENS.....	2N01 CP43289-03	161,665
BRUESCHKE, ERICH E.....	DEVELOPMENT OF INTRAUTERINE STERILIZATION SYSTEM.....	3N01 H012233-11	27,790
GRAY, ALLAN P.....	PREPARATION OF FIVE (5) COMPOUNDS.....	3N01 CP65807-01	4,258
GRAY, ALLAN P.....	PREPARATION OF ONE (1) COMPOUND.....	1N01 CP75886-00	20,749
GRAY, ALLAN P.....	PREPARATION OF ONE (1) COMPOUND.....	1N01 CP75967-00	2,563
GRAY, ALLAN P.....	RAIOSYNTHESIS OF 2, 3, 7, 8-TETRACHLORODIBENZOFURON-C14.....	3N01 ES62138-02	10,630
HENRY, MARY C.....	INGESTEO ASBESTOS EFFECTS.....	5N01 ES52157-05	514,886
KEITH, JAMES N.....	DEVELOP SHORT TRAINING COURSE—SAFE CHEMICAL HANOLING.....	5N01 C065278-02	21,188
KEITH, JAMES N.....	CHEMICAL REPOSITORY.....	5N01 CP55646-08	172,974
MOON, RICHARD C.....	PREVENTION OF PRENEOPLASTIC LESIONS OF THE MAMMARY GLAND.....	1N01 CB74207-00	81,000
MOON, RICHARD C.....	STUDY OF MODULATING FACTORS IN CARCINOGENESIS.....	5N01 CP23292-06	449,540
MOON, RICHARD C.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	1N01 CP75939-00	112,416
REED, JOSEPHINE M.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM63832-01	82,150
SCHIFF, LEONARO J.....	OPERATION OF AN ANIMAL DISEASE DIAGNOSTIC LABORATORY.....	5N01 CM53829-06	129,063
SCHIFF, LEONARD J.....	COLON CARCINOGENESIS IN ORGAN CULTURE.....	1N01 CP75953-00	64,935
SCHIPMA, PETER B.....	COMPUTER SUPPORT FOR CANCER INFORMATION DISSEMINATION.....	5N01 C055221-06	644,537
SHEFNER, ALAN M.....	SERVICES IN SUPPORT OF DRUG-SCREENING PROGRAM.....	5N01 CM43755-07	284,870
SHEFNER, ALAN M.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM57004-03	865,053
ORGANIZATION TOTAL	18	3,650,267	
ILLINDIS CANCER COUNCIL ZIP CODE 60603			
STEINER, JAN W.....	DEMONSTRATION PROJECT IN HEAD & NECK CANCER.....	2N01 CN65256-04	677,529
TAYLOR, SAMUEL G. III.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55245-04	133,500
ORGANIZATION TOTAL	2	811,029	
JOHN CRERAR LIBRARY ZIP CODE 60616			
NOT APPLICABLE.....	SUPPORT FOR REGIONAL MEDICAL LIBRARY.....	3N01 LM14709-20	343,371
ORGANIZATION TOTAL	1	343,371	
MERCY HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
HAWRYLEWICZ, ERVIN J.....	SERUM LDH ISOENZYMES IN WOMEN WITH BREAST TUMORS.....	2N01 CB53855-02	34,440
ORGANIZATION TOTAL	1	34,440	
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
KOSHY, MABEL.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72998-00	6,790
ORGANIZATION TOTAL	1	6,790	
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
DE WYS, WILLIAM D.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENTS.....	2N01 CP65779-01	172,160
HARING, OLGA M.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72963-00	6,624
HSU, CLEMENT C.....	ASSAYS FOR TUMOR ASSOCIATED ANTIGENS.....	1N01 CB74132-00	62,338
MOLTENI, AGOSTINO.....	SUPPORT FOR LABORATORY TO DETECT HYPERTENSION.....	2N01 HV32933-06	408,142
REDDY, JANARDAN K.....	HISTOGENESIS OF GUINEA PIG PANCREATIC ADENOCARCINOMA.....	1N01 CP75876-00	43,148
ROXE, DAVID M.....	COMPARISONS OF MAINTENANCE PERITONEAL AND HEMODIALYSIS.....	2N01 AM52208-02	46,880
STAMLER, JEREMIAH.....	STUDY HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12441-15	718,315
STAMLER, JEREMIAH.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22978-12	583,132
ORGANIZATION TOTAL	8	2,040,739	
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER ZIP CODE 60612			
BACUS, JAMES W.....	APPLY DIGITAL IMAGE PROCESSING TO CYTOLOGY AUTOMATION.....	1N01 CB74190-00	237,000
COHEN, MAYNARD M.....	FEASIBILITY STUDY FOR A MODEL STROKE CENTER PROGRAM.....	3N01 NS62350-02	20,670
DEINHAROT, FRIEDRICH W.....	STUDY OF TUMOR VIRUSES IN PRIMATES.....	3N01 CP33219-09	473,983
SCHOENBERGER, JAMES A.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72967-00	8,926

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ILLINOIS—Continued			
WOLFE, LAUREN G.....	MARMOSET COLONY FOR CANCER RESEARCH.....	9N01 CP71014-00	353,310
ORGANIZATION TOTAL	5 1,093,889		
UNIVERSITY OF CHICAGO ZIP CODE 60637			
COHEN, EDWARD P.....	IMMUNOTHERAPY OF MURINE LEUKEMIA USING HYBRID CELLS.....	1N01 CB74195-00	71,126
ENKER, WARREN E.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67095-03	134,480
FITCH, FRANK W.....	CHARACTERIZATION OF ANTIGEN-BINDING T-CELL RECEPTORS.....	1N01 CB74149-00	72,523
FRIED, JOSEF.....	SYNTHESIS OF LUTEOLYTIC PROSTAGLANDIN ANALOGS.....	1N01 HD72816-00	137,214
HARVEY, RONALD G.....	DERIVATIVES OF CARCINOGENIC POLYCYCLIC HYDROCARBONS.....	2N01 CP33385-08	106,000
JENSEN, ELWOOD V.....	PREDICTION OF RESPONSE TO ADRENALECTOMY.....	2N01 CB43969-04	100,000
KELLAM, SHEPPARD G.....	CONSEQUENCES OF TEENAGE MOTHERHOOD IN A BLACK COMMUNITY.....	1N01 HD72821-00	174,966
MATHEWS, MARTIN B.....	PREPARE ACID MUCOPOLYSACCHARIDE STANDARDS.....	3N01 AM52205-02	4,595
NEWCOMB, RICHARD W.....	PRODUCTION OF SPECIFIC ANTISERA.....	1N01 DE72406-00	63,346
WIED, GEORGE L.....	DEVELOPMENT OF AUTOMATED CELL RECOGNITION SYSTEM.....	5N01 CB33873-06	234,539
WIED, GEORGE L.....	EVALUATE PRENEOPLASTIC LESIONS IN THE RESPIRATORY TRACT.....	5N01 CP65777-01	129,409
ORGANIZATION TOTAL	11 1,228,198		
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE ZIP CODE 60680			
HUAMONTE, FELIPE.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72137-00	134,714
SUBRAMANIAN, KIRANUR N.....	SITES OF PAPOVAVIRUS GENOMES IN TRANSFORMED CELLS.....	1N01 CP71061-00	97,971
ORGANIZATION TOTAL	2 232,685		
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
CHATTERTON, ROBERT T, JR.....	DETECTION OF OVULATION BY A STEROID INDICATOR.....	5N01 HD52849-02	43,426
CHEN, EDWIN H.....	STATISTICAL COORDINATING CENTER FOR SICKLE CELL DISEASE.....	5N01 HB72982-01	334,932
DAS GUPTA, TAPAS K.....	SUPPLY OF MATERIALS FROM NEOPLASTIC SUBJECTS.....	3N01 CP43345-02	14,562
DI MAYORCA, GIAMPIERO.....	TEMPERATURE-SENSITIVE MUTANTS IN CARCINOGENESIS.....	3N01 CP23303-08	60,078
DI MAYORCA, GIAMPIERO.....	MOLECULAR MECHANISM OF CARCINOGENESIS BY ONCOGENIC VIRUS.....	2N01 CP43318-05	379,836
FARNSWORTH, NORMAN R.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	3N01 CM67090-04	118,332
JONASSON, OLGA.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22529-08	149,939
PEYMAN, GHOLAM A.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY62142-01	57,009
SADOWSKY, CYRIL.....	LONG-TERM EFFECTS OF ORTHODONTIC TREATMENT.....	1N01 DE72401-00	78,800
SCHLESINGER, DAVID H.....	PREPARE AND ANALYZE CELL SURFACE PROTEIN FRACTION.....	1N01 CB74214-00	53,930
ORGANIZATION TOTAL	10 1,290,844		
EVANSTON			
EVANSTON HOSPITAL ZIP CODE 60201			
GARYN, WILNER.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72955-00	10,684
SCANLON, EDWARD F.....	THERAPY OF STAGE II & STAGE III OF BREAST CARCINOMA.....	2N01 CB53917-03	99,900
ORGANIZATION TOTAL	2 110,584		
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
CUGELL, DAVID W.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	5N01 HR62945-03	199,080
DEPP, RICHARD.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS.....	5N01 HR62950-04	381,247
EPSTEIN, MAX.....	INNOVATIVE TECHNIQUES FOR COLONOSCOPE PASSAGE INTO CECUM.....	1N01 CB74114-00	119,671
ORGANIZATION TOTAL	3 699,998		
JOLIET			
AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE ZIP CODE 60435			
GARVEY, JOSEPH J.....	ACCREDITATION PROGRAM FOR LABORATORY ANIMAL CARE.....	2N01 RR52114-02	10,000
ORGANIZATION TOTAL	1 10,000		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ILLINOIS—Continued			
MAYWOOD			
LOYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153			
GOLDBERG, JULIUS.....	SIDS RISK FACTOR COOPERATIVE STUDY.....	1N01 HD72843-00	182,514
ORGANIZATION TOTAL	1	182,514	
NORTHBROOK			
BIOLABS, INC. ZIP CODE 60062			
CASTO, BRUCE C.....	IN VITRO INTERACTION BETWEEN CHEM. & VIRAL CARCINOGENS.....	5N01 CP45615-09	332,991
ORGANIZATION TOTAL	1	332,991	
NORTH CHICAGO			
ABBOTT LABORATORIES ZIP CODE 60064			
BARLOW, GRANT H.....	STUDY OF HUMAN GRANULOCYTE CONDITIONING FACTOR.....	2N01 CM43704-09	49,733
ORGANIZATION TOTAL	1	49,733	
SPRINGFIELD			
ILLINOIS DEPARTMENT OF PUBLIC HEALTH ZIP CODE 62706			
FRANCIS, BYRON J.....	A STATE CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN55082-09	178,246
ORGANIZATION TOTAL	1	178,246	
URBANA			
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801			
BILGER, ROBERT C.....	EVALUATION OF A TEST OF SPEECH PERCEPTION IN NOISE.....	1N01 NS72380-00	80,000
VISEK, WILLARD J.....	EFFECT OF DIETARY PROTEIN ON CARCINOGENESIS.....	1N01 CP75899-00	253,046
ORGANIZATION TOTAL	2	333,046	
STATE TOTAL	79	14,302,787	
INDIANA			
CUMBERLAND			
HARLAN INDUSTRIES ZIP CODE 46229			
HARLAN, HAL P.....	PRODUCTION OF ATHYMIC NUDE MICE.....	5N01 CM67079-01	136,310
HARLAN, HAL P.....	PRIMARY GENETIC CENTER FOR GERM-FREE RODENTS.....	1N01 CM77168-00	220,690
HARLAN, HAL P.....	PRODUCTION OF AGED RATS.....	5N01 CP55647-02	174,544
HARLAN, HAL P.....	ESTABLISHMENT OF A RODENT PRODUCTION COLONY.....	3N01 CP65737-02	8,000
TO BE APPOINTED.....	BARRIER-REARED AND MAINTAINED, AGED SPRAGUE-DAWLEY RATS.....	5N01 AG62136-01	83,827
ORGANIZATION TOTAL	5	623,371	
ELKHART			
MILES LABORATORIES ZIP CODE 46514			
GAVIN, JOHN J.....	STUDY OF SPECIFIC LOCUS MUTANTS IN NEUROSPORA CRASSA.....	3N01 ES32113-09	69,963
ORGANIZATION TOTAL	1	69,963	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
INDIANA—Continued			
INDIANAPOLIS			
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS ZIP CODE 46202			
BURKE, LAWRENCE.....	TRAINING FOR MAXILLOFACIAL PROSTHODONTISTS	5N01 CN75333-01	404,229
MAICKEL, ROGER P.....	REQUIREMENTS FOR PANCREAS UPTAKE & EXCRETION-ANIMALS.....	5N01 CP55654-03	53,760
MEALEY, JOHN, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67057-03	33,696
ROESKE, ROGER W.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	2N01 HD62844-01	63,866
ORGANIZATION TOTAL	4 555,551		
INDIANAPOLIS CENTER FOR ADVANCED RESEARCH ZIP CODE 46202			
FRANKLIN, THOMAS D.....	ULTRASOUND IN ISCHEMIC AND INFARCTED MYOCARDIUM.....	2N01 HV53004-08	115,879
ORGANIZATION TOTAL	1 115,879		
LABORATORY SUPPLY COMPANY ZIP CODE 46241			
COX, ELDON J.....	CONVENTIONAL ENVIRONMENT RODENT PRODUCTION CENTER.....	5N01 CM53775-04	142,796
ORGANIZATION TOTAL	1 142,796		
METHODIST HOSPITAL OF INDIANA ZIP CODE 46202			
DUGAN, WILLIAM M, JR.....	CLINICAL ONCOLOGY PROGRAM.....	3N01 CN65336-01	5,535
DUGAN, WILLIAM M, JR.....	CLINICAL ONCOLOGY PROGRAM.....	1N01 CN75393-00	137,711
ORGANIZATION TOTAL	2 143,246		
NEW CASTLE			
INDIANA STATE DEPARTMENT OF MENTAL HEALTH-NEW CASTLE STATE HOSPITAL ZIP CODE 47362			
BROCK, JOSEPH T.....	STUDY OF CARBAMAZEPINE AS AN ANTICONVULSANT AGENT.....	5N01 NS81310-13	60,000
ORGANIZATION TOTAL	1 60,000		
WEST LAFAYETTE			
PURDUE UNIVERSITY ZIP CODE 47907			
CASSADY, JOHN M.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	5N01 CM67091-03	125,773
ORGANIZATION TOTAL	1 125,773		
STATE TOTAL	16 1,836,579		
IOWA			
DES MOINES			
IOWA LUTHERAN HOSPITAL ZIP CODE 50316			
YOUNG, DONALD C.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45067-05	269,853
ORGANIZATION TOTAL	1 269,853		
IOWA CITY			
UNIVERSITY OF IOWA ZIP CODE 52242			
ABBOUD, FRANCOIS M.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22913-09	1,889,950
BERG, JOHN W.....	POPULATION-BASED CANCER EPIDEMIOLOGY RESEARCH CENTER.....	3N01 CP43200-06	699,526
KISKER, C THOMAS.....	COAGULATION CHANGES IN HUMAN VASECTOMY.....	5N01 HD62827-04	26,314
KRAUSE, CHARLES.....	PSYCHOSOCIAL REHABILITATION OF CANCER PATIENTS.....	5N01 CN55061-03	22,010
MACKENZIE, IAN C.....	NUTRITION ON THE EPITHELIUM OF ORAL MUCOUS MEMBRANES.....	5N01 DE42441-05	54,250

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
IOWA—Continued			
ROSAZZA, JOHN P.....	PRODUCTION OF NOVEL ANTINEOPLASTIC COMPOUNDS.....	1N01 CM77176-00	99,991
SCHROTT, HELMUT G.....	NUTRITION COUNSELING IN HYPERLIPIDEMIA.....	1N01 HV72983-00	45,704
STRAUSS, RONALD G.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62973-02	178,441
WATZKE, ROBERT C.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72135-00	155,319
WURSTER, DALE E.....	DEVELOPMENT OF PARENTERAL DOSAGE FORMS.....	2N01 CM43743-04	193,502
ORGANIZATION TOTAL	10 3,365,007		
STATE TOTAL	11 3,634,860		
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
AZARNOFF, DANIEL L.....	PHARMACOKINETICS OF ANTICANCER DRUGS.....	2N01 CM12184-07	56,361
BRACKETT, CHARLES E, JR.....	STUDY OF POST-TRAUMATIC EPILEPSY FOLLOWING HEAD INJURY.....	5N01 NS22313-08	112,992
DIEDERICH, DENNIS A.....	ROLE OF HEMOGLOBIN CARBAMYLLATION IN SICKLE CELL ANEMIA.....	2N01 HB22919-07	94,201
EBNER, KURT E.....	PROLACTIN INTERACTIONS IN MAMMARY GLAND CELLS.....	5N01 CB63985-01	91,300
HOOGSTRATEN, BARTH.....	STUDY OF NEW ANTICANCER AGENTS.....	5N01 CM43802-07	140,304
HOOGSTRATEN, BARTH.....	CANCER CONTROL PROGRAM—SOUTHWEST ONCOLOGY GROUP.....	5N01 CN65285-02	693,000
HUMPHREY, LOREN J.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55303-03	296,670
ORGANIZATION TOTAL	7 1,484,828		
LAWRENCE			
INTEREX RESEARCH CORPORATION ZIP CODE 66044			
BODOR, NICHOLAS.....	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS.....	1N01 HD72833-00	125,738
ORGANIZATION TOTAL	1 125,738		
UNIVERSITY OF KANSAS ZIP CODE 66045			
HIGUCHI, TAKERU.....	DEVELOPMENT OF PARENTERAL DOSAGE FORMS.....	2N01 CM23217-09	20,840
ORGANIZATION TOTAL	1 20,840		
STATE TOTAL	9 1,631,406		
KENTUCKY			
LEXINGTON			
UNIVERSITY OF KENTUCKY ZIP CODE 40506			
BANWELL, JOHN G.....	INCIDENCE OF E. COLI ENTEROTOXIN INDUCED DIARRHEA.....	3N01 AI42549-01	2,986
BROOKS, WILLIAM H.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67058-05	45,360
COLEMAN, MARY S.....	TERMINAL TRANSFERASE LEVEL IN ACUTE LYMPHOCYTIC LEUKEMIA.....	2N01 CM67038-01	158,569
GOLDENBERG, DAVID M.....	LABELLED IMMUNOGLOBULINS TUMOR DETECTION.....	5N01 CB64011-01	86,973
HUSSAIN, ANWAR A.....	DEVELOPMENT OF SUSTAINED RELEASE ORAL DOSAGE FORMS.....	1N01 HD72830-00	101,500
MILLER, WILLIAM.....	REMOVAL OF HLA ANTIGENS FROM BLOOD.....	2N01 HB12409-12	10,221
SMITH, TIMOTHY A.....	IDENTIFY PRIORITIES IN CURRICULUM FOR DENTAL STUDENTS.....	1N01 LM74700-00	153,655
SWIM, H E.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUES.....	1N01 CP75954-00	74,422
WILLIAMS, NOFFLET D.....	DEVELOP AND SUPPORT A CTS FACILITY.....	2N01 LM74703-06	62,512
ORGANIZATION TOTAL	9 696,198		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
KENTUCKY—Continued			
LOUISVILLE			
UNIVERSITY OF LOUISVILLE ZIP CODE 40208			
CHRISTOPHERSON, WILLIAM M.....	EVALUATION OF MASS SCREENING FOR UTERINE CANCER.....	5N01 CN45059-03	28,918
MOORE, CONDUCT.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55307-04	227,983
TAMBURRO, CARLO H.....	DEMONSTRATION CANCER CONTROL PROGRAM IN INDUSTRY.....	5N01 CN55212-03	359,888
ORGANIZATION TOTAL	3 616,789		
STATE TOTAL	12 1,312,987		
LOUISIANA			
BATON ROUGE			
GULF SOUTH RESEARCH INSTITUTE ZIP CODE 70808			
BURCHFIELD, H P.....	CARCINOGENESIS BIOASSAY.....	3N01 CP02210-10	10,471
BURCHFIELD, H P.....	CARCINOGENESIS BIOASSAY OF PESTICIDES.....	3N01 CP43267-04	7,265
GREER, WILLIAM E.....	SUPPORTING SERVICES ON VIRAL RESEARCH PROJECT.....	2N01 NS80993-19	500,000
KLEIN, ELIAS.....	EVALUATION OF MEMBRANES AND MATERIALS.....	2N01 AM22221-11	116,471
KLEIN, ELIAS.....	REVISE PUBLICATIONS ON EVALUATION OF HEMODIALYZERS.....	3N01 AM62216-01	8,584
KLEIN, ELIAS.....	HIGH CLEARANCE SORBENT-FILLED HOLLOW FIBER PREPARATION.....	1N01 AM72201-00	10,000
KLEIN, ELIAS.....	EVALUATION OF MEMBRANES FOR HEMOFILTRATION USE.....	1N01 AM72209-00	14,954
ORGANIZATION TOTAL	7 667,745		
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AT BATON ROUGE ZIP CODE 70803			
CHANG, RAMSAY L.....	USE OF ANIONIC MEMBRANES FOR HEMOFILTRATION.....	1N01 AM72238-00	15,000
ORGANIZATION TOTAL	1 15,000		
COVINGTON			
TULANE UNIVERSITY ZIP CODE 70433			
GERONE, PETER J.....	EVALUATION OF ANTIVIRAL SUBSTANCES IN ANIMALS.....	2N01 AI52525-05	52,094
LOWRIE, ROBERT C, JR.....	CRYOPRESERVATION OF FILARIAE.....	2N01 AI62504-01	22,876
RANGAN, S R.....	ROLE OF IMMUNITY IN OUTCOME OF INFECTION.....	2N01 CP33396-05	50,939
SOIKE, KENNETH F.....	STUDY OF HEPATITIS IN CHIMPANZEES.....	2N01 AI12197-07	24,112
ORGANIZATION TOTAL	4 150,021		
NEW IBERIA			
GULF SOUTH RESEARCH INSTITUTE-ATCHAFALAYA BASIN LABORATORIES ZIP CODE 70560			
GREER, WILLIAM E.....	MAINTAINING BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RS42181-06	123,400
ORGANIZATION TOTAL	1 123,400		
NEW ORLEANS			
ALTON OCHSNER MEDICAL FOUNDATION ZIP CODE 70121			
SEGALOFF, ALBERT.....	STUDY OF INTERACTION OF RADIATION AND ESTROGENS.....	5N01 CP43229-03	93,825
SEGALOFF, ALBERT.....	INFLUENCE OF IRRADIATION ON CARCINOGENESIS.....	5N01 CP65764-01	180,357
ORGANIZATION TOTAL	2 274,182		
GULF SOUTH RESEARCH INSTITUTE-LAKE PONTCHARTRAIN LABORATORIES ZIP CODE 70146			
KLEIN, ELIAS.....	STUDY ON SYNTHETIC POLYPEPTIDES.....	3N01 AM80709-14	4,469
ORGANIZATION TOTAL	1 4,469		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
LOUISIANA—Continued			
LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION-CHARITY HOSPITAL OF LOUISIANA		ZIP CODE 70140	
KREMENTZ, EDWARD T.....	SUPPORT FOR LOUISIANA TUMOR REGISTRY.....	3N01 CP43262-08	288,701
ORGANIZATION TOTAL	1 288,701		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS		ZIP CODE 70119	
GANZALEZ, FRANCISCO M.....	MECHANISMS OF VASCULAR ACCESS PROBLEMS IN HEMODIALYSIS.....	1N01 AM72226-00	72,512
LILLIE, RALPH D.....	DEVELOP HEMATOXYLIN SUBSTITUTES FOR TISSUE STAINING.....	3N01 CB43912-04	48,911
STRONG, JACK P.....	EPIDEMIOLOGY AND GEOGRAPHIC PATHOLOGY OF CANCER.....	2N01 CP53521-06	206,199
ORGANIZATION TOTAL	3 327,622		
TULANE UNIVERSITY		ZIP CODE 70116	
BURNS, KENNETH F.....	OPERATION OF A GERMFREE RODENT COLONY.....	3N01 CM53815-05	5,600
GOTTLIEB, MARISE S.....	EPIDEMIOLOGIC STUDIES OF CANCER IN LOUISIANA.....	2N01 CP61058-04	107,929
KREMENTZ, EDWARD T.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71037-00	91,201
KTSANES, VIRGINIA K.....	REGULATION OF FERTILITY BY THE YOUNG.....	3N01 HD52833-01	10,629
SCHALLY, ANDREW V.....	TESTING ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	2N01 HD62841-01	140,229
ORGANIZATION TOTAL	5 355,588		
STATE TOTAL	25 2,206,728		
MAINE			
BAR HARBOR			
JACKSON LABORATORY		ZIP CODE 04609	
CHAI, CHEN K.....	GENETIC CONTROL OF SUSCEPTIBILITY TO TUMORS.....	1N01 CB74181-00	45,225
CHERRY, MARIANNA.....	PREPARATION AND DISTRIBUTION OF RABBIT SERUM COMPLEMENT.....	2N01 CB53870-02	72,721
MEIER, HANS.....	NATURAL OCCURRENCE OF RNA TUMOR VIRUSES.....	2N01 CP33255-06	460,209
MURPHY, EDWIN D.....	DEVELOP AND MAINTAIN NEW CONGENIC MOUSE STRAINS.....	1N01 CB74174-00	33,895
RODERICK, THOMAS H.....	DEVELOPMENT OF SYSTEM FOR DETECTING LETHAL MUTATIONS.....	5N01 ES42156-05	83,810
WOMACK, JAMES E.....	DEVELOPMENT OF A NEW MOUSE STRAIN.....	5N01 ES42159-07	38,911
ORGANIZATION TOTAL	6 734,771		
STATE TOTAL	6 734,771		
MARYLAND			
BALTIMORE			
AMERICAN ASSOCIATION OF NEUROSURGICAL NURSES		ZIP CODE 21202	
RAUCH, PATRICIA.....	DEVELOP CERTIFICATION EXAM FOR NEUROSURGICAL NURSES.....	1N01 NS72355-00	19,100
ORGANIZATION TOTAL	1 19,100		
IPCO HOSPITAL SUPPLY CORPORATION-COMMUNITY BLOOD AND PLASMA SERVICES DIVISION		ZIP CODE 21231	
SCHMIDT, PAUL J.....	SUPPLY OF PLATELETERESIS.....	5N01 CL42150-12	212,578
ORGANIZATION TOTAL	1 212,578		
JOHN F. KENNEDY INSTITUTE		ZIP CODE 21205	
STARK-SEITZ, RACHEL E.....	SENSORY & PERCEPTUAL FUNCTIONS IN LANGUAGE DEVELOPMENT.....	5N01 NS52323-04	4,557
ORGANIZATION TOTAL	1 4,557		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218			
AUGUST, J THOMAS	STUDIES OF THE MOLECULAR BASIS OF VIRAL CARCINOGENESIS	9N01 CP71027-00	428,510
AURELIAN, LAURE	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION	1N01 CB74170-00	75,000
AURELIAN, LAURE	HERPES VIRUS ANTIGENS AND VIRIONS IN NEOPLASTIC CELLS	3N01 CP33345-05	88,050
AURELIAN, LAURE	HERPES SIMPLEX ASSOCIATED ANTIGENS IN CANCER PATIENTS	3N01 CP43330-03	120,780
BIAS, WILMA B	PREVALENCE OF SPECIFIC HL-A ANTIGENS AND LUNG DISEASES	5N01 HR62937-01	46,822
BURKMAN, RONALD T	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS	5N01 HD62804-04	106,440
CHARACHE, SAMUEL	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE	1N01 HB72999-00	7,109
COHEN, BERNICE H	PULMONARY DISEASE RISK-INDIVIDUALS WITH MZ PHENOTYPES	1N01 HR72910-00	127,190
DIAMOND, EARL L	AMENORRHEA, ADENOMA, AND ORAL CONTRACEPTIVES	1N01 HD72834-00	78,359
EDIDIN, MICHAEL A	STUDY OF MEMBRANE COMPONENTS OF CELL SURFACE	2N01 CB43922-04	65,094
FROST, JOHN K	STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS	2N01 CN45037-05	928,154
HARDY, JANET B	EVALUATE CONTINUING EDUCATION IN PULMONARY MEDICINE	5N01 HR62934-01	123,790
HARDY, JANET B	ANALYSIS OF COOPERATIVE PERINATAL STUDY	3N01 NS22321-07	10,051
HAYWARD, GARY S	STUDIES OF CELLULAR TRANSFORMATION BY HSV-2	1N01 CP71022-00	117,010
HENNEY, CHRISTOPHER S	STUDY OF PROTEIN SYNTHETIC REQUIREMENTS FOR CYTOLYSIS	2N01 CB43932-04	57,090
HUMPHREY, RICHARD L	DEVELOPMENT OF METHOD FOR ENUMERATION OF TUMOR CELLS	5N01 CM43718-05	43,050
HUSSAIN, RABIA	PRODUCTION OF POLYVALENT ANTISERUM TO RYE GRASS ANTIGENS	1N01 AI72532-00	16,210
KAIZER, HERBERT	PEDIATRIC TUMOR RESOURCE	2N01 CP33245-04	27,000
KAUFMAN, JOYCE J	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS	1N01 CP75929-00	81,009
KAUFMAN, JOYCE J	EFFECTS ON CULTURED CELLS OF LIPOPHILIC COMPOUNDS	2N01 NS52320-02	147,100
LAMBERG, STANFORD I	DEVELOP CHEMOTHERAPEUTIC AGENTS FOR MYCOSIS FUNGOIDES	5N01 CB63927-02	88,421
LEHNINGER, ALBERT I	STUDY OF MAMMALIAN CELL TRANSPORT SYSTEMS	2N01 CP45610-06	162,305
LIBBUS, BISHARAH L	STUDY OF DYNAMICS OF SPERMATOGENESIS	2N01 HD32794-06	17,581
MATANOSKI, GENEVIEVE M	EPIDEMIOLOGY OF INFANT MORTALITY IN A HIGH RISK AREA	1N01 HD72845-00	197,868
MICHEL, RONALD G	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY	5N01 EY52145-01	56,565
NIEBYL, JENNIFER	SELECTED FACTORS INFLUENCING INCIDENCE OF ORAL CLEFTS	5N01 DE62486-02	142,914
PATZ, ARNALL	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72146-00	164,851
PIERCE, NATHANIEL F	ADDITIONAL STUDIES OF ANTITOXIC IMMUNITY IN CHOLERA	2N01 AI02051-16	97,657
ROSENSHEIN, NEIL B	EPIDEMIOLOGIC STUDIES OF DRUG INDUCED CANCER	3N01 CP61023-03	127,311
STRANDBERG, JOHN D	ANIMAL PATHOLOGY SUPPORT	5N01 CP65768-03	145,650
TS'O, PAUL O	STUDIES ON SIGNIFICANCE OF MUTATION IN CARCINOGENESIS	5N01 CP55713-03	208,780
WEISFELDT, MYRON L	NON-INVASIVE ASSESSMENT OF CARDIAC FUNCTION IN AGING	1N01 AG72129-00	237,909
ORGANIZATION TOTAL	32	4,341,630	
MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE ZIP CODE 21201			
SAWADA, EDWARD A	EXPANSION OF MARYLAND CERVICAL CANCER SCREENING PROGRAM	2N01 CN55166-04	340,734
SOUTHARD, JOHN W	STATE-WIDE COORDINATION OF HIGH BLOOD PRESSURE CONTROL	1N01 HV72986-00	701,625
ORGANIZATION TOTAL	2	1,042,359	
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
ENTWISLE, GEORGE	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION	5N01 HV12439-14	1,169,002
FERENCZ, CHARLOTTE	RELATE MATERNAL HORMONE THERAPY TO CARDIAC DEVELOPMENT	5N01 HD62800-05	50,189
GUTH, LLOYD	FUNCTIONAL RECOVERY IN RATS AFTER SPINAL CORD LESION	1N01 NS72358-00	83,745
HINTON, DAVID E	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE	3N01 CP65752-05	85,261
JONES, RAYMOND T	CULTURE EPITHELIAL CELL TYPES OF EXPERIMENTAL ANIMALS	1N01 CP75947-00	44,850
KNATTERUD, GENELL L	STUDY OF RETINOPATHY	5N01 EY32129-06	659,477
KNATTERUD, GENELL L	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72147-00	118,652
KROL, WILLIAM F	COORDINATING CENTER—ASPIRIN-MYOCARDIAL INFARCTION STUDY	2N01 HV52901-03	488,504
LEVINE, MYRON M	STUDY OF INFECTIOUS AGENTS IN ADULT VOLUNTEERS	2N01 AI42553-10	1,204,688
MEINERT, CURTIS L	COORDINATING CENTER MODEL FOR NHLI CLINICAL TRIALS	5N01 HV62957-03	316,599
RAITI, SALVATORE	PITUITARY GLAND STORAGE BANK	3N01 AM71153-19	161,318
RAITI, SALVATORE	STORE, PACKAGE, AND DISTRIBUTE HORMONES	1N01 HD72838-00	3,000
SHERWIN, ROGER W	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE	2N01 HV22980-05	442,400
TRUMP, BENJAMIN F	STUDY OF TRACHEOBRONCHIAL EPITHELIUM	3N01 CP43237-09	302,760
TRUMP, BENJAMIN F	STUDIES OF CARCINOGENESIS IN HUMAN TISSUES	1N01 CP75909-00	32,059
YOUNG, JOHN D, JR	COMBINATION DRUG & COMBINED MODALITIES CANCER TREATMENT	3N01 CM43748-14	4,166,728
ORGANIZATION TOTAL	16	9,329,232	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
BELTSVILLE			
INFORMATION DEVELOPMENT AND APPLICATIONS ZIP CODE 20705			
MATHESON, ROERICK.....	LEARNING RESOURCE CENTER SUPPORT.....	2N01 LM64705-03	25,000
NOT APPLICABLE.....	FABRICATE A PREPRODUCTION PLASMA TERMINAL SYSTEM (PTS).....	1N01 LM74725-00	34,352
ORGANIZATION TOTAL	2 59,352		
BETHESDA			
COMPUTER DATA SYSTEMS ZIP CODE 20014			
BAILY, JAMES T.....	ANALYSES OF NINCOS PERINATAL PROJECT DATA.....	1N01 NS72374-00	149,670
BERMAN, NANCY.....	SYSTEMS ANALYSIS AND PROGRAMMING FOR PERINATAL DATA.....	3N01 NS42327-02	40,000
ORGANIZATION TOTAL	2 189,670		
ELECTRO-NUCLEONICS LABORATORIES ZIP CODE 20014			
LEMP, JOHN F, JR.....	PRODUCTION OF ONCOGENIC VIRUSES.....	2N01 CP23249-10	650,000
LEMP, JOHN F, JR.....	VIRUS PROCESSING AND PRODUCTION FACILITY.....	2N01 CP43334-03	559,692
ORGANIZATION TOTAL	2 1,209,692		
INFORMATION MANAGEMENT SERVICES ZIP CODE 20014			
BEACH, JANIS.....	COMPUTING SERVICES—CLINICAL AND DIAGNOSTIC TRIALS.....	3N01 CP71010-02	173,820
TAYLOR, RICHARD B.....	ANALYTICAL SERVICES FOR OCRRR CANCER CENTERS PROGRAM.....	3N01 CO75350-01	501,060
ORGANIZATION TOTAL	2 674,880		
INTERNATIONAL BUSINESS MACHINES CORPORATION ZIP CODE 20034			
CONLON, M CLARK.....	CONVERSION OF LEASED COMPUTER EQUIPMENT TO PURCHASE.....	3N01 LM74709-04	1,515,693
ORGANIZATION TOTAL	1 1,515,693		
LEONARD WOOD MEMORIAL ZIP CODE 20014			
REICH, CLAUDE V.....	EVALUATE CHEMOTHERAPEUTIC AGENTS IN LEPROSY.....	2N01 AI52509-08	300,000
ORGANIZATION TOTAL	1 300,000		
UNIVERSITIES ASSOCIATED FOR RESEARCH AND EDUCATION IN PATHOLOGY ZIP CODE 20014			
CASEY, HAROLD W.....	TISSUE EVALUATION OF CONTRACEPTIVE STEROIDS.....	2N01 HD22729-12	183,516
EARLE, KENNETH.....	COLLECTION OF SERIALLY SECTIONED BRAIN SPECIMENS.....	3N01 NS42303-07	6,600
ORGANIZATION TOTAL	2 190,116		
WHITTAKER CORPORATION—MICROBIOLOGICAL ASSOCIATES ZIP CODE 20016			
ATHEY, W L.....	GENETIC CENTER OF RODENTS—BIOCONTAINMENT ENVIRONMENT.....	5N01 CM53818-13	144,510
BERMAN, JAY.....	CANCER CHEMOTHERAPY CHEMICALS/DRUGS STORAGE/DISTRIBUTION.....	5N01 CM43793-07	464,000
CASTELLANO, GABRIEL A.....	PROVIDE VIRAL DIAGNOSTIC REAGENTS.....	5N01 NS62338-04	221,171
COLLINS, MICHAEL J.....	VIRUS TYPING AND DIAGNOSTIC REAGENTS.....	2N01 CP33288-07	475,000
FREEMAN, A E.....	IN VITRO MALIGNANT TRANSFORMATION.....	2N01 CP61043-01	197,820
KOHNE, OAVIO.....	VIRUS DETECTION IN DISEASED CENTRAL NERVOUS SYSTEM.....	1N01 NS72362-00	99,000
MISHRA, NIRMAL K.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	5N01 CP55670-03	208,058
MULLINAX, H OOLEY.....	STUDY OF BIOCHEMISTRY AND NEURAL CODING OF BRAIN CELLS.....	2N01 HI92245-16	49,508
NIMS, ROBERT M.....	PROVIDE SERVICES IN SUPPORT OF CARCINOGENESIS BIOASSAYS.....	2N01 CP02199-17	768,378
PARKER, JOHN C.....	OPERATION OF AN ANIMAL VIROLOGICAL DIAGNOSTIC LABORATORY.....	5N01 CM67069-01	187,600
PARKER, JOHN C.....	VIRAL STUDIES OF CANCER CHEMOTHERAPY PATIENTS.....	1N01 CM77131-00	92,900
PARKER, JOHN C.....	PREPARE AND DELIVER VARIOUS CELL CULTURES.....	2N01 NS62334-04	119,962
PREMKUMAR, REOY.....	STUDIES OF TYPE C RNA TUMOR VIRUSES.....	2N01 CP43254-09	364,913
PRICE, PAUL J.....	STUDY OF ETIOLOGY OF CANCER.....	5N01 CP43240-10	794,700
PRICE, PAUL J.....	DEVELOPMENT OF MAMMALIAN CELL LINES.....	3N01 CP61045-01	38,630
SASS, BERNARD.....	BIOASSAYS OF ANIMAL TUMOR VIRUSES.....	2N01 CF33248-06	704,600
TRAPANI, ROBERT J.....	EVALUATE HUMAN HISTOCOMPATIBILITY OF TYPING TRAYS.....	2N01 AI12443-09	65,800

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
TRAPANI, ROBERT J.....	HEMATOLOGY SUPPORT CARE.....	5N01 CM63810-03	150,000
VERNON, MINA L.....	TYPE-C RNA TUMOR VIRUSES AND DIAGNOSTIC TESTING.....	5N01 CP53519-08	600,000
ORGANIZATION TOTAL	19	5,746,550	
CHEVERLY			
VARIAN ASSOCIATES ZIP CODE 20781			
NOT APPLICABLE.....	SPARE PARTS FOR NLM SATELLITE BIOMED COMMUNICA SYSTEM.....	1N01 LM74718-00	24,775
ORGANIZATION TOTAL	1	24,775	
COLLEGE PARK			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742			
HANSEN, J NORMAN.....	POLYACRYLAMIDE GEL CHARACTERIZATION-DISULFIDE CROSSED.....	1N01 NS72359-00	39,059
ORGANIZATION TOTAL	1	39,059	
COLUMBIA			
W. R. GRACE AND COMPANY—WASHINGTON RESEARCH CENTER ZIP CODE 21044			
NICKELL, LOUIS G.....	ISOLATION OF NOVEL ANTINEOPLASTIC COMPONENTS.....	5N01 CM67074-01	221,182
ORGANIZATION TOTAL	1	221,182	
GAITHERSBURG			
GEOMET, INC. ZIP CODE 20760			
GOCHENOUEUR, JOHN.....	THIRD NATIONAL CANCER SURVEY DATA PROCESSING SERVICES.....	3N01 CP53522-06	742,306
POCINKI, LEON S.....	ASSESS MANPOWER NEEDS IN CLINICAL ONCOLOGY SPECIALTIES.....	3N01 CB64017-05	60,716
POCINKI, LEON S.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71045-00	123,870
ORGANIZATION TOTAL	3	926,892	
INFORMATION PLANNING ASSOCIATES ZIP CODE 20760			
GERTZOG, JACK.....	SUPPORT SERVICES FOR INVESTIGATIONAL NEW DRUG REPORTS.....	1N01 CM77104-00	90,195
ICHNIEWSKI, FRANCIS C.....	SUPPORT SERVICES—CARCINOGENESIS RESEARCH PROGRAM.....	1N01 CP75896-00	161,804
WILLIAMS, WILLIAM L.....	ASSEMBLY AND DISTRIBUTION OF COMMITTEE BOOKS.....	1N01 C075388-00	89,701
ORGANIZATION TOTAL	3	341,700	
GERMANTOWN			
FAIRCHILD INDUSTRIES ZIP CODE 20767			
NOT APPLICABLE.....	6 COMMUNICATIONS TECHNOLOGY SATELLITE GROUND TERMINALS.....	3N01 LM64717-04	27,000
WAGNER, RICHARD.....	INSTALL 5 CTS GROUND TERMINAL COMMUNICATIONS SYSTEMS.....	1N01 LM74707-00	296,000
ORGANIZATION TOTAL	2	323,000	
KENSINGTON			
LITTON INDUSTRIES—LITTON BIONETICS ZIP CODE 20795			
BRUSICK, DAVID J.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	5N01 CP65856-02	172,240
CANNON, GRACE B.....	REACTIONS BETWEEN BREAST CANCER AND MAMMARY TUMOR VIRUS.....	1N01 CB74087-00	118,337
CICMANEC, JOHN L.....	FACILITY FOR SUBHUMAN PRIMATES FOR CANCER RESEARCH.....	3N01 CP61006-05	1,399,926
DARROW, CLEMENT C, II.....	BREEDING COLONY OF RHESUS MONKEYS MACACA MULATTA.....	5N01 RR52155-05	270,780
DARROW, CLEMENT C, II.....	MAINTAIN A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RR62151-01	86,071
DEAN, JACK H.....	MEASUREMENT OF IMMUNOLOGICAL REACTIVITY TO HUMAN CANCER.....	2N01 CB63975-06	627,752
DEAN, JACK H.....	BIOLOGIC STUDIES OF SOLUBILIZED TUMOR ANTIGENS.....	2N01 CB63987-04	246,268

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
DEAN, JACK H.....	IMMUNOLOGIC ASSESSMENT OF HIGH RISK CANCER FAMILIES.....	2N01 CP61016-01	121,948
DJEU, JULIE Y.....	CELL MEDIATED IMMUNITY TO RODENT TUMORS.....	1N01 CB74093-00	259,608
FUCCILLO, DAVID A.....	IMMUNOLOGICAL ASSAY FOR DNA AND RNA VIRUS.....	2N01 CP43333-07	521,918
GOLWAY, PETER L.....	HOLDING FACILITY FOR SMALL LABORATORY ANIMALS.....	2N01 CP61039-03	221,179
KINGSBURY, ELIZABETH.....	STUDY TRACHEAL MUCOSAL DNA AND PERIPHERAL LUNG TISSUE.....	1N01 CP75893-00	9,822
KINGSBURY, ELIZABETH.....	PATHOGENESIS STUDIES OF PANCREATIC ADENOCARCINOMA.....	1N01 CP75907-00	9,491
KINGSBURY, ELIZABETH.....	IDENTIFY CULTURED CELLS FROM HUMAN AND ANIMAL TISSUES.....	3N01 CP75908-02	29,950
KINGSBURY, ELIZABETH.....	IDENTIFICATION OF HUMAN AND ANIMAL CELLS IN CULTURE.....	1N01 CP75974-00	14,848
MARTIN, DAVID P.....	SJOGREN'S SYNDROME, APHTHOUS ULCERS & BEHCET'S SYNDROME.....	1N01 DE72405-00	28,334
MATHESON, DALE.....	IN VITRO MUTAGENESIS SYSTEM FOR CARCINOGENESIS SCREENING.....	5N01 CP65853-01	205,717
MATTHEWS, EDWIN J.....	MELANOMA CELL VACCINE--ASSAYS FOR CYTOTOXICITY.....	2N01 CB53916-08	326,907
MAURER, BRUCE A.....	RHESUS MONKEY HISTOCOMPATIBILITY STUDIES.....	2N01 CB64016-01	223,304
REIN, ALAN.....	STUDY OF CANCER OF THE BREAST.....	2N01 CP43249-10	515,000
RUSCETTI, FRANCIS.....	PROCUREMENT OF EMBRYONIC CELL LINES.....	3N01 CM22062-17	267,826
SARNGADHARAN, M G.....	PROVIDE FACILITIES FOR VIRAL CANCER RESEARCH.....	1N01 CM77134-00	731,124
SIBINOVIC, KYLE H.....	STUDY PLASMA CELL TUMORS IN MICE.....	2N01 CB92142-23	425,331
SIBINOVIC, KYLE H.....	OPERATION OF ANIMAL DISEASE DIAGNOSTIC LABORATORY.....	5N01 CM53778-02	76,305
STEVENSON, ROBERT E.....	SUPPORT FOR CANCER RESEARCH CENTER.....	3N01 C025423-53	3,405,695
STEVENSON, ROBERT E.....	OPERATE THE FREDERICK CANCER RESEARCH CENTER (FCRC).....	3N01 C075380-02	19,878,267
TONDREAU, SUE C.....	MONITORING OF IMMUNOLOGIC COMPETENCE IN CANCER PATIENTS.....	3N01 CM67067-02	309,662
VALERIO, MARION G.....	STUDY OF CARCINOGENESIS IN HUMAN BRONCHIAL TISSUES.....	3N01 CP43274-12	175,079
WU, ALAN M.....	DEVELOP NEW APPROACHES TO CANCER CHEMOTHERAPY.....	2N01 CM12340-19	849,986
WU, ALAN M.....	MOLECULAR TRANSFORMATION BY RNA ONCOGENIC VIRUSES.....	3N01 CP61029-05	472,359
ORGANIZATION TOTAL	30	32,001,034	
LAUREL			
PHARMACOPATHICS RESEARCH LABORATORIES ZIP CODE 20810			
TEGERIS, ANDREW S.....	MAINTAIN ANIMAL HOLDING FACILITY/PROVIDE RESEARCH SERV.....	2N01 CB33887-05	157,098
ORGANIZATION TOTAL	1	157,098	
RIVERDALE			
INFORMATICS, INC. ZIP CODE 20840			
MYATT, CECIL A, JR.....	KEYBOARDING SERVICES.....	1N01 LM74711-00	361,370
ORGANIZATION TOTAL	1	361,370	
ROCKVILLE			
AMERICAN FOUNDATION FOR BIOLOGICAL RESEARCH-BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 20852			
PERRY, VERNON P.....	FREEZE-DRYING OF TYPING SERA.....	3N01 AI32508-09	30,000
ORGANIZATION TOTAL	1	30,000	
AMERICAN TYPE CULTURE COLLECTION ZIP CODE 20852			
ALDRICH, CHARLES D.....	PRESERVE & DEVELOP REFERENCE-GRADE TUMOR VIRUSES.....	2N01 CP61047-01	92,960
DONOVICK, RICHARD.....	PREPARE AND DISTRIBUTE VIRAL REFERENCE REAGENTS.....	2N01 AI52526-05	128,458
DONOVICK, RICHARD.....	COLLECTION OF LIVING REFERENCE STRAINS.....	2N01 RR42158-06	506,523
HAY, ROBERT J.....	CELLS FROM DUCTAL AND EXOCRINE PORTION OF THE PANCREAS.....	2N01 CP65751-02	83,547
HAY, ROBERT J.....	LUNG CELL RESOURCE FACILITY.....	5N01 HR62930-01	210,000
STEVENS, DAVID A.....	PROCESSING OF RESEARCH REAGENTS.....	2N01 AI42515-08	46,838
ORGANIZATION TOTAL	6	1,068,326	
BIOTECH RESEARCH LABORATORIES ZIP CODE 20852			
TAI, CHANG-CHI.....	CYTOGENETIC EVALUATION OF HIGH RISK CANCER FAMILIES.....	2N01 CP61011-06	79,570
TING, ROBERT C.....	SCREENING FOR ANTIONCOGENIC VIRUS PROPERTIES.....	5N01 CM67052-02	199,967
TING, ROBERT C.....	IN VITRO TRANSFORMATION BY VIRUSES AND CARCINOGENS.....	2N01 CP55640-04	135,212

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
ORGANIZATION TOTAL	3	414,749	
CAPITAL SYSTEMS GROUP ZIP CODE 20852			
SPARGUR, JON L.....	STATISTICAL SERVICES.....	3N01 CB43913-06	156,942
ORGANIZATION TOTAL	1	156,942	
CONTROL DATA CORPORATION ZIP CODE 20852			
LEIBY, NANCY J.....	PROCESSING OF CLINICAL PATIENT RESEARCH DATA.....	2N01 CM67107-02	50,000
THOMPSON, KENNETH L.....	PROCESSING OF CLINICAL PATIENT RESEARCH DATA.....	3N01 CM33739-08	2,276
ORGANIZATION TOTAL	2	52,276	
COR BEL LABORATORIES ZIP CODE 20852			
RICKMAN, WILLIAM M, JR.....	MAINTAIN AN ANIMAL HOLDING FACILITY.....	2N01 CB64024-06	178,629
ORGANIZATION TOTAL	1	178,629	
E G & G, INC.—MASON RESEARCH INSTITUTE ZIP CODE 20852			
GETSCHMAN, JAMES L.....	COMPUTER SUPPORT EFFORT FOR RESOURCES MANAGEMENT.....	1N01 CP71001-00	265,682
KRAMER, ANNE.....	DATA ANALYSES FOR BREAST CANCER TREATMENT PROGRAM.....	1N01 CB74140-00	65,800
PATEL, K.....	DATA-PROCESSING SERVICES FOR CANCER BIOASSAY SYSTEM.....	3N01 CP43257-29	698,917
STROEMER, GRETCHEN.....	PROCESSING VIABLE HUMAN SPECIMEN MATERIALS.....	1N01 CP71000-00	149,973
ORGANIZATION TOTAL	4	1,180,372	
ENVIRO CONTROL ZIP CODE 20852			
FENSTERSTOCK, J C.....	SERVICES TO THE DIET, NUTRITION AND CANCER PROGRAM.....	5N01 CP65759-04	616,249
LYNCH, CORNELIUS.....	DATA SOURCES FOR STUDIES OF DIFFERENTIAL LIFE EXPECTANCY.....	1N01 AG72130-00	54,181
MANUS, ALLAN G.....	SMOKING AND HEALTH PRIME CONTRACT.....	3N01 CP55666-18	2,821,343
MC KINNEY, R W.....	MONITORING OF BIOHAZARD CONTAINMENT FACILITIES.....	2N01 CP61021-01	858,424
ORGANIZATION TOTAL	4	4,350,197	
FLOW LABORATORIES ZIP CODE 20852			
ADKINS, HARRY F.....	FACILITY FOR STORAGE AND DISTRIBUTION OF CLINICAL DRUGS.....	5N01 CM67088-02	122,270
ADKINS, HARRY F.....	LOW TEMPERATURE REPOSITORY OF HUMAN TUMOR CELLS.....	2N01 CP61000-04	222,042
HAUGHOM, JOAN R.....	GROWTH OF HUMAN TROPHOBLASTIC CELLS IN CULTURE.....	2N01 HD62864-02	68,098
STANLEY, THOMAS B, JR.....	REPOSITORY FOR PROCESSING LEUKOCYTE-TYPING SERA.....	3N01 AI22515-17	372,644
SULLIVAN, RUDOLPH R.....	MAINTENANCE OF ANIMAL-BREEDING COLONY.....	2N01 AI81406-17	141,664
TORGENSEN, JUDITH.....	ANIMAL FACILITY TO SUPPORT RESEARCH ON RNA VIRUSES.....	2N01 CP53566-03	182,741
ORGANIZATION TOTAL	6	1,109,459	
FLOW LABORATORIES—FLOW RESEARCH INSTITUTE ZIP CODE 20852			
POTASH, LOUIS.....	SUPPORT FOR VIRUS AND TISSUE-CULTURE LABORATORIES.....	3N01 AI32521-15	297,013
ORGANIZATION TOTAL	1	297,013	
HEM RESEARCH, INC. ZIP CODE 20852			
WHITMAN, JAMES E.....	SUPPLY PRIMATE RNA TUMOR VIRUSES & VIRUS-INFECTED CELLS.....	5N01 CM67066-02	106,699
ORGANIZATION TOTAL	1	106,699	
INFORMATICS, INC. ZIP CODE 20852			
WOLFE, MOLLY A.....	REGISTRIES OF HUMAN CLINICAL PROTOCOLS IN CANCER THERAPY.....	2N01 CB53888-02	78,421
ORGANIZATION TOTAL	1	78,421	
KING RESEARCH ZIP CODE 20852			
KING, DONALD W.....	SURVEY OF JOURNAL OF THE NCI READERS.....	1N01 C075226-00	56,614
ORGANIZATION TOTAL	1	56,614	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MARYLAND—Continued			
MICROOYNE CORPORATION ZIP CODE 20850			
NOT APPLICABLE	SPARE PARTS FOR NLM SATELLITE BIOMED COMMUNICA SYSTEM	1N01 LM74714-00	19,500
ORGANIZATION TOTAL	1	19,500	
SIGMA DATA COMPUTING CORPORATION ZIP CODE 20852			
DOUBROFF, DENNIS	PROGRAMMING SERVICES FOR THE CONTRACT MANAGEMENT SYSTEM	3N01 C075385-01	154,770
ORGANIZATION TOTAL	1	154,770	
TRACOR, INC.—TRACOR JITCO ZIP CODE 20852			
MACDONALD, WILLIAM E	SEARCH FOR TESTS INVOLVING CARCINOGENESIS & MUTAGENESIS	1N01 CP75969-00	29,563
PIELMEIER, GEORGE R	IN VITRO CARCINOGENESIS—GUIDE TO THE LITERATURE	1N01 CP75910-00	3,013
SEXTON, THOMAS B	RESEARCH RESOURCES INFORMATION CENTER	5N01 RR62155-02	251,000
THOMAS, BURNES B, JR	CATALOGING BACKLOG AT NLM	1N01 LM74712-00	39,950
WESSELL, CARL	BIOASSAY PRIME CONTRACT	5N01 CP43350-23	12,604,849
ORGANIZATION TOTAL	5	12,928,375	
WESTAT RESEARCH, INC ZIP CODE 20852			
BERLIN, MARTHA	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY	1N01 CP71044-00	179,889
JAFFE, SIDNEY A	PRICE DEFLATOR FOR BIOMEDICAL RESEARCH AND DEVELOPMENT	2N01 OD52134-02	22,158
ROBINS, MORTON	INCIDENCE, PREVALENCE, AND COSTS OF STROKE	3N01 NS62333-02	118,078
SCHROEDER, ANITA G	COMPREHENSIVE DISEASE STATISTICS SURVEY	1N01 NS72379-00	219,543
TOLEDO, ANNE	SUPPORT SERVICES FOR FIELD STUDIES	2N01 CP61034-05	803,355
ORGANIZATION TOTAL	5	1,343,023	
SILVER SPRING			
APPLIED MANAGEMENT SCIENCES ZIP CODE 20910			
LEVINE, JACQUELYN	COMPARISON OF FLUORIDES IN CARIES PREVENTION	1N01 DE72411-00	81,629
NOT APPLICABLE	ABSTRACTING AUDIOVISUAL MATERIAL FOR AVLINE	2N01 LM64702-02	18,657
ORGANIZATION TOTAL	2	100,286	
DRKAND CORPDRATION ZIP CODE 20910			
ISBISTER, JAMES D	NICHD CENTERS EVALUATION STUDY	1N01 HD72850-00	144,421
ORGANIZATION TOTAL	1	144,421	
TEMPLE HILLS			
ENVIRO CONTRDL—BDRRISTON RESEARCH LABORATORIES ZIP CODE 20031			
BARBOUR, LARRY L	ESTABLISH AND MAINTAIN A RABBIT HOLDING FACILITY	1N01 AI72526-00	142,215
ORGANIZATION TOTAL	1	142,215	
TOWSON			
BECTON, DICKINSON AND COMPANY—HUNTINGDON RESEARCH CENTER ZIP CODE 21204			
WILSNACK, ROGER E	PREPARATION OF ANTISERA TO ONCOGENIC VIRAL ANTIGENS	2N01 CP33223-06	359,625
ORGANIZATION TOTAL	1	359,625	
GREATER BALTIMORE MEDICAL CENTER ZIP CODE 21204			
PROUT, THADDEUS E	ASPIRIN-MYOCARDIAL INFARCTION STUDY	5N01 HV52932-03	55,461
ORGANIZATION TOTAL	1	55,461	
STATE TOTAL	177	83,558,892	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS			
AMHERST			
CARKHUFF ASSOCIATES ZIP CODE 01002			
CARKHUFF, ROBERT R.....	VIDEOTAPE TECHNOLOGY.....	2N01 LM64746-01	186,744
ORGANIZATION TOTAL	1 186,744		
BEDFORD			
E G & G, INC. ZIP CODE 01730			
BRYAN, NANCY.....	CLINICAL DATA RETRIEVAL SERVICES.....	5N01 CM67011-07	189,907
ORGANIZATION TOTAL	1 189,907		
MITRE CORPORATION ZIP CODE 01730			
SHARPE, EDWARD G.....	TECHNICAL SUPPORT OF A SYSTEMS PLANNING BRANCH.....	2N01 C055421-08	201,713
ORGANIZATION TOTAL	1 201,713		
BOSTON			
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
BRAUNWALD, EUGENE.....	MINIMIZATION OF INFARCT SIZE.....	5N01 HV53000-04	120,031
CARPENTER, CHARLES B.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI42552-05	83,312
GATES, CHRISTOPHER C.....	PSYCHOLOGICAL ASPECTS OF BREAST CANCER.....	2N01 CN65311-10	382,779
KASPER, DENNIS L.....	STUDIES ON THE ANTIGENS OF GROUP B STREPTOCOCCUS.....	1N01 AI72538-00	264,948
ORGANIZATION TOTAL	4 851,070		
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
CHURCHILL, WINTHROP H, JR.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64036-01	62,741
DAVID, JOHN R.....	QUANTITATIVE ASSAYS OF MONOCYTE-MACROPHAGE FUNCTION.....	2N01 CB53869-02	118,800
PIESSENS, WILLY F.....	ACTIVATED MACROPHAGES AS IMMUNOTHERAPEUTIC AGENTS.....	2N01 CB64057-01	50,125
ORGANIZATION TOTAL	3 231,666		
BETH ISRAEL HOSPITAL ZIP CODE 02215			
FREEDBERG, IRWIN M.....	RESPONSE TO THERAPY OF CUTANEOUS HERPES SIMPLEX.....	2N01 AI52530-02	99,071
INGBAR, SIDNEY H.....	ANALYZE RESEARCH PRIORITIES IN ENDOCRINOLOGY.....	1N01 AM72236-00	65,347
ORGANIZATION TOTAL	2 164,418		
BOSTON HEALTH AND HOSPITALS DEPARTMENT ZIP CODE 02118			
KASS, EDWARD H.....	EFFECTS OF ORAL CONTRACEPTIVES ON BLOOD PRESSURE.....	5N01 HD52832-04	138,825
KLEIN, JEROME O.....	VACCINE FOR PREVENTION OF OTITIS MEDIA.....	2N01 AI52536-02	185,922
POZEN, MICHAEL W.....	EFFECT OF EMERGENCY PREHOSPITAL CARDIOVASCULAR CARE.....	1N01 HO72988-00	72,481
ROMAN, STANFORD A, JR.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB73003-00	13,332
ORGANIZATION TOTAL	4 410,560		
BOSTON HEALTH AND HOSPITALS DEPARTMENT—BOSTON CITY HOSPITAL ZIP CODE 02118			
KASS, EDWARD H.....	STUDY OF HYPERTENSION IN THERAPY.....	2N01 HV12433-09	612,067
SARAVIS, CALVIN A.....	HUMAN OR ORGAN-ASSOCIATED ANTIGEN DIAGNOSTIC APPLICATION.....	2N01 CB64071-01	91,071
ORGANIZATION TOTAL	2 703,138		
BOSTON UNIVERSITY ZIP CODE 02215			
ALBERT, ARTHUR E.....	DETERMINE OPTIMAL FREQUENCY OF SCREENING STRATEGIES.....	3N01 CB53863-05	7,700
DAWBER, THOMAS R.....	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	2N01 HV33106-05	443,347
DAWBER, THOMAS R.....	REEXAMINATION OF FRAMINGHAM HEART STUDY COHORT.....	5N01 HV52971-04	430,820
FELDMAN, ROBERT G.....	MODEL COMPREHENSIVE STROKE CENTER PROGRAM.....	3N01 NS62349-01	16,492
GENSLER, WALTER J.....	SYNTHESIS OF CORD FACTOR-LIKE COMPONENTS.....	2N01 CP65783-04	78,805

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
GOULD, JEFFREY B	TWINS STUDY FOR NEUROPHYSIOLOGIC FACTORS IN SIDS	2N01 HD32789-06	259,099
HOOD, WILLIAM B, JR	STUDIES IN ISCHEMIC MYOCARDIUM AND INFARCT SIZE	5N01 HV53001-02	67,710
JICK, HERSHEL	AGE RELATED DRUG DOSAGE AND DRUG INTERACTIONS	1N01 AG72108-00	55,102
POCHI, PETER E	STEROID HORMONES ON SEBACEOUS SECRETION & ACNE DEVEL	2N01 HD42863-04	54,184
SHAPIRO, SAMUEL	ESTROGEN REPLACEMENT AFTER PREMENOPAUSAL OOPHORECTOMY	1N01 CB74099-00	37,700
SHAPIRO, SAMUEL	CASE CONTROL STUDY OF CARCINOMA OF ENDOMETRIUM	1N01 CP71029-00	35,478
SLONE, DENNIS	MYOCARDIAL INFARCTION AND ROLE OF ORAL CONTRACEPTIVES	5N01 HD62849-03	360,400
SWAZEY, JUDITH P	CATEGORICAL RESEARCH TO BASIC SCIENCE RESEARCH-KNOWLEDGE	2N01 C055315-04	4,500
VOKONAS, PANTELS	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72951-00	6,698
ORGANIZATION TOTAL	14 1,858,035		
CENTER FOR BLOOD RESEARCH ZIP CODE 02115			
PENNELL, ROBERT B	PREPARATION OF INTRAVENOUS IGG	3N01 HB32940-10	14,000
ORGANIZATION TOTAL	1 14,000		
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
BERNHARD, WILLIAM F	CLINICAL EVALUATION OF LEFT VENTRICULAR ASSIST DEVICE	3N01 HV53007-03	66,211
LESTER, BARRY M	TEENAGE PREGNANCY AND NEONATAL BEHAVIOR	1N01 HD72823-00	11,480
LEVITON, ALAN	EPIDEMIOLOGY OF LEARNING HANDICAPS IN SCHOOL CHILDREN	1N01 NS72377-00	54,250
SUSKIND, ROBERT	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY	5N01 CP65826-04	34,372
VAWTER, GORDON F	SUPPLY OF PEDIATRIC ONCOLOGY SPECIMENS	2N01 CP61036-02	28,363
ORGANIZATION TOTAL	5 194,676		
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
HOLLY, FRANK J	TRANSFORMATION SENSITIVE CELL SURFACE GLYCOPROTEIN	1N01 CB74209-00	71,276
ORGANIZATION TOTAL	1 71,276		
FORSYTH DENTAL CENTER ZIP CODE 02115			
DE PAOLA, PAUL F	FLUORIDE ADMINISTRATION IN CONTROLLING DENTAL CARIES	5N01 DE42445-02	63,476
DE PAOLA, PAUL F	COMMUNITY CARIES PREVENTIVE DEMONSTRATION PROGRAM	2N01 DE52461-06	60,410
ORGANIZATION TOTAL	2 123,886		
HARVARD UNIVERSITY ZIP CODE 02138			
ADAMS, RAYMOND D	CYTOMYELO- AND DENDRITIC-ARCHITECTURE OF MONKEY BRAIN	3N01 NS60940-17	10,885
AMOS, HAROLD	ANTITUMOR EFFECTS OF NATURALLY OCCURRING SUGARS	2N01 CM53825-04	51,853
BARBER, FRANK F	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS	1N01 HV72927-00	149,346
BENJAMIN, THOMAS L	GENETIC AND BIOCHEMICAL STUDY OF CELLS AND VIRUSES	2N01 CP43299-07	113,035
BRAUNWALD, EUGENE	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM	1N01 HV72940-00	147,079
DALEN, JAMES	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE	2N01 HV22979-05	479,895
ESSEX, MYRON E	IMMUNOTHERAPY IN OUTBRED LYMPHOMA AND LEUKEMIAS	2N01 CB64001-01	79,123
GEYER, ROBERT P	SYNTHESIS AND SCREENING OF ARTIFICIAL BLOOD SUBSTITUTES	5N01 HB62926-01	104,801
HERD, JAMES A	DEVELOP NONHUMAN PRIMATE MODELS OF HYPERTENSION	1N01 HV72980-00	195,333
JONES, THOMAS C	STUDY OF ONCOGENIC HERPES VIRUSES	3N01 CP33390-06	23,627
LITTLE, JOHN B	STUDY OF RESPIRATORY CARCINOGENESIS	2N01 CP33273-04	126,143
LOWRIE, EDMUND G	NATIONAL COOPERATIVE DIALYSIS STUDY	5N01 AM62207-04	380,000
MACMAHON, BRIAN	BREAST CANCER COLLABORATIVE RESEARCH WITH THE U.S.S.R.	1N01 CP71024-00	24,977
MACMAHON, BRIAN	EVALUATING EFFECT OF ANTIFERTILITY AGENTS	5N01 HD52801-06	89,478
NOT APPLICABLE	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES	3N01 LM54724-12	34,000
SALHANICK, HILTON A	PROCEDURES FOR INHIBITORS OF PROGESTERONE SYNTHESIS	2N01 HD02319-11	109,237
ORGANIZATION TOTAL	16 2,118,812		
JOSLIN DIABETES FOUNDATION ZIP CODE 02215			
AIELLO, LLOYD M	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72145-00	165,267
ORGANIZATION TOTAL	1 165,267		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
LAHEY CLINIC FOUNDATION ZIP CODE 02215			
COLLER, JOHN A.....	INNOVATIVE TECHNIQUES FOR COLONOSCOPE PASSAGE INTO CECUM.....	1N01 CB74212-00	96,600
ORGANIZATION TOTAL	1	96,600	
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
ADAMS, RAYMOND D.....	STUDY OF MULTIPLE SCLEROSIS IN SCOTLAND.....	3N01 NS42321-08	134,795
BLACK, PAUL H.....	STUDY OF ACTIVATION OF ONCOGENIC VIRUSES.....	2N01 CP43222-06	175,000
FITZPATRICK, THOMAS B.....	ORAL PSORALEN PHOTOCHEMOTHERAPY OF PSORIASIS.....	1N01 AM72200-00	348,747
JEANLOZ, ROGER W.....	BIOCHEMICAL CHARACTERISTICS OF CERVICAL MUCUS OF MACACA.....	2N01 HD42829-04	64,186
KAPLAN, EDWARD M.....	DATA COORDINATING CENTER FOR ANGINA PECTORIS STUDY.....	2N01 HV53027-04	72,024
MUNDTH, ELDRED D.....	STUDY OF CORONARY ARTERY SURGERY.....	2N01 HV32985-10	171,485
NEW, PAUL J.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	2N01 CB43983-05	53,593
POLLEN, DANIEL A.....	STUDY FEASIBILITY OF A SENSORY PROSTHESIS.....	2N01 NS02276-08	41,300
POWELL, WILLIAM J, JR.....	INFARCT SIZE IN EXTRACELLULAR OSMOLALITY.....	5N01 HV53002-05	40,000
ROBBOY, STANLEY J.....	ESTROGENS & GENITAL ANOMALIES & CANCER IN OFFSPRING.....	5N01 CN45157-04	474,792
ZAMECNIK, PAUL C.....	SEQUENCING OF RSV 35S RNA.....	3N01 CP71007-01	97,500
ORGANIZATION TOTAL	11	1,673,422	
NEW ENGLAND DEACONESS HOSPITAL ZIP CODE 02215			
BLACKBURN, GEORGE L.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65870-02	52,177
ORGANIZATION TOTAL	1	52,177	
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111			
GORBACH, SHERWOOD L.....	RELATION OF INTESTINAL FLORA TO BREAST CANCER IN HUMANS.....	1N01 CB74104-00	97,000
MARCHANT, DOUGLAS.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45054-05	324,386
RUDDERS, RICHARD A.....	CLASSIFICATION OF NONHODGKIN'S LYMPHOMAS.....	3N01 CM67112-02	63,003
SCHWARTZ, ROBERT S.....	IMMUNOLOGY OF MURINE LEUKEMIA VIRUS INFECTION.....	2N01 CP61046-01	83,012
ORGANIZATION TOTAL	4	567,401	
NEW ENGLAND NUCLEAR CORPORATION ZIP CODE 02118			
AHERN, DAVID G.....	SYNTHESIS OF RADIOACTIVE RETINOIDS.....	1N01 CP75937-00	150,308
ORGANIZATION TOTAL	1	150,308	
NORTHEASTERN UNIVERSITY ZIP CODE 02115			
SOLOWAY, ALBERT H.....	SYNTHESIS OF CNS ANTITUMOR AGENTS.....	5N01 CM53741-02	72,361
ORGANIZATION TOTAL	1	72,361	
SIDNEY FARBER CANCER INSTITUTE ZIP CODE 02115			
BAST, ROBERT C.....	IMMUNOTHERAPY OF MOUSE OVARIAN CANCER.....	1N01 CB74194-00	114,007
CANTOR, HARVEY.....	HYBRIDIZATION TECHNIQUES TO OBTAIN FUNCTIONAL T-CELLS.....	1N01 CB74147-00	89,009
CHESS, LEONARD.....	ISOLATION OF PERIPHERAL BLOOD MONONUCLEAR CELLS.....	2N01 CB43964-04	81,663
CHESS, LEONARD.....	IN VITRO SENSITIZATION OF HUMAN LYMPHOCYTES.....	2N01 CB53881-03	64,648
FRECHETTE, ALFRED L.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55229-06	88,746
FREI, EMIL, III.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	2N01 CM43781-07	18,672
FREI, EMIL, III.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	5N01 CM53839-07	178,428
FREI, EMIL, III.....	STUDIES OF PATIENTS WITH DISSEMINATED SOLID TUMORS.....	3N01 CM67037-07	356,157
GREENBERGER, JOEL S.....	BALB:1 VIRUS AND MYELOID CELL DIFFERENTIATION.....	1N01 CP71051-00	75,000
HASELTINE, WILLIAM A.....	STUDIES ON THE INTEGRATION SITES OF ONCOGENIC VIRUSES.....	1N01 CP71057-00	86,670
LIVINGSTON, DAVID.....	ISOLATE TYPE C VIRUSES FROM HUMAN LEUKEMIC CELLS.....	9N01 CP71028-00	142,900
ORGANIZATION TOTAL	11	1,295,900	
TUFTS UNIVERSITY ZIP CODE 02111			
BLAIR, HENRY E.....	PREPARE GLUCOCEREBROSIDASE FROM HUMAN PLACENTAL TISSUE.....	3N01 NS52321-06	200,000
LEVY, STUART B.....	TESTING OF VECTOR-HOST SYSTEMS IN MAMMALS.....	1N01 AI72529-00	293,497
WAKSAL, SAMUEL D.....	INDUCTION OF FUNCTIONAL DIFFERENTIATION OF T-CELLS.....	1N01 CB74150-00	78,586
WHITE, GEORGE E.....	SYSTEM FOR EARLY DETECTION OF DENTAL CARIES.....	2N01 DE52476-09	108,808

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
ORGANIZATION TOTAL	4	680,891	
UNIVERSITY HOSPITAL ZIP CODE 02118			
RYAN, THOMAS J.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	5N01 HV62923-03	155,081
STEFFEE, WILLIAM P.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65869-03	83,179
STEFFEE, WILLIAM P.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65872-03	83,329
ORGANIZATION TOTAL	3	321,589	
CAMBRIDGE			
ABT ASSOCIATES, INC. ZIP CODE 02138			
KERPELMAN, LARRY.....	EVALUATION OF THE NMAC DISTRIBUTION PROGRAM.....	1N01 LM74723-00	62,371
TO BE APPOINTED.....	MEASUREMENT OF THE COST OF CANCER CARE.....	3N01 CN65216-04	37,959
ORGANIZATION TOTAL	2	100,330	
ARTHUR D. LITTLE, INC. ZIP CODE 02140			
BROOME, MILDRED G.....	SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67078-02	215,399
KETTERINGHAM, JOHN M.....	PREPARATION OF POLYALKYLSULFONE HOMO- AND CO-POLYMERS.....	2N01 HV32916-06	119,300
MERKER, PHILIP.....	EVALUATION OF COMBINED CHEMOTHERAPY AND MODALITY STUDIES.....	5N01 CM53765-04	816,031
MILLER, IRWIN.....	COORDINATED PROGRAM IN CANCER CHEMOTHERAPY.....	2N01 CM33727-13	180,000
ROHOVSKY, MICHAEL W.....	CHEMOTHERAPY OF CENTRAL NERVOUS SYSTEM SOLID TUMORS.....	5N01 CM67047-02	129,913
SIDMAN, KENNETH R.....	STUDY OF CONTRACEPTIVE DRUGS.....	2N01 HD42802-07	161,628
SIVAK, ANDREW.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	5N01 CP55711-03	228,412
WECHSLER, ALFRED E.....	BIOMEDICAL ENGINEERING.....	5N01 CM63823-01	299,700
WODINSKY, I.....	PRIMARY IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM57006-04	581,813
YESAIR, DAVID W.....	PHARMACOLOGY AND TUMOR BANK.....	2N01 CM53849-03	799,478
YESAIR, DAVID W.....	IMPROVE EFFICACY OF ORAL NATURAL STEROIDS.....	3N01 HD62847-02	253,130
ORGANIZATION TOTAL	11	3,784,804	
BLOCK ENGINEERING ZIP CODE 02139			
SCHILDKRAUT, E ROBERT.....	DEVELOPMENT OF NEW METHODS OF SINGLE CELL SEPARATION.....	1N01 CB74095-00	298,079
ORGANIZATION TOTAL	1	298,079	
BOLT BERANEK AND NEWMAN ZIP CODE 02138			
CASTLEMAN, PAUL A.....	DEVELOPMENT OF SOFTWARE FOR DATA-PROCESSING PROGRAMS.....	3N01 RR42147-16	460,460
ROLLINS, ANN M.....	PROTOTYPE TEST OF DECODING SKILLS.....	1N01 HD72836-00	161,385
SWETS, JOHN A.....	EVALUATE IMAGING TECHNIQUES IN CANCER DIAGNOSIS.....	5N01 CB64010-03	203,952
ORGANIZATION TOTAL	3	825,797	
CAMBRIDGE COLLABORATIVE ZIP CODE 02142			
FREDBERG, J.....	MEASURE PULMONARY FUNCTION IN INFANTS AND CHILDREN.....	5N01 HR62901-02	143,110
ORGANIZATION TOTAL	1	143,110	
HARVARD UNIVERSITY ZIP CODE 02138			
CERNY, JAN.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64035-01	68,709
ORGANIZATION TOTAL	1	68,709	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
BALTIMORE, DAVID.....	STUDIES OF LEUKEMIA VIRUS DNA POLYMERASE.....	2N01 CP53562-03	177,250
CORKIN, SUZANNE.....	EVALUATION OF THE SAFETY AND EFFICACY OF PSYCHOSURGERY.....	2N01 NS62116-12	35,000
HECHT, SIDNEY M.....	SYNTHESIS OF BLEOMYCIN & STRUCTURAL MODIFICATIONS.....	5N01 CM43712-06	52,800
MUNRO, HAMISH N.....	DIETARY PURINES AND PYRIMIDINES IN GI TRACT CANCER.....	1N01 CP75888-00	14,376
ROGERS, ADRIANNE E.....	DIET AND CHEMICAL CARCINOGENESIS STUDY.....	5N01 CP33238-08	174,600
TANNENBAUM, STEVEN R.....	STUDY OF ENVIRONMENTAL OCCURRENCE OF N-NITROSO COMPOUNDS.....	3N01 CP33315-08	117,562
WOGAN, GERALD N.....	STUDY OF TOXICITY OF FUNGAL GROWTH ON FOODSTUFFS.....	2N01 CP43265-04	240,499

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
WORDEN, FREDERIC G	SUPPORT OF NEUROSCIENCES RESEARCH PROGRAM	2N01 NS62343-01	296,200
YANNAS, IOANNIS V	INTERACTION OF NATURAL & MODIFIED BIOPOLYMERS WITH BLOOD	2N01 HV42969-04	87,555
ORGANIZATION TOTAL	9 1,195,842		
EVERETT			
AVCO CORPORATION—EVERETT RESEARCH LABORATORY ZIP CODE 02149			
LEDERMAN, DAVID	DEVELOPMENT OF A LEFT HEART ASSIST BLOOD PUMP	1N01 HV72937-00	318,665
NYILAS, EMERY	MATERIALS DEVELOPMENT AND TESTING	3N01 HV32917-07	137,293
NYILAS, EMERY	EVALUATION OF BIOMATERIALS IN CONTACT WITH BLOOD	2N01 HV42961-05	147,403
ORGANIZATION TOTAL	3 603,361		
LOWELL			
UNIVERSITY OF LOWELL ZIP CODE 01854			
BRUCE, JOHN I	SUPPLY SCHISTOSOME INFECTED SNAILS AND MAMMALS	1N01 AI72524-00	112,795
ORGANIZATION TOTAL	1 112,795		
NATICK			
CONTROL LOGIC ZIP CODE 01760			
ESSERIAN, A JOHN	OPTICAL BAR CODE SCANNING SYSTEM	1N01 GM72116-00	98,500
ORGANIZATION TOTAL	1 98,500		
NEWTON			
EIC CORPORATION ZIP CODE 02158			
BRUMMER, S BARRY	STUDY OF ELECTRICAL STIMULATION OF THE NERVOUS SYSTEM	2N01 NS32313-07	85,835
ORGANIZATION TOTAL	1 85,835		
SHREWSBURY			
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545			
FAIRBANKS, GRANT	CHARACTERIZATION OF MAMMARY EPITHELIAL CELL MEMBRANE	2N01 CB33908-04	60,000
WELSCH, FEDERICO	STUDY OF ESTROGEN-BINDING AND ESTROPHILE PROTEINS	2N01 CB43867-07	135,000
ORGANIZATION TOTAL	2 195,000		
WALTHAM			
BRANDEIS UNIVERSITY ZIP CODE 02154			
VAN VUNAKIS, HELEN	PRODUCTION OF ANTIBODIES TO CHEMICAL CARCINOGENS	2N01 CP23243-05	88,638
ORGANIZATION TOTAL	1 88,638		
COLLABORATIVE RESEARCH, INC. ZIP CODE 02154			
FRIEDMAN, ORRIE M	SYNTHESIS OF VARIOUS PHOSPHORAMIDES	1N01 CM77071-00	94,271
ORGANIZATION TOTAL	1 94,271		
FIRST DATA CORPORATION ZIP CODE 02154			
FRIESEN, DAVID D	COMPUTER FACILITY FOR CHEMICAL/BIOLOGICAL INFORMATION	3N01 RR62118-07	712,527
ORGANIZATION TOTAL	1 712,527		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
THERMO ELECTRON CORPORATION ZIP CODE 02154			
BORNHORST, WALTER J.....	IMPLANTABLE ARTIFICIAL HEART DEVICES.....	2N01 HV12065-14	296,730
BORNHORST, WALTER J.....	DEVELOPMENT OF FLOCKING MATERIALS.....	5N01 HV32915-10	155,740
HAGEN, KENNETH G.....	BLOOD PUMP STUDIES AS RESULT OF ENDOGENOUS HEAT RESEARCH.....	3N01 HV52909-06	365,165
KEISER, JOHN M.....	DEVELOP/EVALUATE UNI- & BILATERAL CARDIAC ASSIST DEVICE.....	3N01 HV42910-12	554,507
KEISER, JOHN M.....	LEFT VENTRICULAR ASSIST DEVICE: CLINICAL EVALUATION.....	2N01 HV53008-06	197,685
KEISER, JOHN M.....	DEVELOP ENERGY CONVERTERS TO CONTROL HEART ASSIST DEVICE.....	1N01 HV72976-00	451,007
TO BE APPOINTED.....	PRODUCTION AND DELIVERY OF THERMAL ENERGY ANALYZERS.....	3N01 CP55715-05	1,112
WHALEN, ROBERT.....	DEVELOPMENT OF A LEFT HEART ASSIST BLOOD PUMP.....	1N01 HV72934-00	369,258
ORGANIZATION TOTAL	8	2,391,204	
WHITTAKER CORPORATION-SPACE SCIENCES DIVISION ZIP CODE 02154			
CHABOT, R W.....	MATERIAL DEVELOPMENT & TESTING HEPARINIZATION PROCESS.....	5N01 HV32919-10	69,271
ORGANIZATION TOTAL	1	69,271	
WILMINGTON			
CHARLES RIVER BREEDING LABORATORIES ZIP CODE 01887			
FOSTER, HENRY L.....	SUPPORT FOR LONG-TERM RAT COLONY.....	3N01 AG32725-16	133,589
FOSTER, HENRY L.....	SUPPLY OF MICE.....	3N01 AG42811-15	185,602
FOSTER, HENRY L.....	RODENT PRODUCTION CENTER IN MODIFIED ENVIRONMENT.....	5N01 CM53848-03	108,000
FOSTER, SUMNER.....	MAINTAIN COLONY OF AGED SPRAGUE-DAWLEY RATS.....	1N01 AG72127-00	33,566
FOSTER, SUMNER.....	GENETIC CENTER FOR RODENTS IN BIOCONTAINMENT ENVIRONMENT.....	1N01 CM77141-00	1,471,309
OTIS, ALBERT P.....	DEVELOP COLONY OF MULTIGENOTYPIC AGED MOUSE STRAINS.....	1N01 AG72128-00	95,748
PUCAK, GEORGE J.....	FEASIBILITY OF DOMESTIC PRODUCTION OF RHESUS MONKEYS.....	3N01 RR62137-02	22,002
TO BE APPOINTED.....	INBRED STRAINS AND SELECTED HYBRID CROSSES IN RATS.....	5N01 AG62135-02	25,000
ORGANIZATION TOTAL	8	2,074,816	
KOCH INDUSTRIES-ABCOR, INC. ZIP CODE 01887			
MEIER, PETER M.....	ENHANCED CARRIES PREVENTIVE EFFECTS OF FLUORIDE TABLETS.....	3N01 DE62485-05	1,122
NUWAYSER, ELIE S.....	STUDY OF DELIVERY OF DRUGS TO THE CERVIX.....	2N01 HD32738-07	270,592
POLIDORO, JOHN P.....	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS.....	1N01 HD72832-00	126,935
WILLIAMS, DAVID L.....	ENZYMATIC PREVENTION OF DENTAL PLAQUE FORMATION.....	5N01 DE62493-01	162,895
ORGANIZATION TOTAL	4	561,544	
WORCESTER			
E G & G, INC.-MASON RESEARCH CENTER ZIP CODE 01608			
BOGDEN, ARTHUR E.....	EVALUATION OF CANCER THERAPEUTIC AGENTS.....	2N01 CB43914-06	169,500
BOGDEN, ARTHUR E.....	BIOLOGICAL CHARACTERIZATION STUDIES OF MAMMARY TUMORS.....	9N01 CB74175-00	169,800
BOGDEN, ARTHUR E.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM57003-04	696,824
BOGDEN, ARTHUR E.....	DEVELOPMENT OF NEW IN VIVO TUMOR SYSTEMS.....	5N01 CM57030-02	166,471
BOGDEN, ARTHUR E.....	ROLE OF HORMONAL FACTORS ON MAMMARY TUMORS.....	3N01 CP61052-04	124,827
GRALLA, EDWARD J.....	CHELATING AGENTS FOR THE TREATMENT OF COOLEY'S ANEMIA.....	3N01 AM52212-03	9,176
ROSENKRANTZ, HARRIS.....	EVALUATION OF ACTIVITY OF ANTIFERTILITY DRUGS & DEVICES.....	2N01 HD22746-18	725,005
ORGANIZATION TOTAL	7	2,061,603	
MEMORIAL HOSPITAL ZIP CODE 01605			
LEVINE, PETER H.....	STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	5N01 HB53019-04	31,445
ORGANIZATION TOTAL	1	31,445	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605			
HUMPHREYS, ROBERT E.....	DIAGNOSIS OF HUMAN LEUKEMIAS.....	2N01 CB64072-02	83,130
ORGANIZATION TOTAL	1	83,130	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MASSACHUSETTS—Continued			
STATE TOTAL	164	28,076,428	
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48104			
BLANKESPOOR, HARVEY D	SUPPLY OF SCHISTOSOME-INFECTED ANIMALS	2N01 A142504-05	121,520
BORER, ROBERT	NEONATAL RESPIRATORY INSUFFICIENCY-EDUCATIONAL PROGRAM	5N01 HR52960-02	135,005
BREWER, GEORGE J	CRISIS AND PAIN SYMPTOM PROPHYLAXIS BY ZINC THERAPY	1N01 HB72916-00	80,578
BURKEL, WILLIAM E	DEVELOP INTIMAL LININGS	5N01 HV12054-13	148,978
FRETER, ROLF G	TESTING OF VECTOR-HOST SYSTEMS IN MAMMALS	5N01 A162518-01	106,775
GARN, STANLEY M	DEVELOPMENT OF PHYSICAL GROWTH MEASUREMENT DATA	3N01 NS52308-04	12,061
HIGUCHI, WILLIAM I	SYSTEMS APPROACH TO VAGINAL CONTRACEPTIVE DRUGS	2N01 HD32740-06	74,360
HISS, ROLAND	CONTINUING EDUCATION IN PULMONARY MEDICINE	5N01 HR62931-01	166,000
KAHN, RAYMOND H	ORGAN CULTURE DEVELOPMENT OF HUMAN AND ANIMAL PROSTATE	2N01 CP55720-04	19,500
MAASSAB, H F	STUDY ON LIVE INFLUENZA VIRUS VACCINE CANDIDATES	1N01 A172521-00	144,323
MC NAMARA, JAMES A, JR	MECHANISMS OF MUSCLE REATTACHMENT AND MIGRATION	5N01 DE52478-03	97,455
MONTO, ARNOLD S	EVALUATION OF OCCURRENCE OF INFLUENZA & VACCINE EFFICACY	2N01 A162514-02	196,766
MONTO, ARNOLD S	ESTABLISH AN INFECTIOUS ENTERIC DISEASE STUDY CENTER	1N01 A172536-00	205,705
SCHOCH, HENRY K	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY	5N01 HV52913-03	92,981
SCHULTZ, JEROME S	EVALUATE COMPATIBILITY-MATERIALS IN CONTACT WITH BLOOD	5N01 HV42962-04	137,017
THREATT, BARBARA	EARLY DETECTION OF CANCER OF THE BREAST	2N01 CN45049-05	379,334
ORGANIZATION TOTAL	16	2,118,358	
DETROIT			
ASH STEVENS, INC. ZIP CODE 48202			
ASH, ARTHUR B	RESYNTHESIS OF BULK CHEMICALS AND DRUGS	5N01 CM57012-03	227,687
ORGANIZATION TOTAL	1	227,687	
CHILDREN'S HOSPITAL OF MICHIGAN ZIP CODE 48201			
STULBERG, CYRIL S	STUDY OF IDENTIFICATION OF CANCER CELLS IN VITRO	2N01 CP33333-04	115,000
ORGANIZATION TOTAL	1	115,000	
HENRY FORD HOSPITAL ZIP CODE 48202			
BRENEMAN, GERALD M	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72957-00	7,651
COATES, E O, JR	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE	5N01 HR62944-03	299,615
ORGANIZATION TOTAL	2	307,266	
MICHIGAN CANCER FOUNDATION ZIP CODE 48201			
BRENNAN, MICHAEL J	A COMMUNITY BASED CANCER CONTROL PROGRAM	5N01 CN65252-04	2,184,000
BRENNAN, MICHAEL J	DETROIT SSMA POPULATION-BASED CANCER REGISTRY	3N01 CP61028-02	849,548
KESSEL DAVID	CHARACTERIZATION OF ANTITUMOR DRUGS	2N01 CM53789-05	36,450
RICH, MARVIN A	STUDY OF HIGH-RISK BREAST-CANCER FAMILIES	2N01 CP33347-09	203,944
RICH, MARVIN A	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY	1N01 CP71040-00	87,190
ORGANIZATION TOTAL	5	3,361,132	
WARNER-LAMBERT COMPANY-PARKE, DAVIS AND COMPANY ZIP CODE 48232			
DION, HENRY W	SUPPLY OF NEW ANTINEOPLASTIC DRUGS	5N01 CM43754-10	129,749
DION, HENRY W	NEW ANTINEOPLASTIC DRUGS	3N01 CM77146-01	757,834
ELSLAGER, EDWARD F	PREPARATION OF BULK CHEMICALS AND DRUGS	5N01 CM23708-13	189,385
ORGANIZATION TOTAL	3	1,076,968	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MICHIGAN—Continued			
WAYNE STATE UNIVERSITY ZIP CODE 48202			
BAKER, LAWRENCE H.....	STUDIES IN PATIENTS WITH DISSEMINATED SOLID TUMORS.....	5N01 CM67105-04	395,590
BLISS, LYNN S.....	PRESCHOOL SCREENING FOR IMPAIRED LANGUAGE DEVELOPMENT.....	5N01 NS62353-02	70,520
JANZEN, ERICA.....	ONCOLOGY NURSING PROGRAMS.....	3N01 CN55239-02	34,063
LUSHER, JEANNE M.....	COOPERATIVE STUDY OF FACTOR VIII IN HEMOPHILIA.....	5N01 HB53025-04	52,789
MOGHISSI, KAMRAN S.....	DEVELOPMENT OF AN INTRACERVICAL CONTRACEPTIVE DEVICE.....	2N01 HD42852-06	63,291
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES.....	5N01 LM54715-02	226,492
ROSE, NOEL R.....	IMMUNOLOGIC STUDIES OF VASECTOMY.....	2N01 HD52841-03	142,344
ORGANIZATION TOTAL	7	985,089	
EAST LANSING			
MICHIGAN STATE UNIVERSITY ZIP CODE 48823			
JONES, JOHN W.....	STUDY OF HYPERTENSION.....	5N01 HV22939-12	940,107
WELSCH, CLIFFORD W.....	PREVENTION OF MAMMARY PRENEOPLASTIC LESIONS.....	1N01 CB74090-00	85,000
ORGANIZATION TOTAL	2	1,025,107	
GRAND RAPIDS			
BUTTERWORTH HOSPITAL ZIP CODE 49503			
BOWMAN, HAROLD E.....	SERUM FROM PATIENTS WITH BREAST LESIONS.....	1N01 CB74213-00	19,900
MOORHEAD, EDWARD L, II.....	CLINICAL ONCOLOGY PROGRAM.....	1N01 CN75347-00	150,000
ORGANIZATION TOTAL	2	169,900	
KALAMAZOO			
UPJOHN COMPANY ZIP CODE 49002			
NEIL, GARY L.....	SUPPLY OF ANTINEOPLASTIC ANTIBIOTICS.....	5N01 CM43753-07	440,225
NEIL, GARY L.....	NEW ANTINEOPLASTIC DRUG SCREENING.....	1N01 CM77100-00	787,152
ORGANIZATION TOTAL	2	1,227,377	
LANSING			
MICHIGAN DEPARTMENT OF PUBLIC HEALTH ZIP CODE 48906			
ISBISTER, JOHN L.....	STATE CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN45076-05	213,694
SCHUURMANS, DAVID M.....	TISSUE CULTURE ASSAY-ANTIBIOTICS & PURIFIED COMPOUNDS.....	2N01 CM33702-06	67,000
WILCOX, KENNETH R, JR.....	IMPROVED METHOD FOR INACTIVATION OF RABIES VIRUS.....	2N01 AI12199-06	27,084
ORGANIZATION TOTAL	3	307,778	
MIDLAND			
DOW CHEMICAL COMPANY ZIP CODE 48640			
BUBLITZ, D E.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	3N01 CM53768-04	90,000
MALELLO, J A.....	EFFECTS OF ANTICANCER AGENTS ON REPRODUCTION.....	5N01 CM23712-05	172,718
SCHWETZ, B A.....	EFFECT OF ENVIRONMENT ON REPRODUCTION AND ONCOGENESIS.....	2N01 ES32102-10	343,859
ORGANIZATION TOTAL	3	606,577	
STATE TOTAL	47	11,528,239	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MINNESOTA			
AUSTIN			
UNIVERSITY OF MINNESOTA ZIP CODE 55912			
JENKIN, HOWARD M.....	IN VITRO CULTIVATION OF TREPONEMA PALLIDUM.....	2N01 AI42537-04	90,012
ORGANIZATION TOTAL	1 90,012		
MINNEAPOLIS			
HENNEPIN COUNTY MEDICAL CENTER ZIP CODE 55415			
KESHAVIAH, PRAHASH.....	MECHANISMS OF FLUID REMOVAL BY ULTRAFILTRATION.....	1N01 AM72239-00	56,278
RUBENS, ALAN B.....	LANGUAGE RECOVERY PROCESS IN ADULTS WITH APHASIA.....	1N01 NS72378-00	223,000
WATHEN, RONALD L.....	DEVELOP IMPLANTABLE SUBCUTANEOUS BLOOD ACCESS DEVICE.....	1N01 AM72208-00	73,153
ORGANIZATION TOTAL	3 352,431		
MIDWEST RESEARCH INSTITUTE ZIP CODE 55406			
PETERSEN, ROBERT J.....	EVALUATION OF FLUOROPOLYMER MEMBRANES IN OXYGENATORS.....	2N01 HV62912-01	72,858
ORGANIZATION TOTAL	1 72,858		
MINNEAPOLIS WAR MEMORIAL BLOOD BANK ZIP CODE 55404			
POLESKY, H F.....	HISTOCOMPATIBILITY ANTIGENS-POOR BLOOD.....	2N01 HB12410-09	12,300
ORGANIZATION TOTAL	1 12,300		
MINNESOTA DEPARTMENT OF HEALTH ZIP CODE 55440			
GIBBS, ARLENE E.....	CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55264-03	327,630
ORGANIZATION TOTAL	1 327,630		
MOUNT SINAI HOSPITAL ZIP CODE 55404			
BERMAN, REUBEN.....	THERAPY FOR HYPERTENSION IN GENERAL POPULATION.....	2N01 HV22937-06	238,813
RANHEIM, PHILLIP J.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72961-00	9,273
ORGANIZATION TOTAL	2 248,086		
RENAL SYSTEMS ZIP CODE 55441			
ROSENBLUTH, ROBERT F.....	EVALUATE IMPLANTABLE CARBON BLOOD ACCESS DEVICE.....	1N01 AM72219-00	52,983
ORGANIZATION TOTAL	1 52,983		
UNIVERSITY OF MINNESOTA ZIP CODE 55455			
BANTLI, HEINRICH.....	ELECTRICAL STIMULATION KF THE CEREBELLUM.....	2N01 NS42332-03	85,000
BERLINGER, NORMAN T.....	SUPPRESSOR MONOCYTES IN CANCER PATIENTS.....	1N01 CB74160-00	74,666
BLACKBURN, HENRY.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22976-07	39,847
BLACKSHEAR, PERRY L, JR.....	STUDY OF FLUID DYNAMICS OF BLOOD CELLS.....	2N01 AM22207-08	39,992
BLOOMFIELD, CLARA D.....	CLASSIFICATION OF NONHODGKIN'S LYMPHOMAS.....	5N01 CM67113-03	55,462
CROW, RICHARD S.....	ECG CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72949-00	49,232
EDSON, J ROGER.....	COOPERATIVE STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	5N01 HB53022-04	42,753
FARAS, ANTHONY J.....	RNA TUMOR VIRUS GENE EXPRESSION IN MAMMALIAN CELLS.....	2N01 CP61055-01	58,835
FOREMAN, HARRY.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD62805-02	88,000
FRANTZ, IVAN D, JR.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22915-09	2,003,267
GILBERTSON, VICTOR A.....	SCREENING TECHNIQUE FOR DETECTING EARLY CANCER OF BOWEL.....	2N01 CB53862-02	609,000
GUMNIT, ROBERT J.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	3N01 NS52327-07	1,396,446
HALBERG, FRANZ.....	RHYTHMOMETRY ON FEMALE VOLUNTEERS OF DIFFERENT AGES.....	5N01 CP55702-03	99,200
KERSEY, JOHN H.....	IMMUNODEFICIENCY-CANCER REGISTRY.....	5N01 CP43384-06	39,959
KIANG, DAVID T.....	ENDOCRINE AND CHEMOTHERAPY IN BREAST CANCER.....	2N01 CB64000-02	90,200
KJELSBERG, MARCUS O.....	STUDY OF PREVENTION OF CORONARY HEART DISEASE.....	2N01 HV22971-06	1,259,958
KNOBLOCK, WILLIAM H.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72131-00	131,226
LASSMAN, FRANK M.....	ANALYSIS OF SPEECH, LANGUAGE AND HEARING DEFICITS.....	3N01 NS42326-03	11,200
LILJEMARK, WILLIAM F.....	SUSCEPTIBILITY TO STUDY OF DENTAL PLAQUE AND CARIES.....	3N01 DE22415-03	4,200

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MINNESOTA—Continued			
MAXWELL, ROBERT E.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS.....	1N01 NS72369-00	85,000
MC CULLOUGH, JEFFREY.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62972-03	265,787
NAJARIAN, JOHN S.....	COLLECTION OF SERA FROM HIGH-CANCER-RISK POPULATIONS.....	2N01 CB33915-05	80,096
PLAGEMANN, PETER G.....	CHARACTERIZATION OF ANTITUMOR DRUGS—DRUG MECHANISMS.....	2N01 CM43788-04	53,000
QUIE, PAUL G.....	PNEUMOCOCCAL OTITIS MEDIA IN ANIMAL MODEL.....	5N01 AI52533-04	93,383
SCHMIDTKE, JON R.....	MACROPHAGES IN TUMOR IMMUNOLOGY.....	2N01 CB43948-04	75,365
SCHOENER, WALTER.....	INDEX OF DIABETES-RELATED LITERATURE.....	2N01 AM70663-17	61,133
SCHUMAN, LEONARD M.....	STUDY OF CANCER MORTALITY.....	3N01 CP33325-06	39,880
SCHUMAN, LEONARD M.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71043-01	71,505
SCHUMAN, LEONARD M.....	HEALTH STATUS OF AMERICAN MEN.....	1N01 HD72803-00	124,203
VENNES, JACK A.....	ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY.....	5N01 AM52213-01	71,203
VESLEY, DONALD.....	COURSES ON PRINCIPLES OF BIOHAZARD AND INJURY CONTROL.....	5N01 CP61033-01	87,048
VOSIKA, GERALD J.....	STUDY OF MYCOBACTERIUM PHLEI IN CANCER.....	2N01 CB64002-01	79,596
WATTENBERG, LEE W.....	STUDY OF LOLYCYCLIC HYDROCARBON METABOLISM.....	3N01 CP33364-09	148,689
YUNIS, EDMOND J.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22530-07	116,592
ORGANIZATION TOTAL	34	7,630,923	
ROCHESTER			
MAYO FOUNDATION ZIP CODE 55901			
AHMANN, DAVID L.....	CHEMOTHERAPY UTILIZING 5-FU, CYTOXAN AND PREDNISONE.....	2N01 CB33899-04	94,850
AHMANN, DAVID L.....	CHEMOTHERAPY STUDIES IN PATIENTS WITH BREAST CANCER.....	5N01 CM53772-07	121,385
BAKER, HILLIER L, JR.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	2N01 CB43982-03	25,530
BEAHR, OLIVER H.....	WORKING GROUP FOR THE REVIEW OF BCDDP'S.....	1N01 CN75379-00	220,340
DECKER, DAVID G.....	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67123-02	114,252
DECKER, DAVID G.....	STUDY OF GENITAL TRACT ANOMALIES.....	5N01 CN45124-07	644,953
DI MAGNO, EUGENE P.....	PHYSIOLOGICAL REFLUX IN THE PANCREATIC DUCT.....	5N01 CP55660-04	117,800
DYCK, PETER J.....	ORAL-FACIAL EVALUATION OF UNTREATED TRIGEMINAL NEURALGIA.....	5N01 DE62497-01	89,666
EAGAN, ROBERT.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT LUNG CANCER.....	3N01 CM77150-01	195,015
EDMONSON, J H.....	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS.....	3N01 CM57044-10	695,938
EVANS, TITUS C.....	DEVELOPMENT OF ULTRASONIC DETECTION OF ATHEROSCLEROSIS.....	5N01 HV42904-06	341,987
EVANS, TITUS C.....	DEVELOP HIGH RESOLUTION ULTRASONIC IMAGING TECHNIQUES.....	1N01 HV72928-00	399,902
FONTANA, R S.....	DETECTION AND LOCALIZATION OF BRONCHOGENIC CARCINOMA.....	5N01 CB53886-04	974,000
FRYE, ROBERT C.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32984-09	77,000
GLEICH, GERALD J.....	ESTABLISH ALLERGEN CERTIFICATION LABORATORY.....	3N01 AI42546-05	42,000
GO, V L.....	DIAGNOSTIC STUDY OF CARCINOMA OF THE BOWEL.....	2N01 CB23854-05	96,030
GREENLEAF, JAMES F.....	BREAST DIAGNOSIS: QUANTITATIVE IMAGING BY ULTRASOUND.....	2N01 CB64041-02	137,000
KURLAND, LEONARD T.....	HEALTH STATUS OF AMERICAN MEN.....	1N01 HD72801-00	96,625
MOERTEL, CHARLES G.....	NEW DRUGS FOR TREATMENT OF GASTROINTESTINAL CANCER.....	2N01 CM02066-17	170,095
MOERTEL, CHARLES G.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	2N01 CM43796-05	210,553
MOERTEL, CHARLES G.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	5N01 CM53838-12	145,653
MOERTEL, CHARLES G.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57033-04	152,225
O'CONNELL, M J.....	CANCER IMMUNOTHERAPY; PHASE I STUDY.....	2N01 CB53874-03	152,123
SCHUTT, ALLAN J.....	ESTABLISHMENT AND MAINTENANCE OF BLOOD SERUM BANK.....	2N01 CB23879-06	192,058
SCHUTT, ALLAN J.....	THERAPY OF PATIENTS WITH GASTRIC CANCER.....	2N01 CM43783-05	132,141
SIEKERT, ROBERT G.....	BIBLIOGRAPHIC SERVICE ON CEREBROVASCULAR DISEASES.....	5N01 NS72363-01	55,030
ORGANIZATION TOTAL	26	5,694,151	
MAYO FOUNDATION—MAYO CLINIC ZIP CODE 55901			
HOAGLAND, H C.....	HUMAN SPECIMEN ACQUISITION FOR CANCER RESEARCH.....	1N01 CP71031-00	84,982
ORGANIZATION TOTAL	1	84,982	
STATE TOTAL	71	14,566,356	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MISSISSIPPI			
JACKSON			
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216			
HAERER, ARMIN F	SURVEY NEUROLOGICAL DISORDERS IN COPIAH COUNTY, MISS.....	2N01 NS72357-01	19,601
LANGFORD, HERBERT G	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION	5N01 HV12437-12	845,384
STEINBERG, MARTIN H	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB73005-00	4,205
ORGANIZATION TOTAL	3 869,190		
UNIVERSITY			
UNIVERSITY OF MISSISSIPPI ZIP CODE 38677			
BAKER, JOHN K.....	DEVELOPMENT OF N-NITROSO COMPOUNDS	5N01 CP43347-05	32,067
ORGANIZATION TOTAL	1 32,067		
STATE TOTAL	4 901,257		
MISSOURI			
COLUMBIA			
CANCER RESEARCH CENTER ZIP CODE 65201			
RODES, NED D.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	1N01 CB74138-00	62,700
RODES, NED D.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45095-05	363,127
ORGANIZATION TOTAL	2 425,827		
UNIVERSITY OF MISSOURI-COLUMBIA ZIP CODE 65201			
GEHRKE, CHARLES W.....	DEVELOPMENT & APPLIC OF GAS CHROMATOGRAPHIC TECHNIQUE.....	2N01 CM12323-11	210,000
LOEPPKY, RICHARD N.....	RETROALDOL TYPE FRAGMENTATION OF B-HYDROXY-NITROSAMINES.....	1N01 CP75946-00	30,543
MILLER, FREDERICK N.....	EFFECTS OF PERITONEAL DIALYSIS ON MICROCIRCULATION.....	1N01 AM72217-00	54,625
NOLPH, KARL D.....	EFFECTS OF INTRA-PERITONEAL VASODILATORS.....	2N01 AM52216-01	50,175
ORGANIZATION TOTAL	4 345,343		
INDEPENDENCE			
INDEPENDENCE NEIGHBORHOOD COUNCILS ZIP CODE 64050			
SCHAEFER, ROY H.....	COMMUNITY CARES PREVENTION DEMONSTRATION PROJECT.....	5N01 DE52469-06	119,977
ORGANIZATION TOTAL	1 119,977		
KANSAS CITY			
AMERICAN ACADEMY OF FAMILY PHYSICIANS ZIP CODE 64114			
KILLIAN, HARRY A.....	FAMILY PHYSICIAN IN DIAGNOSIS AND MANAGEMENT OF CANCER.....	3N01 CN65060-01	28,956
TO BE APPOINTED	EVALUATION OF MEDICAL EDUCATION PROGRAMS.....	1N01 OD72122-00	73,385
ORGANIZATION TOTAL	2 102,341		
MIDWEST RESEARCH INSTITUTE ZIP CODE 64110			
CHENG, C C.....	SYNTHESIS OF COMPOUNDS FOR STUDY OF CANCER CHEMOTHERAPY.....	5N01 CM33743-05	395,365
ENGLE, JAMES F.....	SYNTHESIS OF POLYCYCLIC HYDROCARBON DERIVATIVES.....	2N01 CP33387-10	543,764
ENGLE, JAMES F.....	PREPARATION OF TWO COMPOUNDS.....	3N01 CP65821-02	15,156
FOTOPOULOS, SOPHIA S.....	PSYCHOLOGICAL ASPECTS OF BREAST CANCER.....	2N01 CN55312-08	488,529
FOTOPOULOS, SOPHIA S.....	TREATMENT OF ANOREXIA IN CANCER PATIENTS.....	5N01 CP65787-03	138,550
KAEGI, HANS H.....	SYNTHESIS OF RADIOACTIVE RETINIODS.....	1N01 CP75911-00	155,231

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MISSOURI—Continued			
LEE, C C.....	LONG-RANGE TOXICOLOGIC EFFECT OF SPECIFIC FUNGICIDES.....	5N01 ES22084-10	69,931
MEINERS, A F.....	PREPARATION OF CARCINOGEN SAFETY MONOGRAPHS.....	5N01 C065331-02	149,903
METZ, F I.....	ANALYSIS OF CHEMICALS AND PHARMACEUTICAL FORMULATIONS.....	5N01 CM33722-07	228,823
SMITH, I C.....	APPRAISAL OF ENVIRONMENTAL EXPOSURE TO HEAVY METALS.....	2N01 ES22090-06	65,060
ORGANIZATION TOTAL	10	2,250,312	
SAINT LOUIS			
ST. LOUIS HEART ASSOCIATION ZIP CODE 63108			
ZIMMERMAN, HERBERT B.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	2N01 HV22982-05	355,130
ORGANIZATION TOTAL	1	355,130	
ST. LOUIS REGIONAL MATERNAL AND CHILD HEALTH COUNCIL ZIP CODE 63103			
HILLMAN, LAURA S.....	SIDS RISK FACTOR COOPERATIVE STUDY.....	1N01 HD72844-00	70,467
ORGANIZATION TOTAL	1	70,467	
ST. LOUIS UNIVERSITY ZIP CODE 63103			
GREEN, MAURICE.....	STUDY OF ONCOGENESIS.....	2N01 CP43359-07	499,999
GREEN, MAURICE.....	SEARCH FOR RNA VIRUS-SPECIFIC GENETIC MATERIAL.....	2N01 CP61049-02	269,297
GREEN, MAURICE.....	INFLUENCE OF INTERACTION BETWEEN ENVIRONMENTAL FACTORS.....	2N01 CP61062-01	200,000
KAISER, GEORGE C.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32980-06	218,488
SMITH, KENNETH R, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM57020-03	15,409
ORGANIZATION TOTAL	5	1,203,193	
UNIVERSITY CITY			
WASHINGTON UNIVERSITY ZIP CODE 63130			
BRUCE, ROBERT M.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	1N01 HR72909-00	35,185
HERZIG, GEOFFREY P.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62970-01	110,213
KARDOS, J L.....	DEVELOPMENT OF MATERIALS FOR VASCULAR PROSTHESES.....	3N01 HV32909-07	18,729
KARDOS, J L.....	TEST POLYMERS FOR CIRCULATORY ASSIST DEVICES.....	1N01 HV72919-00	140,179
MARSHALL, GARLAND R.....	PROSTAGLANDIN AND KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	1N01 HV72944-00	85,104
NEEDLEMAN, PHILIP.....	DEVELOP PROSTAGLANDIN SYNTHESIS AND RECEPTOR ANTAGONISTS.....	1N01 HV72945-00	81,195
SCHONFELD, GUSTAV.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	2N01 HV22916-11	757,491
SHREFFLER, DONALD C.....	PREPARE SPECIFIC ALLOANTISERA.....	5N01 AI62502-01	65,036
SHREFFLER, DONALD C.....	DEVELOPMENT OF H-2 RECOMBINANT AND MUTANT STRAINS.....	1N01 CB74154-00	72,804
SOBEL, BURTON E.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM/CLINICAL TESTS.....	1N01 HV72941-00	10,600
VIETTI, TERESA J.....	INTERACTION OF ANTICANCER AGENTS AT THE CELLULAR LEVEL.....	2N01 CM43731-06	84,182
ZARKOWSKY, HAROLD.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB73001-00	12,207
ORGANIZATION TOTAL	12	1,472,925	
STATE TOTAL	38	6,345,515	
MONTANA			
BOZEMAN			
MONTANA STATE UNIVERSITY ZIP CODE 59715			
HUFFMAN, ROY E.....	DEVELOP AND SUPPORT A CTS FACILITY.....	2N01 LM64741-06	64,835
SMITH, MALCOLM H.....	BOVINE RESPIRATORY SYNCYTIAL VIRUS INFECTION IN CALVES.....	2N01 AI52518-03	33,992
ORGANIZATION TOTAL	2	98,827	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
MONTANA—Continued			
HAMILTON			
HAMILTON BIOCHEMICAL RESEARCH LABORATORY ZIP CODE 59840			
PARKER, RENO	PURIFICATION OF LIPOPLYACCHARIDES	1N01 A172525-00	52,445
ORGANIZATION TOTAL	1 52,445		
STATE TOTAL	3 151,272		
NEBRASKA			
LINCOLN			
NEBRASKA DEPARTMENT OF HEALTH ZIP CODE 68508			
GRANT, ROBERT S.....	NEBRASKA STATE CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN45081-08	25,000
ORGANIZATION TOTAL	1 25,000		
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA AT LINCOLN ZIP CODE 68508			
BANERJEE, MIHIR R.....	CARCINOGEN-INDUCED TUMORIGENESIS—MAMMARY GLAND CULTURE	2N01 CP33289-04	88,397
ORGANIZATION TOTAL	1 88,397		
OMAHA			
CREIGHTON UNIVERSITY ZIP CODE 68178			
LYNCH, HENRY T	BIOCHEMICAL AND PHYSIOLOGICAL INVESTIGATIONS.....	2N01 CB44003-04	20,000
LYNCH, HENRY T.....	STUDY FAMILIAL ASPECTS OF COLON/RECTAL CANCER	1N01 CP71041-00	67,000
ORGANIZATION TOTAL	2 87,000		
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER ZIP CODE 68105			
FORKER, ALAN D.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72962-00	8,303
FRIEDLANDER, WALTER J.....	SUPPORT FOR CLINICAL NEUROLOGY INFORMATION CENTER	2N01 NS22300-06	146,389
NOT APPLICABLE	REGIONAL MEDICAL LIBRARY PROGRAM.....	5N01 LM54717-02	162,612
SPARKS, ROBERT D.....	BIOASSAYS OF ENVIRONMENTAL CARCINOGENESIS.....	3N01 CP33278-12	2,940,303
ORGANIZATION TOTAL	4 3,257,607		
STATE TOTAL	8 3,458,004		
NEVADA			
CARSON CITY			
NEVADA STATE DEPARTMENT OF HUMAN RESOURCES ZIP CODE 89701			
HOLDERMAN, MELBA.....	CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN65262-05	142,454
ORGANIZATION TOTAL	1 142,454		
STATE TOTAL	1 142,454		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW HAMPSHIRE			
DURHAM			
UNIVERSITY SYSTEM OF NEW HAMPSHIRE—UNIVERSITY OF NEW HAMPSHIRE ZIP CODE 03824			
JONES, PAUL R.....	PREPARATION OF VARIOUS N-NITROSO COMPOUNDS.....	5N01 CP55675-02	45,920
ORGANIZATION TOTAL	1 45,920		
HANOVER			
DARTMOUTH COLLEGE ZIP CODE 03755			
COLTON, THEODORE.....	STUDY ALTERNATIVE METHODS TO NCI'S SEER PROGRAM.....	1N01 CP71047-00	182,501
CURPHEY, THOMAS J.....	REQUIREMENTS FOR PANCREAS UPTAKE & EXCRETION-ANIMALS.....	5N01 CP55708-02	90,648
LONGNECKER, DANIEL S.....	DELIVERY OF SYNTHETIC NITROSO COMPOUNDS TO THE PANCREAS.....	5N01 CP33378-04	86,252
MATHEWS, LOUIS B.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72953-00	8,833
MAURER, L HERBERT.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45146-03	345,877
SMITH, KENDALL A.....	CULTURE TUMOR-SPECIFIC CYTOTOXIC LYMPHOCYTES.....	1N01 CB74141-00	91,196
SORENSEN, GEORGE D.....	MODEL FOR OAT CELL CARCINOMA OF THE LUNG.....	5N01 CP65776-01	146,114
ORGANIZATION TOTAL	7 951,421		
MARY HITCHCOCK MEMORIAL HOSPITAL ZIP CODE 03755			
LANE, FRANK W, JR.....	CONDUCT RADIATION THERAPY TREATMENT.....	2N01 CB12087-09	424,809
ORGANIZATION TOTAL	1 424,809		
STATE TOTAL	9 1,422,150		
NEW JERSEY			
BOONTON			
RIVERSIDE HOSPITAL ZIP CODE 07005			
EDWARDS, CHARLES H.....	HOSPICE CONCEPT FOR THE CARE OF TERMINAL CANCER PATIENTS.....	1N01 CN75391-00	758,807
ORGANIZATION TOTAL	1 758,807		
BOUND BROOK			
UNION CARBIDE CORPORATION—BOUND BROOK TECHNICAL CENTER ZIP CODE 08805			
BEACH, WILLIAM F.....	MICROFIBER FOR CIRCULATORY ASSIST DEVICE INTIMAL LININGS.....	5N01 HV81388-19	103,322
KWIATKOWSKI, G T.....	BLOOD COMPATIBLE POLY-ELECTROLYTES.....	5N01 HV32950-07	30,626
ORGANIZATION TOTAL	2 133,948		
CAMDEN			
INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 08103			
CORIELL, LEWIS L.....	OPERATION OF A REPOSITORY FOR HUMAN MUTANT CELL LINES.....	3N01 GM62119-04	395,422
LASFARGUES, ETIENNE Y.....	IMMUNOPREVENTION OF SPONTANEOUS MAMMARY TUMORS.....	1N01 CB74201-00	63,225
NICHOLS, WARREN W.....	GENETICALLY MARKED CELLS FOR AGING RESEARCH.....	3N01 AG42865-10	207,416
ORGANIZATION TOTAL	3 666,063		
RCA CORPORATION ZIP CODE 08102			
CUMMINGS, MARTIN M.....	MAINTAIN PHS-CTS COMMUNICATIONS GROUND TERMINALS.....	3N01 LM74704-02	422,640
ORGANIZATION TOTAL	1 422,640		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW JERSEY—Continued			
CHERRY HILL			
COMPUTER HORIZONS ZIP CODE 08034			
NARIN, FRANCIS	LINKAGE BETWEEN RESEARCH PUBLICATIONS AND NIH FUNDING	3N01 OD32109-12	127,818
ORGANIZATION TOTAL	1 127,818		
ELKINS-SINN ZIP CODE 08002			
REESE, DAVIS	PRODUCE PARENTERAL DOSE FORMS FOR CLINICAL USE	5N01 CM67103-01	147,223
ORGANIZATION TOTAL	1 147,223		
HIGHLAND PARK			
UNIVERSITY LABORATORIES ZIP CODE 08904			
BERNSTEIN, EUGENE H	PRODUCTION OF ONCOGENIC VIRUSES AND ANTISERA	2N01 CP33222-08	333,853
ORGANIZATION TOTAL	1 333,853		
LINDEN			
EXXON CORPORATION—EXXON RESEARCH CENTER ZIP CODE 07036			
ASHER, WILLIAM J	LIQUID MEMBRANE CAPSULE SYSTEM FOR CHRONIC UREMIA.....	2N01 AM32224-09	139,933
ORGANIZATION TOTAL	1 139,933		
MAYWOOD			
PFIZER, INC. ZIP CODE 07607			
AHMED, MUMTAZ	VIRAL INVOLVEMENT IN MAMMARY CARCINOMA	2N01 CP61054-01	165,000
HAREWOOD, KEN	PREPARATION AND PURIFICATION OF VIRAL COMPONENTS.....	2N01 CM53805-08	289,000
MAYYASI, SAMI	DEVELOPMENT OF VIRUS-CANCER TEST SYSTEM.....	3N01 CP33234-16	1,733,634
WOLFF, JOHN S. III	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	5N01 CP55703-05	230,562
ORGANIZATION TOTAL	4 2,418,196		
NEWARK			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103			
LASSER, NORMAN L	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	5N01 HV33104-09	505,336
RUSH, BENJAMIN F. JR	PROGRAM FOR EARLY DETECTION OF BREAST CANCER	2N01 CN35006-07	289,909
ORGANIZATION TOTAL	2 795,245		
NEW BRUNSWICK			
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903			
NICKERSON, WALTER J	SCREEN BLACK YEASTS FOR ANTINEOPLASTIC ACTIVITY.....	5N01 CM67106-02	98,192
SIMPSON, ROBERT W	MUTANTS OF RESPIRATORY VIRUSES AS VACCINE STRAINS	2N01 AI22504-05	79,687
ORGANIZATION TOTAL	2 177,879		
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL ZIP CODE 08854			
GOTTLIEB, MARISE S	STUDY OF CORONARY HEART DISEASE.....	5N01 HV42929-05	460,750
KUO, PETER T	CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY	5N01 HV52924-04	126,151
KUO, PETER T	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72968-00	5,716
ORGANIZATION TOTAL	3 592,617		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW JERSEY—Continued			
PRINCETON			
EDUCATIONAL TESTING SERVICE ZIP CODE 08540			
LEWIS, MICHAEL	EFFECT OF BIRTH ORDER ON MOTHER-CHILD RELATIONSHIP	2N01 HD42803-05	171,159
ORGANIZATION TOTAL	1 171,159		
EXCERPTA MEDICA FOUNDATION ZIP CODE 08540			
VINKEN, PIERRE J.	SUPPORT FOR PUBLICATION OF EPILEPSY ABSTRACTS	2N01 NS32303-07	39,340
ORGANIZATION TOTAL	1 39,340		
PRINCETON UNIVERSITY ZIP CODE 08540			
COALE, ANSLEY J.	SUPPORT OF PUBLICATION OF POPULATION INDEX	2N01 HD12138-09	99,821
MENKEN, JANE A.	STUDY ON SEQUELAE TO TEENAGE PREGNANCY	5N01 HD62858-01	83,542
WESTOFF, CHARLES F.	LONGITUDINAL STUDY OF FERTILITY	5N01 HD52819-04	230,614
ORGANIZATION TOTAL	3 413,977		
TOTAL RESEARCH CORPORATION ZIP CODE 08540			
KYLE, CORRINE.	BREAST CANCER DEMONSTRATION PROJECT INTERVIEW CONTRACT	5N01 CN65178-02	91,464
ORGANIZATION TOTAL	1 91,464		
RAHWAY			
MERCK AND COMPANY ZIP CODE 07065			
HILLEMANN, MAURICE M.	ONCOGENIC VIRUS RESEARCH AND VACCINE DEVELOPMENT	2N01 CP12059-19	1,200,000
ORGANIZATION TOTAL	1 1,200,000		
SUMMIT			
CELANESE CORPORATION--SUMMIT LABORATORY ZIP CODE 07901			
ROSENTHAL, ARNOLD J.	OPTIMIZED HEMODIALYSIS MEMBRANES	2N01 AM32200-07	100,000
ORGANIZATION TOTAL	1 100,000		
OVERLOOK HOSPITAL ZIP CODE 07901			
GREGORY, JOHN J.	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72964-00	8,727
ORGANIZATION TOTAL	1 8,727		
THOROFARE			
AMERICAN GASTROENTEROLOGICAL ASSOCIATION ZIP CODE 08086			
STYERS, KENNETH	VISUALIZED LECTURES IN INTESTINAL FUNCTION AND DIARRHEA	1N01 LM74701-00	16,500
ORGANIZATION TOTAL	1 16,500		
TRENTON			
NEW JERSEY STATE DEPARTMENT OF HEALTH ZIP CODE 08625			
GOLDFIELD, MARTIN	ETIOLOGY STUDY OF CANCER IN NEW JERSEY	2N01 CP61031-03	268,171
ORGANIZATION TOTAL	1 268,171		
STATE TOTAL	33 9,023,560		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF NEW MEXICO ZIP CODE 87131			
KEY, CHARLES R	DEVELOP POPULATION-BASED CANCER REGISTRY	2N01 CP33344-12	306,553
KEY, CHARLES R	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY	1N01 CP71036-00	55,785
KLIGERMAN, MORTON M.	A COMMUNITY-BASED CANCER CONTROL PROGRAM	5N01 CN65173-04	920,000
LAND, FRANCIS	CONTINUING EDUCATION IN PULMONARY MEDICINE	5N01 HR62933-01	37,190
TUNG, KENNETH S	IMMUNOPATHOLOGIC CONSEQUENCES OF VASECTOMY	2N01 HD32717-08	129,820
WALKER, A EARL	QUANTITATIVE INTRACRANIAL PRESSURE MEASUREMENT IN MAN	2N01 NS52332-05	72,232
YUHAS, JOHN M.	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY	1N01 CB74203-00	96,300
ORGANIZATION TOTAL	7 1,617,880		
STATE TOTAL	7 1,617,880		
NEW YORK			
ALBANY			
NEW YORK STATE DEPARTMENT OF HEALTH ZIP CODE 12237			
DAO, THOMAS	CHEMOTHERAPY STUDIES IN PATIENTS WITH BREAST CANCER	3N01 CM53834-04	52,852
DOUGLASS, HAROLD O, JR	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA	3N01 CM43794-07	40,817
GREENWALD, PETER	NEW YORK'S CERVICAL CANCER SCREENING PROGRAM	5N01 CN45091-05	294,675
HOLYOKE, EDWARD D	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA	3N01 CM43782-08	154,141
JANERICH, DWIGHT T	SIDS RISK FACTOR COOPERATIVE STUDY	1N01 HD72841-00	94,158
LOGRILLO, VITO M	EFFECTS OF INDUCED ABORTION ON SUBSEQUENT REPRODUCTION	5N01 HD62802-01	101,211
PICKREN, JOHN W	SUPPLY BLOOD & TISSUE SPECIMENS FROM CANCER PATIENTS	5N01 CP43392-03	40,897
ORGANIZATION TOTAL	7 778,751		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE ZIP CODE 12229			
RICHARDSON, ELLIS	PROTOTYPE TEST OF DECODING SKILLS	1N01 HD72837-00	71,245
ORGANIZATION TOTAL	1 71,245		
STATE UNIVERSITY OF NEW YORK ZIP CODE 12210			
HAPEMAN, KENNETH	OPERATION OF MEDLINE BACK-UP COMPUTER SYSTEM	3N01 LM64712-06	15,227
ORGANIZATION TOTAL	1 15,227		
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE ZIP CODE 12208			
FEMAN, STEPHEN S	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY	5N01 EY52146-01	28,822
FEMAN, STEPHEN S	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	1N01 EY72138-00	101,089
GOODMAN, A DAVID	RELATION OF THYROID FUNCTION TO MAMMARY TUMOR GROWTH	1N01 CB74107-00	34,200
HORTON, JOHN	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA	5N01 CM57032-06	95,922
HORTON, JOHN	DEMONSTRATION PROJECT IN BREAST CANCER	2N01 CN45140-04	346,806
LEMPERT, NEIL	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION	2N01 AI52510-04	22,015
MC KNEALLY, MARTIN F	INTRAPLEURAL BCG AFTER PRIMARY SURGERY FOR LUNG CANCER	3N01 CB53940-03	21,924
MC KNEALLY, MARTIN F	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY	5N01 HV62921-05	163,576
ORGANIZATION TOTAL	8 814,354		
AMHERST			
FRONTIER SCIENCE AND TECHNOLOGY RESEARCH FOUNDATION ZIP CODE 14226			
COSTELLO, WILLIAM G	STATISTICAL SUPPORT FOR THE GASTROINTESTINAL TUMOR STUDY	1N01 CM77136-00	170,991
ZELLER, MARVIN	CANCER CONTROL PROGRAM FOR CLINICAL COOPERATIVE GROUPS	3N01 CN75348-01	516,997
ORGANIZATION TOTAL	2 687,988		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
BUFFALO			
ASSOCIATED BIOMEIC SYSTEMS ZIP CODE 14202			
GLICK, J LESLIE.....	STUDY OF LYMPHOBLASTOID CELLS	2N01 CM02271-13	187,500
ORGANIZATION TOTAL	1 187,500		
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
AUNGST, C WILLIAM.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES	3N01 CN55299-02	122,279
BARLOW, JOSEPH.....	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67117-03	85,583
BHATTACHARYA, MALAYA.....	IMMUNODIAGNOSIS FOR EARLY DETECTION OF OVARIAN CANCER	3N01 CB64013-02	55,453
CHU, TSANN M.....	STUDY OF CARCINOEMBRYONIC ANTIGENS.....	2N01 CB33858-03	70,586
DAO, THOMAS L.....	STUDY OF STEROID SULFATION AND ESTROGEN-BINDING	2N01 CB43900-03	8,800
GUTAI, MARY W.....	BIOCHEMICAL MAPPING OF THE INTEGRATION SITE OF SV-40	1N01 CP71062-00	79,110
HELMSTETTER, CHARLES E.....	ISO-ANTIGENIC TYPING OF MOUSE STRAINS AND TUMORS.....	1N01 CM77101-00	85,972
HOROSZEWICZ, JULIUS S.....	EVALUATION OF THE ANTITUMOR PROPERTIES OF STREPTOVARICIN	2N01 CM33726-06	45,235
MIHICH, ENRICO.....	IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM57039-02	104,515
MINOWADA, JUN.....	DIAGNOSTIC USE OF LEUKEMIA-ASSOCIATED ANTIGENS.....	1N01 CB74165-00	62,397
MITTELMAN, ARNOLD.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57034-06	84,807
MURPHY, GERALD P.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55174-04	108,700
PAIGEN, BEVERLY J.....	METHODS OF ASSAYING ARYL HYDROCARBON HYDROXYLASE IN BLOOD.....	3N01 CP55629-08	30,886
PAPAHADJOPOULOS, P D.....	LIPOSOMAL ENCAPSULATION OF ANTITUMOR AGENTS.....	1N01 CM77118-00	163,348
PICKREN, JOHN W.....	CLASSIFICATION OF NONHODGKIN'S LYMPHOMAS.....	3N01 CM67114-01	48,100
SAKO, KUMAO.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65867-01	17,181
SHEDD, DONALD P.....	DEMONSTRATION PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55257-02	338,506
SINHA, DILIP K.....	CHANGING SENSITIVITY TO CARCINOGENESIS OF MAMMARY GLAND	1N01 CB74105-00	58,100
TAKITA, HIROSHI.....	IMMUNOTHERAPY OF SQUAMOUS CELL CARCINOMA.....	2N01 CB64007-02	114,101
WEISS, LEONARD.....	EVALUATE MACROPHAGE ELECTROPHORETIC MOBILITY ASSAY.....	2N01 CB53901-04	39,199
ORGANIZATION TOTAL	20 1,626,658		
RESEARCH FOR HEALTH IN ERIE COUNTY ZIP CODE 14215			
BISSELL, G DONALD.....	COMMUNITY CRIES PREVENTION DEMONSTRATION PROJECT.....	2N01 DE52473-03	63,640
ORGANIZATION TOTAL	1 63,640		
STARKS ASSOCIATES ZIP CODE 14213			
PAULL, KENNETH D.....	CHEMICAL AND DRUG EVALUATION IN CANCER CHEMOTHERAPY.....	3N01 CM53745-06	410,404
SCHULTZ, ROBERT J.....	RESYNTHESIS OF BULK CHEMICALS AND DRUGS.....	5N01 CM53769-03	174,431
STARKS, FRED W.....	SYNTHESIS OF CANCER CHEMOTHERAPY COMPOUNDS.....	5N01 CM23203-13	279,463
ORGANIZATION TOTAL	3 864,298		
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
ALBINO, JUDITH E.....	METHODOLOGIES TO MEASURE SOCIAL & PSYCHOLOGICAL FACTORS.....	1N01 DE72499-00	124,907
BATES, THEODORE R.....	IMPROVE EFFICACY OF ORAL NATURAL STEROIDS.....	5N01 HD62848-01	64,120
BEUTNER, ERNST H.....	ROLE OF ORAL MICROORGANISMS IN HUMAN DENTAL CRIES.....	1N01 DE72410-00	160,838
COSTA, GIOVANNI.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENTS.....	5N01 CP65834-01	54,560
GENCO, ROBERT J.....	CHEMICAL AGENTS TO PREVENT HUMAN PERIODONTAL PLAQUE.....	3N01 DE42440-06	14,032
GUSTAVO, CUDKOWICS.....	IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM53766-02	151,164
KANO, KYOICHI.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52514-03	11,159
KOHN, ROBERT M.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72952-00	5,179
LORE, JOHN M, JR.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65868-03	39,030
NISENGARD, RUSSELL J.....	IMMUNOLOGIC CROSS-REACTIVITY OF ORAL STREPTOCOCCI.....	5N01 DE62488-03	72,851
STINSON, MURRAY W.....	CROSS-REACTING ANTIGENS/ORAL FLORA ACIDOGENIC BACTERIA.....	1N01 DE72408-00	68,428
ZELEN, MARVIN.....	SUPPORT FOR COOPERATIVE STUDY OF BRONCHOGENIC CARCINOMA.....	3N01 CM33715-11	192,424
ORGANIZATION TOTAL	12 958,692		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
CHEEKTOWAGA			
CALSPAN CORPORATION ZIP CODE 14225			
BAIER, ROBERT E.....	MATERIALS COMPATIBLE WITH BLOOD.....	2N01 HV32953-08	135,531
ORGANIZATION TOTAL	1	135,531	
FARMINGDALE			
ARTEK SYSTEMS CORPORATION ZIP CODE 11735			
KITCHENER, WILLIAM R.....	T V CELL SCANNING AND DISPLAY SYSTEMS.....	1N01 CM77128-00	142,533
ORGANIZATION TOTAL	1	142,533	
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
ANDREWS, EDWIN J.....	STUDY OF COLON TUMORS.....	5N01 CP65744-02	7,520
MC GINNIS, ROBERT.....	FEDERAL POLICY IMPACT ON BIOSCIENCES—STATISTICAL MODELS.....	2N01 OD42175-05	62,486
SCOTT, FREDRIC W.....	ANIMAL MODEL FOR ANTIVIRAL EVALUTAION.....	5N01 AI52527-03	104,511
VISEK, WILLARD J.....	STUDY OF CONTRACEPTIVE STEROIDS.....	5N01 HD22725-10	138,649
ORGANIZATION TOTAL	4	313,166	
LAKE PLACID			
TISSUE CULTURE ASSOCIATION—W. ALTON JONES CELL SCIENCE CENTER ZIP CODE 12946			
DOUGLAS, WILLIAM H.....	DIPLOID CHIMPANZEE AND HUMAN HEPATOCYTE CELL STRAINS.....	1N01 AI72500-00	107,392
DOUGLAS, WILLIAM H.....	CULTIVATION OF NORMAL PROSTATIC EPITHELIAL CELLS.....	5N01 CP65762-01	108,074
SMITH, JAMES R.....	IN VITRO ASSESSMENT OF HUMAN CELLULAR AGING.....	1N01 AG72117-00	38,854
ORGANIZATION TOTAL	3	254,320	
MELVILLE			
LONG ISLAND CANCER COUNCIL ZIP CODE 11746			
CRAMPTON, RAY.....	A COMMUNITY-BASED CANCER CONTROL PROGRAM.....	5N01 CN75389-03	1,030,300
SMITH, RAYMOND F.....	PLANNING FOR A COMMUNITY-BASED CANCER CONTROL PROGRAM.....	3N01 CN55274-03	53,100
ORGANIZATION TOTAL	2	1,083,400	
NEW YORK			
AMERICAN HEALTH FOUNDATION ZIP CODE 10019			
FIALA, EMERICH.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	1N01 CP75948-00	94,104
WEISBURGER, JOHN H.....	STUDY OF CANCER EPIDEMIOLOGY.....	2N01 CP33208-15	410,216
WEISBURGER, JOHN H.....	METABOLISM OF CARCINOGENIC COMPOUNDS.....	2N01 CP55639-05	70,000
WEISBURGER, JOHN H.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	1N01 CP75940-00	125,000
WILLIAMS, GARY M.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	3N01 CP55705-09	161,949
WILLIAMS, GARY M.....	STUDIES OF COLON CARCINOGENESIS.....	1N01 CP75952-00	81,081
WYNDER, ERNST L.....	CORRELATION OF EPIDEMIOLOGIC AND METABOLIC PARAMETERS.....	5N01 CP65818-01	180,452
WYNDER, ERNST L.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22983-06	1,221,747
ORGANIZATION TOTAL	8	2,344,549	
AMRAM NOWAK ASSOCIATES ZIP CODE 10019			
NOT APPLICABLE.....	PATIENT EDUCATION FILM WITH FACULTY & LEARNER GUIDES.....	1N01 LM74720-00	71,184
ORGANIZATION TOTAL	1	71,184	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
BRISTOL-MYERS COMPANY ZIP CODE 10022			
CLARIDGE, C A.....	PRODUCE NOVEL ANTINEOPLASTIC COMPOUNDS.....	3N01 CM43759-08	43,335
ORGANIZATION TOTAL	1 43,335		
CAROLYN HORTON AND ASSOCIATES ZIP CODE 10011			
NOT APPLICABLE.....	REPAIR, RESTORATION AND CUSTOM REBINDING OF RARE BOOKS.....	2N01 LM54711-02	6,000
ORGANIZATION TOTAL	1 6,000		
CATHOLIC MEDICAL CENTER OF BROOKLYN AND QUEENS ZIP CODE 11432			
MARTIN, DANIEL S.....	SCREENING AGAINST SPONTANEOUS MURINE MAMMARY TUMORS.....	2N01 CM67081-04	586,406
ORGANIZATION TOTAL	1 586,406		
CITY UNIVERSITY OF NEW YORK—GRADUATE SCHOOL AND UNIVERSITY CENTER ZIP CODE 10036			
LEVITT, HARRY.....	PRESCRIPTIVE FITTING OF WEARABLE MASTER HEARING AIDS.....	2N01 NS42323-07	83,323
ORGANIZATION TOTAL	1 83,323		
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029			
ALEDORT, LOUIS M.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	5N01 HB53020-03	99,349
AUFSES, ARTHUR H, JR.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67096-02	120,246
BOSCH, JUAN P.....	COMPARE HEMOFILTRATION TO CONVENTIONAL HEMODIALYSIS.....	1N01 AM72228-00	311,810
BRUCKNER, HOWARD W.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM53841-06	192,027
GREENSPAN, EZRA M.....	STUDY OF CARCINOMA OF THE OVARIES.....	3N01 CM43703-09	96,952
HOLLAND, JAMES F.....	CHEMOIMMUNOTHERAPY OF ACUTE MYELOCYTIC LEUKEMIA.....	3N01 CB43879-05	280,840
HOLLAND, JAMES F.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	2N01 CM53837-09	117,190
HOLLAND, JAMES F.....	STUDY OF ETIOLOGY AND CONTROL OF LEUKEMIA.....	3N01 CP43225-10	447,819
NICHOLSON, WILLIAM J.....	CONTROL OF PROCEDURES FOR CHRYSOTILE IN BUILDINGS.....	3N01 ES72113-01	81,769
WASSERMAN, LOUIS R.....	PROTOTYPE CLINICAL CHEMOTHERAPY PROGRAM.....	2N01 CN65276-05	299,727
YAHR, MELVIN D.....	VIROLOGY STUDIES IN PARKINSON'S DISEASE.....	5N01 NS52309-02	103,390
ORGANIZATION TOTAL	11 2,151,119		
COLUMBIA UNIVERSITY ZIP CODE 10027			
CANFIELD, ROBERT E.....	STUDY OF HUMAN CHORIONIC GONADOTROPIN.....	5N01 HD02251-11	87,405
FELDMAN, CHARLES H.....	EVALUATE SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	1N01 HR72973-00	172,270
GUNTAKA, RAMAREDDY V.....	PHYSICAL/BIOCHEMICAL MAPPING OF AVIAN SARCOMA VIRUS.....	1N01 CP71055-00	104,200
HILAL, SADEK K.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	2N01 CB43910-63	43,419
JAMES, L STANLEY.....	CLINICAL EVALUATION OF BLOOD GAS SENSORS.....	2N01 HR52948-01	64,465
LEONARD, EDWARD F.....	PLATELET & PROTEIN REACTIONS ON ARTIFICIAL MATERIALS.....	2N01 HV32910-08	153,727
LO GERFO, PAUL.....	THYROIDITIS AS IMMUNOTHERAPY.....	2N01 CB64048-01	71,012
MARKS, PAUL A.....	REGULATION OF EUKARYOTIC GENE SEQUENCES.....	2N01 CP61008-01	68,200
MELLINS, ROBERT B.....	EVALUATION & FOLLOW-UP OF SELECTED PARAMETERS IN INFANTS.....	2N01 HD52856-07	319,594
NAKANISHI, KOJI.....	SYNTHESIS OF NEW RETINOLDS.....	1N01 CP75897-00	85,627
SPIEGELMAN, SOL.....	REPLICATION OF ONCOGENIC RNA VIRUSES.....	9N01 CP71016-00	1,237,020
WEINSTEIN, I BERNARD.....	DEVELOPMENT OF A TISSUE CULTURE TRANSFORMATION SYSTEM.....	3N01 CP23234-10	242,620
ORGANIZATION TOTAL	12 2,649,559		
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021			
KARLIN, DAVID.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY62140-01	47,732
POTTS, DOUGLAS G.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	2N01 CB43980-04	54,440
SCHEIDT, STEPHEN.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52931-03	60,390
SILVER, RICHARD T.....	SUPPORT FOR CLINICAL CANCER CHEMOTHERAPY PROGRAM.....	5N01 CN35025-07	294,875
WEKSLER, MARC E.....	LYMPHOCYTE AND SERUM IMMUNOGLOBULIN DURING LIFE OF MICE.....	3N01 AG62122-04	33,380
ORGANIZATION TOTAL	5 490,817		
HEALTH INSURANCE PLAN OF GREATER NEW YORK ZIP CODE 10022			
FINK, RAYMOND.....	EVALUATION OF THERMOGRAPHY IN BREAST-CANCER SCREENING.....	2N01 CN35021-12	353,596
FINK, RAYMOND.....	STUDY OF VALUE OF MAMMOGRAPHY.....	2N01 CP43278-07	174,720

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Cktract No.	Dollars
NEW YORK—Continued			
ORGANIZATION TOTAL	2	528,316	
JAMES MACDONALD COMPANY ZIP CODE 10023			
NOT APPLICABLE	REPAIR, RESTORATION AND CUSTOM REBINDING OF RARE BOOKS	2N01 LM54710-02	8,000
ORGANIZATION TOTAL	1	8,000	
JEWISH HOSPITAL AND MEDICAL CENTER OF BROOKLYN ZIP CODE 11238			
OOSIK, HARVEY	CYTOGENETIC STUDY OF VIRAL TRANSFORMATION	2N01 CP43251-09	236,496
OOSIK, HARVEY	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE	1N01 HB73002-00	13,840
ORGANIZATION TOTAL	2	250,336	
LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER ZIP CODE 11040			
FISHER, BERNARD	IMMUNOTHERAPY OF SQUAMOUS CELL CARCINOMA OF THE LUNG	2N01 CB64064-01	101,430
KRAMER, ROBERT J.	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72959-00	8,202
LIPSITZ, PHILIP	STUDY OF PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA	2N01 H042821-08	8,750
ORGANIZATION TOTAL	3	118,382	
MAIMONIDES MEDICAL CENTER ZIP CODE 11219			
LICHSTEIN, EOGAR	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	1N01 HV72960-00	8,472
ORGANIZATION TOTAL	1	8,472	
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
FEIT, CARL	COLLECTION OF SERIAL SERUM SAMPLES FROM CANCER PATIENTS	1N01 CB74124-00	88,530
HIRSHAUT, YASHAR	ACQUISITION OF HUMAN TUMOR SPECIMENS FOR VIRUS STUDIES	5N01 CP61038-03	190,515
KRAKOFF, IRWIN H.	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS	3N01 CM57043-09	477,497
LAUGHLIN, JOHN S.	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS	2N01 CN45057-09	258,854
LIPKIN, MARTIN	ANALYSIS OF CELL PROLIFERATION IN FAMILIAL POLYPOSIS	5N01 CP43366-06	203,025
MELAMED, MYRON R.	STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS	3N01 CN45007-06	1,137,583
ROBBINS, GUY F.	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK	5N01 CN55224-04	88,092
SCHWARTZ, MORTON K.	BIOLOGIC MARKERS IN BREAST CANCER PATIENTS	1N01 CB74206-00	97,300
SHAPIRO, WILLIAM R.	THERAPY OF PATIENTS WITH BRAIN TUMORS	5N01 CM57019-03	193,951
SHILS, MAURICE E.	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY	3N01 CP65829-02	82,257
STEARNS, MAUS W, JR.	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA	5N01 CM53844-05	66,980
YOUNG, CHARLES W.	PHASE I STUDIES OF NEW ANTICANCER AGENTS	5N01 CM43804-07	199,833
ORGANIZATION TOTAL	12	3,084,417	
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
FISHMAN, JACK	FAMILIAL GENETIC PATTERNS-BIOCHEMICAL & PHYSIOLOGICAL	3N01 CB44002-03	30,000
HOLLAND, JIMMIE	PSYCHOLOGICAL ASPECTS OF BREAST CANCER	5N01 CN55214-04	130,000
WEITZMAN, ELLIOT O.	EVALUATION & FOLLOW-UP OF SELECTED PARAMETERS IN INFANTS	2N01 H052855-03	349,570
ORGANIZATION TOTAL	3	509,570	
NEW YORK ACADEMY OF MEDICINE ZIP CODE 10029			
NOT APPLICABLE	REGIONAL MEDICAL LIBRARY SERVICES-REGION II	5N01 LM64722-02	404,858
ORGANIZATION TOTAL	1	404,858	
NEW YORK BLOOD CENTER ZIP CODE 10021			
PRINCE, ALFREO M.	EVALUATE POLYVALENT HEPATITIS B VACCINE IN CHIMPANZEES	3N01 AI62500-04	106,230
SZMUNESS, WOLF	EPIDEMOLOGY OF VIRAL HEPATITIS IN HEMODIALYSIS UNITS	3N01 AI62512-06	499,505
SZMUNESS, WOLF	MATERNAL TO INFANT TRANSMISSION OF HEPATITIS B	2N01 HB62908-02	54,711
ORGANIZATION TOTAL	3	660,446	
NEW YORK CITY HEALTH SERVICES ADMINISTRATION ZIP CODE 10013			
PAKTER, JEAN	SIOS RISK FACTOR COOPERATIVE STUDY	1N01 HD72842-00	184,500
ORGANIZATION TOTAL	1	184,500	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
NEW YORK CITY HEALTH SERVICES ADMINISTRATION—PUBLIC HEALTH RESEARCH INSTITUTE OF CITY OF N Y		ZIP CODE 10016	
HIRST, GEORGE K.....	STUDY OF SLOW VIRUS INFECTIONS OF CNS OF MAN.....	2N01 NS70082-20	104,850
OSLER, ABRAHAM G.....	CHEMICAL CARCINOGENESIS AND IMMUNOLOGY.....	2N01 CP55679-03	79,433
ORGANIZATION TOTAL	2 184,283		
NEW YORK MEDICAL COLLEGE		ZIP CODE 10029	
GIROLAMO, RITA F.....	MAMMOGRAPHY TRAINING FOR DETECTION OF BREAST CANCER.....	2N01 CN55249-05	77,904
JAFFE, ISRAELI A.....	CLINICAL TRIAL OF PENICILLAMINE IN RHEUMATOID ARTHRITIS.....	2N01 AM62217-03	242,451
PULLMAN, IRA.....	APATITIC CRYSTALS AND MINERAL-PROTEIN COMPLEXES.....	5N01 DE32418-04	44,260
ROSENKRANZ, HERBERT S.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	1N01 CP75949-00	78,900
ROSENKRANZ, HERBERT S.....	TIER ONE MICROSOMAL ASSAY FOR MUTAGENESIS.....	2N01 ESE2124-01	64,904
ORGANIZATION TOTAL	5 508,419		
NEW YORK UNIVERSITY		ZIP CODE 10003	
BASCH, ROSS S.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	1N01 CB74176-00	66,459
BASILICO, CLAUDIO.....	STUDY OF MUTANT VERTEBRATE CELLS.....	2N01 CP33279-06	146,303
DILLER, LEONARD.....	EARLY INTERVENTION IN REHABILITATION OF CANCER PATIENTS.....	5N01 CN55188-03	282,461
FRIEDMAN-KIEN, ALVIN E.....	STUDY OF INTERFERON AND VIRUS-INDUCED SKIN LESIONS.....	2N01 AI02131-11	113,202
KUSCHNER, MARVIN.....	STUDY OF PULMONARY CARCINOGENESIS.....	5N01 CP33260-10	521,071
LERMAN, STEPHEN P.....	IMMUNOTHERAPY IN FIBROSARCOMAS OF CHICKENS.....	5N01 CB64043-01	117,598
MOOR-JANKOWSKI, JAN.....	ACQUISITION, BREEDING, AND MAINTENANCE OF CHIMPANZEES.....	5N01 HB42971-11	394,594
MOOR-JANKOWSKI, JAN.....	NONHUMAN PRIMATE COLONIES FOR NIH RESEARCH PROGRAMS.....	5N01 RR62132-01	347,569
PASTERNAK, BERNARD S.....	BREAST CANCER IN INITIALLY ASYMPTOMATIC WOMEN.....	1N01 CB74103-00	111,300
RANSOHOFF, JOSEPH.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67059-02	72,462
SCHLOSS, MICHAEL.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32976-08	137,714
VILCEK, JAN T.....	METHODS OF PRODUCING HUMAN INTERFERON.....	2N01 AI02169-14	107,217
ORGANIZATION TOTAL	12 2,423,950		
PLANNED PARENTHOOD-WORLD POPULATION		ZIP CODE 10019	
DRYFOOS, JOY G.....	BEHAVIORAL STATUS OF CHILDREN BORN TO ADOLESCENT MOTHERS.....	1N01 HD72805-00	46,704
ORGANIZATION TOTAL	1 46,704		
POPULATION COUNCIL		ZIP CODE 10017	
GUPTA, GOPI N.....	DEVELOPMENT OF BIO-ERODABLE CONTRACEPTIVE IMPLANTS.....	1N01 HD72827-00	105,000
ORGANIZATION TOTAL	1 105,000		
PRESBYTERIAN HOSPITAL IN NEW YORK		ZIP CODE 10032	
HILAL, SADEK K.....	COMPUTERIZED TRANSAXIAL X-RAY RECONSTRUCTION SYSTEM.....	5N01 CB53974-03	172,674
ORGANIZATION TOTAL	1 172,674		
ROCKEFELLER UNIVERSITY		ZIP CODE 10021	
GOTSLICH, EMIL C.....	STUDIES ON MENINGOCOCCAL POLYSACCHARIDE VACCINES.....	2N01 AI12502-08	40,922
GRADY, ROBERT W.....	EVALUATION OF NEW IRON-CHELATING DRUGS.....	1N01 AM72233-00	65,342
ORGANIZATION TOTAL	2 106,264		
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH		ZIP CODE 10021	
ANDERSON, LUCY.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	1N01 CP75951-00	85,812
BALIS, M EARL.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	1N01 CP75950-00	84,043
BENDICH, AARON.....	EFFECTS OF NUCLEIC ACID PREPARATIONS ON MAMMARY CANCERS.....	2N01 CB43904-03	87,100
BOYSE, EDWARD A.....	INFLUENCE OF VIRUS-RELATED GENES TO CANCER.....	1N01 CP71003-00	119,247
EISINGER, MAGDALENA.....	HUMAN WART VIRUS IN TISSUE CULTURE.....	2N01 CP61022-01	116,000
FOGH, JORGEN.....	ISOLATION AND TISSUE CULTURE OF HUMAN TUMOR CELLS.....	3N01 CB43854-05	228,902
HIRSHAUT, YASHAR.....	HUMAN TUMOR ASSOCIATED ANTIGENS AND ANTIBODIES.....	2N01 CB53942-02	72,527
HIRSHAUT, YASHAR.....	CANCER IMMUNOTHERAPY.....	2N01 CB53970-03	147,015
KASSEL, ROBERT L.....	PLASMATHERAPY OF MOUSE TUMORS.....	1N01 CB74197-00	113,504
LLOYD, KENNETH O.....	TUMOR OR ORGAN-ANTIGENS—DIAGNOSTIC APPLICATION.....	2N01 CB64021-01	72,973

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
LLOYD, KENNETH O	SEROLOGIC ASSAYS WITH MELANOMA ASSOCIATED ANTIGENS	1N01 CB74127-00	58,640
MOORE, MALCOLM A	STUDY MULV INFECTION AND MYELOID CELL DIFFERENTIATION	1N01 CP71053-00	145,200
OETTGEN, HERBERT F	IMMUNOTHERAPY WITH TUMOR PREPARATIONS IN MAN	2N01 CB64062-01	127,845
OETTGEN, HERBERT F	IMMUNIZATION WITH BCG AND ALLOGENEIC RENAL CANCER CELLS	1N01 CB74145-00	110,192
OLD, LLOYD J	THERAPY IN MICE WITH TUMOR NECROSIS FACTOR (TNF)	2N01 CB64051-01	84,818
PINSKY, CARL M	C. PARVUM AS A THERAPEUTIC ADJUNCT TO BREAST CARCINOMA	2N01 CB53873-02	108,677
PINSKY, CARL M	BCG BEFORE RADIATION & CYSTECTOMY IN BLADDER CANCER	1N01 CB74142-00	48,943
PINSKY, CARL M	BCG IMMUNOTHERAPY—RECURRENT SUPERFICIAL BLADDER CANCER	1N01 CB74146-00	44,144
PRENSKY, WOLF	MOLECULAR HYBRIDIZATION STUDIES WITH ACTIVE RNA	2N01 CM53820-03	82,366
PRENSKY, WOLF	STRUCTURE-DISTRIBUTION OF ANIMAL ONCORNAVIRUSES	1N01 CP71059-00	122,800
ROSEN, PAUL P	EPIDEMIOLOGY OF MEDULLARY AND LOBULAR BREAST CANCER	2N01 CB63997-02	65,000
ROSEN, PAUL P	DISSEMINATED CANCER IN INVASIVE MAMMARY CARCINOMA	1N01 CB74097-00	70,031
SARKAR, NURUL H	VIRAL INVOLVEMENT OF MAMMARY CARCINOMA	3N01 CP61053-03	169,895
SCHWARTZ, MORTON K	BIOCHEMICAL ANALYSIS OF HUMAN BREAST CYST FLUID	2N01 CB53853-03	97,210
SHEN, FUNG-WIN	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS	2N01 CB64031-01	73,197
SHIKU, HIROSHI	IN VITRO AUGMENTATION OF CELL MEDIATED CYTOTOXICITY	1N01 CB74130-00	86,954
STUTMAN, OSIAS	CELL-MEDIATED CYTOTOXICITY IN TUMOR IMMUNITY	2N01 CB53894-03	66,744
WANEBO, HAROLD J	LEVAM AS THERAPEUTIC ADJUNCT IN SQUAMOUS CARCINOMA	2N01 CB53875-02	89,010
ORGANIZATION TOTAL	28	2,778,789	
ST. LUKE'S HOSPITAL CENTER ZIP CODE 10025			
KEMP, HARVEY G	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY	2N01 HV32978-07	80,366
WETHERS, DORIS L	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE	1N01 HB73006-00	18,582
ORGANIZATION TOTAL	2	98,948	
STATE UNIVERSITY OF NEW YORK—DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
BROWN, AUDREY K	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA	2N01 HD42819-08	22,254
CARTER, ANNE C	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER	2N01 CN45139-04	385,016
CRAIG, JOHN P	ESTABLISH LAB FOR TITRATION OF CHOLERA SKIN TOXINS	2N01 AI02091-12	56,886
FRIEDMAN, ELI A	DETERMINE CLINICAL EFFICACY OF OXIDIZED STARCH IN UREMIA	3N01 AM42206-05	127,146
KOUNTZ, SAMUEL L	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION	2N01 AI42551-04	114,096
SCHIFFMAN, GERALD	OPERATION OF PNEUMOCOCCAL POLYSACCHARIDE REFERENCE LAB	2N01 AI42541-04	152,272
TOLLES, WALTER E	CELL PREPARATIONS OF GYNECOLOGIC CYTOPATHOLOGY SPECIMENS	2N01 CB43955-07	143,100
ORGANIZATION TOTAL	7	1,000,770	
STELLA AND CHARLES GUTTMAN BREAST DIAGNOSTIC INSTITUTE ZIP CODE 10016			
STRAX, PHILIP	XEROMAMMOGRAPHY VERSUS FILM MAMMOGRAPHY	2N01 CB44012-03	35,612
ORGANIZATION TOTAL	1	35,612	
YESHIVA UNIVERSITY ZIP CODE 10033			
AUGUST, J THOMAS	STUDY OF MOLECULAR BASIS OF VIRAL CARCINOGENESIS	2N01 CP33311-07	203,800
BLAUFOX, MORTON D	STUDY OF HYPERTENSION THERAPY	2N01 HV22931-12	611,980
BLOOM, BARRY R	CHANGES IN CELL MEDIATED IMMUNITY IN LEPROSY PATIENTS	5N01 AI62501-01	32,499
GROLLMAN, ARTHUR P	ANTITUMOR DRUGS AND EFFECTS ON PROTEIN SYNTHESIS	2N01 CM43787-05	74,998
KIRK, EDWARD S	INTERVENTIONS REDUCING MYOCARDIAL INFARCT SIZE	5N01 HV52997-02	121,323
LILLY, FRANK	GENETIC AND IMMUNOLOGIC FACTORS IN VIRAL LEUKEMOGENESIS	9N01 CP71017-00	124,990
MARCUS, DONALD M	PURIFICATION OF AN ANTIGEN FROM HUMAN MAMMARY CARCINOMA	2N01 CB23871-08	110,738
NAGEL, RONALD L	MOLECULAR AND CELLULAR STUDIES ON SICKLE CELL ANEMIA	3N01 HB22920-09	14,900
ROMNEY, SEYMOUR L	CORRELATION OF EPIDEMIOLOGIC AND METABOLIC PARAMETERS	2N01 CP65788-02	163,613
ROSENBAUM, ROBERT	IDENTIFICATION OF LUNG CELLS	2N01 HR52952-02	91,248
SHULMAN, KENNETH M	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER	1N01 NS72371-00	116,127
SOEIRO, RUY	HGT RESTRICTION OF FRIEND LEUKEMIA VIRUS	2N01 CP43380-05	79,015
ORGANIZATION TOTAL	12	1,745,231	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
ROCHESTER			
AMERICAN ASSOCIATION FOR CANCER EDUCATION ZIP CODE 14642			
BAKEMEIER, RICHARD F.....	CANCER EDUCATION IN MEDICAL, DENTAL & OSTEOPATHY SCHOOLS.....	2N01 CN55191-02	52,008
ORGANIZATION TOTAL	1 52,008		
EASTMAN DENTAL CENTER ZIP CODE 14605			
CURZON, M E.....	STRONTIUM, LITHIUM, & FLUORINE EFFECT ON DENTAL PLAQUE.....	1N01 DE72409-00	80,573
LEVERETT, DENNIS H.....	EFFECT OF TOOTH-CLEANING ON SODIUM FLUORIDE RINSE.....	1N01 DE72407-00	48,908
ORGANIZATION TOTAL	2 129,481		
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
BAUM, JOHN.....	US-USSR COOPERATIVE PROGRAM IN RHEUMATOLOGY.....	2N01 AM62205-03	21,452
DOTY, ROBERT W.....	DEVELOPMENT OF A SENSORY PROSTHESIS.....	3N01 NS02279-10	84,080
DOUGLAS, R GORDON, JR.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	2N01 AI22503-09	297,124
FEIBEL, JOHN H.....	FEASIBILITY STUDY FOR MODEL COMPREHENSIVE STROKE CENTER.....	3N01 NS72351-01	118,901
FOWLER, EDWARD H.....	PHARMACOPATHOLOGIC EFFECTS OF MPA.....	2N01 HD32705-11	243,288
HARE, JOHN D.....	TRANSPORT SYSTEMS IN NEOPLASTIC CELLS.....	2N01 CP45611-06	138,990
HILF, RUSSELL.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	1N01 CB74204-00	72,600
MAY, ALLYN G.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22539-11	14,687
RUBIN, PHILIP.....	DEVELOPMENT OF RADIATION ONCOLOGY RESEARCH.....	1N01 CM77159-00	80,240
SMITH, DAVID H.....	STUDIES ON HEMOPHILUS INFLUENZAE B VACCINE.....	1N01 AI72523-00	148,914
WHEELLESS, LEON L, JR.....	STUDY A SLIT-SCAN TECHNIQUE FOR CANCER DETECTION.....	2N01 CB33862-06	368,741
YU, PAUL N.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72966-00	9,865
ORGANIZATION TOTAL	12 1,598,882		
SARANAC LAKE			
TRUOEAU INSTITUTE ZIP CODE 12983			
LEFFORD, MAURICE J.....	MAINTAIN A MYCOBACTERIAL CULTURE COLLECTION.....	2N01 AI52529-02	80,562
MILLER, THOMAS E.....	PRODUCTION OF AN IMPROVED BCG VACCINE.....	5N01 CB53885-02	500
ORGANIZATION TOTAL	2 81,062		
SCHENECTADY			
GENERAL ELECTRIC COMPANY—CORPORATE RESEARCH AND DEVELOPMENT CENTER ZIP CODE 12301			
SWANK, R K.....	DEVELOPMENT OF LARGE AREA SOLID STATE IMAGE RECEPTORS.....	1N01 CB74112-00	324,300
ORGANIZATION TOTAL	1 324,300		
STONY BROOK			
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794			
LANE, BERNARD P.....	STUDY OF CARCINOGENESIS IN ORGAN CULTURE.....	2N01 CP33361-06	129,385
LENER, RAYMOND C.....	OUTCOME OF PREGNANCY FOLLOWING PREVIOUS INDUCED ABORTION.....	5N01 HD62803-02	130,000
RIPA, LOUIS W.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECT.....	5N01 DE52460-04	71,580
RIPA, LOUIS W.....	EFFECT ON CARIES OF XYLITOL AND SORBITAL-SWEETENED GUM.....	5N01 DE62489-03	60,067
ORGANIZATION TOTAL	4 391,032		
SYRACUSE			
BRISTOL-MYERS COMPANY—BRISTOL LABORATORIES ZIP CODE 13201			
BRADNER, WILLIAM T.....	NEW ANTINEOPLASTIC DRUG EVALUATION.....	1N01 CM77147-00	333,000
CLARIDGE, CHARLES A.....	PRODUCTION OF NOVEL ANTINEOPLASTIC COMPOUNDS.....	1N01 CM77138-00	216,665
ORGANIZATION TOTAL	2 549,665		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NEW YORK—Continued			
STATE UNIVERSITY OF NEW YORK-UPSTATE MEDICAL CENTER ZIP CODE 13210			
HENNING, LOIS B.....	STUDYING SLEEP APNEA AND SIDS: DEVELOPMENTAL CORRELATES	2N01 HD52853-02	84,364
HENRY, JOHN B.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52513-04	10,889
ORGANIZATION TOTAL	2 95,253		
TROY			
RENSSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181			
ZELMAN, ALLEN.....	AUGMENTATION OF PERITONEAL DIALYSIS EFFICIENCY	2N01 AM62204-05	114,637
ZELMAN, ALLEN.....	HEMODIALYSIS MEMBRANES	1N01 AM72206-00	15,000
ORGANIZATION TOTAL	2 129,637		
VALHALLA			
NEW YORK MEDICAL COLLEGE ZIP CODE 10595			
BLACK, MAURICE M.....	STUDY OF IMMUNOLOGICAL MEASUREMENTS.....	2N01 CP33398-05	224,030
ROSENKRANZ, HERBERT S.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	5N01 CP65855-03	88,904
ORGANIZATION TOTAL	2 312,934		
STATE TOTAL	241 35,051,790		
NORTH CAROLINA			
CHAPEL HILL			
NORTH CAROLINA HEART ASSOCIATION ZIP CODE 27514			
HIRSCHAUER, PAUL E.....	MODEL COMPREHENSIVE STROKE CENTER PROGRAM.....	3N01 NS62347-02	24,800
ORGANIZATION TOTAL	1 24,800		
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514			
CRAIGE, ERNEST.....	NONINVASIVE ASSESSMENT OF PULMONARY HYPERTENSION.....	5N01 HR62916-01	107,645
DENNY, FLOYD W.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	2N01 AI22505-09	28,830
EDOZIEN, JOSEPH C.....	GUIDE TO DIET AND ANTHROPOMETRY IN CANCER EPIDEMIOLOGY.....	1N01 CP75880-00	56,598
GRISHAM, JOE W.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	5N01 CP55707-03	101,799
GRIZZLE, JAMES E.....	STUDY OF HYPERLIPOPROTEINEMIA	2N01 HV12243-10	104,000
HAUGHTON, GEOFFREY.....	GENETIC CONTROL OF SUSCEPTIBILITY TO CANCER	1N01 CB74182-00	70,480
KAUFMAN, DAVID G.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUE.....	1N01 CP75956-00	88,251
MC MILLAN, CAMPBELL W.....	FACTOR VIII INHIBITORS IN HEMOPHILIA	5N01 HB53016-03	62,872
PEARLMAN, WILLIAM H.....	MAMMARY GLAND RESPONSIVENESS TO MULTIPLE HORMONES	2N01 CB53905-02	95,000
SCHAEFFLER, RICHARD M.....	STUDY OF ECONOMIC VALUE OF TRAINING IN BIOSCIENCE.....	3N01 OD42152-09	50,418
SUCHINDRAN, C M.....	CONSEQUENCES OF ADOLESCENT PREGNANCY AND CHILDBEARING.....	5N01 HD62859-01	94,332
UDRY, J RICHARD.....	STUDY OF MODEL OF REPRODUCTIVE BEHAVIOR.....	2N01 HD42804-08	80,775
ORGANIZATION TOTAL	12 941,000		
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
BOLOGNESI, DANI P.....	STUDIES ON EXPRESSION OF RNA TUMOR VIRUS GENOME.....	2N01 CP33308-07	481,130
DEUBNER, DAVID C.....	EPIDEMIOLOGY OF PRE- AND POST-MENOPAUSAL BREAST CANCER.....	2N01 CB63996-01	174,800
ESTES, E HARVEY, JR.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55234-03	85,295
HEYMAN, ALBERT.....	DETECTION OF TIA IN AN ELDERLY COMMUNITY.....	3N01 NS42337-04	12,000
JENNINGS, ROBERT B.....	STUDIES IN ISCHEMIC MYOCARDIUM AND INFARCT SIZE.....	5N01 HV52999-03	107,348
LYNN, WILLIAM S.....	COMPOSITION OF RESPIRATORY MUCUS.....	5N01 HR52955-03	59,033

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NORTH CAROLINA—Continued			
MAHALEY, MOSES S, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67010-04	98,529
MC LELLAND, ROBERT.....	EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45064-03	320,886
O'FOGHLUDHA, FEARGUS.....	XEROMAMMOGRAPHY VERSUS FILM MAMMOGRAPHY.....	3N01 CB44011-04	2,500
PALMER, RICHARD A.....	IRON CHELATING AGENTS IN TREATMENT OF COOLEY'S ANEMIA.....	3N01 AM42224-04	3,999
PIZZO, SALVATORE V.....	ORAL CONTRACEPTIVES, ANTITHROBIN III, AND FIBRINOLYSIS.....	1N01 HD72804-00	48,721
PRATT, PHILIP.....	TEST LUNG TISSUE IN ADULT RESPIRATORY DISTRESS SYNDROME.....	5N01 HR52946-03	97,966
ROSSE, WENDELL F.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72993-00	6,800
SNYDERMAN, RALPH.....	DIAGNOSTIC APPLICATION OF MONOCYTE FUNCTION IN CANCER.....	1N01 CB74121-00	79,116
WARD, FRANCES E.....	NCI HISTOCOMPATIBILITY TESTING CENTER.....	2N01 CB53890-05	262,405
WELLS, SAMUEL A, JR.....	SCREENING RELATIVES OF PATIENTS WITH MEDULLARY CARCINOMA.....	5N01 CB63994-02	92,961
WELLS, SAMUEL A, JR.....	RELATION OF EMBRYONIC ANTIGEN TO TUMOR ANTIGENS.....	2N01 CP43395-03	41,745
WHISNANT, CAROL C.....	MOLECULAR STUDIES OF T-CELL MEDIATED CYTOTOXICITY.....	1N01 CB74152-00	51,874
ORGANIZATION TOTAL	18	2,027,108	
RESEARCH TRIANGLE PARK			
BECTON, DICKINSON AND COMPANY—RESEARCH CENTER ZIP CODE 27709			
CAVENDER, F L.....	EFFECT OF EXPOSURE TO AIRBORNE ENVIRONMENTAL AGENTS.....	2N01 ES42164-06	516,719
ORGANIZATION TOTAL	1	516,719	
RESEARCH TRIANGLE INSTITUTE ZIP CODE 27709			
CARROLL, F I.....	SYNTHESIS OF NEW RETINOLDS.....	1N01 CP75932-00	107,708
COOK, CLARENCE E.....	CHEMICAL CONTRACEPTIVES FOR THE MALE AND FEMALE.....	3N01 HD62814-03	279,422
COOK, CLARENCE E.....	SYNTHESIS AND TESTING OF CONTRACEPTIVE AGENTS.....	1N01 HD72818-00	96,479
HORVITZ, DANIEL G.....	INCIDENCE, PREVALENCE & COSTS OF HEAD/SPINAL CORD INJURY.....	3N01 NS42334-08	100,719
KEPLER, J A.....	PREPARATION OF RADIOLABELED MATERIALS.....	5N01 CM67121-01	219,837
KIMMEL, GARY L.....	TERATOGENIC POTENTIAL OF ENVIRONMENTAL AGENTS.....	5N01 ES62127-01	246,861
PITT, COLIN G.....	SYNTHESIS OF IRON CHELATING AGENTS FOR COOLEY'S ANEMIA.....	1N01 AM72231-00	41,879
PITT, COLIN G.....	BIODEGRADABLE POLYMERS AND CONTRACEPTIVE DRUGS.....	2N01 HD32741-07	211,983
PITT, COLIN G.....	SYNTHESIZE PROGESTATIONAL AND ANTIPROGESTATIONAL AGENTS.....	2N01 HD62854-02	25,233
POOLE, KENNETH W.....	EVALUATE ANTENATAL STEROID THERAPY IN NEONATAL RDS.....	5N01 HR62948-04	229,057
POOLE, KENNETH W.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM—DATA CENTER.....	1N01 HV72979-00	87,036
WALL, MONROE E.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	5N01 CM67089-03	190,174
YASUDA, HIROTSUGU K.....	STUDY OF ELECTRODELESS GLOW DISCHARGE & POLYMER SURFACES.....	2N01 HV32913-10	93,127
ORGANIZATION TOTAL	13	1,929,515	
WINSTON-SALEM			
WAKE FOREST UNIVERSITY ZIP CODE 27109			
ALEXANDER, EBEN, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67054-03	39,885
CLARKSON, THOMAS B.....	NONHUMAN PRIMATE MODELS OF ATHEROSCLEROSIS.....	3N01 HV53029-03	66,302
CLARKSON, THOMAS B.....	PRIMATE MODELS OF ATHEROSCLEROSIS AND HYPERTENSION.....	1N01 HV72978-00	207,732
CLARKSON, THOMAS B.....	DOMESTIC SQUIRREL MONKEY PRODUCTION.....	5N01 RR52149-03	83,411
MC HENRY, LAWRENCE C.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS.....	1N01 HV72925-00	247,168
ORGANIZATION TOTAL	5	644,498	
STATE TOTAL	50	6,083,640	
OHIO			
AKRON			
CHILDREN'S HOSPITAL MEDICAL CENTER OF AKRON ZIP CODE 44308			
IGEL, HOWARD J.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	5N01 CP55706-05	240,161
ORGANIZATION TOTAL	1	240,161	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
OHIO—Continued			
UNIVERSITY OF AKRON ZIP CODE 44325			
WILLIAMS, GREGORY	STUDY SCIENTIFIC MANPOWER FOR POPULATION RESEARCH.....	3N01 HD62850-02	14,950
ORGANIZATION TOTAL	1	14,950	
BEDFORD			
BEN VENUE LABORATORIES ZIP CODE 44146			
WICKES, GLENN	DEVELOP AND PRODUCE CLINICAL DOSES OF ANTITUMOR AGENTS.....	5N01 CM67109-02	1,377,870
ORGANIZATION TOTAL	1	1,377,870	
BOWLING GREEN			
BOWLING GREEN STATE UNIVERSITY ZIP CODE 43404			
NEAL, ARTHUR G.....	ALIENATION AND FERTILITY CONTROL IN EARLY MARRIAGE YEARS.....	5N01 HD62833-01	125,117
ORGANIZATION TOTAL	1	125,117	
CHARDON			
GAUGA COUNTY GENERAL HEALTH DISTRICT HEALTH DEPARTMENT ZIP CODE 44024			
HULL, TERRY E.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECTS.....	2N01 DE52474-02	40,655
ORGANIZATION TOTAL	1	40,655	
CINCINNATI			
CHRIST HOSPITAL ZIP CODE 45219			
PONS, MARCEL W.....	DETECTION OF RESPIRATORY VIRUS GENOMES IN HUMAN TISSUES.....	1N01 AI72522-00	63,016
ORGANIZATION TOTAL	1	63,016	
UNIVERSITY OF CINCINNATI ZIP CODE 45221			
BUNCHER, CHARLES R.....	STATISTICAL SURVEILLANCE OF LUNG CANCER PROJECTS.....	5N01 CB43868-06	414,441
MOSKOWITZ, MYRON.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	3N01 CN55310-03	1,520
OLINGER, CHARLES P.....	ULTRASONIC INSTRUMENTATION FOR ATHEROSCLEROSIS DETECTION.....	3N01 HV52964-02	6,069
OLINGER, CHARLES P.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS.....	1N01 HV72924-00	289,163
SUTHERLAND, JAMES M.....	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42818-10	13,923
ORGANIZATION TOTAL	5	725,116	
CLEVELAND			
CANCER CENTER, INC. ZIP CODE 44106			
BANISTER, OLIVE K.....	DEVELOP AND IMPLEMENT AT-HOME REHABILITATION PROGRAMS.....	2N01 CN65302-03	270,919
ORGANIZATION TOTAL	1	270,919	
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
CAPLAN, ARNOLD I.....	PREPARE CULTURES OF EMBRYONIC CHICK LIMB CHONDROCYTES.....	1N01 DE72403-00	26,113
DEARBORN, DORR.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	1N01 HR72920-00	104,500
HOPFINGER, ANTON J.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	1N01 CP75927-00	98,678
HOUSER, HAROLD B.....	DIABETES MELLITUS IN THE GILA RIVER INDIAN COMMUNITY.....	2N01 AM62221-01	77,927
HUBAY, CHARLES A.....	THERAPY OF CARCINOMA OF BREAST.....	2N01 CB43990-08	218,800
MORTIMER, EDWARD A, JR.....	STUDY OF CANCER SUBJECTS INOCULATED WITH SV40 VIRUS.....	2N01 CP43201-08	44,703
MORTIMER, JOHN T.....	STUDY OF INTRAMUSCULAR STIMULATION OF PARALYZED MUSCLE.....	2N01 NS22314-05	215,000
ORGANIZATION TOTAL	7	785,721	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
OHIO—Continued			
CLEVELAND CLINIC HOSPITAL ZIP CODE 44106			
BRAUN, WILLIAM E.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22536-06	30,950
BRAUN, WILLIAM E.....	TYPING OF HUMAN TISSUES.....	3N01 AI81298-17	170,800
NOSE, YUKIHIKO.....	DEVELOPMENT AND EVALUATION OF CARDIAC PROSTHESES.....	2N01 HV42960-06	521,617
ORGANIZATION TOTAL	3 723,367		
UNIVERSITY HOSPITALS OF CLEVELAND ZIP CODE 44106			
GROSS, SAMUEL.....	PEDIATRIC SPECIMEN MATERIAL FROM NEOPLASTIC DISEASE.....	2N01 CP61007-02	34,973
ORGANIZATION TOTAL	1 34,973		
COLUMBUS			
AMERICAN CHEMICAL SOCIETY—CHEMICAL ABSTRACTS SERVICE ZIP CODE 43202			
BROWN, CARTER N.....	CHEMICAL ABSTRACTS SERVICE REGISTRY-BASED SERVICES.....	2N01 LM54739-06	141,320
SEALS, JAMES V.....	DRUG RES. & DEVELOPMENT OF CHEMICAL INFORMATION SYSTEM.....	2N01 CM43722-04	449,100
ORGANIZATION TOTAL	2 590,420		
BATTELLE MEMORIAL INSTITUTE ZIP CODE 43201			
BARKER, ANNA D.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM57005-04	775,981
FOLK, ROGER.....	STUDY OF TOXICOLOGY OF COMPOUNDS.....	3N01 CM43746-20	41,879
GARDNER, DAVID L.....	DEVELOPMENT OF ORALLY ACTIVE DOSAGE FORMS FOR STEROIDS.....	1N01 HD72849-00	124,628
OVEJERA, ARTEMIO.....	SCREENING COMPOUNDS USING HUMAN TUMORS IN ATHYMIC MICE.....	5N01 CM67099-03	454,410
SIMON, R.....	DEVELOP AND IMPLEMENT THE LABORATORY ANIMAL DATA BANK.....	3N01 LM54747-10	622,012
ORGANIZATION TOTAL	5 1,935,152		
CENTRAL OHIO LUNG ASSOCIATION ZIP CODE 43215			
ALTMAN, MICHAEL.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	1N01 HR72911-00	29,610
ORGANIZATION TOTAL	1 29,610		
COLUMBUS HEALTH DEPARTMENT ZIP CODE 43215			
MACKENZIE, AILEEN L.....	OHIO CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN45079-08	213,269
ORGANIZATION TOTAL	1 213,269		
NORTH AMERICAN PHILIPS CORPORATION—PHILIPS ROXANE LABORATORIES ZIP CODE 43215			
MARINE, MICHAEL D.....	DEVELOPMENT AND PRODUCTION OF SOLID ORAL DOSE FORMS.....	5N01 CM67053-03	126,921
ORGANIZATION TOTAL	1 126,921		
OHIO STATE UNIVERSITY ZIP CODE 43210			
BALCERZAK, STANLEY P.....	DEVELOPMENT OF THERAPY FOR SICKLE CELL DISEASE.....	2N01 HB22922-07	92,252
HORTON, DEREK.....	DESIGN/SYNTHESIS—DAUNOSAMINE RELATED FRAUDULENT SUGARS.....	5N01 CM57015-02	68,223
HUDSDETH, DE LAYNE.....	REGIONAL EDUCATIONAL CENTER.....	2N01 LM64715-04	219,558
HUGHES, JOHN H.....	ESTABLISH VIRAL REAGENT TESTING LABORATORY.....	5N01 AI62513-01	16,056
HUNT, WILLIAM E.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67060-03	28,123
KING, GERALD W.....	QUANTITATIVE ASSAYS OF MONOCYTE-MACROPHAGE FUNCTION.....	2N01 CB53936-02	89,524
KLASSEN, KARL P.....	THERAPY OF PATIENTS WITH BRONCHOGENIC CARCINOMA.....	3N01 CM33736-07	31,895
MALSPEIS, LOUIS.....	CLINICAL PHARMACOLOGY OF POTENTIAL ANTICANCER AGENTS.....	5N01 CM53828-02	104,258
MILO, GEORGE E, JR.....	INTERACTION BETWEEN CHEMICAL AND VIRAL CARCINOGENS.....	2N01 CP43276-08	139,902
OLSEN, RICHARD G.....	ANTIGENICITY OF PRECANCEROUS LESIONS IN ANIMAL MODELS.....	1N01 CB74159-00	66,489
OLSEN, RICHARD G.....	IMMUNOBIOLOGIC RESPONSES TO ONCORNAVIRUSES.....	2N01 CP53571-03	220,000
ROSEN, SAMUEL C.....	EFFICACY OF ENZYME-FREE ANTIGENS IN ANTICANCER VACCINES.....	5N01 DE52450-06	26,928
SCHIMPFHUSER, FRA.....	AN ANALYSIS OF TEACHING SKILLS.....	3N01 LM54746-03	18,950
ZWILLING, BRUCE S.....	CHEMICAL CARCINOGENESIS AND IMMUNITY.....	5N01 CP53329-01	146,873
ORGANIZATION TOTAL	14 1,269,031		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
OHIO—Continued			
DAYTON			
MONSANTO COMPANY—DAYTON LABORATORY ZIP CODE 45418			
BEEMSTERBOER, GEORGE L.....	PREPARATION OF NSC 153858, MAYTANSINE.....	1N01 CM77140-00	478,137
ELLARD, JAMES A.....	PRODUCTION OF BULK CHEMICALS AND DRUGS.....	5N01 CM67046-01	568,000
MC MILLIN, CARL R.....	TEST POLYMERS FOR CIRCULATORY ASSIST DEVICES.....	1N01 HV72918-00	159,402
ORGANIZATION TOTAL	3 1,205,539		
WRIGHT STATE UNIVERSITY ZIP CODE 45431			
KEZDI, PAUL.....	STUDIES IN ISCHEMIC MYOCARDIUM AND INFARCT SIZE.....	2N01 HV53005-06	66,995
ORGANIZATION TOTAL	1 66,995		
TOLEDO			
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614			
SOLOFF, MELVYN S.....	IDENTIFICATION OF MAMMARY TISSUE.....	2N01 CB63983-01	98,000
ORGANIZATION TOTAL	1 98,000		
STATE TOTAL	52 9,936,802		
OKLAHOMA			
ADA			
VALLEY VIEW HOSPITAL ZIP CODE 74820			
TROSKA, JOE.....	CLINICAL ONCOLOGY PROGRAM.....	2N01 CN65295-03	20,000
ORGANIZATION TOTAL	1 20,000		
NORMAN			
UNIVERSITY OF OKLAHOMA ZIP CODE 73069			
WEINHEIMER, ALFRED J.....	ISOLATION OF ANIMAL AND INSECT ANTINEOPLASTIC AGENTS.....	5N01 CM67108-03	59,203
ORGANIZATION TOTAL	1 59,203		
OKLAHOMA CITY			
OKLAHOMA MEDICAL RESEARCH FOUNDATION ZIP CODE 73104			
BRADFORD, REAGAN H.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22932-09	1,627,075
CARUBELLI, RAOUL.....	COMPOSITION OF RESPIRATORY MUCUS.....	5N01 HR52956-02	48,440
HOGUE, ARTHUR F.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45137-04	290,736
KILLION, JERALD J.....	NEW APPROACHES TO IMMUNOTHERAPY.....	3N01 CB53937-02	18,117
ORGANIZATION TOTAL	4 1,984,368		
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
HABERMAN, JO ANN.....	DEVELOPMENT OF INFRARED SCANNING SYSTEM.....	2N01 CB43869-06	309,750
HABERMAN, JO ANN.....	THERMOGRAPHY TECHNOLOGIST TRAINING PROGRAM.....	2N01 CN55163-05	33,240
LEVIN, DAVID C.....	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	3N01 HR72903-03	25,189
PATTERSON, C DOWELL.....	PULMONARY DISEASE RISK-INDIVIDUALS WITH MZ PHENOTYPES.....	1N01 HR72908-00	60,040
RENNERT, OWEN M.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	1N01 HR72923-00	85,500
ORGANIZATION TOTAL	5 513,719		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
OKLAHOMA—Continued			
STILLWATER			
OKLAHOMA STATE UNIVERSITY AT STILLWATER ZIP CODE 74074			
CARRAWAY, KERMIT L.....	INTERACTION OF BASEMENT MEMBRANES WITH PLATELETS.....	5N01 HV42983-04	71,722
EISENBRAUN, EDMUND J.....	SYNTHESIS OF ANTIFERTILITY COMPOUNDS.....	2N01 HD42846-06	60,296
ORGANIZATION TOTAL	2 132,018		
STATE TOTAL	13 2,709,308		
OREGON			
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY ZIP CODE 97331			
REED, DONALD.....	STUDY OF METABOLISM OF ANTINEOPLASTIC AGENTS.....	5N01 CM23201-09	92,840
ORGANIZATION TOTAL	1 92,840		
PORTLAND			
EMANUEL HOSPITAL ZIP CODE 97227			
STANWOOD, JOHN E.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	2N01 CN55182-02	320,823
ORGANIZATION TOTAL	1 320,823		
GOOD SAMARITAN HOSPITAL AND MEDICAL CENTER ZIP CODE 97210			
CHENOWETH, R G.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY62141-01	58,559
GOODMAN, MORTON J.....	SUPPORT FOR CANCER-DETECTION PROGRAM.....	2N01 CN45088-04	312,891
KLEIN, MICHAEL L.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72144-00	155,131
SCHIMSCHOCK, JAMES R.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	3N01 NS52328-07	972,015
ORGANIZATION TOTAL	4 1,498,596		
MEDICAL RESEARCH FOUNDATION OF OREGON ZIP CODE 97225			
ALEXANDER, NANCY J.....	LONG-TERM EFFECTS OF VASECTOMY.....	2N01 HD42866-07	114,017
MALLEY, ARTHUR.....	PURIFICATION OF HUMAN TUMOR ASSOCIATED ANTIGENS.....	2N01 CB53954-03	77,248
ORGANIZATION TOTAL	2 191,265		
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201			
BUIST, A SONIA.....	STUDY TO STANDARDIZE MEASUREMENT OF CLOSING VOLUME.....	5N01 HR32900-08	206,505
CREAMER, HOWARD R.....	PERIODONTAL DISEASE IN PATIENTS WITH IMMUNE DISORDERS.....	5N01 DE52455-05	161,575
GOODNIGHT, SCOTT H.....	COOPERATIVE STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	5N01 HB53024-03	61,021
PIROFSKY, BERNARD.....	PREPARATION OF GAMMA GLOBULIN.....	2N01 HB32942-08	29,000
PRESCOTT, GERALD H.....	COORDINATION OF REGIONAL CYTOGENETIC REGISTRIES.....	2N01 HD32713-11	223,045
TO BE APPOINTED.....	ANALYZE PCB'S AND DDE IN HUMAN FLUIDS AND TISSUE.....	1N01 ES72126-00	134,993
YATSU, FRANK.....	FEASIBILITY STUDY FOR MODEL COMPREHENSIVE STROKE CENTER.....	3N01 NS72348-04	102,615
ORGANIZATION TOTAL	7 918,754		
PROVIDENCE MEDICAL CENTER ZIP CODE 97213			
MAURICE, GORDON L.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72965-00	10,690
ORGANIZATION TOTAL	1 10,690		
STATE TOTAL	16 3,032,968		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
PENNSYLVANIA			
ALLENTOWN			
ALLENTOWN HOSPITAL ASSOCIATION ZIP CODE 18102			
PRAGER, DAVID	CLINICAL ONCOLOGY PROGRAM.....	1N01 CN75394-00	130,353
ORGANIZATION TOTAL	1 130,353		
BALA-CYNWYD			
U.S. SMALL BUSINESS ADMINISTRATION ZIP CODE 19004			
MATHUR, VINIA C	ASSEMBLE AND DISTRIBUTE NCI COMMITTEE BOOKS.....	3N01 C055170-05	54,318
TING, ROBERT C.....	RNA TUMOR VIRUS TRANSFORMATION OF SKIN FIBROBLAST CELLS.....	3N01 CP43365-04	1,710
ORGANIZATION TOTAL	2 56,028		
DANVILLE			
INSTITUTE FOR MEDICAL EDUCATION AND RESEARCH ZIP CODE 17821			
LAUBACH, CHARLES A.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52920-03	68,407
ORGANIZATION TOTAL	1 68,407		
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033			
BARDIN, CLYDE W.....	ASSAY OF PROGESTERONE RECEPTOR ACTIVITY IN UTERUS.....	2N01.HD12228-12	83,234
BARDIN, CLYDE W.....	COMPARATIVE STUDY OF PROGESTIN METABOLISM.....	5N01 HD22730-12	352,151
BARTLETT, GERALD L.....	STUDY OF CANCER IMMUNOTHERAPY.....	3N01 CB33891-05	194,130
BARTLETT, GERALD L.....	IMMUNOGENICITY OF 'SPONTANEOUS' ANIMAL TUMORS.....	2N01 CB64039-01	58,082
DAVIDSON, EUGENE A.....	GLYCOPROTEINS OF MAMMARY CELL SURFACE.....	2N01 CB63984-02	114,500
DAVIDSON, EUGENE A.....	COMPOSITION OF RESPIRATORY MUCUS.....	5N01 HR52954-01	60,197
EYSTER, M ELAINE.....	STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	5N01 HB53021-03	66,910
KREIDER, JOHN W.....	IMMUNOPREVENTION OF TUMORS IN RABBITS.....	1N01 CB74158-00	92,299
LANOUE, KATHRYN F.....	BIOCHEMISTRY OF MITOCHONDRIA.....	5N01 HV52994-02	47,778
NAEYE, RICHARD L.....	ANALYZE CAUSES OF SUDDEN INFANT DEATH SYNDROME.....	5N01 HD62845-01	38,325
NAEYE, RICHARD L.....	ANALYSIS OF GENERAL AND PLACENTAL PATHOLOGY DATA.....	1N01 NS72376-00	56,447
RAPP, FRED.....	ONCOGENIC POTENTIAL OF DEFECTIVE HUMAN VIRUSES.....	3N01 CP53516-04	496,500
RAPP, FRED.....	IN VITRO MALIGNANT TRANSFORMATION.....	2N01 CP61063-01	84,554
SANTEN, RICHARD J.....	SUPPRESSION OF ENDOCRINE FUNCTION IN HUMAN BREAST CANCER.....	2N01 CB53851-02	225,000
ORGANIZATION TOTAL	14 1,970,107		
MARCUS HOOK			
SUN OIL COMPANY-SUNTECH, INC. ZIP CODE 19061			
MOORE, ROBERT E.....	FLUOROCARBON COMPOUNDS AS ARTIFICIAL BLOOD SUBSTITUTES.....	5N01 HB62927-01	127,280
ORGANIZATION TOTAL	1 127,280		
PHILADELPHIA			
ALBERT EINSTEIN MEDICAL CENTER ZIP CODE 19141			
ISARD, HAROLD J.....	PROGRAM FOR DETECTING CANCER OF THE BREAST.....	2N01 CN45058-03	274,597
ORGANIZATION TOTAL	1 274,597		
ANIMATION ARTS ASSOCIATES ZIP CODE 19130			
ZIEGLER, HARRY E, JR.....	MISCELLANEOUS GRAPHIC ART SERVICES.....	1N01 LM74717-00	24,075
ORGANIZATION TOTAL	1 24,075		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
PENNSYLVANIA—Continued			
BIOLOGICAL ABSTRACTS ZIP CODE 19103			
KENNEDY, H E.....	TOXLINE ENRICHMENT.....	2N01 LM64704-03	40,055
ORGANIZATION TOTAL	1 40,055		
BOOZ, ALLEN AND HAMILTON—NATIONAL ANALYSTS ZIP CODE 19106			
SHERMAN, LORNA R.....	INCIDENCE, PREVALENCE AND COSTS OF MULTIPLE SCLEROSIS.....	2N01 NS42335-05	103,591
ORGANIZATION TOTAL	1 103,591		
CENTER FOR RESEARCH ON THE ACTS OF MAN ZIP CODE 19104			
FURSTENBERG, FRANK F.....	STUDY OF EARLY CHILDBEARING AND KINSHIP RELATIONS.....	1N01 HD72822-00	60,150
ORGANIZATION TOTAL	1 60,150		
CHILDREN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104			
CRILL, FRANCES M.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72997-00	12,345
D'ANGIO, GIULIO J.....	STUDY ONCOGENESIS AND LATE EFFECTS OF CANCER THERAPY.....	2N01 CP65803-01	125,998
HENLE, GERTRUDE.....	PROPAGATION AND SEROEPIDEMIOLOGY OF EB VIRUS.....	5N01 CP33272-05	202,804
HUMMELER, KLAUS.....	MULTIPLE SCLEROSIS ETIOLOGY—IMMUNE ELECTRON MICROSCOPY.....	2N01 NS52311-04	87,000
ORGANIZATION TOTAL	4 428,147		
COLLEGE OF PHYSICIANS OF PHILADELPHIA ZIP CODE 19103			
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY SERVICES—REGION III.....	5N01 LM64723-01	345,618
ORGANIZATION TOTAL	1 345,618		
FRANKLIN INSTITUTE OF THE STATE OF PENNSYLVANIA ZIP CODE 19103			
CAMPBELL, GRAHAM L.....	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER.....	5N01 C065361-01	252,722
CRAIG, PAUL N.....	GIANT HAMSTER ATLAS—REVIEW.....	3N01 CP55687-07	4,733
CRAIG, PAUL N.....	INFORMATION SERVICES FOR THE CARCINOGENESIS PROGRAM.....	2N01 CP65742-03	32,156
CRAIG, PAUL N.....	INFORMATION SUPPORT TO THE LUNG CANCER PROGRAM.....	2N01 CP65812-01	39,095
CRAIG, PAUL N.....	LITERATURE SEARCH OF CARCINOGENIC POTENCY INDEXES.....	3N01 CP65827-01	2,016
KLEINSTEIN, BRUCE H.....	PREPARATION OF GASTROENTEROLOGY ABSTRACTS AND CITATIONS.....	2N01 AM42204-09	141,825
KLEINSTEIN, BRUCE H.....	PREPARATION AND FURNISHING OF CANCER THERAPY ABSTRACTS.....	1N01 CM77092-00	401,310
KLEINSTEIN, BRUCE H.....	INDEXING OF CANCER-RELATED LITERATURE.....	5N01 C075387-02	850,471
KLEINSTEIN, BRUCE H.....	PREPARATION OF CARCINOGENESIS ABSTRACTS.....	1N01 CP75885-00	521,519
KRONICK, PAUL L.....	APPLICATION OF HYDROGELS TO POLYMERIC SURFACES.....	2N01 HV12017-14	53,388
NEMES, MARJORIE M.....	PREPARATION OF ABSTRACTS FROM CANCER-RELATED LITERATURE.....	5N01 C055220-06	147,730
PETERS, ALEC.....	INDEXING JOURNAL ARTICLES IN THE BIOMEDICAL SCIENCES.....	2N01 LM64706-01	100,100
TAUBER, STEPHEN.....	TECHNICAL SUPPORT SERVICES FOR THE ICRDB PROGRAM.....	3N01 C055193-06	224,847
TO BE APPOINTED.....	INFORMATION SERVICES IN HUMAN TISSUE STUDY PROGRAM.....	1N01 CP75890-00	3,000
ORGANIZATION TOTAL	14 2,774,912		
HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
ANGELAKOS, EVANGELOS T.....	NONHUMAN PRIMATE MODELS OF ARTERIOSCLEROSIS.....	2N01 HV62905-02	53,419
BRADY, LUTHER W.....	NETWORK DEMONSTRATION PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55255-02	65,475
ORGANIZATION TOTAL	2 118,894		
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
ENGSTROM, PAUL F.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45055-03	320,847
SUTNICK, ALTON.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	3N01 CN45126-05	19,711
TO BE APPOINTED.....	IMPLEMENT PLAN FOR COOPERATION AMONG CANCER INSTITUTES.....	1N01 C075334-00	273,562
ORGANIZATION TOTAL	3 614,120		
LANKENAU HOSPITAL ZIP CODE 19151			
DREIFUS, LEONARD S.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52938-02	85,967
HOLMES, WILLIAM L.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72958-00	9,093
ORGANIZATION TOTAL	2 96,060		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
PENNSYLVANIA—Continued			
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129			
PAUCKER, KURT.....	PRODUCTION OF PURE ANTIBODY TO INTERFERON.....	2N01 AI52520-05	48,664
ORGANIZATION TOTAL	1 48,664		
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC WELFARE—EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE ZIP CODE 19129			
MARACEK, JEANNE A.....	CONSEQUENCES OF ADOLESCENT CHILDBEARING.....	1N01 HD72806-00	64,067
ORGANIZATION TOTAL	1 64,067		
PHILADELPHIA GERIATRIC CENTER ZIP CODE 19141			
ALTSCHULER, HENRY.....	COLLECTION OF SERA FROM HIGH-CANCER-RISK POPULATIONS.....	2N01 CB33914-03	52,768
ORGANIZATION TOTAL	1 52,768		
TEMPLE UNIVERSITY ZIP CODE 19122			
CLARK, WALLACE H, JR.....	INDUCTION OF MALIGNANT MELANOMAS IN GUINEA PIGS.....	2N01 CP33200-09	129,795
FORBES, P D.....	UV PHOTOCARCINOGENESIS.....	2N01 CP43271-06	234,469
POLLACK, ROBERT L.....	STUDIES OF DENTAL PLAQUE & SALIVA FROM HUMANS.....	5N01 DE62495-02	88,937
SWENSON, ROBERT M.....	STUDIES ON THE ANTIGENS OF GROUP B STREPTOCOCCUS.....	1N01 AI72539-00	315,382
ORGANIZATION TOTAL	4 768,583		
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107			
LEWIS, GEORGE C, JR.....	CANCER CONTROL PROGRAM—GYNECOLOGIC ONCOLOGY GROUP.....	1N01 CN75338-00	297,078
SHAPIRO, SANDOR S.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	5N01 HB53018-03	56,513
SHAPIRO, SANDOR S.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	3N01 HB53035-03	183,105
SMITH, HARRY L, JR.....	SUPPORT FOR CHOLERA VIBRIO REFERENCE LABORATORY.....	5N01 AI32502-08	41,156
WALLACE, JOHN D.....	STUDY OF THERMOGRAPHY IN SCREENING FOR BREAST CANCER.....	3N01 CN35027-09	192,784
ORGANIZATION TOTAL	5 770,636		
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104			
FORADORI, GEORGE.....	DATA MANAGEMENT CENTER FOR BREAST CANCER DETECTION.....	3N01 CN65376-02	1,065,822
ORGANIZATION TOTAL	1 1,065,822		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174			
ASAKURA, TOSHIO.....	MOLECULAR AND CLINICAL STUDY OF SICKLE CELL DISEASE.....	3N01 HB22962-08	49,000
AUSTRIAN, ROBERT.....	SURVEILLANCE OF PNEUMOCOCCAL INFECTION.....	2N01 AI32517-07	114,797
CHANCE, BRITTON.....	BIOENERGETIC ASPECTS OF CANCER CHEMOTHERAPEUTIC AGENTS.....	3N01 CM53830-03	24,020
EDMUNDS, L HENRY, JR.....	EXTRACORPOREAL SUPPORT FOR RESPIRATORY INSUFFICIENCY.....	5N01 HR42922-05	70,823
HUGGINS, GEORGE R.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	1N01 HD72807-00	85,000
JIMENEZ, SERGIO A.....	NATURAL & MODIFIED COLLAGEN INTERACTION WITH PLATELETS.....	5N01 HV42982-06	149,457
KARE, MORLEY.....	GUSTATORY (TASTE) EVALUATION OF CANCER PATIENTS.....	3N01 CP65791-02	39,882
KUHL, DAVID E.....	COMPUTERIZED TRANSAXIAL NUCLIDE RECONSTRUCTION.....	3N01 CB53859-02	1,200
LEBOY, PHOEBE S.....	METHYLATION OF TRNA IN NORMAL NEOPLASTIC MAMMARY TISSUE.....	1N01 CB74108-00	99,100
MULLEN, JAMES L.....	OPTIMAL NUTRITIONAL SUPPORT TO CANCER THERAPY.....	5N01 CP65802-01	19,337
SCHWARTZMAN, ROBERT M.....	ANIMAL COLONY FOR ALLERGY STUDIES.....	1N01 AI72537-00	118,631
TSOU, KWAN C.....	5'-NUCLEOTIDE PHOSPHODIESTERASE SERUM ISOZYME TEST.....	3N01 CB64029-02	110,043
WOLF, DON P.....	PHYSIOCHEMICAL CHARACTERIZATION—HUMAN CERVICAL MUCOUS.....	2N01 HD42838-06	89,370
ORGANIZATION TOTAL	13 970,660		
WILLS EYE HOSPITAL ZIP CODE 19130			
TASMAN, WILLIAM.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72150-00	31,901
ORGANIZATION TOTAL	1 31,901		
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
BUCK, CLAYTON A.....	GLYCOPROTEINS OF THE MAMMARY CELL SURFACE.....	2N01 CB64069-02	99,700
PALMER, JON C.....	IMMUNOTHERAPY OF MOUSE TUMORS.....	2N01 CB64005-01	93,672
ORGANIZATION TOTAL	2 193,372		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
PENNSYLVANIA—Continued			
PITTSBURGH			
ALLEGHENY HEALTH, EDUCATION AND RESEARCH CORPORATION—ALLEGHENY GENERAL HOSPITAL ZIP CODE 15212			
SCHIFFER, LEWIS M.....	STUDY OF CELL KINETICS OF BREAST CANCER.....	2N01 CB43899-04	173,100
SCHIFFER, LEWIS M.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	1N01 CB74083-00	98,000
SHRIVASTAVA, P N.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	2N01 CN45148-06	152,048
ORGANIZATION TOTAL	3 423,148		
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
BERRY, GUY C.....	MODIFICATION OF SILICONE ELASTOMERS FOR MEDICAL DEVICES.....	2N01 HV32949-10	61,188
KRASNER, JEROME L.....	RESEARCH AND DEVELOPMENT OF A CARDIORESPIRATORY MONITOR.....	1N01 HD72846-00	112,435
ORGANIZATION TOTAL	2 173,623		
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213			
ARAMANY, MOHAMED A.....	TRAINING PROGRAMS FOR DENTAL TECHNICIANS.....	2N01 CN55184-02	97,422
BILGER, ROBERT C.....	EVALUATE IMPLANTED AUDITORY PROSTHESES.....	3N01 NS52331-07	11,205
ORGANIZATION TOTAL	2 108,627		
HARMARVILLE REHABILITATION CENTER ZIP CODE 15238			
RICKETTS, J E.....	INTEGRATED CANCER REHABILITATION SERVICES.....	5N01 CN65183-01	187,175
ORGANIZATION TOTAL	1 187,175		
MAGEE-WOMEN'S HOSPITAL ZIP CODE 15213			
ARCHER, DAVID F.....	EFFICACY OF POSTCOITAL CONTRACEPTIVES.....	5N01 HD62840-01	33,469
ORGANIZATION TOTAL	1 33,469		
MONTEFIORE HOSPITAL ZIP CODE 15213			
SELKER, ROBERT G.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67061-03	88,289
ORGANIZATION TOTAL	1 88,289		
UNIVERSITY OF PITTSBURGH ZIP CODE 15260			
DETRE, KATHERINE M.....	COORDINATING CENTER—CORONARY INTERVENTION STUDY.....	1N01 HI72947-00	86,176
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP.....	2N01 CB23876-06	499,000
FISHER, BERNARD.....	THERAPY OF PATIENTS WITH COLORECTAL CANCER.....	1N01 CM77177-00	600,000
FISHER, BERNARD.....	SCREENING FOR EARLY DETECTION OF CANCER OF THE BREAST.....	3N01 CN45065-06	350,650
GRIECO, PAUL A.....	LUTEOLYTIC AGENTS—C-12 SUBSTITUTED ANALOGS PGF2ALPHA.....	2N01 HD62852-02	61,632
HOLLAND, AUDREY L.....	APHASIC PATIENTS' COMMUNICATIVE PERFORMANCE.....	3N01 NS52317-04	9,500
PASCASIO, ANNE.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	2N01 CN55298-02	115,877
PECKHAM, WILLIAM D.....	DEVELOPMENT OF RADIOIMMUNOASSAY FOR RHESUS MONKEY LH.....	1N01 HD72829-00	66,331
SASHIN, DONALD.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS.....	1N01 HV72932-00	210,750
SWORT, ARLOWAYNE.....	ONCOLOGY NURSING PROGRAMS.....	5N01 CN55186-03	193,389
WARA, WILLIAM M.....	IMMUNOTHERAPY OF C3H MURINE MAMMARY CARCINOMAS.....	2N01 CB64044-02	74,000
ORGANIZATION TOTAL	11 2,267,305		
UNIVERSITY PARK			
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802			
DOCHERTY, JOHN J.....	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION.....	1N01 CB74171-00	105,825
GAFFNEY, E V.....	CULTIVATION OF NORMAL AND MALIGNANT HUMAN MAMMARY CELLS.....	2N01 CB33898-07	68,600
HYMER, WESLEY C.....	STUDY OF CONTROL OF PROLACTIN SECRETION.....	2N01 CB23863-07	85,000
JURS, PETER.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	1N01 CP75926-00	45,453
ORGANIZATION TOTAL	4 304,878		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
PENNSYLVANIA—Continued			
VALENCIA			
APPLIED SCIENCE ASSOCIATES ZIP CODE 16059			
GLASGOW, ZITA.....	DEVELOP & TEST INSTRUCTIONAL MATERIAL TO DETECT DIABETES.....	3N01 LM64731-01	3,413
GLASGOW, ZITA.....	FIELD TESTING OF 15 LECTURE-SUPPORT INSTRUCTIONAL FILMS.....	1N01 LM74713-00	156,295
ORGANIZATION TOTAL	2 159,708		
WARRINGTON			
POLYSCIENCES, INC. ZIP CODE 18976			
BOETTNER, FRED.....	LARGE SCALE EXTRACTION AND ISOLATION OF PLANT PRODUCTS.....	1N01 CM77070-00	280,845
HALPERN, DAVID B.....	POLYMER STUDIES OF PROSTHETIC CARDIAC MATERIALS.....	2N01 HV61124-20	97,032
ORGANIZATION TOTAL	2 377,877		
STATE TOTAL	108 15,322,966		
RHODE ISLAND			
PROVIDENCE			
RHODE ISLAND DEPARTMENT OF HEALTH ZIP CODE 02908			
SIMEONE, FIORINDO A.....	PLANNING FOR A COMMUNITY CANCER CONTROL PROGRAM.....	3N01 CN55271-03	80,258
SIMEONE, FIORINDO A.....	COMMUNITY-BASED CANCER CONTROL PROGRAM.....	1N01 CN75215-00	1,047,000
ORGANIZATION TOTAL	2 1,127,258		
RHODE ISLAND HOSPITAL ZIP CODE 02902			
CONSTANTINE, HERBERT P.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45096-05	241,941
ORGANIZATION TOTAL	1 241,941		
STATE TOTAL	3 1,369,199		
SOUTH CAROLINA			
CHARLESTON			
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401			
O'BRIEN, PAUL H.....	COLLECTION OF BREAST CANCER SPECIMENS.....	2N01 CB23867-07	55,000
ORGANIZATION TOTAL	1 55,000		
COLUMBIA			
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL ZIP CODE 29201			
MC CALLUM, DAVID B.....	STATE-WIDE COORDINATION OF HIGH BLOOD PRESSURE CONTROL.....	1N01 HV72987-00	588,380
ORGANIZATION TOTAL	1 588,380		
STATE TOTAL	2 643,380		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TENNESSEE			
KNOXVILLE			
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916			
COGGIN, JOSEPH H.....	RELATION OF EMBRYONIC ANTIGEN TO TUMOR ANTIGENS.....	3N01 CP43325-04	68,796
ORGANIZATION TOTAL	1	68,796	
MEMPHIS			
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
JOHNSON, WARREN.....	HUMAN SPECIMEN ACQUISITION FOR CANCER RESEARCH.....	1N01 CP71030-00	58,592
WEBSTER, ROBERT G.....	SUPPLY OF POLYPEPTIDE ANTIGENS OF INFLUENZA VIRUS.....	2N01 AI42510-08	85,879
WEBSTER, ROBERT G.....	SURVEILLANCE AND ECOLOGY OF ANIMAL INFLUENZA.....	5N01 AI52524-04	275,545
WELCH, ARNOLO.....	SYNTHESIZE POTENTIAL INHIBITORS OF PYRIMIOINES.....	1N01 CM77127-00	89,145
ORGANIZATION TOTAL	4	509,161	
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163			
KORONES, SHELOON B.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS.....	5N01 HR62953-03	344,358
KRAUS, ALFREO PAUL.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	1N01 HB72995-00	11,892
ROBERTSON, JAMES T.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM57021-04	140,000
ROBERTSON, JAMES T.....	DIFFERENTIAL NUTRITIONAL REQUIREMENTS BY HOST AND TUMOR.....	5N01 CP65786-02	161,908
STADLAN, E M.....	FRESH AND FROZEN BRAIN TISSUES FOR CANCER RESEARCH.....	2N01 CP61020-02	40,000
ORGANIZATION TOTAL	5	698,158	
NASHVILLE			
GEORGE PEABODY COLLEGE FOR TEACHERS ZIP CODE 37203			
SANOLER, HOWARD M.....	EFFECTS OF ADOLESCENT PREGNANCY ON MOTHER-INFANT.....	5N01 HO62860-01	57,442
ORGANIZATION TOTAL	1	57,442	
VANDERBILT UNIVERSITY ZIP CODE 37240			
CHIU, JEN-FU.....	ANTIBODIES TO HUMAN ORGAN OR TISSUE ASSOCIATED ANTIGENS.....	2N01 CB53896-03	95,406
GINN, H EARL.....	NEUROBEHAVIORAL AND CLINICAL RESPONSES TO HEMODIALYSIS.....	3N01 AM22211-13	150,243
HARTMANN, WILLIAM H.....	BREAST CANCER DETECTION DEMONSTRATION PROJECTS.....	2N01 CN65373-02	116,307
HNILICA, LUBOMIR S.....	NONHISTONE DNA BINDING PROTEINS.....	5N01 CP65730-03	96,547
JAMES, A EVERETTE, JR.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55099-04	223,221
KARZON, DAVID T.....	RESPIRATORY VACCINES IN CHILDREN AND INFANTS.....	2N01 AI22507-17	384,752
LACY, WILLIAM W.....	DEVELOP AND EVALUATE CLINICAL RESEARCH DATA SYSTEM.....	1N01 RR72100-00	62,260
OLDHAM, ROBERT K.....	PURIFICATION OF BREAST TUMOR ASSOCIATED ANTIGENS.....	1N01 CB74162-00	100,356
OLDHAM, ROBERT K.....	NORMALS CELL MEDIATED REACTIVITY TO HUMAN TUMOR ANTIGENS.....	1N01 CB74166-00	76,374
OLDHAM, ROBERT K.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	3N01 CM77122-02	152,147
PAGE, DAVID L.....	RISK IN DIAGNOSIS OF NON-INVASIVE MAMMARY CARCINOMA.....	1N01 CB74098-00	99,500
ORGANIZATION TOTAL	11	1,557,113	
STATE TOTAL	22	2,890,670	
TEXAS			
AUSTIN			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712			
FOLKERS, KARL.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	2N01 HD62846-01	159,999
POPOVICH, ROBERT P.....	DEVELOPMENT OF LOW DIALYSIS CLEARANCE HYPOTHESIS.....	2N01 AM62211-01	121,605
ORGANIZATION TOTAL	2	281,604	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TEXAS—Continued			
COLLEGE STATION			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSI		ZIP CODE 77843	
MARTELL, ARTHUR E.....	DEVELOPMENT OF IRON CHELATORS FOR COOLEY'S ANEMIA.....	1N01 AM72232-00	46,198
ORGANIZATION TOTAL	1 46,198		
DALLAS			
AMERICAN HEART ASSOCIATION		ZIP CODE 75231	
OLIVER, CHARLES G.....	DEVELOP DATA BASE FOR ARRHYTHMIA DETECTOR EVALUATION.....	1N01 HV72989-00	107,396
ORGANIZATION TOTAL	1 107,396		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS		ZIP CODE 75235	
HEARTMAN, STEPHEN F.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	1N01 HD72810-00	74,000
JOHNSTON, KENNETH H.....	STEREOTYPING SYSTEM FOR NEISSERIA GONORRHOEAE.....	2N01 AI52534-03	58,761
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY PROGRAM.....	3N01 LM54705-05	237,882
NOT APPLICABLE.....	MEDICAL ILLUSTRATIONS.....	3N01 LM54736-03	18,692
PROUGH, RUSSELL A.....	STUDY OF POLYCYCLIC HYDROCARBON METABOLISM.....	5N01 CP33362-04	51,433
ROSENBERG, ROGER N.....	BIOLOGICAL SYSTEMS FOR EVALUATION OF ANTITUMOR AGENTS.....	5N01 CM53767-03	84,357
STASTNY, PETER.....	EVALUATION OF HISTOCOMPATIBILITY-MATCHING.....	2N01 AI22531-07	32,630
UNGER, ROGER H.....	HUMAN DIABETES PROGRAM.....	5N01 AM62219-01	273,973
WATERMAN, MICHAEL R.....	STUDIES IN SICKLE CELL DISEASE.....	3N01 HB22954-07	30,241
WILLERSON, JAMES T.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM/CLINICAL TESTS.....	1N01 HV72942-00	13,920
ORGANIZATION TOTAL	10 875,889		
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON		ZIP CODE 77550	
ABELL, CREED W.....	GROWTH ALTERATION OF MAMMARY NEOPLASTIC CELLS.....	2N01 CB43906-03	85,000
ALBRECHT, THOMAS B.....	TRANSFORMATION OF MAMMALIAN CELLS.....	2N01 CP61042-01	126,727
BARNETT, DONALD R.....	ISOLATION OF NEW PRODUCTS FROM PLASMA FRACTIONATION.....	3N01 HB42948-05	17,447
BEATHARD, GERALD A.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52504-04	22,700
BOWMAN, BARBARA.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	1N01 HR72922-00	102,150
BUFFLER, PATRICIA A.....	DATA ON LIVER CANCER IN SELECTED COUNTIES OF TEXAS.....	1N01 CP71005-00	110,261
GROSSMAN, ROBERT G.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER.....	1N01 NS72372-00	111,300
PAPERMASTER, BEN W.....	IMMUNOTHERAPEUTIC STUDIES WITH LYMPHOKINE 178.....	2N01 CB64058-01	92,350
PETERSON, JOHNNY W.....	STUDY OF CHOLERA TOXOIDS IN HUMAN VOLUNTEERS.....	2N01 AI02101-09	102,000
WILLIAMS, BETTY J.....	CHORINERGIC STIMULI DURING MYOCARDIAL ISCHEMIA.....	5N01 HV52996-02	52,260
ORGANIZATION TOTAL	10 822,195		
HOUSTON			
BAYLOR COLLEGE OF MEDICINE		ZIP CODE 77025	
BUTEL, JANET S.....	NUCLEIC ACID PREPARATION EFFECTS ON MAMMARY CARCINOMAS.....	2N01 CB53904-03	95,000
COUCH, ROBERT B.....	EVALUATION OF RESPIRATORY VIRUS VACCINES.....	5N01 AI32506-09	307,460
COUCH, ROBERT B.....	ESTABLISHMENT OF AN INFLUENZA RESEARCH CENTER.....	5N01 AI42528-08	628,591
ENTMAN, MARK L.....	STUDIES IN ISCHEMIC MYOCARDIUM AND INFARCT SIZE.....	5N01 HV52998-02	124,584
GARBER, ALAN J.....	ABNORM. OF CARBOHYDRATE METABOLISM IN CHRONIC UREMIA.....	2N01 AM42215-03	85,167
GREENBERG, S DONALD.....	EVALUATE PRENEOPLASTIC LESIONS IN THE RESPIRATORY TRACT.....	5N01 CP65837-02	92,223
GREENBERG, STEPHEN B.....	TRANSPORT OF INTERFERON ACROSS THE MUCOUS MEMBRANE.....	2N01 AI42530-04	56,543
KAUFMAN, RAYMOND H.....	ESTROGENS & GENITAL ANOMALIES & CANCER IN OFFSPRING.....	5N01 CN45092-07	281,515
KIT, SAUL.....	HERPES SIMPLEX VIRUS THYMIDINE KINASE GENE.....	1N01 CP71058-00	78,630
KOHLER, PETER O.....	TESTOSTERONE ENANTHATE-INDUCED REVERSIBLE AZOOSPERMIA.....	5N01 HD62816-01	50,688
LEVINSON, CARL J.....	ETHINYLESTRADIOL AS POSTCOITAL CONTRACEPTIVE AGENT.....	5N01 HD62838-01	65,810
MEDINA, DANIEL.....	STUDY OF ROLE OF STROMA IN GROWTH.....	2N01 CB43907-03	87,500

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TEXAS—Continued			
MEDINA, DANIEL.....	HYPERPLASTIC ALVEOLAR NODULE SYSTEM-ANTITUMOR SCREEN.....	3N01 CM57018-02	3,040
MELNICK, JOSEPH L.....	STUDY THE POSSIBLE VIRAL ETIOLOGY OF HUMAN MALIGNANCIES.....	2N01 CP53526-03	349,900
MUMFORD, DAVID M.....	STUDY OF IMMUNE ALTERATIONS ASSOCIATED WITH VASECTOMY.....	2N01 HD32759-06	18,637
NELSON, THOMAS E.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	1N01 HR72921-00	79,870
PEAVY, DUANE L.....	APHTHOUS STOMATITIS AND BEHCET'S SYNDROME.....	1N01 DE72400-00	60,196
ROSEN, JEFFREY M.....	ESTROGEN/PROGESTIN EFFECTS ON BREAST IN NEONATAL PERIOD.....	1N01 CB74189-00	70,100
SOCHER, SUSAN H.....	REGULATION OF GENE EXPRESSION IN MOUSE MAMMARY CANCER.....	2N01 CP43385-03	96,036
STEVENS, PAUL M.....	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	3N01 HR72905-01	30,146
SUKI, WADI N.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52506-03	39,884
THOMPSON, H K, JR.....	CLINICAL RESEARCH DATA MANAGEMENT AND ANALYSIS SYSTEM.....	5N01 RR52118-07	35,966
TINDALL, DONALD J.....	ISOLATE AND PURIFY RAT ANDROGEN BINDING PROTEIN.....	5N01 HD62842-01	49,421
ORGANIZATION TOTAL	23	2,786,907	
METHODIST HOSPITAL ZIP CODE 77025			
KELLAWAY, PETER A.....	CLINICAL QUANTIFICATIONS & TREATMENT OF INFANTILE SPASMS.....	5N01 NS62342-03	57,318
ORGANIZATION TOTAL	1	57,318	
ST. JOSEPH HOSPITAL ZIP CODE 77002			
MOORE, DUNCAN L.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55100-03	314,824
ORGANIZATION TOTAL	1	314,824	
STEHLIN FOUNDATION FOR CANCER RESEARCH ZIP CODE 77002			
GIOVANELLA, BEPPINO C.....	STUDY OF BREAST-CANCER TRANSPLANTS IN ATHYMIC MICE.....	2N01 CB33856-07	160,000
GIOVANELLA, BEPPINO C.....	MODEL SYSTEMS FOR CHEMOTHERAPY OF HUMAN TUMORS.....	2N01 CM67073-01	312,855
ORGANIZATION TOTAL	2	472,855	
TEXAS HEART INSTITUTE ZIP CODE 77025			
NORMAN, JOHN C.....	EVALUATION OF MODEL VII LEFT VENTRICULAR ASSIST DEVICE.....	2N01 HV53006-05	218,084
NORMAN, JOHN C.....	LEFT HEART ASSIST DEVICE DEVELOPMENT.....	1N01 HV72936-00	244,962
ORGANIZATION TOTAL	2	463,046	
UNIVERSITY OF HOUSTON ZIP CODE 77004			
WELCH, STEVEN C.....	SYNTHESIS OF NEW RETINOIDS.....	1N01 CP75935-00	83,531
ORGANIZATION TOTAL	1	83,531	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025			
BROWN, LEE R.....	ANTIBODY TO STREPTOCOCCUS MUTANTS IN XEROSTOMIA PATIENTS.....	1N01 DE72402-00	34,795
DUPONT, HERBERT L.....	ESTABLISH AN INFECTIOUS ENTERIC DISEASE STUDY CENTER.....	5N01 AI72534-01	837,309
FRIEDMAN, LAWRENCE.....	EVALUATE ORAL RINSING WITH A SODIUM MONOFLUOROPHOSPHATE.....	5N01 DE62496-02	24,988
HAWKINS, C MORTON.....	COORDINATING CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72948-00	307,230
LEVY, BARNET M.....	PERIODONTAL DISEASE IN PATIENTS WITH IMMUNE DISORDERS.....	5N01 DE52454-05	143,290
ORGANIZATION TOTAL	5	1,347,612	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF ONCO-RNA PROTEINS IN MAMMALIAN CELLS.....	5N01 CP61017-03	143,968
BECKER, FREDERICK F.....	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE.....	5N01 CP65846-03	145,227
BODEY, GERALD P.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	5N01 CM43801-09	254,172
BODEY, GERALD P.....	QUANTITATIVE EVALUATION OF PROTECTED ENVIRONMENT.....	2N01 CM53832-04	569,964
BODEY, GERALD P.....	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS.....	3N01 CM57042-10	703,923
DODD, GERALD D.....	MAMMOGRAPHY TRAINING FOR DETECTION OF BREAST CANCER.....	2N01 CN55250-06	88,979
DRANE, JOE B.....	TRAINING FOR MAXILLOFACIAL PROSTHODONTISTS.....	5N01 CN75175-01	331,668
GALLAGHER, H STEPHEN.....	MORPHOLOGICAL & EPIDEMIOLOGICAL FACTORS OF BREAST CANCER.....	2N01 CB53854-02	40,000
GALLAGHER, H STEPHEN.....	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67026-02	52,603
GRANATEK, CHRISTINE.....	DIAGNOSTIC USE OF CROSS-REACTING MICROBIAL ANTIGENS.....	1N01 CB74122-00	83,297
GUINEE, V F.....	STATISTICAL CENTER.....	2N01 CN65296-01	305,532
HERSH, EVAN M.....	STUDY OF CANCER IMMUNOTHERAPY.....	2N01 CB33888-06	461,095

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TEXAS—Continued			
HURLBERT, ROBERT B	ANTITUMOR DRUGS; EFFECTS ON POLYNUCLEOTIDE METABOLISM	2N01 CM43786-04	64,170
JACKSON, CARMAULT B, JR	SUPPORT FOR CANCER INFORMATION TELEPHONE SERVICES	2N01 CN35033-04	50,000
KEELING, MICHAEL E	MAINTENANCE AND BREEDING OF CHIMPANZEES	1N01 RS72142-00	85,966
LANZOTTI, VICTOR J	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY	5N01 CP65871-01	21,535
LOO, TI L	PHARMACOLOGIC STUDIES OF ANTITUMOR AGENTS	5N01 CM53773-03	509,166
MC KEIVY, EUGENE M	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER	5N01 C065345-02	238,442
MOUNTAIN, CLIFTON F	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER	1N01 CM77149-00	140,148
MOUNTAIN, CLIFTON F	PATHOLOGY SUPPORT FOR NON-OAT CELL LUNG CANCER	1N01 CM77153-00	122,968
MURPHY, SAMUEL G	IMMUNOTHERAPY IN THE L2C LEUKEMIA	2N01 CB64003-01	123,130
SAMUELS, MELVIN L	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY	5N01 CP65866-01	27,808
SHALEK, ROBERT J	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS	2N01 CN45150-05	42,000
SHAW, CHARLES R	MICROSOMAL ENZYME STUDIES	2N01 CP55604-07	78,750
SMITH, JULIAN P	STUDY OF CHEMOTHERAPY OF OVARIAN CARCINOMA	5N01 CM33710-08	184,931
SMITH, JULIAN P	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA	5N01 CM67116-02	15,767
VAN EYS, JAN	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY	5N01 CP65794-01	30,596
ORGANIZATION TOTAL	27	4,915,805	

RICHARDSON

UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT DALLAS ZIP CODE 75080

CLOWES, ROYSTON C	VERIFICATION OF GENETIC CONSTITUTION OF PLASMID VECTORS	5N01 AI62517-01	31,916
ORGANIZATION TOTAL	1	31,916	

SAN ANTONIO

SANTA ROSA MEDICAL CENTER ZIP CODE 78285

COOPER, ELMER E	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY	5N01 HV52921-02	33,900
ORGANIZATION TOTAL	1	33,900	

SOUTHWEST FOUNDATION FOR RESEARCH AND EDUCATION ZIP CODE 78284

EICHBERG, JORG W	IMMUNOTHERAPY OF HERPES VIRUS LYMPHOMAS IN MARMOSETS	2N01 CB64055-01	139,344
HEBERLING, RICHARD L	LATENT VIRUS INFECTION & C-TYPE PARTICLES TRANSMISSION	2N01 CPZ---††---09	413,170
KALTER, SEYMOUR S	SUPPORT FOR CHIMPANZEE BREEDING COLONY	2N01 CP33340-08	69,152
MC GILL, HENRY C	NONHUMAN PRIMATE MODELS OF ATHEROSCLEROSIS/HYPERTENSION	3N01 HV53030-04	126,695
MELTZ, MARTIN L	SCREENING OF NEW MATERIALS FOR CYTOTOXICITY	5N01 CM67075-01	106,153
RAO, PEMMARAJU N	SYNTHETIC CHEMICAL FACILITY	5N01 H052857-05	122,136
SHAIKH, ABUBAKAR A	PRIMATE TESTING FACILITY	2N01 HD52810-03	133,787
SHAIN, SYDNEY A	HORMONAL FACTORS OF THE PROSTATE	5N01 CP33379-05	351,649
ORGANIZATION TOTAL	8	1,462,086	

SOUTHWEST RESEARCH INSTITUTE ZIP CODE 78228

MANGOLD, DONALD J	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS	1N01 HD72831-00	95,027
ORGANIZATION TOTAL	1	95,027	

SOUTHWEST TEXAS METHODIST HOSPITAL ZIP CODE 78229

WHITECAR, JOHN P, JR	CLINICAL ONCOLOGY PROGRAM	1N01 CN75396-00	112,010
ORGANIZATION TOTAL	1	112,010	

UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284

DOUGHERTY, JOSEPH C	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION	2N01 AI52505-04	28,757
HARRINGTON, JOHN T	MIGRATION INHIBITION ASSAYS	2N01 CB43893-02	81,842
LAMM, DONALD L	BCG IMMUNOTHERAPY OF RECURRENT BLADDER CANCER	1N01 CB74192-00	69,210
LIVINGSTON, ROBERT B	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY	1N01 CB74205-00	54,100
MC GUIRE, WILLIAM L	ENDOCRINE-INDUCED BREAST CANCER REGRESSION	2N01 CB23862-07	125,000
SMITH, KENOALL O	STUDY OF MULTIPLE SCLEROSIS BY RADIOIMMUNOASSAY	2N01 NS62339-01	76,902
ORGANIZATION TOTAL	6	435,811	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TEXAS—Continued			
TYLER			
TEXAS DEPARTMENT OF HEALTH RESOURCES—EAST TEXAS CHEST HOSPITAL		ZIP CODE 75701	
HURST, GEORGE A.....	TYLER ASBESTOS WORKERS STUDY.....	5N01 CN45066-08	500,000
ORGANIZATION TOTAL	1 500,000		
STATE TOTAL	105 15,245,930		
UTAH			
LOGAN			
UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY		ZIP CODE 84322	
KLEINSCHUSTER, STEPHEN J.....	IMMUNOPROPHYLAXIS OF 'CANCER EYE' IN CATTLE.....	1N01 CB74155-00	288,385
ORGANIZATION TOTAL	1 288,385		
OGDEN			
OGDEN RESEARCH FOUNDATION		ZIP CODE 84403	
WILLIAMS, C BASIL.....	ASPIRIN-MYOCARDIAL INFARCTION STUOY.....	5N01 HV52918-04	79,526
ORGANIZATION TOTAL	1 79,526		
PROVO			
BRIGHAM YOUNG UNIVERSITY		ZIP CODE 84602	
BRAOSHAW, WILLIAM S.....	IOENTIFY BIOCHEMICAL IOICATORS FOR TOXICITY.....	1N01 ES72119-00	94,245
MANGUM, JOHN H.....	ANTITUMOR ORUGS—EFFECTS ON FOLATE METABOLISM.....	2N01 CM43790-05	61,760
ORGANIZATION TOTAL	2 156,005		
SALT LAKE CITY			
SALT LAKE CLINIC RESEARCH FOUNDATION		ZIP CODE 84102	
BARKER, ALLAN H.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUOY.....	5N01 HV52923-03	82,329
BARKER, ALLAN H.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV72969-00	10,553
ORGANIZATION TOTAL	2 92,882		
UTAH STATE DEPARTMENT OF SOCIAL SERVICES		ZIP CODE 84103	
ELIASON, GAYLE H.....	IMPLEMENTATION FOR A CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN65365-05	358,846
ORGANIZATION TOTAL	1 358,846		
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH		ZIP CODE 84112	
CASTLE, CHARLES H.....	STUOY OF HYPERTENSION IN THERAPY.....	5N01 HV12435-15	984,142
OANIELS, A U.....	VENA CAVA RING TESTS OF ANIMAL BIOMATERIALS.....	2N01 HV62911-02	104,644
OE WITT, CHARLES W.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI42507-05	21,196
EICHWALO, ERNST J.....	DETERMINING THE EFFECT OF CHRONIC IMMUNOSUPPRESSION.....	2N01 CP45600-05	138,654
GANDHI, OM P.....	EFFECTS OF MICROWAVE RAOIATION ON THE NERVOUS SYSTEM.....	5N01 ES62146-01	77,871
GLASGOW, LOWELL A.....	STUDY OF ANTIVIRAL SUBSTANCES & ANIMAL SYSTEMS.....	2N01 AI42524-05	115,739
GROVER, THOMAS P.....	EVALUATE OPERATIONS OF A NCL CYTOSCREENER.....	3N01 CB53867-03	23,959
JARVIK, ROBERT K.....	ENERGY CONVERTER FOR LEFT VENTRICLE ASSIST OEVICES.....	1N01 HV72975-00	158,077
KOLFF, WILLEM J.....	SYSTEM TO REMOVE UREA FROM DIALYZING FLUIO.....	1N01 AM72210-00	78,729
LYON, JOSEPH L.....	AN EPIOEMIOLOGICAL INVESTIGATION OF CANCER IN UTAH.....	5N01 CP43382-05	173,527
LYON, JOSEPH L.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71039-00	34,060
MOODY, FRANK G.....	PHYSIOLOGICAL REFLUX IN PANCREATIC OUCT.....	5N01 CP55709-04	107,603

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
UTAH—Continued			
OVERALL, JAMES C, JR.....	RECURRENT HERPES VIRUS HOMINIS INFECTION.....	2N01 AI52532-05	117,346
PETERSEN, ROBERT V.....	TEST OF NEW BIODEGRADABLE DRUG DELIVERY SYSTEMS.....	1N01 H072824-00	124,612
RIEKHOF, F TEMPEL.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72149-00	34,038
SMART, CHARLES.....	IMPLEMENTATION OF AN AT-HOME REHABILITATION PROGRAM.....	5N01 CN65301-02	213,361
SWINYARO, EWART A.....	PHARMACOLOGICAL EVALUATION OF ANTI-CONVULSANTS.....	5N01 NS52302-03	135,949
THOR, ELISABET A.....	ACTIVITY AND ZINC TISSUE LEVELS IN HEMODIALYSIS.....	1N01 AM72211-00	29,522
TOWNSENO, LEROY B.....	SYNTHESIS OF POLYCYCLIC FRAUOULENT NUCLEOSIDES.....	1N01 CM77142-00	195,000
WARO, J R.....	COOPERATIVE SYSTEMATIC STUOIES OF RHEUMATIC DISEASES.....	5N01 AM62218-02	822,309
ORGANIZATION TOTAL	20	3,690,338	
STATE TOTAL	27	4,665,982	
VERMONT			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
CRAIGHEAD, JOHN E.....	STUOY OF CARCINOGENESIS IN ORGAN CULTURE.....	2N01 CP33360-05	110,427
FOSTER, ROGER S, JR.....	NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN65322-02	297,858
HARRIS, LAWRENCE S.....	EVALUATE MATERIALS FOR THROMBOEMBOLIC AND BLOOD TRAUMA.....	2N01 HV52939-05	58,071
LUCEY, JEROLD F.....	PERINATAL CARE OF THE HIGH-RISK INFANT AND MOTHER.....	5N01 HR52961-02	215,750
WEED, LAWRENCE L.....	COMPUTERIZED PROBLEM-ORIENTED MEDICAL INFORMATION SYSTEM.....	2N01 CM33716-05	40,000
ORGANIZATION TOTAL	5	722,106	
STATE TOTAL	5	722,106	
VIRGINIA			
ALEXANDRIA			
ATLANTIC RESEARCH CORPORATION ZIP CODE 22314			
REEVE, JAMES E.....	INSTALLATION OF TELECAST ROOMS FOR CTS EXPERIMENTS.....	3N01 LM64745-01	97,098
ORGANIZATION TOTAL	1	97,098	
HALIFAX ENGINEERING, INC. ZIP CODE 22312			
NOT APPLICABLE.....	MAINTENANCE ELECTRONICS AT NMAC ATLANTA, GEORGIA.....	2N01 LM64730-05	69,013
ORGANIZATION TOTAL	1	69,013	
RUHL ASSOCIATES ZIP CODE 22302			
WHITING, MARJORIE.....	DIETARY AND NUTRITIONAL SURVEYS AND CANCER EPIOEMIOLOGY.....	3N01 CP65789-01	3,018
ORGANIZATION TOTAL	1	3,018	
VALUE ENGINEERING COMPANY ZIP CODE 22303			
DEAN, CHARLES.....	DRUG DISTRIBUTION AND INVENTORY SYSTEM.....	2N01 CM53821-10	99,999
SANFACON, THOMAS J.....	DRUG RESEARCH & DEVELOPMENT OF DATA PROCESSING SYSTEM.....	5N01 CM67086-03	936,242
ORGANIZATION TOTAL	2	1,036,241	
ARLINGTON			
AMERICAN BLOOD COMMISSION ZIP CODE 22209			
HUBBELL, ROBERT.....	TASK FORCE ON UTILIZATION OF BLOOD & COMPONENTS.....	1N01 HB72977-00	14,700
KENNEOY, LOUANNE.....	ANALYSIS OF BLOOD PROCUREMENT AND SOCIAL POLICY.....	3N01 HB62956-03	3,055
LIEN, DONNA M.....	BLOOD BANKING SERVICES ON A REGIONAL BASIS.....	5N01 HB62967-03	240,254

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
VIRGINIA—Continued			
ORGANIZATION TOTAL	3	258,009	
AMERICAN OSTEOPATHIC ASSOCIATION ZIP CODE 22209			
PERRIN, JOHN P.....	EVALUATE NIH MEDICAL EDUCATION PROGRAMS IN OSTEOPATHY.....	1N01 OD72121-00	37,600
ORGANIZATION TOTAL	1	37,600	
DATA USE AND ACCESS LABORATORIES ZIP CODE 22209			
HILL, GARY L.....	TECHNOLOGY/TRAINING FOR ACCESSING UNIT RECORD DATA FILES.....	2N01 HD62828-03	110,571
ORGANIZATION TOTAL	1	110,571	
KAPPA SYSTEMS ZIP CODE 22209			
ALDRIDGE, JANIS L.....	SUPPORT SERVICES-CANCER BIOLOGY AND DIAGNOSIS.....	3N01 CB53866-08	521,761
BAUER, WILLIAM I.....	SUPPORT FOR THE NATIONAL COMMISSION ON DIABETES.....	3N01 AMZ1##/-05	79,862
BAUER, WILLIAM I.....	SUPPORT SERVICES FOR UPDATING OF NATIONAL PLAN.....	1N01 HO72914-00	295,402
KELLY, M ROBERT.....	NATIONAL CANCER PROGRAM INFORMATION CLEARINGHOUSE.....	5N01 CO75351-01	234,589
RASMANN, JOHN F.....	NATIONAL HIGH BLOOD PRESSURE EDUCATION PROGRAM.....	5N01 HV52942-05	1,587,298
ORGANIZATION TOTAL	5	2,718,912	
MACMILLAN, INC.—ASSOCIATION STERLING FILMS ZIP CODE 22209			
NOT APPLICABLE.....	DISTRIBUTION AND BOOKING SERVICES-NMAC, NLM.....	2N01 LM54718-02	84,000
ORGANIZATION TOTAL	1	84,000	
BLACKSBURG			
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY ZIP CODE 24061			
MOORE, WALTER E.....	COMPARATIVE STUDIES OF FECAL FLORA.....	5N01 CP33334-08	137,942
WILKINS, TRACY D.....	RELATION OF FECAL NEUTRAL STEROLS TO LARGE BOWEL CANCER.....	5N01 CP55685-03	129,839
ORGANIZATION TOTAL	2	267,781	
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
DREIFUSS, FRITZ E.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS52329-04	545,853
DREIFUSS, FRITZ E.....	STUDY PROPERTIES OF ETHOSUXIMIDE AND CLONAZEPAM.....	2N01 NS92196-08	151,258
GUERRANT, RICHARD L.....	INCIDENCE OF E. COLI ENTEROTOXIN INDUCED DIARRHEA.....	2N01 AI42548-01	45,241
GWALTNEY, JACK M, JR.....	INFLUENZA VIRUS AND MYCOPLASMA PNEUMONIAE VACCINES.....	2N01 AI22508-12	38,520
HOWARDS, STUART S.....	EFFECT OF VASECTOMY ON TESTES, EPIDIDYMISS & VAS.....	5N01 HD22770-10	79,237
JANE, JOHN A.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS.....	1N01 NS72373-00	115,519
KATTWINKEL, JOHN.....	NEONATAL RESPIRATORY INSUFFICIENCY & FAILURE EDUC. PROG.....	5N01 HR52962-03	180,069
PARSONS, J THOMAS.....	MAPPING OF INTEGRATION SITES OF AVIAN SARCOMA VIRUS.....	1N01 CP71056-00	61,920
PARSONS, L CLAIRE.....	PRODUCTION OF NURSING EDUCATIONAL MATERIALS.....	3N01 LM34131-14	43,520
REBHUN, LIONEL.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	3N01 CM67002-04	61,010
ORGANIZATION TOTAL	10	1,322,147	
HERNDON			
EXPERIMENTAL PATHOLOGY LABORATORIES ZIP CODE 22070			
BUSEY, WILLIAM.....	ANIMAL PATHOLOGY SUPPORT.....	3N01 CP65731-06	247,004
COCKRELL, BEVERLY.....	TASK I-IMPROVE ORGAN CULTURE; TASK II-PROTECT RAT LIVER.....	2N01 CP75895-01	21,795
COCKRELL, BEVERLY.....	PROTECTION OF RAT LIVER FROM CARBON TETRACHLORIDE.....	1N01 CP75968-00	1,700
ORGANIZATION TOTAL	3	270,499	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
VIRGINIA—Continued			
LURAY			
DOUBLE J. FARMS ZIP CODE 22835			
JUDY, JESSE N.....	MAINTENANCE OF SHEEP COLONY.....	1N01 HI72900-00	228,000
ORGANIZATION TOTAL	1 228,000		
MC LEAN			
BOEING COMPANY--BOEING COMPUTER SERVICES ZIP CODE 22101			
GARNEAU, JEAN.....	SOFTWARE SYSTEMS SUPPORT.....	2N01 LM64755-01	132,255
GARNEAU, JEAN.....	MIIS/MUMPS SOFTWARE SUPPORT.....	1N01 LM74726-00	59,132
ORGANIZATION TOTAL	2 191,387		
JRB ASSOCIATES ZIP CODE 22101			
DANZEISEN, RICHARD N.....	RESOURCES ANALYSIS & PLANNING FOR NCP BUDGETING.....	2N01 C045425-09	295,990
HARRIS, ROBERT.....	SUPPORT SERVICES FOR NATIONAL HEART PLAN.....	3N01 H042935-06	24,071
LEWIS, GREGORY W.....	SUPPORT SERVICES FOR THE DIVISION OF CANCER CONTROL.....	5N01 CN55200-05	658,597
SANDERS, JACQUELINE.....	DESIGN NINCDS PROGRAM INFORMATION SYSTEM.....	3N01 NS62345-04	125,840
SCHECTMAN, STEVEN B.....	EVALUATION STUDY OF PRIMATE RESEARCH CENTERS.....	1N01 RR72143-00	63,839
WEIS, JOHN.....	SYSTEMS PLANNING FOR THE NCI/OD NATIONAL CANCER PROGRAM.....	3N01 C055426-15	320,775
WELLS, FRANK M.....	SYSTEMS PLANNING SUPPORT SERVICES-NCI.....	3N01 C075390-01	1,504,512
ORGANIZATION TOTAL	7 2,993,624		
MITRE CORPORATION ZIP CODE 22101			
BENNETT, ARTHUR M.....	PHS CTS BIOMEDICAL COMMUNICATIONS EXPERIMENTS.....	1N01 LM74727-00	249,955
KORNREICH, MARY R.....	PREPARATION OF CARCINOGENESIS BIOASSAY REPORTS.....	3N01 CP65863-03	423,382
SOLOMAN, S.....	DEVELOPMENT OF SYSTEM EVALUATION IMPLEMENTATION PLAN.....	1N01 LM74708-00	49,981
ORGANIZATION TOTAL	3 723,318		
TRW, INC.--TRW SYSTEMS GROUP ZIP CODE 22101			
MOEN, DONALD F.....	CONTINUED DEVELOPMENT OF NCP PROJECT ANALYSIS MODEL.....	5N01 C055318-02	156,953
STOCK, GERALD E.....	DEVELOP NCP/NCI MANAGEMENT INFORMATION SYSTEM.....	5N01 C055420-04	910,000
ORGANIZATION TOTAL	2 1,066,953		
NORFOLK			
EASTERN VIRGINIA MEDICAL AUTHORITY--EASTERN VIRGINIA MEDICAL SCHOOL ZIP CODE 23507			
JOHNSON, ALVA H.....	FRACTIONATION OF ANTIGENIC COMPONENTS OF T.B. CULTURE.....	2N01 AI42503-07	52,617
WRIGHT, GEORGE L, JR.....	PURIFICATION OF HUMAN TUMOR ASSOCIATED ANTIGENS.....	2N01 CB53955-03	77,283
ORGANIZATION TOTAL	2 129,900		
RICHMOND			
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284			
BANKS, WILLIAM L.....	NUTRITIONAL REQUIREMENTS IN TREATMENT OF BRAIN TUMORS.....	1N01 CP75881-00	184,058
FREER, RICHARD J.....	EVALUATE PEPTIDES AS CHEMOATTRACTANTS FOR LEUCOCYTES.....	2N01 DE62494-03	120,243
FREER, RICHARD J.....	PROSTAGLANDIN AND KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	1N01 HV72943-00	81,272
GUZELIAN, PHILIP S, JR.....	STUDY PHARMACOKINETICS AND TOXICITY OF KEPONE.....	2N01 ES62117-03	38,470
MAURER, HAROLD M.....	STUDY OF PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42820-12	82,612
MELLETTE, SUSAN J.....	REHABILITATION/CONTINUING CARE RESOURCES AND SERVICES.....	3N01 CN65287-03	236,629
SUTER, CAREY.....	FEASIBILITY STUDY BOR MODEL COMPREHENSIVE STROKE CENTER.....	3N01 NS72354-02	126,316
ORGANIZATION TOTAL	7 869,600		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
VIRGINIA—Continued			
VIRGINIA STATE DEPARTMENT OF HEALTH ZIP CODE 23219			
JACKSON, ROBERT S.....	VIRGINIA CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55165-04	216,518
ORGANIZATION TOTAL	1	216,518	
SPRINGFIELD			
REVLON, INC.—MELOY LABORATORIES ZIP CODE 22151			
BLACKMAN, KENNETH E.....	GROWTH OF NORMAL AND TUMOR VIRUS CELLS.....	1N01 CB74139-00	79,861
DIWAN, B.....	BIOASSAY OF MAMMARY TUMOR VIRUSES.....	2N01 CP43263-05	298,000
INNERARITY, THOMAS L.....	PREPARATION AND ANALYSIS OF LIPOPROTEINS.....	3N01 HI32926-09	342,310
KORTRIGHT, KENNETH H.....	RADIOIMMUNOASSAY OF IMMUNOGLOBULIN MOLECULES.....	5N01 CB63932-02	120,946
KORTRIGHT, KENNETH H.....	NCI IMMUNODIAGNOSTIC REFERENCE CENTER.....	2N01 CB63976-05	257,000
KORTRIGHT, KENNETH H.....	ISOLATE GONADAL CELL MEMBRANE/GONADOTROPIN BINDING SITE.....	3N01 HD42849-06	18,654
LUBINIECKI, ANTHONY S.....	SPONTANEOUS & VIRUS-INDUCED NEOPLASTIC TRANSFORMATION.....	2N01 CP43216-06	220,224
LUBINIECKI, ANTHONY S.....	STORAGE OF HUMAN TROPHOBLASTIC AND RAT LEYDIG CELLS.....	5N01 HD62821-08	66,546
OLSON, DOUGLAS.....	ISOLATION OF GONADAL/GONADOTROPIN BINDING SITES.....	3N01 HD72814-01	50,857
SLY, LEWIS D.....	SUPPORT FOR ANIMAL-CARE FACILITY.....	5N01 AI32504-13	286,465
SLY, LEWIS D.....	TRANSPLACENTAL CARCINOGENESIS IN ERYTHROCEBUS PATAS.....	5N01 CP55613-04	211,666
SLY, LEWIS D.....	HOUSING AND CARE OF ANIMALS IN INFECTIOUS VIRUS STUDIES.....	3N01 NS42325-08	146,103
SLY, LEWIS D.....	HERPES VIRUS INDUCTION OF CERVICAL CANCER.....	1N01 NS72360-00	141,189
SLY, LEWIS D.....	ISOLATION HOUSING OF ANIMALS.....	1N01 NS72375-00	329,930
VERNA, JOHN E.....	SPONTANEOUS AND VIRUS-INDUCED NEOPLASTIC TRANSFORMATION.....	2N01 CP43207-15	1,299,933
VERNA, JOHN E.....	MOLECULAR STUDY OF CARCINOMA OF THE BREAST.....	3N01 CP43223-11	323,504
VERNA, JOHN E.....	SPONTANEOUS & VIRUS-INDUCED NEOPLASTIC TRANSFORMATION.....	2N01 CP43236-14	973,746
ORGANIZATION TOTAL	17	5,166,934	
VIENNA			
DOT SYSTEMS ZIP CODE 22180			
BROADWELL, JANET.....	ADMINISTRATIVE SERVICES FOR CONFERENCES.....	3N01 CM53774-10	93,177
ORGANIZATION TOTAL	1	93,177	
HAZLETON LABORATORIES CORPORATION—HAZLETON LABORATORIES AMERICA ZIP CODE 22180			
BOWLES, CHARLES A.....	PERFORM MIXED LEUKOCYTE CULTURES.....	3N01 CM23701-10	17,383
BOWLES, CHARLES A.....	BONE-MARROW TRANSPLANTATION AND IMMUNOTHERAPY STUDIES.....	3N01 CM43702-06	135,820
BOYD, DALE D.....	STUDY OF IMMUNIZATION TO CARIES.....	2N01 DE42434-11	269,923
BOYD, DALE D.....	MAINTAINING A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RR42180-04	158,339
CUNNICK, LAWRENCE E.....	DMBA TUMORED RATS.....	1N01 CM77144-00	24,822
DALGARD, DANIEL W.....	SUPPORT FOR PRIMATE-BREEDING FACILITY.....	5N01 CM33708-13	489,545
DALGARD, DANIEL W.....	PRIMATE MODEL FOR DENTAL CARIES STUDIES.....	5N01 DE52458-04	70,731
GARGUS, JAMES L.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	3N01 CM57007-06	237,570
GARGUS, JAMES L.....	PROVISION OF TUMORED MODELS FOR INVESTIGATION.....	1N01 CM77126-00	42,896
GOOD, ROBERT C.....	DETERMINATIVE AND DIAGNOSTIC MICROBIOLOGICAL STUDIES.....	5N01 CM67080-01	425,574
RUTTER, HENRY A, JR.....	BIOLOGICAL EFFECTS OF INGESTED ASBESTOS IN RATS.....	5N01 ES52158-04	186,104
VALERIO, DAVID A.....	STUDY ROLE OF VIRUSES IN EXPERIMENTAL AND HUMAN CANCER.....	2N01 CP61024-01	726,395
VALERIO, DAVID A.....	MAINTAINING A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RS42182-05	4,562
ORGANIZATION TOTAL	13	2,754,898	
STATE TOTAL	87	20,709,198	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
WASHINGTON			
PULLMAN			
WASHINGTON STATE UNIVERSITY ZIP CODE 99163			
BURGER, DIETER	DETECT CIRCULATING ANTIGEN-ANTIBODY COMPLEXES IN CANCER	2N01 CB63990-02	46,633
HOSICK, HOWARD L.....	DIFFERENTIATION OF MAMMARY EPITHELIAL CELLS.....	2N01 CB63986-01	53,600
ORGANIZATION TOTAL	2 100,233		
RICHLAND			
BATTELLE MEMORIAL INSTITUTE- PACIFIC NORTHWEST LABORATORIES ZIP CODE 99352			
WILDUNG, RAYMOND E.....	HEAVY METALS/HEAVY METALS COMPLEXES FATE IN SOILS/PLANTS.....	2N01 ES22043-13	98,397
ZWICKER, GARY M.....	INHALATION BIOASSAY OF CIGARETTE SMOKE.....	5N01 CP43315-16	442,229
ORGANIZATION TOTAL	2 540,626		
SEATTLE			
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER ZIP CODE 98105			
BERNSTEIN, ILENE.....	ROLE OF LEARNED FOOD AVERSIONS IN THE CANCER PATIENT.....	5N01 CP65790-02	51,945
ORGANIZATION TOTAL	1 51,945		
FRED HUTCHINSON CANCER RESEARCH CENTER ZIP CODE 98104			
BRESLOW, NORMAN E.....	CENTRALIZED CANCER PATIENT DATA SYSTEM.....	1N01 C075325-00	365,295
HARTMAN, JOHN.....	PLANNING FOR A COMMUNITY BASED CANCER CONTROL PROGRAM.....	3N01 CN55272-02	20,250
HELLSTROM, KARL E.....	IMMUNOTHERAPEUTICAL TRIALS WITH HUMAN TUMORS.....	2N01 CB64018-03	182,159
HELLSTROM, KARL E.....	TUMOR SPECIFIC TRANSPLANTATION ANTIGENS IN TUMORS.....	3N01 CP53570-06	163,253
HILL, LUCIUS.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	3N01 CM77148-04	141,294
LEE, JOHN A.....	MODELS OF MALIGNANT & PREMALIGNANT BREAST DISEASE.....	1N01 CB74100-00	77,460
NOWINSKI, ROBERT C.....	AN IMMUNOGENETIC ANALYSIS OF MOUSE LEUKEMIA VIRUSES.....	5N01 CP61009-02	90,500
SCRIBNER, JOHN D.....	METABOLISM OF CARCINOGENIC COMPOUNDS.....	2N01 CP55719-04	38,260
THOMAS, E DONNALL.....	EVALUATE TYPING TECHNIQUE ON BONE MARROW TRANSPLANTATION.....	2N01 AI52515-05	123,522
THOMPSON, DONOVAN J.....	SUPPORT FOR A CANCER SURVEILLANCE SYSTEM.....	3N01 CP61059-01	209,614
THOMPSON, DONOVAN J.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	1N01 CP71038-00	74,842
ORGANIZATION TOTAL	11 1,486,449		
INSTITUTE OF APPLIED PHYSIOLOGY AND MEDICINE ZIP CODE 98122			
REID, JOHN M.....	ULTRASONIC IMAGING DEVELOPMENT.....	1N01 HV72926-00	134,334
ORGANIZATION TOTAL	1 134,334		
PROVIDENCE MEDICAL CENTER ZIP CODE 98122			
MANSFIELD, PETER B.....	TISSUE CULTURED ENDOTHELIUM/VASCULAR PROSTHETIC DEVICES.....	2N01 HV12060-17	162,737
ORGANIZATION TOTAL	1 162,737		
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ALEXANDER, E RUSSELL.....	DIAGNOSTIC APPLICATIONS OF HUMAN TUMOR ANTIGENS.....	2N01 CB64068-01	108,032
ANDERSEN, NIELS H.....	SYNTHESIS OF LUTEOLYTIC PROSTANOIDS.....	2N01 HD42839-03	29,386
BABB, ALBERT L.....	RED CELL DISTRIBUTIONS IN CYANATE-TREATED BLOOD.....	2N01 HB62962-01	105,070
BAGDADE, JOHN D.....	STUDY OF HYPERLIPIDEMIA AND ATHEROGENESIS.....	2N01 AM32212-08	149,840
BENNETT, ROGER.....	DEVELOP AND SUPPORT A CTS FACILITY.....	2N01 LM64743-07	83,683
BIERMAN, EDWIN L.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	2N01 HV12157-10	1,017,300
BLANDAU, RICHARD J.....	OVULATION DETECTION IN CHRONICALLY INSTRUMENTED ANIMALS.....	2N01 HD32791-08	104,106
BLANDAU, RICHARD J.....	SPERM TRANSPORT THROUGH CERVIX.....	2N01 HD42826-05	48,199
BOWDEN, DOUGLAS M.....	EVALUATE MACACA NEMESTRINA AS A MODEL OF AGING.....	3N01 AG62145-01	6,098
BURNELL, JAMES M.....	STUDY OF ACID-BASE CHEMISTRY AND HUMAN BONE.....	3N01 AM32208-07	13,260
CHRISTOPHER, T GRAHAM.....	CLINICAL RESEARCH DATA MANAGEMENT AND ANAYSIS SYSTEM.....	5N01 RR52117-03	85,284
CUTLER, RALPH E.....	PHARMACOKINETIC STUDIES IN CHRONIC RENAL DISEASE.....	2N01 AM22219-04	113,479

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
WASHINGTON—Continued			
ENWONWU, CYRIL.....	NUTRITION ON THE EPITHELIUM OF ORAL MUCOUS MEMBRANES.....	5N01 DE42442-05	41,960
ESCHBACH, JOSEPH W.....	RESPONSE TO ERYTHROPOIETIN OF ANEMIA OF CHRONIC UREMIA.....	1N01 AM72203-00	137,428
FISHER, LLOYD D.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32973-10	608,522
FOY, HJORDIS M.....	INFLUENZA SURVEILLANCE AND VACCINE EVALUATION.....	5N01 AI62511-01	205,432
HOFFMAN, ALLAN S.....	INTERACTION OF NATURAL & MODIFIED BIOPOLYMERS WITH BLOOD.....	5N01 HV42970-06	91,025
LOCKARD, JOAN S.....	STUDY EXPERIMENTAL ANTIEPILEPTIC DRUGS.....	2N01 NS12282-16	434,346
LOVELY, RICHARD H.....	EFFECTS OF MICROWAVE RADIATION ON THE NERVOUS SYSTEM.....	3N01 ES62133-01	51,435
MC LEAN, EDWARD B.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72134-00	85,033
MILLER, BRUCE E.....	CARCINOGENESIS OF PETROLEUM HYDROCARBONS IN MARINE LIFE.....	1N01 ES72101-00	92,556
MINIFIE, FRED D.....	RELATION OF HEARING IMPAIRMENT & LANGUAGE DISABILITY.....	3N01 HD32793-05	272,429
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES.....	5N01 LM54729-02	280,296
NUTE, PETER E.....	DETECTION OF POINT MUTATIONS IN HUMAN SOMATIC CELLS.....	2N01 ES42151-08	166,371
ODLAND, GEORGE.....	ANALYZE PRIORITIES AND NEEDS FOR RESEARCH IN DERMATOLOGY.....	1N01 AM72215-00	123,623
PAULSEN, C ALVIN.....	CONTRACEPTIVE DEVELOPMENT STUDIES FOR MALES.....	2N01 HD12234-14	66,811
PAULSEN, C ALVIN.....	DEVELOP MALE CONTRACEPTIVE--PARENTERAL TESTOSTERONE.....	2N01 HD62815-03	185,836
PETERSON, DONALD R.....	SIDS RISK FACTOR COOPERATIVE STUDY.....	1N01 HD72839-00	199,609
SCHMER, GOTTFRIED.....	AUTOCOAGULANT-BOUND HEMODIALYSIS.....	2N01 AM42201-07	54,476
SCHMER, GOTTFRIED.....	FIXED RED CELL GHOSTS.....	1N01 AM72202-00	15,000
SCRIBNER, BELDING H.....	INFLUENCE OF ANIONS DURING DIALYSIS.....	1N01 AM72222-00	70,000
SILVERSTEIN, FRED E.....	ENDOSCOPIC CONTROL OF MASSIVE BLEEDING IN PATIENTS.....	3N01 AM52211-03	83,164
TERRY, M W.....	PRIMATE SUPPLY INFORMATION CLEARINGHOUSE.....	1N01 RR72124-00	90,345
TROUPIN, ALLAN S.....	CARBAMAZEPINE IN THE TREATMENT OF EPILEPSY.....	5N01 NS02281-09	69,224
WARD, ARTHUR A, JR.....	COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS62341-04	733,279
WOOTTON, PETER B.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	2N01 CN45158-08	28,768
ORGANIZATION TOTAL	36	6,050,705	

WALLA WALLA

ST. MARY COMMUNITY HOSPITAL	ZIP CODE 99362		
CONNELL, ROBERT M.....	IMPLEMENTATION OF CLINICAL ONCOLOGY PROGRAM.....	1N01 CN75395-00	144,524
ORGANIZATION TOTAL	1	144,524	
STATE TOTAL	55	8,671,553	

WEST VIRGINIA

AUGUSTA

MOUNT PLEASANT BOOKBINDER	ZIP CODE 26704		
NOT APPLICABLE.....	REPAIR, RESTORATION AND CUSTOM REBINDING OF RARE BOOKS.....	2N01 LM54712-02	8,000
ORGANIZATION TOTAL	1	8,000	

MORGANTOWN

WEST VIRGINIA UNIVERSITY	ZIP CODE 26506		
EDWARDS, WINSTON D.....	PROSTATE TRANSPLANT MODEL FOR STUDYING NEOPLASIA.....	1N01 CP75887-00	24,650
FODOR, GABOR.....	EVALUATE NEURO AND ELECTROPHYSIOLOGICAL ACTIVITIES.....	1N01 AM72212-00	9,992
MURPHY, ROBERT.....	LOCAL ACCESS TO BIOMEDICAL INFORMATION IN WEST VIRGINIA.....	1N01 LM74710-00	14,837
THOMAS, JOHN A.....	PITUITARY HORMONES, ANDROGENS AND PROSTATE METABOLISM.....	3N01 CP43230-05	7,361
VELTRI, ROBERT W.....	STUDY OF TUMOR-ASSOCIATED ANTIGENS IN LUNG CANCER.....	2N01 CB43890-05	71,400
ORGANIZATION TOTAL	5	128,240	
STATE TOTAL	6	136,240	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
WISCONSIN			
MADISON			
ENDOCRINE LABORATORIES OF MADISON ZIP CODE 53713			
DAVIS, JAMES	EFFECT OF CERTAIN AGENTS ON REPRODUCTIVE TRACT FUNCTIONS.....	5N01 ES62111-02	495,922
ORGANIZATION TOTAL	1 495,922		
MOGUL CORPORATION ZIP CODE 53713			
FORTNEY, ROGER D.....	OPERATION OF A GERMFREE RODENT COLONY.....	5N01 CM53813-07	371,962
FORTNEY, ROGER D.....	MAINTENANCE OF RODENT PRODUCTION CENTER.....	5N01 CM53846-03	175,000
ORGANIZATION TOTAL	2 546,962		
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706			
BLATTNER, FREDERICK R.....	CONSTRUCTION OF PHAGE CLONING VECTORS FOR E. COLI HOSTS.....	3N01 AI62506-02	19,671
BRANDENBURG, JAMES H.....	DEMONSTRATION PROJECT FOR HEAD AND NECK CANCER.....	2N01 CN45130-03	108,545
BRESNICK, GEORGE H.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72139-00	119,946
BRYAN, GEORGE T.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	1N01 CP75905-00	129,998
CAMERON, JOHN R.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	2N01 CN45152-05	50,277
DAVIS, MATTHEW D.....	STUDY OF DIABETIC RETINOPATHY (READING CENTER).....	5N01 EY32130-06	216,557
DAVIS, MATTHEW D.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY52148-02	155,155
DAVIS, MATTHEW D.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72148-00	43,309
EASTERDAY, BERNARD C.....	STUDY OF INTERFERON AND INTERFERON INDUCERS.....	2N01 AI02132-10	75,140
KELLERMANN, GOTTFRIED H.....	INDUCE ARYL HYDROCARBON HYDROXYLASE IN HUMAN LYMPHOCYTES.....	2N01 CP65734-06	93,000
LARSON, FRANK C.....	SIGNIFICANCE OF ALKALINE PHOSPHATASE IN CANCER PATIENTS.....	1N01 CB74173-00	52,496
MYERS, FRANK L.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY52140-01	52,339
PERLMAN, DAVID.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67076-02	59,624
RUSCH, HAROLD P.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55228-04	88,364
RUSCH, HAROLD P.....	PLANNING FOR A COMMUNITY BASED CANCER CONTROL PROGRAM.....	3N01 CN55270-04	8,604
SIEDBAND, MELVIN P.....	DEVELOPMENT & TESTING OF SYSTEM TO IMPROVE X-RAY IMAGING.....	3N01 CB53914-03	19,951
ZACHMAN, RICHARD D.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS.....	5N01 HR62952-03	172,514
ORGANIZATION TOTAL	17 1,465,490		
WISCONSIN ALUMNI RESEARCH FOUNDATION ZIP CODE 53705			
COON, FRANCIS B.....	PREPARATION OF PLANT EXTRACTS.....	5N01 CM43707-11	120,666
DE DENNIS, SUSANA R.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM53770-03	696,922
HUGHES, DONALD L.....	ANALYZE PCB'S AND DDE IN HUMAN FLUIDS AND TISSUE.....	1N01 ES72141-00	91,875
ORGANIZATION TOTAL	3 909,463		
MARSHFIELD			
MARSHFIELD MEDICAL FOUNDATION ZIP CODE 54449			
SAUTTER, RICHARD D.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32981-09	122,586
ORGANIZATION TOTAL	1 122,586		
MILWAUKEE			
ALDRICH CHEMICAL COMPANY ZIP CODE 53233			
WICKERSHAM, THOMAS W.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	5N01 CM23706-08	205,076
ORGANIZATION TOTAL	1 205,076		
MEDICAL COLLEGE OF WISCONSIN ZIP CODE 53233			
AABERG, THOMAS M.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY52143-01	23,173
BOUCHARDS, LAWRENCE.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	2N01 HV32982-06	56,940
GRAUSZ, JOHN P.....	MEASURE PULMONARY FUNCTION IN INFANTS AND CHILDREN.....	5N01 HR62902-01	146,580
GROSSBERG, SIDNEY E.....	MAMMALIAN INTERFERONS AS STANDARD REFERENCE REAGENTS.....	3N01 AI42514-06	7,000
GROSSBERG, SIDNEY E.....	STUDY OF STABILITY OF HUMAN INTERFERON.....	2N01 AI42520-05	74,360

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
WISCONSIN—Continued			
KINGHAM, JAMES D.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	1N01 EY72136-00	111,781
MILBRATH, JOHN R.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	3N01 CN55308-04	256,929
RODEY, GLENN E.....	SPECIFIC HL-A ANTIGENS IN PIGEON BREEDERS' DISEASE.....	5N01 HR62940-01	24,388
SANCES, ANTHONY, JR.....	NMR CONCEPTS AND DEVELOPMENT OF BIOLOGICAL FLOW.....	2N01 HI02216-08	152,141
WILKINSON, EDWARD J.....	OCCULT BREAST CANCER METASTASES IN AXILLARY LYMPH NODES.....	1N01 CB74110-00	108,500
ORGANIZATION TOTAL	10	961,792	
STATE TOTAL	35	4,707,291	
WYOMING			
CHEYENNE			
WYOMING STATE DEPARTMENT OF HEALTH AND SOCIAL SERVICES ZIP CODE 82001			
PARISH, HERMAN S.....	IMPLEMENTATION FOR A CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN65261-02	146,924
ORGANIZATION TOTAL	1	146,924	
STATE TOTAL	1	146,924	
PUERTO RICO			
SAN JUAN			
PUERTO RICO DEPARTMENT OF HEALTH ZIP CODE 00908			
MARTINEZ, ISIDRO.....	CERVICAL CANCER SCREENING PROGRAM—PUERTO RICO.....	5N01 CN55075-05	206,374
MARTINEZ, ISIDRO.....	CANCER SURVEY IN THE PUERTO RICO AREA.....	3N01 CP43386-06	24,479
ORGANIZATION TOTAL	2	230,853	
PUERTO RICO INSTITUTE OF PSYCHIATRY ZIP CODE 00936			
GREEN, PHILIP S.....	DEVELOP ULTRASONIC ENDOSCOPIC PROBES.....	1N01 CB74136-00	209,401
ORGANIZATION TOTAL	1	209,401	
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS ZIP CODE 00936			
GARCIA-PALMIERI, MARIO R.....	EPIDEMIOLOGICAL STUDIES OF CORONARY HEART DISEASE.....	2N01 HV42902-06	260,000
KERBER, WILLIAM T.....	DOMESTIC SQUIRREL MONKEY PRODUCTION.....	2N01 RR52133-03	73,572
KERBER, WILLIAM T.....	BEHAVIOR, ECOLOGY AND REPRODUCTION OF NONHUMAN PRIMATES.....	1N01 RR72115-00	299,981
OQUENDO, FRANCISCO HERNANDEZ.....	TRAINING PREVENTIVE DENTISTRY AIDES.....	5N01 DE52480-03	35,000
ORGANIZATION TOTAL	4	668,553	
STATE TOTAL	7	1,108,807	
TRUST PACIFIC			
SAIPAN			
TRUST TERRITORY OF THE PACIFIC ISLANDS DEPARTMENT OF HEALTH SERVICES ZIP CODE 96950			
KUMANGI, MASAO.....	TRUST TERRITORY CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN55168-03	184,124
ORGANIZATION TOTAL	1	184,124	
STATE TOTAL	1	184,124	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
TRUST PACIFIC—Continued			
OTHER COUNTRIES			
AUSTRALIA			
MELBOURNE			
WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH			
METCALF, DONALD.....	GRANULOCYTE & MACROPHAGE IN LEUKEMIA & RELATED NEOPLASMS.....	3N01 CB33854-04	134,767
METCALF, DONALD.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	1N01 CB74148-00	80,901
MILLER, JACQUES F.....	TRANSFER FACTOR & DELAYED HYPERSENSITIVITY IN THE MOUSE.....	2N01 CB63992-01	44,320
NOSSAL, GUSTAV J.....	ROLE OF T AND B LYMPHOCYTES IN TUMOR IMMUNITY.....	2N01 CB23889-04	144,940
ORGANIZATION TOTAL	4	404,928	
SYDNEY			
ROYAL NORTH SHORE HOSPITAL			
NELSON, D S.....	ROLE OF THE MACROPHAGE IN TUMOR RESISTANCE.....	2N01 CB63973-02	76,456
ORGANIZATION TOTAL	1	76,456	
SYDNEY HOSPITAL			
HERSEY, PETER.....	DIAGNOSTIC APPLICATIONS OF ANTIBODIES TO MELANOMA.....	1N01 CB74120-00	41,018
ORGANIZATION TOTAL	1	41,018	
COUNTRY TOTAL	6	522,402	
AUSTRIA			
SALZBURG			
AUSTRIAN ACADEMY OF SCIENCES—INSTITUTE FOR MOLECULAR BIOLOGY			
KRATOCHWILL, KLAUS.....	RESPONSE OF EMBRYO MAMMARY GLAND TO ANDROGENIC HORMONES.....	2N01 CB33883-05	60,000
WIRL, GERHARD.....	STUDIES OF INFLUENCE OF MAMMARY CARCINOMA ON COLLAGEN.....	1N01 CB74109-00	41,600
ORGANIZATION TOTAL	2	101,600	
COUNTRY TOTAL	2	101,600	
BELGIUM			
BRUSSELS			
EUROPEAN ORGANIZATION FOR RESEARCH ON TREATMENT OF CANCER			
ATTASI, GHANEM.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	5N01 CM57040-03	288,124
TAGNON, H J.....	CANCER CHEMOTHERAPY RESEARCH COLLABORATIVE OFFICE.....	5N01 CM53840-04	93,900
ORGANIZATION TOTAL	2	382,024	
COUNTRY TOTAL	2	382,024	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CANADA			
HALIFAX			
DALHOUSIE UNIVERSITY			
RAUTAHARJU, P M	SUPPORT FOR ECG CENTER FOR PREVENTION OF HEART DISEASE	2N01 HV42911-06	236,853
ORGANIZATION TOTAL	1 236,853		
HAMILTON			
MC MASTER UNIVERSITY			
SINCLAIR, JOHN C	NEONATAL RESPIRATORY INSUFFICIENCY & FAILURE EDUC. PROG.	5N01 HR52959-02	103,500
UCHIDA, IRENE A.	PLASMA LIPOPROTEINS IN IDENTICAL TWINS	1N01 HV72917-00	178,617
WITELSON, SANDRA F.	NEUROANATOMY IN THE HUMAN TEMPORAL LOBES	5N01 NS62344-02	76,000
ORGANIZATION TOTAL	3 358,117		
MONTREAL			
MC GILL UNIVERSITY			
MACKLEN, P T	STANDARDIZATION OF MEASUREMENT OF CLOSING VOLUME	5N01 HR32902-06	149,470
STAMM, J W	ROOT SURFACE CARIES IN FLUORIDATED AREAS	2N01 DE62492-02	4,950
ORGANIZATION TOTAL	2 154,420		
MONTREAL HEART INSTITUTE			
BOURASSA, MARTIAL G	COLLABORATIVE STUDY OF SURGERY ON CORONARY ARTERIES	2N01 HV32983-08	252,770
ORGANIZATION TOTAL	1 252,770		
TORONTO			
HOSPITAL FOR SICK CHILDREN			
MC CLURE, PETER D	COLLECT BLOOD SPECIMENS AND SOLID TUMOR MATERIALS	2N01 CP61040-02	22,950
ORGANIZATION TOTAL	1 22,950		
ONTARIO CANCER INSTITUTE			
FELD, RONALD	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER	3N01 CM77152-01	178,578
SIMINOVITCH, LOUIS	SUPPLY OF MUTANT VERTEBRATE CELLS	5N01 CP43331-07	153,860
ORGANIZATION TOTAL	2 332,438		
UNIVERSITY OF TORONTO			
FARBER, EMMANUEL	BIOCHEMISTRY AND MORPHOLOGY OF HEPATIC CARCINOGENESIS	1N01 CP75879-00	83,306
LITTLE, ALICK	LIPID RESEARCH CLINIC	5N01 HV22917-09	1,531,434
ORGANIZATION TOTAL	2 1,614,740		
VANCOUVER			
UNIVERSITY OF BRITISH COLUMBIA			
KUTNEY, JAMES P	SYNTHESIS OF VINBLASTINE AND VINCRIStINE	2N01 CM23223-06	109,985
ORGANIZATION TOTAL	1 109,985		
WINNIPEG			
UNIVERSITY OF MANITOBA			
ANTHONISEN, NICHOLAS R	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE	5N01 HR62943-04	372,535
ANTHONISEN, NICHOLAS R	INTERMITTENT POSITIVE PRESSURE BREATHING CLINICAL STUDY	3N01 HR72902-01	10,913

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
CANADA—Continued			
CHERNIACK, REUBEN M.....	STUDY TO STANDARDIZE THE MEASUREMENT OF CLOSING VOLUME.....	5N01 HR32903-10	167,220
FRIESEN, HENRY G.....	SUPPLY OF HUMAN PROLACTIN.....	3N01 CP43250-07	65,614
RIGATTO, HENRIQUE.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS.....	5N01 HR62949-03	184,690
ORGANIZATION TOTAL	5 800,972		
COUNTRY TOTAL	18 3,883,245		
CHINA (TAIWAN)			
TAIPEI			
DONALD DEXTER VAN SLYKE MEMORIAL FOUNDATION			
PHILLIPS, ROBERT A.....	GI DIALYSIS AS ADJUNCT TO THERAPY OF RENAL FAILURE.....	3N01 AM62210-05	46,669
ORGANIZATION TOTAL	1 46,669		
COUNTRY TOTAL	1 46,669		
COLOMBIA			
CALI			
UNIVERSITY OF VALLE			
CUELLO, CARLOS.....	GEOGRAPHICAL PATHOLOGY AND EPIDEMIOLOGY OF CANCER.....	5N01 CP33286-06	96,566
DUEÑAS, ALVARO.....	HLA AND LYMPHOMA CASE CONTROL STUDY IN COLUMBIA.....	3N01 CP61037-01	1,500
ORGANIZATION TOTAL	2 98,066		
COUNTRY TOTAL	2 98,066		
FINLAND			
HELSINKI			
CENTRAL PUBLIC HEALTH LABORATORY			
MAKELA, P HELENA.....	CONDUCTING A FIELD TRIAL OF MENINGOCOCCUS VACCINE.....	2N01 AI52502-03	64,500
ORGANIZATION TOTAL	1 64,500		
UNIVERSITY OF HELSINKI			
HAYRY, PEKKA J.....	EFFECTOR MECHANISMS IN CANCER REJECTION.....	2N01 CB64032-01	53,650
MAKELA, V OLAVI.....	SPECIFICITY OF ANTIGEN-BINDING RECEPTORS ON T-CELLS.....	2N01 CB43923-03	28,800
ORGANIZATION TOTAL	2 82,450		
TURKU			
UNIVERSITY OF TURKU			
HAKKINEN, ILKKA P.....	SCREENING FOR GASTRIC CANCER.....	2N01 CB64070-02	30,354
TOIVANEN, PAAVO.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	1N01 CB74177-00	43,500
ORGANIZATION TOTAL	2 73,854		
COUNTRY TOTAL	5 220,804		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
FRANCE			
LYON			
WORLD HEALTH ORGANIZATION—INTERNATIONAL AGENCY FOR RESEARCH ON CANCER			
AGTHE, C.....	THE EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN.....	3N01 CP45608-08	100,604
DAY, N E.....	ETIOLOGY OF ESOPHAGEAL CANCER IN IRAN.....	9N01 CP71048-00	176,043
DE THE, G BLAUDIN.....	SERCEPIDEMIOLOGICAL STUDY OF CARCINOMA AND LYMPHOMA.....	5N01 CP43296-08	725,000
LOGAN, W P.....	CANCER MORTALITY RELATED TO OCCUPATION AND SOCIAL CLASS.....	1N01 CP71015-00	15,750
MONTESANO, R.....	SIGNIFICANCE OF EXPERIMENTAL CARCINOGENESIS DATA.....	3N01 CP55630-07	202,101
MUIR, C S.....	CLEARINGHOUSE FOR ON-GOING WORK IN CANCER EPIDEMIOLOGY.....	2N01 C055195-04	192,083
ORGANIZATION TOTAL	6 1,411,581		
COUNTRY TOTAL	6 1,411,581		
GERMANY FED R			
GOTTINGEN			
GEORG AUGUST UNIVERSITY OF GOTTINGEN			
KRAMER, P.....	GASTROINTESTINAL DETOXIFICATION OF HEMOFILTRATE.....	1N01 AM72235-00	8,000
ORGANIZATION TOTAL	1 8,000		
HANOVER			
HANOVER UNIVERSITY OF MEDICINE			
MOHR, ULRICH.....	DEVELOP ANIMAL MODEL FOR PANCREATIC CARCINOGENESIS.....	1N01 CP75972-00	102,000
ORGANIZATION TOTAL	1 102,000		
HEIDELBERG			
EUROPEAN MOLECULAR BIOLOGY ORGANIZATION			
TOOZE, JOHN.....	PHYSICAL CONTAINMENT OF RECOMBINANT DNA RESEARCH.....	1N01 RS72110-00	4,840
ORGANIZATION TOTAL	1 4,840		
GERMAN CANCER RESEARCH CENTER			
KRAMMER, P H.....	CHARACTERIZATION OF ANTIGEN-BINDING T-CELL RECEPTORS.....	1N01 CB74179-00	65,732
ORGANIZATION TOTAL	1 65,732		
COUNTRY TOTAL	4 180,572		
ISRAEL			
BET-DAGAN			
VOLCANI INSTITUTE OF AGRICULTURAL RESEARCH			
HURWITZ, SHMUEL.....	PARATHYROID FUNCTION IN RELATION TO BONE DISORDERS.....	1N01 AM72214-00	24,900
ORGANIZATION TOTAL	1 24,900		
JERUSALEM			
HEBREW UNIVERSITY OF JERUSALEM			
KEDAR, ELIEZER.....	IMMUNOTHERAPY OF MURINE LEUKEMIAS.....	2N01 CB64050-02	107,944

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ISRAEL—Continued			
MENCZEL, JACOB.....	OSTEOPOROSIS AND FRACTURE RESEARCH.....	2N01 AM32204-09	112,501
STEIN, W D.....	STUDIES OF MAMMALIAN CELL TRANSPORT SYSTEMS.....	5N01 CP43307-07	149,968
STEIN, YECHESKIEL.....	ESTABLISHMENT OF A LIPID RESEARCH CLINIC.....	3N01 HV53015-07	465,741
WEISS, DAVID W.....	ANTITUMOR RESISTANCE BY EXTRACT OF TUBERCLE BACILLI.....	2N01 CM12127-07	49,993
ORGANIZATION TOTAL	5 886,147		
ISRAELI MINISTRY OF HEALTH—CENTER OF REGISTRATION OF CANCER AND ALLIED DISEASES			
KATZ, LEAH H.....	CANCER INCIDENCE STUDY & REGISTRY ASSESSMENT.....	2N01 CP33351-05	85,937
ORGANIZATION TOTAL	1 85,937		
REHOVOTH			
WEIZMANN INSTITUTE OF SCIENCE			
ARNON, RUTH.....	ANTIBODY-DRUG CONJUGATES IN THE IMMUNOTHERAPY.....	2N01 CB64049-01	71,750
BERKE, GIDEON.....	MOLECULAR STUDIES OF SPECIFIC CELL MEDIATED CYTOTOXICITY.....	1N01 CB74183-00	99,105
COHEN, IRUN R.....	TUMOR AVOIDANCE OF DESTRUCTION BY THE IMMUNE SYSTEM.....	2N01 CB63982-03	39,450
FELDMAN, MICHAEL.....	IN VITRO SENSITIZATION OF HUMAN LYMPHOCYTES.....	2N01 CB63979-02	75,165
HAAS, MARTIN.....	INDUCTION OF FUNCTIONAL DIFFERENTIATION OF T-CELLS.....	1N01 CB74180-00	92,915
HERAN-GHERA, NECHAMA.....	GENETIC CONTROL OF SUSCEPTIBILITY TO TUMORS.....	1N01 CB74151-00	100,580
REVEL, MICHEL.....	STUDY OF ALTERATION IN TRANSLATION OF GENETIC MESSAGES.....	5N01 CP33220-07	286,808
SACHS, LEO.....	INVESTIGATE ASPECTS OF LUNG CANCER INCIDENCE.....	5N01 CP02217-11	225,900
SEGAL, SHRAGA.....	IMMUNOBIOLOGY OF METASTASES.....	1N01 CB74185-00	48,263
SHAPIRO, DAVID.....	PRODUCE 3 RADIOLABELED GLYCOLIPID SUBSTANCES.....	2N01 NS52300-04	33,450
SHARON, NATHAN.....	ISOLATION AND CHARACTERIZATION OF HUMAN PBL'S.....	1N01 CB74163-00	80,105
SHINITZKY, MEIR.....	ALTERED MEMBRANE MICROVISCOSITY.....	1N01 CB74193-00	58,680
SILBERBERG, ALEXANDER.....	INTERACTIONS OF PLATELETS WITH COLLAGENS.....	2N01 HV52907-03	113,475
ORGANIZATION TOTAL	13 1,325,646		
TEL AVIV			
TEL AVIV UNIVERSITY			
FRENSDORFF, ASHER.....	INFLUENCE OF CARCINOGENS ON VIRAL GENE EXPRESSION.....	1N01 CB74118-00	96,149
FRENSDORFF, ASHER.....	IMMUNIZATION OF MICE WITH PURIFIED MMTV POLYPEPTIDES.....	1N01 CP71011-00	96,836
WITZ, ISAAC P.....	EARLY DETECTION OF ANTIBODIES TO SYNGENEIC MOUSE TUMORS.....	1N01 CB74134-00	88,721
ORGANIZATION TOTAL	3 281,706		
TEL HASHOMER			
CHIAM SHEBA MEDICAL CENTER			
MODAN, BARUCH.....	DIET FACTORS AND EPIDEMIOLOGY OF BREAST CANCER.....	2N01 CB53883-04	51,200
MODAN, BARUCH.....	EPIDEMIOLOGY OF BENIGN BREAST DISEASE.....	1N01 CB74102-00	51,543
ORGANIZATION TOTAL	2 102,743		
COUNTRY TOTAL	25 2,707,079		
ITALY			
MILAN			
FARMITALIA			
ARCAMONE, FEDERICO MARIA.....	DESIGN & SYNTHESIS OF DOXORUBICIN DERIVATIVES & ANALOGS.....	5N01 CM57014-02	193,163
BERNARDI, LUIGI.....	DESIGN AND SYNTHESIS OF AGLYCONES TO DOXORUBICINONE.....	3N01 CM57036-02	189,590
ORGANIZATION TOTAL	2 382,753		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
ITALY—Continued			
MARIO NEGRI INSTITUTE FOR PHARMACOLOGICAL RESEARCH			
GARATTINI, SILVIO	COLLECTION AND SCREENING OF ANTINEOPLASTIC AGENTS.....	5N01 CM33720-05	193,110
GARATTINI, SILVIO	ANTINEOPLASTIC DRUG KINETICS.....	5N01 CM67064-01	75,580
GARATTINI, SILVIO	COMPARATIVE PHARMACOLOGY OF STEROID CONTRACEPTIVE DRUGS.....	5N01 HU22733-08	160,309
SPREAFICO, FEDERICO	STUDIES IN IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM53826-03	96,809
ORGANIZATION TOTAL	4	525,808	
NATIONAL CANCER INSTITUTE			
RILKE, FRANCO.....	CLASSIFICATION OF NONHODGKIN'S LYMPHOMAS.....	5N01 CM67115-01	21,715
ORGANIZATION TOTAL	1	21,715	
NATIONAL TUMOR INSTITUTE			
VERONESI, UMBERTO.....	STUDY OF CANCER AND BRAIN TUMORS.....	3N01 CM33714-11	155,069
VERONESI, UMBERTO.....	COORDINATING CENTER FOR THE CLINICAL STUDY OF MELANOMA.....	5N01 CM43726-06	95,375
ORGANIZATION TOTAL	2	250,444	
NAPLES			
UNIVERSITY OF NAPLES			
GIORANO, CARMELO.....	STUDY ON AMINO ACID AND UREMIA.....	3N01 AM90066-11	29,500
GIORANO, CARMELO.....	STUDY ON OXYSTARCH AND UREMIA.....	2N01 AM90070-09	34,000
ORGANIZATION TOTAL	2	63,500	
PAVIA			
UNIVERSITY OF PAVIA			
PAOLETTI, PIETRO.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67056-03	22,266
ORGANIZATION TOTAL	1	22,266	
PERUGIA			
UNIVERSITY OF PERUGIA			
BONMASSAR, ENZO.....	DRUG MODIFIED TUMOR ANTIGENS AS IMMUNOTHERAPY.....	2N01 CB64054-02	67,000
ORGANIZATION TOTAL	1	67,000	
PISA			
UNIVERSITY OF PISA			
BIANCHI, ROMANO.....	STUDY OF DIETARY TREATMENT OF CHRONIC UREMIA.....	2N01 AM80707-15	20,120
ORGANIZATION TOTAL	1	20,120	
COUNTRY TOTAL	14	1,353,606	
JAPAN			
NAGOYA			
AICHI CANCER CENTER			
NISHIZUKA, Y.....	PERINATAL ALTERATIONS INFLUENCE ON CARCINOGENESIS.....	5N01 CP55650-04	68,750
SEGI, MITSUO.....	SHIFTS IN CANCER RISKS FOR SPECIFIC SITES.....	5N01 CP23213-07	153,798
ORGANIZATION TOTAL	2	222,548	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
JAPAN—Continued			
OSAKA			
OSAKA CITY UNIVERSITY			
TOKUYAMA, TAKASHI.....	STUDY OF STRUCTURE OF ALKALOIDS.....	2N01 AM42203-03	8,000
ORGANIZATION TOTAL	1 8,000		
TOKYO			
INSTITUTE OF MICROBIAL CHEMISTRY			
UMEGAWA, HARNO.....	POTENTIAL ANTITUMOR AGENTS FROM MICROBIAL ORIGIN.....	5N01 CM57009-03	75,000
ORGANIZATION TOTAL	1 75,000		
INTERNATIONAL MEDICAL INFORMATION CENTER			
TSUDA, YOSHINARI.....	INTERACTION BETWEEN THE ICRDB PROGRAM AND ASIA.....	1N01 C075362-00	80,211
ORGANIZATION TOTAL	1 80,211		
JAPANESE FOUNDATION FOR CANCER RESEARCH			
IKAWA, YOJI.....	SUPPLY ASIATIC RODENT AND PRIMATE MATERIALS.....	1N01 CP71032-00	48,193
SAKURAI, YOSHIO.....	CANCER LIAISON OFFICE IN JAPAN.....	2N01 CM22054-08	70,500
ORGANIZATION TOTAL	2 118,693		
COUNTRY TOTAL	7 504,452		
NETHERLANDS			
AMSTERDAM			
NETHERLANDS CANCER INSTITUTE			
BOOT, LOURENS M.....	IMMUNOGENETIC STUDY OF BREAST CANCER AND LEUKEMIA.....	2N01 CP33368-03	90,000
RUMKE, PHILIP.....	SPERM IMMUNOLOGY.....	2N01 HD52834-03	45,778
ORGANIZATION TOTAL	2 135,778		
NETHERLANDS RED CROSS			
LOOS, J A.....	CRYOPRESERVATION OF HUMAN MONOCYTES.....	1N01 CB74164-00	45,547
ORGANIZATION TOTAL	1 45,547		
LEIDEN			
STATE UNIVERSITY OF LEIDEN			
VAN ROOD, J J.....	OBTAIN HL-A SERA & IMPROVE HISTOCOMPATIBILITY TECHNOLOGY.....	2N01 AI42508-07	116,098
ORGANIZATION TOTAL	1 116,098		
RIJSWIJK			
NETHERLANDS CENTRAL ORGANIZATION TNO			
BENTVELZEN, PETER A.....	RELEASE OF RNA TUMOR VIRUS & ITS GENETIC CONTROL.....	2N01 CP43328-04	180,000
MARQUET, R L.....	IMMUNOGENICITY OF 'SPONTANEOUS' ANIMAL TUMORS.....	2N01 CB64038-01	45,453
VAN PUTTEN, L M.....	COMBINATION OF RADIATION AND CHEMOTHERAPY.....	5N01 CM53763-02	73,151
ORGANIZATION TOTAL	3 298,604		
COUNTRY TOTAL	7 596,027		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
NORWAY			
OSLO			
NORWEGIAN PUBLIC HEALTH SERVICE			
PEDERSEN, EINAR	SHIFTS IN CANCER RISKS AMONG NORWEGIAN MIGRANTS	2N01 CP43247-04	33,604
ORGANIZATION TOTAL	1	33,604	
COUNTRY TOTAL	1	33,604	
SPAIN			
MADRID			
MADRID UNIVERSITY			
GOSALVEZ, MARIO	ANTITUMOR DRUGS EFFECT-ELECTRON TRANSPORT/ENERGY METAB.	2N01 CM53792-04	18,528
ORGANIZATION TOTAL	1	18,528	
COUNTRY TOTAL	1	18,528	
SWEDEN			
GOTHENBURG			
GOTHENBURG UNIVERSITY			
HYDEN, HOLGER N	COMPACT LOW-VOLUME SELF-REGENERATING ARTIFICIAL KIDNEY	2N01 AM62200-03	63,202
ORGANIZATION TOTAL	1	63,202	
STOCKHOLM			
CAROLINE INSTITUTE			
BERGSTROM, JONAS	STUDY OF UREMIC TOXICOLOGY	2N01 AM22215-09	92,543
CASPERSSON, TORBJORN	MARKERS APPLICABLE TO GYNECOLOGIC CYTOPATHOLOGY SPECIMEN	2N01 CB43945-03	46,000
KLEIN, EVA	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS	2N01 CB64023-01	43,800
KLEIN, EVA	IN VITRO IMMUNIZATION WITH AUTOCHTHONOUS HUMAN TUMOR	1N01 CB74144-00	62,000
KLEIN, GEORGE	ETIOLOGY OF SOME HUMAN CANCERS	3N01 CP33316-06	194,000
ORGANIZATION TOTAL	5	438,343	
UNIVERSITY OF STOCKHOLM			
ERNSTER, LARS	STUDY OF POLYCYCLIC HYDROCARBON METABOLISM	5N01 CP33363-07	185,000
ORGANIZATION TOTAL	1	185,000	
UPPSALA			
UNIVERSITY OF UPPSALA			
STENKVIST, BJORN	MORPHOLOGIC AND EPIDEMIOLOGIC ASPECTS OF BREAST CANCER	2N01 CB53968-02	110,500
WIGZELL, HANS	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS	2N01 CB64033-01	55,000
WIGZELL, HANS	OBTAIN UNIQUE MARKERS FOR MONONUCLEAR CELLS	1N01 CB74129-00	50,000
ORGANIZATION TOTAL	3	215,500	
COUNTRY TOTAL	10	902,045	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
SWITZERLAND			
GENEVA			
INTERNATIONAL UNION AGAINST CANCER			
OELAFRESNAYE, JEAN.....	INTERNATIONAL SCIENTIST INFORMATION EXCHANGE PROGRAM.....	5N01 C065341-02	297,143
WARWICK, G P.....	SUPPORT OF THE NCI INTERNATIONAL PROGRAMS.....	9N01 C075377-00	147,654
ORGANIZATION TOTAL	2 444,797		
UNIVERSITY OF GENEVA			
ORCI, LELIO.....	CONDUCTING MORPHOLOGICAL STUDIES OF DIABETES.....	1N01 AM72213-00	48,000
ORGANIZATION TOTAL	1 48,000		
COUNTRY TOTAL	3 492,797		
UGANDA			
KAMPALA			
MAKERERE UNIVERSITY			
OLWENY, CHARLES M.....	SUPPORT FOR CANCER TREATMENT CENTER.....	2N01 CM71343-18	67,252
ORGANIZATION TOTAL	1 67,252		
COUNTRY TOTAL	1 67,252		
UNITED KINGDOM			
BELFAST			
QUEEN'S UNIVERSITY OF BELFAST			
BOYO, OERIK R.....	SYNTHESIS OF OPTICALLY ACTIVE BP 7,8-DIHYDROOIOI.....	2N01 AM62209-01	9,000
ORGANIZATION TOTAL	1 9,000		
CARDIFF			
VELINDRE HOSPITAL			
PRITCHARD, J A.....	MACROPHAGE ELECTROPHORETIC MOBILITY ASSAY.....	2N01 CB53956-04	6,618
ORGANIZATION TOTAL	1 6,618		
EDINBURGH			
INVERESK RESEARCH INTERNATIONAL			
MC GREGOR, GEORGE.....	MICROBIAL SYSTEMS AS PRESCREENS FOR CHEMICAL CARCINOGENS.....	3N01 CP75858-01	147,787
ORGANIZATION TOTAL	1 147,787		
LEATHERHEAD			
BRITISH FOOD MANUFACTURING INDUSTRIES RESEARCH ASSOCIATION			
HOLMES, A W.....	N-NITROSO COMPOUNDS AND PRECURSORS IN THE ENVIRONMENT.....	2N01 CP43337-04	24,716
ORGANIZATION TOTAL	1 24,716		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1977—Continued

Project director	Purpose of contract	Contract No.	Dollars
UNITED KINGDOM—Continued			
LEEDS			
UNIVERSITY OF LEEDS			
COOPER, EDWARD H	TRIALS IN GASTROINTESTINAL CANCER	2N01 CM43727-06	32,900
ORGANIZATION TOTAL	1 32,900		
LONDON			
BROMPTON HOSPITAL			
TURNER-WARWICK, MARGARET.....	HISTOCOMPATIBILITY IN HYPERSENSITIVITY LUNG DISEASES	5N01 HR62935-01	36,153
ORGANIZATION TOTAL	1 36,153		
MEDICAL RESEARCH COUNCIL			
KIRK, D N	STEROID COLLECTION FOR MEDICAL RESEARCH	2N01 AM50032-15	26,444
ORGANIZATION TOTAL	1 26,444		
UNIVERSITY OF LONDON			
ADAMS, GERALD E	SYNTHESIS OF RADIOSENSITIZING AGENTS.....	1N01 CM77139-00	188,979
BROOKES, PETER.....	POLYCYCLIC HYDROCARBON METABOLISM IN RESPIRATORY TRACT.....	3N01 CP33367-03	10,000
HARRAP, KENNETH R.....	MODEL SYSTEM DEVELOPMENT & ANTICANCER AGENT COLLECTION.....	5N01 CM43736-06	32,000
HICKS, R MARIAN.....	PREVENTION OF EPITHELIAL CANCER BY RETINOLDS	1N01 CP75938-00	81,169
HICKS, R MARIAN.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUES.....	1N01 CP75955-00	61,925
ORGANIZATION TOTAL	5 374,073		
NOTTINGHAM			
UNIVERSITY OF NOTTINGHAM			
BALDWIN, ROBERT W	IMMUNOTHERAPY OF C3H MURINE MAMMARY CARCINOMA	5N01 CB64042-03	78,181
BALDWIN ROBERT W.....	DETECTION OF TUMOR SPECIFIC ANTIGENS IN THE CIRCULATION.....	1N01 CB74167-00	46,424
EMBLETON, MICHAEL J.....	IMMUNOGENICITY OF SPONTANEOUS ANIMAL TUMORS	2N01 CB64009-01	46,475
ORGANIZATION TOTAL	3 171,080		
OXFORD			
UNIVERSITY OF OXFORD			
JOHNSON, PAUL	STUDY OF SUDDEN INFANT DEATH SYNDROME	5N01 HD32772-08	84,540
ORGANIZATION TOTAL	1 84,540		
COUNTRY TOTAL	16 913,311		

APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetic sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization.

- Affiliated Hospitals Center--Boston (2 units), Mass.
Allegheny Health, Education and Research Corporation (formerly shown as Allegheny General Hospital)--Pittsburgh, Pa.
Battelle Memorial Institute--Columbus, Ohio; Richland, Wash.
Becton, Dickinson and Company--Towson, Md.; Research Triangle Park, N.C.
Boston Health and Hospitals Department (may include awards to Mallory Institute of Pathology Foundation)--Boston (2 units), Mass.
Bristol-Myers Company--New York, Syracuse, N.Y.
California State Health and Welfare Agency--Sacramento, San Francisco, Calif.
Children's Hospital of Michigan (formerly shown as Child Research Center of Michigan)--Detroit, Mich.
City University of New York--New York (2 units), N.Y.
College of Medicine and Dentistry of New Jersey--Newark, Piscataway, N.J.
Cornell University--Ithaca, New York, N.Y.
E G & G, Inc.--Rockville, Md.; Bedford, Worcester, Mass.
Enviro Control--Rockville, Temple Hills, Md.
Flow Laboratories--Rockville (2 units), Md.
Gulf South Research Institute--Baton Rouge, New Iberia, New Orleans, La.
Harvard University--Boston, Cambridge, Mass.
Indiana State Department of Mental Health (may include awards to the Association for Advancement of Mental Health Research and Education, Inc.)--New Castle, Ind.
Informatics, Inc.--Riverdale, Rockville, Md.
Kaiser Foundation Hospitals--Oakland, San Francisco, Calif.
Los Angeles County Health Services Department--Los Angeles, Torrance, Calif.
Louisiana State University--Baton Rouge, New Orleans, La.
Mayo Foundation--Rochester (2 units), Minn.
Midwest Research Institute--Kansas City, Mo.; Minneapolis, Minn.
Mitre Corporation--Bedford, Mass.; Mc Lean, Va.
New York Blood Center (formerly shown as Community Blood Council of Greater New York)--New York, N.Y.
New York City Health Services Administration (may include awards to the Medical and Health Research Association of New York City)--New York (2 units), N.Y.
New York Medical College--New York, Valhalla, N.Y.
New York State Department of Health (may include awards to Health Research, Inc.)--Albany, Buffalo, N.Y.
New York State Department of Mental Hygiene (may include awards to New York State Research Foundation for Mental Hygiene, Inc.)--Albany, N.Y.
Northwestern University--Chicago, Evanston, Ill.

Oregon State Higher Education System--Corvallis, Portland, Oreg.
Pennsylvania State University--Hershey, University Park, Pa.
SRI International (formerly shown as Stanford Research Institute)--
Menlo Park, Calif.
State University of New York--Albany, Buffalo, New York, Stony Brook,
Syracuse, N.Y.
State University System of Florida--Gainesville, Tallahassee, Tampa,
Fla.
Tulane University--Covington, New Orleans, La.
U.S. Small Business Administration--Washington (2 units), D.C.;
Bala-Cynwyd, Pa.
U.S. Smithsonian Institution--Washington (2 units), D.C.
University of California--Berkeley, Davis, Irvine, La Jolla, Los
Angeles, San Francisco, Santa Cruz, Calif. The unit in La Jolla
may include awards to the Friends of Psychiatric Research of
San Diego.
University of Connecticut--Farmington, Storrs, Conn.
University of Illinois--Chicago (2 units), Urbana, Ill.
University of Kansas--Kansas City, Lawrence, Kans.
University of Maryland System--Baltimore, College Park, Md.
University of Minnesota--Austin, Minneapolis, Minn.
University of Mississippi--Jackson, University, Miss.
University of Nebraska System--Lincoln, Omaha, Nebr.
University of Oklahoma--Norman, Oklahoma City, Okla.
University of Tennessee System--Knoxville, Memphis, Tenn.
University of Texas System--Austin, Dallas, Galveston, Houston
(2 units), Richardson, San Antonio, Tex.
University System of Georgia--Athens, Atlanta, Augusta, Ga.
Utah State Higher Education System--Logan, Salt Lake City, Utah
Whittaker Corporation--Bethesda, Md.; Waltham, Mass.

MR BISNETT
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034951

DHEW Publication No. (NIH) 78-1044

NATIONAL INSTITUTES OF HEALTH

Research Grants

Fiscal Year 1978



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

National Institutes of Health

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NATIONAL INSTITUTES OF HEALTH

Research Grants

Fiscal Year 1978

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service National Institutes of Health

DHEW Publication No. (NIH) 79-1042

Prepared by
NATIONAL INSTITUTES OF HEALTH
DIVISION OF RESEARCH GRANTS
Statistics and Analysis Branch

PREFACE

The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the research contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents a listing of the research grants (including the research career development awards) awarded by NIH from fiscal year 1978 funds. Research grants awarded by other constituent agencies of the Public Health Service are not included in this volume.



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TECHNICAL NOTE

Cancer Control Grants

The research demonstration and dissemination projects of the National Cancer Institute are no longer being included in this volume for the sake of conformity with their treatment in the budgetary process. These grants, commonly referred to as cancer control grants, are shown separately from research grants in the budget, and their exclusion from this volume reflects their treatment generally in analytical studies. Accordingly, the cancer control grants will be shown as a separate table in another volume of this series.

Organization Identification

In the presentation of grants made from fiscal year 1978 funds, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the principal investigator lies. Study of the structure of grantee organizations in the United States (primarily universities and colleges, and State Departments of Mental Health or their equivalents) has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education is comprised of two or more campuses reporting directly to the central administration, each campus is listed separately.
2. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and the organization is listed as many times within a given city as there are components of the organization receiving grants.
3. If a foundation has been established for the purpose of receiving and administering funds for grants, the name and location of the organization having professional responsibility for the grant are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
4. If an association receiving a grant has a fixed national headquarters, the grants are listed at the headquarters location. If however, the association does not have a fixed headquarters, the grants are listed in the city shown for this organization in either the Encyclopedia of Associations (1) or the Research Centers Directory (2).

These qualifications do not apply to foreign institutions or to some domestic organizations, because a systematic study of their organizational structure has not been made. Organizations which require a clarifying comment, or which appear in more than one geographical location are listed alphabetically in the Appendix.

Supplemental Awards

In this publication, supplemental awards are combined with the parent grant, or with other supplements, when both awards are made from the same fiscal year funds. Supplemental grants awarded in fiscal year 1978 to parent grants awarded in a previous fiscal year are shown separately; if two or more such supplements were made during fiscal year 1978, these supplements are combined.

-
- (1) Fiske, M. (Ed.): Encyclopedia of Associations. Gale Research Co., Detroit, Mich., 12 ed., Vol. 1, 1978.
 - (2) Palmer, A.M. (Ed.): Research Centers Directory. Gale Research Co., Detroit, Mich., 6 ed., 1978.

ABBREVIATIONS

The NIH component supporting a grant is indicated by the code letters in the left-hand column. These code letters form part of the identification of the grant number.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, Metabolism, and Digestive Diseases.....	NIAMDD
CA	National Cancer Institute.....	NCI
DE	National Institute of Dental Research.....	NIDR
ES	National Institute of Environmental Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences.....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RR	Division of Research Resources.....	DRR
TW	Fogarty International Center.....	FIC
LM	National Library of Medicine.....	NLM
	National Institutes of Health.....	NIH

TABLE 1.--SUMMARY OF NIH RESEARCH GRANTS AND AWARDS BY SUPPORTING COMPONENT, FISCAL YEAR 1978

	ALL RESEARCH GRANTS		RESEARCH PROJECTS, PROGRAM PROJECTS AND CENTERS, AND GENERAL SUPPORT		RESEARCH CAREER PROGRAM AWARDS	
	NUMBER	DOLLARS	NUMBER	DOLLARS	NUMBER	DOLLARS
SUPPORTING COMPONENT						
TOTAL NATIONAL INSTITUTES OF HEALTH.....	16,687	1,620,193,902	15,431	1,577,504,704	1,256	42,689,198
INSTITUTES AND RESEARCH DIVISIONS.....	16,621	1,617,787,434	15,372	1,575,346,261	1,249	42,441,173
DIVISION OF RESEARCH RESOURCES.....	809	138,644,638	808	138,607,199	1	37,439
NATIONAL CANCER INSTITUTE.....	3,138	377,417,852	3,010	373,018,422	128	4,399,430
NATIONAL EYE INSTITUTE.....	971	64,619,450	896	62,099,195	75	2,520,255
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE.....	2,509	274,329,114	2,261	265,835,711	248	8,493,403
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES.....	1,200	94,906,725	1,080	90,741,941	120	4,164,784
NATIONAL INSTITUTE OF ARTHRITIS, METABOLISM, AND DIGESTIVE DISEASES.....	2,333	187,046,359	2,086	178,289,052	247	8,757,307
NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT.....	1,175	106,740,264	1,102	104,299,662	73	2,440,602
NATIONAL INSTITUTE OF DENTAL RESEARCH.....	405	34,695,018	371	33,549,065	34	1,145,953
NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES.....	293	32,722,055	278	32,294,658	15	427,397
NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES.....	2,185	173,762,028	2,027	168,519,463	158	5,242,565
NATIONAL INSTITUTE OF NEUROLOGICAL AND COMMUNICATIVE DISORDERS AND STROKE.....	1,342	111,095,804	1,201	106,511,787	141	4,584,017
NATIONAL INSTITUTE ON AGING.....	261	21,808,127	252	21,580,106	9	228,021
NATIONAL LIBRARY OF MEDICINE.....	66	2,406,468	59	2,158,443	7	248,025

NOTE.--For information as to how this table was prepared, see Technical Note, p. vii.

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978

Principal investigator	Project title	Grant number	Dollars
GRAND TOTAL, 15,431 GRANTS.....			1,577,504,704
UNITED STATES,* 15,270 GRANTS.....			1,570,058,076
OTHER COUNTRIES, 161 GRANTS.....			7,446,628

UNITED STATES

ALABAMA

AUBURN

AUBURN UNIVERSITY ZIP CODE 36830

LATIMER, PAUL H.....	OPTICAL PROPERTIES OF PLATELETS AND ERYTHROCYTES.....	1R01 HL18256-01A2	29,147
VALLARINO, LIDIA M.....	DEVELOPMENT OF LANTHANIDE FLUORESCENT STAINS.....	1R01 CA24363-01	95,083
ORGANIZATION TOTAL	2	124,230	

BIRMINGHAM

EYE FOUNDATION HOSPITAL ZIP CODE 35233

PFISTER, ROSWELL R.....	ASCORBIC ACID IN THE TREATMENT OF CORNEAL DISEASE.....	3R01 EY02018-01S1	1,134
PFISTER, ROSWELL R.....	ASCORBIC ACID IN THE TREATMENT OF CORNEAL DISEASE.....	5R01 EY02018-02	80,181
ORGANIZATION TOTAL	2	81,315	

MILES COLLEGE ZIP CODE 35208

BROWN, GRACE L.....	FACULTY-STUDENT BIOMEDICAL RESEARCH.....	1S06 RR08160-01	118,316
ORGANIZATION TOTAL	1	118,316	

SOUTHERN RESEARCH INSTITUTE ZIP CODE 35205

BENNETT, L LEE, JR.....	MECHANISM OF ACTION OF NEW ANTICANCER DRUGS.....	1R01 CA23155-01	157,873
BENNETT, L LEE, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05676-02	25,970
BROCKMAN, ROBERT W.....	BIOCHEMICAL STUDY OF ANTICANCER AGENTS IN COLON TUMORS.....	5R26 CA20070-03	95,524
GRISWOLD, DANIEL P, JR.....	BIOLOGY AND TREATMENT OF MURINE COLON CARCINOMA.....	2R26 CA17303-04	213,093
LEWIS, DANNY H.....	DEVELOPMENT OF A SOFT DENTURE LINER FOR PROLONGED USE.....	1R01 DE04794-01	40,631
MONTGOMERY, JOHN A.....	ENZYME INHIBITORS AS NEW TYPES OF ANTICANCER AGENTS.....	1R01 CA23173-01	149,181
SANI, BRAHMA P.....	RETINOIC ACID-BINDING PROTEIN.....	5R01 CA18263-03	56,914
SANI, BRAHMA P.....	BIOCHEMICAL MARKERS IN COLON TUMORIGENESIS.....	5R26 CA22924-02	61,005
SHEALY, Y FULMER.....	CHEMICALLY REACTIVE COMPOUNDS FOR CANCER CHEMOTHERAPY.....	1R01 CA23127-01	142,707
TEMPLE, CARROLL G, JR.....	MULTISUBSTRATE, PSEUDOCOFACOR ENZYME INHIBITORS.....	1R01 CA23141-01	135,154
WILLIAMSON, ARTHUR E, JR.....	NONINVASIVE INTRAOCULAR PRESSURE MONITORING SYSTEM.....	2R01 EY01478-03	57,359
ORGANIZATION TOTAL	11	1,135,411	

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294

ACTION, RONALD T.....	MEMBRANE SPECIFICITIES RELATED TO NEOPLASIA.....	5R01 CA15338-05	60,190
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*Includes Puerto Rico.

NOTE.—Grants are listed according to the State and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ALABAMA—Continued			
ACTON, RONALD T.....	BIOLOGICAL ROLE OF ALLOANTIGENS.....	5R01 CA18609-03	58,940
ALFORD, CHARLES A, JR.....	PERINATAL INFECTIONS, IMMUNITY AND MALDEVELOPMENT.....	5P01 HD10699-02	414,172
ANDREOLI, THOMAS E.....	TRANSPORT PROCESSES IN LIPID MEMBRANES & RENAL TUBULES.....	5R01 AM14873-09	96,978
ARNOLD, ROLAND R.....	SALIVARY LACTOFERRIN AND REGULATION OF THE ORAL FLORA.....	5R01 DE04801-02	52,174
BAKER, HENRY J, JR.....	AN ANIMAL MODEL OF HUMAN GANGLIOSIDOSIS.....	5R01 NS10967-06	113,397
BAKER, HENRY J, JR.....	LABORATORY ANIMAL RESOURCE FOR BIOMEDICAL RESEARCH.....	2P40 RR00463-10	100,188
BARTOLUCCI, ALFRED A.....	SOUTHEASTERN GROUP STATISTICAL SERVICES.....	3R10 CA24456-01S1	156,139
BASTIA, DEEPAK.....	ORIGINS AND TERMINI OF REPLICATION OF COLE1 AND R6K.....	5R01 GM24357-02	61,820
BENNETT, J CLAUDE.....	STUDIES ON GAMMA GLOBULIN STRUCTURE.....	5R01 AI09153-13	74,897
BENNETT, J CLAUDE.....	COORDINATED STUDIES IN RHEUMATIC DISEASES.....	2P01 AM03555-19	246,342
BENNETT, J CLAUDE.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20614-02	331,941
BISHOP, DAVID H.....	TRANSCRIPTION AND REPLICATION OF ANIMAL RNA VIRUSES.....	5R01 AI13402-03	89,831
BISHOP, DAVID H.....	GENETIC AND MOLECULAR STUDIES OF ARENAVIRUSES.....	1R01 AI14183-01A1	63,010
BOOTS, LARRY R.....	ROLE OF SELECTED COENZYMES IN ENDOMETRIAL FUNCTION.....	1R01 HD10768-01A1	60,137
BRASCHO, DONN J.....	CANCER EDUCATION GRANT.....	2R25 CA17965-04	122,108
BRATTAIN, MICHAEL G.....	TISSUE CULTURE OF PURIFIED COLONIC CARCINOMA CELLS.....	1R26 CA21520-01A1	52,435
BUGG, CHARLES E.....	CRYSTAL STRUCTURES OF PURINE AND PYRIMIDINE ANALOGS.....	2R01 CA12159-07	40,378
CAIN, STEPHEN M.....	SURVIVAL VALUE OF PHYSIOLOGIC RESPONSES TO HYPOXIA.....	2R01 HL14693-07	74,163
CASELL, GAIL H.....	MYCOPLASMAS AND INFERTILITY: PATHOGENIC MECHANISMS.....	1R01 HD11447-01	122,922
CASELL, GAIL H.....	MURINE CRD: A MODEL OF CHRONIC PULMONARY INFLAMMATION.....	5R01 HL19741-03	65,603
CLEMENTS, REX S, JR.....	PHOSPHATIDYLINOSITOL METABOLISM AND INSULIN SECRETION.....	5R01 AM21065-02	35,415
COMPANS, RICHARD W.....	INFLUENZA VIRUS STRUCTURE, BIOSYNTHESIS AND ASSEMBLY.....	5R01 AI12680-04	70,421
COMPANS, RICHARD W.....	MOLECULAR STUDIES OF ONCORNA AND ARENAVIRUSES.....	2R01 CA18611-04	68,320
CONRAD, MARCEL E.....	IRON-INTestinal MUCOSAL METAL BINDING PROTEINS.....	1R01 AM21416-01	97,150
CONRAD, MARCEL E.....	LEAD ABSORPTION, EXCRETION, AND METABOLISM.....	5R01 ES01306-02	60,172
CONRAD, MARCEL E.....	PLATELET TRANSFUSIONS: USAGE AND COMPLICATIONS.....	5R01 HL20856-02	69,132
COOPER, MAX D.....	CELL DIFFERENTIATION STUDIES IN CANCER IMMUNOBIOLOGY.....	5P01 CA16673-04	370,899
CURTISS, ROY, III.....	EXTRACHROMOSOMAL ELEMENTS IN GRAM NEGATIVE BACTERIA.....	5R01 AI11456-06	57,890
DILLON, HUGH C, JR.....	DIPLOCOCCUS PNEUMONIAE: INFECTION AND IMMUNITY.....	5R01 HD09732-03	43,544
DURANT, JOHN R.....	CANCER CENTER CORE SUPPORT GRANT (COMPREHENSIVE).....	2P30 CA13148-07	2,049,181
DURANT, JOHN R.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA19657-03	327,086
DURANT, JOHN R.....	DEVELOPMENT OF CENTRALIZED CANCER PATIENT DATA SYSTEM.....	5R10 CA21182-02	90,702
DUSTAN, HARRIET P.....	MECHANISMS OF HYPERTENSION.....	1R01 HL23201-01	180,425
FISCHER, THEODORE E.....	RESEARCH OF POLYURETHANES FOR MAXILLOFACIAL USE.....	5R01 DE04138-04	71,508
FLETCHER, SAMUEL G.....	PHYSIOLOGY OF SPEECH ARTICULATION PROCESSES & DISORDERS.....	2P50 NS11852-04	183,404
FULLMER, HAROLD M.....	INSTITUTE OF DENTAL RESEARCH.....	2P50 DE02670-12	1,940,120
GAMS, RICHARD A.....	CELLULAR INCORPORATION OF VITAMIN B-12.....	1R01 CA20709-01A1	44,720
GLAZE, ROBERT P.....	BIOMEDICAL RESEARCH.....	1S07 RR07178-01	15,898
GLICKSON, JERRY D.....	STUDIES OF BLEOMYCIN BINDING TO NUCLEIC ACIDS.....	1R01 CA24411-01	74,850
HALSEY, JAMES H, JR.....	SUPPORT FOR CEREBROVASCULAR DISEASE RESEARCH CENTER.....	5P50 NS08802-09	404,550
HEMSTREET, GEORGE P, III.....	IMMUNE RECOGNITION OF AUTOLOGOUS RENAL CELL CARCINOMA.....	1R23 CA24875-01	19,167
HICKEY, TERRY L.....	DEVELOPMENT OF THE RETINOGENICULATE SYSTEM.....	5R01 EY01338-04	43,123
HICKEY, TERRY L.....	DEVELOPMENT OF THE HUMAN LATERAL GENICULATE NUCLEUS.....	1R01 EY02159-01	32,559
HIRAMOTO, RAYMOND N.....	A MODEL FOR MULTIPLE MODALITY THERAPY OF OSTEOSARCOMA.....	1R01 CA16699-01A3	92,173
HIRSCHOWITZ, BASIL I.....	CONTROL OF GASTRIC SECRETION.....	2R01 AM09260-12A1	76,475
HUNT, CHARLES.....	ATHEROSCLEROSIS IN NEW MODELS OF DIABETES MELLITUS.....	5R01 HL21416-02	64,320
JAMES, THOMAS N.....	MECHANISMS OF CARDIOVASCULAR DISEASE.....	5P01 HL11310-12	1,557,464
KEARNEY, JOHN F.....	REGULATION OF B CELL CLONAL DIVERSITY.....	1R01 AI14782-01	74,540
KEMP, GEORGE E.....	PURIFICATION OF ACETYLCHOLINE RECEPTOR FROM MUSCLE.....	1R01 NS14262-01	30,795
KLEINSTEIN, ROBERT N.....	VISUAL FIELD DEFECTS WITH BLOOD PRESSURE THERAPY.....	1R01 EY02544-01	92,603
KRUMDIECK, CARLOS L.....	STUDIES ON THE BIOCHEMISTRY OF PTEROYL POLYGLUTAMATES.....	1R01 GM23453-01A1	67,352
LAMON, EDDIE W.....	THE IMMUNE RESPONSE TO VIRALLY DETERMINED TUMOR ANTIGENS.....	2R01 CA17273-04	64,520
LAWTON, ALEXANDER R, III.....	DIFFERENTIATION OF B LYMPHOCYTES.....	5R01 AI11502-06	65,023
LEBOWITZ, JACOB.....	CIRCULAR DNA—IMPLICATIONS FOR CANCER & DRUG RESISTANCE.....	2R01 CA17077-04	65,350
LENKINSKI, ROBERT E.....	THE SOLUTION CONFORMATION OF ANGIOTENSIN II.....	1R01 AM21980-01	29,245
LEVENE, RALPH Z.....	PATHOGENESIS OF PRIMARY OPEN ANGLE GLAUCOMA.....	5R01 EY01536-05	101,070
MARTINEZ, MARIO G.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA17934-04	63,737
MAYNE, RICHARD.....	COLLAGEN POLYMORPHISM AND ARTERIAL STRUCTURE.....	1R01 HL21665-01	54,602
MC GHEE, JERRY R.....	STUDIES ON EFFECTIVE CARRIES IMMUNITY.....	5R01 DE04217-04	81,044
MESTECKY, JIRI F.....	SECRETORY IGA SYSTEM: MOLECULAR-CELLULAR INTERACTIONS.....	2R01 AI10854-07	89,672

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ALABAMA—Continued			
MOLE, JOHN E.....	STRUCTURE OF MURINE HISTOCOMPATIBILITY ALLOANTIGENS.....	5R01 CA20690-02	71,563
NAVAR, LUIS G.....	REGULATION OF RENAL HEMODYNAMICS.....	5R01 HL18426-04	63,536
NAVIA, JUAN M.....	VITAMIN A IN BONES AND TEETH CALCIFICATION.....	1R01 DE04862-01	38,915
NIEDERMEIER, WILLIAM.....	ROLE OF GLYCOPROTEINS IN MAMMARY TUMOR METASTASIS.....	5R01 CA19933-03	87,530
NORTON, THOMAS T.....	NEURAL MECHANISMS OF EXTRASTRIATE AND STRIATE VISION.....	7R01 EY02909-01	34,120
OMURA, GEORGE A.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA03013-22	298,220
OVERBECK, HENRY W.....	HEMODYNAMICS AND VASOACTIVITY IN RENAL HYPERTENSION.....	7R01 HL23312-01	78,757
OVERBECK, HENRY W.....	IONS, WATER, AND HYPERTENSION.....	7R01 HL23600-01	86,360
OYSTER, CLYDE W.....	NEUROPHYSIOLOGY OF OPTOKINETIC NYSTAGMUS.....	3R01 EY00771-06S1	1,845
OYSTER, CLYDE W.....	NEURAL INTERACTION IN THE VERTEBRATE RETINA.....	1R01 EY02207-01A1	48,375
PACE, CAROLINE S.....	ELECTROPHYSIOLOGICAL STUDIES OF CULTURED ISLET CELLS.....	1R01 AM21973-01	62,050
PITTMAN, JAMES A, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00032-18	570,106
PITTMAN, JAMES A, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05349-17	200,462
PRCHAL, JOSEF T.....	CATARACT THERAPY RBC ABNORMALITIES IN DIABETICS.....	1R01 EY02432-01	78,853
PRETLOW, THOMAS G, II.....	BREAST CANCER.....	1R01 CA23922-01	80,183
RACKLEY, CHARLES E.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17667-04	1,412,275
REDDY, WILLIAM J.....	MECHANISM OF ACTION OF INSULIN.....	3R01 AM15235-07S1	21,998
REHM, WARREN S.....	FLUID AND ELECTROLYTE TRANSPORT IN THE CORNEA.....	5R01 EY00456-10	48,176
REYNOLDS, DAVID W.....	HERPES VIRUS INFECTIONS IN HIGH RISK CANCER GROUPS.....	5R01 CA16424-04	68,621
ROBINSON, LEONARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05300-17	79,629
ROY, POLLY.....	MOLECULAR STUDIES OF FISH RHABDOVIRUSES.....	1R01 AI13686-01	52,350
SACHS, GEORGE.....	ENZYMIC BASIS OF ACID SECRETION.....	2R01 AM15878-06	103,770
SACHS, GEORGE.....	GASTRIC TUBULES STUDIES.....	1R01 AM21588-01	37,250
SACHS, GEORGE.....	CHARACTERISTICS OF COLONIC CANCER MEMBRANES.....	3R26 CA16722-03S1	4,259
SCHNEYER, CHARLOTTE A.....	STUDY OF SALIVARY GLAND STRUCTURE AND FUNCTION.....	5R01 DE02110-14	55,386
SCHUTZBACH, JOHN S.....	THE BIOSYNTHESIS OF CELL ENVELOPE GLYCOPROTEINS.....	5R01 CA16777-05	72,562
SEGREST, JERE P.....	LIPOSOMES AS CARRIERS FOR CHEMOTHERAPEUTIC DRUGS.....	1R01 CA22868-01A1	116,859
SEGREST, JERE P.....	LIPID INTERACTIONS OF A CELL SURFACE GLYCOPROTEIN.....	5R01 GM23177-03	54,497
SHINGLETON, HUGH M.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA12484-08	89,425
SHIOTA, TETSUO.....	SIXTH INTERNATIONAL SYMPOSIUM ON PTERIDINE CHEMOTHERAPY.....	5R13 CA22918-02	12,000
SPANGLER, STANLEY G.....	DIABETES: SUGAR FLUXES IN INTERNALLY PERFUSED MUSCLE.....	1R01 AM24098-01	82,030
SPARKS, DAVID L.....	EYE MOVEMENT CONTROL: THE ROLE OF BRAIN STEM NEURONS.....	5R01 EY01189-06	39,339
STROUD, ROBERT M.....	COMPLEMENT CHEMISTRY AND BIOLOGY.....	1R01 CA24446-01	62,198
SUDDATH, FRED L.....	THE MOLECULAR STRUCTURE OF HUMAN SERUM TRANSFERRIN.....	1R01 HL21170-01A1	34,707
TAYLOR, KENNETH B.....	HEART LACTATE DEHYDROGENASE: THE COMPLEX WITH NADH.....	3R01 HL20116-01S1	2,377
TOMANA, MILAN.....	BIOCHEMISTRY OF CARBOHYDRATES IN CELL SURFACE COMPONENTS.....	5R01 CA19918-03	54,044
WEST, SEYMOUR S.....	HEPARIN—BIOPHYSICAL, CHEMICAL, AND BIOLOGICAL ASPECTS.....	1R01 HL22402-01	114,883
YIELDING, K LEMONE.....	DNA REPAIR AND COLON CANCER.....	3R26 CA16376-03S1	12,982
YIELDING, K LEMONE.....	DNA REPAIR AND COLON CANCER.....	2R26 CA16376-04	49,660
YIELDING, LERENA W.....	PHOTOAFFINITY LABELING OF DRUG-DNA INTERACTIONS.....	1R01 AI14808-01	48,000
ORGANIZATION TOTAL	101	16,008,138	

MOBILE

UNIVERSITY OF SOUTH ALABAMA	ZIP CODE 36688		
BAUGH, CHARLES M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05774-04	44,509
CHANG, FREDERIC C.....	SYNTHESIS OF POTENTIAL BILE ACID METABOLITES.....	5R26 CA21656-02	56,948
COGGIN, JOSEPH H, JR.....	CHARACTERIZATION OF FETAL ANTIGENS IN TUMORS.....	5R01 CA22674-02	91,157
COGGIN, JOSEPH H, JR.....	ETIOLOGY OF A LYMPHOMA EPIZOOTIC IN HAMSTERS.....	1R01 CA23491-01	83,199
DOWNY, JAMES M.....	PHYSICAL FACTORS AND CORONARY FLOW.....	1R01 HL20648-01A1	46,125
FUNKHOUSER, JANE D.....	LUNG DEVELOPMENT AND DIFFERENTIATION IN ORGAN CULTURE.....	5R01 HD10314-03	43,042
GORDON, ALLEN R.....	REGULATION OF TENSION IN SMOOTH MUSCLE.....	2R01 AM18415-04	47,000
GREENBERG, STANLEY.....	MECHANISMS OF CONTROL OF PULMONARY SMOOTH MUSCLE.....	5R01 HL22177-02	32,416
GREENBERG, STANLEY.....	VASCULAR MECHANISMS IN RENAL HYPERTENSION.....	5R01 HL22216-02	32,300
HUANG, ROSA H.....	ESR STUDY OF AGING: MONOAMINE OXIDASE AND MEMBRANES.....	1R01 NS14434-01	23,500
LAUSCH, ROBERT N.....	CELLULAR IMMUNE RESPONSE TO HUMAN CYTOMEGALOVIRUS.....	5R01 CA23758-02	70,949
LAUSCH, ROBERT N.....	STUDY OF SERUM FACTORS MODIFYING TUMOR IMMUNITY.....	5R01 CA23777-02	86,664
LONGENECKER, H E, JR.....	ACTIONS OF NEUROTOXINS FROM C. SCULPTURATUS VENOM.....	5R01 ES01321-02	44,178
MC CORD, JOE M.....	SUPEROXIDE AND SUPEROXIDE DISMUTASE IN HUMAN DISEASE.....	1R01 AM20527-01A1	48,175

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ALABAMA—Continued			
MUSTAFA, SYED J.....	ADENOSINE, PROSTAGLANDINS IN RELATION TO CORONARY FLOW.....	5R01 HL19202-03	38,833
OAKES, JOHN E.....	DNA HOMOLOGIES AMONG HERPESVIRUSES.....	1R01 AI15143-01	33,183
PETERSON, RAYMOND D.....	ROLE OF THE PITUITARY IN EXPERIMENTAL LEUKEMOGENESIS.....	3R01 CA17819-03S1	11,550
TAYLOR, AUBREY E.....	TRANSPORT ACROSS ALVEOLAR CAPILLARY MEMBRANE.....	5R01 HL22549-02	47,497
TAYLOR, AUBREY E.....	INTESTINAL SECRETION: CAPILLARY AND TISSUE FORCES.....	2R01 HL22569-02	72,875
TOREN, E CLIFFORD, JR.....	LIQUID CHROMATOGRAPHY AUTOMATION FOR ISOZYME ANALYSES.....	5R01 GM24452-02	52,351
TOREN, E CLIFFORD, JR.....	MICROCOMPUTERIZED AUTOMATION FOR CLINICAL CHEMISTRY.....	5R01 GM24453-02	69,459
WEPPNER, WILLIAM A.....	CHARACTERIZATION OF ANTIGEN ON A SPONTANEOUS LYMPHOMA.....	1R23 CA24312-01	27,083
WINKLER, HERBERT H.....	PERMEABILITY OF THE EPIDEMIC TYPHUS RICKETTSIA.....	7R01 AI15035-01	59,216
WINKLER, HERBERT H.....	SUGAR AND SUGAR PHOSPHATE TRANSPORT.....	5R01 AM21716-02	30,455
ORGANIZATION TOTAL	24	1,192,664	
NORMAL			
ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 35762			
GRAYSON, GEORGE W.....	SOMATOTROPHIN AND PESTICIDES.....	3S06 RR08149-02S1	1,350
GRAYSON, GEORGE W.....	SOMATOTROPHIN AND PESTICIDES.....	5S06 RR08149-03	113,728
ORGANIZATION TOTAL	2	115,078	
TALLADEGA			
TALLADEGA COLLEGE ZIP CODE 35160			
BACON, ARTHUR L.....	BIOMEDICAL SCIENCES.....	5S06 RR08105-05	67,677
BACON, ARTHUR L.....	BIOMEDICAL SCIENCES.....	2S06 RR08105-06	139,467
ORGANIZATION TOTAL	2	207,144	
TUSCALOOSA			
STILLMAN COLLEGE ZIP CODE 35401			
SINGH, JARNAIL.....	DEVELOPMENT OF BIOMEDICAL RESEARCH CAPABILITIES.....	5S06 RR08021-06	7,540
SINGH, JARNAIL.....	DEVELOPMENT OF BIOMEDICAL RESEARCH CAPABILITIES.....	2S06 RR08021-07	52,511
ORGANIZATION TOTAL	2	60,051	
TUSKEGEE INSTITUTE			
TUSKEGEE INSTITUTE ZIP CODE 36088			
HENDERSON, JAMES H.....	BIOMEDICAL SCIENCES--MULTIDISCIPLINARY.....	5S06 RR08091-06	14,987
HENDERSON, JAMES H.....	BIOMEDICAL SCIENCES--MULTIDISCIPLINARY.....	2S06 RR08091-07	368,751
ORGANIZATION TOTAL	2	383,738	
UNIVERSITY			
UNIVERSITY OF ALABAMA SYSTEM--UNIVERSITY OF ALABAMA IN UNIVERSITY ZIP CODE 35486			
ALEXANDER, CHESTER, JR.....	FREE RADICAL REACTIONS IN DNA PURINE ANALOGS.....	1R01 CA20245-01A1	35,886
HARDMAN, JOHN K.....	STUDY OF PROPERTIES OF TRYPTOPHAN SYNTHETASES.....	5R01 GM20547-06	34,585
LORDEN, JOAN F.....	CENTRAL MONOAMINE SYSTEMS AND BODY WEIGHT REGULATION.....	1R01 NS14755-01	25,125
SPARKS, DAVID L.....	EFFECTS OF DEPRIVATION ON THE OCULOMOTOR SYSTEM.....	1R01 EY02293-01	66,589
ORGANIZATION TOTAL	4	162,185	
STATE TOTAL	153	19,588,270	
ALASKA			
COLLEGE			
UNIVERSITY OF ALASKA SYSTEM--UNIVERSITY OF ALASKA AT COLLEGE ZIP CODE 99701			
WEST, GEORGE C.....	RESEARCH IN ZOOLOGY IN ALASKA.....	5P01 GM10402-15	391,945

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ALASKA—Continued			
ORGANIZATION TOTAL	1	391,945	
STATE TOTAL	1	391,945	
ARIZONA			
FLAGSTAFF			
NORTHERN ARIZONA UNIVERSITY		ZIP CODE 86001	
OWEN, THOMAS L.....	AGING EFFECTS ON SMALL VESSEL REACTIVITY.....	1R23 AG01112-01	31,785
ORGANIZATION TOTAL	1	31,785	
PHOENIX			
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER		ZIP CODE 85013	
SCHWARTZ, ARTHUR S.....	NEUROLOGICAL MECHANISMS OF SENSORY DEFICIT.....	5R01 NS05715-12	23,634
WESTENBERG, IRWIN S.....	THE ALBINE GENE'S EFFECT ON RETINOGENICULATE AXONS.....	3R01 EY03013-01S1	1,934
ORGANIZATION TOTAL	2	25,568	
TEMPE			
ARIZONA STATE UNIVERSITY		ZIP CODE 85281	
BIEBER, ALLAN L.....	STRUCTURE AND ACTIVITY OF GUANINE AMINOHYDROLASES.....	5R01 GM22388-03	21,903
BURKE, WILLIAM F, JR.....	MUCLEASES IN BACILLUS SUBTILIS TRANSFORMATION.....	1R01 GM25343-01	38,462
DAVIDSON, ELIZABETH W.....	INSECTICIDAL ACTION OF BACILLUS SPHAERICUS.....	5R01 AI14306-02	17,109
DOANE, WINIFRED W.....	GENETIC REGULATORY MECHANISM IN CELLULAR DIFFERENTIATION.....	7R01 GM25255-01	104,419
DORMAN, MICHAEL F.....	SPEECH PERCEPTION BY ARTICULATION DISORDERED CHILDREN.....	1R01 NS14688-01	29,060
LESHOWITZ, BARRY H.....	FREQUENCY SELECTIVITY IN NORMAL AND IMPAIRED EARS.....	5R01 NS09874-05	82,696
MC GAUGHEY, ROBERT W.....	INFLUENCE OF STEROIDS ON MAMMALIAN OOCYTE MATURATION.....	2R01 HD06532-04A1	47,928
PETTIT, GEORGE R.....	NATURALLY OCCURRING ANTINEOPLASTIC AGENTS.....	2R01 CA16049-05	81,937
WOOLF, CHARLES M.....	BEHAVIOR GENETICS—PHOTOTAXIS-GEOTAXIS IN DROSOPHILA.....	5R01 GM19583-05	27,404
WOOLF, CHARLES M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07112-11	28,802
ORGANIZATION TOTAL	10	479,720	
SOUTHWEST BIOMEDICAL RESEARCH INSTITUTE		ZIP CODE 85281	
HECHT, FREDERICK.....	CYTOGENETICS OF CLONAL NEOPLASIAS.....	7R01 CA25055-01	35,198
HECHT, FREDERICK.....	HUMAN CHROMOSOME STRUCTURE, FUNCTION, AND BEHAVIOR.....	7R01 HD12601-01	48,059
ORGANIZATION TOTAL	2	83,257	
TSAILE			
NAVAJO COMMUNITY COLLEGE		ZIP CODE 86556	
MC NELEY, JAMES K.....	BIOMEDICAL SCIENCES.....	1S06 RR08163-01	164,198
ORGANIZATION TOTAL	1	164,198	
TUCSON			
UNIVERSITY OF ARIZONA		ZIP CODE 85721	
ARORA, SATISH K.....	STRUCTURAL INVESTIGATIONS OF MODE OF ACTION OF DRUGS.....	1R01 GM25150-01	37,176
BARRETT, HARRISON H.....	CODED-APERTURE SYSTEMS FOR NUCLEAR DOSE REDUCTION.....	5R01 CA17731-03	70,664
BARRETT, HARRISON H.....	IMPROVED TUMOR IMAGING IN NUCLEAR MEDICINE.....	1P01 CA23417-01	94,604
BENSON, BRYANT.....	STRUCTURE AND ACTION OF PINEAL ANTIGONADOTROPIN.....	2R01 HD08759-04	63,662
BLANCK, THOMAS J.....	ANESTHETIC DEPRESSION OF THE MYOCARDIUM.....	1R23 GM25180-01	44,935
BLITT, CASEY D.....	INHALATION ANESTHETICS: PULMONARY BIOTRANSFORMATION.....	5R01 GM24456-02	18,940
BOYER, JOHN T.....	SOUTHWEST ARTHRITIS CENTER.....	5P60 AM20597-02	211,112
BRENDEL, KLAUS.....	STUDY OF DRUGS IN CARBOHYDRATE-LIPID INTERRELATION.....	5R01 AM14977-09	50,631
BRENDEL, KLAUS.....	PLACENTAL BASEMENT MEMBRANES IN HEALTH AND DISEASE.....	5R01 HD10781-02	54,055

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ARIZONA—Continued			
BRESSLER, RUBIN.....	EFFECT OF PHARMACOLOGIC AGENTS ON METABOLISM OF HEART.....	5R01 HL13636-08	53,390
BROWN, BURNELL R, JR.....	ANESTHETIC-DRUG INTERACTIONS WITH THE LIVER.....	5R01 AM16715-07	56,554
BURROWS, BENJAMIN.....	PULMONARY SCOR: AIRWAYS OBSTRUCTIVE DISEASES.....	5P50 HL14136-07	967,051
CHVAPIL, MILOS.....	LYSYL OXIDASE IN HEALTH AND DISEASE.....	5R01 AM18706-03	111,612
CHVAPIL, MILOS.....	PROTECTION AGAINST HEPATOTOXICITY BY ZINC.....	1R01 ES01570-01A1	51,361
CHVAPIL, MILOS.....	BIOMATERIAL APPLICATIONS OF COLLAGEN SPONGE.....	1R01 GM24380-01	71,048
CHVAPIL, MILOS.....	CHARACTERIZATION OF KELOIDS AND HYPERTROPHIC SCARS.....	1R01 GM25159-01	74,076
COLE, JACK R.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	1R01 CA22336-01A1	68,473
COLE, JACK R.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09094-01	122,120
CORRIGAN, JAMES J, JR.....	FACTOR II ANTIGEN AND COAGULANT ACTIVITY.....	5R01 HL21431-02	32,661
CROSS, HAROLD E.....	VITREOUS REACTIONS TO INJURY.....	2R01 EY01633-03	92,317
CUSANOVICH, MICHAEL A.....	REGENERATION OF THE VISUAL PIGMENT RHODOPSIN.....	2R01 EY01113-04	23,976
CUSANOVICH, MICHAEL A.....	MECHANISM OF ACTION OF VERTEBRATE CYTOCHROME C.....	2R01 GM21277-04	34,459
DANTZLER, WILLIAM H.....	REGULATION OF INDIVIDUAL NEPHRON FILTRATION RATES.....	5R01 AM16294-06	33,161
ENEMARK, JOHN H.....	STRUCTURAL MODELS FOR MOLYBDO-ENZYMES.....	2R01 ES00966-04	54,523
FORSTER, LESLIE S.....	ELECTRONIC PROPERTIES OF COMPLEX MOLECULES.....	5R01 GM19921-12	34,044
GERNER, EUGENE W.....	HEAT AND RADIATION IN CANCER THERAPY.....	2P01 CA17343-04	795,236
GERNER, EUGENE W.....	RADIATION INDUCED DEFECTS IN CELL KINETICS.....	2R01 CA18273-04	70,327
GLASS, RICHARD S.....	A MECHANISM FOR OXIDATIVE PHOSPHORYLATION.....	5R01 HL15104-07	58,735
GOLL, DARREL E.....	STUDIES ON MYOFIBRILLAR PROTEINS.....	5R01 AM19864-03	43,922
GORE, ROBERT W.....	PHYSICAL DETERMINANTS OF MICROVASCULAR FUNCTION.....	2R01 HL13437-09	58,174
GRIMES, WILLIAM J.....	CELL SURFACES AND CELLS TRANSFORMED BY ONCOGENIC VIRUSES.....	5R01 CA12753-08	52,713
HADLEY, MAC E.....	HYPOTHALAMIC REGULATION OF PARS INTERMEDIA FUNCTION.....	5R01 AM16282-06	57,906
HADLEY, MAC E.....	ENDOCRINE CONTROL OF MELANOMA CELL DIFFERENTIATION.....	5R01 CA20547-02	52,412
HALL, JENNIFER D.....	HOST CELL FUNCTIONS INVOLVED IN SV40 TRANSFORMATION.....	5R01 CA20429-02	63,448
HALONEN, MARILYN J.....	PULMONARY AND CIRCULATORY ALTERATIONS INDUCED BY IGE.....	1R01 HL22582-01	35,700
HARTSHORNE, DAVID J.....	BIOCHEMISTRY OF CONTRACTILE PROTEINS.....	1R01 HL23615-01	77,718
HAUSSLER, MARK R.....	FUNCTION OF VITAMIN D METABOLITES AND BONE DISEASE.....	5R01 AM15781-07	50,949
HEWLETT, MARTINEZ J.....	VIRUS-CELL INTERACTIONS AND POLIOVIRUS RNA STRUCTURE.....	5R01 AI13670-02	48,425
HRUBY, VICTOR J.....	PEPTIDE HORMONE STRUCTURE AND FUNCTION.....	5R01 AM17420-05	49,009
HRUBY, VICTOR J.....	GLUCAGON STRUCTURE-FUNCTION STUDIES.....	5R01 AM21085-02	44,137
HUXTABLE, RYAN J.....	BIOCHEMISTRY AND REGULATION OF TAURINE IN THE HEART.....	5R01 HL19394-03	61,432
HUXTABLE, RYAN J.....	DEVELOPMENTAL PROCESSES IN PULMONARY HYPERTENSION.....	5R01 HL20087-02	54,566
JOHNSON, DAVID G.....	THE REGULATION OF INSULIN SECRETION.....	1R01 AM25318-01	44,347
JOHNSON, PAUL C.....	REGULATION OF BLOOD FLOW IN THE MICROCIRCULATION.....	2R01 HL15390-12	105,241
JOHNSON, PAUL C.....	REGULATION AND EXCHANGE IN THE MICROCIRCULATION.....	5P01 HL17421-05	297,561
JONES, STEPHEN E.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA13612-05	132,175
KASSANDER, A RICHARD, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07002-13	76,699
KETTEL, LOUIS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05675-10	174,981
KIM, HYUN D.....	MEMBRANE-LIMITED METABOLISM IN MAMMALIAN RED CELLS.....	5R01 AM17723-04	51,682
LA LONE, BRIAN J.....	PULSATILE REGULATION OF FLOW IN THE MICROCIRCULATION.....	5R23 HL21332-02	39,468
LAIRD, HUGH E.....	TAURINE AND EPILEPSY.....	1R01 NS14405-01	27,208
LINDELL, THOMAS J.....	ROLE OF PHOSPHORYLATION IN EUKARYOTIC TRANSCRIPTION.....	5R01 GM22897-03	74,087
LITTLE, JOHN W.....	BIOCHEMICAL ANALYSIS OF THE E. COLI LEXA GENE PRODUCT.....	5R01 GM24178-02	59,534
MAGUN, BRUCE E.....	NUCLEAR PROTEIN CHANGES IN TRANSFORMATION.....	3R01 CA20913-02S1	10,608
MEEZAN, ELIAS.....	GLYCOPROTEIN STRUCTURE AND METABOLISM IN DIABETES.....	5R01 AM15394-08	53,671
MEEZAN, ELIAS.....	BASEMENT MEMBRANES OF THE EYE IN DIABETIC RETINOPATHY.....	5R01 EY01868-02	69,464
MEEZAN, ELIAS.....	DIABETIC HUMAN BRAIN MICROVASCULAR BASEMENT MEMBRANE.....	5R01 HL20500-02	56,887
MEINKE, WILLIAM J.....	DETECTION OF HUMAN WART VIRAL DNA IN MALIGNANT TISSUE.....	5R01 CA23675-02	81,252
MENDELSON, NEIL H.....	CONTROL OF GROWTH AND DIVISION.....	2R01 GM18735-08	56,679
MOORE, WESLEY S.....	HEALING COMPLICATIONS IN VASCULAR GRAFTING.....	5R01 HL22110-02	68,750
MORKIN, EUGENE.....	CELLULAR MECHANISMS IN CARDIAC HYPERTROPHY.....	5P01 HL20984-02	400,817
MOUNT, DAVID W.....	MECHANISM OF INDUCTION OF VIRAL AND CELLULAR FUNCTIONS.....	1R01 GM24496-01	79,173
PRITCHETT, RANDALL F.....	TRANSCRIPTION OF THE CYTOMEGALOVIRUS GENOME.....	1R01 AI15141-01	61,791
REMERS, WILLIAM A.....	ANTITUMOR AGENTS: SYNTHESIS OF MITOMYCIN ANALOGS.....	2R01 CA21430-03	51,168
REST, RICHARD F.....	THE FATE OF INTRACELLULAR NEISSERIA GONORRHOEAE.....	1R01 AI14934-01	55,366
RUPLEY, JOHN A.....	STUDIES ON DEHYDROGENASES.....	5R01 GM22373-03	40,383
RUPLEY, JOHN A.....	PROTEIN SOLVATION.....	1R01 GM24760-01	47,655
RUSSELL, DIANE H.....	POLYAMINE METABOLISM IN CANCER AND CANCER CHEMOTHERAPY.....	5R01 CA14783-06	89,318
SALEMME, FRANCIS R.....	CYTOCHROME STRUCTURE AND INTERACTION.....	5R01 GM21534-05	72,117

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ARIZONA—Continued			
SALMON, SYDNEY E.....	KINETICS OF MONOCLONAL PLASMA CELL NEOPLASIA OF MAN.....	3R01 CA14102-06S2	24,660
SALMON, SYDNEY E.....	MEDICAL ONCOLOGY PROGRAM PROJECT.....	2P01 CA17094-04	783,303
SALMON, SYDNEY E.....	BIOASSAY AND CHEMOTHERAPY OF HUMAN TUMOR STEM CELLS.....	5R01 CA21839-02	112,456
SALMON, SYDNEY E.....	CANCER CENTER CORE SUPPORT GRANT.....	1P30 CA23074-01	429,985
SHACK, ROLAND V.....	ULTRAFAST SCANNER MICROSCOPE IN LABORATORY AUTOMATION.....	1R01 CA24466-01	233,026
SHELTON, RALPH L.....	PREDICTING ARTICULATION FROM CINEFLUOROGRAPHIC MEASURES.....	2R01 DE03350-08	58,005
SHIMIZU, NOBUYOSHI.....	GENETIC CONTROL OF MAMMALIAN CELL SURFACE FUNCTIONS.....	5R01 GM24375-02	55,101
SIPES, I GLENN.....	ACTIVATION AND BINDING OF ORGANOHALOGEN CARCINOGENS.....	5R01 CA21820-02	92,428
STUART, DOUGLAS G.....	ANALYSIS OF MOTOR UNIT - MUSCLE RECEPTOR INTERACTIONS.....	2R01 NS07888-11A1	78,858
SWINDELL, WILLIAM.....	ANALOG TISSUE DENSITOMETER FOR CANCER RADIOTHERAPY.....	5R01 CA19477-02	86,815
TOLLIN, GORDON.....	FLAVIN-PROTEIN INTERACTIONS IN FLAVOENZYME CATALYSIS.....	3R01 AM15057-07S1	7,830
TOLLIN, GORDON.....	FLAVIN-PROTEIN INTERACTIONS IN FLAVOENZYME CATALYSIS.....	2R01 AM15057-08	52,060
VODA, ANN M.....	MENOPAUSAL HOT FLASH.....	1R01 AG01059-01	45,050
WALSON, PHILIP D.....	CARRAGEENAN AND NECROTIZING ENTEROCOLITIS.....	1R01 HD11454-01	39,346
WANGENSTEEN, STEPHEN.....	CLINICAL RESEARCH CENTER IN SURGERY.....	3M01 RR00714-05S1	154,287
WELLS, MICHAEL A.....	UTILIZATION OF ESSENTIAL FATTY ACIDS BY SUCKLING RATS.....	5R01 HD10954-02	68,665
WITTE, MARLYS H.....	CIRCULATORY CONTROL OF SPLENIC FUNCTION.....	5R01 HL20086-02	73,270
WYCKOFF, RALPH W.....	PEPTIDES FROM DENTAL AND OSSEOUS COLLAGENS.....	5R01 DE04635-02	49,935
ORGANIZATION TOTAL	87	9,024,576	
STATE TOTAL	103	9,809,104	
ARKANSAS			
FAYETTEVILLE			
UNIVERSITY OF ARKANSAS ZIP CODE 72701			
GEREN, COLLIS R.....	VENOM COMPONENTS: ISOLATION, CHARACTERIZATION AND USE.....	5R01 GM24173-02	44,172
MILLETT, FRANCIS S.....	NMR STUDIES OF MEMBRANE BOUND PROTEINS.....	3R01 GM20488-05S1	4,000
MILLETT, FRANCIS S.....	NMR STUDIES OF MEMBRANE BOUND PROTEINS.....	5R01 GM20488-06	54,596
ORGANIZATION TOTAL	3	102,768	
LITTLE ROCK			
UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201			
BARRON, ALMEN L.....	CHLAMYDIAL GENITAL INFECTION: AN ANIMAL MODEL SYSTEM.....	5R01 AI13069-04	47,304
BRUCE, THOMAS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05350-17	69,049
BURNS, E ROBERT.....	INDUCED CIRCADIAN PHASE DIFFERENCES IN TUMOR AND HOST.....	5R01 CA20623-02	23,916
CANNON, DONALD J.....	COLLAGEN: MOLECULAR CHANGES WITH AGING.....	5R01 AG01120-02	59,727
CARTER, WILLIAM J.....	MECHANISM OF THYROTOXIC MYOPATHY.....	1R01 AM20718-01	19,931
CAVE, MAC D.....	MODES OF DNA AMPLIFICATION EXPRESSED BY OOCYTES.....	5R01 GM21446-05	40,550
CHANG, LOUIS W.....	EFFECT OF LEAD ON THE DEVELOPING NERVOUS SYSTEM.....	5R01 ES01631-02	11,486
GILMORE, SHIRLEY A.....	RADIATION-INDUCED CHANGES IN THE NEONATAL NERVOUS SYSTEM.....	5R01 NS04761-15	50,828
HILLER, F CHARLES.....	THERAPEUTIC AEROSOLS: CHARACTERISTICS AND RETENTION.....	3R01 HL20024-02S1	4,200
HILLER, F CHARLES.....	THERAPEUTIC AEROSOLS: CHARACTERISTICS AND RETENTION.....	5R01 HL20024-03	85,148
HOGUE, CAROL J.....	EFFECTS OF PRENATAL CARE ON ADOLESCENT CHILDBEARING.....	1R01 HD11972-01	57,686
JONES, JOE M.....	GENETIC CONTROL OF NEOPLASMS IN RATS.....	1R01 CA23687-01	60,080
KOHLER, PETER O.....	HORMONE PRODUCTION IN CULTURED ENDOCRINE CELLS.....	5R01 AM21458-02	89,222
MANSOURI, ALI.....	STRUCTURE-FUNCTION RELATIONSHIP OF HEMOGLOBIN A.....	5R01 AM20181-02	20,701
MENNA, JAY H.....	EFFECT OF INSECTICIDE CARRIER ON VIRAL INFECTION.....	1R23 ES01715-01	36,341
MORRIS, MANFORD D.....	A NEW HERITABLE FREE CHOLESTEROL STORAGE DISEASE.....	1R01 AM21376-01	105,369
MOSS, A J, JR.....	EFFECTS OF EAST NEUTRONS ON CULTURED MAMMALIAN CELLS.....	5R01 CA13270-05	30,832
NAGLE, WILLIAM A.....	HYPERTHERMIA AND RADIATION: X-RAYS VS FAST NEUTRONS.....	5R01 CA19018-03	72,210
REMMEL, RONALD S.....	INPUTS TO PONTINE RF PROJECTIONS TO THE MLF.....	5R01 EY01794-03	27,887
SCHEVING, LAWRENCE E.....	CHRONOBIOLOGICAL APPROACH TO CANCER CHEMOTHERAPY.....	5R01 CA14388-06	70,172
SHERMAN, JEROME K.....	CRYOBANKING OF MOUSE SPERMATOZOA.....	1R01 HD12146-01	44,606
WESTBROOK, KENT C.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA21358-02	147,668
YEH, YUN-CHI.....	BIOCHEMICAL AND GENETIC STUDIES OF DNA SYNTHESIS.....	2R01 GM18012-06	54,838

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ARKANSAS—Continued			
ZWEMER, RAYMUND L.....	INTERNATIONAL ANATOMICAL NOMENCLATURE.....	3R13 LM01810-03S1	4,095
ORGANIZATION TOTAL	24 1,233,846		
SILAM SPRINGS			
JOHN BROWN UNIVERSITY ZIP CODE 72761			
GRIGGS, HENRY G.....	ULTRAVIOLET AND IONIZING RADIATION DAMAGE.....	2R01 CA18809-02	15,000
ORGANIZATION TOTAL	1 15,000		
STATE TOTAL	28 1,351,614		
CALIFORNIA			
ARCATA			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—HUMBOLDT STATE UNIVERSITY ZIP CODE 95521			
HANDWERKER, W PENN.....	ECONOMIC NICHE, FAMILY PATTERN AND FERTILITY.....	5R01 HD10591-02	25,847
ORGANIZATION TOTAL	1 25,847		
BERKELEY			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY—DEPARTMENT OF HEALTH ZIP CODE 94704			
AUSTIN, DONALD F.....	NEW METHODS OF CANCER REGISTRY DATA ANALYSES.....	5R01 CA21448-02	122,439
LENNETTE, EDWIN H.....	IMMUNOLOGY AND EPIDEMIOLOGY OF CERTAIN VIRAL DISEASES.....	2R01 AI01475-21	229,445
LENNETTE, EDWIN H.....	ELECTRON MICROSCOPIC STUDIES OF SELECTED VIRAL AGENTS.....	5R01 AI08200-11	42,673
LENNETTE, EDWIN H.....	STUDIES ON THE PATHOGENESIS OF NAEGLERIA INFECTIONS.....	5R01 AI13345-03	64,280
ORGANIZATION TOTAL	4 458,837		
INSTITUTE FOR RESEARCH IN SOCIAL BEHAVIOR ZIP CODE 94705			
MELLINGER, GLEN D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05719-07	50,857
ORGANIZATION TOTAL	1 50,857		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
ADAMS, ANTHONY J.....	VISION AND BLOOD FLOW IN RETINAL VASCULAR DISEASE.....	1R01 EY02271-01	85,623
AMES, BRUCE N.....	REGULATION OF GENE FUNCTION AND PROTEIN SYNTHESIS.....	2R01 GM19993-11	111,173
AMES, GIOVANNA F.....	MEMBRANES AND ACTIVE TRANSPORT OF AMINO ACIDS.....	5R01 AM12121-11	99,510
BALLOU, CLINTON E.....	COMPLEX POLYSACCHARIDES IN MYCOBACTERIUM SPECIES.....	5R01 AI12522-24	125,931
BARKER, HORACE A.....	INTERMEDIARY METABOLISM OF BACTERIA.....	2R01 AI00563-31	82,415
BARTLETT, PAUL A.....	SYNTHESIS OF MACROCYCLIC NATURAL PRODUCTS.....	5R01 CA16616-05	73,529
BARTLETT, PAUL A.....	A NOVEL CLASS OF NUCLEOSIDE ANTIMETABOLITES.....	1R01 CA22747-01	51,668
BARTLETT, PAUL A.....	PHOSPHATE-DERIVED PHOTOAFFINITY LABELS.....	2R01 GM21612-04	45,789
BENTLEY, DAVID R.....	FUNCTIONAL DEVELOPMENT OF IDENTIFIED NEURAL NETWORKS.....	2R01 NS09074-09	36,428
BERGMAN, ROBERT G.....	C-C AND C-N BOND FORMATION USING METAL-BASED REAGENTS.....	1R01 GM25459-01	68,061
BLACKBURN, ELIZABETH H.....	SPECIFIC DNA-PROTEIN INTERACTION IN TETRAHYMENA.....	1R01 GM26259-01	65,194
BRECHER, GEORGE.....	HEMOPOIETIC DIFFERENTIATION, MACROCYTIC ANEMIA.....	7R01 CA25133-01	81,888
BRIGGS, GEORGE M.....	VITAMIN AND MINERAL REQUIREMENTS AND INTERACTIONS.....	2R01 RR01029-02	35,096
BROOKS, GEORGE A.....	TRACER STUDIES ON LACTATE METABOLISM DURING EXERCISE.....	5R01 AM19577-02	37,952
BUDINGER, THOMAS F.....	MYOCARDIUM INFARCT SIZING BY 82RB EMISSION TOMOGRAPHY.....	1R01 HL21697-01	142,488
BURKI, HENRY J.....	IN VITRO STUDY OF MAMMALIAN CELLS DAMAGED BY TRITIUM.....	5R01 CA14310-06	60,648
BURKI, HENRY J.....	ALKYLATING-CARCINOGEN MUTAGENESIS IN MAMMALIAN CELLS.....	1R01 ES01916-01	52,741
BURLINGAME, A L.....	BIOMEDICAL, CLINICAL MASS SPECTROMETRY RESOURCE.....	3P41 RR00719-03S3	34,766
BURLINGAME, A L.....	BIO-ORGANIC BIOMEDICAL MASS SPECTROMETRY RESOURCE.....	2P41 RR00719-04A1	329,467
BURNSIDE, MARY B.....	MICROTUBULE AND MICROFILAMENT STRUCTURE AND FUNCTION.....	5R01 GM23539-03	41,010
CALENDAR, RICHARD.....	MOLECULAR STUDIES ON PHAGE P2 AND ITS SATELLITE, P4.....	5R01 AI08722-10	73,650
CANDE, WILLIAM Z.....	FUNCTIONAL MODEL FOR MITOSIS IN CELL LINES.....	5R01 GM23238-03	37,582
CARPENTER, FREDERICK H.....	STRUCTURE AND ACTIVITY OF INSULIN.....	5R01 AM00608-25	54,280
CARPENTER, FREDERICK H.....	MECHANISM OF LEUCINE AMINOPEPTIDASE.....	5R01 EY00813-08	60,367

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
CASIDA, JOHN E.....	MODE OF ACTION AND METABOLISM OF ORGANIC TOXICANTS.....	2P01 ES00049-14	466,319
CASTRO, JOSEPH R.....	TREATMENT OF CANCER WITH HELIUM AND HEAVY IONS.....	5P01 CA19138-03	937,794
CHAMBERLIN, MICHAEL J.....	SELECTIVITY OF BACTERIAL TRANSCRIPTION.....	5R01 GM12010-15	134,452
CLARK, ALVIN J.....	PHYSIOLOGY OF BACTERIAL CONJUGATION AND RECOMBINATION.....	5R01 AI05371-16	136,922
COHN, THEODORE E.....	THE DETECTION OF VISUAL SIGNALS.....	3R23 EY01481-03S1	1,353
COLE, R DAVID.....	HISTONE BIOCHEMISTRY AND THE INFLUENCE OF HORMONES.....	2R01 GM20338-11	143,002
CURTIS, STANLEY B.....	THE RESPONSE OF A RAT RHABDOMYOSARCOMA TO HEAVY IONS.....	2R01 CA17411-04	153,559
DANIELL, ELLEN.....	CELL TRANSFORMATION BY DEFECTIVE VIRUS PARTICLES.....	5R01 CA19058-03	55,773
DAUBEN, WILLIAM G.....	ULTRAVIOLET IRRADIATION OF NATURAL PRODUCTS.....	5R01 AM00709-25	55,749
DAUBEN, WILLIAM G.....	MODIFIED STEROID AND SESQUITERPENE ANTITUMOR AGENTS.....	5R01 CA04284-19	52,309
DE VALOIS, RUSSELL L.....	ELECTROPHYSIOLOGY OF COLOR VISION.....	5R01 EY00014-11	69,902
DEKKER, CHARLES A.....	HUMAN SERUM RIBONUCLEASES IN HEALTH AND DISEASE.....	5R01 CA19606-03	48,392
DIXON, JONATHAN S.....	PURIFICATION OF ERYTHROPOIETIN.....	5R01 HL21686-02	89,101
DUESBERG, PETER H.....	MOLECULAR AND GENETIC ANALYSES OF RNA TUMOR VIRUSES.....	5R01 CA11426-10	264,631
EAKIN, RICHARD M.....	STRUCTURE AND FUNCTION OF PHOTORECEPTORS.....	5R01 EY02229-17	56,548
EBBE, SHIRLEY N.....	KINETICS OF MEGAKARYOCYTE AND PLATELET TURNOVER.....	5R01 AM21355-02	91,603
ECHOLS, G HARRISON, JR.....	CANCER RESEARCH PROGRAM: VIRUSES; CONTROL MECHANISMS.....	5P30 CA14097-06	181,228
ECHOLS, G HARRISON, JR.....	GENETIC & CHEMICAL STUDIES OF PHAGE LAMBDA DEVELOPMENT.....	5R01 GM17078-10	119,789
ELBERG, SANFORD S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07006-13	200,462
FLOM, MERTON C.....	SENSORY AND MOTOR MECHANISMS IN FUNCTIONAL AMBLYOPIA.....	5R01 EY02125-02	71,124
FOGEL, SEYMOUR.....	RECOMBINATION-DNA SYNTHESIS AND DEVELOPMENT IN YEAST.....	5R01 GM17317-09	63,964
FORTE, JOHN G.....	MECHANISM OF HO AND CL- TRANSPORT BY GASTRIC MUCOSA.....	5R01 AM10141-14	72,550
FRAENKEL-CONRAT, BEATRICE.....	ALKYLATION OF POLYNUCLEOTIDES IN VITRO AND IN VIVO.....	5R01 CA12316-08	89,050
FRAENKEL-CONRAT, HEINZ L.....	THE MECHANISM OF THE NEUROTOXICITY OF VENOMS.....	5R01 ES00700-05	40,470
FREELING, MICHAEL.....	DEVELOPMENTAL GENETICS WITH AN INDUCIBLE GENE SYSTEM.....	2R01 GM21734-04	68,140
FREEMAN, RALPH D.....	DEVELOPMENT AND PLASTICITY OF THE VISUAL SYSTEM.....	5R01 EY01175-06	56,550
FRISTROM, JAMES W.....	GENIC/MOLECULAR BASIS OF IMAGINAL DISC MORPHOGENESIS.....	2R01 GM19937-06	87,786
FUERSTENAU, DOUGLAS W.....	INTERFACIAL PROPERTIES OF APATITE AND TOOTH MATERIALS.....	5R01 DE03708-06	45,594
GARCIA, JOSEPH F.....	RADIOASSAY OF ERYTHROPOIETIN.....	1R01 HL22469-01	41,967
GERHART, JOHN C.....	STUDIES OF CELLULAR REGULATORY MECHANISMS.....	2R01 GM19363-15	103,926
GLAESER, ROBERT M.....	BIOLOGICAL STRUCTURE ANALYSIS BY ELECTRON MICROSCOPY.....	3R01 GM23325-02S1	13,281
GLAESER, ROBERT M.....	BIOLOGICAL STRUCTURE ANALYSIS BY ELECTRON MICROSCOPY.....	5R01 GM23325-03	209,014
GLASER, DONALD A.....	MICROBIAL AND SOMATIC CELL GENETICS AND PHYSIOLOGY.....	5R01 GM22021-04	137,958
GLASER, DONALD A.....	FACILITY FOR AUTOMATED EXPERIMENTS IN CELL BIOLOGY.....	3P41 RR00961-03S1	451,562
GOLDSMITH, WERNER.....	HEAD-NECK SYSTEM MOTION AND STRESS DUE TO IMPACT.....	2R01 AM18384-04	42,668
GRUNDER, HERMANN A.....	CT SCANNING FOR HEAVY ION THERAPY TREATMENT PLANNING.....	1P01 CA25205-01	209,556
HAFTER, ERVIN R.....	PSYCHOPHYSIOLOGICAL STUDIES OF BINAURAL INTERACTION.....	5R01 NS07787-11	47,071
HARRIS, MORGAN.....	CYTOPLASMIC INHERITANCE IN NORMAL AND TUMOR CELLS.....	5R01 CA12130-08	76,576
HEARST, JOHN E.....	STRUCTURE OF DNA IN EUKARYOTIC CELLS AND VIRUSES.....	5R01 GM11180-15	101,738
HEARST, JOHN E.....	NUCLEIC ACID INTERACTIONS WITH SYNTHETIC PSORALENS.....	1R01 GM25151-01	61,310
HEATHCOCK, CLAYTON H.....	STEREOSELECTIVE SYNTHESIS OF MACROLIDE ANTIBIOTICS.....	1R01 AI15027-01	69,877
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF ISOPRENOID ANTITUMOR COMPOUNDS.....	5R01 CA12617-07	61,886
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF BRUCEANTIN.....	5R01 CA21163-02	27,473
HOSODA, JUNKO.....	ROLE OF LIGASE AND OTHER ENZYMES IN DNA REPLICATION.....	2R01 GM16841-07	107,346
HOSODA, JUNKO.....	STRUCTURE OF DNA-UNWINDING PROTEIN.....	5R01 GM23563-02	45,557
HUBBELL, WAYNE L.....	MOLECULAR BASIS OF MEMBRANE EXCITATION.....	5R01 EY00729-07	97,871
KELLER, EDWARD L.....	STUDIES ON THE OCULOMOTOR SYSTEM OF ALERT PRIMATES.....	5R01 EY00955-07	38,156
KING, JANET C.....	ZINC REQUIREMENTS OF PREGNANT WOMEN.....	5R01 HD11272-02	99,606
KLINMAN, JUDITH P.....	ENZYME CATALYZED HYDROGEN ABSTRACTION REACTIONS.....	7R01 GM25765-01	49,777
KNIGHT, C ARTHUR.....	CHEMISTRY OF VIRUS MUTATION.....	5R01 AI00634-25	89,829
KOSHLAND, DANIEL E, JR.....	REGULATORY PROCESSES IN BIOLOGICAL SYSTEMS.....	2R01 AM09765-13	169,043
KOSHLAND, MARIAN E.....	MECHANISM OF ANTIBODY SPECIFICITY AND BIOSYNTHESIS.....	5R01 AI07079-13	128,782
LAZARUS, RICHARD S.....	STRESS AND COPING IN AGING.....	1R01 AG00799-01A1	125,712
LEIGHTON, TERRANCE J.....	REGULATION OF BACTERIAL CELL DEVELOPMENT.....	5R01 GM22053-04	59,948
LEWIS, EDWIN R.....	MORPHOLOGY AND PHYSIOLOGY OF THE INNER EAR.....	2R01 NS12359-04	48,117
LINDGREN, FRANK T.....	LIPOPROTEIN METHODOLOGY AND BIOMEDICAL APPLICATIONS.....	5P01 HL18574-03	619,083
LINN, STUART M.....	FIDELITY OF NUCLEOTIDE POLYMERASES DURING AGING.....	1R01 AG00819-01	40,929
LINN, STUART M.....	IN VITRO RESTRICTION AND MODIFICATION OF PHAGE DNA.....	5R01 GM19020-10	71,025
LOHER, WERNER J.....	CIRCADIAN AND HORMONAL CONTROL OF SEXUAL BEHAVIOR.....	5R01 HD03619-10	43,979
MACEY, ROBERT I.....	CA AND MG IN MAINTENANCE OF MEMBRANE TRANSPORT.....	5R01 GM18819-06	46,770

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
MACHEN, TERRY E.....	TRANSITIONS AND TRANSPORT IN GASTRIC MUCOSA.....	5R01 AM19520-02	45,791
MAESTRE, MARCOS F.....	PHYSICAL STRUCTURE OF VIRUSES, CHROMOSOMES & CELL NUCLEI.....	2R01 AI08427-10	91,325
MALKIN, RICHARD.....	IRON-SULFUR PROTEINS AS BOUND ELECTRON CARRIERS.....	5R01 GM20571-05	39,742
MARGEN, SHELDON.....	NUTRITIONAL REQUIREMENTS IN THE AGING HUMAN.....	5R01 AG00164-03	41,080
MARGEN, SHELDON.....	STUDIES IN HUMAN NUTRITION.....	3P01 AM10202-12S1	129,212
MARTIN, G STEVEN.....	GENETICS OF RNA TUMOR VIRUSES.....	5R01 CA17542-03	34,580
MATHIES, RICHARD A.....	RAMAN INVESTIGATIONS OF THE MOLECULAR BASIS OF VISION.....	5R01 EY02051-02	44,547
MATWIYOFF, NICHOLAS A.....	A NATIONAL, STABLE ISOTOPES RESOURCE AT LOS ALAMOS.....	5P41 RR00962-03	178,204
MAZIA, DANIEL.....	TRANSFORMATION, DIVISION, AND MOTION OF CELLS.....	2P01 GM13882-13	315,487
MENDELSON, MORTIMER L.....	RADIOBIOLOGICAL TECHNIQUES IN HUMAN CANCER THERAPY.....	5R01 CA14533-07	295,631
MILLER, SHELDON S.....	HOMEOSTATIC ABILITY OF THE RETINAL PIGMENT EPITHELIUM.....	1R01 EY02205-01	79,985
MISHELL, ROBERT I.....	REGULATION OF CELLS OF THE IMMUNE SYSTEM.....	2R01 AI08817-10	48,737
MISHELL, ROBERT I.....	IMMUNOREGULATORY EFFECTS OF BACTERIAL SUBSTANCES.....	1R01 CA25056-01	63,349
NANDI, SATYABRATA.....	BIOLOGY OF MAMMARY NEOPLASIA.....	3P01 CA05388-18S1	45,962
NANDI, SATYABRATA.....	BIOLOGY OF MAMMARY NEOPLASIA.....	2P01 CA05388-19	522,366
NEILANDS, JOHN B.....	IRON METABOLISM OF MICROORGANISMS.....	5R01 AI04156-17	35,639
NEILANDS, JOHN B.....	CHELATES FOR COOLEY'S ANEMIA AND IRON STORAGE DISEASE.....	5R01 AM17146-05	56,088
NIKAIDO, HIROSHI.....	BIOCHEMISTRY OF BACTERIAL CELL MEMBRANES.....	5R01 AI09644-09	87,036
OACE, SUSAN M.....	DIETARY FIBER AND BIOAVAILABILITY OF MICRONUTRIENTS.....	5R01 AM19970-02	54,303
OSTWALD, ROSEMARIE.....	EFFECT OF DIETARY CHOLESTEROL IN MAMMALS.....	5R01 AM08480-15	89,479
PAFFENBARGER, RALPH S, JR.....	FACTORS IN YOUTH PREDISPOSING TO CHRONIC DISEASE.....	5R01 HL19839-09	146,481
PENHOET, EDWARD E.....	CONTROL OF RNA SYNTHESIS IN EUKARYOTIC CELLS.....	5R01 CA20357-03	44,067
PENHOET, EDWARD E.....	STRUCTURE AND MODIFICATION OF MAMMALIAN TRANSFER RNA.....	5R01 CA21245-02	47,291
POLSE, KENNETH A.....	CONTACT LENS EFFECTS ON REFRACTIVE ERROR.....	3R01 EY01755-01S2	24,064
POLSE, KENNETH A.....	CONTACT LENS EFFECTS ON REFRACTIVE ERROR.....	5R01 EY01755-02	169,102
RABINOWITZ, JESSE C.....	PURINE AND PTERIDINE METABOLISM IN MICROORGANISMS.....	2R01 AM02109-21	151,899
RAJU, MUDUNDI R.....	HEAVY PARTICLES IN RADIOTHERAPY: A COMPARATIVE STUDY.....	2R01 CA17290-03	148,264
RAJU, MUDUNDI R.....	FLOW CYTOPHOTOMETRY IN RADIOBIOLOGY AND RADIOTHERAPY.....	1R01 CA22585-01	61,347
RAPOPORT, HENRY.....	TOXIC ALGAE IN MARINE AND FRESH-WATER ENVIRONMENTS.....	5R01 ES01547-02	152,007
RAYBOURN, MICHAEL S.....	IN VITRO ELECTROPHYSIOLOGY OF CNS TOXICITY.....	1R01 ES01907-01	76,965
RAYMOND, KENNETH N.....	COORDINATION ISOMERS IN BIOLOGICAL IRON TRANSPORT.....	5R01 AI11744-05	79,600
REEVES, WILLIAM C.....	ECOLOGY AND CONTROL OF ARBOVIRUSES.....	5R01 AI03028-20	290,109
RUBIN, HARRY.....	PRIMARY EVENTS IN REGULATING CELL MULTIPLICATION.....	5R01 CA15744-05	148,839
SCHACHMAN, HOWARD K.....	STRUCTURES AND INTERACTIONS OF BIOLOGICAL MACROMOLECULES.....	5R01 GM12159-15	106,204
SCHIMMERLING, WALTER.....	PHYSICAL CHARACTERISTICS OF HEAVY ION BEAMS.....	1R01 CA23247-01	182,294
SCHOR, CLIFTON M.....	ABNORMAL EYE MOVEMENTS IN STRABISMUS AND AMBLYOPIA.....	5R01 EY02573-02	38,162
SHORE, VIRGIE G.....	COMPOSITION AND STRUCTURE OF PLASMA LIPOPROTEINS.....	3R01 HL17463-03S1	171,960
STEINHARDT, RICHARD A.....	HORMONAL REGULATION OF ION TRANSPORT IN TUMORIGENESIS.....	5R01 CA21711-02	56,309
STENT, GUNTHER S.....	A NEW SOURCE OF HYALURONIDASE AND ANTI-COAGULANTS.....	1R01 HL22227-01	52,795
STENT, GUNTHER S.....	BEHAVIOR AND DEVELOPMENT OF A SIMPLE NERVOUS SYSTEM.....	5R01 NS12818-25	66,697
STOKSTAD, E L.....	METABOLISM OF FOLIC ACID AND VITAMIN B12.....	2R01 AM08171-15	77,009
STOKSTAD, E L.....	NUTRITIONAL REQUIREMENTS OF FREE-LIVING SYSTEMS.....	3R01 AM12625-08S1	27,481
STREITWIESER, ANDREW, JR.....	CARBON ACIDITY.....	2R01 GM12855-14	68,913
THORNER, JEREMY W.....	CELL-CELL INTERACTIONS OF A SIMPLE EUKARYOTE.....	2R01 GM21841-04	74,944
TIMIRAS, PAOLA S.....	EFFECT OF CHRONIC CNS-ENDOCRINE MODIFICATION ON AGING.....	1R01 AG00043-01A3	50,081
TIMIRAS, PAOLA S.....	MEMBRANOGENESIS IN CRETINISM AND HYPERTHYROIDISM.....	2R01 HD07340-04A1	62,766
TINOCO, IGNACIO, JR.....	STRUCTURE AND FUNCTION OF NUCLEIC ACIDS.....	5R01 GM10840-20	134,783
TOBIAS, CORNELIUS A.....	PRETHERAPEUTIC USE OF ACCELERATED HEAVY IONS.....	5P01 CA15184-05	939,125
VAN DEN BERG, BARBARA J.....	CHILD HEALTH AND DEVELOPMENT STUDIES.....	5P01 HD07256-07	165,484
VAN DEN BERG, BARBARA J.....	EPIDEMIOLOGICAL STUDIES, PRECURSORS OF HYPERTENSION.....	5R01 HL19859-03	151,269
VAN DILLA, MARVIN A.....	CHROMOSOMAL FLOW CYTOMETRY: DNA AND CENTROMERES.....	1R01 GM25076-01	144,710
VAN SLUYTERS, RICHARD C.....	NEUROPHYSIOLOGY OF VISUAL DEPRIVATION.....	1R01 EY02193-01	47,180
VANDERLAAN, MARTIN.....	CYTOCHEMICAL PROBES OF UROTHELIAL TUMOR CELLS.....	1R26 CA23790-01	103,803
VOLLHARDT, K PETER.....	ACTIVATED MUTAGENIC AND CARCINOGENIC HYDROCARBONS.....	5R01 CA20713-02	44,169
VOLLHARDT, K PETER.....	ROUTES TO PHYSIOLOGICALLY ACTIVE COMPOUNDS.....	5R01 GM22479-03	30,081
WERBLIN, FRANK S.....	MEMBRANE MECHANISMS FOR CELL FUNCTION IN RETINA.....	5R01 EY00561-09	97,191
WESTHEIMER, GERALD.....	RETINAL AND CENTRAL VISUAL FUNCTIONS.....	2R01 EY00220-17	47,931
WESTHEIMER, GERALD.....	OCULOMOTOR CONTROL.....	5R01 EY00592-10	107,198
WIEDEMANN, ECKEHART.....	INVESTIGATION OF HUMAN B-LIPOTROPIN.....	1R01 CA23382-01	73,399
WILLIAMS, MARY A.....	CHARACTERIZATION AND ISOLATION OF LECITHINS.....	5R01 AM10166-13	63,979

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
WILLIAMS, MARY A.....	ESSENTIAL FATTY ACID INTAKE AND FATTY ACID SYNTHESIS.....	5R01 AM12024-11	67,085
WILSON, ALLAN C.....	REGULATION AS A BASIS FOR ORGANISMAL DIFFERENCES.....	5R01 GM21509-04	52,165
WINKELSTEIN, WARREN, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05441-17	72,683
WOFSY, LEON.....	RECEPTOR FUNCTION IN LYMPHOCYTE DIFFERENTIATION.....	9R01 CA24436-14	119,836
YOUNG, JANIS D.....	BIOLOGICAL ACTIVITY OF MYELIN BASIC PROTEIN.....	5R01 NS12548-02	58,878
YUND, MARY A.....	HORMONAL REGULATION OF GENE ACTIVITY IN DROSOPHILA.....	5R01 GM23349-02	41,063
ZUCKER, IRVING.....	BEHAVIOR, HORMONES, AND BIOLOGICAL CLOCKS.....	2R01 HD02982-12	81,658
ZUSMAN, DAVID R.....	STUDY OF CELL DIVISION AND MORPHOGENESIS IN BACTERIA.....	5R01 GM20509-06	43,470
ORGANIZATION TOTAL	152	16,840,098	
WRIGHT INSTITUTE ZIP CODE 94704			
CARP, FRANCES M.....	EVALUATE FORMAT IMPACT ON RESPONSES OF ELDERLY PEOPLE.....	1R01 AG00711-01A1	60,819
ORGANIZATION TOTAL	1	60,819	
CLAREMONT			
CLAREMONT COLLEGES SYSTEM—CLAREMONT GRADUATE SCHOOL ZIP CODE 91711			
OSKAMP, STUART.....	LONG-TERM STUDY OF SUCCESS IN CONTRACEPTIVE PLANNING.....	5R01 HD08074-05	43,843
ORGANIZATION TOTAL	1	43,843	
CLAREMONT COLLEGES SYSTEM—PITZER COLLEGE ZIP CODE 91711			
ATWELL, CONSTANCE W.....	CONSEQUENCES OF VESTIBULAR SELF-STIMULATION IN INFANTS.....	5R01 HD09644-03	48,971
ORGANIZATION TOTAL	1	48,971	
CLAREMONT COLLEGES SYSTEM—POMONA COLLEGE ZIP CODE 91711			
HANSCH, CORWIN H.....	CORRELATION OF BIOLOGICAL ACTIVITY AND STRUCTURE.....	5R01 CA11110-19	126,708
LONG, GEORGE L.....	SUBUNIT INTERACTIONS OF D-LACTATE DEHYDROGENASES.....	5R01 GM22868-03	27,347
ORGANIZATION TOTAL	2	154,055	
CLAREMONT COLLEGES SYSTEM—SCRIPPS COLLEGE ZIP CODE 91711			
HARTLEY, ALAN A.....	ADULT AGE DIFFERENCES IN COGNITIVE PROCESSES.....	1R23 AG01073-01	24,207
ORGANIZATION TOTAL	1	24,207	
CULVER CITY			
MEMORIAL CANCER RESEARCH FOUNDATION OF SOUTHERN CALIFORNIA ZIP CODE 90230			
PLOTKIN, DAVID.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20146-02	29,345
ORGANIZATION TOTAL	1	29,345	
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
ABILDGAARD, CHARLES F.....	SERIAL COMPARATIVE STUDY OF VON WILLEBRAND'S DISEASE.....	5R01 HL19267-02	32,380
BAVISTER, BARRY D.....	PHYSIOLOGICAL AND BIOCHEMICAL STUDY OF SPERM MOTILITY.....	1R01 HD12989-01	54,934
BEAMAN, BLAINE L.....	MECHANISMS CONTROLLING NOCARDIAL PATHOGENESIS.....	2R01 AI13167-04	73,917
BEAMAN, BLAINE L.....	PULMONARY CLEARANCE OF IMMUNOLOGICALLY COMPROMISED MICE.....	1R01 AI15114-01	106,886
BENISEK, WILLIAM F.....	STEROID BINDING SITES OF STEROID BINDING PROTEINS.....	5R01 AM14729-08	56,193
BENJAMINI, ELIEZER.....	SELECTIVE STIMULATION OF CELL MEDIATED IMMUNITY.....	1R01 CA25053-01	140,404
BERGSTROM, DONALD E.....	SYNTHESIS OF C-5 SUBSTITUTED PYRIMIDINE NUCLEOSIDES.....	5R01 CA21493-02	43,738
BLAISDELL, F WILLIAM.....	INTRAVASCULAR COAGULATION IN THE BURN PATIENT.....	7R01 GM26561-01	94,848
BOYD, JAMES B.....	POLYTENE CHROMOSOMES—STRUCTURE AND FUNCTION.....	5R01 GM16298-10	45,417
BRUENING, GEORGE E.....	MECHANISMS OF IMMUNITY TO VIRUS INFECTION.....	5R01 AI13708-02	43,267
BYARD, JAMES L.....	COMPARATIVE FATE OF PESTICIDES IN CULTURED HEPATOCYTES.....	1R01 ES01597-01A1	32,734
CALA, PETER M.....	VOLUME REGULATION: THE ROLE OF THE MEMBRANE POTENTIAL.....	1R01 HL21179-01A1	55,435
CANOLTY, NANCY L.....	UTILIZATION OF PROTEIN AND ENERGY.....	1R22 AM20437-01A1	66,227
CARDIFF, ROBERT D.....	MTV GENE AMPLIFICATION AND EXPRESSION.....	5R01 CA21454-02	98,748
CARLSON, EDWARD C.....	ISOLATED DIABETIC BASEMENT MEMBRANE CHARACTERIZATION.....	1R01 AM24000-01	83,814
CLIFFORD, ANDREW J.....	DIET AND PURINE METABOLISM IN GOUT.....	5R01 AM16726-06	40,509
CONN, ERIC E.....	METABOLISM OF AROMATIC COMPOUNDS.....	5R01 GM05301-21	72,364

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
CRAMER, JAMES C.....	FERTILITY AND FAMILY INCOME IN THE UNITED STATES.....	5R01 HD10233-03	13,654
CUPPS, PERRY T.....	PITUITARY AND HYPOTHALAMIC PROTEINS AND PEPTIDES.....	5R01 HD00394-18	115,043
DAHMS, MICHAEL E.....	BIOCHEMICAL ASPECTS OF GENE REGULATION.....	2R01 HD04899-06A1	61,443
DOI, ROY H.....	ROLE OF RNA POLYMERASE IN BACTERIAL DIFFERENTIATION.....	5R01 GM19673-07	54,986
DRAGO, JOSEPH R.....	PROSTATE ADENOCARCINOMA MODEL: NB RATS AND NUDE MICE.....	1R26 CA25032-01	112,351
DREYFUS, PIERRE M.....	DEVELOPMENTAL NEUROBIOLOGY IN PRIMATES.....	5P01 HD08658-05	296,902
DUNGWORTH, DONALD L.....	PULMONARY EFFECTS OF ENVIRONMENTAL OXIDANT POLLUTANTS.....	2P01 ES00628-08	439,879
ENDERS, ALLEN C.....	MECHANISMS OF IMPLANTATION OF THE BLASTOCYST.....	5R01 HD10342-03	81,930
ETZLER, MARILYNN E.....	STRUCTURE, DEVELOPMENT, AND MODIFICATIONS OF LECTINS.....	2R01 GM21882-04	63,448
FEENEY, ROBERT E.....	INHIBITORS OF PROTEOLYTIC ENZYMES.....	5R01 AM13686-10	38,738
FEENEY, ROBERT E.....	COMPARATIVE BIOCHEMISTRY OF PROTEINS.....	5R01 GM23817-14	52,330
FEENEY, ROBERT E.....	TRANSFERRIN IRON BINDING AND TRANSPORT PROPERTIES.....	5R01 HL18619-03	35,152
FREEDLAND, RICHARD A.....	INFLUENCE OF NUTRITION ON ENZYME SYSTEMS.....	5R01 AM04732-18	52,229
GEOKAS, MICHAEL C.....	EARLY DIAGNOSIS OF PANCREATIC CANCER.....	5R26 CA19188-02	39,420
GERSHWIN, M ERIC.....	THE PATHOGENESIS OF AUTOIMMUNITY IN NEW ZEALAND MICE.....	5R01 CA20816-03	68,735
GERSHWIN, M ERIC.....	LEUKEMOGENESIS IN GNOTOBIOTIC NUDE MICE.....	1R01 CA24362-01	66,170
GIRI, SHRI N.....	EVALUATION OF ANTIFIBROTIC AGENTS IN PULMONARY FIBROSIS.....	5R01 HL19720-03	74,522
GOLDSTEIN, ELLIOT.....	EFFECT OF ATMOSPHERIC POLLUTANTS ON PULMONARY DEFENSES.....	5R01 ES01327-02	41,685
GREEN, JERRY F.....	INTRAVASCULAR REDISTRIBUTION OF BLOOD VOLUME.....	5R01 HL20371-02	60,651
GREEN, MELVIN M.....	GENETIC AND EVOLUTIONARY STUDIES WITH DROSOPHILA.....	5P01 GM22221-04	340,989
GREENBERG, DEBORAH B.....	COLLAGEN METABOLISM IN RAT LUNG EXPLANTS.....	1R23 ES01713-01	34,530
GULYASSY, PAUL F.....	ABNORMAL PROTEIN BINDING IN UREMIA.....	5R01 AM19833-02	81,744
HALSTED, CHARLES H.....	INTESTINAL AND HEPATIC FOLATE METABOLISM.....	2R01 AM18330-04	75,083
HAMILTON, WILLIAM J, III.....	PRIMATE SOCIOECOLOGY: A NUTRITIONAL APPROACH.....	5R01 RR01078-02	55,706
HANSEN, ROBERT J.....	INSULIN AND PROTEIN TURNOVER IN ANIMAL TISSUES.....	5R01 AM15059-08	81,403
HARRIS, DANIEL C.....	BIOCHEMICAL APPROACHES TO MANAGEMENT OF IRON OVERLOAD.....	5R01 HL20141-02	41,098
HEDRICK, JERRY L.....	A MOLECULAR APPROACH TO FERTILIZATION.....	5R01 HD04906-09	80,284
HENRY, KENNETH R.....	AUDITORY DEFICITS IN THE AGING MOUSE.....	1R01 AG01018-01	53,661
HERSHEY, JOHN W.....	MECHANISM OF INITIATION OF PROTEIN BIOSYNTHESIS.....	2R01 GM22135-04	112,563
HSIEH, DENNIS P.....	TOXIC FUNGAL POLYKETIDES (ASPERGILLUS, BACTERIA).....	5R01 ES00612-08	61,129
HURLEY, LUCILLE S.....	NUTRITIONAL FACTORS IN MAMMALIAN DEVELOPMENT.....	5R01 HD01743-14	67,441
HURLEY, LUCILLE S.....	GENETIC AND NUTRITIONAL INTERACTIONS IN DEVELOPMENT.....	5R01 HD02355-13	66,606
INGRAHAM, JOHN L.....	PHYSIOLOGY OF BACTERIA AT LOW TEMPERATURE.....	5R01 AI05526-16	72,708
KELTNER, JOHN L.....	PHOTOGRAMMETRIC QUANTIFICATION OF THE OPTIC CUP.....	5R01 EY01841-03	69,476
KIGER, JOHN A, JR.....	GENETIC STUDIES OF CYCLIC NUCLEOTIDE METABOLISM.....	2R01 GM21137-04A1	60,875
KILGORE, WENDELL W.....	STUDY OF PARATHION AS A PUBLIC HEALTH HAZARD.....	3P01 ES00735-04S1	110,738
KING, BARRY F.....	FUNCTIONAL CYTOLOGY OF THE PLACENTA AND FETAL MEMBRANES.....	2R01 HD11658-02	73,093
KUSTU, SYDNEY G.....	GENETIC STUDIES OF GLUTAMINE SYNTHETASE IN BACTERIA.....	5R01 GM21307-05	45,861
LA MAR, GERD N.....	STRUCTURAL AND DYNAMIC STUDY OF MODEL HEME COMPLEXES.....	5R01 HL16087-05	62,341
MACKENZIE, MALCOLM R.....	STUDY OF HUMAN MULTIPLE MYELOMA CELL ANTIGENS.....	2R01 CA17192-04	68,255
MACMILLAN, ALAN D.....	FAMILIAL DYSTROPHIC & DYSPLASTIC EYE DISEASES.....	1R23 EY02222-01	12,839
MACY, JOAN M.....	INFLUENCE OF DIETARY FIBER ON RAT INTESTINAL BACTERIA.....	5R01 AM20872-02	48,809
MAKI, AUGUST H.....	BINDING OF CH3HG0, AN ENVIRONMENTAL HAZARD, WITH DNA.....	5R01 ES01268-04	52,377
MARR, ALLEN G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07007-13	142,903
MASON, DEAN T.....	REGULATORY ROLE OF MYOSIN IN CARDIAC HYPERTROPHY.....	1R01 HL21820-01	89,139
MASON, WILLIAM A.....	PSYCHOSOCIAL DEVELOPMENT.....	5R01 HD06367-07	114,551
MC NAMEE, MARK G.....	DYNAMIC INTERACTIONS OF THE ACETYLCHOLINE RECEPTOR.....	5R01 NS13050-03	36,971
MEARES, CLAUDE F.....	BIFUNCTIONAL CHELATING AGENTS IN TUMOR LOCALIZATION.....	2R01 CA16861-04	61,444
MEIZEL, STANLEY.....	BIOCHEMICAL STUDIES OF IN VITRO SPERM CAPACITATION.....	5R01 HD06698-05	51,828
MEIZEL, STANLEY.....	STUDIES OF AN INACTIVE TESTIS AND SPERM TRYPSIN.....	5R01 HD07893-04	68,068
MULLONEY, BRIAN.....	PHYSIOLOGICAL MECHANISMS PRODUCING ORDERED MOVEMENT.....	2R01 NS12295-04	60,890
OVERSTREET, JAMES W.....	SPERM TRANSPORT IN THE FEMALE RABBIT.....	1R01 HD11186-01A1	58,989
PAPPAGIANIS, DEMOSTHENES.....	INDUCED ACTIVE IMMUNITY TO COCCIDIOIDOMYCOSIS.....	5R01 AI13336-03	73,988
PHAFF, H J.....	GENOME COMPARISON AS A BASIS FOR YEAST SYSTEMATICS.....	5R01 GM16370-09	68,065
PLANT, RICHARD E.....	INVESTIGATION OF A MODEL FOR BURSTING NEURONS.....	1R01 NS13777-01	11,184
PREISS, JACK.....	REGULATION OF POLYSACCHARIDE SYNTHESIS.....	5R01 AI05520-16	119,416
PRITCHARD, WILLIAM R.....	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00169-17	1,921,531
PRITCHARD, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05457-16	82,463
RABINOWITZ, LAWRENCE.....	RENAL EXCRETION OF ORGANIC NONELECTROLYTES.....	5R01 AM12367-11	60,306
RENKIN, EUGENE M.....	REGULATORY MECHANISMS IN BLOOD CIRCULATION.....	2R01 HL17998-04	68,143

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
RENKIN, EUGENE M.....	CAPILLARY TRANSPORT OF LARGE MOLECULES.....	5R01 HL18010-04	88,802
ROBBINS, DICK L.....	PATHOGENETIC ROLE OF RF COMPLEMENT IN ARTHRITIS.....	1R01 AM21425-01	39,352
ROGERS, QUINTON R.....	THE ROLE OF NUTRITION IN FOOD INTAKE REGULATION.....	5R01 AM13252-09	78,245
RUCKER, ROBERT B.....	EXPERIMENTAL ATHEROSCLEROSIS AND ELASTIN METABOLISM.....	5R01 HL15965-06	32,537
RUCKER, ROBERT B.....	CHARACTERIZATION OF LUNG ELASTINS.....	5R01 HL18918-03	36,394
RUEBNER, BORIS H.....	PERINATAL BILE PIGMENTS IN INFANTS AND MONKEYS.....	5R01 HD07331-05	104,864
SCHMID, CARL W, JR.....	REPETITIVE DNA SEQUENCES IN THE HUMAN GENOME.....	5R01 GM21346-05	41,645
SCHNEEMAN, BARBARA O.....	NUTRITIONAL EFFECTS OF PLANT FIBER ON DIGESTION.....	5R01 AM20446-02	35,646
SCHNEIDER, ROBERT.....	SUPPORT FOR REGISTRY OF ANIMAL NEOPLASMS.....	5R01 CA14916-06	200,587
SCHWABE, CALVIN W.....	HOST-PARASITE RELATIONSHIPS IN PARASITIC ZOOSES.....	5R01 AI07857-12	40,934
SCIBIENSKI, ROBERT J.....	NEW APPROACHES TO IMMUNOTHERAPY.....	1R01 CA20526-01A2	26,200
SILLMAN, ARNOLD J.....	THE CHEMICAL ENVIRONMENT AND PHOTORECEPTOR FUNCTION.....	5R01 EY01839-02	21,284
SMITH, KEVIN M.....	SYNTHESES OF LABELED HEMES FOR PROTEIN NMR STUDIES.....	1R01 HL22252-01	64,515
SMITH, ROBERT E.....	BREAST TEMPERATURE AS AN OVULATION PREDICTOR.....	1R01 HD11176-01	80,289
STARR, MORTIMER P.....	THE PHYTOPATHOGENIC BACTERIA.....	2R01 AI08426-22	73,562
STERN, JUDITH S.....	PHYSICAL ACTIVITY, PANCREATIC FUNCTION AND OBESITY.....	5R01 AM18899-04	63,518
STUMPF, PAUL K.....	MECHANISMS OF DESATURATION OF FATTY ACIDS.....	2R01 GM19213-07	49,968
TAPPEL, ALOYS L.....	NUTRITIONAL FUNCTION OF SELENIUM.....	5R01 AM06424-16	52,058
TAPPEL, ALOYS L.....	FREE RADICAL LIPID PEROXIDATION DAMAGE.....	5R01 AM09933-22	54,856
TRAUT, ROBERT R.....	RIBOSOME STRUCTURE AND FUNCTION.....	5R01 GM17924-08	107,945
TROY, FREDERIC A.....	CHEMISTRY AND BIOSYNTHESIS OF CELL-SURFACE POLYMERS.....	5R01 AI09352-09	60,298
TROY, FREDERIC A.....	MEMBRANE-BOUND ENZYME INTERACTIONS AND GROWTH CONTROL.....	5R01 CA17327-03	64,238
TUPPER, C JOHN.....	MEDICAL SCHOOL ANIMAL RESOURCE IMPROVEMENT.....	5P40 RR01068-02	13,646
TUPPER, C JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05684-10	143,808
VILLAREJO, MERNA R.....	ISOLATION OF THE LACTOSE PERMEASE PROTEIN.....	5R01 GM23189-03	42,786
WALSH, DONAL A.....	REGULATION OF CELL FUNCTION BY PHOSPHORYLATION.....	5R01 AM13613-10	115,970
WARING, GEORGE O, III.....	ANIMAL MODELS OF CORNEAL DYSTROPHIES AND DEGENERATIONS.....	1R01 EY02224-01	52,335
WELLINGS, SEFTON R.....	PRENEOPLASTIC POTENTIAL OF HUMAN BREAST LESIONS.....	5R01 CA21366-02	77,357
WELLINGS, SEFTON R.....	QUANTITATIVE STUDIES OF HUMAN BREAST PATHOLOGY.....	5R01 CA21523-02	87,513
WENNBERG, RICHARD P.....	ASSESSMENT OF BILIRUBIN TRANSPORT AND TOXICITY.....	1R01 HD10491-01A1	71,526
WILSON, BARRY W.....	TOXICANTS AND AVIAN CELL GROWTH AND METABOLISM.....	2R01 ES00202-10	48,756
WILSON, LOWELL D.....	THE ADRENAL MITOCHONDRIAL HYDROXYLATING SYSTEM.....	2R01 AM16173-04A1	72,448
WOLFE, STEPHEN L.....	THE FINE STRUCTURE OF CHROMOSOMES.....	5R01 GM11873-12	12,366
WOOLLEY, DOROTHY E.....	LEAD NEUROTOXICITY DURING DEVELOPMENT.....	1R01 ES01503-01A1	59,520
ORGANIZATION TOTAL	111	10,046,339	
DOMINGUEZ HILLS			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT DOMINGUEZ HILLS		ZIP CODE 90247	
CHI, LOIS W.....	IMMUNE RESPONSE IN MICE TO NTG CERCAIRAE OF S. JAPONICUM.....	3S06 RR08156-01S1	1,800
CHI, LOIS W.....	MINORITY BIOMEDICAL RESEARCH PARTICIPATION.....	5S06 RR08156-02	86,604
ORGANIZATION TOTAL	2	88,404	
DOWNEY			
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—RANCHO LOS AMIGOS HOSPITAL		ZIP CODE 90242	
SELVESTER, RONALD H.....	INFARCT SIZE: ECG, ANGIO, AND PATHOLOGY CORRELATIONS.....	2R01 HL17532-04	81,139
WAGNER, F WILLIAM, JR.....	MICRO/MACROVASCULATURE IN HEALING OF FOOT LESIONS.....	5R01 HL22113-02	50,878
WATERS, ROBERT.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05542-16	20,829
ORGANIZATION TOTAL	3	152,846	
DUARTE			
CITY OF HOPE NATIONAL MEDICAL CENTER		ZIP CODE 91010	
BEUTLER, ERNEST.....	DIAGNOSIS AND THERAPY OF GAUCHER'S DISEASE.....	5R01 AM14755-08	102,890
BEUTLER, ERNEST.....	THE FORMATION AND SURVIVAL OF RED BLOOD CELLS.....	5R01 HL07449-17	154,904
COMINGS, DAVID E.....	PHYSIOLOGY AND BIOCHEMISTRY OF HUMAN CHROMOSOMES.....	5R01 GM15886-12	103,561
COMINGS, DAVID E.....	DNA BINDING PROTEINS AND CHROMOSOME STRUCTURE.....	5R01 GM23199-03	60,535
DUBUC, PAUL U.....	THE EARLY DEVELOPMENT OF OBESE-HYPERGLYCEMIC MICE.....	5R01 AM19627-02	43,923

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ENGVALL, EVA S.....	THE PLACENTA SPECIFIC PROTEIN, SP1, IN CANCER.....	1R01 CA24359-01	47,157
FLANAGAN, STEVEN D.....	AFFINITY PARTITIONING OF SUBSYNAPTIC MEMBRANES.....	1R01 NS14281-01	31,980
HOLDEN, JOSEPH T.....	FACTORS AFFECTING BACTERIAL TRANSPORT SYSTEM ACTIVITY.....	5R01 GM20395-06	61,632
IKEDA, KAZUO.....	PHYSIOLOGY OF SYNAPSES IN NORMALS AND MUTANTS.....	2R01 NS07442-11	32,113
IKEDA, KAZUO.....	NEURAL MECHANISM OF MUTANT PHENOTYPES.....	5R01 NS11513-05	24,648
ITAKURA, KEICHI.....	ISOLATION OF NUCLEIC ACIDS USING SYNTHETIC DNA AS PROBE.....	1R01 GM25658-01	97,900
KAPLAN, WILLIAM D.....	GENETICS AND BEHAVIOR OF NEUROLOGICAL MUTANTS.....	5R01 NS08014-11	88,319
KLEVECZ, ROBERT R.....	TEMPORAL ORDER AND AGING IN CULTURED SOMATIC CELLS.....	5R01 AG00434-08	70,371
LEVINE, RACHMIEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05471-16	121,472
MC CAMAN, RICHARD E.....	THE CHEMISTRY OF PLASTIC CHANGES IN NEURONS.....	5R01 NS09339-08	66,649
MITTMAN, CHARLES.....	NONUNIFORM VENTILATION AND DIFFUSING CAPACITY.....	1R01 HL22976-01	49,182
OHNO, SUSUMU.....	SEX AND AGING STUDIES OF MUTANT MICE.....	5R01 AG00042-04	48,524
PEARSON, DAVID B.....	NEUROBIOLOGY OF PEPTIDE HORMONES IN ORGAN CULTURE.....	1R01 NS13644-01A1	80,041
RAPPAPORT, HENRY.....	PATHOLOGY CENTER FOR LYMPHOMA CLINICAL STUDIES.....	5R10 CA18044-04	216,524
RIGGS, ARTHUR D.....	REGULATORY PROTEINS IN E. COLI AND EUKARYOTIC CELLS.....	5R01 HD04420-09	96,055
ROBERTS, EUGENE.....	NITROGEN METABOLISM OF NERVOUS TISSUE.....	5R01 NS01615-21	109,503
ROBERTS, EUGENE.....	NEUROTRANSMISSION AND NEUROLOGICAL DISEASE.....	5P01 NS12116-04	289,554
RUOSLAHTI, ERKKI I.....	ALPHA-FETOPROTEIN: STRUCTURE AND FUNCTION.....	5R01 CA19894-03	89,595
RUOSLAHTI, ERKKI I.....	FIBROBLAST SURFACE ANTIGEN.....	5R01 CA22108-02	66,945
RUOSLAHTI, ERKKI I.....	NUCLEAR PROTEINS IN HEPATOMA AND NORMAL LIVER.....	1R01 CA22657-01	18,230
SALVATERRA, PAUL M.....	SYNAPTIC MEMBRANE STUDIES.....	1R01 NS13813-01	42,195
SHIVELY, JOHN E.....	ROLE OF HLA-B27 AND SHIGELLA ANTIGENS IN DISEASE.....	1R01 AM21597-01	77,101
TODD, CHARLES W.....	CORE GRANT: TUMOR IMMUNOLOGY AND CHEMISTRY.....	2P30 CA16434-04	357,883
TODD, CHARLES W.....	ASSAY AND STRUCTURE OF CARCINOEMBRYONIC ANTIGENS.....	5R26 CA19163-03	175,679
VAUGHN, JAMES E.....	SPINAL CORD DEVELOPMENT.....	5R01 NS09578-09	52,776
WIMER, RICHARD E.....	AMMON'S HORN: CONNECTIVITY AND BEHAVIOR.....	2R01 NS10284-06A1	76,665
YONEMOTO, ROBERT H.....	COLORECTAL CANCER TRANSFER FACTOR FEASIBILITY STUDY.....	1R26 CA22374-01A1	52,990
YONEMOTO, ROBERT H.....	CELL-MEDIATED IMMUNITY AND ASSAY FOR BREAST CANCER.....	1R01 CA23047-01	41,685
YOSHIDA, AKIRA Y.....	STUDY OF METAL-BINDING PEPTIDES.....	1R01 ES01928-01	58,200
YOSHIDA, AKIRA Y.....	MOLECULAR PATHOLOGY OF GENETIC DISORDERS IN MAN.....	5R01 HL15125-07	178,916
YOSHIDA, AKIRA Y.....	GENETICS OF GLYCOSYLTRANSFERASES IN HUMAN BLOOD.....	5R01 HL20301-02	64,793
ORGANIZATION TOTAL	36	3,351,090	
EL SEGUNDO			
AEROSPACE CORPORATION ZIP CODE 90245			
JANZ, RONALD F.....	ANALYSIS OF MECHANICAL BEHAVIOR OF THE LEFT VENTRICLE.....	3R01 HL14651-05S1	11,109
ORGANIZATION TOTAL	1	11,109	
FRESNO			
AMERICAN MOSQUITO CONTROL ASSOCIATION ZIP CODE 93727			
SOLLERS-RIEDEL, HELEN.....	SYNTHESIS OF LITERATURE ON MOSQUITOES.....	9R01 AI15643-06	18,100
ORGANIZATION TOTAL	1	18,100	
FULLERTON			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT FULLERTON ZIP CODE 92634			
LINDER, MARIA C.....	COPPER ABSORPTION AND CERULOPLASMIN IN CANCER.....	1R01 CA22410-01A1	71,249
ORGANIZATION TOTAL	1	71,249	
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
ARQUILLA, EDWARD R.....	IMMUNOLOGY STRUCTURE SITE AND ACTION OF INSULIN.....	2R01 AM13441-10	113,136
BALDWIN, KENNETH M.....	ADAPTATION TO FUNCTIONAL OVERLOAD IN MUSCLE FIBER TYPES.....	1R01 AM21406-01	55,324
BALDWIN, KENNETH M.....	REGULATION OF CARDIAC ADAPTATION TO EXERCISE.....	1R01 HL22361-01	56,179
BARTLETT, ROBERT H.....	EXTRACORPOREAL MEMBRANE OXYGENATION—NEONATE RES FAILURE.....	1R01 HD11153-01	144,580
BARTLETT, ROBERT H.....	PROLONGED EXTRACORPOREAL CARDIOPULMONARY SUPPORT.....	3R01 HL15593-04S1	25,800

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BARTLETT, ROBERT H.....	PROLONGED EXTRACORPOREAL CARDIOPULMONARY SUPPORT.....	5R01 HL15593-05	128,900
BERNS, MICHAEL W.....	DIRECTED CHROMOSOME DELETIONS BY LASER.....	5R01 GM22754-03	32,743
BERNS, MICHAEL W.....	CELL DIVISION STUDIED BY LASER.....	5R01 GM23445-02	36,504
BERNS, MICHAEL W.....	IN VITRO STUDIES ON HEART CELL FUNCTION.....	5R01 HL15740-06	74,095
BLANKS, ROBERT H.....	EYE MOVEMENT CONTROL.....	1R01 EY03018-01	88,064
BODE, HANS R.....	REGULATION OF MULTIPOTENT CELL DIFFERENTIATION.....	5R01 HD08086-05	41,596
BORER, PHILIP N.....	BASIC NUCLEIC ACID STRUCTURES: FORM AND INTERACTION.....	5R01 GM24494-02	36,775
BRANT, DAVID A.....	CONFORMATIONAL ANALYSIS OF POLYSACCHARIDES.....	1R01 AI15096-01	22,826
CAHALAN, MICHAEL D.....	MOLECULAR MECHANISMS IN EXCITABLE MEMBRANES.....	1R01 NS14609-01	38,498
CAMPBELL, RICHARD D.....	EFFECT OF EXPERIMENTAL NERVE DEPLETION ON DEVELOPMENT.....	5R01 NS12446-04	48,109
CASERIO, MARJORIE C.....	ALKYLATION OF DISULFIDES-SULFENYL SALTS.....	5R01 CA19944-03	43,266
COTMAN, CARL W.....	BEHAVIORAL AND NEURAL PLASTICITY IN THE AGED RAT.....	5P01 AG00538-02	339,535
COTMAN, CARL W.....	SYNAPTIC MEMBRANE STRUCTURE AND FUNCTION.....	2R01 NS08597-10	103,840
CRAWFORD, THOMAS J.....	CORRELATES OF CHILDBEARING INTENTIONS: A PILOT STUDY.....	1R01 HD10391-01	12,027
CUNNINGHAM, DENNIS D.....	INITIATION OF FIBROBLAST DIVISION BY GLUCOCORTICOID.....	5R01 CA12306-08	69,664
DAVIS, ROWLAND H.....	ARGININE METABOLISM AND CELL COMPARTMENTATION.....	5R01 AM20083-02	78,244
DI SAIA, PHILIP J.....	GYNECOLOGICAL ONCOLOGY GROUP.....	1R10 CA23765-01	36,277
GRANGER, GALE A.....	LYMPHOCYTE RELEASED CELL TOXIN.....	5R01 AI09460-09	90,787
GUTMAN, GEORGE A.....	SEROLOGICAL AND STRUCTURAL STUDIES ON KAPPA CHAINS.....	1R01 AI14774-01	80,500
HALL, JAMES E.....	VOLTAGE-DEPENDENT CONDUCTANCE IN MEMBRANES.....	1R01 HL23183-01	56,410
HALL, PETER F.....	STRUCTURE AND REGULATION OF CYTOCHROMES P-450.....	2R01 AM15621-04A1	67,341
HAMKALO, BARBARA A.....	STRUCTURE AND FUNCTION OF EUKARYOTIC CHROMOSOMES.....	5R01 GM23241-03	46,210
HATFIELD, G WESLEY.....	CONTROL OF GENE EXPRESSION AND THE ROLE OF TRNA.....	5R01 GM24330-02	74,262
JOSEPHSON, ROBERT K.....	MECHANISMS OF NEUROMUSCULAR SPECIFICITY.....	1R01 NS14564-01	55,991
KITZES, LEONARD M.....	AUDITORY INFORMATION FLOW IN CORTEX AND THALAMUS.....	1R01 NS14479-01	59,185
KOPOWITZ, HAROLD.....	PHYSIOLOGY OF A PLEXIFORM NERVOUS SYSTEM.....	1R01 NS13713-01A1	47,488
LANDFIELD, PHILIP W.....	NEUROPHYSIOLOGICAL STUDIES ON BRAIN AGING.....	5R01 AG00341-02	35,961
MC IVER, ROBERT T, JR.....	MASS SPECTROMETRY OF ULTRA-LOW VAPOR PRESSURE COMPOUNDS.....	5R01 GM23416-03	35,011
MC LAUGHLIN, CALVIN S.....	COMPARATIVE STRUCTURE AND FUNCTION OF RIBOSOMES.....	5R01 CA10628-11	102,260
MINH, VU-DINH.....	ROLE OF THE DIAPHRAGM IN REGIONAL LUNG MECHANICS.....	7R01 HL23985-01	42,719
MOLDAVE, KIVIE.....	MECHANISM OF PROTEIN BIOSYNTHESIS.....	5R01 AM15156-09	113,326
MOORE, HAROLD W.....	SYNTHESIS OF MITOMYCIN AND RELATED COMPOUNDS.....	5R01 CA11890-09	87,061
MOSIER, H DAVID, JR.....	MECHANISMS CONTROLLING GROWTH RATE.....	5R01 HD07074-05	67,637
MOSIER, H DAVID, JR.....	CONTROL OF SOMATIC GROWTH IN THE FETUS AND NEONATE.....	1R01 HD12034-01	120,322
NICOLSON, GARTH L.....	CELL SURFACE STUDIES OF METASTATIC MELANOMA.....	5R01 CA15122-04	97,509
NICOLSON, GARTH L.....	RETINOID INHIBITION OF TUMOR CELL GROWTH.....	1R01 CA22823-01	52,091
NICOLSON, GARTH L.....	MALIGNANT CELL VARIANTS OF LYMPHOSARCOMA.....	1R01 CA22950-01	106,119
NUNN, WILLIAM D.....	CONTROL OF LIPID METABOLISM IN ESCHERICHIA COLI.....	5R01 GM22466-03	40,346
OVERMAN, LARRY E.....	SYNTHESIS OF ACTIVE NEUROLOGICAL AGENTS.....	2R01 NS12389-04	68,807
ROBERTSON, RICHARD T.....	STRUCTURE AND FUNCTION OF ASCENDING RETICULAR SYSTEMS.....	2R01 NS14267-02	41,116
RODRIGUEZ, ELOY.....	CHEMICAL STUDIES OF ALLERGENIC CALIFORNIAN PLANTS.....	1R01 AI14646-01	31,075
SCHNEIDERMAN, HOWARD A.....	METABOLISM AND HORMONES IN ARTHROPODS.....	5R01 AI10527-09	86,057
SCHNEIDERMAN, HOWARD A.....	GENETICALLY-CONTROLLED MALIGNANT NEOPLASMS.....	5R01 CA12643-08	52,972
SCHNEIDERMAN, HOWARD A.....	GENETIC ANALYSIS OF BASIC DEVELOPMENTAL MECHANISMS.....	5R01 HD06082-08	94,612
SCHNEIDERMAN, HOWARD A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07008-13	129,344
SHANK, RONALD C.....	QUANTITATIVE ALKYLATION OF NUCLEIC ACIDS BY CARCINOGENS.....	1R01 CA21955-01	41,068
SHEA, KENNETH J.....	TEMPLATE SYNTHESIS OF MACROMOLECULES.....	5R01 GM22995-03	33,604
SIMPKINS, HENRY.....	THE ROLE OF CHROMATIN STRUCTURE IN ERYTHROLEUKEMIA.....	7R01 CA25079-01	39,369
SKLANSKY, JACK.....	COMPUTER-AIDED IMAGE RECOGNITION.....	5R01 GM17632-07	244,225
STANBRIDGE, ERIC J.....	GENETIC ANALYSIS OF HUMAN MALIGNANCY.....	3R01 CA19401-02S1	3,870
STANBRIDGE, ERIC J.....	GENETIC ANALYSIS OF HUMAN MALIGNANCY.....	5R01 CA19401-03	60,221
STARR, ARNOLD.....	AUDITORY EVOKED BRAIN POTENTIALS IN NEUROLOGICAL DISEASE.....	5R01 NS11876-05	130,341
SWETT, JOHN E.....	SENSORY FUNCTIONS OF THE DORSAL COLUMNS.....	1R01 NS13751-01A1	63,457
SYPERD, PAUL S.....	GENETIC CONTROL OF RIBOSOME ASSEMBLY.....	2R01 GM18293-08	61,225
SYPERD, PAUL S.....	DEVELOPMENTAL CHANGES IN THE PROTEIN-SYNTHETIC APPARATUS.....	5R01 GM23999-02	59,068
TAFT, ROBERT W.....	HYDROGEN BONDING AND IONIC SOLVATION BY FNMR AND ICR.....	5R01 GM14078-13	63,141
THOMPSON, RICHARD F.....	CENTRAL NEURAL MECHANISMS OF HEARING.....	5R01 NS12268-04	40,794
VAN DEN NOORT, STANLEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05351-17	75,291
VICKERY, LARRY E.....	MECHANISM AND REGULATION OF CYTOCHROME P450-SCC.....	1R01 AM21792-01	51,932
VICKERY, LARRY E.....	ADRENAL TUMOR CELLS: REGULATION AND STEROID SYNTHESIS.....	5R01 CA14638-06	71,891

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
WAGNER, EDWARD K.....	VIRAL RNA SYNTHESIS CONTROL IN HERPES VIRUS INFECTION.....	2R01 CA11861-09	70,104
WAKABAYASHI, AKIO.....	EFFECTS OF PROLONGED HYPOPERFUSION ON THE MYOCARDIUM.....	1R01 HL18460-01A2	52,420
WARNER, ROBERT C.....	STUDIES OF POLYNUCLEOTIDES AND NUCLEIC ACIDS.....	5R01 CA12627-09	107,345
WASMUTH, JOHN J.....	GENE MAPPING OF REGULATORY LOCI IN ANIMAL CELLS.....	1R01 GM25339-01	49,673
WATSON, JAMES D.....	THE INDUCTION OF ANTIBODY SYNTHESIS.....	5R01 AI13383-04	56,881
WHALEN, RICHARD E.....	HORMONAL CONTROL OF BEHAVIOR.....	5R01 HD00893-15	67,528
WHITE, STEPHEN H.....	MODEL STUDIES OF MYELIN STABILITY.....	5R01 NS10837-04	43,372
WILSON, ARCHIE F.....	AEROSOL THERAPY.....	5R01 HL19704-03	68,956
WOOLFOLK, CLIFFORD A.....	BIOCHEMISTRY OF PURINE OXIDIZING ENZYMES.....	5R01 GM22815-03	30,111
WULFF, DANIEL L.....	CONTROL OF TRANSCRIPTION IN THE LAMBDA Y REGION.....	1R01 GM25438-01	64,727
ORGANIZATION TOTAL	75	5,259,115	
LA JOLLA			
LA JOLLA CANCER RESEARCH FOUNDATION ZIP CODE 92037			
FISHMAN, WILLIAM H.....	FUNDAMENTAL ENZYMOLOGIC STUDIES APPLIED TO ONCOLOGY.....	5R01 CA21967-02	154,754
FISHMAN, WILLIAM H.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	1P20 CA22384-01	145,962
LINNEY, ELWOOD A.....	EMBRYONAL CARCINOMA GROWTH AND DIFFERENTIATION.....	1R01 CA24206-01	79,171
MANES, COLE.....	STUDIES IN MAMMALIAN EMBRYOGENESIS.....	5R01 HD11654-02	189,679
ORGANIZATION TOTAL	4	569,566	
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
BACHELER, LEE T.....	ORGANIZATION OF INTEGRATED TUMOR VIRUS GENOMES.....	1R01 CA22829-01	80,219
BEEMON, KAREN L.....	EXPRESSION OF RNA TUMOR VIRUS GENES.....	1R01 CA23896-01	125,023
BELLUGI-KLIMA, URSULA.....	THE ACQUISITION OF SIGN LANGUAGE AND ITS STRUCTURE.....	5R01 NS09811-08	157,935
BLOOM, FLOYD E.....	CATECHOLAMINES—CLINICAL BASIC SCIENCE ADVANCES.....	1R13 NS14463-01	25,000
BLOOM, FLOYD E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05595-14	168,504
BOURGOIS-COHN, SUZANNE.....	STUDIES OF REGULATION IN E. COLI EXTENDED TO LYMPHOMAS.....	5R01 GM20868-05	143,151
BOURGOIS-COHN, SUZANNE.....	MECHANISMS OF PROTEIN-NUCLEIC ACID INTERACTIONS.....	1R01 GM25617-01	80,290
BROWN, MARVIN R.....	THERMOREGULATORY ACTIONS OF BRAIN PEPTIDES.....	1R01 NS14263-01	69,944
COHN, MELVIN.....	ANTIBODY SYNTHESIS.....	5R01 AI05875-14	203,763
COHN, MELVIN.....	IMMUNOSELECTION AND CANCER: A PROBLEM IN EVOLUTION.....	5R01 CA19754-03	255,337
DENNERT, GUNTHER.....	IMMUNE RESPONSE TO TUMOR CELL SURFACE ANTIGENS.....	5R01 CA15581-04	68,223
DENNERT, GUNTHER.....	THE ANTIGEN RECEPTOR OF A CONTINUOUS T KILLER CELL LINE.....	5R01 CA19334-03	70,886
DULBECCO, RENATO.....	NORMAL AND NEOPLASTIC DEVELOPMENT OF THE MAMMARY GLAND.....	1R01 CA21993-01	181,944
ECKHART, WALTER.....	VIRAL GENE FUNCTIONS AND REGULATION OF CELL GROWTH.....	5R01 CA13884-07	140,553
ECKHART, WALTER.....	CORE GRANT—REGULATION, THE CELL MEMBRANE AND CANCER.....	2P30 CA14195-05	459,550
ECKHART, WALTER.....	TRANSCRIPTION IN POLYOMA-TRANSFORMED CELLS.....	5R01 CA21896-02	40,543
FAN, HUNG Y.....	EXPRESSION AND LOCALIZATION OF C-TYPE VIRUS GENES.....	5R01 CA15747-05	128,049
FARRON-FURSTENTHAL, F.....	THE ROLE OF ALTERED GENE EXPRESSION IN NEOPLASMS.....	3R01 CA17497-03S1	21,437
FRANCKE, BERTOLD R.....	GENE FUNCTIONS OF HERPES SIMPLEX VIRUS.....	5R01 CA15058-05	120,964
GIBBS, DON E.....	POLY-5'-AZANUCLEOTIDES IN NUCLEIC ACID SYNTHESIS.....	5R01 GM22542-03	71,155
GIOTTA, GREGORY J.....	DERIVATION OF NERVE CELL LINES FROM THE BRAIN.....	1R23 CA24393-01	58,200
GUILLEMIN, ROGER C.....	BRAIN PEPTIDES ON PITUITARY FUNCTIONS & IN DIABETES.....	5P01 AM18811-04	326,763
GUILLEMIN, ROGER C.....	NEUROENDOCRINOLOGY OF REPRODUCTION AND GROWTH.....	5P50 HD09690-04	744,335
HAMILTON, RICHARD T.....	COMPARISON OF TRANSPORT IN NORMAL AND TRANSFORMED CELLS.....	5R01 CA19523-03	83,473
HEINEMANN, STEPHEN F.....	SYNAPSE FORMATION IN CLONED CELL LINES.....	5R01 NS11549-05	155,305
HOLLEY, ROBERT W.....	FACTORS REQUIRED FOR MAMMALIAN CELL DIVISION.....	5R01 CA11176-10	133,680
HUNTER, ANTHONY R.....	MACROMOLECULAR SYNTHESIS AND CELL GROWTH CONTROL.....	2R01 CA17096-04	113,480
HYMAN, ROBERT A.....	GENETIC BASIS OF ANTIGENIC VARIATION.....	2R01 CA13287-07	125,975
HYMAN, ROBERT A.....	GENETIC ANALYSIS OF GROSS LEUKEMIA ANTIGENS.....	5R01 CA17020-03	57,030
KIDOKORO, YOSHIAKI.....	MUSCLE DIFFERENTIATION AND SYNAPTIC INTERACTION IN VITRO.....	2R01 NS11918-04	79,630
LEVER, JULIA E.....	MECHANISMS OF REGULATION OF MEMBRANE FUNCTION.....	1R01 GM25006-01	90,704
LINDSTROM, JON M.....	STUDIES USING PURIFIED ACETYLCHOLINE RECEPTOR.....	5R01 NS11323-06	141,918
NEVILLE, HELEN J.....	THE DEVELOPMENT OF CEREBRAL SPECIALIZATION.....	1R01 NS14365-01	79,680
NILSEN-HAMILTON, MARIT.....	FIBROBLAST GROWTH FACTOR AND PHOSPHORYLATION.....	1R01 CA24395-01	97,981
PATRICK, JAMES W.....	TROPHIC INTERACTION OF NERVE AND MUSCLE.....	2R01 NS13546-03	95,189
PFÄHL, MAGNUS.....	GENETIC ANALYSIS OF LAC REPRESSOR AND OPERATOR.....	5R01 GM23671-02	83,506
RASCHKE, WILLIAM C.....	CHARACTERIZATION OF THE ABELSON LEUKEMIA VIRUS.....	5R01 CA21531-02	79,034

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SCHUBERT, DAVID R.....	PHYSIOLOGY OF NERVE, GLIAL, AND MUSCLE CELL LINES.....	2R01 NS09658-08	139,759
SHIER, W THOMAS.....	ROLE OF SIALIC ACID IN ONCOGENIC TRANSFORMATION.....	5R01 CA20636-02	70,840
STALLCUP, WILLIAM B.....	SURFACE ANTIGENS OF NEURAL CELLS.....	5R01 CA21791-02	73,068
STEINBACH, JOSEPH H.....	ACETYLCHOLINE RECEPTOR FUNCTION.....	1R01 NS13719-01A1	29,970
TROWBRIDGE, IAN S.....	LYMPHOCYTE ANTIGENS: STRUCTURE, FUNCTION AND SYNTHESIS.....	2R01 CA17733-04	99,404
TROWBRIDGE, IAN S.....	IDENTIFICATION OF HUMAN LYMPHOCYTE SURFACE ANTIGENS.....	5R01 CA20272-02	78,871
VERMA, INDER M.....	REVERSE TRANSCRIPTASE FROM RNA TUMOR VIRUSES.....	5R01 CA16561-05	61,637
VERMA, INDER M.....	GENETIC ORGANIZATION OF RNA TUMOR VIRUSES.....	5R01 CA21408-02	91,659
VOGT, MARGUERITE M.....	VIRAL GENE FUNCTIONS INVOLVED IN TRANSFORMATION.....	2R01 CA13608-06A1	37,937
WALTER, GERNOT F.....	EARLY PROTEINS OF SIMIAN VIRUS 40.....	5R01 CA15365-05	167,013
WESTALL, FREDERICK C.....	INDUCED BIOMEDICAL PROPERTIES OF THE ENCEPHALITOGEN.....	2R01 NS12391-04	114,538
YOGEEESWARAN, GANESA.....	GLYCOLIPIDS, SURFACE GLYCOPROTEINS AND TUMOR METASTASIS.....	5R01 CA19312-03	73,024
ORGANIZATION TOTAL	49	6,196,073	
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
ALTMAN, AMNON.....	STUDIES ON TUMOR-SPECIFIC IMMUNE RESPONSES.....	1R23 CA24911-01	30,060
BEARDSLEY, TERRY R.....	THYMUS CELL MATURATION AND LEUKEMOGENESIS IN MICE.....	1R23 CA25774-01	33,487
BIRDWELL, CHARLES R.....	TUMOR CELL-VASCULAR ENDOTHELIAL CELL INTERACTIONS.....	1R01 CA23929-01	114,674
CARSON, DENNIS A.....	IGG RHEUMATOID FACTOR & ETIOLOGY OF RHEUMATOID ARTHRITIS.....	1R01 AM20182-01	75,487
CARSON, DENNIS A.....	ADENOSINE DEAMINASE DEFICIENCY: GENETICS AND IMMUNOLOGY.....	5R01 GM23200-03	52,755
CHISARI, FRANCIS V.....	IMMUNOBIOLOGY AND PATHOGENESIS OF HEPATITIS B.....	3R01 AI13393-02S1	5,236
CHISARI, FRANCIS V.....	IMMUNOBIOLOGY AND PATHOGENESIS OF HEPATITIS B.....	5R01 AI13393-03	58,423
COOPER, NEIL R.....	CANCER CELL SURVIVAL AND MECHANISMS OF CYTOTOXICITY.....	5R01 CA14692-06	109,126
CROSBY, WILLIAM H.....	STUDY OF IRON METABOLISM.....	5R01 AM16452-05	72,640
CURTISS, LINDA K.....	SERUM LIPOPROTEINS AS REGULATORS OF IMMUNE FUNCTION.....	1R23 AI14921-01	42,150
DANDLIKER, WALTER B.....	BIOPHYSICAL STUDY OF HORMONE-RECEPTOR INTERACTIONS.....	1R01 GM23980-01	89,705
DAWSON, ARTHUR D.....	REGIONAL LUNG FUNCTION IN MAN.....	5R01 HL10009-13	41,140
DIXON, FRANK J.....	IMMUNOPATHOLOGIC STUDIES.....	5P01 AI07007-13	1,877,924
DIXON, FRANK J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05514-16	200,462
EDGINGTON, THOMAS S.....	IMMUNOGENESIS OF AUTOIMMUNE HEMOLYTIC ANEMIA.....	5R01 AM18163-04	112,762
EDGINGTON, THOMAS S.....	HUMAN TUMOR-ASSOCIATED MOLECULAR EXPRESSIONS.....	3R01 CA14346-05S1	73,546
EDGINGTON, THOMAS S.....	HUMAN TUMOR-ASSOCIATED MOLECULAR EXPRESSIONS.....	5R01 CA14346-06	199,425
EDWARDS, DAVID L.....	MOLECULAR GENETICS OF MEMBRANE ASSEMBLY IN NEUROSPORA.....	5R01 GM24991-02	62,883
ESSER, ALFRED F.....	INTERACTION OF COMPLEMENT PROTEINS WITH MEMBRANES.....	5R01 AI14099-03	33,178
FERRONE, SOLDANO.....	IMMUNOCHEMICAL CHARACTERIZATION OF ANTIGENS IN MELANOMA.....	2R01 CA16069-04	76,055
FERRONE, SOLDANO.....	MONOCLONAL ANTIBODIES TO HUMAN CELL SURFACE ANTIGENS.....	1R01 CA24329-01	65,064
FIDLER, JOHN M.....	DIFFERENTIATION OF MEMORY B CELL PRECURSORS.....	1R01 AI15226-01	70,350
GOODMAN, MICHAEL G.....	MECHANISM OF LYMPHOCYTE ACTIVATION BY THIOL COMPOUNDS.....	1R01 AI15284-01	42,150
GOTZE, OTTO.....	ACTIVATION AND CONTROL OF PROPERDIN SYSTEM PROTEINS.....	5R01 AI13010-02	78,321
GREEN, RALPH.....	A MODEL FOR COBALAMIN DEFICIENCY.....	1R01 NS13714-01A1	89,817
GRIFFIN, JOHN H.....	PROTEINS OF COAGULATION AND HAGEMAN FACTOR PATHWAYS.....	5R01 HL21544-02	58,284
HASPEL, MARTIN V.....	DEMYELINATION AND SLOW VIRUS DISEASE.....	1R01 NS14068-01	62,661
HATEFI, YOUSSEF.....	ENERGY CONSERVATION AND TRANSFER IN MITOCHONDRIA.....	5R01 AM08126-15	149,422
HATEFI, YOUSSEF.....	ENERGY-LINKED MITOCHONDRIAL TRANSHYDROGENATION.....	1R01 GM24887-01	44,409
HENDERSON, GARY B.....	MECHANISM AND COMPONENTS OF METHOTREXATE TRANSPORT.....	1R23 CA23970-01	35,125
HOCH, JAMES A.....	GENETIC CONTROL OF DEVELOPMENT.....	5R01 GM19416-07	65,609
HOCH, SALLIE O.....	DNA-BINDING PROTEINS IN HUMAN SERUM.....	2R01 CA17563-04	66,700
HUENNEKENS, FRANK M.....	CHEMISTRY AND MECHANISM OF ACTION OF FOLATE COENZYMES.....	5R01 CA06522-17	185,488
HUENNEKENS, FRANK M.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA16600-03	175,134
HUGLI, TONY E.....	ANAPHYLATOXINS AS INFLAMMATORY AND CHEMOTACTIC AGENTS.....	5R01 HL20220-03	95,196
ITO, JUNETSU.....	REPLICATION OF LINEAR DNA MOLECULES.....	1R01 GM24824-01	56,300
ITO, JUNETSU.....	STUDIES OF SPORULATION IN BACILLUS SUBTILIS.....	1R01 GM25081-01	84,387
JOHNSON, ERIC F.....	DETERMINANTS OF CARCINOGEN ACTIVATION/DETOXIFICATION.....	1R01 CA24146-01	58,833
KATZ, DAVID H.....	GENETIC CONTROL OF IMMUNOCOMPETENT DIFFERENTIATION.....	5R01 AI13781-02	154,901
KATZ, DAVID H.....	CELL COOPERATION IN IMMUNE RESPONSES.....	5R01 AI13874-03	123,543
KLINMAN, NORMAN R.....	CLONAL ANALYSIS OF THE IMMUNE MECHANISM.....	7R01 AI15797-01	193,911
LERNER, RICHARD A.....	THE CELLULAR SLIME MOLD AS A MODEL FOR HUMAN DEVELOPMENT.....	5R01 GM22500-03	65,614
LEWIS, URBAN J.....	CONVERSION PRODUCTS OF GROWTH HORMONE AND PROLACTIN.....	5R01 AM09537-13	96,959
LEWIS, URBAN J.....	PRIMARY STRUCTURES OF GROWTH HORMONES AND PROLACTINS.....	2R01 AM16065-07	42,535
LEWIS, URBAN J.....	MEMBRANE & METABOLIC STUDIES OF DIABETOGENIC FACTORS.....	5R01 AM21290-02	97,492

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
LOSKUTOFF, DAVID J.....	ENDOTHELIAL CELL MEDIATED FIBRINOLYSIS.....	1R01 HL22289-01	82,153
MC MILLAN, ROBERT.....	PATHOGENESIS OF THE IMMUNE THROMBOCYTOPENIAS.....	5R01 AM16125-07	87,626
MORGAN, WILLIAM T.....	SERUM PROTEIN FUNCTION IN ORGANIC ANION TRANSPORT.....	2R01 HD09252-04	49,807
MORRISON, DAVID C.....	BIOCHEMICAL PARAMETERS OF LPS-INITIATED HOST RESPONSE.....	5R01 AI13187-03	67,054
MULLER-EBERHARD, HANS J.....	BLOOD SYSTEMS IN COAGULATION AND VESSEL DISEASE.....	5P01 HL16411-04	555,600
MULLER-EBERHARD, URSULA.....	HEMOGLOBIN METABOLISM—CLINICAL AND BASIC APPROACH.....	2R01 AM16737-16	47,665
MULLER-EBERHARD, URSULA.....	DISTRIBUTION OF IRON AND HEME BY PROTEINS.....	5R01 AM18329-04	132,530
MULLER-EBERHARD, URSULA.....	PERINATAL DETOXIFICATION MECHANISMS.....	3R01 HD04445-08S1	51,608
MULLER-EBERHARD, URSULA.....	PERINATAL DETOXIFICATION MECHANISMS.....	2R01 HD04445-09	107,258
OLDSTONE, MICHAEL B.....	PATHOGENESIS OF DISEASE CAUSED BY PERSISTENT VIRAL INFECTION.....	5R01 AI09484-10	107,125
OLDSTONE, MICHAEL B.....	MULTIPLE & AMYOTROPHIC LATERAL SCLEROSIS PATHOGENESIS.....	5P50 NS12428-04	369,018
PELLEGRINO, MICHELE A.....	URINE AS SOURCE OF HUMAN CELL SURFACE MARKERS.....	5R01 CA16071-05	131,103
PLOW, EDWARD F.....	BIOREGULATION BY A SPECIFIC FIBRINOLYTIC PRODUCT.....	1R01 AM22116-01	58,051
PLOW, EDWARD F.....	THE ALTERNATIVE PATHWAY FOR FIBRINOLYSIS.....	5R01 HL17964-04	63,725
REISFELD, RALPH A.....	MOLECULAR APPROACHES TO CELL SURFACE ANTIGENS.....	5R01 AI10180-08	167,087
REISFELD, RALPH A.....	NEOPLASIA AND HISTOCOMPATIBILITY ANTIGENS IN SERUM.....	5R01 CA19108-03	73,746
SILVER, JACK.....	STRUCTURE STUDIES OF IA ALLOANTIGENS.....	5R01 CA23030-02	62,964
SINHA, YAGYA N.....	ROLE OF PROLACTIN IN MOUSE MAMMARY TUMORIGENESIS.....	5R01 CA18664-03	72,920
SPIEGELBERG, HANS L.....	STUDIES OF LYMPHOCYTE RECEPTORS AND OF IGD.....	5R01 AI10734-07	151,323
STRUM, WILLIAMSON B.....	BIOCHEMICAL BASIS FOR INTESTINAL ANTIFOLATE TOXICITY.....	2R01 CA17809-04	85,577
THEOFILOPOULOS, ARGYRIOS N.....	CIRCULATING AND CELL BOUND IMMUNE COMPLEXES.....	1R01 CA23322-01	69,885
THOMAS, CHARLES A, JR.....	MOLECULAR CYTOGENETICS.....	7R01 GM25531-01	156,045
ULEVITCH, RICHARD J.....	THE MOLECULAR PATHOLOGY OF LPS-INDUCED INJURY.....	1R01 AI15136-01	72,153
VANDER LAAN, WILLARD P.....	GH AND PROLACTIN IN GROWTH AND TUMORIGENESIS.....	5R01 CA14025-06	129,742
VANDER LAAN, WILLARD P.....	DIABETES, SOMATOTROPIN, FACTOR VIII & ATHEROSCLEROSIS.....	5R01 HL20517-03	182,496
VAUGHAN, JOHN H.....	MECHANISMS OF BRONCHIAL ASTHMA AND OTHER ALLERGIES.....	5P50 AI10386-08	155,183
VAUGHAN, JOHN H.....	RHEUMATOID FACTOR AND REACTIONS IN RHEUMATOID ARTHRITIS.....	1R01 AM21175-01	187,472
VAUGHAN, JOHN H.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00833-04	591,091
WEIGLE, WILLIAM O.....	EFFECT OF AGING ON IMMUNE AND TOLERANT STATES.....	1R01 AG00783-01	65,157
WELSH, RAYMOND M, JR.....	DEFECTIVE VIRUS, IMMUNITY, AND CHRONIC DISEASE.....	2R01 AI12438-04A1	57,922
WHITELEY, JOHN M.....	CHEMISTRY OF FOLATE AND PTERIDINE COENZYMES.....	5R01 CA11778-09	96,401
WILSON, CURTIS B.....	METABOLISM OF RENAL BASEMENT MEMBRANES AND TUBULAR CELLS.....	5R01 AM18626-03	56,660
WILSON, CURTIS B.....	IMMUNOPATHOLOGY OF RENAL DISEASE IN MAN.....	5R01 AM20043-02	216,187
YU, JOHN C.....	HUMAN RED CELL MEMBRANE: STRUCTURE AND FUNCTION.....	1R01 HL21845-01	80,832
ZICCARDI, ROBERT J.....	MECHANISM AND DETECTION OF COMPLEMENT ACTIVATION.....	1R01 AI14502-01	51,368
ZIMMERMAN, THEODORE S.....	BLOOD COAGULATION: PLATELET-PLASMA PROTEIN INTERACTION.....	5R01 HL15491-06	113,265
ZINKERNAGEL, ROLF M.....	SPECIFICITY OF VIRUS-IMMUNE T CELLS IN VITRO AND IN VIVO.....	5R01 AI13779-02	113,447
ORGANIZATION TOTAL	82	10,538,569	
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
ABELSON, JOHN N.....	STRUCTURE AND FUNCTION OF RIBONUCLEIC ACIDS.....	5R01 CA10984-10	129,845
AKESON, WAYNE H.....	CONNECTIVE TISSUE RESPONSE TO IMMOBILITY.....	5R01 AM14918-07	89,122
AKESON, WAYNE H.....	INTERNAL FIXATION DEVICES FOR FRACTURE HEALING.....	5R01 AM15478-08	100,625
AKESON, WAYNE H.....	PATHOPHYSIOLOGY OF THE COMPARTMENT SYNDROME.....	5R01 AM18824-03	101,975
AKESON, WAYNE H.....	EXERCISE EFFECTS ON TENDON REPAIR.....	5R01 GM24900-02	68,419
ALHADEFF, JACK A.....	HUMAN LIVER ALPHA-L-FUCOSIDASE AND FUCOSIDOSIS.....	5R01 AM20409-02	7,423
ALHADEFF, JACK A.....	HUMAN LIVER SIALYLTRANSFERASES AND ALPHA-L-FUCOSIDASE.....	1R01 AM21245-01	25,552
ALLISON, WILLIAM S.....	STRUCTURAL STUDIES ON THE ENERGY TRANSDUCING ATPASE.....	5R01 GM16974-09	65,368
BADA, JEFFREY L.....	ASPARTIC ACID RACEMIZATION: RELATIONSHIP TO AGING.....	5R01 AG00638-02	42,780
BAILY, NORMAN A.....	TUMOR LOCALIZATION AND TREATMENT PLANNING.....	2R01 CA14535-04	60,236
BAKER, BRUCE S.....	GENETICS OF MEIOSIS AND DEVELOPMENT IN DROSOPHILA.....	2R01 GM23345-03	82,593
BAKER, MICHAEL E.....	INHIBITION OF STEROID BINDING BY PROTEASE INHIBITORS.....	1R01 GM24190-01	61,055
BAXT, WILLIAM G.....	ROLE OF RNA TUMOR VIRUSES IN HUMAN LEUKEMIA.....	5R01 CA15376-03	48,790
BECKER, MICHAEL A.....	REGULATION OF PURINE NUCLEOTIDE SYNTHESIS IN MAN.....	5R01 AM18197-04	98,607
BENUMOF, JONATHAN L.....	DISTRIBUTION OF BLOOD FLOW IN ABNORMAL LUNGS.....	1R23 GM24674-01	36,263
BERG, DARWIN K.....	NEURONAL DEVELOPMENT AND SYNAPSE FORMATION IN VITRO.....	5R01 NS12601-03	37,682
BERK, ROBERT N.....	BILIARY RADIOGRAPHIC CONTRAST MATERIALS.....	5R01 AM21620-02	106,499
BERNSTEIN, EUGENE F.....	PULSELESS FLOW AND CIRCULATORY ASSISTANCE.....	3R01 HL18948-02S1	2,263
BERNSTEIN, EUGENE F.....	PULSELESS FLOW AND CIRCULATORY ASSISTANCE.....	5R01 HL18948-03	124,080
BERNSTEIN, EUGENE F.....	ARTERIOVENOUS CONNECTION IN EXTREMITY REVASCULARIZATION.....	1R01 HL22741-01	93,302

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BICKFORD, REGINALD G.....	AUTOMATIC PATTERN RECOGNITION ON ELECTROENCEPHALOGRAM.....	2R01 NS08962-10	111,112
BLANTZ, ROLANO C.....	THE AUTOREGULATION OF GLOMERULAR FILTRATION RATE.....	3R01 HL14914-06S1	20,252
BLOOR, COLIN M.....	PATHOGENESIS OF CARDIAC HYPERTROPHY.....	5R01 HL20190-02	101,598
BLUESTEIN, HARRY G.....	IMMUNE RESPONSIVENESS AND HISTOCOMPATIBILITY TYPE.....	5R01 AI10931-07	71,740
BONO, CLIFFORD W.....	MOLECULAR CHARACTERIZATION OF A NEUROTROPIC CORONAVIRUS.....	5R01 NS13898-02	51,837
BOOKSTEIN, JOSEPH J.....	ANGIOGRAPHY OF NONOCCLUSIVE INTESTINAL ISCHEMIA.....	5R01 GM22396-03	25,813
BOOKSTEIN, JOSEPH J.....	CORONARY PHARMACOANGIOGRAPHY.....	5R01 HL19675-02	43,227
BOROERS, STEPHEN E.....	VASCULAR MECHANICS AND STRUCTURE IN HYPERTENSION.....	1R23 HL22745-01	36,633
BOYNTON, ROBERT M.....	PSYCHOPHYSIOLOGICAL AND OPTICAL STUDIES OF VISION.....	5R01 EY01541-05	56,269
BRAUOE, ABRAHAM I.....	LETHAL BACTEREMIA.....	2R01 AI10108-08	113,467
BRAUOE, ABRAHAM I.....	GONOCOCCAL INFECTION.....	5R01 AI11643-05	74,933
BRAUOE, ABRAHAM I.....	EXPERIMENTAL PYELONEPHRITIS.....	5R01 AI12476-10	97,916
BROOY, STUART.....	MEMBRANE MUTANTS OF NEUROSPORA.....	5R01 GM19308-06	35,011
BULLOCK, THEODORE H.....	STUDIES IN COMPARATIVE NEUROPHYSIOLOGY.....	5R01 NS00021-31	134,696
BUONASSISI, VINCENZO.....	CELLULAR SYNTHESIS AND RELEASE OF MUCOPOLYSACCHARIDES.....	5R01 HL17995-04	80,860
BUTLER, WARREN L.....	PHOTORECEPTOR PIGMENTS IN PHOTORESPONSIVE ORGANISMS.....	5R01 GM20648-05	54,180
CARPENTER, ADELAIDE T.....	EM OF RECOMBINATION MUTANTS IN OSOPOHILA.....	5R01 GM23338-03	65,942
CICERONE, CAPOL M.....	LIGHT-INDUCED AND INHERITED RETINAL DEGENERATION.....	7R01 EY03015-01	41,021
CRICQUI, MICHAEL H.....	THE ETIOLOGY/PREVALENCE OF PERIPHERAL ARTERIAL DISEASE.....	1R01 HL22255-01	73,856
DEFTOS, LEONARDO J.....	THE CALCITROPIC HORMONES.....	5R01 AM15888-06	116,377
DENNIS, EDWARD A.....	ACTION OF LIPOLYTIC ENZYMES.....	5R01 GM20501-04	55,157
DOOLITTLE, RUSSELL F.....	THROMBOSIS RESEARCH PROGRAM PROJECT.....	5P01 HL18576-03	492,840
DOTTON, RICHARD W.....	CELLULAR EVENTS IN THE IMMUNE RESPONSE.....	3R01 AI08795-10S1	73,064
ELLISMAN, MARK H.....	DYNAMICS OF MEMBRANE ORGANIZATION AT NODES OF RANVIER.....	1R01 NS14718-01	36,495
ENNS, THEODORE.....	CARBON DIOXIDE DIFFUSION IN LUNG & MUSCLE TISSUES.....	5R01 HL19008-02	35,720
FANESTIL, DARRELL O.....	HORMONAL REGULATION OF EPITHELIAL TRANSPORT.....	2R01 AM14915-09	145,995
FAULKNER, DAVID J.....	ANTIBIOTICS FROM MARINE ORGANISMS.....	5R01 AI11969-05	58,078
FEHER, GEORGE.....	SPECTROSCOPIC INVESTIGATIONS OF BIOLOGICAL SYSTEMS.....	5R01 GM13191-14	103,278
FIRTEL, RICHARD A.....	GENE STRUCTURE AND TRANSCRIPTIONAL REGULATION.....	5R01 GM24279-02	105,470
FORTES, P. A.....	CARDIAC GLYCOSIDES AND THE MECHANISM OF THE NA-K PUMP.....	5R01 HL20262-02	44,056
FRIEDKIN, MORRIS E.....	NEW ANTAGONISTS OF AMETHOPTERIN-RESISTANT LEUKEMIA.....	5R01 CA11449-10	106,908
FRIEDMANN, THEODORE.....	NUCLEOTIDE SEQUENCING OF POLYOMA DNA.....	1R01 CA24288-01	164,639
FRONEK, ARNOST.....	SYSTEMIC AND LOCAL VASCULAR ADJUSTMENT IN SHOCK.....	5R01 HL12690-09	62,953
FRONEK, ARNOST.....	NONINVASIVE DIAGNOSIS OF PERIPHERAL ARTERIAL DISEASE.....	5R01 HL18977-03	40,945
FRONEK, KITTY.....	THE SYMPATHETIC NERVOUS SYSTEM AND THE ARTERIAL WALL.....	2R01 HL16768-04	99,856
FRONEK, KITTY.....	PATHOGENESIS OF PERIPHERAL ARTERIAL DISEASE.....	5R01 HL20564-02	79,308
FUNG, YUAN-CHENG B.....	CONTINUUM MECHANICS IN BIOPHYSICS.....	5R01 HL12494-10	44,913
GARST, MICHAEL E.....	SYNTHESIS OF MITOMYCIN C VIA PYRROLIZIDINE ALKALOIDS.....	5R01 CA22238-02	38,555
GEIOUSCHEK, E. PETER.....	STUDIES ON NUCLEIC ACIDS AND NUCLEOPROTEINS.....	5R01 GM18386-09	159,265
GILL, GORDON N.....	HORMONAL REGULATION OF CONTROL MECHANISMS.....	5R01 AM13149-11	102,644
GLUCK, LOUIS L.....	SURFACTANT: BIOCHEMICAL DEVELOPMENT AND STABILIZATION.....	5R01 HD10622-02	180,956
GOLOBAUM, MICHAEL H.....	ANGIOGENESIS, HEALING, AND AGING IN RETINA AND CHOROID.....	1R01 EY02434-01	56,218
GOODMAN, MURRAY.....	SYNTHESIS AND CONFORMATIONS OF PEPTIDE HORMONES.....	2R01 AM15410-09	76,697
GOODMAN, MURRAY.....	CONFORMATION OF BIOPOLYMERS AND PEPTIDES.....	2R01 GM18694-06	54,180
GOULIAN, MEHRAN.....	DNA SYNTHESIS STUDIES.....	5R01 CA11705-09	114,155
GREEN, MELVIN H.....	THE PROCESS AND CONTROL OF TRANSCRIPTION OF SV40.....	1R01 CA24281-01	60,267
GRUNOY, SCOTT M.....	RESEARCHES ON CAUSES AND TREATMENT OF GALLSTONES.....	5R01 AM16667-05	65,142
HALASZ, NICHOLAS A.....	KIDNEY PRESERVATION STUDIES.....	5R01 AM20193-02	88,481
HARPER, ELVIN.....	INVASIVE TUMOR CELL COLLAGENASE.....	5R01 CA18377-03	43,512
HARRISON, WALTER K.....	MYOCARDIAL FUNCTION RISK FACTORS, AND FUTURE CHD.....	5R01 HL20374-03	71,093
HARTLINE, DANIEL K.....	QUANTITATIVE STIMULATION OF SIMPLE NEURONAL NETS.....	3R01 NS13138-02S1	1,643
HAYASHI, MASAKI.....	SYNTHESIS OF INFECTIOUS BACTERIOPHAGE PARTICLES.....	2R01 GM12934-14	86,771
HAYASHI, MASAKI.....	NUCLEOTIDE SEQUENCE OF TUBULIN GENES.....	1R01 GM25086-01	35,977
HELINSKI, DONALD R.....	STRUCTURE AND GENETIC CONTROL OF COLICINES.....	2R01 AI07194-13	121,472
HEMMINGSSEN, EDVARO A.....	STUDIES OF CAVITATION IN BIOLOGICAL SYSTEMS.....	5R01 HL16855-03	56,357
HOFMANN, ALAN F.....	BILE ACID METABOLISM IN HEALTH AND DISEASE.....	1R01 AM21506-01	204,266
HOLLAND, JOHN J.....	SYNTHESIS IN NORMAL, VIRUS-INFECTED AND TUMOR CELLS.....	9R01 AI14627-11	159,887
HORNSBY, PETER J.....	AGING OF ENDOCRINE CELLS IN CULTURE.....	1R01 AG00936-01	37,889
HOSTETLER, KARL Y.....	STUDIES ON THE PATHOGENESIS OF DRUG-INDUCED LIPIDOSIS.....	1R01 GM24979-01	50,289
HOUGIE, CECIL.....	MOLECULAR BASIS OF V. WILLEBRAND'S DISEASE & HEMOPHILIA.....	5R01 HL15230-05	62,040

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
HOUGIE, CECIL.....	STUDIES ON THE PASSOVOY FACTOR.....	5R01 HL19272-03	34,312
HSUEH, AARON J.....	EFFECT OF AGING ON HORMONAL CONTROL OF MAMMARY TUMORS.....	5R01 CA21867-02	87,340
INTAGLIETTA, MARCOS.....	BIOENGINEERING ANALYSIS OF MICROVASCULAR FUNCTION.....	5R01 HL12493-10	89,274
ITANO, HARVEY A.....	STUDIES IN MOLECULAR HEMATOLOGY.....	5R01 AM14982-08	119,634
JONES, KENNETH L.....	GENETIC DWARFS: A STUDY OF CELLULAR GROWTH DEFECTS.....	5R01 HD10038-03	51,136
KAGNOFF, MARTIN F.....	INTESTINAL IMMUNE RESPONSES.....	5R01 AM17276-05	71,130
KAMEN, MARTIN D.....	MOLECULAR BASIS FOR FUNCTION OF BACTERIAL IRON PROTEINS.....	5R01 GM18528-18	91,700
KAPLAN, NATHAN O.....	STUDIES ON COENZYMES AND NUCLEIC ACID METABOLISM.....	5R01 CA11683-09	129,412
KAPLAN, NATHAN O.....	PROGRAM PROJECT ON ATHYMIC MICE AND HUMAN TUMORS.....	1P01 CA23052-01	410,286
KAPLAN, NATHAN O.....	RESOURCE FACILITY FOR NMR AND MASS SPECTROMETRY.....	2P41 RR00708-04	175,125
KEARNS, DAVID R.....	STRUCTURAL STUDIES OF RNA.....	5R01 GM22969-03	80,110
KENNEDY, SAMUEL I.....	ALPHAVIRUS PERSISTENCE IN VERTEBRATE CELLS.....	1R01 AI15087-01	93,235
KRAUT, JOSEPH.....	CRYSTALLOGRAPHIC STUDIES OF DIHYDROFOLATE REDUCTASES.....	2R01 CA17374-04	89,762
KRAUT, JOSEPH.....	CRYSTALLOGRAPHIC STUDY OF BIOLOGICAL MOLECULES.....	5R01 GM10928-16	131,436
KRAUT, JOSEPH.....	COMPUTER RESOURCE FOR BIOMOLECULAR RESEARCH.....	2P41 RR00757-06	371,644
KUNG, FAITH H.....	ACUTE LEUKEMIA COOPERATIVE GROUP B.....	5R10 CA11789-09	110,474
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE OUABAIN SENSITIVE ATPASE.....	2R01 HL17879-04	78,955
LAMPERT, PETER W.....	FINE STRUCTURAL PATHOLOGY OF MYELIN.....	5R01 NS09053-09	34,875
LASSER, ELLIOTT C.....	COMPLEMENT, COAGULATION, IN CONTRAST MEDIA REACTIONS.....	5R01 GM22794-03	167,898
LASSER, ELLIOTT C.....	PREVENTION OF X-RAY CONTRAST MEDIA REACTIONS.....	1R01 GM24993-01	225,750
LEONG, JOHN.....	MICROBIAL TRANSITION METAL ION TRANSPORT.....	1R01 AI14084-01A1	51,324
LOOMIS, WILLIAM F.....	GENETIC REGULATION OF DEVELOPMENT IN DICTYOSTELIUM.....	5R01 GM19543-06	53,606
LOY, REBEKAH.....	REGENERATION OF SYMPATHETIC NEURONS IN HIPPOCAMPUS.....	1R01 NS14372-01	51,811
MACLEOD, DONALD I.....	RETINAL MECHANISMS IN HUMAN VISION.....	5R01 EY01711-03	45,112
MALCOM, LAWRENCE L.....	ARTICULAR CARTILAGE SURFACE MECHANICS.....	5R01 AM20045-02	55,566
MASOUREDIS, SERAFEIM P.....	RH COMPLEX OF RED CELLS.....	3R01 HL12994-08S2	31,669
MASOUREDIS, SERAFEIM P.....	RH COMPLEX AND THE RED CELL MEMBRANE.....	2R01 HL12994-09A1	80,735
MAZZONE, ROBERT W.....	CAPILLARY MORPHOLOGY IN PULMONARY EDEMA.....	1R23 HL21943-01	34,288
MENDELSON, JOHN.....	CONTROL OF IMMUNE AND MALIGNANT LYMPHOCYTE GROWTH.....	5R01 CA11971-08	64,099
MENDELSON, JOHN.....	SUPPORT FOR CLINICAL CANCER EDUCATION.....	5R25 CA19087-03	137,286
MENDELSON, JOHN.....	SPECIALIZED CANCER CENTER (CORE) SUPPORT.....	1P30 CA23100-01	340,299
MENDELSON, JOHN.....	PHARMACOLOGIC CONTROL OF LEUKOCYTE CYCLIC NUCLEOTIDES.....	5R01 GM22637-03	40,381
MILLER, ARNOLD L.....	I-CELL DISEASE AND MENTAL RETARDATION.....	2R01 NS12138-04	66,513
MIYAI, KATSUMI.....	BILE ACIDS AND HEPATIC SUBCELLULAR PATHOLOGY.....	5R01 AM16110-06	58,165
MONTAL, S MAURICIO.....	RHODOPSIN IN BILAYER MEMBRANES AND VISUAL EXCITATION.....	1R01 EY02084-01	135,871
MOORE, ROBERT Y.....	HISTOCHEMICAL STUDIES OF BIOGENIC AMINES IN BRAIN.....	5R01 NS12080-05	67,703
MOORE, ROBERT Y.....	CENTRAL MECHANISMS IN DIURNAL RHYTHM REGULATION.....	5R01 NS12267-05	73,048
MOXLEY, JOHN H, III.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00827-04	607,464
MOXLEY, JOHN H, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05665-11	200,462
NINNEMANN, JOHN L.....	CANCER ASSOCIATED IMMUNOSUPPRESSIVE SERUM PROTEINS.....	5R01 CA19320-03	39,393
NINNEMANN, JOHN L.....	IMMUNE CONSEQUENCES OF THERMAL INJURY.....	5R01 GM23128-03	64,657
NYHAN, WILLIAM L.....	AMINO ACID INTERRELATIONS IN HUMAN METABOLIC DISEASE.....	5R01 HD04608-10	103,637
O'BRIEN, JOHN S.....	MOLECULAR BASIS OF CEREBRAL DEGENERATION.....	5R01 NS08682-10	97,154
ORLOFF, MARSHALL J.....	ISOLATION OF THE INTESTINAL PHASE HORMONE.....	1R01 AM19875-01	110,265
ORLOFF, MARSHALL J.....	STUDIES OF PANCREAS TRANSPLANTATION IN DIABETES.....	5R01 AM20745-02	161,557
OSHIMA, ROBERT G.....	IN VITRO DIFFERENTIATION OF EMBRYONAL CARCINOMA CELLS.....	1R01 CA22852-01	51,329
OSLER, ABRAHAM G.....	FUNCTIONS OF THE ALTERNATE COMPLEMENT PATHWAY.....	7R01 AI15798-01	74,194
PASTORE, EDWARD J.....	ANTIFOLATE MECHANISMS STUDIED BY NMR SPECTROSCOPY.....	3R01 CA19094-02S1	8,166
PASTORE, EDWARD J.....	ANTIFOLATE MECHANISMS STUDIED BY NMR SPECTROSCOPY.....	5R01 CA19094-03	62,251
PETERS, RICHARD M.....	AUTOMATED INFORMATION SYSTEM FOR THE CRITICALLY ILL.....	5R01 GM17284-10	229,936
PETERS, RICHARD M.....	INTERSTITIAL TISSUE AND ONCOTIC PRESSURE IN TRAUMA.....	5R01 GM24901-02	80,669
PETERS, RICHARD M.....	POST-TRAUMA LUNG MECHANICS AND FLUID EXCHANGE.....	5R01 HL13172-10	82,666
PILCH, YOSEF H.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12240-07	42,040
PINON, RAMON.....	MOLECULAR STUDIES OF MEIOSIS IN YEAST.....	3S06 RR08135-03S1	3,722
PINON, RAMON.....	BIOMEDICAL SCIENCES RESEARCH PROGRAM.....	2S06 RR08135-04	195,823
PINTO, JOHN G.....	MECHANICS OF THE PAPILLARY MUSCLE AND THE LEFT VENTRICLE.....	5R01 HL19460-03	46,765
POWELL, HENRY C.....	PATHOGENESIS OF TOXIC AND METABOLIC NEUROPATHIES.....	1R01 NS14162-01	49,856
PRICE, PAUL A.....	CHEMICAL STUDIES ON PANCREATIC DEOXYRIBONUCLEASE.....	5R01 GM16603-10	73,686
PRINTZ, MORTON P.....	ROLE OF ANGIOTENSINOGEN IN HYPERTENSION AND STROKE.....	5R01 HL15808-06	96,650
RANNEY, HELEN M.....	STUDIES OF THE PROPERTIES OF HEMOGLOBIN.....	5R01 AM17348-06	128,645

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ROSENFELD, MICHAEL G.....	CAMP AND HORMONAL REGULATION OF PROTEIN SYNTHESIS.....	5R01 AM18477-04	96,194
ROSS, JOHN, JR.....	PHYSIOLOGY AND BIOCHEMISTRY OF CARDIOVASCULAR ADAPTATION.....	5P01 HL12373-10	875,591
ROSS, JOHN, JR.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17682-04	1,230,114
ROTENBERG, MANUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07011-13	200,462
RUDOLPH, ROSS.....	CONTRACTION MECHANISMS IN PROBLEM WOUND HEALING.....	1R01 GM24648-01	58,681
RYAN, ALLEN F.....	MIDDLE EAR RESPONSES IN SEROUS OTITIS MEDIA.....	1R01 NS14389-01	59,769
SAIER, MILTON H, JR.....	MECHANISM OF CARBOHYDRATE TRANSPORT IN BACTERIA.....	5R01 AI14176-02	27,662
SAIER, MILTON H, JR.....	CYCLIC AMP EFFLUX FROM BACTERIA AND RAT GLIOMA CELLS.....	5R01 CA16521-03	65,411
SALTMAN, PAUL D.....	STUDIES OF BIOLOGICAL TRANSPORT MECHANISMS.....	5R01 AM12386-11	125,888
SANDERS, TOMMY M.....	CARDIOVASCULAR ADAPTATION TO STRESS.....	5R01 HL18560-03	63,864
SATO, GORDON H.....	ATHYMIC MICE FACILITY: USE IN HUMAN CANCER RESEARCH.....	5P30 CA18885-03	77,907
SATO, GORDON H.....	HORMONAL REQUIREMENT OF CELLS IN VITRO AND IN VIVO.....	5R01 CA19731-02	54,490
SATO, GORDON H.....	HORMONE DEPENDENT TUMORS AND LOSS OF GROWTH REGULATION.....	5R01 GM17019-09	97,132
SCHEFFLER, IMMO E.....	GENETICS AND BIOCHEMISTRY OF SOMATIC CELLS.....	5R01 GM18835-08	83,879
SCHMIDT, JOSEPH D.....	CHEMOTHERAPY OF ADVANCED PROSTATIC CANCER.....	5R26 CA21438-02	121,043
SCHNEIDER, JERRY A.....	IN VITRO CHARACTERIZATION OF CYSTINOTIC VARIANTS.....	5R01 AM18434-03	77,631
SEEGMILLER, JARVIS E.....	ARTHRITIS: INHERITED METABOLIC AND NUTRITIONAL CAUSES.....	5R01 AM13622-10	139,201
SEEGMILLER, JARVIS E.....	HUMAN BIOCHEMICAL GENETICS PROGRAM.....	5P50 GM17702-08	943,064
SEEGMILLER, JARVIS E.....	PREVENTIVE CONTROL OF THE LESCH-NYHAN SYNDROME.....	1R01 HD10847-01	148,449
SELL, STEWART.....	SYPHILIS IMMUNITY.....	5R01 AI14262-02	78,317
SELL, STEWART.....	LYMPHOCYTES: GENE EXPRESSION AND ACTIVATION EVENTS.....	5R01 CA16367-05	71,400
SELL, STEWART.....	EARLY EFFECTS OF A HEPATOCARCINOGEN IN VITRO.....	5R01 CA21230-02	219,006
SELL, STEWART.....	ONCO-DEVELOPMENTAL GENE CONTROL: ALPHA-FETOPROTEIN.....	5R01 CA22227-02	89,873
SELVERSTON, ALLEN I.....	NEURAL GEOMETRY AND INTEGRATION IN GANGLIA.....	2R01 NS09322-07A1	33,765
SHAPIRO, HARVEY M.....	EVALUATION OF CEREBRAL ISCHEMIA THERAPY.....	5R01 NS13679-02	87,351
SHARMA, VIJAY S.....	MECHANISM OF REACTIONS OF HEMOGLOBIN WITH LIGANDS.....	5R01 AM18781-03	31,877
SHERR, HOWARD P.....	GASTROINTESTINAL EFFECTS OF BACTERIAL ENTEROTOXINS.....	1R01 AM19620-01A1	65,128
SIMON, MELVIN I.....	BACTERIAL MOTILITY: MECHANISM & ROLE IN INFECTION.....	5R01 AI13008-03	37,905
SIMON, MELVIN I.....	MOLECULAR MECHANISMS OF MOTILITY AND CHEMOTAXIS.....	1R01 AI14988-01	50,285
SINGER, S JONATHAN.....	THE STRUCTURE OF ANTIBODY MOLECULES AND CELL MEMBRANES.....	5R01 AI06659-14	92,909
SINGER, S JONATHAN.....	TRANS-MEMBRANE CONTROL IN TRANSFORMED AND NORMAL CELLS.....	5R01 CA22031-02	71,819
SINGER, S JONATHAN.....	MOLECULAR APPROACHES TO CELL ULTRASTRUCTURE.....	2R01 GM15971-11	145,264
SMITH, DOUGLAS W.....	DNA REPLICATION IN E. COLI USING FOLDED CHROMOSOMES.....	5R01 GM21978-03	57,038
SNYDER, ELAINE F.....	AGING AND EVENT-RELATED BRAIN POTENTIALS IN MAN.....	5R01 AG00712-02	30,628
SOVAK, MILOS.....	DEVELOPMENT OF NEW RADIOGRAPHIC CONTRAST MEDIA.....	5R01 GM22911-03	205,350
SPECTOR, DEBORAH H.....	MOLECULAR BIOLOGY OF HUMAN CYTOMEGALOVIRUS.....	1R01 AI15635-01	77,780
SPITZER, NICHOLAS C.....	THE CHEMOSENSITIVITY OF EMBRYONIC AMPHIBIAN NEURONS.....	5R01 NS13733-02	40,004
STEINBERG, DANIEL.....	A/S SCOR LIPROTEIN AND STEROL METABOLISM.....	5P50 HL14197-07	677,970
STEINBERG, DANIEL.....	THE DISORDERED LIPID METABOLISM OF DIABETES MELLITUS.....	5R01 HL22053-02	147,878
STEINBERG, DANIEL.....	STUDIES ON THE METABOLIC BASIS OF INHERITED LIPIDOSES.....	5R01 NS08246-10	65,358
STERN, HERBERT.....	PROGRAM FOR DEVELOPMENTAL BIOLOGY.....	5P01 HD03015-12	161,132
STONE, RICHARD A.....	HUMAN DOPAMINE-BETA-HYDROXYLASE.....	2R01 HL18095-04	39,714
STOUGHTON, RICHARD B.....	PERCUTANEOUS ABSORPTION AND EFFECTS OF ANTIMETABOLISTES.....	7R01 AM25281-01	85,872
STULL, JAMES T.....	ROLE OF PHOSPHOPROTEIN IN CARDIAC INOTROPIC RESPONSES.....	2R01 HL18170-04	22,580
TAYLOR, PALMER W.....	KINETIC STUDIES ON DRUG-PROTEIN COMPLEX FORMATION.....	5R01 GM18360-07	68,647
TAYLOR, PALMER W.....	PHARMACOLOGY OF MEMBRANE ASSOCIATED RECEPTORS.....	5R01 GM24337-02	45,908
TAYLOR, SUSAN S.....	PROTEIN KINASE: PRIMARY STRUCTURE AND C-AMP INTERACTION.....	2R01 GM19301-07	49,300
TAYLOR, SUSAN S.....	EVOLUTION OF LACTATE DEHYDROGENASES.....	5R01 GM22452-03	40,390
TRAYLOR, TEDDY G.....	MECHANISMS OF REACTIONS OF OXYGEN WITH HEME PROTEINS.....	5R01 HL13581-11	63,911
UTLEY, JOELLA F.....	RADIOPROTECTION OF NORMAL AND TUMOR TISSUE BY WR-2721.....	1R01 CA24092-01	36,432
VACQUIER, VICTOR D.....	BIOCHEMISTRY OF SPERM-EGG BINDING AND FERTILIZATION.....	7R01 HD12986-01	50,059
VARON, SILVIO S.....	HUMORAL AND CELLULAR INFLUENCES ON NEURAL CELLS.....	2R01 NS07606-10	87,934
VARON, SILVIO S.....	SEPARATION OF VIABLE NEURONS AND NEUROGLIAL CELLS.....	5R01 NS12893-03	53,785
VICTORIA, EDWARD J, JR.....	MEMBRANE BIOCHEMISTRY OF RH ANTIGENS.....	1R01 HL23108-01	68,532
VOLCANI, BENJAMIN E.....	BIOCHEMICAL STUDIES ON SILICEOUS SKELETAL FORMATION.....	5R01 GM08229-18	124,665
WEST, JOHN B.....	PHYSIOLOGICAL BASIS OF PULMONARY DISEASE.....	5P01 HL17731-04	501,253
WILSON, DORIS B.....	CEREBROVASCULAR RESPONSE TO EMBRYONIC OVERGROWTH.....	5R01 HD09562-03	71,684
WORTHEN, DAVID M.....	STUDIES ON ARGON LASER TRABECULOTOMY.....	3R01 EY01673-01S1	20,754
XUONG, NGUYEN-HUU.....	A COMPUTER CONTROLLED MULTIREFLECTION DIFFRACTOMETER.....	5R01 GM20102-06	124,632
XUONG, NGUYEN-HUU.....	AUTOMATIC ANALYSIS OF 2-DIMENSIONAL ELECTROPHEROGRAMS.....	5R01 GM22940-03	49,996

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
YEN, SAMUEL S.....	NEUROENDOCRINE CONTROL OF THE ADENOHYPHYSIS.....	5R01 HD09728-03	71,215
YGUERABIDE, JUAN.....	DYNAMICS AND FUNCTION OF CHROMATIN SUBUNIT STRUCTURE.....	5R01 GM22786-03	49,510
ZIMM, BRUNO H.....	NUCLEIC ACIDS AND CHROMOSOMAL DNA.....	5R01 GM11916-15	79,818
ZVAIFLER, NATHAN J.....	BLOOD/SYNOVIAL FLUID IMMUNOREACTANTS—RHEUMATIC DISEASE.....	5R01 AM14916-09	113,140
ZWEIFACH, BENJAMIN W.....	STRUCTURE AND FUNCTION OF MICROCIRCULATION.....	2R01 HL10881-13	169,625
ZWEIFACH, BENJAMIN W.....	MICROCIRCULATION IN PATIENTS WITH DIABETES MELLITUS.....	5R01 HL22118-02	147,405
ORGANIZATION TOTAL	206	22,429,831	
LOMA LINDA			
LOMA LINDA UNIVERSITY ZIP CODE 92354			
GILBERT, RAYMOND D.....	ADAPTATIONS OF THE FETAL CARDIOVASCULAR SYSTEM.....	5R01 HD10029-03	67,611
GODFREY, THOMAS E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17948-04	89,348
GUSSECK, DAVID J.....	REGULATION OF PLACENTAL PROTEIN HORMONE SYNTHESIS.....	5R01 HD09440-03	93,524
HADLEY, G GORDON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05352-17	79,371
HESSINGER, DAVID A.....	PHYSALIA VENOM: PURIFICATION, MECHANISM, TREATMENT.....	7R01 ES02182-01	42,850
KISSINGER, DAVID G.....	DIET AND AGE AT MENARCHE.....	5R01 HD10572-02	81,643
KUZMA, JAN W.....	EPIDEMIOLOGY OF SDA CANCER MORTALITY, 20-YEAR FOLLOW-UP.....	3R01 CA18186-03S1	13,956
LONGO, LAWRENCE D.....	FETAL OXYGENATION AND PLACENTAL GAS EXCHANGE.....	2R01 HD03807-10	146,328
NEILSEN, IVAN R.....	DEVELOPMENT OF BIOMEDICAL COMPUTATION FACILITY.....	3P41 RR00276-13S1	41,248
PHILLIPS, ROLAND L.....	EPIDEMIOLOGY OF CANCER IN A LOW-RISK GROUP.....	5R01 CA14703-05	280,796
PHILLIPS, ROLAND L.....	FACTORS IN BLOOD PRESSURE LEVELS OF CHILDREN.....	5R01 HL20005-03	263,139
POWER, GORDON G.....	BLOOD FLOW AND GAS EXCHANGE IN THE PLACENTA AND LUNGS.....	5R01 HL15655-05	104,717
ORGANIZATION TOTAL	12	1,304,531	
LONG BEACH			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LONG BEACH ZIP CODE 90840			
COHLBERG, JEFFREY A.....	PROTEIN-PROTEIN INTERACTIONS IN E. COLI RIBOSOMES.....	1R01 GM23541-01A1	51,171
ORGANIZATION TOTAL	1	51,171	
LOS ANGELES			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LOS ANGELES ZIP CODE 90032			
BROWN, COSTELLO L.....	NEGATIVE ION STUDIES OF BIOORGANIC MOLECULES.....	2R01 GM20793-04	39,520
FERGUSON, LLOYD N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07152-04	25,384
FERGUSON, LLOYD N.....	MINORITY STUDENT TRAINING FOR BIOMEDICAL RESEARCH.....	5S06 RR08101-06	116,778
FERGUSON, LLOYD N.....	MINORITY STUDENT TRAINING FOR BIOMEDICAL RESEARCH.....	2S06 RR08101-07	680,534
ONAK, THOMAS P.....	BIOLOGICALLY ACTIVE SMALL CAGE BORON DERIVATIVES.....	3R01 CA12128-06S1	7,271
ORGANIZATION TOTAL	5	869,487	
GEORGE S. PAULSON CENTER ZIP CODE 90048			
CORDAY, ELIOT.....	OPTIMIZATION DIASTOLIC AUGMENTATION AND SYSTOLIC SINK.....	2R01 HL14644-05	91,671
EZRIN, CALVIN.....	PITUITARY ADENOMAS: STRUCTURE-FUNCTION RELATIONS.....	1R01 CA21905-01	65,490
GATTI, RICHARD A.....	MLR LOCUS TYPING OF CANCER PATIENTS.....	5R01 CA18892-03	77,441
KATZ, JOSEPH.....	PATHWAYS OF GLUCOSE METABOLISM AND HYDROGEN TRANSPORT.....	5R01 AM12604-10	101,995
KATZ, JOSEPH.....	GLYCOGEN METABOLISM BY ISOLATED HEPATOCYTES.....	5R01 AM19576-02	56,953
LERNER, ROGER L.....	ROLE OF SECRETIN IN HUMAN INSULIN SECRETION.....	3R01 AM21720-01S1	14,394
LERNER, ROGER L.....	ROLE OF SECRETIN IN HUMAN INSULIN SECRETION.....	5R01 AM21720-02	79,939
MAXWELL, MORTON H.....	EXPERIMENTAL RENAL ARTERIAL HYPERTENSION.....	5R01 HL22069-02	84,543
MURTHY, VRUDHULA K.....	COMPREHENSIVE MODELS FOR CANCER SURVIVAL AND MORTALITY.....	3R01 CA21380-01S1	6,133
MURTHY, VRUDHULA K.....	COMPREHENSIVE MODELS FOR CANCER SURVIVAL AND MORTALITY.....	5R01 CA21380-02	112,235
ROGNSTAD, ROBERT A.....	METABOLIC PATHWAYS IN THE INTACT LIVER CELL.....	1R01 AM20417-01	27,830
ROGNSTAD, ROBERT A.....	PYRUVATE CYCLES IN THE METABOLISM OF GLUCOGENIC CELLS.....	1R01 AM21437-01	52,998
RUBENSTEIN, PAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05468-16	93,700
SWAMINATHAN, NARAYANASAMI.....	CHEMISTRY OF PLACENTAL AND TUMOR CHORIOGONADOTROPINS.....	5R01 CA19392-03	67,346
SWAN, HAROLD J.....	ISCHEMIC HEART DISEASE SPECIALIZED CENTER OF RESEARCH.....	5P50 HL17651-04	1,113,655
ORGANIZATION TOTAL	15	2,046,323	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
CHARLES R. OREW POSTGRADUATE MEDICAL SCHOOL ZIP CODE 90059			
ALFRED, LAWRENCE J.....	ARYL HYDROCARBON HYDROXYLASE LEVELS: HEAD-NECK CANCER.....	5R01 CA19659-02	69,048
ALFRED, LAWRENCE J.....	BIOMEDICAL RESEARCH AND TRAINING—MULTI-INSTITUTIONAL.....	3S06 RR08140-04S2	7,749
ALFRED, LAWRENCE J.....	MULTIINSTITUTIONAL BIOMEDICAL RESEARCH AND TRAINING.....	5S06 RR08140-05	247,291
PERCY, ALAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05780-03	40,954
SATCHER, DAVID.....	COMPREHENSIVE HOSPITAL/COMMUNITY SICKLE CELL CENTER.....	1P60 HL23282-01	778,067
THADEPALLI, HARAGOPAL.....	EXPERIMENTAL LUNG ABSCESS.....	1R01 HL20963-01	31,358
ORGANIZATION TOTAL	6 1,174,467		
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027			
BENEDICT, WILLIAM F.....	MECHANISM OF MALIGNANT TRANSFORMATION OF DNA INHIBITORS.....	5R01 CA14226-06	103,025
DONNELL, GEORGE N.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	5M01 RR00086-16	412,678
DUKES, PETER P.....	PURIFICATION OF HUMAN ERYTHROPOIETIN FOR RESEARCH USE.....	5R01 HL10880-13	111,947
HAYS, DANIEL M.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA23146-01	131,193
HIGGINS, GUSSIE R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA02649-22	241,691
JONES, PETER A.....	5-AZACYTIDINE INDUCED DIFFERENTIATION.....	1R01 GM25739-01	61,214
KOCH, RICHARD.....	STUDY OF DIET DISCONTINUATION IN PKU CHILDREN.....	5R01 HD09543-04	149,870
MC ALLISTER, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05469-16	45,375
ORGANIZATION TOTAL	8 1,256,993		
ESTELLE OOHENY EYE FOUNDATION ZIP CODE 90033			
MINCKLER, DONALD S.....	MORPHOLOGY OF MONKEY OPTIC NERVE.....	1R01 EY02210-01	97,811
NESBURN, ANTHONY B.....	HERPES SIMPLEX OF THE EYE: PATHOGENESIS AND TREATMENT.....	5R01 EY00858-06	205,134
OGDEN, THOMAS E.....	A STUDY OF STRUCTURE AND FUNCTION OF RETINAL NEURONES.....	2R01 EY01671-03A1	101,124
OGDEN, THOMAS E.....	NONLINEAR ANALYSIS OF RETINAL POTENTIALS.....	5R01 EY01775-03	72,972
ORGANIZATION TOTAL	4 477,041		
HOSPITAL OF THE GOOD SAMARITAN ZIP CODE 90017			
SILVERMAN, LAWRENCE M.....	CREATINE KINASE BB AS A MARKER OF PROSTATIC CARCINOMA.....	1R26 CA25057-01	32,620
ORGANIZATION TOTAL	1 32,620		
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY—UNIV OF SO CALIFORNIA MED CTR ZIP CODE 90033			
BERNSTEIN, SOL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05466-12	26,617
FRASHER, WALLACE G, JR.....	QUANTITATION OF FLOW AND SOLUTE FLUX IN MICROVESSELS.....	5R01 HL11153-12	36,839
MORROW, C PAUL.....	GYNECOLOGICAL ONCOLOGY GROUP.....	2R10 CA13641-07	43,213
ORGANIZATION TOTAL	3 106,669		
LOYOLA MARYMOUNT UNIVERSITY ZIP CODE 90045			
WALSH, PATRICIA R.....	SOURCES OF ATTITUDES TOWARD THE AGED.....	1R01 AG00860-01	29,367
ORGANIZATION TOTAL	1 29,367		
OCCIDENTAL COLLEGE ZIP CODE 90641			
MAYS, LAURA L.....	RELATION OF TRNA TO PROTEIN ERRORS IN AGING RAT LIVER.....	5R01 AG00479-04	50,782
ORGANIZATION TOTAL	1 50,782		
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
ALFIN-SLATER, ROSLYN B.....	NUTRITIONAL STRESS ON AFLATOXIN-INDUCED CARCINOGENESIS.....	5R01 CA20938-02	30,694
AMSTUTZ, HARLAN C.....	NEW HIP PROSTHESIS AND FIXATION MODES—IN VIVO STUDY.....	5R01 AM20333-02	94,136
ARMUJO, ROLANDO.....	EPIDEMIOLOGY OF STOMACH CANCER AND NITRATES IN CHILE.....	5R01 CA20236-02	95,555
ASH, LAWRENCE R.....	DEVELOPMENT OF LABORATORY MODELS IN FILARIASIS.....	5R22 AI10250-08	85,299
ASHMAN, ROBERT F.....	IMMUNOLOGIC ROLE OF THE ANTIGEN BINDING CELL.....	1R01 AI14922-01	94,801
ASSALI, NICHOLAS S.....	FETAL AND NEONATAL CARDIOVASCULAR FUNCTIONS.....	5R01 HL01755-25	128,736
ATKINSON, DANIEL E.....	ENZYME-EFFECTOR INTERACTIONS AND METABOLIC REGULATION.....	5R01 AM09863-13	97,915
AUSTIN, GARTH E.....	PATHOGENESIS OF PRIMARY HEPATOCELLULAR CARCINOMAS.....	5R01 CA19624-03	70,200
BAKER, BRUCE L.....	PARENTS AS TEACHERS: MEDIA-ASSISTED TRAINING PROGRAMS.....	5R01 HD10962-02	88,943
BAKER, NOME.....	TRIGLYCERIDE SYNTHESIS AND TRANSPORT IN DIABETES.....	3R01 AM21072-01S1	10,812
BAKER, NOME.....	TRIGLYCERIDE SYNTHESIS AND TRANSPORT IN DIABETES.....	5R01 AM21072-02	103,899
BALUDA, MARCEL A.....	TUMOR INDUCTION BY AVIAN MYELOBLASTOSIS VIRUS.....	5R01 CA10197-12	171,834
BARKLEY, DAVID S.....	IMMUNE RESPONSES IN HUNTINGTON'S DISEASE.....	7R01 NS15067-01	62,382

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BARNARD, R JAMES	EFFECTS OF EXERCISE ON THE HEART AND ITS BLOOD SUPPLY	5R01 HL20253-02	51,551
BARR, ALLAN R	CYTOPLASMIC INCOMPATIBILITY FOR FILARIASIS CONTROL	5R22 AI11847-11	71,531
BARRETT, CYNTHIA T	NEONATAL RESPIRATORY DISTRESS: AMINOPHYLLINE EFFECTS	1R01 HD12197-01	44,878
BARRETT, JACK D	ISO-RENINS IN HYPERTENSIVES	1R01 HL21877-01A1	33,309
BELKIN, JOHN N	MOSQUITOES OF MIDDLE AMERICA	5R01 AI04379-17	70,186
BELLVILLE, J WELDON	DYNAMIC ISOLATION STUDIES OF CONTROL OF RESPIRATION	5R01 HL15659-05	46,833
BEUMER, JOHN, III	CLINICAL CANCER EDUCATION PROGRAM	5R25 CA18724-03	58,583
BEVAN, JOHN A	MORPHOPHARMACOLOGY OF VASCULAR ADRENERGIC TRANSMISSION	5R01 HL08359-14	58,548
BEVAN, JOHN A	CEREBRAL ARTERIAL TONE AND REACTIVITY	2R01 HL15805-06	63,294
BEVAN, JOHN A	VASCULAR NEUROEFFECTOR MECHANISMS IN HEALTH & DISEASE	1P01 HL20581-01A1	366,875
BILLING, RONALD J	LEUKEMIA ASSOCIATED ANTIGENS	1R01 CA24358-01	84,080
BLOCK, JEROME B	SUPPORT FOR CLINICAL CANCER EDUCATION	5R25 CA18861-03	174,909
BOK, DEAN	ELECTRON MICROSCOPE AUTORADIOGRAPHY OF OCULAR TISSUES	5R01 EY00444-10	78,113
BONAVIDA, BENJAMIN	MIXED LEUKOCYTE TUMOR REACTION IN SYNGENEIC SYSTEMS	5R01 CA19753-03	51,584
BONAVIDA, BENJAMIN	INAPPROPRIATE ANTIGENS ON SJL/J RETICULUM CELL SARCOMA	1R01 CA24314-01	46,964
BOYER, PAUL D	BIOLOGICAL ENERGY TRANSDUCING MECHANISMS	5R01 GM11094-16	121,324
BRADY, ALLAN J	CELLULAR & MOLECULAR MECHANISM OF MYOCARDIAL FUNCTION	3P01 HL11351-11S1	39,108
BRADY, ALLAN J	CELLULAR & MOLECULAR MECHANISM OF MYOCARDIAL FUNCTION	5P01 HL11351-12	988,273
BRESLOW, LESTER	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05442-17	87,652
BRICKER, NEAL S	UREMIA: PATHOGENESIS, EFFECTS, & POSSIBLE PREVENTION	7R01 AM25287-01	142,867
BRINKMAN, CHARLES R, III	RENAL HYPERTENSION IN PREGNANCY	2R01 HL13634-08	127,555
BROWN, JOSIAH	ENDOCRINE FUNCTION OF TRANSPLANTED FETAL PANCREAS	2R01 AM17980-04	76,254
BROWN, W JANN	DEVELOPMENTAL BIOLOGY IN MENTAL RETARDATION	5P01 HD05615-08	557,592
BUCHWALD, NATHANIEL A	NEUROPHYSIOLOGY & NEUROPSYCHOLOGY IN MENTAL RETARDATION	5P01 HD05958-08	419,285
BUCKBERG, CERALD D	SURGERY AND NONOBSTRUCTIVE CORONARY INSUFFICIENCY	5R01 HL16292-05	271,458
BUCKBERG, GERALD D	SURGICALLY INDUCED MYOCARDIAL EDEMA	5R01 HL20080-02	131,957
BUTCHER, LARRY L	SUBSTANTIA NIGRA, ACETYLCHOLINESTERASE, AND BEHAVIOR	5R01 NS10928-04	55,518
CAMPBELL, JOHN H	REGULATORY FUNCTION OF THE REX GENE OF PHAGE LAMBDA	5R01 AI13089-03	51,104
CAMPFIELD, L ARTHUR	INSULIN SECRETION IN GENETIC DIABETES AND OBESITY	1R01 AM25111-01	47,898
CARLISLE, EDITH M	STUDY OF PHYSIOLOGICAL ROLE OF SILICON	5R01 AM16611-06	87,472
CARNES, WILLIAM H	CARDIOVASCULAR STUDIES ON COPPER DEFICIENCY	5R01 HL12561-11	128,891
CARSTEN, MARY E	PARTURITION AND CELLULAR BASIS OF UTERINE CONTRACTILITY	5R01 HD00010-15	130,039
CEDERBAUM, STEPHEN D	HUMAN ARGINASE AND ARGINASE DEFICIENCY	1R01 HD11298-01A1	51,380
CHANG, YI-HAN	MECHANISM OF ACTION OF COLCHICINE	1R01 AM20367-01A1	93,014
CHAO, LI-PEN	STUDIES WITH PURIFIED CHOLINE ACETYLTRANSFERASE	2R01 NS11087-04A1	88,714
CHAPMAN, ORVILLE L	ORGANIC PHOTOCHEMISTRY	5R01 GM24427-05	76,618
CHASE, MICHAEL H	STATE-DEPENDENT CONTROL OF SOMATIC REFLEX ACTIVITY	5R01 NS09999-05	81,123
CHOPRA, INDER J	THYROID GLAND PHYSIOLOGY IN HEALTH AND DISEASE	2R01 AM16155-07	84,875
CIANI, SERGIO	SELECTIVE ION PERMEATION IN EXCITABLE CELLS	5R01 NS13344-02	39,275
CLARK, WILLIAM R	MECHANISMS OF DIFFERENTIATION OF T LYMPHOCYTES	9R01 AI14747-07	59,834
CLARKE, IAN C	FRICTION AND WEAR OF PROSTHETIC BEARING MATERIALS	5R01 AM18988-03	73,858
CLARKE, IAN C	IMPROVED RADIOGRAPHIC ASSESSMENT OF TOTAL HIP JOINTS	5R01 AM19705-02	21,519
CLINE, MARTIN J	A NEW METHOD OF BONE MARROW CULTURE	5R01 AM18058-05	37,010
CLINE, MARTIN J	NORMAL AND MALIGNANT HEMATOPOIETIC CELL REPLICATION	5R01 CA15619-05	106,629
CLINE, MARTIN J	A PROGRAM IN MEDICAL ONCOLOGY	2P01 CA15688-05	443,683
CODE, CHARLES F	MOTOR AND ELECTRICAL ACTIVITY OF THE ALIMENTARY CANAL	5R01 AM18618-04	100,847
COLLIER, ROBERT J	MOLECULAR MECHANISMS OF BACTERIAL PATHOGENESIS	2R01 AI07877-11	106,568
COOPER, EDWIN L	ONTOGENY AND EVOLUTION OF IMMUNOCOMPETENT CELLS	5R01 HD09333-04	69,748
COTY, WILLIAM A	VITAMIN D ACTION IN THE AVIAN SHELL GLAND	1R23 AG01102-01	39,362
CRAM, DONALD J	HOST MOLECULES THAT COMPLEX AND CATALYZE	5R01 GM12640-14	65,428
CRANDALL, PAUL H	A CLINICAL RESEARCH PROGRAM FOR THE 'PARTIAL' EPILEPSIES	2P50 NS02808-18	458,834
CRESCITELLI, FREDERICK	PROPERTIES OF VISUAL PIGMENTS FROM SELECTED VERTEBRATES	1R01 EY02178-01	35,633
DAVIDSON, MAYER B	MECHANISMS OF INSULIN ANTAGONISM	5R01 AM14702-08	76,701
DE VELLIS, JEAN S	A ROUTINE DIAGNOSTIC TEST FOR MINIMAL HEART DAMAGE	5R01 HL18567-03	40,878
DETELS, ROGER	CHRONIC OBSTRUCTIVE RESPIRATORY DISEASE—EPIDEMIOLOGY	5R01 ES01473-02	435,939
DETELS, ROGER	EPIDEMIOLOGIC STUDIES OF IMMUNE FACTORS IN MS	5R01 NS10186-07	295,069
DHOPEHWARKAR, GOVIND A	DEVELOPING BRAIN: EFFECTS OF NUTRITIONAL IMBALANCES	1R01 NS13755-01A1	41,360
DIAMOND, JARED M	WATER TRANSPORT ACROSS EPITHELIAL MEMBRANES	3R01 GM14772-10S1	14,513
DIAMOND, JARED M	WATER TRANSPORT ACROSS EPITHELIAL MEMBRANES	2R01 GM14772-11	91,678
DIRKS, DONALD D	SUPRATHRESHOLD AUDITORY BEHAVIOR	5R01 NS09713-05	53,509

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
DIXON, ANDREW D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05304-17	67,736
ECKERT, ROGER O.....	BIOELECTRIC AND IONIC CONTROL OF CELL FUNCTION.....	3R01 NS08364-10S1	6,260
EDGERTON, ROBERT B.....	THE COMMUNITY CONTEXT OF NORMALIZATION.....	3R01 HD09474-02S1	35,019
EDWARDS, PETER A.....	CHOLESTEROL AND LIPOPROTEIN METABOLISM.....	5R01 HL19063-03	45,602
EISENBERG, DAVID S.....	STRUCTURE AND ACTION OF MULTISUBUNIT ENZYMES.....	5R01 GM16925-10	112,188
EISENMAN, GEORGE.....	ION PERMEATION THROUGH CHANNELS, CARRIERS AND NERVE.....	5R01 GM24749-09	77,148
EISERLING, FREDERICK A.....	VIRUS MORPHOGENESIS: CONTROL OF PHAGE ASSEMBLY.....	5R01 AI14092-02	39,766
ELASHOFF, ROBERT M.....	EXPLORATORY STUDIES IN CANCER PATIENT DATA CONTROL.....	1R10 CA23636-01	69,792
ESTRIN, THELMA.....	COMPUTER SCIENCE & NEUROPHYSIOLOGY IN STUDY OF THE BRAIN.....	3R01 NS02501-16S2	72,147
EYMAN, RICHARD K.....	PROGRAM FOR THE DEVELOPMENT OF THE MENTALLY RETARDED.....	5P01 HD05540-07	460,727
FAHEY, JOHN L.....	INTERDISCIPLINARY RESEARCH IN IMMUNOLOGIC DISEASES.....	1P50 AI15332-01	289,563
FAHEY, JOHN L.....	IMMUNE FUNCTIONS AND CANCER.....	3P01 CA12800-06S1	148,883
FAHEY, JOHN L.....	IMMUNE FUNCTIONS AND CANCER.....	2P01 CA12800-07A1	716,465
FAHEY, JOHN L.....	BLADDER CANCER: IMMUNOLOGY, IMMUNOTHERAPY & VIROLOGY.....	5R26 CA16880-05	212,553
FAIN, GORDON L.....	PHYSIOLOGY OF PHOTORECEPTORS.....	5R01 EY01844-02	61,142
FARBER, DEBORA A.....	CYCLIC NUCLEOTIDES IN CONE METABOLISM AND DISEASE.....	1R01 EY02651-01	81,736
FAREED, GEORGE C.....	SIMIAN VIRUS 40, DNA REPLICATION AND TRANSFORMATION.....	5R01 CA20794-03	85,525
FESSLER, JOHN H.....	MOLECULAR DEVELOPMENT OF COLLAGEN FIBERS.....	5R01 AM13748-10	70,893
FINE, LEON G.....	PATHOPHYSIOLOGY OF THE ISOLATED HUMAN NEPHRON.....	1R01 AM25301-01	31,363
FLUHARTY, ARVAN L.....	DERMATAN SULFATE CATABOLISM.....	2R01 HD08855-04	56,480
FOGELMAN, ALAN M.....	DETECTION OF FAMILIAL HYPERCHOLESTEROLEMIA.....	5R01 HL20807-02	36,056
FOGELMAN, ALAN M.....	CHOLESTEROL METABOLISM AND ATHEROSCLEROSIS.....	1R01 HL22474-01	51,341
FOOS, ROBERT Y.....	VITREORETINAL JUNCTURE.....	2R01 EY00725-07	75,142
FOOTE, CHRISTOPHER S.....	OXIDATION OF MODEL BIOLOGICAL SYSTEMS.....	2R01 GM20080-06	63,795
FOX, CHARLES F.....	MEMBRANE FUNCTION, STRUCTURE AND BIOGENESIS.....	5R01 GM18233-08	97,144
FRANK, ROBERT G, JR.....	PHYSIOLOGY OF NERVE AND SYNAPSE IN THE 20TH CENTURY.....	5R01 LM02956-02	20,477
FULCO, ARMAND J.....	UNSATURATED FATTY ACID BIOSYNTHESIS IN BACILLI.....	2R01 AI09829-09	60,161
FULCO, ARMAND J.....	SOLUBLE CYTOCHROME P-450 HYDROXYLASES FROM BACTERIA.....	5R01 GM23913-02	43,001
GALE, ROBERT P.....	A PROGRAM IN BONE MARROW TRANSPLANTATION.....	1P01 CA23175-01	496,792
GARCIA, JOHN.....	BEHAVIORAL AND NEURAL EFFECTS OF TOXICOSIS AND PAIN.....	3R01 NS11618-05S1	18,788
GITNICK, GARY L.....	PREVENTION OF POST TRANSFUSION CHRONIC LIVER DISEASE.....	5R01 AM17984-05	26,998
GITNICK, GARY L.....	TRANSMISSION OF INFLAMMATORY BOWEL DISEASE.....	1R01 AM19498-01A1	199,328
GITNICK, GARY L.....	CULTIVATION OF VIRUSES IN INFLAMMATORY BOWEL DISEASE.....	1R01 AM21978-01	72,931
GLITZ, DOHN G.....	HUMAN PANCREATIC RIBONUCLEASE AND CANCER.....	1R01 CA25088-01	63,426
GOLDBERG, LOUIS J.....	STUDIES IN ORAL PHARYNGEAL REFLEXES.....	2R01 DE04166-10	36,639
GOLDE, DAVID W.....	STUDIES OF ALVEOLAR MACROPHAGE FUNCTION IN MAN.....	5R01 HL20675-02	48,621
GOLUB, SIDNEY H.....	LYMPHOCYTE SENSITIZATION TO TUMOR ANTIGENS IN VITRO.....	2R01 CA17013-04	50,703
GORSKI, ROGER A.....	STUDIES ON THE OVARIAN-HYPOTHALAMIC-HYPOPHYSEAL AXIS.....	5R01 HD01182-16	102,000
GRALLA, JAY.....	REGULATION OF TRANSCRIPTION BY DNA-PROTEIN COMPLEXES.....	5R01 CA19941-03	43,979
GRINNELL, ALAN D.....	FORMATION, FUNCTION AND PLASTICITY OF SYNAPSES.....	2R01 NS06232-14	63,407
GROSSMAN, MORTON I.....	GASTRIC PHYSIOLOGY STUDIES.....	5R01 AM08354-14	31,270
GROSSMAN, MORTON I.....	PEPTIC ULCER CENTER.....	5P50 AM17328-05	1,204,920
GROSSMAN, MORTON I.....	PANCREATIC PHYSIOLOGY STUDIES.....	1R01 AM20971-01	29,911
GRUNSTEIN, MICHAEL.....	MOLECULAR BASIS FOR HISTONE GENE EXPRESSION.....	5R01 GM23674-02	86,507
GUSSEN, RUTH.....	HUMAN TEMPORAL BONE PATHOLOGY.....	2R01 NS06606-13	122,549
HAGIWARA, SUSUMU.....	MICRONEUROPHYSIOLOGY.....	5R01 NS09012-10	116,697
HALL, MICHAEL O.....	THE BIOSYNTHESIS OF VISUAL PIGMENT RHODOPSIN.....	3R01 EY00046-08S1	20,959
HALL, MICHAEL O.....	THE ETIOLOGY OF RETINAL DEGENERATION.....	2R01 EY00046-09	99,189
HARPER, RONALD M.....	NEURAL CONTROL OF CARDIORESPIRATORY FUNCTION.....	1R01 HL22418-01	61,595
HAYS, ESTHER F.....	DEVELOPMENT OF LYMPHOMA IN THE THYMUS.....	5R01 CA12386-06	40,073
HAYS, ESTHER F.....	STUDY OF COLONY-FORMING CELLS IN BONE MARROW.....	5R01 CA13666-06	49,879
HELLER, JORAM.....	RETINOL DELIVERY TO PIGMENT EPITHELIUM & NEURAL RETINA.....	5R01 EY00704-08	62,841
HERCULES, KATHLEEN.....	MAPPING OF SV40 TRANSCRIPTION UNITS.....	5R01 CA23057-02	41,550
HERSCHMAN, HARVEY R.....	INITIATION OF CELLULAR PROLIFERATION.....	1R01 GM24797-01	65,930
HILDEMAN, WILLIAM H.....	MECHANISMS OF IMMUNOBLOCKING VERSUS TUMOR IMMUNITY.....	5R01 CA15788-05	64,134
HILDEMAN, WILLIAM H.....	COMPARATIVE TRANSPLANTATION IMMUNOGENETICS.....	5R01 CA23025-03	109,556
HONRUBIA, VICENTE.....	EXPERIMENTAL STUDIES ON COCHLEAR MECHANISMS.....	2R01 NS08193-10	90,935
HORWITZ, JOSEPH.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF LENS PROTEINS.....	3R01 EY01622-02S1	19,835
HORWITZ, JOSEPH.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF LENS PROTEINS.....	5R01 EY01622-03	22,568
HOWARD, BRUCE D.....	BIOCHEMICAL STUDIES OF SYNAPSES.....	5R01 NS12873-03	50,092

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
HOWARD, DEXTER H.....	HOW PHAGOCYTES DEAL WITH FUNGI.....	1R01 AI15120-01	61,080
JUDD, HOWARD L.....	ESTROGEN AND ANDROGEN STUDIES IN ENDOMETRIAL CANCER.....	5R01 CA23093-02	79,647
JUNG, MICHAEL E.....	TOTAL SYNTHESIS OF EPIPODOPHYLLOTOXIN ANTITUMOR DRUGS.....	1R01 CA22827-01	55,504
KASAMATSU, HARUMI.....	POLYPEPTIDES AND THE PROTEIN-DNA COMPLEX IN SV40 VIRION.....	3R01 CA21768-01S1	8,827
KASAMATSU, HARUMI.....	POLYPEPTIDES AND THE PROTEIN-DNA COMPLEX IN SV40 VIRION.....	5R01 CA21768-02	38,315
KAY, MARGUERITE M.....	REMOVAL OF SENESCENT AND STORED HUMAN RED CELLS.....	1R01 HL22671-01	45,011
KIHARA, HAYATO.....	METACHROMATIC LEUKODYSTROPHY IN CULTURED CELL SYSTEMS.....	5R01 NS11665-05	112,601
KIRSCHENBAUM, MICHAEL A.....	SODIUM HOMEOSTASIS AND RENAL PROSTAGLANDINS.....	5R01 HL21272-02	33,820
KOLIN, ALEXANDER.....	DEVELOPMENT OF ELECTROMAGNETIC RHEOANGIOGRAPHY.....	3R01 HL17591-02S2	4,403
KOLIN, ALEXANDER.....	DEVELOPMENT OF ELECTROMAGNETIC RHEOANGIOGRAPHY.....	2R01 HL17591-03	48,434
KORENMAN, STANLEY G.....	HORMONAL INTERACTIONS IN THE UTERUS.....	2R01 HD09285-05	56,079
KRASNE, FRANKLIN B.....	ESCAPE BEHAVIOR: INTEGRATION AND PLASTICITY.....	2R01 NS08108-11	121,825
KRASNE, SALLY J.....	PROBES OF HEART AND NERVE MEMBRANES—FLUORESCENT DYES.....	5R01 HL20254-02	40,637
KRUGER, LAWRENCE.....	COMPARATIVE STUDIES OF SOMATIC AFFERENT PROJECTION.....	5R01 NS05685-14	81,224
KUHL, DAVID E.....	QUANTITATIVE SECTION SCANNING IN BRAIN TUMOR & STROKE.....	5R01 GM24839-02	90,021
KUROKAWA, KIYOSHI.....	CELL METABOLISM OF DEFINED SEGMENTS OF SINGLE NEPHRON.....	5R01 AM21351-02	51,789
LA RUE, ASENATH A.....	PROBLEM SOLVING IN MIDDLE-AGED AND ELDERLY ADULTS.....	5R23 AG00745-02	35,781
LADEFOGED, PETER N.....	MODELS OF LINGUISTIC PERFORMANCE.....	2R01 NS09780-07	93,463
LAGASSE, LEO D.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA13630-07	57,614
LASCELLES, JUNE.....	REGULATION OF HEMOPROTEIN SYNTHESIS & NITRATE REDUCTASE.....	2R01 AM11148-12	62,355
LATIES, GEORGE G.....	MEMBRANE PERMEABILITY AS A REGULATORY ELEMENT.....	5R01 GM19807-07	68,329
LENGYEL, JUDITH A.....	TRANSCRIPTION IN DROSOPHILA CULTURED CELLS AND EMBRYOS.....	5R01 HD09948-03	81,017
LETINSKY, MICHAEL S.....	STRUCTURE AND FUNCTION OF DEVELOPING SYNAPSES.....	5R01 NS13470-02	21,440
LETINSKY, MICHAEL S.....	TROPHIC AND INDUCTIVE INFLUENCES IN DEVELOPMENT.....	1R01 NS14417-01	37,984
LEVIN, SEYMOUR R.....	ISOLATED PERFUSED INTESTINE: STUDY OF GUT-ISLET AXIS.....	1R01 AM21031-01	43,416
LEWIS, HARLAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07009-13	184,937
LIEBERMAN, JACK.....	ANTITRYPSIN AND OTHER CAUSES OF CHRONIC LUNG DISEASE.....	5R01 HL21156-02	72,230
LIEBESKIND, JOHN C.....	BEHAVIORAL AND ELECTROPHYSIOLOGICAL STUDIES OF PAIN.....	5R01 NS07628-11	88,000
LOLLEY, RICHARD N.....	MATURATION OF METABOLISM IN NORMAL & DYSTROPHIC RETINA.....	2R01 EY00395-10	58,832
LYMAN, JOHN H.....	ELECTROCUTANEOUS FEEDBACK FOR ARTIFICIAL LIMBS.....	5R01 GM21430-05	79,565
MACINNIS, AUSTIN J.....	MOLECULAR MODE OF ANTHELMINTIC ACTION.....	5R01 AI13228-03	48,655
MAGOUN, HORACE W.....	DEVELOPMENT OF NEUROSCIENCE IN THE UNITED STATES.....	1R01 LM03069-01	28,707
MARKHAM, CHARLES H.....	CENTRAL VESTIBULAR MECHANISMS.....	2R01 NS06658-13	70,696
MARKOLF, KEITH L.....	LIGAMENOUS STABILITY OF THE KNEE.....	5R01 AM19043-03	89,933
MARSH, GAYLE G.....	MS EDUCATIONAL PSYCHOSOCIAL TREATMENT PROGRAM.....	1R01 NS14430-01	50,424
MARTINEZ, RAFAEL J.....	SERUM AND LYMPH BACTERICIDINS: BIOCHEMICAL MECHANISMS.....	5R01 AI12835-04	41,264
MATSUYAMA, STEVEN S.....	GLIAL CELL CHROMOSOMES AND SENILE DEMENTIA.....	5R23 AG00776-02	35,558
MC GINTY, DENNIS J.....	SLEEP STATE RESPIRATORY CONTROL IN ANIMALS.....	1R01 HD11903-01	74,908
MELLINKOFF, SHERMAN M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00865-05	770,599
MELLINKOFF, SHERMAN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05354-17	200,462
MEYER, JAMES H.....	STUDY OF ALIMENTARY DERANGEMENTS AFTER ULCER SURGERY.....	5R01 AM19182-03	25,887
MEYERS, ROBERTA L.....	MECHANISM OF CORNEAL INFLAMMATION IN HERPES KERATITIS.....	5R01 EY00394-11	82,468
MEYERS, ROBERTA L.....	PATHOGENESIS OF EXPERIMENTAL ALLERGIC UVEITIS.....	5R01 EY01309-05	75,316
MEYERS, ROBERTA L.....	HLA AND IMMUNE FACTORS IN OCULAR HERPES.....	1R01 EY02646-01	33,782
MILLER, JAMES N.....	IMMUNE MECHANISMS IN EXPERIMENTAL AND HUMAN SYPHILIS.....	2R01 AI12601-04	110,861
MOMMAERTS, WILFRIED F.....	MOLECULAR MECHANISMS IN MYONAL DIFFERENTIATION.....	5R01 AM19996-02	111,771
MORTON, DONALD L.....	MULTIDISCIPLINARY CANCER DIAGNOSIS AND THERAPY.....	5P01 CA12582-08	815,087
MULLEN, YOKO S.....	IMMUNE ASPECTS IN FETAL PANCREAS ALLOGRAFTS.....	5R01 AM20827-02	42,890
NAYAK, DEBI P.....	INTERFERENCE BY DEFECTIVE INFLUENZA VIRUSES.....	5R01 AI12749-04	44,422
NEWMAN, MICHAEL G.....	HOST BACTERIAL INTERACTIONS IN PERIODONTAL DISEASE.....	5R01 DE04441-02	87,794
NIERLICH, DONALD P.....	REGULATION OF RNA SYNTHESIS.....	5R01 GM15381-11	57,307
NODA, HIROHARU.....	NEURONAL BASIS OF VISUAL PERCEPTION IN EYE MOVEMENTS.....	5R01 EY01051-05	97,053
NORMAN, AMOS.....	EFFECT OF X-RAY CONTRAST MEDIA ON CHROMOSOMES.....	1R01 GM24679-01	77,131
NOVIN, DONALD.....	STUDIES OF HUNGER, THIRST AND WATER METABOLISM.....	5R01 NS07687-11	51,444
O'CONNOR, JOHN D.....	BINDING PROTEINS OF BETA-ECDYSONE & JUVENILE HORMONE.....	2R01 NS08990-07	57,497
O'LAGUE, PAUL H.....	ELECTROPHYSIOLOGY OF DEVELOPING NEURONS IN CULTURE.....	5R01 NS12901-03	69,956
ORNITZ, EDWARD M.....	MATURATION OF VESTIBULAR NYSTAGMUS.....	1R01 EY02612-01	81,548
PARDRIDGE, WILLIAM M.....	SKELETAL MUSCLE AMINO ACID METABOLISM.....	1R01 AM21762-01	45,296
PEARSON, CARL M.....	CLINICAL PHARMACOLOGY IN RHEUMATIC & MUSCULAR DISEASES.....	3P50 GM15759-10S1	129,000
PEASE, DANIEL C.....	STRUCTURAL ASPECTS OF THE LUNG SURFACTANT SYSTEM.....	2R01 HL01770-26A1	12,070

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
PHELPS, DALE L.....	TOCOPHEROL PROTECTION IN OXYGEN INDUCED RETINOPATHY.....	3R01 EY01939-01S1	17,568
PIERCE, JOHN G.....	PURIFICATION AND CHEMISTRY OF PROTEIN HORMONES.....	5R01 AM18005-25	112,952
POPIAK, GEORGE J.....	MOLECULAR ASPECTS OF MENTAL RETARDATION.....	5P01 HD06576-05	372,699
POPIAK, GEORGE J.....	ENZYMES AND INHIBITORS OF CHOLESTEROL BIOSYNTHESIS.....	5R01 HL12745-10	58,944
PORTER, DAVID D.....	IMMUNOLOGIC AND VIRAL STUDIES OF SLOW VIRUS INFECTIONS.....	5R01 AI09476-10	70,215
PUHVEL, S MADLI.....	PATHOGENESIS OF INFLAMMATORY ACNE.....	5R01 AM17425-05	98,275
RAU, ERIC E.....	IONIC CONTROL OF CONTRACTILITY IN ANOXIC MYOCARDIUM.....	1R23 HL21783-01	36,714
RAY, DAN S.....	REGULATION OF M13 VIRAL DNA REPLICATION.....	5R01 AI10752-07	77,193
REISLER, EMIL.....	DYNAMIC EVENTS IN MYOSIN DURING CONTRACTION OF MUSCLE.....	1R01 AM22031-01	65,252
RINDERKNECHT, HEINRICH.....	PANCREATIC SECRETORY PROTEINS IN CANCER OF THE PANCREAS.....	5R26 CA20222-03	23,313
RIVIERE, GEORGE R.....	TOOTH TRANSPLANTATION GENETICS AND IMMUNOLOGY.....	5R01 DE04489-03	63,222
ROBERTS, SIDNEY.....	AMINO ACID IMBALANCES AND BRAIN METABOLISM.....	5R01 NS13295-02	84,796
SALSER, WINSTON A.....	NUCLEOTIDE SEQUENCING METHODS FOR ONCOGENIC VIRUSES.....	5R01 GM18586-07	60,841
SALSER, WINSTON A.....	DETERMINING SEQUENCES FOR HEMOGLOBIN MESSENGER RNA.....	5R01 HL21831-05	79,648
SANSOME-BAZZANO, GAIL L.....	ANDROGEN METABOLISM AND SEBUM COMPOSITION DURING PUBERTY.....	1R01 HD11633-01	97,065
SARNA, GREGORY P.....	TREATED ACR LEUKEMIA: COMPARATIVE HOST-TUMOR KINETICS.....	5R01 CA19870-03	38,447
SAWYER, CHARLES H.....	RHINENCEPHALON, NEUROENDOCRINE FUNCTION AND BEHAVIOR.....	5R01 NS01162-22	88,554
SAXON, ANDREW.....	NORMAL REGULATION OF IMMUNOGLOBULIN E IN HUMANS.....	1R01 AI15251-01	55,045
SCHEIBEL, ARNOLD B.....	THE HISTOLOGICAL SUBSTRATE OF CEREBRAL DOMINANCE.....	1R01 NS13871-01A1	52,448
SCHLAG-REY, MADELEINE L.....	SINGLE UNIT STUDIES OF VISUO-OCULOMOTOR MECHANISMS.....	1R01 EY02305-01A1	63,680
SCHLAG, JOHN D.....	CONDITIONING OF PYRAMIDAL ACTIVITY BY SENSORY INFLOW.....	5R01 NS04955-15	41,692
SCHOTZ, MICHAEL C.....	LIPOPROTEIN LIPASE: CHEMISTRY AND FUNCTION.....	5R01 HL16577-04	107,428
SCHUMAKER, VERNE N.....	MACROMOLECULES OF CIRCULATORY AND GENETIC IMPORTANCE.....	5R01 GM13914-14	89,291
SCHWARTZ, ILSA R.....	DYNAMIC ASPECTS OF AUDITORY SYNAPTIC TERMINALS.....	2R01 NS14503-02	43,563
SEEGER, ROBERT C.....	HUMAN NEUROBLASTOMA CELL SURFACE ANTIGENS.....	1R01 CA22794-01	88,556
SERCARZ, ELI E.....	REGULATION OF LYMPHOCYTE INTERACTIONS.....	2R01 AI11183-06	93,590
SERCARZ, ELI E.....	CHEMICAL BASIS FOR RECEPTOR RECOGNITION OF LYSOZYMES.....	9R01 CA24442-10	66,573
SHAPIRO, DAVID.....	HYPERTENSION: ANALYSIS OF DRUG & BEHAVIORAL THERAPIES.....	3R01 HL19568-02S1	9,316
SHAPIRO, DAVID.....	HYPERTENSION: ANALYSIS OF DRUG & BEHAVIORAL THERAPIES.....	5R01 HL19568-03	109,932
SIDELL, NEIL.....	EFFECTS OF RETINOIC ACID ON THE IMMUNE SYSTEM.....	1R23 CA25801-01	29,366
SIEGEL, JEROME M.....	RETICULAR FORMATION NEURONS: RELATION TO MOTOR ACTIVITY.....	1R01 NS14610-01	42,403
SIGMAN, DAVID S.....	METAL ION CATALYSIS IN ENZYMIC REACTIONS.....	5R01 GM21199-11	60,498
SIMPSON, LARRY.....	THE FUNCTION OF THE KINETOPLAST IN THE HEMOFLAGELLATES.....	5R01 AI09102-10	61,137
SIMPSON, LARRY.....	DNA IN TRANSFORMATION OF TRYPANOSOMA BRUCEI.....	5R01 AI13027-03	23,151
SINGH, BRAMAH N.....	MECHANISMS AND CONTROL OF SUDDEN CARDIAC DEATH.....	1R01 HL23970-01	56,515
SMITH, EMIL L.....	STRUCTURE AND PROPERTIES OF PROTEINS AND ENZYMES.....	5R01 GM11061-16	271,094
SMITH, JUDITH L.....	SIGNIFICANCE OF MUSCLE FIBER TYPES.....	5R01 NS10423-05	90,449
SMITH, ROBERT A.....	GROUP TRANSFER PROCESSES IN NORMAL AND MALIGNANT CELLS.....	5R01 CA13196-07	79,486
SOLL, ANDREW H.....	PHYSIOLOGY OF THE ISOLATED MAMMALIAN PARIETAL CELL.....	5R01 AM19984-02	44,737
SOLOMON, DAVID H.....	GRAVES' DISEASE STUDIES.....	5R01 AM17251-04	73,724
SONNENSCHIN, RALPH R.....	REGIONAL CIRCULATORY RESPONSES TO HYPOXIA.....	5R01 HL17903-03	45,589
STECKEL, RICHARD J.....	CANCER CENTER CORE SUPPORT GRANT.....	2P30 CA16042-04	953,984
STELL, WILLIAM K.....	PATHWAYS FOR COLOR VISION IN RETINAS.....	5R01 EY01190-06	104,180
STERMAN, MAURICE B.....	EEG NORMALIZATION BY FEEDBACK TRAINING IN EPILEPTICS.....	2R01 NS10726-04A2	44,019
STEVENS, JACK G.....	LATENCY IN HERPES VIRUS INFECTION OF CELLS AND TISSUES.....	2R01 AI06246-14	110,145
STEVENS, JACK G.....	ANALYSIS OF THE SHOPE PAPILLOMA-CARCINOMA SYSTEM.....	5R01 CA18151-03	80,531
STEVENS, ROBERT V.....	TOTAL SYNTHESIS OF CHIRALLY PURE STEROIDS.....	5R01 AM20398-02	53,710
STIEHM, E RICHARD.....	CELLULAR IMMUNITY IN SICK AND MALNOURISHED INFANTS.....	2R01 HD09800-04	98,174
STRAATSMA, BRADLEY R.....	VISION RESEARCH CENTER.....	5P30 EY00331-12	176,967
SULLIVAN, STUART F.....	VENTILATORY ADJUSTMENTS FOR OPTIMAL OXYGENATION.....	5R01 HL17358-04	47,815
SWENDSEID, MARIAN E.....	AMINO ACID AND AMINE METABOLISM IN EXPERIMENTAL UREMIA.....	5R01 AM15197-06	39,267
SZEGO, CLARA M.....	HORMONAL CONTROL OF CELL GROWTH AND DIFFERENTIATION.....	5R01 HD04354-25	110,307
TARJAN, GEORGE.....	MENTAL RETARDATION RESEARCH CENTER.....	2P30 HD04612-10	611,300
TERASAKI, PAUL I.....	STUDY OF SIGNIFICANCE OF HLA ANTIGENS IN DISEASE.....	5R01 AM02375-20	60,435
THOMAS, JAMES P.....	MECHANISMS OF SPATIAL PATTERN VISION.....	5R01 EY00360-12	37,859
THOMAS, WARREN D.....	CONSERVATION OF PRIMATE SPECIES AND CANCER RESEARCH.....	5P40 RR01043-03	55,937
TIERNEY, DONALD F.....	LUNG INJURY, SUBSTRATE UTILIZATION, OXYGEN TOXICITY.....	5R01 HL17719-03	71,851
TOBIN, ELAINE M.....	MESSENGER RNA AND PHYTOCHROME CONTROLLED DEVELOPMENT.....	5R01 GM23167-03	45,873
TOOHEY, JOHN I.....	SULFHYDRYL AND ALKYLTHIO COMPOUNDS IN CELL DIVISION.....	5R01 GM23915-02	48,199
TYAN, MARVIN L.....	AGE-RELATED CHANGES IN PRECURSORS OF T- AND B-CELLS.....	5R01 AG00990-02	47,694

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
UNGERLEIDER, J THOMAS.....	9-DELTA THC AND COMPAZINE R IN CANCER CHEMOTHERAPY.....	3R01 CA21451-01S1	64,481
URIST, MARSHALL R.....	INDUCTIVE SUBSTRATES FOR TOOTH AND BONE FORMATION.....	5R01 DE02103-14	216,964
VALENTINE, WILLIAM N.....	ENZYMATIC AND BIOCHEMICAL STUDIES ON BLOOD CELLS.....	2R01 HL12944-09	171,541
VAN LANCKER, JULIEN L.....	ROLE OF REPAIR ENZYMES IN PATHOGENESIS OF LIVER CANCER.....	5R01 CA14840-05	48,175
WALFORD, ROY L.....	THE ROLE OF IMMUNE PHENOMENA IN THE AGING PROCESS.....	2R01 AG00424-17	95,363
WALFORD, ROY L.....	IMMUNOLOGIC AGING—GERIATRIC & DOWN'S SYNDROME SUBJECTS.....	1P01 AG00790-01	308,435
WALFORD, ROY L.....	TRANSPLANTATION IMMUNOGENETICS AND CANCER.....	5R01 AI10088-08	124,007
WALL, RANDOLPH.....	THE PRODUCTION OF IMMUNOGLOBULIN MRNA IN MYELOMA CELLS.....	5R01 AI13410-02	55,422
WALSH, JOHN H.....	HORMONAL ETIOLOGY OF GASTRIC HYPERSECRETION.....	5R01 AM17294-05	93,499
WARD, PAUL H.....	EXPERIMENTAL STUDIES ON VESTIBULAR MECHANISMS.....	2R01 NS08335-10A1	95,269
WARD, PAUL H.....	COMMUNICATIVE DISORDERS CLINICAL RESEARCH CENTER.....	5P50 NS09823-08	625,079
WASTERLAIN, CLAUDE G.....	PROTEIN SYNTHESIS IN EPILEPSY, AGING AND BRAIN DISORDER.....	5R01 NS13227-04	71,008
WEBBER, MILO M.....	RADIOTRACERS IN THE DIAGNOSIS AND TREATMENT OF CANCER.....	3R01 CA15787-03S1	45,904
WEINSTOCK, ALFRED.....	ELABORATION OF GLYCOPROTEINS IN MINERALIZING TISSUES.....	5R01 DE03386-08	75,523
WEISBART, RICHARD H.....	LYMPHOCYTE MEDIATORS IN CELL MEDIATED IMMUNITY.....	5R01 AI13253-03	61,389
WEISS, RICHARD L.....	AMINO ACID REGULATORY INTERACTIONS IN YEAST.....	1R01 GM23943-01	44,073
WEST, LOUIS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05756-05	167,362
WHEELER, LARRY A.....	ORAL FLORA AND CARCINOGENESIS OF DENTAL THERAPEUTICS.....	5R01 CA22249-02	54,068
WHITE, STUART C.....	IMMUNOPATHOLOGY—EXPERIMENTAL AUTOALLERGIC SIALADENITIS.....	5R01 DE03859-05	69,577
WICKNER, WILLIAM T.....	MEMBRANE ASSEMBLY IN VIRUS-TRANSFORMED CELLS.....	5R01 GM23377-03	50,625
WOLFGRAM, FREDERICK J.....	FUNDAMENTAL STUDIES RELATING TO MULTIPLE SCLEROSIS.....	5P50 NS08711-09	294,134
WRIGHT, ERNEST M.....	MOLECULAR MECHANISM OF INTESTINAL CALCIUM TRANSPORT.....	5R01 AM19567-02	69,279
WRIGHT, ERNEST M.....	THE SECRETION OF THE CEREBROSPINAL FLUID.....	5R01 NS09666-05	71,725
YOUNG, LOWELL S.....	STUDY OF HOST-MICROBIAL FACTORS IN BACILLEMIA.....	2R01 AI11271-06	44,345
YOUNG, LOWELL S.....	IMMUNOBIOLOGY OF K ANTIGENS OF ENTEROBACTERIACEAE.....	5R01 AI13518-02	62,347
YOUNG, RICHARD W.....	HISTOPHYSICAL AND HISTOCHEMICAL STUDIES ON THE EYE.....	5R01 EY00095-17	100,180
YOUNG, RICHARD W.....	DAILY RHYTHMS IN VISUAL CELL METABOLISM.....	1R01 EY02277-01	38,126
ZABIN, IRVING.....	STUDIES OF AN INDUCIBLE BACTERIAL ENZYME.....	5R01 AI04181-17	104,059
ZAMENHOF, STEPHEN.....	PRENATAL MALNUTRITION AND AGING.....	5R01 AG00162-02	54,068
ORGANIZATION TOTAL	282	30,640,195	
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AHMAD, NAZIR.....	RATHKE'S POUCH—DERIVED TUMORS: A UNIQUE MODEL SYSTEM.....	3R01 CA21426-01S1	3,235
ALADJEM, FREDERICK.....	SERUM LIPOPROTEINS IN PATIENTS WITH BREAST CANCER.....	5R01 CA19634-02	68,536
ALADJEM, FREDERICK.....	STRUCTURE AND FUNCTION OF HUMAN SERUM LIPOPROTEINS.....	5R01 HL19084-03	90,549
ALEXANDER, NATALIE.....	AN INDEX OF SYMPATHETIC ACTIVITY IN HYPERTENSION.....	5R01 HL19251-03	66,711
APPLEMAN, M MICHAEL.....	CYCLIC NUCLEOTIDE PHOSPHODIESTERASE.....	5R01 AM16367-05	39,667
APPLEMAN, M MICHAEL.....	AGING AND INSULIN EFFECTS ON CYCLIC AMP METABOLISM.....	1R01 AM20978-01	39,886
BAKER, ROBERT F.....	REGULATION OF GENE EXPRESSION IN DEVELOPMENT.....	3R01 HD04015-09S1	8,809
BARNDT, ROBERT, JR.....	ANGIOGRAPHIC ESTIMATION—ATHEROSCLEROTIC WALL THICKNESS.....	5R23 HL21279-02	41,837
BATEMAN, JOSEPH R, III.....	WESTERN CANCER STUDY GROUP.....	2R10 CA05186-16A1	28,081
BAU, ROBERT.....	STRUCTURAL STUDIES ON PLATINUM-NUCLEOTIDE COMPLEXES.....	3R01 CA17367-03S1	7,990
BAU, ROBERT.....	STRUCTURAL STUDIES ON PLATINUM-NUCLEOTIDE COMPLEXES.....	2R01 CA17367-04	50,564
BEKHOR, ISAAC.....	CHROMATIN-GLUCOCORTICOID INFLUENCES IN CLEFT PALATE.....	2R01 DE04031-04	85,847
BILES, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05792-02	25,376
BIRREN, JAMES E.....	A COMPREHENSIVE RESEARCH PROGRAM IN AGING.....	5P01 AG00133-02	390,813
BRODIE, ARNOLD F.....	MECHANISMS OF OXIDATIVE ENERGY GENERATION IN BACTERIA.....	2R01 AI05637-16	156,753
CADY, LEE D.....	CARDIOVASCULAR FITNESS AND OTHER RISK FACTORS.....	3R01 HL18235-03S1	10,289
CLOUGH, WENDY G.....	EBV DNA SYNTHESIS IN TRANSFORMED LYMPHOCYTES.....	5R01 CA23070-02	43,021
COHEN, ARTHUR M.....	INHIBITION OF CARCINOGENESIS BY SELENIUM.....	1R01 CA24518-01	67,698
CRAWFORD, DONALD W.....	INJURY, WALL THICKNESS, AND ARTERIAL WALL OXYGENATION.....	5R01 HL21032-02	72,336
CRAWFORD, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05303-17	35,030
DEONIER, RICHARD C.....	GENETIC STUDIES OF E. COLI.....	1R01 GM24589-01	51,719
DIDDLE, KENNETH R.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY.....	1R10 EY02471-01	32,124
DUNKERTON, LOIS V.....	TEMPLATE APPROACHES TO NEW GLYCOSYLATION REACTIONS.....	5R01 CA21162-02	37,203
DUNN, ARNOLD S.....	HORMONAL REGULATION OF HEPATIC GLUCOSE PRODUCTION.....	5R01 AM07215-14	52,263
FIFE, THOMAS H.....	ENZYMATIC AND NONENZYMATIC HYDROLYSIS OF ACETALS.....	2R01 GM10613-16	57,696
FIFE, THOMAS H.....	ENZYMATIC AND NONENZYMATIC REACTIONS OF ACYL PHOSPHATES.....	2R01 GM16564-10	51,052
FINCH, CALEB E.....	AGING AND BRAIN MONOAMINES IN MICE.....	5R01 AG00117-03	69,276
FINCH, CALEB E.....	AGING AND BIOSYNTHESIS IN NONDIVIDING CELLS.....	5R01 AG00446-05	69,048

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
FRELINGER, JEFFREY A	GENETICS AND FUNCTION OF MURINE IA ANTIGENS	1R01 CA22662-01	138,090
FRIEDLER, ROBERT M	NATRIURESIS OF VOLUME EXPANSION AND CYCLIC AMP	5R01 AM19181-03	31,943
GOODMAN, MYRON F	CARDIOTOXICITY IN CANCER TREATMENT: A MOLECULAR STUDY	2R01 CA17358-04	46,664
GOODMAN, MYRON F	ERROR CORRECTION IN DNA SYNTHESIS	2R01 GM21422-03A1	64,850
GORDON, IRVING	STUDIES OF MEASLES VIRUS OR OTHER VIRUS INFECTIONS	5R01 AI03874-18	73,938
GRODINS, FRED S	CARDIOPULMONARY CONTROL COUPLING IN EXERCISE	5R01 HL16390-05	12,230
HAMMOND, G DENMAN	COOPERATIVE STUDY OF CHILDREN'S CANCER	5R10 CA13539-06	775,719
HAMMOND, G DENMAN	COMPREHENSIVE CANCER CENTER--CORE SUPPORT GRANT	5P30 CA14089-05	1,191,688
HARDING, BOYD W	STEROID HYDROXYLASES IN NORMAL AND ABNORMAL ADRENALS	5R01 CA07057-15	132,212
HARWIG, JOHN F	FIBRINOGEN LABELING WITH RADIOMETALS	5R01 HL21273-02	34,889
HAYWOOD, L JULIAN	COMPREHENSIVE SICKLE CELL CENTER	5P60 HL15162-07	657,192
HEIDELBERGER, CHARLES D	IN VITRO CHEMICAL CARCINOGENESIS	5R01 CA21036-03	114,747
HEIDELBERGER, CHARLES D	CHEMICAL TRANSFORMATION OF PROSTATE EPITHELIAL CELLS	5R26 CA21746-02	117,798
HENDERSON, BRIAN E	CANCER CENTER EPIDEMIOLOGY AND BIostatISTICS	3P01 CA17054-03S1	946,866
HENRY, JAMES P	PSYCHOSOCIAL HYPERTENSION, CATECHOLAMINES AND DRUGS	2R01 HL17706-04A1	74,404
HOCHSTEIN, PAUL E	METABOLIC BASIS OF TUMOR CELL DEFORMABILITY	5R01 CA19615-03	77,422
HORTON, RICHARD	ALDOSTERONE, RENIN AND PROSTAGLANDINS IN MAN	2R01 HL13476-07A2	51,318
HORTON, RICHARD	ALDOSTERONE BINDING, CLEARANCE, AND SECRETION IN MAN	5R01 HL21112-02	31,510
ISHIKAWA, KOICHI	LUNG CANCERS AND CARCINOMATOUS NEUROMYOPATHIES	1R01 CA22885-01	20,000
JELLIFFE, ROGER W	LABORATORY OF APPLIED PHARMACOKINETICS	5R01 GM23826-02	122,589
KAPRIELIAN, ZOHRA B	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07012-12	124,094
LAI, MICHAEL M	STRUCTURE AND REPLICATION OF RNA TUMOR VIRUSES	2R01 CA16113-04	66,491
LEWIS, STEVEN M	ACCURACY OF THE VENTILATORY RESPONSE TO EXERCISE	1R23 HL21990-01A1	43,228
LIEB, MARGARET	VIRUS & HOST INTERACTIONS IN MISMATCH REPAIR	1R01 GM25034-01	75,857
LIPSETT, JAMES A	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA18259-03	57,390
LUKES, ROBERT J	LYMPHOMA-LEUKEMIA CANCER CENTER PROGRAM	5P01 CA19449-03	363,863
LUKES, ROBERT J	CLINICAL CANCER EDUCATION GRANT	1R25 CA24426-01	182,952
MACK, THOMAS M	CASE CONTROL STUDY OF CARCINOMA OF THE PANCREAS	2R26 CA19171-03	90,752
MACK, THOMAS M	CASE CONTROL STUDY OF CARCINOMA OF THE ESOPHAGUS	5R01 CA19496-03	88,243
MANNING, PHIL R	INDIVIDUALIZED LIBRARY SERVICES FOR OFFICE PRACTICE	5R01 LM02857-02	124,687
MARKLAND, FRANCIS S, JR	CROTALASE: CHEMISTRY, PHYSIOLOGY, CLINICAL POTENTIAL	1R01 HL22875-01	116,840
MARSH, DONALD J	COUNTERCURRENT PROPERTIES OF THE RENAL INNER MEDULLA	5R01 AM15968-07	85,980
MARTIN, SUSAN P	EPIDEMIOLOGY OF INTRACRANIAL NEOPLASMA	5R01 CA20571-02	61,999
MASSRY, SHAUL G	BLOOD BRAIN BARRIER AND CALCIUM	5R01 AM18959-03	52,260
MATHIES, ALLEN W, JR	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER	5M01 RR00043-18	889,422
MATHIES, ALLEN W, JR	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05356-17	200,462
MEIER, STEPHEN P	MATRIX-CELL INTERACTION IN CRANIOFACIAL DEVELOPMENT	5R01 DE04613-02	44,760
MEISELMAN, HERBERT J	HEMORRHOLOGY STUDIES RELATED TO IN VIVO BLOOD FLOW	5R01 HL15722-06	30,687
MELROSE, RAYMOND J	SUPPORT FOR CLINICAL CANCER PROGRAM (DENTAL)	5R25 CA19270-03	31,108
MILLS, BARBARA G	STUDIES OF THE ETIOLOGY OF PAGET'S DISEASE OF BONE	1R01 AM19980-01A1	51,884
MINKIN, CEDRIC	MECHANISMS OF BONE RESORPTION IN CHRONIC PERIODONTITIS	1R01 DE04961-01	109,364
MITCHELL, MALCOLM S	EFFECTS OF THERAPY ON TUMOR-SPECIFIC IMMUNITY	1R01 CA25765-01	71,182
MONROE, BARBARA G	ULTRASTRUCTURAL STUDIES OF DEVELOPING INFUNDIBULUM	1R01 NS14633-01	42,990
MONTGOMERIE, JOHN Z	CANDIDA ENDOPHTHALMITIS WITH IV HYPERALIMENTATION	5R01 EY01865-02	65,794
MOORE, GEORGE P	PERIPHERAL NEUROMUSCULAR INTERACTION	2R01 NS11298-03	55,549
MOOSER, GREGORY	RECEPTOR FUNCTION AND RELATED STUDIES IN ORAL BIOLOGY	5R01 DE03739-06	73,018
MOSLEY, JAMES W	EVALUATION OF GLUCOCORTICOIDS FOR FULMINANT HEPATITIS	2R01 AM17953-04	81,749
MOSTELLER, RAYMOND D	REGULATION OF PROTEIN DEGRADATION IN ESCHERICHIA COLI	5R01 GM23292-03	41,898
NICOLOFF, JOHN T	HUMAN THYROID HORMONE METABOLISM	5R01 AM11727-11	63,208
NIMNI, MARCEL E	CONTROL OF COLLAGEN METABOLISM AND CROSS-LINKING	5R01 AM10358-12	89,263
NIMNI, MARCEL E	COLLAGEN IN OSTEOARTHRITIC CARTILAGE	5R01 AM16404-05	79,852
OLAH, GEORGE A	ELECTROPHILIC NATURE OF CHEMICAL CARCINOGENESIS	5R01 CA23031-02	40,910
OLAH, GEORGE A	HYDROCARBONS AND DERIVATIVES AS BIOALKYLATING AGENTS	2R01 GM24832-02	138,400
PARKER, JOHN W	NEW METHOD FOR SEPARATING LEUCOCYTE SUBPOPULATIONS	1R01 CA23677-01	91,229
PELLEGRINI, MARIA C	EXPRESSION AND ORGANIZATION OF RIBOSOMAL PROTEIN GENES	1R01 GM24572-01	58,659
PLATT, CHRISTOPHER J	LOCALIZATION OF DIFFERING VESTIBULAR SENSORY INPUTS	5R01 NS13946-02	8,911
PUFFER, HAROLD W	FLOW-INDUCED FLUX CHANGES ACROSS TUMOR MICROVESSELS	5R01 CA22224-02	54,785
RADER, ROLAND D	A NOVEL PULSED DOPPLER FLOWMETER	5R01 HL20979-02	37,047
RAIJMAN, LUISA J	THE REGULATION OF UREA SYNTHESIS IN MAMMALS	5R01 AM19417-03	46,411
RANDALL, PATRICK K	BEHAVIORAL ASPECTS OF REPRODUCTIVE AGING IN ANIMALS	1R01 AG00855-01	38,676

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
REED, CHRISTOPHER A.....	SYNTHETIC ANALOGUES OF THE CYTOCHROMES.....	1R01 GM23851-01A1	46,470
RHO, JOON H.....	3-D FLUOROMETRIC ANALYSIS OF HYDROCARBON METABOLITES.....	5R01 CA19974-02	43,345
RHO, JOON H.....	SUBCELLULAR CHANGES OF BLOOD VESSELS IN HYPERTENSION.....	5R01 HL21099-02	56,684
ROSS, RONALD K.....	IMMUNOBLASTIC LYMPHADENOPATHY AND HISTIOCYTIC LYMPHOMA.....	1R01 CA24082-01	85,078
RUSSELL, FINDLAY E.....	PEPTIDES AND CERTAIN ENZYMES OF VENOM.....	2R01 NS11476-04	55,302
RYAN, STEPHEN J.....	AN EXPERIMENTAL APPROACH TO MACULOPATHY.....	5R01 EY01545-03	69,727
RYAN, STEPHEN J.....	PARS PLANA VITRECTOMY IN PENETRATING OCULAR TRAUMA.....	1R01 EY02061-01A1	124,998
RYAN, STEPHEN J.....	BRUCH'S MEMBRANE/RETINAL PIGMENT EPITHELIAL STUDIES.....	1R01 EY02287-01	97,802
SCHAIK, K WARNER.....	COGNITIVE BEHAVIOR IN MATURITY AND OLD AGE.....	5R01 AG00480-06	82,298
SCHECTER, JOEL E.....	RATHKE'S POUCH-DERIVED TUMORS: A UNIQUE MODEL SYSTEM.....	5R01 CA21426-02	65,338
SCHIFFMAN, SANDRA.....	MECHANISM OF CONTACT ACTIVATION OF INTRINSIC CLOTTING.....	2R01 HL17402-04	87,542
SCHIFFMAN, SANDRA.....	BIOCHEMISTRY OF HUMAN FACTOR XI.....	5R01 HL18859-03	56,462
SCHNEIR, MICHAEL L.....	THE MOLECULAR NATURE OF GINGIVAL AND MUCOSAL COLLAGEN.....	2R01 DE03318-07A1	95,057
SCHONFELD, STEVEN E.....	OCCURRENCE AND ANTIGENICITY OF ENAMEL PROTEINS.....	1R01 DE05088-01	53,825
SEITER, CHARLES H.....	SPECTROSCOPIC STUDIES OF RESPIRATORY METALLOPROTEINS.....	5R01 HL19392-03	35,202
SHIH, JEAN C.....	MULTIPLE FORMS (ISOZYMES) OF PHENYLALANINE TRANSAMINASE.....	5R01 CA21494-02	42,145
SHIZUYA, HIROAKI.....	ENZYMATIC STUDIES ON SYNTHESIS OF DNA.....	1R01 GM24584-01A1	49,553
SINGER, FREDERICK R.....	PATHOGENESIS OF PSEUDOHYPERTHYROIDISM.....	5R01 CA17666-03	54,462
SLAVKIN, HAROLD C.....	BIOLOGY OF CONNECTIVE TISSUE, BONES, AND TEETH.....	2P01 DE02848-08A1	312,497
SLAVKIN, HAROLD C.....	INTERCELLULAR COMMUNICATION DURING TOOTH FORMATION.....	5R01 DE03569-07	102,378
SMITH, RONALD E.....	EXPERIMENTAL OCULAR HISTOPLASMIC CHOROIDITIS.....	5R01 EY01883-02	91,812
SMITH, RONALD E.....	SYNTHESIS OF DESCEMET'S MEMBRANE BY CORNEAL ENDOTHELIUM.....	5R01 EY01993-02	103,949
SMITH, RONALD E.....	EFFECTS OF INTRAOCULAR LENSES ON CORNEAL ENDOTHELIUM.....	3R01 EY02043-01S1	13,201
SOBIN, SIDNEY S.....	STUDIES IN VASCULAR PHYSIOLOGY.....	2R01 HL11152-12A1	57,481
SOBIN, SIDNEY S.....	HYPOXIA AND PULMONARY VASCULAR SMOOTH MUSCLE.....	1R01 HL23224-01	41,048
SORGENTE, NINO.....	ROLE OF VASCULARIZATION DURING CRANIOFACIAL DEVELOPMENT.....	2R01 DE04074-04	100,305
STELLWAGEN, ROBERT H.....	MECHANISM OF ENZYME INDUCTION BY CYCLIC NUCLEOTIDES.....	5R01 CA12563-08	59,330
STEPHENS, PHILIP J.....	INFRARED NATURAL AND MAGNETIC CIRCULAR DICHROISM.....	5R01 GM16263-10	68,165
TOKES, ZOLTAN A.....	LIPOSOMES AS ARTIFICIAL VESICLES FOR DRUG DELIVERY.....	5R01 CA21271-02	39,156
TOWNSEND, DUANE E.....	CERVICAL NEOPLASIA TREATMENT.....	5R01 CA20795-03	46,408
VAN ARSDOL, MAURICE D, JR.....	THE OLDER POPULATION OF THE UNITED STATES.....	3R01 AG00631-01S1	14,685
VAN ARSDOL, MAURICE D, JR.....	THE OLDER POPULATION OF THE UNITED STATES.....	5R01 AG00631-02	6,660
VOGT, PETER K.....	INTERACTIONS BETWEEN AVIAN TUMOR VIRUSES AND THEIR HOSTS.....	2R01 CA13213-08	153,106
VOGT, PETER K.....	GENETICS OF RNA TUMOR VIRUSES.....	5R01 CA19725-03	165,746
WALSH, DAVID A.....	AGE DIFFERENCES IN VISUAL INFORMATION PROCESSING.....	5R01 AG00521-03	31,724
WALSH, DAVID A.....	AGE DIFFERENCES IN SEMANTIC MEMORY.....	5R01 AG00572-02	42,838
WALSH, DON.....	NIEHS MARINE/FRESHWATER BIOMEDICAL CENTER GRANT.....	1P30 ES01965-01	119,631
WARSHEL, ARIEH.....	THEORETICAL STUDIES OF THE VISION PROCESS.....	5R01 EY01766-03	26,610
WARSHEL, ARIEH.....	THEORETICAL STUDIES OF ENZYMATIC REACTIONS.....	1R01 GM24492-01	46,411
WEBER, WILLIAM P.....	SYNTHESIS METABOLITES 7,12-DIMETHYLBENZ(A)ANTHRACENE.....	5R01 CA19444-02	38,955
WEIL, MAX H.....	MECHANISMS OF HYPO-ONCOTIC PULMONARY EDEMA.....	1R01 HL23015-01	21,072
WEINER, LESLIE P.....	DEMYELINATING DISEASES CAUSED BY VIRUSES.....	2R01 NS12967-03	63,035
WEINER, LESLIE P.....	THE EFFECT OF VIRUSES ON SPINAL CORD-MUSCLE INTERACTIONS.....	1R01 NS13685-01A1	61,652
WISNER, JAMES R, JR.....	AGING AND OVARIAN-UTERINE FUNCTION.....	5R01 AG00560-02	37,394
WOLF, WALTER.....	NEW PLATINUM COMPOUNDS AS POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19076-03	59,039
YATES, FRANCIS E.....	CENTER FOR SYSTEMS ANALYSIS IN PATHOPHYSIOLOGY.....	5P50 GM23732-02	683,501
ORGANIZATION TOTAL	134	14,350,411	
VETERANS ADMINISTRATION WADSWORTH HOSPITAL CENTER ZIP CODE 90073			
KAPLOWITZ, NEIL.....	THE SMALL INTESTINE AS A PORTAL OF ENTRY FOR XENOBIOTICS.....	1R01 GM24987-01	49,248
ORGANIZATION TOTAL	1	49,248	
MENLO PARK			
LINUS PAULING INSTITUTE OF SCIENCE AND MEDICINE ZIP CODE 94025			
ROBINSON, ARTHUR B.....	MEDICAL DIAGNOSIS BY MASS SPECTROMETRY.....	5R01 GM21197-05	167,064
ORGANIZATION TOTAL	1	167,064	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SRI INTERNATIONAL ZIP CODE 94025			
ACTON, EDWARD M.....	ANTITUMOR ANTHACYCLINES, SYNTHETIC N & S ISOSTERES.....	1R01 CA24168-01	68,271
ALMQUIST, RONALD G.....	SYNTHESIS OF POTENTIAL ANTIHYPERTENSIVE AGENTS.....	5R01 HL19538-03	85,104
BARON, WILLIAM S.....	PHOTORECEPTOR INFORMATION PROCESSING IN PRIMATES.....	2R01 EY01579-04	125,549
BRODIE, IVOR.....	INVESTIGATION OF CHARGE TRANSFER ELECTROGRAPHY.....	2R01 CA16543-02A1	113,880
COLWELL, WILLIAM T.....	SYNTHESIS AND EVALUATION OF PROSTAGLANDIN METABOLITES.....	5R01 HL19066-03	96,147
COURTNEY, KENNETH R.....	FREQUENCY-DEPENDENT DRUG ACTIONS IN CARDIAC MUSCLE.....	1R01 HL21742-01	45,414
CRANE, HEWITT D.....	BINOCULAR OCULOMOTOR SYSTEMS AND INTERACTIONS.....	5R01 EY01031-05	209,702
DAVIS, EDWARD E.....	ELECTROPHYSIOLOGICAL STUDY OF MOSQUITO CHEMORECEPTORS.....	5R01 AI10954-05	38,272
DAVIS, EDWARD E.....	NEUROPHYSIOLOGY OF TICK PERIPHERAL RECEPTORS.....	5R01 AI13690-02	47,643
EVANS, MICHAEL J.....	INJURY AND TUMOR FORMATION IN THE RAT LUNG.....	5R01 CA19354-02	70,223
EVANS, MICHAEL J.....	PULMONARY TISSUE INJURY AND REPAIR.....	5R01 HL16330-06	59,201
FIELDSTEEL, A HOWARD.....	CULTIVATION OF M. LEPRAE IN TISSUE CULTURE.....	5R22 AI08417-09	144,525
FIELDSTEEL, A HOWARD.....	TISSUE CULTURE/GENETIC STUDIES OF TREPONEMA PALLIDUM.....	1R01 AI15113-01	128,471
FODGE, DOUGLAS W.....	GLUCOCORTICOID IN NORMAL AND TRANSFORMED CELLS.....	5R01 CA19627-03	83,503
FREEMAN, GUSTAVE.....	STUDY OF CHRONIC OBSTRUCTIVE LUNG DISEASE.....	5P01 ES00842-07	598,682
HAMMEN, RICHARD F.....	INHIBITION OF SEQUENCE-SPECIFIC DNA-PROTEIN REACTIONS.....	5R01 CA20603-02	72,452
JENSEN, RICHARD A.....	VAGAL CONTROL OF HEART RATE: A BIOPHYSICAL MODEL.....	5R01 HL19076-03	113,042
KAPLAN, JOEL N.....	MATERNAL BEHAVIOR AND INFANT DEVELOPMENT.....	2R01 HD04905-07	105,094
KAPLAN, SAMUEL D.....	RETROSPECTIVE COHORT MORTALITY STUDY OF PRIESTS.....	1R01 CA23657-01	70,277
KELLY, DONALD H.....	PROCESSING OF ELEMENTARY VISUAL STIMULI.....	5R01 EY01128-05	267,649
KLEID, DENNIS G.....	MECHANISM OF CARCINOGEN-INDUCED FRAMESHIFT MUTATIONS.....	5R01 CA21593-02	51,455
LAWSON, JOHN A.....	DIAGNOSTIC AGENTS FOR PANCREATIC TUMORS.....	5R26 CA21646-02	71,694
LEE, WILLIAM W.....	BLOOD COMPATIBLE BENZAMIDINE CONTAINING POLYMERS.....	1R01 HL21769-01	54,909
MILL, THEODORE.....	THE ROLE OF FREE RADICALS AND ANTIOXIDANTS IN AGING.....	3R01 AG00486-03S1	10,298
MILL, THEODORE.....	THE ROLE OF FREE RADICALS AND ANTIOXIDANTS IN AGING.....	2R01 AG00486-04	46,388
MILLER, JON P.....	CYCLIC AMP ANALOGS AS ANTIPSORIASIS AGENTS.....	1R01 AM21773-01	107,027
MILLER, JON P.....	MAPPING CYCLIC AMP BINDING SITES ON PROTEIN KINASES.....	1R01 GM25697-01	96,418
MOSHER, CAROL W.....	ETHIDIUM ANALOGS WITH DNA BASE-SEQUENCE SPECIFICITY.....	5R01 CA19895-03	64,397
PEPPERS, NORMAN A.....	A NEW APPROACH TO ELEMENT ANALYSIS OF SINGLE CELLS.....	5R01 GM23856-02	102,082
PETERS, JOHN H.....	STUDIES OF ANTILEPROSY DRUGS IN ANIMALS AND MAN.....	5R22 AI08214-11	87,689
PIANTANIDA, THOMAS P.....	TEMPORAL PROCESSING IN HUMAN COLOR VISION.....	5R01 EY02357-02	56,352
REBERT, CHARLES S.....	ASYMMETRY OF HUMAN EEG, PERCEPTION, AND LEARNING.....	2R01 NS12591-03	84,412
REIST, ELMER J.....	SYNTHESIS OF CNS ANTITUMOR AGENTS.....	5R01 CA13911-06	65,789
REIST, ELMER J.....	PLANT SAPONINS WITH ANTIFERTILITY ACTIVITY.....	5R01 HD09919-03	73,809
SKINNER, WILFRED A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05522-16	148,430
TANABE, MASATO.....	C-13 SUBSTITUTED STEROIDS AS ANTIFERTILITY AGENTS.....	5R01 HD09978-03	79,836
VOLD, BARBARA S.....	ROLE OF TRNA IN CELLULAR REGULATORY MECHANISMS.....	2R01 GM24842-02	102,944
WOOD, BERNARD J.....	STEREOSPECIFIC SYNTHESIS WITH A MOLECULAR TEMPLATE.....	1R01 GM25140-01	54,261
ORGANIZATION TOTAL	38	3,901,291	
NORTHRIDGE			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM--CALIFORNIA STATE UNIVERSITY AT NORTHRIDGE ZIP CODE 91324			
LEFEVRE, GEORGE, JR.....	COMPARATIVE STUDIES ON INDUCED MUTATION IN DROSOPHILA.....	2R01 GM13631-13	82,992
OPPENHEIMER, STEVEN B.....	MECHANISMS OF INTERCELLULAR ADHESION.....	2R01 CA12920-07A2	61,538
ORGANIZATION TOTAL	2	144,530	
OAKLAND			
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA ZIP CODE 94609			
ABRAHAM, SAMUEL.....	ALTERED GENOME EXPRESSION IN PRENEOPLASIA AND NEOPLASIA.....	5R01 CA11736-09	163,486
ABRAHAM, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05467-10	44,389
CERIANI, ROBERTO L.....	USE OF CELL MEMBRANES TO ASSESS PHENOTYPIC EXPRESSION.....	5R01 CA19455-03	59,448
CERIANI, ROBERTO L.....	BREAST NEOPLASIA DIAGNOSIS WITH SPECIFIC ANTIBODIES.....	1R01 CA20286-01A1	91,181
GREEN, GARY M.....	NUTRITIONAL SIGNIFICANCE OF INTESTINAL PROTEOLYSIS.....	5R01 AM17737-05	95,320
MORETTI, RICHARD L.....	LOCAL REGULATION OF CORONARY FLOW BY PROSTAGLANDINS.....	5R01 HL19218-03	47,800
MORETTI, RICHARD L.....	PROSTAGLANDINS, PLATELET AGGREGATION AND VASOACTIVITY.....	1R01 HL22946-01	84,379
SMITH, STUART.....	STRUCTURE AND SPECIFICITY OF LIPOGENIC ENZYMES.....	2R01 AM16073-04A1	87,142

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
THOMPSON, KAREN E.....	CELL SURFACE MODULATION IN MAMMARY NEOPLASIA.....	5R01 CA18946-02	91,361
ORGANIZATION TOTAL	9 764,506		
KAISER FOUNDATION HOSPITALS—KAISER FOUNDATION RESEARCH INSTITUTE ZIP CODE 94612			
CUTTING, CECIL C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05521-16	27,045
FRIEDMAN, GARY D.....	SURVEILLANCE FOR DRUGS THAT MAY BE CARCINOGENIC.....	5R01 CA19939-02	112,965
FRIEDMAN, GARY D.....	ATHEROSCLEROTIC DISEASE AND RISK FACTORS IN TWINS.....	1R01 HL21971-01	125,266
GLASS, ANDREW G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20148-02	60,181
ORGANIZATION TOTAL	4 325,457		
PALO ALTO			
AMERICAN INSTITUTES FOR RESEARCH ZIP CODE 94306			
CARD, JOSEFINA J.....	HIGH-LEVEL MIGRATION FROM THE PHILIPPINES TO THE U. S.....	1R01 HD11938-01A1	28,525
ORGANIZATION TOTAL	1 28,525		
NORTHERN CALIFORNIA CANCER PROGRAM, INC. ZIP CODE 94304			
CARTER, STEPHEN K.....	NORTHERN CALIFORNIA ONCOLOGY GROUP.....	5R10 CA21744-02	1,143,443
ROSENBERG, SAUL A.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA19408-03	510,706
ORGANIZATION TOTAL	2 1,654,149		
PALO ALTO MEDICAL RESEARCH FOUNDATION ZIP CODE 94301			
HOFSTEE, BAREND H.....	PROTEIN FRACTIONATION ON HYDROPHOBICITY GRADIENTS.....	5R01 GM22545-03	53,011
INGELS, NEIL B, JR.....	VENTRICULAR DYNAMICS FROM SURGICALLY INSERTED MARKERS.....	5R01 HL17993-04	225,896
KRAHENBUHL, JAMES L.....	MONOCYTES AND MACROPHAGES IN RESISTANCE TO CANCER.....	1R01 CA22452-01	99,543
KRUPP, MARCUS A.....	ANIMAL FACILITY IMPROVEMENT PROJECT.....	1P40 RR01093-01A1	47,110
KRUPP, MARCUS A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05513-16	38,993
REMINGTON, JACK S.....	TOXOPLASMOSIS: NATURE OF INFECTION & IMMUNE RESPONSE.....	5R01 AI04717-17	245,737
ORGANIZATION TOTAL	6 710,290		
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125			
ALLMAN, JOHN M.....	FUNCTIONAL ORGANIZATION OF VISUAL CORTEX.....	5R01 NS12131-05	46,992
ATTARDI, GIUSEPPE.....	GENE EXPRESSION AND CONTENT IN CELL DIFFERENTIATION.....	5R01 GM11726-15	251,633
BALDESCHWIELER, JOHN D.....	STUDY OF BIOLOGICAL SYSTEMS BY NEW PHYSICAL METHODS.....	2R01 GM21111-06	110,475
BOETTGER, HEINZ G.....	MASS SPECTROMETRY RESOURCE FOR BIOMEDICAL APPLICATIONS.....	5P41 RR00922-02	71,724
BONNER, JAMES F.....	MOLECULAR BASIS OF GENETIC CONTROL.....	2R01 GM13762-13	235,815
BROCKES, JEREMY P.....	CULTURED SCHWANN CELLS STUDY.....	1R01 NS14403-01	65,878
BROKAW, CHARLES J.....	MECHANISMS OF MOVEMENT OF SIMPLE SPERM FLAGELLA.....	2R01 GM18711-07	87,254
BROKAW, CHARLES J.....	COMPUTER SIMULATION OF SLIDING FILAMENT SYSTEMS.....	2R01 GM21931-03A1	23,112
CAMPBELL, JUDITH L.....	ENZYMATIC MECHANISMS OF DNA REPLICATION.....	1R01 GM25508-01	56,255
CHAN, SUNNEY I.....	STUDIES OF LIPID-LIPID AND LIPID-PROTEIN INTERACTIONS.....	5R01 GM22432-04	147,937
DAVIDSON, ERIC H.....	EUKARYOTIC GENOME SEQUENCE STRUCTURE—HEMOGLOBIN.....	3P01 GM20927-03S1	45,995
DAVIDSON, ERIC H.....	EUKARYOTIC GENOME SEQUENCE STRUCTURE—HEMOGLOBIN.....	5P01 GM20927-04	261,696
DAVIDSON, ERIC H.....	OOGENESIS AND GENE CONTROL IN ANIMAL REPRODUCTION.....	5R01 HD05753-09	208,798
DAVIDSON, ERIC H.....	YEAR ROUND S. PURPURATUS RESEARCH RESOURCE.....	2P40 RR00986-04	74,629
DAVIDSON, NORMAN R.....	PHYSICAL CHEMISTRY OF NUCLEIC ACIDS.....	5R01 GM10991-19	180,552
DERVAN, PETER B.....	PROTEIN-NUCLEIC ACID CROSS-LINKING REAGENTS.....	5R01 GM22909-03	39,806
DICKERSON, RICHARD E.....	MACROMOLECULAR INTERACTIONS AND GENETIC CONTROL.....	2R01 GM12121-14	169,957
DICKERSON, RICHARD E.....	DNA SYNTHESIS AND INTERACTION WITH PROTEINS AND DRUGS.....	5R01 GM24393-02	83,176
DREYER, WILLIAM J.....	MICROSEQUENCE STUDIES OF CELL SURFACE ANTIGENS.....	5R01 AI14059-02	89,952
DREYER, WILLIAM J.....	MOLECULAR STUDIES OF NEW TUMOR ANTIGENS.....	5R01 CA15926-05	70,707
EVANS, DAVID A.....	ANTICANCER AND NEUROTOXIC ALKALOID SYNTHESIS.....	5R01 CA17904-03	70,199
EVANS, DAVID A.....	PROSTAGLANDIN SYNTHESIS.....	2R01 GM21746-04	56,106
EVANS, DAVID A.....	SYNTHESIS OF CATION MEMBRANE CARRIER LIGANDS.....	5R01 GM23991-02	49,785
FENDER, DEREK H.....	NEW INSTRUMENTATION FOR CLINICAL EVALUATION OF THE ERG.....	5R01 EY01774-02	39,064
FENDER, DEREK H.....	CHILDREN'S DEVELOPMENT OF READING STRATEGIES.....	1R01 EY02479-01	90,465
GAGNE, ROBERT R.....	MODEL INORGANIC SYSTEMS FOR COPPER PROTEINS.....	2R01 AM18319-04	67,444

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
GODDARD, WILLIAM A, III.....	MECHANISM & STRUCTURE IN OXYGEN BINDING & REDOX PROTEINS.....	5R01 GM23971-02	98,640
HOOD, LEROY E.....	GENETICS OF ANTIBODY DIVERSITY, EXPRESSION AND EVOLUTION.....	5R01 AI10781-08	156,259
HOROWITZ, NORMAN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07003-13	195,950
HUDSPETH, ALBERT J.....	TRANSDUCTION MECHANISM OF HAIR CELLS.....	5R01 NS13154-03	56,123
IRELAND, ROBERT E.....	THE SYNTHESIS OF APHIDICOLIN AND TIRANDAMYCIN.....	2R01 CA18191-04	72,979
IRELAND, ROBERT E.....	POLYETHER IONOPHORES: SYNTHESIS OF X537A AND ANALOGS.....	5R01 HL21367-02	94,014
KONISHI, MASAKAZU.....	SEXUAL DIFFERENTIATION OF BRAIN AND BEHAVIOR.....	5R01 HD10501-02	47,981
KONISHI, MASAKAZU.....	NEUROPHYSIOLOGY OF SOUND LOCALIZATION.....	1R01 NS14617-01	78,904
LESTER, H ALLEN.....	NICOTINIC SYNAPSES, BIOPHYSICAL STUDIES.....	2R01 NS11756-04A1	79,950
LEWIS, EDWARD B.....	GENETIC CONTROL OF DEVELOPMENTAL PATHWAYS.....	5R01 HD06331-07	94,082
MANIATIS, THOMAS P.....	CHROMOSOME STRUCTURE AND GENE CONTROL IN SV40.....	5R01 GM24716-02	56,291
MARSH, RICHARD E.....	CRYSTAL STRUCTURE STUDIES ON COMPOUNDS RELATED TO DNA.....	5R01 GM16966-09	69,790
MC CANN, GILBERT D.....	LIGHT TRANSDUCTION AND COLOR VISION.....	5R01 EY01822-02	94,099
NORRIS, DAVID D.....	AN INTEGRATING ELECTRO-OPTICAL MS ION DETECTOR.....	5R01 GM20850-04	222,907
PETTIGREW, JOHN D.....	COMPARATIVE PHYSIOLOGY OF BINOCULAR VISION.....	5R01 EY01909-02	45,704
RAFTERY, MICHAEL A.....	NEUROCHEMISTRY AND KINETICS OF SYNAPTIC TRANSMISSION.....	2R01 NS10294-07	111,044
RAFTERY, MICHAEL A.....	CHEMISTRY AND KINETICS OF AXONAL CONDUCTION.....	5R01 NS12018-13	89,304
REMBAUM, ALAN.....	IMMUNOMICROSPHERES FOR CELL MEMBRANE RECEPTORS STUDY.....	5R01 CA20668-02	74,031
REVEL, JEAN P.....	MOLECULAR BASIS OF SPECIFICITY IN CELLULAR MEMBRANES.....	5P01 GM06965-19	523,317
RICHARDS, JOHN H.....	MOLECULAR STUDIES OF THE IMMUNE RESPONSE.....	5R01 CA23028-02	62,106
RICHARDS, JOHN H.....	MECHANISM OF ENZYME ACTION.....	5R01 GM10218-16	49,866
RICHARDS, JOHN H.....	ENZYME SYSTEMS USING NUCLEAR MAGNETIC RESONANCE.....	5R01 GM16424-10	86,749
ROBERTS, JOHN D.....	NITROGEN-15 AND CARBON-13 NMR SPECTROSCOPY.....	5R01 GM11072-16	125,816
SCHAEFER, WILLIAM P.....	X-RAY STUDY OF OXYGEN-CARRYING COBALT COMPLEXES.....	5R01 HL12395-10	32,679
SCHROEDER, WALTER A.....	STRUCTURE-FUNCTION RELATIONSHIPS IN THE HEME PROTEINS.....	5R01 HL02558-22	124,646
STRAUSS, JAMES H.....	A GENETIC ANALYSIS OF SINDBIS VIRUS.....	2R01 AI10793-07	73,614
STRUMWASSER, FELIX.....	MECHANISMS OF INNATE AND ENTRAINED PATTERNS IN NEURONS.....	2R01 NS07071-12	95,064
STRUMWASSER, FELIX.....	PEPTIDERGIC AND CIRCADIAN NEURONS IN TISSUE CULTURE.....	5R01 NS13896-02	78,495
VAN ESSEN, DAVID C.....	LAMINAR ORGANIZATION OF EXTRASTRIATE VISUAL CORTEX.....	5R01 EY02091-02	74,337
WAYLAND, HAROLD.....	QUANTITATION OF FLOW AND SOLUTE FLUX IN MICROVESSELS.....	5R01 HL08977-14	136,186
ORGANIZATION TOTAL	56	5,896,333	
HUNTINGTON MEMORIAL HOSPITAL ZIP CODE 91105			
AGNEW, WILLIAM F.....	C.S.F. SECRETION: STRUCTURE AND FUNCTION.....	5R01 NS12906-02	76,564
BING, R J.....	BIOMEDICAL RESEARCH.....	1S07 RR05797-01	14,243
ORGANIZATION TOTAL	2	90,807	
PASADENA FOUNDATION FOR MEDICAL RESEARCH ZIP CODE 91101			
KAIGHN, M EDWARD.....	MONOLAYER CULTURES OF HUMAN PROSTATIC CARCINOMA.....	5R26 CA19826-03	94,026
ORGANIZATION TOTAL	1	94,026	
REDLANDS			
UNIVERSITY OF REDLANOS ZIP CODE 92373			
IFFT, JAMES B.....	PHYSICAL CHEMISTRY OF PROTEINS IN SALT SOLUTIONS.....	5R01 GM18871-11	26,500
ORGANIZATION TOTAL	1	26,500	
RIVERSIDE			
UNIVERSITY OF CALIFORNIA AT RIVERSIOE ZIP CODE 92502			
BARTNICKI-GARCIA, SALOMON.....	BIOCHEMISTRY OF MORPHOGENESIS IN MUCOR.....	2R01 AI05540-13	69,527
BIRGE, ROBERT R.....	SPECTROSCOPY AND PHOTOPHYSICS OF VISUAL CHROMOPHORES.....	1R01 EY02202-01	42,665
BUTLER, EDGAR W.....	SOCIAL WELL-BEING AND HEALTH OF THE AGED ACROSS TIME.....	5R01 AG00320-02	79,249
BYUS, CRAIG V.....	ORNITHINE DECARBOXYLASE INDUCTION IN NEOPLASTIC CELLS.....	1R01 CA23743-01	56,199
CASTRO, CHARLES E.....	BIODEHALOGENATION.....	1R01 ES01588-01	56,666
FEDERICI, BRIAN A.....	EVALUATION OF COELOMOMYCES FUNGI FOR MOSQUITO CONTROL.....	5R01 AI12772-02	16,684
HAMMOCK, BRUCE D.....	BIODEGRADABLE PESTICIDES BASED ON HORMONE METABOLISM.....	5R01 ES01260-02	37,745
HENRY, HELEN L.....	KIDNEY CELL CULTURE: REGULATION OF CALCIUM METABOLISM.....	1R01 AM21398-01	31,361
HOLTEN, DAROLD D.....	NUTRITIONAL & HORMONAL CONTROL OF G-6-P04 DEHYDROGENASE.....	2R01 AM13324-10	68,683

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
MIDLAND, M MARK.....	ASYMMETRIC REDUCTIONS VIA TRIALKYLBORANES.....	1R01 GM24517-01	46,565
MILLER, THOMAS A.....	MODE OF ACTION OF INSECTICIDES.....	5R01 ES00814-08	31,006
NOLTMANN, ERNST A.....	STUDIES ON PHOSPHOHEXOSE ISOMERASES.....	5R01 AM07203-16	89,793
NOLTMANN, ERNST A.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09070-02	98,761
NORMAN, ANTHONY W.....	STUDIES ON VITAMIN D AND CALCIUM METABOLISM.....	3R01 AM09012-13S1	27,667
NORMAN, ANTHONY W.....	STUDIES ON VITAMIN D AND CALCIUM METABOLISM.....	5R01 AM09012-14	111,113
NORMAN, ANTHONY W.....	STUDIES ON VITAMIN D METABOLISM IN HUMANS.....	2R01 AM14750-07	95,003
NORMAN, ANTHONY W.....	FOURTH WORKSHOP ON VITAMIN D: SUPPORT FUNDS.....	1R13 AM25329-01	12,000
OKAMURA, WILLIAM H.....	PREPARATION OF VITAMIN D ANALOGS AND METABOLITES.....	5R01 AM16595-05	70,323
OKAMURA, WILLIAM H.....	STUDIES ON THE RETINOIDS AND VINYL ALLENE CHEMISTRY.....	1R01 EY02452-01	17,460
PETRINOVICH, LEWIS F.....	STUDIES OF HABITUATION.....	5R01 HD04343-07	44,024
REID, BRIAN R.....	ENZYMATIC RECOGNITION OF TRANSFER OF RNA.....	5R01 CA11697-08	47,091
RIESEN, AUSTIN H.....	SOMATOSENSORY DEPRIVATION: BRAIN-BEHAVIORAL EFFECTS.....	2R01 HD10408-15	22,985
SAWYER, DONALD T.....	MN COMPLEXES AS MODELS FOR SOD AND O ₂ PHOTOSYNTHESIS.....	5R01 GM22761-03	58,121
SHANNON, LELAND M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07010-13	77,831
SHERMAN, IRWIN W.....	HOST-PARASITE INTERRELATIONSHIPS IN THE MALARIAS.....	5R01 AI05226-14	61,297
SHERMAN, IRWIN W.....	MEMBRANE STUDIES WITH MALARIAL PARASITES.....	5R01 AI13422-03	49,086
SHOREY, HARRY H.....	PHEROMONES AND REGULATION OF NEMATODE MATING BEHAVIOR.....	5R01 AI14194-02	68,250
STRAUS, DANIEL S.....	ANALYSIS OF INSULIN AND MSA ACTION IN CELL HYBRIDS.....	1R01 AM21993-01	44,157
TALBOT, PRUDENCE.....	MECHANISMS OF MAMMALIAN OVULATION.....	1R01 HD11386-01	31,744
TAUBERT, KATHRYN A.....	FACTORS MODIFYING CARDIAC DIGOXIN EFFECTS AND CONTENT.....	1R23 HL22575-01	35,524
TRAUGH, JOLINDA A.....	EFFECTS OF RIBOSOME PHOSPHORYLATION ON TRANSLATION.....	5R01 GM21424-04	68,930
ORGANIZATION TOTAL	31	1,667,510	
SACRAMENTO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY ZIP CODE 95814			
MC EWEN, WILLIAM J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05549-16	63,422
ORGANIZATION TOTAL	1	63,422	
SAN DIEGO			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN DIEGO STATE UNIVERSITY ZIP CODE 92115			
ABBOTT, MITCHEL T.....	PYRIMIDINE AND PROLYL A-KETOGLUTARATE DIOXYGENASES.....	1R01 GM25055-01	39,861
LEBHERZ, HERBERT G.....	REGULATION OF ALDOLASE SYNTHESIS.....	5R01 GM23045-03	54,811
WEISS, RICHARD L.....	CELL FUSION IN CHLAMYDOMONAS REINHARDI.....	1R01 GM25636-01	77,017
ORGANIZATION TOTAL	3	171,689	
CHILDREN'S HOSPITAL AND HEALTH CENTER ZIP CODE 92123			
GALAMBOS, ROBERT.....	EEG RESPONSES DURING COGNITIVE PROCESSING IN CHILDREN.....	1R01 HD11154-01	79,223
SUTHERLAND, DAVID H.....	GAIT STUDY OF NORMAL CHILDREN IN THEIR GROWING YEARS.....	5R01 HD08520-03	109,142
ORGANIZATION TOTAL	2	188,365	
LABORATORY FOR COMPARATIVE BIOCHEMISTRY ZIP CODE 92109			
BARTLETT, GRANT R.....	RED CELL METABOLISM.....	3R01 HL06950-16S1	27,988
BARTLETT, GRANT R.....	RED CELL METABOLISM.....	2R01 HL06950-17	57,086
BARTLETT, GRANT R.....	RED CELL STORAGE AND TRANSFUSION.....	5R01 HL16931-04	98,781
ORGANIZATION TOTAL	3	183,855	
MERCY HOSPITAL AND MEDICAL CENTER ZIP CODE 92103			
GELLER, JACK.....	BIOCHEMICAL STUDY OF PROSTATE CANCER DIFFERENTIATION.....	2R26 CA18003-03	47,078
ORGANIZATION TOTAL	1	47,078	
ZOOLOGICAL SOCIETY OF SAN DIEGO ZIP CODE 92112			
BENIRSCHKE, KURT.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09002-02	99,515
RYDER, OLIVER A.....	COMPARATIVE MOLECULAR CYTOGENETICS.....	3R01 GM23073-02S1	3,442
RYDER, OLIVER A.....	COMPARATIVE MOLECULAR CYTOGENETICS.....	5R01 GM23073-03	40,471
ORGANIZATION TOTAL	3	143,428	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SAN FRANCISCO			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN FRANCISCO STATE UNIVERSITY		ZIP CODE 94132	
MEREDITH, PATRICIA J.....	NEONATAL THYMIC FACTOR AND IMMUNOREGULATION WITH AGE.....	7R23 AG01303-01	46,693
ORGANIZATION TOTAL	1 46,693		
CHILDREN'S HOSPITAL OF SAN FRANCISCO		ZIP CODE 94118	
SPENCER, E MARTIN.....	THE REGULATION OF SOMATOMEDIN SYNTHESIS BY INSULIN.....	7R01 AM25648-01	93,668
ORGANIZATION TOTAL	1 93,668		
INSTITUTES OF MEDICAL SCIENCES		ZIP CODE 94120	
ADELSON, JOEL W.....	CHYMOTENIN: STIMULATION OF ENZYME-SELECTIVE SECRETION.....	2R01 AM19973-02	96,883
BACH-Y-RITA, PAUL.....	PERIPHERAL NEUROPHYSIOLOGY OF EYE MOVEMENTS.....	5R01 EY01474-03	143,003
COGAN, ALEXANDER I.....	INTEROCULAR SUPPRESSION IN STRABISMUS.....	5R01 EY01558-03	57,789
COLLINS, CARTER C.....	PORTABLE SEEING AID.....	3R01 EY00686-06S1	9,113
COLLINS, CARTER C.....	PORTABLE SEEING AID.....	5R01 EY00686-07	120,473
COLLINS, CARTER C.....	STUDY OF VISUAL SCIENCES.....	5P30 EY01186-06	159,858
COLLINS, CARTER C.....	HUMAN OCULOMOTOR MOTILITY.....	5R01 EY01719-03	91,379
KARIC, LUCIJA S.....	EXTRACORPOREAL CIRCULATION AND PROTEIN DENATURATION.....	5R23 HL21271-02	41,389
LEVY, JOSEPH V.....	DIABETIC HYPERTENSIVE RATS—PHARMACOLOGIC REACTIVITY.....	1R01 AM21146-01A1	73,009
LEVY, JOSEPH V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05566-15	81,692
LITWAK, PHILIP.....	DEMONSTRATION OF 6-SEGMENT SPINAL CORD PLASTICITY.....	1R01 NS14733-01	52,706
MITCHELL, RICHARD R.....	IMPROVEMENT IN REGIONAL VENTILATION-PERFUSION RESOLUTION.....	1R01 HL21518-01A1	80,431
NAKAYAMA, KEN.....	THREE-DIMENSIONAL EYE ROTATION MEASUREMENTS: STRABISMUS.....	3R01 EY01582-03S1	7,821
NAKAYAMA, KEN.....	THREE-DIMENSIONAL ASPECTS OF VISION AND OCULOMOTILITY.....	2R01 EY01582-04	64,657
OSBORN, JOHN J.....	BIOMEDICAL KNOWLEDGE ENGINEERING IN CLINICAL MEDICINE.....	1R01 GM24669-01	90,291
PERSIDSKY, MAXIM D.....	GRANULOCYTES BANKING TECHNIQUES.....	5R01 CA12754-07	81,804
PERSIDSKY, MAXIM D.....	PRESERVATION OF HUMAN PLATELETS FOR TRANSFUSION.....	5R01 HL20788-02	46,623
RODVIEN, ROBERT.....	SURFACE-INDUCED THROMBOSIS—ALBUMIN VARIANT MODIFICATION.....	5R01 HL20313-02	62,570
SCOTT, ALAN B.....	CHEMICAL ALTERATION OF EXTRAOCULAR MUSCLE FUNCTION.....	1R01 EY02106-01	51,848
TYLER, CHRISTOPHER W.....	ETIOLOGY AND DIAGNOSIS OF RETINAL AND CORTICAL DISORDERS.....	5R01 EY02124-02	58,392
WILLIAMS, GEORGE Z.....	NORMAL HEALTH PROFILE STUDY.....	3R01 GM17369-08S1	229,606
ORGANIZATION TOTAL	21 1,701,337		
MOUNT ZION HOSPITAL AND MEDICAL CENTER		ZIP CODE 94115	
BEADNER, SOL A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05472-16	23,025
FRIEDMAN, MEYER.....	BEHAVIORAL CHANGES IN POST INFARCTION PATIENTS.....	5R01 HL21427-02	198,497
LEEDS, SANFORD E.....	RELATION OF LYMPHATICS TO CARDIOPULMONARY FUNCTION.....	3R01 HL03180-20S1	6,501
LEEDS, SANFORD E.....	RELATION OF LYMPHATICS TO CARDIOPULMONARY FUNCTION.....	2R01 HL03180-21	74,175
ROSENMAN, RAY H.....	CENTRAL NERVOUS SYSTEM AND CORONARY HEART DISEASE.....	3R01 HL03429-18S1	3,103
ORGANIZATION TOTAL	5 305,301		
SCIENTIFIC ANALYSIS CORPORATION		ZIP CODE 94123	
MILLER, DOROTHY L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05782-03	23,549
ORGANIZATION TOTAL	1 23,549		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO		ZIP CODE 94143	
ABLIN, ARTHUR R.....	CHILDREN'S CANCER STUDY GROUP.....	3R10 CA17829-01S4	8,216
ABLIN, ARTHUR R.....	CHILDREN'S CANCER STUDY GROUP.....	2R10 CA17829-02A1	101,486
ALBERTS, BRUCE M.....	BIOCHEMISTRY OF GENE REGULATION IN HIGHER EUKARYOTES.....	5R01 GM23928-02	91,227
ALBERTS, BRUCE M.....	DNA-PROTEIN INTERACTIONS IN DNA-REPLICATION CONTROL.....	5R01 GM24020-03	98,030
ALVARADO, JORGE A.....	TISSUE CHANGES IN AGING AND IN GLAUCOMATOUS EYES.....	5R01 EY02068-02	112,986
ARIEFF, ALLEN I.....	BLOOD BRAIN BARRIER AND CARBOHYDRATE METABOLISM.....	5R01 AM18350-05	56,412
ARMSTRONG, ROSA M.....	EPITHELIAL-STROMAL INTERACTIONS OF BREAST CARCINOMA.....	1R01 CA20122-01	57,399
ARNAUD, CLAUDE D.....	PARATHYROID HORMONE AND CALCITONIN.....	5R01 AM21614-02	131,025
ARNAUD, SARA B.....	25 HYDROXYVITAMIN D METABOLISM IN GI DISEASE.....	5R01 AM21595-02	61,431
BAINTON, DOROTHY F.....	MATURATION AND FUNCTION OF WBC AND MEGAKARYOCYTES.....	5R01 AM10486-13	53,177
BAINTON, DOROTHY F.....	PATHOLOGY OF CELL DIFFERENTIATION IN LEUKEMIA.....	2R01 CA14264-06	61,563
BARRETT, SONDR A.....	MYELOID CELL SURFACE RECEPTORS: NORMAL & LEUKEMIC.....	5R01 CA20575-02	61,164

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
BASBAUM, ALLAN I.....	BRAINSTEM CONTROL OF PAIN TRANSMISSION.....	1R01 NS14627-01	53,918
BAUMRIND, SHELDON.....	INTEGRATED THREE-DIMENSIONAL CRANIOFACIAL MEASUREMENT.....	5R01 DE03703-03	72,752
BAXTER, JOHN D.....	MECHANISM OF THYROID HORMONE ACTION.....	5R01 AM18878-03	47,829
BAXTER, JOHN D.....	GROWTH HORMONE GENE: PURIFICATION AND REGULATION.....	5R01 AM19997-02	87,650
BAXTER, JOHN D.....	MECHANISM OF HORMONE HYPERRESPONSIVENESS IN GLAUCOMA.....	5R01 EY01785-03	62,072
BAXTER, JOHN D.....	ROLE OF STEROIDS IN HYPERTENSION.....	5R01 HL16918-05	81,331
BHATNAGAR, RAJENDRA S.....	BIOCHEMISTRY OF LUNG CONNECTIVE TISSUES.....	5R01 HL19668-03	88,270
BIGLIERI, EDWARD G.....	SECRETORY STEROID MIXTURES OF ADRENAL CORTEX.....	5R01 AM06415-17	105,994
BISHOP, J MICHAEL.....	ROUS SARCOMA VIRUS: REPLICATION AND CELL TRANSFORMATION.....	5R01 CA12705-08	462,204
BLAISDELL, F WILLIAM.....	TRAUMA RESEARCH PROGRAM.....	5P50 GM18470-07	361,443
BLOIS, MARSDEN S, JR.....	STUDIES ON THE BIOPHYSICS AND BIOCHEMISTRY OF MELANINS.....	5R01 AM19994-02	79,207
BLOIS, MARSDEN S, JR.....	STUDIES ON THE PATHOBIOLOGICAL CHEMISTRY OF MELANOMA.....	5R01 CA20423-02	64,748
BOURNE, HENRY.....	CLINICAL PHARMACOLOGY AND PHARMACOKINETICS.....	5P01 GM16496-10	479,278
BROOKS, GEORGE F.....	HUMAN IMMUNE RESPONSES TO N. GONORRHOEAE INFECTIONS.....	7R01 AI15642-01	48,718
BROWN, KENNETH T.....	NEUROPHYSIOLOGY OF THE VERTEBRATE RETINA.....	5R01 EY00468-19	174,658
BYERS, VERA S.....	IN VITRO STUDIES ON POISON OAK IMMUNITY IN HUMANS.....	5R01 AI12947-02	84,664
CALARCO, PATRICIA G.....	CELL SURFACE ANTIGENS IN EARLY MOUSE DEVELOPMENT.....	1R01 HD10884-01A1	94,352
CHAR, DEVRON H.....	UVEITIS: SPECIFIC AND NONSPECIFIC CELLULAR REACTIVITY.....	5R01 EY01759-03	41,147
CHAR, DEVRON H.....	EYE DISEASE HISTOCOMPATIBILITY ANTIGENS.....	5R01 EY02072-02	42,454
CHARLTON, VALERIE E.....	FETAL NUTRITION VIA THE GASTROINTESTINAL TRACT.....	5R01 HD11109-02	79,039
CHIERICI, GEORGE J.....	IN VIVO EXPERIMENTS ON BONE MUSCLE INTERACTION.....	1R01 DE05119-01	38,503
CLEMENTS, JOHN A.....	PULMONARY SCOR: NEONATAL RESPIRATORY DISTRESS SYNDROMES.....	5P50 HL19185-02	662,654
CLYMAN, RONALD I.....	PERINATAL CONTROL OF THE DUCTUS ARTERIOSUS.....	5R23 HL21409-02	39,300
COFFINO, PHILIP.....	CARCINOGEN TESTING: A MOUSE LYMPHOMA MUTATION SYSTEM.....	1R01 CA23218-01	62,669
CONNELL, CAROLYN J.....	THE EFFECT OF HCG ON SERTOLI CELLS.....	5R01 HD10033-04	51,017
COPENHAGEN, DAVID R.....	SYNAPTIC INTERACTION IN THE VERTEBRATE RETINA.....	5R01 EY01869-02	50,856
CORREIA, MARIA A.....	COLONIC CYTOCHROME P-450: CHEMICAL CARCINOGENESIS ROLE.....	5R26 CA22369-02	69,140
CREASY, ROBERT K.....	RESPONSES OF THE GROWTH RETARDED FETUS TO ACUTE STRESS.....	5R01 HD06619-06	91,642
DAENTL, DONNA L.....	POLYAMINES AND MAMMALIAN REPRODUCTION.....	5R01 HD10531-02	34,722
DALLMAN, PETER R.....	CELLULAR ADAPTATIONS TO IRON DEFICIENCY.....	5R01 AM13897-09	118,039
DAUPHINEE, MICHAEL J.....	THYMOSIN DEFICIENCY IN CANCER, AGING AND AUTOIMMUNITY.....	5R01 AG00991-02	42,892
DAUPHINEE, MICHAEL J.....	SUPPRESSOR DEFECT, AUTOIMMUNITY AND NEOPLASIA.....	5R01 CA22518-02	39,694
DAVIS, BRIAN.....	REGULATION OF AIRWAY MUCOUS GLANDS AND ION TRANSPORT.....	5R23 HL21150-02	39,001
DAWSON, CHANDLER R.....	ANALYSIS OF PROBLEMS IN OCULAR INFLAMMATORY DISEASES.....	5R01 EY00427-09	169,659
DAWSON, CHANDLER R.....	PATHOGENESIS AND EARLY DIAGNOSIS OF EYE INFLAMMATIONS.....	2R01 EY01198-04A1	132,147
DEDO, HERBERT H.....	PHYSIOLOGIC AND ACOUSTIC FACTORS IN SPASTIC DYSPHONIA.....	1R01 NS14199-01	49,759
DENNIS, MICHAEL J.....	PHYSIOLOGY OF SYNAPSES DEVELOPING IN VIVO.....	5R01 NS10792-06	68,433
DIAMOND, IVAN F.....	REGULATION OF RECEPTOR FUNCTION.....	1R01 NS14742-01	59,090
DRUMMOND, WILLA H.....	MECHANISMS OF FETAL AND NEONATAL ASPHYXIC SYNDROMES.....	3R01 HD10682-02S1	2,406
DRUMMOND, WILLA H.....	MECHANISMS OF FETAL AND NEONATAL ASPHYXIC SYNDROMES.....	2R01 HD10682-03	14,840
DURBIN, RICHARD P.....	SURFACE ENZYMES OF INTACT GASTRIC MUCOSA.....	5R01 AM18395-03	65,260
EKBLAD, E MARGARETA.....	CYCLIC NUCLEOTIDES IN GASTRIC ACID SECRETION.....	1R01 AM21448-01	36,490
ELIAS, HANS.....	GROWTH OF INTRAHEPATIC BILE DUCTS (CHOLANGIOGENESIS).....	5R01 AM19171-03	78,102
ELIAS, PETER M.....	NATURE OF THE MAMMALIAN CUTANEOUS PERMEABILITY BARRIER.....	5R01 AM19098-03	38,045
ELIAS, PETER M.....	NORMAL AND MALIGNANT KERATINOCYTE SURFACE STRUCTURE.....	5R01 CA19522-02	33,196
ELIAS, PETER M.....	ANTINEOPLASTIC ACTION OF VITAMIN A IN SKIN CANCER.....	1R01 CA22683-01	48,326
ENGLEMAN, EPHRAIM P.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20684-02	336,423
EPSTEIN, CHARLES J.....	MOLECULAR EFFECTS OF CHROMOSOMAL ANEUPLOIDY.....	5R01 GM24309-02	62,487
EPSTEIN, CHARLES J.....	BIOCHEMISTRY OF EARLY MAMMALIAN DEVELOPMENT.....	5R01 HD03132-11	86,560
EPSTEIN, ERVIN H, JR.....	GLUCOCORTICOID INTERACTION WITH HUMAN SKIN.....	2R01 AM18495-04	81,850
EPSTEIN, JOHN H.....	CHEMOTHERAPEUTIC AGENTS AND ULTRAVIOLET CARCINOGENESIS.....	5R01 CA15605-05	46,049
EPSTEIN, LOIS B.....	INTERFERON AS A MEDIATOR OF CELLULAR IMMUNITY.....	5R01 AI12481-04	101,765
EPSTEIN, WILLIAM L.....	ALLERGIC SKIN DISEASE COOPERATIVE GROUP.....	1P50 AI14752-01	199,023
EPSTEIN, WILLIAM L.....	STUDIES OF GRANULOMATOUS HYPERSENSITIVITY.....	5R01 AM07939-16	114,770
FAIRLEY, H B.....	ACUTE PULMONARY FAILURE: MECHANISMS MANAGEMENT.....	5R01 GM24023-03	32,310
FELTS, JAMES M.....	OROSOMUCOID AND NEPHROTIC LIPEMIA.....	1R01 AM21923-01	67,011
FIELDING, CHRISTOPHER J.....	REGULATION OF PLASMA TRIGLYCERIDE METABOLISM.....	5R01 HL18705-03	50,846
FISHMAN, ROBERT A.....	BRAIN EDEMA CLINICAL RESEARCH CENTER.....	1P50 NS14543-01	444,291
FISKE, MARJORIE E.....	PROGRAM PROJECT IN HUMAN DEVELOPMENT AND AGING.....	2P01 AG00002-07	64,500
FLACH, ALLAN J.....	SYMPATHETIC NERVE TERMINAL DEGENERATION POST EPINEPHRINE.....	5R01 EY02141-02	40,103

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
FORSHAM, PETER H.....	PANCREATIC ISLET FUNCTION IN DIABETES.....	5R01 AM12763-09	84,435
FORSHAM, PETER H.....	GENERAL CLINICAL RESEARCH CENTER FOR ADULTS.....	5M01 RR00079-16	1,209,548
FORSYTH, RALPH P.....	ENVIRONMENTAL FACTORS IN HYPERTENSION.....	3R01 HL19204-02S1	1,585
FORSYTH, RALPH P.....	ENVIRONMENTAL FACTORS IN HYPERTENSION.....	2R01 HL19204-03	74,405
FRICK, OSCAR L.....	ALLERGIC DISEASES CENTER.....	3P50 AI11010-05S1	7,477
FRIEDLAENDER, MITCHELL H.....	IMMUNOPATHOLOGY OF HYPERSENSITIVITY REACTIONS IN THE EYE.....	1R01 EY02502-01	75,792
FRIEDMAN, MICHAEL A.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17995-D3A1	99,301
FRIEND, DANIEL S.....	REVERSIBLE INFERTILITY AND SPERM MEMBRANE STRUCTURE.....	5R01 HD10445-02	61,903
FUKUYAMA, KIMIE.....	CYTOCHEMICAL STUDIES ON THE KERATINIZATION PROCESS.....	5R01 AM12433-11	125,792
GALLO, ROBERT V.....	BRAIN REGULATION OF THE ANTERIOR PITUITARY.....	3R01 HD05577-06S1	12,541
GALLO, ROBERT V.....	NEURAL REGULATION OF EPISODIC LH RELEASE.....	2R01 HD05577-07	91,900
GANONG, WILLIAM F.....	NEURAL AND HUMORAL CONTROL OF ENDOCRINE FUNCTION.....	2P01 AM06704-16	433,036
GOLDFIEN, ALAN.....	HORMONAL CONTROL OF UTERINE ADRENOTROPIC RECEPTORS.....	1R01 HD08006-01A2	104,514
GOLDFINE, IRA D.....	BINDING OF INSULIN TO NUCLEI.....	5R01 AM19415-02	53,906
GOLDSMITH, PAUL C.....	IMPROVED METHOD OF EM IMMUNOCYTOCHEMISTRY.....	5R01 HD10907-02	62,830
GOLDSTEIN, GARY W.....	METABOLIC ACTIVITY OF BRAIN CAPILLARIES.....	2R01 ES01164-04	75,771
GOLDSTEIN, GARY W.....	METABOLIC BASIS FOR DIABETIC MICROANGIOPATHY.....	5R01 HL22088-D2	76,687
GOLDSTEIN, LAWRENCE S.....	HIGH RADIATION DAMAGE IN GERM CELLS AND CULTURED EMBRYOS.....	1R01 CA22644-01	94,308
GOLDSTONE, JERRY.....	IN VIVO STUDIES OF THE GASTRIC MICROCIRCULATION.....	5R01 AM19248-03	34,412
GOLLAN, JOHN L.....	HEPATIC PATHWAYS OF HEME AND BILIRUBIN METABOLISM.....	1RD1 AM21899-01	86,028
GOODMAN, HOWARD M.....	TUMOR VIRUS, PLASMID & CELL ANALYSIS.....	5R01 CA14026-07	226,180
GOODMAN, JOEL W.....	STRUCTURE OF IMMUNOLOGIC DETERMINANTS OF PROTEINS.....	5RD1 AI05664-15	163,365
GOSPODAROWICZ, DENIS J.....	REGENERATION OF CORNEAL EPITHELIUM AND ENDOTHELIUM.....	1R01 EY02186-D1	102,212
GOSPODAROWICZ, DENIS J.....	CONTROL OF OVARIAN CELL PROLIFERATION.....	5R01 HD11082-02	92,042
GOSPODAROWICZ, DENIS J.....	MAINTENANCE AND REPAIR OF VASCULAR ENDOTHELIUM.....	5R01 HL20197-02	68,370
GOYAN, JERE E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RRD5453-16	74,393
GREENE, PATRICIA J.....	SEQUENCE-SPECIFIC DNA-PROTEIN INTERACTIONS.....	1RD1 GM25729-D1	51,668
GREENSPAN, JOHN S.....	LYMPHOCYTE FUNCTION IN RECURRENT APHTHOUS ULCERATION.....	1RD1 DED4736-01	65,305
GRODSKY, GEROLD M.....	INSULIN AND GLUCAGON SYNTHESIS AND SECRETION IN VITRO.....	5RD1 AMD141D-20	131,754
GRODSKY, GEROLD M.....	CHINESE HAMSTER PROGRAM PROJECT.....	1P01 AM21933-01	676,002
GRUMBACH, MELVIN M.....	HORMONAL EFFECTS ON GROWTH AND MATURATION.....	5R01 HD02335-13	146,984
GUTHRIE, CHRISTINE.....	BIOSYNTHESIS OF BACTERIOPHAGE T4 TRANSFER RNAS.....	5RD1 GM21119-05	61,966
HAASE, ASHLEY T.....	REPLICATION OF THE SLOW VIRUS VISNA.....	5R01 NS11782-04	55,504
HALL, JOAN M.....	THE NATURE AND SEQUENCE OF OCULAR IMMUNE RESPONSE.....	5RD1 EYD1182-04	62,362
HALL, ZACH W.....	POSTSYNAPTIC PROTEINS AT THE NEUROMUSCULAR JUNCTION.....	5RD1 NS13521-03	63,252
HAMILTON, WILLIAM K.....	ANESTHESIA RESEARCH CENTER.....	5P5D GM15571-10	607,148
HARVOLD, EGIL P.....	EXPERIMENTAL STUDY ON THE ETIOLOGY OF MALOCCLUSION.....	5RD1 DE02739-10	178,105
HATTNER, ROBERT S.....	BRAIN TUMOR IMAGING USING A NOVEL POSITRON CAMERA.....	5RD1 CA19D20-03	46,884
HAVEL, RICHARD J.....	CARDIOVASCULAR-RESPIRATORY PHYSIOLOGY AND BIOCHEMISTRY.....	3PD1 HLD6285-17S1	285
HAVEL, RICHARD J.....	CARDIOVASCULAR-RESPIRATORY PHYSIOLOGY AND BIOCHEMISTRY.....	5P01 HL06285-18	3,895,412
HAVEL, RICHARD J.....	SUPPORT FOR ARTERIOSCLEROSIS CENTER.....	5P50 HL14237-07	896,462
HEUSER, JOHN E.....	THE STRUCTURAL BASIS OF NEUROSECRETION.....	2RD1 NS11979-D4	84,455
HINMAN, FRANK, JR.....	FUNCTION AND DEFENSES OF URETHRAL EPITHELIUM.....	2R01 AM10045-12	44,626
HITZEMANN, ROBERT J.....	SYNAPTIC MEMBRANES, GLYCOPROTEINS AND DEVELOPMENT.....	1R01 NS13398-01A1	64,608
HOLLENBERG, MILTON.....	REGULATION OF MYOCARDIAL CELL GROWTH.....	1R01 HL22664-01	53,592
HONDEGHEM, LUC M.....	ANTIARRHYTHMIC DRUG ACTION ON VMAX OF CARDIAC CELLS.....	1RD1 HL21672-D1	73,024
HOROWITZ, MARDI J.....	THE IMPACT OF STRESS ON CORONARY HEART DISEASE.....	2R01 HL17580-04	47,189
HOSHINO, TAKAO.....	CHEMOTHERAPY & PERTURBED BRAIN TUMOR CELL KINETICS.....	2RD1 CA19992-D3	51,600
HOSKINS, H DUNBAR, JR.....	CONGENITAL GLAUCOMA: CLASSIFICATION, ETIOLOGY, THERAPY.....	5RD1 EYD1559-D3	54,591
HOWELL, STEPHEN B.....	THYMIDINE RESCUE OF HIGH DOSE METHOTREXATE.....	1RD1 CA23334-D1	93,425
HOWES, EDWARD L, JR.....	PATHOGENESIS OF ALTERED OCULAR VASCULAR PERMEABILITY.....	5RD1 EYDD56-D9	37,079
HUMPHREYS, MICHAEL H.....	CIRCULATORY HEMODYNAMICS AND SODIUM EXCRETION.....	1RD1 HL22482-01	54,005
HUNT, C ANTHONY.....	LIPOSOMES AS IN VIVO DRUG/THIOPURINE NUCLEOTIDES PRODRUG.....	1R01 GM24612-01	29,085
HUNT, THOMAS K.....	A STUDY OF WOUND HEALING AND WOUND INFECTION.....	5RD1 GM12829-14	137,250
HUSSAIN, M ZAMIRUL.....	MECHANICAL MECHANISMS OF PERIODONTAL DISEASE.....	5R23 DE04752-02	27,526
IVARIE, ROBERT D.....	MUTATIONS AFFECTING GENE EXPRESSION IN TUMOR CELLS.....	1RD1 CA23046-D1	36,748
JAFFE, ROBERT B.....	REGULATION OF THE HUMAN HYPOTHALAMIC-PITUITARY SYSTEM.....	2RD1 HDD8D35-04A1	90,346
JAFFE, ROBERT B.....	PRIMATE ENDOCRINE REGULATION IN THE PERINATAL PERIOD.....	2RD1 HDD8478-D4	92,619
JAMES, THOMAS L.....	MAGNETIC RESONANCE STUDIES OF SICKLE CELL DISEASE.....	5RD1 AM19D47-D3	26,865
JAMES, THOMAS L.....	NMR T1P STUDIES OF MOTIONS IN PROTEINS AND MEMBRANES.....	1RD1 GM25D18-D1	41,671

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
JAMES, THOMAS L.....	NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY RESOURCE.....	5P41 RR00892-03	58,616
JAWETZ, ERNEST.....	VIRAL KERATOCONJUNCTIVITIS AND RELATED DISORDERS.....	5R01 EY00186-24	109,082
JOHNSON, KENNETH P.....	MULTIPLE SCLEROSIS AND VIRAL INFECTIONS OF THE CNS.....	1P50 NS14069-01	470,015
JORGENSEN, EUGENE C.....	THYROID HORMONE ANALOGS.....	2R01 AM17576-04	73,361
KALTREIDER, H BENFER.....	IMMUNE FUNCTIONS OF THE LUNG.....	5R01 AI12296-04	63,236
KAMIN, ROBERTA M.....	IMMUNE INTERFERONS: PRODUCTION AND ROLE IN IMMUNITY.....	1R01 CA25035-01	64,974
KAN, YUET W.....	STUDY OF ABNORMAL HEMOGLOBIN SYNTHESIS.....	5R01 AM16666-06	112,065
KATZUNG, BERTRAM G.....	DEPOLARIZATION INDUCED CARDIAC AUTOMATICITY.....	2R01 HL17452-04	70,627
KELLY, REGIS B.....	PROTEINS OF THE MAMMALIAN VISUAL SYSTEM.....	1R01 EY02306-01	62,526
KELLY, REGIS B.....	BIOCHEMISTRY OF SYNAPTIC TRANSMISSION.....	2R01 NS09878-08	93,943
KENYON, GEORGE L.....	ACTIVE SITES OF CREATINE KINASE FROM HEART AND MUSCLE.....	2R01 AM17323-06	60,902
KIDD, PARRIS M.....	HEART DEVELOPMENT IN HAMSTER INHERITED CARDIOMYOPATHY.....	1R23 HL22959-01	37,129
KIM, YOUNG S.....	INTESTINAL PEPTIDE HYDROLASES AND PEPTIDE TRANSPORT.....	5R01 AM17938-05	63,501
KIM, YOUNG S.....	STUDY OF GLYCONJUGATES IN COLONIC NEOPLASIA.....	5R26 CA14905-06	122,013
KIM, YOUNG S.....	CELL SURFACE GLYCOCONJUGATES IN PANCREATIC CANCER.....	1R26 CA24321-01	56,522
KORENBROT, JUAN I.....	RHODOPSIN AND LIGHT-TRANSDUCTION IN ROD PHOTORECEPTORS.....	2R01 EY01586-04	87,511
KORNBERG, THOMAS B.....	IN VITRO RECONSTRUCTION OF GENE EXPRESSION.....	1R01 GM25581-01	91,334
KRAMER, STEVEN G.....	RETINAL DOPAMINE AND ERG FLICKER SUPPRESSION.....	5R01 EY01373-02	42,747
KRAMER, STEVEN G.....	VISION RESEARCH CENTER (CORE FACILITIES).....	1P30 EY02162-01	147,967
KREVSAN, JULIUS R.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00083-16	669,413
KREVSAN, JULIUS R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05355-17	200,462
KUHN, ROBERT W.....	STRUCTURE AND FUNCTION OF STEROID-BINDING PROTEINS.....	5R01 HD10328-03	54,434
KUNTZ, IRWIN D, JR.....	HYDRATION OF MACROMOLECULES.....	2R01 GM19267-07	58,589
LA VAIL, JENNIFER H.....	RETROGRADE AXONAL TRANSPORT IN THE VISUAL SYSTEM.....	2R01 NS13533-03	87,999
LA VAIL, MATTHEW M.....	CELLULAR MECHANISMS OF INHERITED RETINAL DEGENERATION.....	3R01 EY01919-02S1	107,632
LA VAIL, MATTHEW M.....	CELLULAR MECHANISMS OF INHERITED RETINAL DEGENERATION.....	2R01 EY01919-03	129,791
LANGRIDGE, ROBERT.....	SPECIAL RESEARCH RESOURCE FOR BIOMOLECULAR GRAPHICS.....	3P41 RR01081-02S1	50,979
LEVY, JAY A.....	C-TYPE VIRUSES IN AUTOIMMUNE DISEASE AND NEOPLASIA.....	2R01 CA13086-07	84,624
LI, CHOH H.....	PITUITARY LACTOGENIC AND GONADOTROPIC HORMONES.....	5R01 AM06097-25	110,387
LI, CHOH H.....	HCS(HPL): STRUCTURE-FUNCTION RELATIONSHIPS.....	5R01 AM18677-03	64,213
LI, CHOH H.....	ACTH AND RELATED PEPTIDES.....	5R01 GM02907-27	115,219
LIBET, BENJAMIN.....	SYNAPTIC TRANSMISSION IN AUTONOMIC GANGLIA.....	2R01 NS00884-22	77,304
LIE-INJO, LUAN E.....	SEVERAL ASPECTS OF ABNORMAL RED BLOOD CELL METABOLISM.....	1R01 AM21571-01	57,990
LIE, KIAN J.....	BIOLOGICAL CONTROL OF SCHISTOSOMES.....	5R22 AI08520-11	77,092
MADDOX, DAVID A.....	FACTORS REGULATING SALT EXCRETION IN THE RAT.....	5R01 AM19396-03	51,181
MARGULIS, ALEXANDER R.....	STUDY OF DIAGNOSTIC RADIOLOGY.....	5P01 GM21017-05	210,439
MARTIAL, JOSEPH A.....	PURIFICATION AND REGULATION OF THE PROLACTIN GENE.....	1R01 GM25549-01	117,363
MARTIN, DAVID W, JR.....	STUDIES IN GENETIC REGULATION OF PURINE METABOLISM.....	1R01 AM20428-01	105,439
MARTON, LAURENCE J.....	POLYAMINES, POLYAMINE ANTIMETABOLITES AND CELL GROWTH.....	2R01 CA15515-04	40,496
MC CARTHY, BRIAN J.....	TRANSCRIPTION OF HISTONE GENES FROM CHROMATIN.....	5R01 GM20287-06	67,848
MC CARTHY, BRIAN J.....	PUFFING AND RNA SYNTHESIS IN DROSOPHILA CHROMOSOMES.....	1R01 GM25584-01	53,636
MC KENDALL, ROBERT R.....	HOST DEFENSES IN HERPESVIRUS DISEASES OF THE CNS.....	1R23 AI14564-01	35,580
MC SHERRY, ELIZABETH.....	GROWTH, ACIDOSIS & RENAL DISORDER IN TYPE 1 RTA.....	1R01 AM21771-01	45,220
MENTZER, WILLIAM C, JR.....	NORTHERN CALIFORNIA SICKLE CELL CENTER.....	1P60 HL20985-01	751,053
MERZENICH, MICHAEL M.....	FUNCTIONAL ORGANIZATION OF THE AUDITORY SYSTEM.....	3R01 NS10414-06S1	7,382
MERZENICH, MICHAEL M.....	FUNCTIONAL ORGANIZATION OF THE AUDITORY SYSTEM.....	2R01 NS10414-07	66,416
MERZENICH, MICHAEL M.....	DEVELOPMENT OF AN ACOUSTIC PROSTHESIS.....	5R01 NS11804-05	224,264
MILLER, ARTHUR J.....	MUSCULAR DISORDERS IN CRANIOFACIAL MALFORMATIONS.....	1R01 DE04940-01	68,246
MILLER, ARTHUR J.....	ASPECTS OF POSTNATAL DEVELOPMENT WITHIN THE BRAIN STEM.....	2R01 HD09841-04	31,383
MILLER, MALCOLM R.....	INNERVATIONAL STUDIES OF AUDITORY PAPILLAE.....	2R01 NS11838-03	62,494
MORALES, MANUEL F.....	FUNCTION AND GROWTH OF CARDIAC AND SKELETAL MUSCLE.....	5P01 HL16683-04	227,723
MORRIS, R CURTIS, JR.....	DETERMINANTS OF 1,25-(OH)2D3 PRODUCTION IN -D CHICKS.....	1R01 AM21354-01A1	110,871
NADEL, JAY A.....	PULMONARY SCOR: CHRONIC DISEASES OF AIRWAYS.....	5P50 HL19156-02	385,694
NICHOLS, BARBARA A.....	ROLE OF MONONUCLEAR PHAGOCYTES IN PATHOLOGIC STATES.....	5R01 AI11639-05	48,767
NICOLL, ROGER A.....	EFFECT OF BARBITURATES ON SYNAPTIC TRANSMISSION.....	5R01 GM23478-02	39,888
O'CONNOR, G RICHARD.....	STUDY OF OCULAR TOXOPLASMOSIS.....	5R01 EY01204-05	143,731
O'CONNOR, G RICHARD.....	INFLAMMATORY DISEASES OF THE EYE: CORE SUPPORT.....	5P30 EY01597-04	108,808
O'DONNELL, JAMES J.....	RETINITIS PIGMENTOSA-INBORN ERROR OF RPE PHAGOCYTOSIS.....	5R01 EY01786-03	85,670
OCKNER, ROBERT K.....	LIPID METABOLISM IN INTESTINE AND LIVER.....	5R01 AM13328-09	120,309
OH, JANG O.....	RECURRENT HERPES SIMPLEX UVEITIS.....	5R01 EY00964-04	75,163

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
OH, JANG O.....	EYE INFECTIONS BY TYPE 2 HERPES SIMPLEX VIRUS.....	5R01 EY01578-03	71,347
OPPENHEIMER, NORMAN J.....	STRUCTURE-FUNCTION RELATIONS IN PYRIDINE COENZYMES.....	5R01 GM22982-03	40,078
ORTIZ DE MONTELLANO, PAUL.....	SELECTIVE OESTRUCTON OF CYTOCHROME P450 BY DRUGS.....	1R01 GM25515-01	66,531
ORTIZ DE MONTELLANO, PAUL.....	MECHANISM AND CONTROL OF STEROL BIOSYNTHESIS.....	5R01 HL15476-05	54,710
OSTLER, H BRUCE.....	DIAGNOSIS OF BACTERIAL ENDOPHTHALMITIS.....	5R01 EY01922-02	75,950
OWENS, ELMER.....	HEARING AIDS AND REHABILITATION FOR HEARING LOSS.....	5R01 NS12998-03	86,681
PAPAHADJOPOULOS, P D.....	PHOSPHOLIPID-PROTEIN INTERACTIONS AND MEMBRANE FUNCTION.....	7R01 GM26369-01	72,181
PAPKOFF, HAROLD.....	STUDIES ON PREGNANT MARE SERUM GONADOTROPIN.....	2R01 HD05722-06	71,192
PARER, JULIAN T.....	FETAL HEART RATE PATTERNS AND FETAL OXYGENATION.....	5R01 HD09980-03	67,716
PARMLEY, WILLIAM W.....	FUNCTIONAL INFARCT SIZE BY GATED RADIOANGIOGRAPHY.....	5R01 HL21793-02	146,926
PAVONE, BEN W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05305-17	39,160
PETRAKIS, NICHOLAS L.....	GENETIC EPIDEMIOLOGY AND NATURAL HISTORY OF CANCER.....	5P01 CA13556-07	644,689
PHILLIPS, THEODORE L.....	THE THERAPEUTIC RATIO AND EXPERIMENTAL RADIO THERAPY.....	2R01 CA17227-04	176,881
PHILLIPS, THEODORE L.....	EXPERIMENTAL COMBINEO RADIO THERAPY-CHEMOTHERAPY.....	5R01 CA20529-03	257,604
PHILLIPS, THEODORE L.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA21439-02	86,869
PHILLIPS, THEODORE L.....	DEVELOPMENT OF A CT SCANNER FOR RADIATION THERAPY.....	5R01 CA21842-02	76,792
PHILLIPS, THEODORE L.....	EXTENDED RADIO THERAPY FOR PROSTATIC NEOPLASM.....	5R26 CA22389-02	25,122
PHILLIPS, THEODORE L.....	COMBINED MODALITIES: CHEMOTHERAPY/RADIO THERAPY.....	1R13 CA25081-01	71,850
PICKART, LOREN R.....	BIOLOGICAL AND SYNTHETIC MODULATORS OF CELL GROWTH.....	1R01 CA25741-01	48,473
PIEL, CAROLYN.....	VITAMIN D METABOLITES BY MASS SPECTROMETRY.....	1R01 AM19981-01A1	54,077
PIPER, WALTER N.....	LEAD TOXICITY RELATED TO HEME BIOSYNTHESIS.....	2R01 ES01343-04	102,524
PIPER, WALTER N.....	TOXICANT DEREGULATION OF ENDOCRINE HEME BIOSYNTHESIS.....	1R01 ES01941-01	93,258
PRUSINER, STANLEY B.....	SLOW BRAIN DISEASE: ASSAY AND PURIFICATION OF SCRAPIE.....	3R01 NS11917-03S1	5,237
RALSTON, HENRY J, III.....	SYNAPTIC ORGANIZATION IN SPINAL CORD AND THALAMUS.....	5R01 NS11614-05	84,178
RAMACHANDRAN, JANAKIRAMAN.....	PITUITARY HORMONES IN NORMAL AND NEOPLASTIC GROWTH.....	2R01 CA16417-04	85,539
RAMSAY, DAVID J.....	THIRST AND ITS CONTRIBUTION TO EDEMA.....	5R01 HL18862-02	72,995
RAPOPORT, BASIL.....	THYROID STIMULATORS IN HEALTH AND OISEASE.....	5R01 AM19289-03	65,220
ROSEN, STEVEN O.....	CELL ADHESION IN SLIME MOLDS AND HIGHER CELLS.....	5R01 GM23547-02	24,394
ROSENAU, WERNER.....	LYMPHOTOXIN IN CELL-MEOIATED TUMOR IMMUNITY.....	3R01 CA07191-14S1	19,324
ROTHMAN, STEPHEN S.....	SECRETION OF PROTEINS AND IONS BY THE PANCREAS.....	5R01 AM16990-05	82,109
RUONICK, ALBERT.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEIOICAL RESEARCH.....	5R07 AI10051-18	470,080
RUONICK, ALBERT.....	THE FOREST CYCLES OF OENGUE IN MALAYSIA.....	5R22 AI11540-06	101,217
RUTTER, WILLIAM J.....	OIFFERENTIATION IN THE ENDOCRINE ANO EXOCRINE PANCREAS.....	5R01 AM21344-02	124,439
RUTTER, WILLIAM J.....	GENE EXPRESSION AND REPLICATION IN EUCARYOTIC ORGANISMS.....	5R01 GM21830-04	168,401
RYNING, FRANK W.....	CMV INFECTION AND PULMONARY OEFENSE MECHANISMS.....	1R23 AI15194-01	35,070
SALAMY, ALBERT.....	FAR-FIELD POTENTIALS IN BRAINSTEM MALDEVELOPMENT.....	2R01 NS12424-04	27,062
SANTI, DANIEL V.....	CHEMOTHERAPY WITH INHIBITORS OF PROTEIN SYNTHESIS.....	5R01 CA14266-06	84,678
SANTI, OANIEL V.....	THYMIOYLATE SYNTHETASE ANO RELATED ENZYMES.....	2R01 CA14394-07	93,960
SCHACHTER, JULIUS.....	MICROIMMUNOFLUORESCENCE WITH CHLAMYDIA PSITTACI.....	1R01 AI14540-01	34,436
SCHACHTER, JULIUS.....	EPIDEMIOLOGY OF CERVICAL CANCER: CHLAMYDIAE & HERPES.....	3R01 CA14427-05S1	32,868
SCHACHTER, JULIUS.....	INCLUSION CONJUNCTIVITIS OF THE NEWBORN.....	1R01 EY02216-01	90,448
SCHACHTER, JULIUS.....	HUMAN INFERTILITY: CHLAMOIAL ROLE ASSESSED IN VITRO.....	1R01 HD12271-01	59,621
SCHAMBELAN, MORRIS.....	RENIN, ANGIOTENSIN, STEROIOS, IONS AND BLOOD PRESSURE.....	5R01 HL11046-12	85,225
SCH EINMAN, MELVIN M.....	PROSPECTIVE BUNOLE BRANCH BLOCK STUDY.....	5R01 HL20238-02	69,028
SCHILLER, NELSON B.....	CARDIAC VOLUME BY BIPLANE ECHOCARDIOGRAPHY.....	1R23 HL22787-01	43,370
SCHMID, RUDI.....	STUOIES OF BILE PIGMENT METABOLISM.....	3R01 AM11275-12S1	55,693
SCHMID, RUDI.....	STUDIES OF BILE PIGMENT METABOLISM.....	5R01 AM11275-13	200,867
SCHMID, RUDI.....	INTERDISCIPLINARY LIVER RESEARCH PRDGRAM.....	5P50 AM18520-04	534,050
SCHMUCKER, DOUGLAS L.....	AGING EFFECTS ON HEPATIC STRUCTURE AND FUNCTION.....	5R01 AG00357-02	56,925
SEDAT, JOHN W.....	A STUDY OF EUCARYOTIC INTERPHASE CHRDMOSOMES.....	1R01 GM25101-01	75,611
SHAFAER, RICHARD H.....	VISCOELASTIC ANALYSIS OF BRAIN AND TUMDR DNA.....	2R01 CA19658-03	36,971
SHAH, SHANTILAL N.....	DEVELOPMENTAL REGULATION OF BRAIN STEROL SYNTHESIS.....	5R01 NS11670-05	51,410
SHETLAR, MARTIN O.....	PHOTO INDUCEO ONA-PRDTEIN CROSS-LINKING IN CHROMATIN.....	5R01 GM23526-02	55,410
SHIPP, THOMAS F.....	SEQUENTIAL NEUROMECHANICAL EVENTS TO INITIATE VOICE.....	1R01 NS14729-01	9,442
SHOHET, STEPHEN B.....	MEMBRANE LIPID AND PROTEIN METABDLISM IN BLDDO CELLS.....	3R01 AM16095-06S1	12,401
SHOHET, STEPHEN B.....	MEMBRANE LIPID AND PROTEIN METABOLISM IN BLDDD CELLS.....	5R01 AM16095-07	99,498
SHUMAN, MARC A.....	BLOOD CLDTING KINETICS STUDIED BY RADIOIMMUNOASSAY.....	5R01 HL21403-02	52,072
SIEGEL, ROBERT C.....	LYSYL DXIDASE MEDIATED COLLAGEN CRDSS-LINKING.....	5R01 AM16424-06	51,023
SIITERI, PENTTI K.....	DYNAMICS OF ESTROGEN BIOSYNTHESIS.....	5R01 H008692-05	137,088
SILVERMAN, SOL, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17914-04	83,980

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SINGER, THOMAS P.....	MEMBRANE-BOUND ENZYMES IN HEART AND OTHER TISSUES.....	2P01 HL16251-06	452,357
SIPERSTEIN, MARVIN D.....	CHOLESTEROL METABOLISM IN NORMAL AND MALIGNANT LIVER.....	5R01 CA15979-05	152,803
SMOLIN, GILBERT.....	ALTERATIONS OF CORNEAL IMMUNOLOGIC REACTIONS.....	5R01 EY01121-06	61,824
SMUCKLER, EDWARD A.....	CYTOCHEMICAL STUDIES IN LIVER INJURY.....	5R01 AM19843-03	91,668
SMUCKLER, EDWARD A.....	PATHOLOGY OF CHEMICAL CARCINOGENESIS.....	5R01 CA21141-02	128,800
STAUB, NORMAN C.....	PATHOPHYSIOLOGY OF PULMONARY EDEMA.....	5P50 HL19155-02	370,285
STEINBERG, ROBERT A.....	REGULATION OF CYCLIC AMP-DEPENDENT PROTEIN KINASE.....	1R23 CA24334-01	32,490
STEINBERG, ROY H.....	PIGMENT EPITHELIUM INTERACTIONS WITH NEURAL RETINA.....	5R01 EY01429-05	134,112
STITES, DANIEL P.....	STUDY OF FETO-PLACENTAL-MATERNAL INTERACTION.....	2R01 HD03939-10	63,451
STOBO, JOHN D.....	HETEROGENEITY OF THYMUS DERIVED LYMPHOCYTES.....	1R01 AI14104-01A1	78,878
STOECKENIUS, WALTHER.....	PHOTOENERGY TRANSDUCTION IN HALOBACTERIUM.....	5R01 GM23651-02	89,658
STROUD, ROBERT M.....	STRUCTURE AND FUNCTION OF PROTEINS AT MOLECULAR LEVEL.....	5R01 GM24485-02	80,325
TALAL, NORMAN.....	SIGNIFICANCE OF ANTINUCLEIC ACID ANTIBODIES IN LUPUS.....	2R01 AM16140-07	63,644
THALER, M MICHAEL.....	DEVELOPMENTAL ASPECTS OF HEPATOBILIARY METABOLISM.....	2R01 HD03148-11	140,943
THALER, M MICHAEL.....	FETAL BILIARY MALFORMATIONS: INDUCTION AND PREVENTION.....	1R01 HD11645-01	69,708
TREVOR, ANTHONY J.....	PHARMACOLOGICAL PROPERTIES OF KETAMINE ENANTIOMORPHS.....	1R01 GM23918-01	38,521
TRUNKEY, DONALD D.....	INTRACELLULAR MEDIATORS DURING SEPTIC AND BURN SHOCK.....	1R01 GM25078-01	84,027
VALENZUELA, PABLO.....	STRUCTURE AND TRANSCRIPTION OF RIBOSOMAL RNA GENES.....	1R01 GM25157-01	41,332
VARMUS, HAROLD E.....	MOLECULAR BIOLOGY OF MOUSE MAMMARY TUMOR VIRUS.....	5R01 CA19287-03	93,848
VEITH, ILZA.....	FROM DRAGONBLOOD TO INSULIN: THE HISTORY OF DIABETES.....	1R01 LM03009-01	20,542
VESSEY, DONALD A.....	CHARACTERIZATION OF MICROSOMAL BILE ACID CONJUGATION.....	5R01 AM19212-03	37,234
WALLERSTEIN, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05755-05	73,491
WARNOCK, DAVID G.....	URINARY ACIDIFICATION BY ISOLATED RENAL TUBULES.....	5R01 AM19407-03	61,678
WARNOCK, MARTHA L.....	ABESTOS AND CANCER.....	1R01 ES02117-01	42,710
WATSON, JOHN A.....	EFFECTORS OF CHOLESTEROL SYNTHESIS.....	2R01 HL16294-04A1	47,956
WEINER, RICHARD I.....	ROLE OF BRAIN MONOAMINES IN LH AND PROLACTIN RELEASE.....	2R01 HD08924-04A1	87,282
WILLIAMS, JOHN A.....	REGULATION OF PANCREATIC ACINAR FUNCTION BY INSULIN.....	1R01 AM21089-01	78,892
WILLIAMS, JOHN A.....	ROLE OF CELL MEMBRANE IN HORMONE SECRETION AND ACTION.....	2R01 GM19998-05A1	81,891
WILSON, CHARLES B.....	CORRELATED STUDY OF METABOLIC REGULATION IN NEOPLASIA.....	3P01 CA13525-06S1	456,425
WISSIG, STEVEN L.....	ULTRASTRUCTURAL STUDIES OF CAPILLARY PERMEABILITY.....	5R01 HL04512-19	62,340
WOLFF, MANFRED E.....	STUDIES ON RECEPTORS WITH SITE SPECIFIC STEROIDS.....	2R01 AM14824-07	69,347
WONG-RILEY, MARGARET T.....	ORGANIZATION AND CONNECTIONS OF VISUAL CORTEX.....	5R01 NS12995-03	51,012
YAMAMOTO, KEITH R.....	GENE REGULATION BY STEROID RECEPTOR PROTEINS.....	5R01 CA20535-02	76,809
YANG, JEN T.....	OPTICAL ROTATORY POWER OF BIOPOLYMERS.....	5R01 GM10880-19	114,612
YANG, JEN T.....	STEREOCHEMICAL MECHANISM OF SICKLING OF HEMOGLOBIN S.....	2R01 HL18818-04	51,738
ZIPPIN, CALVIN.....	CONFERENCES FOR PERSONNEL OF CANCER DATA PROGRAMS.....	1R13 CA23655-01	88,316
ZIPPIN, CALVIN.....	LATE EFFECTS OF RADIATION THERAPY FOR CERVICAL CANCER.....	1R01 CA24200-01	31,876
ORGANIZATION TOTAL	289	35,865,883	
UNIVERSITY OF THE PACIFIC ZIP CODE 94115			
INESI, GIUSEPPE.....	CALCIUM ION AND CONTROL OF CARDIOVASCULAR FUNCTION.....	5P01 HL16607-05	267,580
RYGE, GUNNAR.....	CORROSION AND CLINICAL BEHAVIOR OF DENTAL AMALGAM.....	5R01 DE04516-02	93,323
RYGE, GUNNAR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05301-11	25,206
ORGANIZATION TOTAL	3	386,109	
SAN JOSE			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN JOSE STATE UNIVERSITY ZIP CODE 95192			
FOWLER, ROBERT G.....	SPECIFICITY OF METAL MUTAGENESIS IN ESCHERICHIA COLI.....	1R01 GM25321-01	29,938
ORGANIZATION TOTAL	1	29,938	
SANTA CLARA VALLEY MEDICAL CENTER ZIP CODE 95128			
MILES, LAUGHTON E.....	CHRONOBIOLOGICAL DISORDERS IN BLIND PEOPLE.....	1R01 EY02614-01	82,401
O'REILLY, ROBERT A.....	ANALYTIC DEVELOPMENT OF PHARMACOKINETIC TOOLS.....	5R01 GM22860-03	78,805
RABKIN, RALPH.....	THE KIDNEY INSULIN, PROINSULIN AND C-PEPTIDE.....	7R01 AM25313-01	32,752
ORGANIZATION TOTAL	3	193,958	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SANTA BARBARA			
SANTA BARBARA BOTANIC GARDEN ZIP CODE 93105			
WALTERS, MARTA S.....	MEIOSIS: A REVISED SEQUENCE OF EVENTS IN PROPHASE.....	5R01 GM19272-05	37,080
ORGANIZATION TOTAL	1 37,080		
SPEECH COMMUNICATIONS RESEARCH LABORATORY ZIP CODE 93109			
BROAD, DAVID J.....	INVERSE FILTERING FOR DETECTING LARYNGEAL PATHOLOGY.....	1R01 NS13309-01A1	72,237
ORGANIZATION TOTAL	1 72,237		
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106			
ANDERSON, DON H.....	RELATIONSHIP OF MAMMALIAN CONES TO PIGMENT EPITHELIUM.....	5R01 EY02082-02	49,171
BRUCE, THOMAS C.....	BIOCHEMICAL MECHANISMS—ENZYMES, CANCER AND MODELS.....	5R01 AM09171-15	144,037
CARBON, JOHN A.....	STUDIES ON GENE ORGANIZATION AND EXPRESSION.....	5R01 CA11034-10	159,254
CARLISLE, HARRY J.....	EFFECT OF OVARIAN STEROIDS ON THERMOREGULATION.....	5R01 HD10473-02	59,332
ENGLESBERG, ELLIS.....	THE HUMAN LYMPHOCYTE AND LYMPHOBLAST.....	5R01 CA18644-03	18,188
FISHER, STEVEN K.....	STUDIES ON THE DEVELOPING AND ADULT VISUAL SYSTEM.....	5R01 EY00888-07	54,812
GOTTSDANKER, ROBERT M.....	AGING AND PREPARATION FOR RAPID RESPONSE.....	5R01 AG00011-02	35,914
HOOKE, THOMAS M, JR.....	CONFORMATIONS OF BIOLOGICALLY IMPORTANT MOLECULES.....	5R01 GM18092-06	35,166
HUBBARD, ARTHUR T.....	ELECTROANALYSIS OF CENTRAL CATECHOLAMINE NEURONS.....	5R01 NS13556-03	37,548
JACOBS, GERALD H.....	CONE-DOMINATED AND ROD-DOMINATED VISUAL SYSTEMS.....	5R01 EY00105-09	81,743
JACOBS, GERALD H.....	WITHIN-SPECIES VARIATIONS IN VISUAL CAPACITY.....	5R01 EY02052-02	55,037
LARIS, PHILIP C.....	EXTRINSIC FLUORESCENCE AND MEMBRANE POTENTIALS.....	5R01 CA19234-05	48,495
LARIS, PHILIP C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07099-12	89,112
LEE, NANCY L.....	GENETIC CONTROL OF PROTEIN SYNTHESIS IN E. COLI.....	2R01 GM14652-12	68,007
LITTLE, R DANIEL.....	1,3-DIYL TRAPPING REACTIONS IN ORGANIC SYNTHESIS.....	5R01 CA21144-02	36,722
NICOLI, DAVID F.....	NEW TECHNIQUES FOR FLUORESCENCE IMMUNOASSAY.....	1R01 AI15073-01	23,573
ORIAS, EDUARDO.....	CONDITIONAL LETHAL MUTANTS OF TETRAHYMENA.....	2R01 GM19290-07	87,924
ORIAS, EDUARDO.....	GENETIC DISSECTION OF PHAGOCYTOSIS IN TETRAHYMENA.....	2R01 GM21067-04	57,312
PARSONS, STANLEY M.....	BIOCHEMISTRY OF HISTIDINE REPRESSION.....	5R01 GM23031-03	92,644
PURICH, DANIEL L.....	PHOSPHOTRANSFERASE CATALYSIS AND REGULATION.....	5R01 GM24039-02	40,033
ROBERTS, CHARLES T, JR.....	GENETIC REGULATION BY CYCLIC AMP IN TETRAHYMENA.....	1R01 GM25652-01	56,380
SAMUEL, CHARLES E.....	MECHANISM OF INTERFERON ACTION.....	2R01 AI12520-04	65,344
SEARS, DUANE W.....	STRUCTURES OF HISTOCOMPATIBILITY-2 MEMBRANE ANTIGENS.....	1R01 CA24433-01	72,948
WILSON, LESLIE.....	DRUG INTERACTIONS WITH BRAIN MICROTUBULE PROTEINS.....	2R01 NS13560-03	108,846
ORGANIZATION TOTAL	24 1,577,542		
SANTA CRUZ			
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ ZIP CODE 95064			
BERGER, RALPH J.....	THERMOREGULATION DURING SLEEP AND TORPOR IN MAMMALS.....	5R01 GM23694-03	59,017
BRIDGEMAN, BRUCE.....	TEMPORAL CODING AND PROCESSING IN MONKEY VISUAL CORTEX.....	3R01 EY01482-03S1	4,866
DANIEL, CHARLES W.....	STUDIES ON HORMONE-DEPENDENT MOUSE MAMMARY TUMORS.....	5R01 CA18464-03	57,400
DAVIS, WILLIAM J.....	NEURAL BASIS OF BEHAVIORAL HIERARCHIES AND PLASTICITY.....	5R01 NS09050-09	103,869
DRATZ, EDWARD A.....	STRUCTURE AND FUNCTION OF VISUAL PHOTORECEPTORS.....	5R01 EY00175-09	57,878
DRATZ, EDWARD A.....	STUDIES OF THE PREVENTION OF RETINAL ROD DEGENERATION.....	3R01 EY01521-03S1	5,911
DRATZ, EDWARD A.....	ANTIOXIDANTS AND RETINA-PIGMENT EPITHELIUM FUNCTION.....	2R01 EY01521-04	90,666
FELDMAN, JERRY F.....	GENETIC ANALYSIS OF BIOLOGICAL CLOCK MECHANISMS.....	5R01 GM22144-04	65,236
FINK, ANTHONY L.....	ENZYME-CATALYZED REACTIONS AT SUBZERO TEMPERATURES.....	2R01 GM20555-04	68,795
HINEGARDNER, RALPH T.....	IMMUNOLOGY OF THE SEA URCHIN.....	1R01 AI14785-01	40,245
KLIGER, DAVID S.....	INVESTIGATION OF THE BLEACHING STAGES OF RHODOPSIN.....	5R01 EY00983-06	39,141
MAYER, MELANIE J.....	DEVELOPMENT OF ANISOTROPIC VISUAL SENSITIVITY.....	1R01 EY02445-01	40,639
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF APHIDICOLIN.....	5R01 AI14127-02	35,635
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF CARDIAC AGLYCONES.....	2R01 HL18113-04	94,763
NOLLER, HARRY F, JR.....	RIBOSOME STRUCTURE AND FUNCTION.....	5R01 GM17129-08	67,269
NOLLER, HARRY F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07135-08	76,774
POODRY, CLIFTON A.....	GENETIC CONTROL OF DEVELOPMENT USING DROSOPHILA.....	5R01 GM20401-06	42,435
ROCHA, VICTOR.....	BASIC RESEARCH PROGRAM.....	3S06 RR08132-03S1	2,787
ROCHA, VICTOR.....	BASIC RESEARCH PROGRAM.....	2S06 RR08132-04	250,311

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
SCHLEICH, THOMAS W.....	MECHANISMS OF RNA-PROTEIN INTERACTIONS.....	1R01 GM23951-01	99,592
WIPKE, W TODD.....	RESOURCE-RELATED RESEARCH: BIOMOLECULAR SYNTHESIS.....	5R24 RR01059-02	81,492
ORGANIZATION TOTAL	21 1,384,721		
SANTA MONICA			
RAND CORPDRATION ZIP CODE 90406			
DAVANZO, JULIE S.....	MIGRATION UNEMPLOYMENT AND JOB MOBILITY.....	1R01 HD10864-01	99,822
KING, WILLIAM S.....	MATHEMATICAL MODELS FOR STUDYING SICKLE-CELL DISEASE.....	2R01 HL16580-04	85,637
LINCOLN, THOMAS L.....	CELL KINETICS COMPUTER MODEL FOR LEUKEMIA THERAPY.....	5R01 CA12369-06	146,796
MORRISON, PAUL F.....	PREDICTIVE PHARMACOKINETIC MODEL OF ANTIFOLATE RESCUE.....	5R01 CA19663-03	93,368
WILLIAMS, ALPERT P, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05710-08	28,380
ORGANIZATION TOTAL	5 454,003		
STANFORD			
INDIVIDUAL AWARD—RATHER, LELLANO J. ZIP CODE 94305			
RATHER, LELLAND J.....	A STUDY OF MUELLER AND FALLOPIO ON TUMORS.....	5R01 LM02852-02	9,840
ORGANIZATION TOTAL	1 9,840		
STANFORD UNIVERSITY ZIP CODE 94305			
ANDERSEN, HANS C.....	STATISTICAL MECHANICS OF LIPID BILAYER MEMBRANES.....	5R01 GM23085-03	39,168
ANGELL, JAMES B.....	RESOURCE FOR SILICON BIOMEDICAL TRANSDUCERS.....	3P41 RR01086-01S1	127,579
ANGELL, JAMES B.....	RESOURCE FOR SILICON BIOMEDICAL TRANSDUCERS.....	5P41 RR01086-02	220,645
BAGSHAW, MALCOLM A.....	STUDY OF EXTENDED RADIOTHERAPY FOR PROSTATIC NEOPLASMS.....	5R26 CA15455-05	45,327
BAGSHAW, MALCOLM A.....	HOSPITAL-BASED MULTIPOINT PION RADIOTHERAPY OF CANCER.....	3P01 CA19653-02S1	11,048
BALDWIN, ROBERT L.....	PHYSICAL STUDIES OF NUCLEIC ACIDS AND PROTEINS.....	2R01 GM19988-18	123,500
BAUM, DAVID.....	HYPOXIA, METABOLISM AND NEONATAL THERMOREGULATION.....	5R01 HD06775-06	100,002
BAUM, DAVID.....	CONGENITAL HEART DISEASE AND ORGAN DEVELOPMENT.....	3R01 HD08814-03S1	13,189
BAUR, SONIA.....	GASTROINTESTINAL HORMONE-RECEPTOR INTERACTIONS.....	5R01 AM18497-03	78,709
BAYLOR, DENIS A.....	NEURAL SIGNALLING IN THE RETINA.....	5R01 EY01543-05	125,642
BERG, PAUL.....	BASIC MECHANISMS IN VIRAL CARCINOGENESIS.....	5R01 CA15513-05	101,740
BERG, PAUL.....	MECHANISMS AND REGULATION OF GENE EXPRESSION.....	5R01 GM13235-14	246,364
BERNFIELD, MERTON R.....	EXTRACELLULAR MATERIALS AND EMBRYONIC ORGAN FORMATION.....	5R01 HD06763-07	142,786
BLASCHKE, TERRENCE F.....	KINETICS OF DRUG-DRUG AND DRUG-DISEASE INTERACTIONS.....	2R01 GM22209-04	87,200
BROWN, J MARTIN.....	EXPERIMENTAL RADIOTHERAPY: BASIS AND MODIFICATION.....	5R01 CA15201-05	78,395
BRUTLAG, DOUGLAS L.....	ORGANIZATION OF PERICENTRIC HETEROCHROMATIN.....	2R01 GM21498-04	100,744
CAMPBELL, ALLAN M.....	GENETICS OF LAMBDA PROPHAGE-BIOTIN OPERON.....	2R01 AI08573-11	119,025
CAVALLI-SFORZA, LUIGI L.....	HUMAN POPULATION GENETICS.....	5R01 GM20467-06	185,351
CHOW, KAO L.....	NEUROLOGY OF VISION AND LEARNING.....	5R01 EY00691-18	74,059
CLAYTON, DAVID A.....	MITOCHONDRIAL DNA IN MALIGNANT CELLS.....	5R01 CA12312-08	67,236
COHEN, ELLIS N.....	MECHANISM OF LOCAL ANESTHETIC CONDUCTION BLOCK.....	5R01 GM22113-03	81,391
COHEN, STANLEY N.....	GENETIC CONTROL OF NONCHROMOSOMAL DRUG RESISTANCE.....	5R01 AI08619-11	157,448
COLLMAN, JAMES P.....	MODELS FOR CYTOCHROME P450 HYDROXYLASES.....	2R01 GM17880-08	111,445
CONSTANTINOU, CHRISTOS E.....	PYELOURETERAL PACEMAKER SYSTEM.....	5R01 AM19366-03	100,860
COOPER, ALLEN D.....	REGULATION OF HEPATIC CHOLESTEROL SYNTHESIS.....	2R01 AM18774-04	81,530
COOPER, ALLEN D.....	CHOLESTEROL BIOSYNTHESIS AND ITS CONTROL IN LIVER.....	2R01 HL05360-19	47,008
CUTLER, ROBERT W.....	MECHANISMS OF NEUROTRANSMITTER RELEASE.....	5R01 NS12079-05	74,396
DAVID, PAUL A.....	CONTRACEPTIVE TECHNOLOGY AND FAMILY LIMITING BEHAVIOR.....	1R01 HD10724-01	91,273
DAVIS, RONALD W.....	CELL REGULATION: BIOCHEMICALLY ISOLATED DNA SEGMENTS.....	2R01 GM21891-04	141,321
DE BUSK, ROBERT F.....	OBJECTIVE EVALUATION EARLY AFTER MI AND HEART SURGERY.....	5R01 HL18907-03	200,237
DEMENT, WILLIAM C.....	SUDDEN INFANT DEATH SYNDROME AND SLEEP APNEA.....	5R01 HD08339-05	253,077
DEMENT, WILLIAM C.....	SLEEP APNEA CLINICAL RESEARCH CENTER.....	5P50 NS10727-06	241,577
DEMENT, WILLIAM C.....	STUDIES OF NARCOLEPSY.....	3R01 NS13211-02S1	45,808
DEMENT, WILLIAM C.....	STUDIES OF NARCOLEPSY.....	2R01 NS13211-03	108,145
DEWSON, JAMES H, III.....	AUDITORY NEUROPSYCHOLOGY AND PRECURSORS OF LANGUAGE.....	5R01 NS12315-03	50,526
DJERASSI, CARL.....	MASS SPECTROMETRY IN ORGANIC AND BIOCHEMISTRY.....	5R01 AM04257-18	110,228
DJERASSI, CARL.....	MARINE CHEMISTRY WITH SPECIAL EMPHASIS ON STEROIDS.....	2R01 GM06840-20	200,093
DJERASSI, CARL.....	MAGNETIC CIRCULAR DICHROISM OF CYTOCHROMES P-450.....	5R01 GM20276-05	60,358

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
DJERASSI, CARL.....	RESOURCE-RELATED RESEARCH—COMPUTERS AND CHEMISTRY.....	5R24 RR00612-09	365,487
DONIACH, SEBASTIAN.....	X-RAY SPECTROSCOPY OF CA 20IONS IN BIOLOGICAL SYSTEMS.....	1R01 GM25217-01	58,339
ENG, LAWRENCE F.....	CENTRAL NERVOUS SYSTEM MEMBRANES AND ACIDIC PROTEINS.....	2R01 NS11632-04A1	75,871
FARBER, EUGENE M.....	BIOLOGIC EFFECTS OF PHOTOCHEMOTHERAPY IN PSORIASIS.....	5R01 AM18760-02	125,757
FARQUHAR, JOHN W.....	STANFORD FIVE CITY MULTIFACTOR RISK REDUCTION STUDY.....	1R01 HL21906-01A1	1,697,114
FEE, WILLARD E, JR.....	AMINOGLYCOSIDE OTOTOXICITY DETERMINANTS.....	1R01 NS14596-01	55,420
FEIGENBAUM, EDWARD A.....	SUPPORT FOR COMPUTING FACILITY.....	2P41 RR00785-06	807,138
FELDMAN, DAVID.....	THE ROLE OF RECEPTORS IN GLUCOCORTICOID ACTION.....	5R01 AM18156-05	46,324
FELDMAN, DAVID.....	STEROID RECEPTORS AND FUNCTION IN BONE CELLS.....	5R01 AM19675-02	37,936
FLAVELL, JOHN H.....	MEMORY DEVELOPMENT.....	5R01 HD10429-02	66,036
FRIEDBERG, ERROL C.....	DNA REPAIR AND ITS RELATIONSHIP TO CARCINOGENESIS.....	5R01 CA12428-08	46,926
FRIES, JAMES F.....	A NATIONAL ARTHRITIS DATA RESOURCE (ARAMIS).....	2R18 AM21393-04	297,748
FUHRMAN, FREDERICK A.....	PHARMACOLOGY AND CHEMISTRY OF NUDIBRANCH TOXINS.....	1R01 HL22201-01	45,381
GANESAN, ADAYAPALAM T.....	DNA SYNTHESIS AND GENETIC RECOMBINATION IN B. SUBTILIS.....	5R01 GM14108-13	91,276
GETTING, PETER A.....	ANALYSIS OF INTERNEURONS AND MOTONEURONS.....	1R01 NS14517-01	50,924
GLADER, BERTIL E.....	PATHOPHYSIOLOGY OF HEMOLYSIS: RBC HYDRATION DISORDERS.....	1R01 AM20879-01	59,433
GRAY, GARY M.....	CARBOHYDRATE DIGESTION BY THE INTESTINE.....	2R01 AM11270-12	73,382
GRAY, GARY M.....	ROLE IN DIGESTION OF SMALL INTESTINAL OLIGOPEPTIDASES.....	2R01 AM15802-06	134,724
GRUMET, FRANK C.....	HLA ANTIGENS: POLYMORPHISMS AND APPLICATIONS.....	1R01 HL21662-01A1	81,525
HAHN, GEORGE M.....	MODIFICATION OF RADIATION RESPONSE IN VITRO.....	2R01 CA04542-20	139,645
HAHN, GEORGE M.....	CHEMOTHERAPY: CYTOTOXICITY, REPAIR AND ITS INHIBITION.....	5R01 CA15769-05	75,995
HAHN, GEORGE M.....	TUMOR RADIOCHEMOTHERAPY: EFFECTS OF ULTRASOUND AND HEAT.....	5R01 CA19386-02	211,775
HALL, DENNIS A.....	ROLE OF STEROID HORMONES IN URINARY CONCENTRATION.....	1R01 AM21911-01	57,189
HANAWALT, PHILIP C.....	REPLICATION AND TRANSCRIPTION OF GENETIC MATERIAL.....	3R01 GM09901-16S1	14,443
HANAWALT, PHILIP C.....	REPLICATION AND REPAIR OF GENETIC MATERIAL.....	2R01 GM09901-17	137,843
HANAWALT, PHILIP C.....	DNA REPAIR IN ESCHERICHIA COLI AND BACILLUS SUBTILIS.....	5R01 GM19010-07	83,808
HANCE, ALLAN J.....	O2 DEPENDENT BIOSYNTHESIS—RESPONSE TO O2 DEPLETION.....	1R23 HL22383-01	49,500
HARBURY, CHRISTINA B.....	PLATELET MEMBRANE FUNCTION: ASSESSMENT & APPLICATION.....	5R01 HL17930-03	56,669
HARELL, GEORGE S.....	COMPARISON OF MICROSPHERE AND RBC BEHAVIOR IN VIVO.....	5R01 HL20943-02	116,005
HARRISON, DONALD C.....	CLINICAL ANTIARRHYTHMIC AND PHARMACODYNAMIC STUDIES.....	5R01 HL21221-02	82,808
HELLER, H CRAIG.....	THERMOREGULATION DURING SLEEP AND TORPOR IN MAMMALS.....	5R01 GM23695-03	36,536
HELLER, H CRAIG.....	CNS REGULATION OF BODY TEMPERATURE.....	5R01 NS10367-07	47,866
HERZENBERG, LEONARD A.....	IMMUNOGLOBULINS: GENETICS AND REGULATION.....	5R01 AI08917-14	103,477
HERZENBERG, LEONARD A.....	GENETIC STUDIES WITH MAMMALIAN CELLS.....	5R01 CA04681-20	169,127
HERZENBERG, LEONARD A.....	CLINICAL AND BIOLOGICAL USES OF AUTOMATED CELL SORTING.....	5R01 GM17367-09	487,478
HERZENBERG, LEONARD A.....	FETAL-MATERNAL IMMUNOLOGICAL INTERACTIONS.....	2R01 HD01287-16	134,117
HILBERMAN, MARK.....	ACUTE RENAL FAILURE FOLLOWING CARDIAC SURGERY.....	1R01 HL21210-01A1	110,920
HINTZ, RAYMOND L.....	GROWTH HORMONE AND SOMATOMEDIN IN DIABETES MELLITUS.....	1R01 AM21058-01	92,086
HODGSON, KEITH O.....	STRUCTURE OF TUMOR REGULATORY PROTEINS.....	2R01 CA16748-04	70,513
HOGNESS, DAVID S.....	THE ARRANGEMENT OF INFORMATION IN ANIMAL CHROMOSOMES.....	2R01 GM20158-06	158,730
HOLM, RICHARD H.....	BIOLOGICALLY RELATED IRON-SULFUR CHEMISTRY.....	5R01 GM22352-04	138,397
HOLMAN, HALSTED R.....	AUTOIMMUNE TISSUE DAMAGE AND ITS POTENTIAL REVERSAL.....	5R01 AM05425-16	82,767
HOLMAN, HALSTED R.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20610-02	196,873
HUDSON, BRUCE S.....	ELECTRONIC STRUCTURE OF THE VISUAL POLYENES.....	2R01 EY01518-04	45,417
HUDSON, BRUCE S.....	RESONANCE ENHANCED SPECTROSCOPY.....	1R01 GM24024-01	41,912
HUESTIS, WRAY H.....	NEUROTRANSMITTER RECEPTORS IN HUMAN ERYTHROCYTES.....	5R01 HL18660-03	35,512
HUMPHRIES, GILLIAN M.....	IMMUNE RESPONSES TO MEMBRANES: PHYSICOCHEMICAL STUDIES.....	1R23 AI14813-01	46,648
JAMISON, REX L.....	MICROPUNCTURE STUDIES OF THE MAMMALIAN RENAL MEDULLA.....	2R01 AM18077-08	145,508
JARDETZKY, OLEG.....	NMR STUDY OF THE LAC-REPRESSOR PROTEIN.....	5R01 GM18098-08	115,737
JARDETZKY, OLEG.....	HIGH FREQUENCY NMR BIOTECHNOLOGY RESOURCE.....	5P41 RR00711-06	198,092
JOHNSON, WILLIAM S.....	STEROID AND TERPENOID SYNTHESIS AND RELATED STUDIES.....	5R01 AM03787-19	96,800
KAISER, ARMIN D.....	CONTROL OF MULTICELLULAR DEVELOPMENT IN MYXOBACTERIA.....	5R01 GM23441-02	102,938
KALLMAN, ROBERT F.....	EXPERIMENTAL RADIOTHERAPY—CELLULAR RESPONSES IN VIVO.....	5R01 CA03353-21	84,339
KALLMAN, ROBERT F.....	COMBINED MODALITIES: CELL, TUMOR AND TISSUE EFFECTS.....	5R01 CA20527-03	156,313
KAPLAN, ERNEST N.....	PERINEURIAL TUBULIZATION WITH TELEPEPTIDE-POOR COLLAGEN.....	1R01 NS14165-01	41,306
KAPLAN, HENRY S.....	BIOLOGICAL ASPECTS OF CARCINOGENESIS BY RADIATION.....	5R01 CA03352-22	147,449
KAPLAN, HENRY S.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P01 CA05838-17	1,907,398
KAPLAN, HENRY S.....	RADIOBIOLOGY/ONCOLOGY RESEARCH PROGRAM.....	2P30 CA10372-12	1,070,630
KARASEK, MARVIN A.....	METABOLIC CONTROL OF EPIDERMAL CELL GROWTH.....	5R01 AM14121-09	101,938
KARASEK, MARVIN A.....	BIOCHEMISTRY OF SKIN BLOOD VESSEL GROWTH.....	5R01 AM19595-02	116,403

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
KARLIN, SAMUEL.....	STOCHASTIC MODELS IN MEDICINE AND BIOLOGY.....	5R01 GM10452-15	123,142
KEDES, LAURENCE H.....	EMBRYONIC CHROMOSOMAL PROTEINS AND THEIR RNA TEMPLATES.....	5R01 GM17995-06	72,462
KEDES, LAURENCE H.....	HISTONE GENE TRANSCRIPTION IN EMBRYONIC DEVELOPMENT.....	5R01 GM24118-02	56,643
KENDIG, JOAN J.....	EXCITABLE CELL FUNCTION AT HYPERBARIC PRESSURES.....	2R01 NS13108-03	69,089
KORN, DAVID.....	DNA POLYMERASES IN NORMAL AND NEOPLASTIC HUMAN CELLS.....	3R01 CA14835-05S1	9,380
KORN, DAVID.....	DNA POLYMERASES IN NORMAL AND NEOPLASTIC HUMAN CELLS.....	2R01 CA14835-06	139,346
KORNBERG, ARTHUR.....	MECHANISM AND CONTROL OF DNA REPLICATION.....	2R01 GM07581-18	305,909
KORNBERG, ROGER D.....	RELATION OF HISTONES TO DNA IN NORMAL AND CANCER CELLS.....	7R01 CA24546-01	65,426
KRISS, JOSEPH P.....	STUDIES ON LONG-ACTING THYROID STIMULATOR.....	5R01 AM07642-15	98,219
LEDERBERG, JOSHUA.....	GENETICS OF BACTERIA.....	5R01 CA16896-20	125,071
LEDERBERG, JOSHUA.....	GENETICS RESEARCH PROJECT.....	5P01 GM20832-04	448,869
LEHMAN, I ROBERT.....	GENETIC RECOMBINATION AND VIRAL DNA SYNTHESIS.....	5R01 GM06196-20	167,912
LEVINE, SEYMOUR.....	DEVELOPMENTAL AND BEHAVIORAL NEUROENDOCRINOLOGY.....	5P01 HD02881-12	244,617
LEVY, RONALD.....	ANTITUMOR ANTIBODIES GENERATED IN VITRO.....	5R01 CA21223-02	76,229
LOEW, GILDA H.....	THEORY OF PHYSICAL PROPERTIES AND REACTIVITY IN P450.....	1R01 GM23662-01	58,548
LUETSCHER, JOHN A, JR.....	SECRETION AND EFFECTS OF ADRENAL HORMONES.....	5R01 HL13917-20	138,494
LUETSCHER, JOHN A, JR.....	BIG RENIN: BIOCHEMICAL AND CLINICAL STUDIES.....	5R01 HL17364-04	65,131
MACCOBY, ELEANOR E.....	BASIC PROCESSES IN COGNITIVE AND SOCIAL DEVELOPMENT.....	5P01 HD09814-04	279,404
MANSOUR, TAG E.....	CHEMICAL AGENTS AND HEART GLYCOLYTIC ENZYMES.....	5R01 HL17976-18	80,356
MARMOR, MICHAEL F.....	INTERACTION BETWEEN RETINA AND PIGMENT EPITHELIUM.....	2R01 EY01678-04	77,926
MATHERS, LAWRENCE H.....	TROPHISM IN THE DEVELOPING NERVOUS SYSTEM.....	1R01 EY02589-01	50,889
MAURICE, DAVID M.....	CONTROL OF CORNEAL HYDRATION.....	2R01 EY00431-10	240,655
MAURICE, DAVID M.....	TRANSPORT PROCESSES ACROSS THE CORNEAL EPITHELIUM.....	2R01 EY00915-07	111,678
MAURICE, DAVID M.....	CORNEAL NEUROBIOLOGY.....	5R01 EY02108-02	67,331
MAZZE, RICHARD I.....	NEPHROTOXICITY OF FLUORINATED ANESTHETICS.....	5R01 GM22746-03	79,406
MC CONNELL, HARDEN M.....	SPIN-LABEL HAPTENS, MEMBRANE FLUIDITY, IMMUNE RESPONSE.....	5R01 AI13587-03	121,693
MC CULLEY, JAMES P.....	MEIBOMIAN KERATOCONJUNCTIVITIS.....	1R01 EY02302-01	85,672
MC DEVITT, HUGH O.....	GENETIC CONTROL OF THE IMMUNE RESPONSE.....	5R01 AI07757-12	287,356
MC DEVITT, HUGH O.....	HUMORAL, CELLULAR & GENETIC MECHANISMS IN AUTOIMMUNITY.....	2P01 AI11313-06	421,094
MC DEVITT, HUGH O.....	DEVELOPMENTAL ANALYSIS OF THE MURINE T/T ALLELE MUTANTS.....	5R01 HD09410-04	139,967
MC MAHAN, UEL J, II.....	STRUCTURE AND FUNCTION OF REGENERATING AXON TERMINALS.....	5R01 NS14506-02	49,736
MEINDL, JAMES D.....	BME CENTER FOR INTEGRATED ELECTRONICS IN MEDICINE.....	2P50 GM17940-09	1,373,492
MERIGAN, THOMAS C.....	INTERFERON, IMMUNITY AND LATENT VIRUSES.....	2R01 AI05629-16	178,543
MERIGAN, THOMAS C.....	EFFECT OF INTERFERON THERAPY ON NONHODGKIN'S LYMPHOMA.....	5R01 CA16857-04	56,760
MILLER, RUPERT G, JR.....	ADAPTATION OF NEW STATISTICAL IDEAS FOR MEDICINE.....	5R01 GM21215-04	117,351
MILLER, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07005-13	187,634
MOSHER, HARRY S.....	SYNTHETIC TETRODOTOXIN ANALOGS.....	1R01 NS14345-01	61,918
NICHOLLS, JOHN G.....	INTEGRATION AND REGENERATION IN THE NERVOUS SYSTEM.....	5R01 NS11544-06	104,267
NORTHWAY, WILLIAM H, JR.....	PULMONARY OXYGEN TOXICITY IN THE NEWBORN LUNG.....	3R01 HL14663-06S1	26,767
NORTHWAY, WILLIAM H, JR.....	PULMONARY OXYGEN TOXICITY IN THE NEWBORN LUNG.....	2R01 HL14663-07	69,837
OLEFSKY, JERROLD M.....	INSULIN RECEPTORS AND THE GLUCOSE TRANSPORT SYSTEM.....	5R01 AM19905-02	4,538
PAFFENBARGER, RALPH S, JR.....	EPIDEMIOLOGIC STUDY OF ENDOMETRIAL CANCER.....	7R01 CA23778-01	156,902
PAFFENBARGER, RALPH S, JR.....	PSYCHOSOCIAL FACTORS IN STUDENTS PREDICTIVE OF CANCER.....	1R01 CA24255-01	78,158
PAYNE, ROSE O.....	LEUKOCYTE ANTIGENS AND ANTIBODIES.....	9R01 AI14438-21	137,697
PECORA, ROBERT.....	DYNAMIC LIGHT SCATTERING FROM BIOLOGICAL SYSTEMS.....	2R01 GM22517-03	54,434
PERKEL, DONALD H.....	STOCHASTIC MODELS OF NEURAL SYSTEMS.....	2R01 NS09744-09	99,713
PERKINS, DAVID D.....	GENETICS OF NEUROSPORA.....	5R01 AI01462-23	160,427
PITTENDRIGH, COLIN S.....	CIRCADIAN ORGANIZATION AND THE AGING PROCESS.....	5R01 AG00490-04	55,362
PIZIALI, ROBERT L.....	STRUCTURAL CHARACTERISTICS OF THE HUMAN KNEE.....	5R01 AM18181-03	48,850
PIZIALI, ROBERT L.....	STRUCTURAL CHARACTERISTICS OF THE HUMAN LUMBAR SPINE.....	5R01 AM19737-02	100,570
POPP, RICHARD L.....	ABNORMAL CARDIAC WALL MOTION VIEWED ULTRASONICALLY.....	1R01 HL21278-01A1	79,897
PRINCE, DAVID A.....	CELLULAR MECHANISMS IN FOCAL EPILEPTOGENESIS.....	2R01 NS06477-13	72,337
PRINCE, DAVID A.....	EPILEPSY RESEARCH PROGRAM.....	5P50 NS12151-04	277,658
REAVEN, GERALD M.....	LIPEMIA-CARBOHYDRATE AND GLYCERIDE METABOLISM.....	5R01 HL08506-15	113,715
REAVEN, GERALD M.....	VLDL-TG METABOLISM IN DIABETES MELLITUS.....	5R01 HL20397-03	150,874
RICH, CLAYTON.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00070-16	534,156
RICH, CLAYTON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05353-17	200,462
ROBERTSON, CHANNING R.....	STUDIES OF RENAL SOLUTE AND WATER TRANSPORT.....	5R01 AM18910-06	67,226
ROBIN, EUGENE D.....	CONFERENCE ON 'THE INTERNAL ENVIRONMENT'.....	1R13 HL22068-01	17,061
ROBINSON, WILLIAM S.....	THE VIRUS OF HUMAN HEPATITIS B.....	5R01 AI13526-03	169,509

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ROSENBERG, SAUL A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA21555-02	280,761
ROSENTHAL, A RALPH.....	COMPUTER MAPPING OF THE OPTIC NERVE HEAD.....	5R01 EY01248-05	86,742
ROTHMAN, JAMES E.....	MECHANISM OF ASSEMBLY OF A VIRAL MEMBRANE.....	1R01 GM25662-01	98,440
RUBINSTEIN, LUCIEN J.....	DIFFERENTIATION AND STROMA-INDUCTION IN NEURAL TUMORS.....	5R01 CA11689-07	156,370
SAKITT, BARBARA.....	PROBLEMS IN VISION.....	2R01 EY01336-04A1	40,870
SCHIMKE, ROBERT T.....	MOLECULAR MECHANISMS IN RESISTANCE TO FOLATE ANALOGUES.....	5R01 CA16318-04	333,616
SCHIMKE, ROBERT T.....	ENZYME SYNTHESIS AND DEGRADATION IN METABOLIC CONTROL.....	5R01 GM14931-13	146,622
SCHRIER, STANLEY L.....	METABOLISM OF ERYTHROCYTE STROMA.....	5R01 AM13682-19	112,005
SCHURMAN, DAVID J.....	JOINT INFECTIONS AND ARTICULAR CARTILAGE DESTRUCTION.....	5R01 AM17948-03	67,632
SCHWARTZ, HERBERT C.....	DEVELOPMENTAL CHANGES IN INFANTS OF DIABETIC MOTHERS.....	1R01 AM25603-01	72,895
SCHWARTZ, HERBERT C.....	EXTRAUTERINE GROWTH AND ADAPTATION.....	5P01 HD02147-12	246,593
SCHWARTZKROIN, PHILIP A.....	DEVELOPMENT OF ACTIVITY AT A CNS SYNAPSE.....	1R01 NS14050-01	37,629
SEARS, ROBERT R.....	AGING OUTCOMES IN A 55-YEAR LONGITUDINAL STUDY.....	1R01 AG01015-01	50,850
SHARPLESS, K BARRY.....	ASYMMETRIC OXIDATION OF ORGANIC COMPOUNDS.....	1R01 GM24551-01	72,251
SHOOTER, ERIC M.....	NERVE GROWTH FACTOR IN NEURONAL DEVELOPMENT.....	5R01 NS04270-16	146,325
SHUMWAY, NORMAN E.....	ORTHOTOPIC HEART TRANSPLANTATION.....	2R01 HL08696-15	289,657
SIMMONS, F BLAIR.....	DEVELOPMENT OF A COCHLEAR PROSTHESIS.....	5R01 NS10532-06	176,216
SIMMONS, F BLAIR.....	FIELD TEST OF NEWBORN HEARING TESTING DEVICE.....	5R01 NS12326-04	135,288
SIMONI, ROBERT D.....	STUDIES ON MEMBRANE FUNCTION AND CELLULAR ENERGETICS.....	5R01 GM18539-08	65,368
SIMONI, ROBERT D.....	REGULATION OF CHOLESTEROL METABOLISM.....	2R01 HL18219-04	52,571
SMITH, KENDRIC C.....	REPAIR OF RADIATION-INDUCED LESIONS IN DNA.....	5R01 CA02896-22	95,874
SMITH, KENDRIC C.....	MOLECULAR BASIS OF RADIATION LETHALITY.....	2R01 CA06437-17	90,718
SMITH, MARION E.....	BIOSYNTHESIS OF LIPIDS IN EXPERIMENTAL DEMYELINATION.....	5R01 NS02785-19	59,636
SPUDICH, JAMES A.....	PROTEINS IN CELL MOVEMENTS AND CHANGES OF CELL SHAPE.....	5R01 GM25240-02	137,163
STAMEY, THOMAS A.....	ENTEROBACTERIAL ADHERENCE TO THE VAGINAL MUCOSA.....	5R01 AI09366-08	87,455
STARK, GEORGE R.....	ASPECTS OF CONTROL IN MAMMALIAN GENE EXPRESSION.....	2R01 CA17287-04	214,240
STARK, GEORGE R.....	NOVEL INHIBITORS OF CPS AND ATC AS ANTITUMOR DRUGS.....	5R26 CA20870-02	53,796
STEELE, CHARLES R.....	MECHANICS OF THE ORGAN OF CORTI.....	2R01 NS12086-04	45,201
STINSON, EDWARD B.....	CLINICAL HEART TRANSPLANTATION.....	2P01 HL13108-09	1,311,752
STOCKDALE, FRANK E.....	STUDIES OF CELL DIFFERENTIATION.....	5R01 AM16466-05	94,354
STOCKDALE, FRANK E.....	STUDIES IN GROWTH REGULATION.....	1R01 HD12083-01	106,115
STOCKER, BRUCE A.....	GENETICS AND PHYSIOLOGY OF SALMONELLA TYPHIMURIUM.....	5R01 AI07168-13	90,776
STROBER, SAMUEL.....	ALTERATIONS OF T CELLS IN LYMPHOPROLIFERATIVE DISEASE.....	5R01 CA17004-04	109,824
STRYER, LUBERT.....	CONFORMATIONAL ASPECTS OF VISUAL EXCITATION.....	5R01 EY02005-02	68,764
STRYER, LUBERT.....	TIME-RESOLVED RESONANCE RAMAN STUDIES OF VISION.....	1R01 EY02387-01	112,620
STRYER, LUBERT.....	OPTICAL STUDIES OF PROTEIN STRUCTURE & FUNCTION.....	5R01 GM24032-02	133,713
SUNSHINE, PHILIP.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00081-16	425,830
SUSSMAN, HOWARD H.....	ECTOPIC PLACENTAL PROTEINS IN HUMAN CANCER.....	5R01 CA13533-07	102,125
TAUBE, HENRY.....	BIOCHEMICALLY SIGNIFICANT MOLECULES AS LIGANDS.....	5R01 GM13638-13	76,670
THOMPSON, STUART H.....	SOMA CALCIUM AND POTASSIUM CONDUCTANCES.....	1R01 NS14519-01	76,830
TRUOELL, JAMES R.....	CHROMOSOMAL PROTEIN ALTERATIONS BY ANESTHETICS.....	1R01 GM24175-01	74,472
TUNE, BRUCE M.....	RENAL TRANSPORT AND METABOLIC EFFECTS OF ANTIBIOTICS.....	5R01 AM17647-05	66,601
VISTNES, LARS M.....	ENZYMATIC BURN DEBRIEMENT.....	5R01 GM23379-02	27,233
VOSTI, KENNETH L.....	BACTERIOLOGY AND SEROLOGY OF PYELONEPHRITIS.....	2R01 AI03638-18	59,599
WALLACE, OUGLAS C.....	MAMMALIAN MITOCHONDRIAL GENETICS & RNA TUMOR VIRUSES.....	5R01 GM24285-02	74,312
WEISSMAN, IRVING L.....	ROLE OF THE THYMUS IN IMMUNOLOGICAL DEVELOPMENT.....	5R01 AI09072-10	158,613
WESSELLS, NORMAN K.....	MECHANISMS OF ORGAN DEVELOPMENT.....	5R01 HD04708-09	100,247
WESSELLS, NORMAN K.....	ANALYSIS OF NEURONAL PATHWAYS.....	5R01 NS02944-18	37,093
WHITTEMORE, ALICE S.....	EFFECTS OF MULTIPLE EXPOSURES—QUANTITATIVE ASPECTS.....	1R01 CA23214-01	67,284
YANOFSKY, CHARLES.....	GENETIC/BIOCHEMICAL STUDY OF TRYPTOPHAN SYNTHETASE.....	5R01 GM09738-16	95,136
YEAGER, ANNE S.....	CYTOMEGALOVIRUS: TRANSMISSION TO NEWBORNS BY BLOOD.....	5R01 HD09872-03	69,092
YOUNG, STUART W.....	MALIGNANT PERFUSION: APPLIED TO DIAGNOSIS AND THERAPY.....	1R23 CA24879-01	34,081
ZARE, RICHARD N.....	LASER FLUORESCENCE ANALYSIS.....	2R01 CA23156-02	80,802
ORGANIZATION TOTAL	211	31,990,565	

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MALACINSKI, GEORGE M.....	DEVELOPMENTAL GENETICS OF MEXICAN AXOLOTL—CONFERENCE.....	1R13 HD11635-01	7,775
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Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	1	7,775	
TORRANCE			
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL		ZIP CODE 90509	
BARAJAS, LUCIANO.....	ELECTRON MICROSCOPY OF THE JUXTAGLOMERULAR APPARATUS.....	5R01 HL18340-04	53,546
BENFIELD, JOHN R.....	LUNG CANCER MODEL FOR SURGICAL RESEARCH.....	5R01 CA16201-05	112,232
BRAY, GEORGE A.....	CLINICAL AND EXPERIMENTAL STUDY OF OBESITY.....	5R01 AM15165-08	103,782
BRAZIER, MARY A.....	ELECTROPHYSIOLOGICAL STUDIES OF THE EPILEPTIC BRAIN.....	3R01 NS11379-05S1	9,719
EDWARDS, JOHN E.....	STUDY OF HEMATOGENOUS CANDIDA ALBICANS ENDOPHTHALMITIS.....	5R01 EY01066-06	79,216
EFFROS, RICHARD M.....	PATHOGENESIS AND MEASUREMENT OF PULMONARY EDEMA.....	2R01 HL18606-04	52,849
FINKLESTEIN, JERRY Z.....	CHILDREN'S CANCER STUDY GROUP A.....	5R10 CA14560-05	122,411
FISHER, DELBERT A.....	THYROID FUNCTION IN THE FETUS AND NEWBORN.....	5R01 HD04270-10	148,098
FU, PAUL C.....	BIOGENESIS AND EFFECTS OF ETHYLENE IN ANIMALS.....	5R01 GM22796-03	20,442
GLASSOCK, RICHARD J.....	PATHOPHYSIOLOGY OF EXPERIMENTAL GLOMERULAR INJURY.....	5R01 AM16565-06	73,744
GUZE, LUCIEN B.....	MEASUREMENT OF ENDOTOXIN BY MASS SPECTROSCOPY.....	5R01 AI12343-04	54,282
HEINER, DOUGLAS C.....	PERINATAL RECOGNITION AND MANAGEMENT OF ALLERGY.....	3R01 HD09327-03S1	14,080
HEINER, DOUGLAS C.....	PERINATAL RECOGNITION AND MANAGEMENT OF ALLERGY.....	2R01 HD09327-04	77,545
HOLLISTER, DAVID W.....	CHARACTERIZATION OF A NEW HUMAN COLLAGEN.....	5R01 AM19618-02	70,242
IMAGAWA, DAVID T.....	STUDY OF VARIOUS FORMS OF DISTEMPER ENCEPHALITIS.....	1R01 AI13369-01A1	64,253
ISACOFF, WILLIAM H.....	HIGH DOSE METHOTREXATE IN COLORECTAL CANCER.....	5R26 CA21210-02	95,000
JOBE, ALAN H.....	LUNG PHOSPHOLIPID APPERANCE AND STABILITY.....	5R01 HD11932-02	44,867
JURATSCH, CRAIG E.....	PULMONARY HYPERTENSION: PATHWAYS AND PHARMACOLOGY.....	5R01 HL18371-03	73,389
LAKS, MICHAEL M.....	HEMODYNAMICS AND HEART STRUCTURE--VENTRICULAR OVERLOAD.....	3R01 HL14717-05S1	20,550
LAKS, MICHAEL M.....	HEMODYNAMICS AND HEART STRUCTURE--VENTRICULAR OVERLOAD.....	2R01 HL14717-06	57,991
MILLER, MICHAEL E.....	PULMONARY COMPLICATIONS OF VIRAL INFECTIONS.....	5R01 HL20002-03	67,250
MOORE, THOMAS C.....	HEART PRESERVATION AND TRANSPLANTATION STUDIES.....	5R01 HL18936-02	58,464
MORIN, ROBERT J.....	PLATELET FUNCTION AND ADENINE NUCLEOTIDE METABOLISM.....	5R01 HL14344-07	54,115
NATHANIELSZ, PETER W.....	PROLACTIN FUNCTION IN FETAL SHEEP.....	1R01 HD11483-01	102,625
NELSON, RONALD J.....	COMPOSITE PROSTHESIS FOR TRACHEA OR ESOPHAGUS.....	1R01 GM24300-01	45,745
NIES, KENNETH M.....	ANTIBODY SYNTHESIS IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	1R01 AM21988-01	46,268
RAUM, WILLIAM J.....	OCTOPAMINE AND TYRAMINE I125 RADIOIMMUNOASSAY.....	1R01 AM21711-01	5,565
RIMOIN, DAVID L.....	MEDICAL GENETICS CENTER.....	1P01 HD11966-01	375,664
SAMLOFF, I MICHAEL.....	PEPSINOGEN POLYMORPHISM IN MAN.....	5R01 AM13233-10	83,932
SHAPIRO, LARRY J.....	GENETIC AND BIOCHEMICAL STUDIES OF STEROID SULFATASE.....	1R01 HD12178-01	49,314
SIEGEL, SHARON.....	DEVELOPMENT OF THE RENIN-MINERALOCORTICOID SYSTEM.....	5R01 HD10611-02	109,691
STATE, DAVID.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12041-07	35,027
SWANSON, WILLIAM H.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00425-10	736,833
SWANSON, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05551-16	117,532
TANAKA, KOICHI R.....	METABOLIC AND BIOCHEMICAL STUDIES OF BLOOD CELLS.....	5R01 AM14898-16	88,342
WASSERMAN, KARLMAN.....	MECHANISMS OF PHYSIOLOGICAL RESPONSES TO EXERCISE.....	5R01 HL11907-08	105,557
WEICHEL, MORTON E, JR.....	HORMONE INTERACTION AND BRAIN PYRIMIDINE BIOSYNTHESIS.....	5R01 HD09277-04	46,319
WEICHEL, MORTON E, JR.....	DEVELOPMENTAL ASPECTS OF NERVE GROWTH FACTOR.....	1R01 HD11303-01A1	103,542
WHIPP, BRIAN J.....	CHEMORECEPTOR FUNCTION IN DYNAMIC VENTILATORY CONTROL.....	5R01 HL14967-06	50,393
WHIPP, BRIAN J.....	DYNAMIC INTERRELATIONS UNDERLYING EXERCISE HYPERPNEA.....	5R01 HL19410-03	18,050
YEE, ROBERT D.....	OCULAR MOTOR SUBSYSTEMS IN CONGENITAL NYSTAGMUS.....	2R01 EY01853-03	36,052
YOUNG, RONALD F.....	ANATOMIC STUDY OF TRIGEMINAL PRIMARY AFFERENT FIBERS.....	5R01 DE05118-02	23,503
ZAMBONI, LUCIANO.....	EXPERIMENTAL STUDIES ON INITIATION OF DEVELOPMENT.....	5R01 HD09913-02	45,812
ORGANIZATION TOTAL	43	3,753,833	
STATE TOTAL	2,010	223,111,332	

COLORADO

BOULDER

UNIVERSITY OF COLORADO AT BOULDER ZIP CODE 80309

BERG, HOWARD C.....	PHOTOPHYSIOLOGY IN A BACTERIUM CONTAINING RHODOPSIN.....	5R01 EY01263-05	62,435
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Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
BONNEVILLE, MARY A.....	PLASMA MEMBRANE OF NORMAL AND NEOPLASTIC UROTHELIA.....	1R26 CA22468-01A1	52,548
BONNEVILLE, MARY A.....	ISOLATION AND CHARACTERIZATION OF PLASMA MEMBRANE.....	5R01 GM18267-08	69,582
CARUTHERS, MARVIN H.....	STUDIES ON DNA REGULATORY REGIONS OF CHROMOSOMES.....	2R01 GM21120-04	117,771
CARUTHERS, MARVIN H.....	CHEMICAL AND ENZYMATIC STUDIES ON GENE CONTROL REGIONS.....	1R01 GM25680-01	70,855
CECH, CAROL L.....	MOLECULAR MECHANISMS OF TRANSCRIPTIONAL CONTROL.....	1R01 AI14938-01	50,493
CECH, THOMAS R.....	CHROMATIN STRUCTURE OF A TRANSCRIPTION UNIT.....	1R01 GM25273-01	65,176
CHUNG, LELAND W.....	NEONATAL IMPRINTING AND HEPATIC DRUG METABOLISM.....	1R01 GM25027-01	53,045
DANNA, KATHLEEN J.....	TUMOR VIRUS DNA, A MOLECULAR VEHICLE FOR ENZYME GENES.....	5R01 CA18212-03	79,186
DE FRIES, J C.....	DETERMINANTS OF BEHAVIORAL DEVELOPMENT IN CHILDREN.....	5R01 HD10333-02	141,407
DUBIN, MARK W.....	RECEPTIVE FIELD ORGANIZATION IN THE VISUAL SYSTEM.....	5R01 EY00998-06	65,095
ERWIN, V GENE.....	BIOMEDICAL RESEARCH DEVELOPMENT.....	5S08 RR09065-02	100,000
FALL, R RAY.....	REGULATION OF LIPID METABOLISM.....	5R01 HL16628-05	55,425
FIFKOVA, EVA.....	VISUAL DEPRIVATION AND SYNAPSES OF VISUAL CENTERS.....	5R01 EY01500-04	53,547
GILL, STANLEY J.....	THERMODYNAMICS IN RESPIRATORY PROTEIN BINDING.....	1R01 HL22325-01	88,757
GOLD, LAWRENCE M.....	REGULATION OF BACTERIOPHAGE T4 GENE EXPRESSSION.....	2R01 GM19963-06	162,992
GOLDSTEIN, LESTER.....	BIOCHEMICAL INTERRELATIONS OF NUCLEUS AND CYTOPLASM.....	5R01 GM15156-11	83,129
HACKENBERG, ROBERT A.....	A LONGITUDINAL FERTILITY STUDY IN A DEVELOPING CITY.....	5R01 HD10885-02	95,652
HALLICK, RICHARD B.....	GENE EXPRESSION IN CELL ORGANELLES.....	5R01 GM21351-05	61,079
HAM, RICHARD G.....	PROGRAM PROJECT IN CELL BIOLOGY OF AGING.....	5P01 AG00310-05	214,651
HAM, RICHARD G.....	EFFECT OF MALIGNANCY ON CELL GROWTH REQUIREMENTS.....	2R01 CA15305-04	95,940
HIRSH, DAVID I.....	GENETIC CONTROL OF DEVELOPMENT.....	5R01 GM19851-07	89,175
JONES, RICHARD E.....	ROLE OF HISTAMINE IN FUNCTION OF THE MAMMALIAN OVARY.....	1R01 HD11482-01	34,630
KUEMPEL, PETER L.....	TERMINATION OF CHROMOSOME REPLICATION.....	5R01 GM15905-11	69,359
LIPETZ, MILTON E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07013-13	135,688
MC CLELLAND, GARY H.....	INDIVIDUAL FERTILITY DECISIONS AND SEX PREFERENCES.....	5R01 HD10802-02	28,687
MC CONKEY, EDWIN H.....	RIBOSOMAL PROTEIN PHOSPHORYLATION AND CELL GROWTH.....	5R01 CA22250-02	52,166
MC CONKEY, EDWIN H.....	NUCLEOLAR FUNCTIONS (HELA CELLS).....	5R01 GM21749-04	102,048
PORTER, KEITH R.....	HIGH-VOLTAGE ELECTRON MICROSCOPY OF BIOLOGICAL SYSTEMS.....	3P41 RR00592-08S1	5,000
PORTER, KEITH R.....	HIGH-VOLTAGE ELECTRON MICROSCOPY OF BIOLOGICAL SYSTEMS.....	5P41 RR00592-09	304,790
PRESCOTT, DAVID M.....	THE GENETIC APPARATUS OF HYPOTRICHOUS CILIATES.....	5R01 GM19199-07	102,010
RAKOWSKI-DUBOIS, M C.....	SULFUR TRANSFER REACTIONS OF MOLYBDENUM COMPLEXES.....	1R01 GM25122-01	40,772
SOLL, LARRY J.....	GENETIC AND BIOCHEMICAL ANALYSIS OF TRNA FUNCTIONS.....	2R01 GM21596-04	64,594
STAEHELIN, L ANDREW.....	STRUCTURE AND FUNCTION OF FREEZE-ETCHED CELL MEMBRANES.....	5R01 GM18639-07	80,589
STAEHELIN, L ANDREW.....	STRUCTURE-FUNCTION CORRELATIONS OF CHOROPLAST MEMBRANES.....	5R01 GM22912-03	45,395
STEIN, GRETCHEN H.....	GROWTH REGULATION: SENESCENT VS. NONSENESCENT CELLS.....	1R01 AG00947-01	92,329
SUEOKA, NOBORU.....	STUDIES OF CHROMOSOME REPLICATION.....	5R01 GM20352-06	93,731
SUEOKA, NOBORU.....	TRANSCRIPTION IN BRAIN AND NEUROTUMOR CELLS.....	5R01 GM22951-03	16,700
WALBA, DAVID M.....	TOTAL SYNTHESIS OF NATURAL CARDIOTONIC IONOPHORES.....	1R01 HL22778-01	56,297
WILSON, IRWIN B.....	ALKALINE PHOSPHATASE IN LYMPHOPROLIFERATIVE DISEASES.....	5R01 CA21950-02	16,715
WILSON, IRWIN B.....	STUDY OF ANGIOTENSIN CONVERTING ENZYME OF HUMAN SERUM.....	5R01 HL18908-03	11,896
WILSON, IRWIN B.....	THE CONVERTING ENZYME OF LUNG.....	1R01 HL22242-01	30,104
WOOD, WILLIAM B.....	BIOCHEMISTRY AND GENETIC CONTROL OF VIRUS ASSEMBLY.....	5R01 AI14994-02	182,908
WOOD, WILLIAM B.....	GENETIC CONTROL OF EMBRYOGENESIS IN C. ELEGANS.....	1R01 HD11762-01	90,354
YARUS, MICHAEL J.....	STRUCTURE, SPECIFICITY AND SYNTHESIS OF TRNA.....	1R01 GM25627-01	112,823
ORGANIZATION TOTAL	45	3,697,525	
DENVER			
AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA ZIP CODE 80220			
DAVIS, JOHN H.....	INTERNATIONAL SYMPOSIUM ON TRAUMA.....	1R13 GM25634-01	10,000
ORGANIZATION TOTAL	1	10,000	
COLORADO REGIONAL CANCER CENTER ZIP CODE 80262			
MAJOR, FRANCIS J.....	GYNCOLOGIC ONCOLOGY GROUP.....	1R10 CA25378-01	30,547
WALKER, STROTHER H.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	5R10 CA21878-02	92,461
ORGANIZATION TOTAL	2	123,008	
DENVER HEALTH AND HOSPITALS DEPARTMENT-DENVER GENERAL HOSPITAL ZIP CODE 80204			
MOORE, GEORGE E.....	STUDIES OF HUMAN HEMATOPOIETIC AND CANCER CELLS.....	5R01 CA15018-05	104,575

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
ORGANIZATION TOTAL	1	104,575	
NATIONAL ASTHMA CENTER ZIP CODE 80204			
HANSON, DONALD G.....	ORALLY-INDUCED IMMUNOLOGIC TOLERANCE TO PROTEINS.....	5R01 AI13474-03	63,397
KALISKER, ALBERT.....	CONTROL OF IMMUNE RESPONSES BY MAST CELL MEDIATORS.....	5R01 AI13592-03	40,647
MIKLICH, DONALD R.....	MECHANISM OF EMOTIONS' ASTHMA TRIGGERING EFFECT.....	5R01 HL21318-02	47,337
RENNE, CHARLES M.....	ASTHMA IN FAMILIES: BEHAVIOR ANALYSIS AND TREATMENT.....	1R01 HL22021-01	64,740
WEISER, PHILIP C.....	EXERCISE-INDUCED BRONCHOSPASM IN CHILDREN.....	5R01 HL21126-02	49,763
ORGANIZATION TOTAL	5	265,884	
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206			
BRENNAN, PATRICK J.....	STRUCTURE OF THE ANTIGENS OF ATYPICAL MYCOBACTERIA.....	1R01 AI14687-01	40,498
CAMPBELL, PRISCILLA A.....	CELL BIOLOGY OF THE IMMUNE RESPONSE TO BACTERIA.....	5R01 AI11240-06	55,622
CHILLER, JACQUES M.....	CELLULAR MECHANISMS OF IMMUNOREGULATION AND TOLERANCE.....	5R01 AI13131-03	70,529
DAHLEM, NANCY W.....	INTRACTABILITY, MEDICATION, AND COPING STYLES IN ASTHMA.....	1R01 HL22065-01	71,786
GOREN, MAYER B.....	SURFACE CHEMISTRY OF MYCOBACTERIA.....	3R22 AI08401-10S1	3,650
GOREN, MAYER B.....	SURFACE CHEMISTRY OF MYCOBACTERIA.....	5R22 AI08401-11	78,976
GREY, HOWARD M.....	STRUCTURE-FUNCTION RELATIONSHIPS OF IMMUNOGLOBULINS.....	5R01 AI09758-09	111,244
GREY, HOWARD M.....	SELF-NONSELF DISCRIMINATION AND TUMOR RECOGNITION.....	1P01 CA21825-01	308,169
HENSON, PETER M.....	RELEASE OF INJURIOUS CONSTITUENTS FROM CELLS.....	5R01 GM24834-02	116,689
HENSON, PETER M.....	PATHOGENESIS OF INFLAMMATORY LUNG INJURY.....	5R01 HL21565-02	148,010
HOLLISTER, J ROGER.....	RECOVERY OF ANTIGENS IN ANIMAL AND HUMAN ARTHRITIS.....	5R01 AM18484-03	34,251
JOHNSTON, RICHARD B, JR.....	MECHANISMS OF RESISTANCE TO BACTERIAL INFECTION.....	5R01 AI14148-02	74,697
KINSKY, STEPHEN C.....	IMMUNOGENICITY OF LIPOSOMES.....	7R01 AI15796-01	96,988
MC GUIRE, EDWARD J.....	CELL ADHESION OF NORMAL AND MALIGNANT LIVER CELLS.....	5R01 CA14431-06	73,582
MINDEN, PERCY.....	ANTIGEN-ANTIBODY INTERACTIONS IN NEOPLASTIC DISEASE.....	5R01 CA15446-09	114,604
MORRIS, HELEN G.....	ENDOGENOUS PROSTAGLANDINS IN ASTHMA.....	1R01 HL22026-01A1	87,086
PACE, NORMAN R.....	METABOLISM OF RNA IN PROKARYOTES AND EUKARYOTES.....	2R01 GM20147-06	162,191
PATO, MARTIN L.....	EXCISION AND REPLICATION OF MU VIRUS DNA.....	1R01 GM24270-01	56,126
RICKENBERG, HOWARD V.....	CONTROL OF ENZYME BIOSYNTHESIS—ROLE OF CYCLIC AMP.....	5R01 AM11046-13	102,146
ROBINSON, ARTHUR.....	SEX CHROMOSOMAL ABNORMALITIES: A PROSPECTIVE STUDY.....	5R01 HD10032-03	121,115
ROBINSON, ARTHUR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05474-16	92,222
ROBINSON, KENNETH R.....	ELECTRICAL CURRENTS AND EMBRYONIC CELLS.....	5R01 HD11925-02	75,332
SEALE, RONALD L.....	NUCLEOSOME-DNA INTERACTIONS IN CHROMATIN REPLICATION.....	5R01 GM23808-02	53,877
SHUCARD, DAVID W.....	ELECTROPHYSIOLOGICAL MEASURES OF CEREBRAL SPECIALIZATION.....	1R01 HD11747-01	44,209
SOGIN, MITCHELL L.....	THE ROLE OF REPETITIVE DNA SEQUENCES IN GENE EXPRESSION.....	5R01 GM23464-02	55,875
SOUHRADA, JOSEPH F.....	FUNCTIONAL CHARACTERISTICS OF SMOOTH MUSCLE FROM LUNG.....	2R01 HL17322-04	47,658
STAMATO, THOMAS D.....	ISOLATING CARCINOGEN SENSITIVE MAMMALIAN CELL MUTANTS.....	1R01 ES01803-01	61,772
STRUNK, ROBERT C.....	FUNCTION & SPECIFICITY OF TERMINAL COMPLEMENT ENZYMES.....	7R01 AI15340-01	27,194
ORGANIZATION TOTAL	28	2,386,098	
UNIVERSITY OF COLORADO AT DENVER ZIP CODE 80202			
OLEFSKY, JERROLD M.....	PLASMA INSULIN LEVELS AND ADIPOCYTE METABOLISM.....	5R01 AM25242-02	44,262
ORGANIZATION TOTAL	1	44,262	
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
ABRAMS, ADOLPH.....	STRUCTURE AND FUNCTION OF BACTERIAL MEMBRANE ATPASE.....	2R01 GM05810-19	70,281
ALLEN, ROBERT H.....	STRUCTURE AND FUNCTION OF B12-BINDING PROTEINS.....	5R01 AM21365-02	77,763
ALLEN, ROBERT H.....	COBALAMIN ANALOGUES AS ANTITUMOR ANTIMETABOLITES.....	1R01 CA22976-01	57,905
AUSTIN, JAMES H.....	STUDIES IN GENETICALLY DETERMINED NEUROLOGICAL DISEASES.....	2R01 NS07701-12A1	40,130
AUSTIN, JAMES H.....	STUDIES IN AGING OF THE BRAIN.....	5R01 NS09760-08	70,694
BANCHERO, NATALIO.....	OXYGEN TRANSPORT MECHANISMS IN HYPOXIA.....	5R01 HL18145-03	44,499
BATTAGLIA, FREDERICK C.....	PREMATURITY—HCG ROLE IN IMMUNOSUPPRESSION.....	5P01 HD00781-15	331,138
BETZ, GEORGE.....	REPRODUCTIVE FUNCTION OF GONADAL OXIDASES.....	2R01 HD08309-04	58,199
BETZ, WILLIAM J.....	NEUROMUSCULAR SYNAPSES IN CELL CULTURE.....	5R01 NS10207-07	42,228
BROWN, JERRY L.....	MODIFICATION OF THE NH2-TERMINAL REGION OF PROTEINS.....	5R01 CA12574-07	64,852
BROWN, WILLIAM R.....	IMMUNOGLOBULIN A AND THE HUMAN GASTROINTESTINAL TRACT.....	2R26 CA17342-04	51,101
CANN, JOHN R.....	PHYSICO-CHEMISTRY AND IMMUNOLOGY OF MACROMOLECULES.....	5R01 HL13909-27	75,529
CLAMAN, HENRY N.....	IMMUNOLOGICAL CHANGES IN AGING.....	5R01 AG00464-05	63,717
CLAMAN, HENRY N.....	ALLERGIC DISEASE CENTER—ALLERGIC VASCULITIS.....	5P50 AI12028-05	110,589

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
CLAMAN, HENRY N.....	IMMUNOCOMPETENCE OF THYMUS CELLS.....	2R01 AI12685-13	115,765
COHEN, J JOHN.....	MATURATION OF LYMPHOCYTE PRECURSORS.....	5R01 AI11661-05	74,965
CONGER, JOHN D.....	PATHOGENESIS OF ACUTE RENAL FAILURE.....	2R01 HL18097-04	57,664
CROWLE, ALFRED J.....	EFFECTS OF AGING ON DELAYED HYPERSENSITIVITY IN MICE.....	5R01 AG00008-02	42,885
CUMMINGS, DONALD J.....	REPLICATION, FUNCTION AND BIOGENESIS OF MITOCHONDRIA.....	5R01 GM21948-03	45,445
DOUVAS, ANGELINE S.....	CHARACTERIZATION OF A NUCLEAR RNA-PROTEIN COMPLEX (RNP).....	1R01 AM21839-01	58,649
EIPPER, ELIZABETH A.....	BIOCHEMISTRY AND PHYSIOLOGY OF MULTIPLE FORMS OF ACTH.....	5R01 AM18929-03	47,239
ERIKSON, RAYMOND L.....	BIOSYNTHESIS OF VIRAL RNA.....	5R01 CA21117-13	69,831
ERIKSON, RAYMOND L.....	AVIAN SARCOMA VIRUS TRANSFORMATION-SPECIFIC ANTIGENS.....	3R01 CA21326-01S1	400
ERIKSON, RAYMOND L.....	AVIAN SARCOMA VIRUS TRANSFORMATION-SPECIFIC ANTIGENS.....	5R01 CA21326-02	27,345
FREED, CURT R.....	BRAIN CATECHOLAMINES IN CONTROL OF BLOOD PRESSURE.....	1R01 HL20194-01A2	54,909
FRIEDMAN, SUSAN J.....	D-GLUCOSAMINE: POTENTIATOR IN CANCER CHEMOTHERAPY.....	5R01 CA16154-04	45,979
FRIEDMAN, SUSAN J.....	THE DEVELOPMENT AND PATHOLOGY OF HUMAN CHORIOCARCINOMA.....	1R01 CA23985-01	33,371
FROST, WARREN W.....	ANIMAL RESOURCE DIAGNOSTIC LABORATORY.....	5P40 RR01090-02	99,469
GORDON, JULIUS A.....	INTERACTION OF LECTINS WITH CELL MEMBRANES.....	5R01 CA14313-06	41,618
GORDON, STUART G.....	MOLECULAR AND CELLULAR STUDY OF CANCER PROCOAGULANT A.....	5R01 CA14408-06	53,227
GREER, ROBERT O.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA21098-02	40,161
GROVER, ROBERT F.....	ADAPTATION TO HYPOXIA.....	5P01 HL14985-07	800,520
HAGERMAN, DWAIN D.....	STEROID ENZYMOLOGY: OVARIAN AROMATASE.....	1R01 HD11730-01	51,242
HAHN, WILLIAM E.....	GENETIC TRANSCRIPTION IN THE MAMMALIAN BRAIN.....	5R01 NS10813-06	51,009
HAMBIDGE, K MICHAEL.....	STUDIES OF HUMAN ZINC DEFICIENCY.....	2R22 AM12432-10	104,380
HATHAWAY, WILLIAM E.....	CLINICAL STUDIES OF FLETCHER FACTOR.....	5R01 HL18507-03	31,819
HATHAWAY, WILLIAM E.....	THROMBOEMBOLIC DISEASE STUDIES.....	5R01 HL20337-02	33,628
HENDEE, WILLIAM R.....	THERMOGRAPHY AT MICROWAVE AND MILLIMETER WAVELENGTHS.....	5R01 CA17642-02	144,228
HIRS, CHRISTOPHE H.....	STRUCTURE AND FUNCTION OF PANCREATIC ENZYMES.....	7R01 AM25230-01	63,519
HUFFER, WILLIAM E.....	PATHOLOGY OF BONE IN DIALYSIS PATIENTS.....	5R01 AM18890-03	18,893
IMADA, MASARU.....	MEMBRANE PROTEINS IN TUMORS.....	5R01 CA22096-02	30,074
JONES, CAROL A.....	IMMUNOLOGIC STUDIES RELATED TO MALIGNANCY.....	5R01 CA18734-03	77,870
KERN, FRED, JR.....	ESTROGEN EFFECTS ON BILIARY LIPIDS & BILE ACID KINETICS.....	5R01 AM19605-02	104,317
KERR, SYLVIA J.....	STUDY OF METHYLATIONS IN NEOPLASIA.....	5R01 CA12742-07	96,983
KING, DONALD W.....	SEMINARS AND WORKSHOPS IN TECHNIQUES OF CANCER RESEARCH.....	5R13 CA15961-05	69,345
KING, DONALD W.....	SEMINARS AND LABORATORY WORKSHOPS FOR MD/PHD CANDIDATES.....	5R13 GM23356-03	29,217
KIRSCH, WOLFF M.....	CELL SYNCHRONIZATION IN SOLID TUMORS.....	3R01 CA19137-02S1	8,313
KIRSCH, WOLFF M.....	CELL SYNCHRONY IN SOLID TUMORS: WARFARIN EFFECT.....	2R01 CA19137-03	40,563
KOZLOFF, LLOYD M.....	CHEMISTRY OF PHAGE INVASION, STRUCTURE, AND ASSEMBLY.....	5R01 AI06336-15	80,396
LANGAN, THOMAS A.....	PROPERTIES AND FUNCTION OF NUCLEAR PHOSPHOPROTEINS.....	5R01 CA12877-08	79,467
LASHER, ROBERT S.....	DIFFERENTIATION OF GABA NEURONS IN THE CNS.....	5R01 NS13133-03	30,048
LEHMAN, JOHN M.....	PATHOLOGY OF NEOPLASTIC TRANSFORMATION.....	5R01 CA16030-04	50,582
LEHMAN, RALPH A.....	LATERALIZATION OF HANDEDNESS, ATTENTION AND LEARNING.....	2R01 NS12117-04	13,895
LUBS, HERBERT A.....	ORGANIZATION OF METAPHASE CHROMOSOMES.....	5R01 GM23121-03	43,026
MAINS, RICHARD E.....	ELECTROPHYSIOLOGICAL CORRELATES OF ACTH SECRETION.....	5R01 AM19859-02	23,799
MARTIN, A ROBERT.....	MECHANISMS OF SYNAPTIC TRANSMISSION.....	5R01 NS09660-09	59,424
MARTINEZ-HERNANDEZ, ANTONIO.....	BASEMENT MEMBRANE STRUCTURE, FUNCTION, PATHOLOGY.....	5R01 AM15663-07	96,114
MC INTIRE, FLOYD C.....	BACTERIAL COAGGREGATION MECHANISMS IN ORAL PLAQUE.....	1R01 DE04926-01	57,070
MESCHIA, GIACOMO.....	PHYSIOLOGICAL STUDY OF THE PLACENTA.....	5R01 HD01866-13	142,706
MILLER, STEPHEN O.....	SUPPRESSOR CELL MECHANISMS AND GENETICS IN TOLERANCE.....	1R23 AI14913-01	37,470
MOLINOFF, PERRY B.....	REGULATION OF BETA-ADRENERGIC RECEPTORS.....	5R01 NS13289-02	52,818
MONTGOMERY, ROBERT R, JR.....	VWAGII—A NEW VWD DEFICIENT ANTIGEN.....	1R23 HL21730-01	41,029
MOORE, GEORGE E.....	IMMUNOTHERAPY OF CANCER PATIENTS WITH METHACRYLATES.....	5R01 CA18754-03	56,593
MOORHEAD, JOHN W.....	INTERACTION OF T-CELLS IN IMMUNITY AND TOLERANCE.....	5R01 AI12993-03	54,429
MURPHY, ROBERT C.....	STRUCTURE DETERMINATION OF MAST CELL PHOSPHOLIPIDS.....	5R01 GM19897-04	38,365
NAKANE, PAUL K.....	FETAL PANCREATIC ISLET DEVELOPMENT IN DIABETIC MICE.....	1R01 HD11603-01	40,876
NEVILLE, MARGARET C.....	MATHEMATICAL MODELS OF MEMBRANE PROCESSES.....	5R01 AM15807-06	57,496
NEVILLE, MARGARET C.....	NUTRIENT UPTAKE IN NORMAL AND TUMOROUS MAMMARY GLAND.....	5R01 CA19389-03	36,159
NIES, ALAN S.....	PROSTAGLANDINS AND LOCAL CONTROL OF THE CIRCULATION.....	1R01 HL21308-01A1	84,315
NOLTE, JOHN F.....	PINEAL PHOTORECEPTORS.....	5R01 EY02083-02	35,428
O'BRIEN, OONOUGH.....	CENTER GRANT FOR RESEARCH IN MENTAL RETARDATION.....	5P30 HD04024-10	260,202
O'BRIEN, OONOUGH.....	BIOCHEMICAL, GENETIC AND OTHER STUDIES IN RETARDATION.....	5P01 HD08315-04	344,698
OLEFSKY, JERROLO M.....	DIETARY THERAPY OF DIABETES MELLITUS.....	1R01 AM25240-01	26,145
OLEFSKY, JERROLO M.....	INSULIN RECEPTORS AND THE GLUCOSE TRANSPORT SYSTEM.....	7R01 AM25241-01	25,048

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
PATERSON, CHRISTOPHER A.....	REGULATION OF LENS CATION BALANCE AND DISTRIBUTION.....	5R01 EY00506-10	91,556
PATON, BRUCE C.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00051-17	932,099
PATON, BRUCE C.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00069-16	578,594
PATTERSON, DAVID.....	GENE EXPRESSION IN SOMATIC CELLS IN THE AGING PROCESS.....	2R01 AG00029-04	86,931
PETTUJOHN, DAVID E.....	ORGANIZATION OF DNA IN CHROMOSOMES.....	2R01 GM18243-07	72,308
PETTY, THOMAS L.....	THE MORPHOLOGIC BASIS OF AIRFLOW OBSTRUCTION.....	1R01 HL22723-01	61,081
PIERCE, G BARRY.....	PROGRAM IN DEVELOPMENTAL BIOLOGY OF CANCER.....	5P01 CA15823-04	249,188
PIERCE, G BARRY.....	DIFFERENTIATION OF CANCER.....	1R01 CA24010-01	138,106
PIZER, LEWIS I.....	CONTROL MECHANISMS IN PRO- AND EUKARYOTIC CELLS.....	7R01 AI15300-01	61,610
PRASAD, KEDAR N.....	HEAVY METAL-INDUCED DAMAGE TO THE NERVOUS SYSTEM.....	5R01 ES01576-02	88,248
PUCK, THEODORE T.....	SOMATIC CELL GENETICS IN CANCER.....	5P01 CA20810-03	198,020
PUCK, THEODORE T.....	THE CELL BIOLOGY OF DEVELOPMENTAL ANOMALIES.....	2P01 HD02080-13	318,374
QUISSELL, DAVID O.....	PHARMACOLOGY OF SUBMAXILLARY GLAND SECRETION IN VITRO.....	1R01 DE04778-01	41,884
REEVE, E BASIL.....	MECHANISMS REGULATING PLASMA PROTEINS AND SOLUTES.....	5R01 HL02262-23	97,492
REEVES, JOHN T.....	STUDY OF EFFECTS OF DIABETES REACTIVITY.....	5R01 HL20429-03	39,107
REVIS, GEORGE J.....	IMMUNOCHEMISTRY OF ORAL ACTINOMYCES SURFACE ANTIGENS.....	5R23 DE04290-03	23,983
ROBINSON, WILLIAM A.....	AUTOLOGOUS MARROW RESCUE AFTER INTENSIVE CHEMOTHERAPY.....	1R01 CA23552-01	85,253
ROPER, STEPHEN D.....	SYNAPTIC TRANSMISSION IN AUTONOMIC GANGLION CELLS.....	5R01 NS11505-05	74,711
RUTHERFORD, ROBERT B.....	EVALUATING ARTERIAL DISEASE BY VELOCITY-WAVE ANALYSIS.....	1R01 HL22893-01	109,886
SADLER, JOHN R.....	DEFECTIVE HERPES VIRAL DNA.....	1R01 AI14592-01	43,697
SADLER, JOHN R.....	THE CLONING OF SYNTHETIC LACTOSE OPERATORS.....	1R01 GM24606-01	64,607
SCHALCH, DON S.....	ROLE OF SOMATOMEDIN IN GROWTH AND DIABETES MELLITUS.....	2R01 AM18617-04	70,051
SCHRIER, ROBERT W.....	SYSTEMIC HEMODYNAMICS AND RENAL WATER EXCRETION.....	5P01 AM19928-02	282,589
SCHWARZ, MARVIN I.....	ETIOLOGIC FACTORS IN CRYPTOGENIC FIBROSING ALVEOLITIS.....	5R01 HL19018-03	18,348
SEEDS, NICHOLAS W.....	IN VITRO BIOCHEMICAL DIFFERENTIATION OF NERVE CELLS.....	5R01 NS09818-07	33,841
SEEDS, NICHOLAS W.....	GTP AND FACTORS REGULATING TUBULIN POLYMERIZATION.....	2R01 NS10709-04A1	44,564
SIMON, FRANCIS R.....	SURFACE MEMBRANE REGULATION OF BILE ACID TRANSPORT.....	3R01 AM15851-06S1	13,815
SIMON, FRANCIS R.....	SURFACE MEMBRANE REGULATION OF BILE ACID TRANSPORT.....	2R01 AM15851-07	46,642
STARZL, THOMAS E.....	EFFECTS OF ORTHOTOPIC LIVER TRANSPLANTATION.....	5R01 AM07772-15	109,390
STARZL, THOMAS E.....	HEPATOTROPIC FACTORS IN SPLANCHNIC VENOUS BLOOD.....	5R01 AM17260-10	80,430
SWANSON, GEORGE D.....	MULTIPLE GAS MEASUREMENT OF LUNG TISSUE VOLUME.....	1R23 HL22978-01	44,526
TALMAGE, DAVID W.....	THE ROLE OF MACROPHAGES IN ALLOGRAFT IMMUNITY.....	5R01 AI03047-20	87,806
TALMAGE, DAVID W.....	THE IMMUNOGENICITY OF TUMOR-MACROPHAGE HYBRIDS.....	5R01 CA20744-02	59,543
TAN, ENG M.....	AUTOIMMUNE RESPONSES TO NUCLEAR ANTIGENS.....	1R01 AM20705-01	106,378
TAYLOR, AUSTIN L.....	PHAGE MU: A MODEL FOR INTEGRATION OF ANIMAL VIRUS DNA.....	5R01 ES114025-02	45,326
WALDREN, CHARLES A.....	METABOLISM, GENOME REPAIR & ENVIRONMENTAL MUTAGENS.....	5R01 ES01555-02	51,803
WARD, HARRY P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05357-17	200,462
WEINER, NORMAN.....	SYNTHESIS, STORAGE AND RELEASE OF CATECHOLAMINES.....	5R01 NS07927-11	141,505
WEINER, NORMAN.....	BASAL GANGLIA DISORDERS AND NEUROTRANSMITTER FUNCTION.....	5P50 NS09199-09	323,934
WENGER, DAVID A.....	SPHINGOMYELINASE ACTIVITY AND SPHINGOMYELIN LIPIDOSES.....	5R01 HD10494-02	31,110
WENGER, DAVID A.....	SUBSTRATE SPECIFICITY OF HUMAN BETA-GALACTOSIDASES.....	5R01 NS10698-04	36,253
WESTON, WILLIAM L.....	MONOCYTE-MACROPHAGE FUNCTION IN MYCOSIS FUNGOIDES.....	5R01 AI13171-03	22,710
WICKELGREN, WARREN O.....	ORGANIZATION OF THE NERVOUS SYSTEM.....	2R01 NS09661-08A1	58,820
WICKS, WESLEY D.....	REGULATION OF HEPATOMA ENZYME SYNTHESIS BY CYCLIC AMP.....	5R01 AM16753-07	54,973
ORGANIZATION TOTAL	118	11,112,619	
UNIVERSITY OF DENVER ZIP CODE 80210			
EATON, GARETH R.....	INTERACTION OF SPIN LABELS WITH TRANSITION METALS.....	5R01 GM21156-05	63,600
HARTER, SUSAN.....	THE DEVELOPMENT OF MOTIVE HIERARCHIES IN CHILDREN.....	5R01 HD09613-03	58,937
HORN, JOHN L.....	MEASUREMENTS OF INDIVIDUAL DIFFERENCES IN ADULTHOOD.....	5R01 AG00583-02	54,331
KEY, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07138-07	37,898
PREDECKI, PAUL K.....	BLOOD COMPATIBLE MATERIALS BY FLUID PERFUSION.....	5R01 HL20073-02	51,063
REUSCH, VICTOR M, JR.....	BIOSYNTHESIS OF SURFACE POLYMERS BY ORAL ACTINOMYCES.....	7R23 DE05135-01	36,359
RINARD, GEORGE A.....	PATIENT EVALUATION OF AN OCULAR CONTROL SYSTEM.....	2R01 AM10763-10A1	98,480
WICKSTROM, ERIC.....	MOLECULAR RULERS FOR RIBOSOMES.....	1R01 GM24128-01A1	59,765
YORK, SHELDON S.....	CHANGES IN LAC REPRESSOR STRUCTURE DURING DNA BINDING.....	5R01 GM20561-06	64,560
ORGANIZATION TOTAL	9	524,993	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
FORT COLLINS			
COLORADO STATE UNIVERSITY	ZIP CODE 80521		
ABEL, JOHN H, JR.....	COMPARTMENTALIZATION OF LUTEAL CELL FUNCTION.....	5R01 HD10327-03	113,321
ALEXANDER, A V.....	MODELS OF HYPOXIC PULMONARY HYPERTENSION.....	2R01 HL18191-04	63,980
AZARI, PARVIZ.....	INTERMOLECULAR CROSS-LINKS IN LENS.....	1R01 EY02416-01	74,088
BEDFORD, JOEL S.....	DOSE AND TIME FACTORS IN CELLULAR RADIOSENSITIVITY.....	5R01 CA18023-04	106,258
BONILLA, CARLOS A.....	CARDIOLOGY OF MDP-INDUCED LEFT VENTRICULAR FAILURE.....	5R01 HL16233-05	78,411
CAUGHEY, WINSLOW S.....	CONFERENCE ON BIOCHEMICAL AND CLINICAL ASPECTS OF O2.....	1R13 AM25634-01	6,196
CAUGHEY, WINSLOW S.....	REACTIONS OF HEMEPROTEINS AND OXYGEN.....	5R01 HL15980-06	138,770
CRAMER, DAVID A.....	DEVELOPMENT OF ADIPOSE CELLS AND TISSUE IN OBESITY.....	5R01 AM18275-02	56,527
DE BRUIJN, KENNETH E.....	POTENTIAL ANTITUMOR AGENTS AND ESTERASE INHIBITORS.....	5R01 CA14477-06	24,606
DE BRUIJN, KENNETH E.....	STEREOSPECIFICITY IN ANTITUMOR ACTIVITY.....	3R01 CA19908-02S1	5,514
DE BRUIJN, KENNETH E.....	STEREOSPECIFICITY IN ANTITUMOR ACTIVITY.....	2R01 CA19908-03	31,096
DEWEY, WILLIAM C.....	CELLULAR RESPONSES TO IRRADIATION.....	5R01 CA08618-13	192,917
DEWEY, WILLIAM C.....	MOLECULAR BASIS OF RADIOSENSITIZATION BY HYPERTHERMIA.....	5R01 CA18334-03	91,352
GILLETTE, EDWARD L.....	RADIATION REPAIR OF NORMAL MAMMALIAN TISSUES.....	5R01 CA13899-07	94,168
GILLETTE, EDWARD L.....	TUMOR & NORMAL TISSUE RESPONSE TO HEAT AND RADIATION.....	2R01 CA17831-04	75,628
GILLETTE, EDWARD L.....	HYPERTHERMIA AND IRRADIATION EFFECT ON TUMORS.....	1R01 CA24262-01	69,121
GORELL, THOMAS A.....	HORMONAL CONTROL OF DIFFERENTIATION AND REGRESSION.....	1R01 HD10613-01A1	25,767
GORTHY, WILLIS C.....	MORPHOLOGICAL AND HISTOCHEMICAL STUDIES OF CATARACTS.....	2R01 EY00378-09	77,943
HAPP, GEORGE M.....	CONTROL OF REPRODUCTIVE MATURATION: AN INSECT MODEL.....	1R01 AI14019-01A1	46,445
HEGEDUS, LOUIS S.....	ORGANOPALLADIUM ANTITUMOR AGENTS.....	5R01 CA18680-03	34,356
HILL, GEORGE C.....	ELECTRON TRANSPORT SYSTEMS IN TRYPANOSOMES.....	5R01 AI11622-05	51,011
HISTAND, MICHAEL B.....	NONINVASIVE MEASUREMENT OF CARDIAC OUTPUT.....	1R01 HL22326-01	88,752
JORDAN, JOHN P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07127-10	60,582
KOZLOWSKI, GERALD P.....	IMMUNOTECHNIQUES FOR GN-RH AND RELATED NEUROPEPTIDES.....	2R01 HD08867-04	45,615
LETT, JOHN T.....	AGING, RADIATION & DNA DAMAGE IN NONDIVIDING TISSUE.....	3R01 AG00005-05S1	3,810
LETT, JOHN T.....	AGING, RADIATION & DNA DAMAGE IN NONDIVIDING TISSUE.....	5R01 AG00005-06	83,252
LETT, JOHN T.....	REPAIR OF RADIATION DAMAGE IN CELLULAR DNA.....	5R01 CA10714-11	95,777
LUMB, WILLIAM V.....	PORTACAVAL SHUNT AS TREATMENT FOR HYPERLIPEMIA.....	5R01 HL20183-02	93,391
MASKEN, JAMES F.....	NEUROENDOCRINE REGULATION OF PUBERTY.....	1R01 HD09363-01A1	49,177
MATHIAS, MELVIN M.....	DIETARY FAT COMPOSITION AND PROSTAGLANDIN SYNTHESIS.....	2R01 HL18239-03	42,026
MEYERS, ALBERT I.....	SYNTHESIS OF MAYTANSINE AND ITS DERIVATIVES.....	2R01 CA16051-04	85,664
NETT, TORRANCE M.....	GN-RH-RECEPTOR INTERACTION: AFFINITY VERSUS BIOPOTENCY.....	5R01 HD07841-04	77,564
NISWENDER, GORDON D.....	REGULATION OF LH RECEPTORS AND PROGESTERONE SECRETION.....	1R01 HD11590-01	90,827
NOCKELS, CHERYL F.....	VITAMIN E IMPROVES IMMUNITY BY ALTERING CYCLIC AMP.....	5R01 AI13710-02	49,858
PAULE, MARVIN R.....	GENE SELECTION BY MULTIPLE EUKARYOTIC RNA POLYMERASES.....	5R01 GM22580-03	53,292
PAUTLER, EUGENE L.....	TRANSRETINAL POTENTIAL AND SUGAR TRANSPORT IN MAMMALS.....	5R01 EY01643-03	41,803
PEARSON, LEONARD D.....	HOST-VIRUS INTERACTIONS IN A LOCAL LYMPH NODE.....	1R23 AI14893-01	41,432
PEMISTER, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05458-16	93,923
PHILLIPS, ROBERT W.....	DEVELOPMENT OF A SWINE MATURITY ONSET DIABETES MODEL.....	5R01 AM21206-02	73,745
RALPH, CHARLES L.....	FUNCTION OF THE PINEAL COMPLEX.....	2R01 NS12257-05	69,339
SNEIDER, THOMAS W.....	METHYLATION OF EUKARYOTIC DNA.....	5R01 CA18719-02	37,022
STERMITZ, FRANK R.....	ANTITUMOR COMPOUNDS FROM NORTH AMERICAN PLANTS.....	5R01 CA19243-03	27,178
STONE, HELEN B.....	RADIATION AND HYPOXIC CELL SENSITIZERS.....	5R01 CA20344-03	79,645
SWAN, HENRY.....	PREVENTION OF MYOCARDIAL HYPOXIA DURING BY-PASS.....	1R01 HL21969-01	67,567
TORNABENE, THOMAS G.....	EFFECTS OF LEAD ON PROCARYOTIC AND EUKARYOTIC CELLS.....	5R01 ES01047-04	32,088
TU, ANTHONY T.....	HEMORRHAGIC AND NECROTIC TOXINS IN SNAKE VENOMS.....	2R01 GM15591-11	66,409
TU, ANTHONY T.....	SEA SNAKE VENOMS AND TOXINS.....	5R01 GM19172-07	47,704
TU, ANTHONY T.....	ACTION OF LIZARD TOXINS AND ROLE IN ENVENOMATION.....	1R01 GM24718-01	70,086
WILL, DONALD H.....	ANIMAL MODELS OF HYPOXIC PULMONARY HYPERTENSION.....	3R01 HL18191-03S1	3,333
WILL, DONALD H.....	COLD INDUCED PULMONARY HYPERTENSION.....	5R01 HL20719-02	45,132
WOODY, ROBERT W.....	OPTICAL PROPERTIES OF BIOLOGICAL MACROMOLECULES.....	5R01 GM22994-03	74,842
WOODY, ROBERT W.....	SPECTROSCOPIC STUDIES OF RNA POLYMERASE MECHANISM.....	5R01 GM23697-03	41,933
ORGANIZATION TOTAL	52	3,290,243	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
COLORADO—Continued			
LAKWOOD			
AMC CANCER RESEARCH CENTER AND HOSPITAL ZIP CODE 80214			
BOREK, ERNEST.....	MOLECULAR BIOLOGY OF ETHIONINE CARCINOGENESIS.....	5R01 CA23536-02	114,846
PARKS, RICHARD C.....	IMMUNOLOGICAL MECHANISMS OF ANTIGENIC TUMOR 'ESCAPE'.....	5R01 CA18923-03	26,491
ORGANIZATION TOTAL	2 141,337		
STATE TOTAL	264 21,700,544		
CONNECTICUT			
FARMINGTON			
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032			
BALLOW, MARK.....	MEDIATORS OF INFLAMMATION IN TEAR SECRETIONS.....	5R23 EY02036-02	13,942
BALLOW, MARK.....	ALTERED METABOLISM & IMMUNE FUNCTION IN NEPHROSIS.....	1R01 HD12050-01	59,302
BECKER, ELMER L.....	IMMUNOLOGICALLY ACTIVATED ENZYME SYSTEMS OF CELLS.....	5R01 AI09648-09	103,190
BERLIN, RICHARD D.....	EFFECT OF MICROTUBULAR PROTEINS ON CELL SURFACES.....	5R01 CA15544-05	41,552
BERLIN, RICHARD D.....	DYNAMIC INTERACTIONS OF MEMBRANES, ACTION & MICROTUBULES.....	5R01 GM22621-03	39,159
BRONNER, FELIX.....	MINERAL METABOLISM IN POSTMENOPAUSAL OSTEOPOROSIS.....	5R01 AM14251-07	75,515
BURSTONE, CHARLES J.....	PREDICTION OF TOOTH DISPLACEMENT.....	5R01 DE03545-06	99,081
BURSTONE, CHARLES J.....	FORCE SYSTEMS FROM ORTHODONTIC APPLIANCE.....	2R01 DE03953-04	140,004
CATALANOTTO, FRANK A.....	EFFECTS OF MATERNAL ZINC DEFICIENCY ON ENAMEL ZINC.....	1R01 DE04830-01	26,896
CHAN, LEE-NIEN L.....	CHANGES IN MEMBRANE PROPERTIES DURING ERYTHROPOIESIS.....	5R01 HL19068-03	50,878
CHAN, LEE-NIEN L.....	REGULATION OF HEMOGLOBIN SYNTHESIS IN CHICK EMBRYOS.....	5R01 HL20928-02	21,501
CINTI, DOMINICK L.....	CYTOCHROME B5 IN MICROSOMAL ELONGATION OF FATTY ACIDS.....	1R01 AM21633-01	58,850
COHEN, STANLEY.....	COMPLEMENT AND CELLULAR ACTIVATION.....	5R01 AI12477-05	58,331
COHEN, STANLEY.....	ANTIBODIES TO LYMPHOCYTE-DERIVED MEDIATORS.....	5R01 AI13258-03	45,890
COSTA, MAX.....	NICKEL CARCINOGENESIS IN TISSUE CULTURE.....	1R23 ES01677-01	40,000
COYKENDALL, ALAN L.....	MOLECULAR TAXONOMY OF POTENTIAL PERIODONTAL PATHOGENS.....	5R01 DE04721-02	39,257
CRONLUND, MALCOLM.....	THE ROLE OF FIBRIN DEPOSITION IN CANCER.....	1R01 CA22202-01A1	28,244
D'AMATO, DONALD P.....	ZINC RADIOPHARMACEUTICALS FOR OCULAR MELANOMA DETECTION.....	5R01 CA22077-02	42,933
DEUTSCHER, MURRAY P.....	ENZYMOLGY AND CONTROL OF AMINO ACID ACTIVATION.....	5R01 GM16317-11	77,383
FEINSTEIN, MAURICE B.....	STUDIES ON MECHANISM OF ACTION OF ANESTHETICS.....	5R01 GM17536-09	51,233
FEINSTEIN, MAURICE B.....	CYCLIC NUCLEOTIDES AND CALCIUM IN PLATELETS.....	5R01 HL18937-03	33,821
FERNANDEZ, SALVADOR M.....	DEVELOPMENTAL CHANGES IN THE MYOGENIC CELL SURFACE.....	5R01 GM23235-02	33,875
FERNANDEZ, SALVADOR M.....	SMOOTH MUSCLE DEVELOPMENT IN VITRO.....	1R01 HL23013-01	54,673
GAY, THOMAS J.....	ELECTROMYOGRAPHIC-CINEFLUOROGRAPHIC STUDIES OF SPEECH.....	5R01 NS10424-04	28,282
GLASEL, JAY A.....	SUPPORT FOR NMR SPECTROSCOPY FACILITY.....	5P41 RR00639-05	61,742
GOLDSCHNEIDER, IRVING.....	DEVELOPMENT OF IMMUNOLOGICALLY COMPETENT LYMPHOCYTES.....	5R01 AI09649-09	51,647
GOLDSCHNEIDER, IRVING.....	TERMINAL TRANSFERASE IN NORMAL & NEOPLASTIC LYMPHOCYTES.....	5R01 AI14743-02	108,032
GONDOS, BERNARD.....	GONADAL DIFFERENTIATION IN THE HUMAN FETUS.....	1R01 HD12918-01	56,338
GRASSO, JOSEPH A.....	STUDIES IN RBC DIFFERENTIATION.....	5R01 AM19167-04	52,259
GRIMM-JORGENSEN, YVONNE.....	THYROTROPIN RELEASING FACTOR; RELEASE AND FUNCTION.....	1R01 AM20929-01	42,101
HENDERSON, EDWARD G.....	IONIC MECHANISMS UNDERLYING RECEPTOR DESENSITIZATION.....	5R01 NS12563-02	41,526
HOLLAND, MICHAEL J.....	CONTROL OF TRANSCRIPTION OF ISOLATED EUKARYOTIC GENES.....	5R01 GM23109-03	45,832
HOYER, LEON W.....	STUDIES OF ANTIBODIES TO ANTIHEMOPHILIC FACTOR.....	2R01 HL16626-05	83,686
HOYER, LEON W.....	STUDIES OF ANTIHEMOPHILIC FACTOR.....	5R01 HL16872-04	108,213
JUNGAS, ROBERT L.....	ACTION OF INSULIN ON ENZYMES OF ADIPOSE TISSUE.....	5R01 AM18092-05	49,570
JUNGAS, ROBERT L.....	EFFECT OF INSULIN ON CO2 FIXATION IN ADIPOSE TISSUE.....	1R01 AM22142-01	87,383
KAPLAN, JERRY.....	MEMBRANE DYNAMICS IN ALVEOLAR MACROPHAGES.....	5R01 HL21120-02	43,383
KATZ, ARNOLD M.....	ACTIONS OF DRUGS AND IONS ON CARDIAC MEMBRANES.....	5R01 HL21812-02	123,660
KATZ, ELTON P.....	THE DEVELOPMENTAL BIOLOGY OF CALCIFIED TISSUES.....	5R01 DE02953-09	54,439
KEGELES, S STEPHEN.....	CHILDREN'S ACCEPTANCE OF CARIES PREVENTIVE PROCEDURES.....	5R01 DE03868-04	107,803
KOLAKOWSKI, DONALD L.....	A STUDY OF HOST FACTORS IN CARIES SUSCEPTIBILITY.....	1R01 DE04938-01	44,410
KOPPEL, DENNIS E.....	MEMBRANE DYNAMICS OF LOCOMOTING TISSUE CELLS.....	5R01 GM23585-02	38,203
KREUTZER, DONALD L.....	LEUKOTACTIC MEDIATORS IN LUNG INFLAMMATORY REACTIONS.....	1R23 HL22437-01	39,540
LAMB, GERTRUDE.....	A SHARED PATIENT-CARE INFORMATION SYSTEM.....	5R01 LM02903-02	77,143

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
LANGELAND, KAARE	BIOCOMPATIBILITY OF ENDODONTIC MATERIALS	5R01 DE04096-02	67,634
LOE, HARALD	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05677-10	100,425
MASSEY, ROBERT U.	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05678-10	149,426
MC CALL, DAVID	PH EFFECT IN HEART CELLS: INFLUENCE OF CARDIAC DRUGS	7R01 HL22568-01	30,682
MOREST, DONALD K.	ANATOMY OF THE AUDITORY SYSTEM	5R01 NS14347-02	126,391
MOREST, DONALD K.	STUDIES ON VERTEBRATE NEUROGENESIS	5R01 NS14354-02	53,836
MUNDY, GREGORY R.	THE MONOCYTE-MACROPHAGE SYSTEM AND BONE RESORPTION	1R01 AM21584-01	65,778
NANDA, RAVINDRA	ANTERIOR DISPLACEMENT OF MAXILLA BY CONTROLLED FORCES	2R01 DE03998-04	40,004
NUKI, KLAUS	LOCALIZATION IN GINGIVA OF BONE RESORPTION MEDIATORS	1R01 DE04728-01	90,141
O'ROURKE, J.	UVEAL BLOOD FLOW AND METABOLISM	2R01 EY00123-07A2	65,125
OLIVER, JANET M.	CHEDIAK-HIGASHI AND CANCER CELLS WITH SIMILAR DEFECTS	5R01 CA18564-03	46,080
OLIVER, JANET M.	ACTION OF CARBAMATE HERBICIDES IN MAMMALIAN CELLS	2R01 ES01106-04	40,980
OSBORN, MARY J.	STUDIES ON BIOSYNTHESIS OF LIPOPOLYSACCHARIDES	2R01 AI08650-10	157,426
PAPPANO, ACHILLES J.	PHARMACOLOGY OF DEVELOPING CARDIAC TISSUES	3R01 HL13339-08S1	1,151
PATTERSON, JOHN W.	EXPERIMENTAL CATARACTS	5R01 EY00902-14	29,024
PATTERSON, JOHN W.	LENS FIBER FORMATION	1R01 EY02128-01	51,740
PFEIFFER, STEVEN E.	CLONAL CELL LINES OF THE NERVOUS SYSTEM	5R01 NS10861-05	57,046
POYTON, ROBERT O.	STRUCTURE AND ASSEMBLY OF CYTOCHROME C OXIDASE	2R01 GM21800-04	60,831
RAISZ, LAWRENCE G.	FACTORS INFLUENCING BONE METABOLISM	5R01 AM18063-05	126,757
RODAN, GIDEON A.	PARATHYROID HORMONE (PTH) BIOASSAY & CAMP IN PTH ACTION	2R01 AM17848-04	66,626
RODAN, GIDEON A.	MECHANICAL AND ELECTRICAL EFFECTS ON OSTEOGENESIS	5R01 DE04327-03	52,406
ROSSOMANDO, EDWARD F.	CELLULAR ASSEMBLY: ITS ROLE IN FACIAL MORPHOGENESIS	5R01 DE03715-04	35,309
ROSSOMANDO, EDWARD F.	ABNORMAL PALATAL DEVELOPMENT INDUCED BY HADACIDIN	5R01 DE04657-02	39,369
ROTH, GERALD J.	PROSTAGLANDIN SYNTHESIS IN HUMAN PLATELETS	5R01 HL20794-02	47,868
ROTHFIELD, LAWRENCE I.	BIOSYNTHESIS OF THE BACTERIAL CELL ENVELOPE	5R01 AM13407-11	120,879
ROTHFIELD, LAWRENCE I.	MOLECULAR ORGANIZATION OF PRESYNAPTIC MEMBRANES	1R01 NS14647-01	49,322
ROTHFIELD, NAOMI F.	THE ROLE OF PROPERDIN IN CONNECTIVE TISSUE DISEASES	5R01 AM16576-06	74,635
ROTHFIELD, NAOMI F.	MULTIPURPOSE ARTHRITIS CENTER	1P60 AM20621-01A1	210,411
ROWE, DAVID W.	BIOCHEMICAL CHARACTERIZATION OF DIABETIC FIBROBLASTS	5R01 AM21309-02	49,174
SCHENKMAN, JOHN B.	INDUCTION AND MODE OF ACTION OF HEPATIC DRUG OXIDASE	1R01 GM26114-01	123,910
SCHENKMAN, JOHN B.	MICROSOMAL ENZYMES: MEMBRANE LOCATION AND INTERACTION	7R01 GM26530-01	49,524
SCHENKMAN, JOHN B.	ACTIVE OXYGEN GENERATION BY HEPATIC MICROSOMES	7R01 GM26548-01	70,858
SETLOW, PETER	DEGRADATION REACTIONS IN SPORE GERMINATION	2R01 GM19698-07	80,991
SHA'AFI, RAMADAN I.	CHEMOTAXIS AND ELECTROLYTE TRANSPORT IN NEUTROPHILS	1R01 AI13734-01A1	54,069
SHASKAN, EDWARD G.	S-ADENOSYL-L-METHIONINE METABOLISM IN AGING RAT BRAIN	5R01 AG00340-02	37,321
SHENK, THOMAS E.	STRUCTURE AND FUNCTION OF DNA TUMOR VIRUS GENOMES	5R01 CA19151-03	43,860
SHERLINE, PETER	MICROTUBULES AND THE MECHANISM OF SECRETION	5R01 GM22497-03	40,754
SMILOWITZ, HENRY M.	DEVELOPMENTAL AND NEURAL CONTROL OF THE CELL SURFACE	5R01 NS13860-02	37,106
SPENCER, RICHARD P.	PROGRAM IN RADIONUCLIDE STUDIES OF TUMORS AND GROWTH	5R01 CA17802-04	193,698
SPITZNAGLE, LARRY A.	DEVELOPMENT OF TUMOR AND ORGAN IMAGING AGENTS	5R01 GM22973-03	28,847
STRITTMATTER, PHILIPP	STUDY OF STRUCTURE AND FUNCTION OF MICROSOMAL MEMBRANES	2R01 GM15924-11	146,171
SUNDERMAN, F WILLIAM, JR.	NICKEL CARCINOGENESIS	5R01 ES01337-03	75,690
TANZER, JASON M.	VIRULENCE CHARACTERIZATION IN STREPTOCOCCUS MUTANS	5R01 DE03758-04	108,169
TANZER, MARVIN L.	STRUCTURE, FUNCTION AND PROPERTIES OF COLLAGEN	2R01 AM12683-10	59,682
TANZER, MARVIN L.	BIOLOGY AND CHEMISTRY OF PROCOLLAGEN IN CELL CULTURE	5R01 AM17220-06	44,119
TAUBE, SHEILA	ASSEMBLY OF NORMAL AND ONCOGENIC ENVELOPED VIRUSES	5R01 CA21037-03	53,668
TIBBETTS, CLARK J.	ADENOVIRUS GENOME EXPRESSION—PHYSICAL MAPPING STUDIES	2R01 CA17130-04	86,776
TRUMMEL, CLARENCE L.	RELATION OF INFLAMMATION TO BONE RESORPTION	5R01 DE04885-02	33,751
VENHAM, LARRY L.	YOUNG CHILD'S RESPONSE TO DENTAL STRESS	5R01 DE04409-02	82,223
VOLLE, ROBERT L.	STUDIES ON GANGLIONIC TRANSMISSION	2R01 NS07540-11A1	70,875
WARD, PETER A.	LEUKOCYTE CHEMOTAXIS	5R01 AI09651-08	62,831
WARD, PETER A.	IMMUNOPATHOLOGY AND CLINICAL IMMUNOLOGY	3P01 AI12225-03S1	192,152
WARD, PETER A.	REGULATION OF LEUKOTACTIC MEDIATORS BY LUNG	5R01 AI13910-03	87,385
WU, HENRY C.	BIOCHEMISTRY OF CELL DIVISION IN BACTERIA	5R01 CA11371-10	72,059
YOSHIDA, TAKESHI	MIGRATION INHIBITION OF TUMOR CELLS BY LYMPHOKINES	5R01 CA19286-03	42,172
YOSHIDA, TAKESHI	LYMPHOKINES IN PULMONARY GRANULOMAS	5R01 HL19711-03	55,568
ZURIER, ROBERT B.	PROSTAGLANDINS CYCLIC NUCLEOTIDES AND INFLAMMATION	5R01 AM17309-05	79,156
ORGANIZATION TOTAL	101	6,800,563	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
HAMDEN			
QUINNIPIAC COLLEGE	ZIP CODE 06518		
RITCHIE, BRENDA B.....	BIOPHYSICS OF MUSCULAR EXERCISE.....	5R01 NS09960-06	53,833
RITCHIE, BRENDA B.....	HUMAN MUSCULAR FATIGUE.....	1R01 NS14756-01	51,075
ORGANIZATION TOTAL	2 104,908		
HARTFORD			
HARTFORD HOSPITAL	ZIP CODE 06115		
MADERAZO, EUFRONIO G.....	LEUKOTAXIS ENHANCING FACTOR AND LUNG INFECTIONS.....	1R01 HL22257-01	51,524
ORGANIZATION TOTAL	1 51,524		
MIDDLETOWN			
WESLEYAN UNIVERSITY	ZIP CODE 06457		
ALLEWELL, NORMA M.....	THERMODYNAMIC ANALYSIS OF ASPARTATE TRANSCARBAMYLASE.....	5R01 AM17335-06	55,343
BERRY, SPENCER J.....	CHARACTERIZATION OF INSECT OOCYTE MRNA.....	1R01 HD10435-01A1	45,765
DONADY, JOHN J.....	GENETIC CONTROL OF CELL DIFFERENTIATION.....	3R01 HD08286-03S1	7,752
DONADY, JOHN J.....	GENETIC CONTROL OF CELL DIFFERENTIATION.....	2R01 HD08286-04A1	65,408
GORTNER, ROSS A, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07107-11	38,499
HAAKE, PAUL C.....	PHOSPHORYLATION IN METABOLIC PROCESSES.....	5R01 AM12743-11	40,325
JACOBI, PETER A.....	A SYNTHETIC APPROACH TO THE CYTOTOXIC GERMACRONOLIDES.....	5R01 CA20483-02	49,055
KIEFER, BARRY I.....	DEVELOPMENTAL GENETICS OF SPERMATID DIFFERENTIATION.....	5R01 GM19130-06	63,230
KOHLER, BRYAN E.....	SPECTROSCOPIC STUDIES OF THE VISUAL PIGMENTS.....	5R01 EY01733-03	41,354
LUKENS, LEWIS N.....	COLLAGEN SYNTHESIS AND ITS REGULATION.....	2R01 AM16162-06A1	90,333
LYNCH, CAROL B.....	GENETIC ANALYSIS OF BEHAVIORAL THERMOREGULATION.....	2R01 GM21993-04	82,923
LYNCH, CAROL B.....	AN ADAPTIVE MODEL OF MATERNAL BEHAVIOR.....	1R01 HD11293-01	24,257
PAWLOWSKI, PHILIP J.....	REGULATION OF COLLAGEN BIOSYNTHESIS.....	1R23 HL21663-01	41,175
PRATT, REX F.....	BETA-LACTAMASES AND BACTERIAL PENICILLIN RESISTANCE.....	5R01 AI12942-03	18,052
PRATT, REX F.....	BETA-LACTAMASES—INHIBITION, MECHANISM, AND EVOLUTION.....	1R01 AI15077-01	29,510
PRATT, REX F.....	THE CHEMICAL MODIFICATION OF HISTIDINE IN PROTEINS.....	1R01 GM24079-01A1	37,662
TURNER, ROBERT S, JR.....	ALTERED CELL ADHESIVENESS IN VIVO: MEMBRANE CHANGES.....	5R01 CA20350-02	27,821
WOLFE, JASON S.....	REGULATION OF GENE EXPRESSION IN SYNCHRONIZED CELLS.....	5R01 GM18014-08	55,392
ORGANIZATION TOTAL	18 813,856		
NEW HAVEN			
HASKINS LABORATORIES	ZIP CODE 06510		
BACCHI, CYRUS J.....	POLYAMINES IN TRYPANOSOMES—FUNCTION AND METABOLISM.....	1R01 AI13852-01A1	47,685
HARRIS, KATHERINE S.....	RESEARCH PROGRAM ON DYNAMICS OF SPEECH ARTICULATION.....	2P50 NS13617-16A1	209,166
HARRIS, KATHERINE S.....	LARYNGEAL FUNCTION IN NORMAL AND ABNORMAL SPEECH.....	5R01 NS13870-02	125,342
HUTNER, SEYMOUR H.....	CATIONIC TRYPANOCIDES: POLYAMINES AND LETHALITY.....	1R01 AI13801-01A1	55,129
LIBERMAN, ALVIN M.....	NATURE AND ACQUISITION OF THE SPEECH CODE AND READING.....	5P01 HD01994-13	399,085
LIBERMAN, ALVIN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05596-14	45,676
ORGANIZATION TOTAL	6 882,083		
JOHN B. PIERCE FOUNDATION OF CONNECTICUT	ZIP CODE 06519		
BARTOSHUK, LINDA M.....	TASTE OF WATER: EFFECTS OF SOLUTES AND ADAPTATION.....	5R01 ES00880-05	45,421
CAIN, WILLIAM S.....	PERCEIVED INTENSITY OF ODORANTS AND IRRITANTS.....	2R01 ES00592-07	76,715
DOUGLAS, JAMES S.....	AIRWAY SMOOTH MUSCLE AND CYCLIC NUCLEOTIDES.....	5R01 HL20611-02	50,082
DOUGLAS, JAMES S.....	AIRWAY REACTIVITY: BETA-ADRENOCEPTORS & PROSTAGLANDINS.....	5R01 HL20783-02	64,514
DU BOIS, ARTHUR B.....	PERIPHERAL CIRCULATION AND FLUID BALANCE.....	5R01 HL17407-05	84,470
NADEL, ETHAN R.....	BLOOD VOLUME AND VENOUS RETURN IN THERMAL STRAIN.....	1R01 HL20634-01A1	56,522
STITT, JOHN T.....	TEMPERATURE REGULATION: ACTION OF PROSTAGLANDIN E1.....	5R01 NS11487-05	55,385
STOLWIJK, JAN A.....	STUDY OF HUMAN RESPONSES TO THERMAL ENVIRONMENT.....	5P01 ES00354-11	193,507
STOLWIJK, JAN A.....	PERIPHERAL VENOMOTOR CONTROL IN THERMAL STRESS.....	2R01 HL17732-03A1	73,643
STOLWIJK, JAN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05692-09	45,845
ORGANIZATION TOTAL	10 746,104		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
YALE UNIVERSITY ZIP CODE 06520			
ALTMAN, SIDNEY	TRNA: STUDIES OF PRECURSORS, MUTANTS AND FUNCTION	2R01 GM19422-07	92,889
APFEL, ROBERT E	CHARACTERIZATION OF BIOMATERIALS BY ELASTIC PROPERTY	1R01 HL22233-01	34,286
ARMITAGE, IAN M	STUDY OF MACROMOLECULAR STRUCTURE AND FUNCTION BY NMR	5R01 AM18778-03	49,160
ARONSON, PETER S	TRANSPORT MECHANISMS IN PROXIMAL CONVOLUTED TUBULE	1R01 AM20847-01	79,206
ASKENASE, PHILIP W	IMMUNOLOGY OF CUTANEOUS BASOPHIL HYPERSENSITIVITY	5R01 AI12211-05	83,445
ATKINS, ELISHA	STUDIES IN THE PATHOGENESIS OF FEVER	5R01 AI01564-22	132,587
BARNETT, RUSSELL J	CELL BIOLOGY OF PLASMA MEMBRANES	5R01 AM03688-19	113,062
BAUE, ARTHUR E	SURGICAL ASPECTS OF SHOCK AND HYPOXIA	5R01 HL19673-03	133,198
BEATY, BARRY J	EARLY DIAGNOSIS OF LACROSSE ARBOVIRAL ENCEPHALITIS	1R01 AI15641-01	68,245
BEHRMAN, HAROLD R	CONTROL OF CORPUS LUTEUM REGRESSION	5R01 HD10718-02	72,907
BERNARD, GARY D	OPTICAL INFORMATION PROCESSING IN EYES	5R01 EY01140-06	91,146
BERSON, JEROME A	DNA, PHOTOSYNTHESIS, AND THE CHEMISTRY OF TRIPLETS	5R01 GM23375-02	52,590
BERTINO, JOSEPH R	MECHANISM OF ACTION OF FOLATE ANTAGONISTS	5R01 CA08010-15	117,833
BERTINO, JOSEPH R	CLINICAL PHARMACOLOGY AND CANCER CHEMOTHERAPY	5P01 CA08341-13	930,937
BERTINO, JOSEPH R	QUINAZOLINE ANALOGS OF FOLIC ACID THERAPEUTIC AGENTS	1R26 CA24887-01	27,750
BIANCANI, PIERO	BIOPHYSICAL PRINCIPLES OF PERISTALTIC PHENOMENA	5R01 AM16021-07	79,668
BINDER, HENRY J	INTESTINAL ELECTROLYTE TRANSPORT IN HEALTH AND DISEASE	5R01 AM14669-08	56,397
BITENSKY, MARK W	COORDINATED INTERACTION OF PLASMA MEMBRANE PROTEINS	5R01 AM20179-06	113,087
BITENSKY, MARK W	INTERACTIONS OF VIBRIO CHOLERA ENTEROTOXIN	1R01 CA22301-01	42,050
BLOOMER, JOSEPH R	PROTOPORPHYRIA: STUDY WITH CULTURED SKIN FIBROBLASTS	5R01 AM19009-03	56,874
BOCKELMAN, CHARLES K	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07015-13	149,518
BODEL, PHYLLIS T	CAUSE OF FEVER IN MALIGNANT DISEASES	5R01 CA14655-05	87,473
BOOSS, JOHN	HOST DEFENSE IN MURINE CYTOMEGALOVIRUS INFECTION	5R01 AI13871-02	51,021
BOUHUYS, AREND	COMMUNITY STUDIES OF OBSTRUCTIVE LUNG DISEASE	5R01 HL21352-02	178,078
BOULPAEP, EMILE L	FUNCTIONAL STRUCTURE OF RENAL TUBULE	5R01 AM13844-09	84,068
BOYER, JAMES L	MECHANISM OF BILE SECRETION AND CHOLESTASIS	7R01 AM25636-01	144,831
BRAVERMAN, IRWIN M	ROLE OF MICROCIRCULATION IN CUTANEOUS DISORDERS	5R01 AM15739-07	105,595
BRAVERMAN, IRWIN M	PATHOGENESIS OF MYCOSIS FUNGOIDES	1R01 AM21153-01	73,306
BREG, W ROY	CYTOGENETIC STUDIES IN MENTAL RETARDATION	5R01 HD11624-02	74,455
CADMAN, EDWIN C	RATIONAL SEQUENCING OF NUCLEOSIDE DRUG ANALOGUES	1R23 CA24187-01	31,023
CANELLAKIS, EVANGELO S	THE USE OF DOUBLE INTERCALATORS AS ANTICANCER AGENTS	5R01 CA15317-05	25,967
CANELLAKIS, EVANGELO S	RESEARCH TEAMS FOR ANTITUMOR DRUG DEVELOPMENT	1R01 CA23153-01A1	125,826
CARIDE, VICENTE J	LIPOSOME MYOCARDIAL UPTAKE IN INFARCT AND ISCHEMIA	1R01 HL22470-01	98,629
CARTER, DAVID M	MODEL SYSTEMS TO STUDY ACCELERATED CUTANEOUS AGING	1P01 AG01012-01	326,286
CARTER, DAVID M	CELL RESPONSE TO DNA DAMAGE BY UV AND OTHER MUTAGENS	9R01 AM21784-07A1	89,793
CASALS-ARIET, JORDI	SUPPORT FOR WORLD REFERENCE CENTER FOR ARBOVIRUSES	5R01 AI10984-07	88,822
CHANDLER, WILLIAM K	ELECTRICAL AND CONTRACTILE PROPERTIES OF MUSCLE	5R01 NS07474-12	192,263
CHLEBOWSKI, JAN F	ASSEMBLY, ACTIVATION AND REGULATION OF ENZYMES	1R01 GM24932-01	54,192
COHEN, LAWRENCE B	OPTICAL STUDIES OF NEURON ACTIVITY AND ORGANIZATION	5R01 NS08437-10	117,782
COHEN, MELVIN J	PERIPHERAL AND CENTRAL STUDIES OF NEURONAL ORGANIZATION	3R01 NS08996-09S1	6,247
COLE, CHARLES N	CONTROL OF TUMOR VIRUS GENE EXPRESSION	5R01 CA22228-02	72,145
COLE, JACK W	CANCER CENTER SUPPORT GRANT	2P30 CA16359-04	2,122,252
COLE, PATRICIA E	RNA-PROTEIN RECOGNITION IN RNA REPLICATION	7R01 GM26109-01	63,943
COLEMAN, JOSEPH E	METALLOENZYME SYNTHESIS, STRUCTURE AND FUNCTION	5R01 AM09070-14	74,501
COLEMAN, JOSEPH E	STRUCTURE AND FUNCTION OF DNA BINDING PROTEINS	2R01 GM21919-04	81,460
COLLINS, WILLIAM F, JR	A CENTER FOR ACUTE SPINAL CORD INJURY	2P50 NS10174-07	995,373
CONN, HAROLD O	DISTAL SPLENORENAL VS PORTAL SYSTEMIC ANASTOMOSIS	5R01 AM18897-04	44,101
COOPER, JACK R	CHOLINERGIC NERVE ENDING PARTICLES	2R01 NS09836-07	59,044
COTLIER, EDWARD	BIOCHEMICAL STUDIES IN NORMAL AND CATARACTOUS LENSES	2R01 EY02490-02	139,900
COWARD, JAMES K	RATIONAL DRUG DESIGN BASED ON CHEMICAL MECHANISMS	1R01 CA23209-01	68,513
CRONAN, JOHN E, JR	GENETIC APPROACHES TO REGULATION OF LIPID METABOLISM	5R01 AI10186-08	43,570
CROTHERS, DONALD M	NATURAL AND ARTIFICIAL CONTROL OF DNA FUNCTION	5R01 CA15583-05	76,896
CROTHERS, DONALD M	MACROMOLECULAR CONFORMATION AND DYNAMICS	2R01 GM21966-04	69,095
CROTHERS, DONALD M	FRACTIONATION OF EUKARYOTIC DNA	1R01 GM25245-01	72,200
DANNIES, PRISCILLA S	REGULATION OF HORMONE SYNTHESIS AND SECRETION	1R01 HD11487-01	69,416
DE FRONZO, RALPH A	GLUCOSE INTOLERANCE AND AGING	5R01 AG00764-02	100,911
DE FRONZO, RALPH A	INSULIN ACTION & INSULIN SECRETION IN HEALTH AND DISEASE	1R01 AM24092-01	97,928
DE LORENZO, ROBERT J	PROTEIN PHOSPHORYLATION, EPILEPSY, & ANTICONVULSANTS	5R01 NS13632-02	26,336

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
DONALDSON, ROBERT M, JR.....	BINDING AND TRANSPORT FUNCTIONS OF INTESTINAL MICROVILLI	5R01 AM17509-06	62,404
DOUGLAS, WILLIAM W.....	STIMULUS-SECRETION COUPLING: CHROMAFFIN AND OTHER CELLS.....	2R01 NS09137-09	136,210
DOWNING, S EVANS.....	CHEMOSENSITIVE SYSTEMS IN SUDDEN INFANT DEATH.....	5R01 HD07276-05	63,426
DOWNING, S EVANS.....	MYOCARDIAL PERFORMANCE AND METABOLISM IN THE NEWBORN.....	5R01 HL08659-14	100,227
DOWNING, S EVANS.....	RELATIONSHIP OF INSULIN TO CATECHOL CARDIOMYOPATHY.....	5R01 HL20401-03	89,555
DWYER, JOHN M.....	CELLULAR IMMUNITY AND HUMAN DISEASE.....	5R01 AI11785-05	72,467
EBBERT, ARTHUR, JR.....	GENERAL CLINICAL RESEARCH CENTERS—ADULT & CHILDREN.....	5M01 RR00125-15	940,234
EBBERT, ARTHUR, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05358-17	200,462
EISENFELD, ARNOLD J.....	STUDY OF CONTRACEPTIVE RECEPTOR MECHANISMS.....	5R01 HD08280-05	95,895
EISENSTADT, JEROME M.....	CYTOPLASMIC INHERITANCE IN CULTURED MAMMALIAN CELLS.....	5R01 GM21873-04	109,343
EISENSTADT, JEROME M.....	REGULATION OF MAMMALIAN MITOCHONDRIAL BIOGENESIS.....	5R01 GM22142-03	37,205
EISENSTADT, JEROME M.....	CHROMOSOME MEDIATED GENE TRANSFER IN CULTURED CELLS.....	1R01 GM24353-01	71,420
ENGELMAN, DONALD M.....	CHOLESTERYL ESTERS IN MEMBRANES AND ATHEROSCLEROSIS.....	2R01 HL14111-07	65,811
ERNEST, MICHAEL J.....	HORMONAL CONTROL OF TYROSINE AMINOTRANSFERASE MRNA.....	1R01 AM22030-01	57,652
EVANS, ALFRED S.....	IMMUNOLOGY OF PERSISTENT INFECTIONS WITH EB VIRUS.....	5R01 CA12952-06	162,178
EVANS, ALFRED S.....	CHILDHOOD ENVIRONMENT AND HODGKIN'S DISEASE.....	5R01 CA19499-02	60,156
FALLER, JOHN W.....	METAL CHELATE PROBES OF DNA-DRUG INTERACTIONS.....	1R01 CA21490-01A1	55,930
FARQUHAR, MARILYN G.....	GLOMERULAR CAPILLARIES: NORMAL AND PATHOLOGIC.....	5R01 AM17724-04	108,513
FARQUHAR, MARILYN G.....	STUDIES ON SECRETION IN PITUITARY AND OTHER CELLS.....	2R01 AM17780-05	130,015
FELIG, PHILIP.....	HORMONES, SUBSTRATES & LIVER IN GLUCOSE HOMEOSTASIS.....	5R01 AM13526-09	117,539
FISCHER, DIANA B.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21194-02	59,100
FISCHER, JAMES J.....	RADIATION THERAPY AND BIOLOGY RESEARCH PROGRAM.....	5P01 CA06519-16	1,362,538
FIXMAN, MARSHALL.....	PROBLEMS IN THEORETICAL CHEMISTRY AND POLYMERS.....	5R01 GM13556-14	72,765
FORBES, THOMAS R.....	CITY OF LONDON PARISH RECORDS.....	5R01 LM02927-02	26,148
FORGET, BERNARD G.....	MOLECULAR BIOLOGY OF HUMAN HEMOGLOBIN SYNTHESIS.....	3R01 AM19482-02S1	16,155
FORGET, BERNARD G.....	MOLECULAR BIOLOGY OF HUMAN HEMOGLOBIN SYNTHESIS.....	5R01 AM19482-03	129,400
FORGET, BERNARD G.....	CONTROL OF HUMAN FETAL HEMOGLOBIN SYNTHESIS.....	5R01 HL20922-02	76,961
FRANCKE, UTA.....	INTRACHROMOSOMAL GENE MAPPING IN MAN.....	7R01 GM26105-01	90,595
FRIEDLAENDER, GARY E.....	IMMUNOBIOLOGY OF BONE TUMORS AND BONE ALLOGRAFTS.....	5R01 CA22267-02	64,403
FRUTON, JOSEPH S.....	PROTEIN CONFORMATION AND ENZYME CATALYSIS.....	5R01 GM18172-08	80,847
GALL, JOSEPH G.....	THE ORGANIZATION OF ANIMAL CELL NUCLEI.....	5R01 GM12427-15	115,555
GAREN, ALAN.....	HORMONAL CONTROLS OF DROSOPHILA DEVELOPMENT.....	1R01 GM24764-01	70,318
GEE, J BERNARD.....	OBSTRUCTIVE LUNG DISEASE & ALVEOLAR MACROPHAGES.....	5R01 HL19237-03	100,431
GEHA, ALEXANDER S.....	SURGICAL ASPECTS OF MYOCARDIAL HYPERTROPHY.....	5R01 HL19182-03	138,742
GERLT, JOHN A.....	ENZYMOLGY OF PHOSPHORUS METABOLISM.....	5R01 GM22350-03	31,774
GERLT, JOHN A.....	STRUCTURE AND BIOCHEMICAL ACTIVITY OF CYCLIC AMP.....	3R01 GM23026-02S1	28,492
GERLT, JOHN A.....	STRUCTURE AND BIOCHEMICAL ACTIVITY OF CYCLIC AMP.....	5R01 GM23026-03	34,076
GERSHON, RICHARD K.....	RESPONSE OF THYMUS-DERIVED CELLS TO ANTIGEN.....	5R01 AI10497-08	93,793
GERSHON, RICHARD K.....	IMMUNE RESPONSES TO TUMOR GRAFTS.....	3R01 CA08593-12S1	10,666
GERSHON, RICHARD K.....	IMMUNE RESPONSES TO TUMOR GRAFTS.....	5R01 CA08593-13	129,467
GERSHON, RICHARD K.....	CHARACTERIZATION OF LYMPHOID POPULATIONS IN CANCER.....	5R01 CA14216-06	123,230
GIEBISCH, GERHARD H.....	CARDIOVASCULAR, METABOLIC ASPECTS OF MEMBRANE TRANSPORT.....	5P01 AM17433-05	676,541
GILLIS, CHARLES N.....	DISPOSITION OF VASOACTIVE HORMONES IN MAMMALIAN LUNG.....	5R01 HL13315-08	80,776
GILLIS, CHARLES N.....	ADRENERGIC RECEPTORS IN PULMONARY VASCULAR MUSCLE.....	1R01 HL23245-01	81,746
GLASER, GILBERT H.....	NEUROLOGICAL RESEARCH CENTER (EPILEPSY).....	5P50 NS06208-13	226,118
GLENN, WILLIAM W.....	REMOTE STIMULATION BY RADIO-FREQUENCY TRANSMISSION.....	2R01 HL04651-19	134,662
GODSON, GODFREY N.....	DNA REPLICATION IN SMALL VIRUSES.....	2R01 AI11633-04A1	59,707
GOLDSMITH, TIMOTHY H.....	VISUAL MECHANISMS.....	5R01 EY00222-18	63,687
GREENGARD, PAUL.....	METABOLIC BASIS OF NEURAL FUNCTION.....	5R01 NS08440-10	76,012
GREGORY, DOUGLAS S.....	MECHANISM OF CONTROL OF AQUEOUS HUMOR FORMATION.....	5R01 EY01630-03	65,093
GROSS, IAN.....	PHOSPHOLIPID SYNTHESIS BY FETAL LUNG IN ORGAN CULTURE.....	5R01 HL19752-03	90,537
HAMMOND, GRAEME L.....	CARDIOPULMONARY BYPASS AND THE VASCULAR ENDOTHELIUM.....	1R01 HL22244-01	104,253
HAYSLETT, JOHN P.....	CARDIOVASCULAR AND METABOLIC ASPECTS OF RENAL FUNCTION.....	5R01 AM18061-05	94,185
HAYSLETT, JOHN P.....	MECHANISM OF POTASSIUM TRANSPORT IN INTESTINAL TISSUE.....	5R01 AM18777-03	57,937
HERRUP, KARL F.....	CNS DEVELOPMENT: A GENETIC AND CELL SURFACE STUDY.....	1R01 HD12213-01	88,191
HIRSCH, JOY.....	PSYCHOPHYSICAL ASSESSMENT OF AMBLYOPIA.....	1R23 EY02495-01	10,459
HODGE, LON D.....	METABOLISM OF ADENOVIRUS RNA.....	5R01 CA18214-03	70,690
HODSON, CECIL J.....	ULTRASONIC MONITORING OF VISCERAL BLOOD VESSELS.....	5R01 HL19791-02	93,286
HOFFMAN, JOSEPH F.....	MEMBRANE TRANSPORT PROCESSES IN RED BLOOD CELLS.....	5R01 HL09906-13	132,322
HOFFMAN, RONALD.....	REGULATION OF ERYTHROPOIESIS IN CANCER.....	1R01 CA22697-01	51,687

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
HOLFORD, THEODORE R.....	COLORECTAL CANCER: FACTORS RELATED TO SURVIVAL.....	5R01 CA21849-02	26,525
HORSTMANN, DOROTHY M.....	CLINICAL VIROLOGY OF EPSTEIN BARR VIRUS INFECTIONS.....	3R01 AI11611-05S1	14,793
HORSTMANN, DOROTHY M.....	RESPONSES TO RUBELLA VIRION AND SUBUNIT VACCINES.....	5R01 AI11788-09	150,655
HORVATH, CSABA G.....	NOVEL HYDROPHOBIC INDEX FOR LFER OF ANTITUMOR AGENTS.....	5R01 CA21948-02	68,590
HORVATH, CSABA G.....	LIQUID CHROMATOGRAPHY OF BIOLOGICAL SUBSTANCES.....	2R01 GM20993-04	75,868
HOWARD-FLANDERS, PAUL.....	CROSS-LINKING OF NUCLEOPROTEINS BY RADIATION.....	2R01 GM11014-18	72,630
HSIUNG, GUEH-DJEN G.....	EXPERIMENTAL MODELS FOR CYTOMEGALOVIRUS INFECTIONS.....	5R01 HD10609-03	75,089
HUBBARD, ANN L.....	CELL SURFACE SIALOGLYCOPROTEINS.....	5R01 GM23669-02	69,478
HUSZAR, GABOR B.....	STRUCTURE OF MYOSIN IN NORMAL AND PREGNANT UTERUS.....	5R01 HD10235-03	77,294
HUSZAR, GABOR B.....	URINARY 3MH EXCRETION AND METABOLIC STATE OF INFANTS.....	1R01 HD12183-01	6,330
HUTCHINSON, FRANKLIN.....	EFFECTS OF THE ANTITUMOR AGENT BLEOMYCIN ON DNA.....	5R01 CA17938-03	54,146
JACOBY, ROBERT O.....	GENETIC RESISTANCE TO LETHAL FLAVIVIRAL ENCEPHALITIS.....	1R01 AI14712-01A1	66,580
JAMIESON, JAMES D.....	CELL SECRETION AND MEMBRANE FORMATION IN THE PANCREAS.....	5R01 AM17389-06	100,847
JANEWAY, CHARLES A, JR.....	THE SPECIFICITY OF T LYMPHOCYTE RECEPTORS.....	5R01 AI13766-02	49,383
JANEWAY, CHARLES A, JR.....	INFLUENCE OF H-2 ANTIGENS ON MOUSE T CELL RESPONSES.....	1R01 AI14579-01	66,830
JONAS, ALBERT M.....	STUDY OF TRANSMISSIBLE MURINE COLONIC HYPERPLASIA.....	5R26 CA15405-05	80,163
JONAS, ALBERT M.....	RESOURCE FOR STUDY OF LABORATORY ANIMAL DISEASES.....	5P40 RR00393-11	286,905
JONAS, ALBERT M.....	A FIELD-LABORATORY UNIT FOR PRIMATE RESEARCH.....	5P40 RR00849-02	5,475
KANKEL, DOUGLAS R.....	NERVOUS SYSTEM DEVELOPMENT AND SYNAPSE FORMATION.....	5R01 NS11788-05	69,699
KANKEL, DOUGLAS R.....	ACETYLCHOLINESTERASE: GENETICS-NEUROBIOLOGY.....	2R01 NS12346-04	102,948
KANTOR, FRED S.....	CELLULAR IMMUNITY IN VIRAL DISEASES.....	5R01 AI06706-11	39,064
KANTOR, FRED S.....	INTERPLAY OF HUMORAL FACTORS IN CELLULAR IMMUNITY.....	2R01 AI11077-06	127,530
KASHGARIAN, MICHAEL.....	THE PATHOLOGY OF RECOVERY FROM ACUTE RENAL INJURY.....	5R01 AM19930-02	57,439
KELSEY, JENNIFER L.....	ESTROGENS AND GENITAL CANCERS, A CASE-CONTROL STUDY.....	5R01 CA20556-02	191,844
KESSEN, WILLIAM.....	TEMPORAL ASPECTS OF YOUNG INFANTS' VISUAL PERCEPTION.....	1R01 HD11104-01	91,940
KIDD, KENNETH K.....	GENETICS OF HUMAN BEHAVIORAL DISORDERS: STUTTERING.....	2R01 NS11786-05	73,390
KIRCHNER, JOHN A.....	STUDY OF HEAD AND NECK CANCER BY SERIAL SECTION.....	5R01 CA22101-02	41,687
KIRK, R GARY.....	MEMBRANE TRANSPORT IN BLOOD CELLS AND TISSUE.....	1R01 AM21391-01	123,615
KITAHATA, LUKE M.....	NEUROPHARMACOLOGY—ANESTHESIA AND THE NERVOUS SYSTEM.....	2R01 NS09871-07	131,358
KLEINHAUS, ANNA L.....	NEURONAL EFFECTS OF CONVULSANT/ANTICONVULSANT DRUGS.....	2R01 NS08851-07A2	51,135
KONIGSBERG, WILLIAM H.....	RELATION OF PROTEIN STRUCTURE TO BIOLOGICAL FUNCTION.....	5R01 GM12607-14	153,660
KONIGSBERG, WILLIAM H.....	PURIFICATION OF TISSUE FACTOR (THROMBOPLASTIN).....	1R01 HL22957-01	73,686
KRASIN, FRANK L.....	A STUDY OF DOUBLE-STRAND BREAK REPAIR IN CELLULAR DNA.....	1R01 GM25260-01	30,670
LA MOTTE, CAROLE C.....	DISTRIBUTION OF PAIN AND TEMPERATURE AFFERENTS.....	1R01 NS13335-01A2	71,790
LA MOTTE, ROBERT H.....	NEUROPHYSIOLOGY OF PAIN ADAPTATION AND HYPERALGESIA.....	1R01 NS14624-01	52,185
LAI, YIN-LOK.....	HEREDITARY RETINAL DEGENERATION IN WAG/RIJ RATS.....	5R01 EY01769-03	71,159
LAI, YIN-LOK.....	PERIPHERAL RETINAL DEGENERATION IN FISCHER RATS.....	1R01 EY02542-01	63,685
LANDMESSER, LYNN T.....	DEVELOPMENTAL AND TROPHIC NEURAL INTERACTIONS.....	5R01 NS10666-07	50,078
LENGYEL, PETER.....	INTERFERON, ANIMAL VIRUSES AND PROTEIN SYNTHESIS.....	5R01 AI12320-04	89,461
LERNER, AARON B.....	BIOLOGY OF NORMAL AND MALIGNANT MELANOCYTES.....	5R01 CA04679-19	323,463
LERNER, AARON B.....	NEW APPROACHES TO THE TREATMENT OF MELANOMA.....	5R01 CA18823-03	79,197
LEWIS, SIMON A.....	MODELING NAO TRANSPORT IN MAMMALIAN URINARY BLADDER.....	1R01 AM20851-01	98,629
LI VOLSI, VIRGINIA A.....	THE ORIGIN OF THE OSTEOCLAST.....	5R01 AM20363-02	57,832
LIFTER, JOHN.....	BIOCHEMICAL STUDIES ON MEMBRANE BOUND IMMUNOGLOBULIN.....	1R01 CA25758-01	55,910
LOKE, JACOB S.....	SMOKE INHALATION: BIOCHEMICAL AND CELLULAR RESPONSES.....	1R23 HL22895-01	43,745
LYTTON, BERNARD.....	LOCALIZATION OF RENAL STONES WITH ULTRASOUND.....	1R01 AM19765-01A1	41,599
MACNAB, ROBERT M.....	PRINCIPLES OF SENSORY RECEPTION AND MOTOR FUNCTION.....	5R01 AI12202-05	66,324
MALAWISTA, STEPHEN E.....	BIOPHYSICAL MECHANISMS IN LEUKOCYTES AND MELANOCYTES.....	5R01 AM10493-13	126,697
MALAWISTA, STEPHEN E.....	CONTROL OF LYSOSOMAL MOVEMENTS IN HUMAN LEUKOCYTES.....	5R01 AM19742-02	47,205
MALECH, HARRY L.....	ANTIBODY BINDING TO HUMAN NEUTROPHILS.....	1R23 AI15252-01	43,200
MANUELIDIS, ELIAS E.....	EXPERIMENTAL CREUTZFELDT-JAKOB DISEASE.....	3R01 NS12674-03S1	53,292
MANUELIDIS, LAURA M.....	PATHOGENETIC DETERMINANTS OF HUMAN CNS TUMORS.....	2R01 CA15044-05	53,746
MARCHESI, SALLY L.....	GLYCOPROTEINS OF PLATELET MEMBRANE AND PLATELET FUNCTION.....	5R01 HL20140-02	40,255
MARKERT, CLEMENT L.....	STUDY OF EMBRYONIC DEVELOPMENT.....	5R01 HD07741-05	68,348
MARSH, JOHN C.....	EASTERN COOPERATIVE ONCOLOGY GROUP—CLINICAL STUDIES.....	2R10 CA15485-05	116,606
MC COLLUM, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05443-17	86,864
MC GUIRE, EDWARD J.....	PERIPHERAL AND CENTRAL INNERVATION OF THE URINARY TRACT.....	1R01 AM21485-01	65,975
MC GUIRE, JOSEPH S.....	CONTROL OF EPIDERMAL CELL DIFFERENTIATION.....	2R01 AM13929-09	128,738
MEIGS, J WISTER.....	CANCER IN PERSONS EXPOSED TO EXOGENOUS ESTROGENS.....	5R01 CA20347-03	119,278
MEIGS, J WISTER.....	OCCUPATIONAL CORRELATES OF NASOPHARYNGEAL MALIGNANCY.....	1R01 CA24304-01	57,224

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
MICHAEL, CHARLES R.....	NEUROPHYSIOLOGY OF ALL-CONE VISION.....	5R01 EY00568-10	94,022
MILLER, I GEORGE, JR.....	STUDIES OF EPSTEIN-BARR VIRUS.....	5R01 CA12055-07	103,132
MILLER, WILLIAM H.....	STRUCTURE AND FUNCTION OF EYES.....	5R01 EY00089-14	66,439
MITCHELL, MALCOLM S.....	EFFECTS OF CHEMOTHERAPY ON TUMOR-SPECIFIC IMMUNITY.....	3R01 CA13105-06S1	9,881
MOORE, PETER B.....	RIBOSOME STRUCTURE AND FUNCTION.....	2R01 AI09167-10	105,035
MOTOYAMA, ETSURO K.....	PULMONARY MECHANICS DURING POSTNATAL DEVELOPMENT.....	5R01 HL21444-02	60,974
MURPHY, DONAL B.....	EXPRESSION OF IA LOCI IN SUBCLASSES OF LYMPHOCYTES.....	5R01 AI14349-02	70,303
OGDEN, JOHN A.....	NORMAL AND ABNORMAL POSTNATAL SKELETAL DEVELOPMENT.....	5R01 HD10854-02	72,468
ORNSTON, L NICHOLAS.....	ORIGINS OF METABOLIC DIVERSITY.....	1R01 GM25487-01	81,029
OTVOS, JAMES D.....	MULTINUCLEAR NMR INVESTIGATIONS OF METALLOTHIONEIN.....	1R23 ES01674-01	33,698
PALADE, GEORGE E.....	RESEARCH CENTER ON CELLULAR MEMBRANES.....	5P50 GM21714-04	604,129
PALADE, GEORGE E.....	LOCALIZATION OF PORE SYSTEMS IN CAPILLARY WALLS.....	5R01 HL17080-05	157,198
PAPERMASTER, DAVID S.....	MEMBRANE BIOSYNTHESIS IN NORMAL AND DYSTROPHIC RETINA.....	3R01 EY00845-04S1	1,000
PAPERMASTER, DAVID S.....	MEMBRANE BIOSYNTHESIS IN NORMAL AND DYSTROPHIC RETINA.....	2R01 EY00845-05	66,064
PAWELEK, JOHN M.....	INSULIN AND THE REGULATION OF THE MELANOMA PHENOTYPE.....	1R01 AM23032-01	32,990
PEARSON, HOWARD A.....	MANAGEMENT OF HEMOSIDEROSIS IN THALASSEMIA.....	5R01 HL19961-03	102,279
PLATT, TERRY.....	REGULATORY SEQUENCES IN TRP OPERON MRNA OF E COLI.....	5R01 GM22830-03	51,642
POULSON, DONALD F.....	STUDIES ON HEREDITARY ANDROCIDAL INFECTIONS.....	5R01 AI10467-07	96,862
POWELL, JEFFREY R.....	GENETICS OF NATURAL POPULATIONS OF MOSQUITOES.....	5R01 AI12016-03	39,413
POWLEY, TERRY L.....	HYPOTHALAMIC CONTROL OF BODY WEIGHT AND FEEDING.....	5R01 AM15511-08	56,848
PRESTEGARD, JAMES H.....	NMR INVESTIGATIONS OF VESICULAR MEMBRANES.....	2R01 GM19035-07	71,896
PRESTEGARD, JAMES H.....	PROTEIN-LIPID INTERACTION.....	5R01 GM22797-03	39,589
PRESTEGARD, JAMES H.....	SOUTHERN NEW ENGLAND HIGH FIELD NMR FACILITY.....	5P41 RR00798-05	48,809
PRUSOFF, WILLIAM H.....	IODODEOXYURIDINE, IODO-DNA, AND BIOLOGICAL ACTIVITY.....	5R01 CA05262-18	162,247
RAKIC, PASKO T.....	PRENATAL DEVELOPMENT OF THE PRIMATE VISUAL SYSTEM.....	1R01 EY02593-01	117,811
RAKIC, PASKO T.....	NEUROGENETIC PROCESSES IN FETAL BRAIN.....	7R01 NS14841-01	160,807
RASMUSSEN, HOWARD.....	HORMONAL AND IONIC CONTROL OF METABOLISM.....	5R01 AM19813-03	243,594
RASMUSSEN, HOWARD.....	UROLITHIASIS CENTER.....	5P50 AM20570-02	296,182
RASMUSSEN, HOWARD.....	CELLULAR EVENTS IN BONE REMODELING OF TOOTH MIGRATION.....	5R01 DE04724-02	88,683
REID, TED W.....	ROLE OF GLUTAMINE TRANSFERASE IN THE RETINA.....	5R01 EY01656-03	55,331
REYNOLDS, HERBERT Y.....	IMMUNE RESPONSES IN THE HUMAN LUNG.....	1R01 HL22302-01	58,445
RICHARDS, FRANK F.....	STUDY OF POLYFUNCTIONAL ANTIBODY-COMBINING REGIONS.....	5R01 AI08614-11	113,527
RICHARDS, FREDERIC M.....	PROGRAM IN MACROMOLECULAR STRUCTURE, MOTION, CONTROL.....	5P01 GM22778-03	451,444
RITCHIE, J MURDOCH.....	STUDY OF MAMMALIAN C FIBERS.....	5R01 NS08304-11	84,716
RITCHIE, J MURDOCH.....	DEMYELINATING DISEASE—BIOPHYSICS OF NERVE DYSFUNCTION.....	5R01 NS12327-04	70,723
ROONEY, SEAMUS A.....	EFFECT OF HORMONES ON LUNG PHOSPHOLIPID BIOSYNTHESIS.....	5R01 HD10192-03	144,515
ROONEY, SEAMUS A.....	PULMONARY SURFACTANT PRODUCTION IN NEWBORN ANIMALS.....	5R01 HD11018-02	97,179
ROOT, RICHARD K.....	HUMAN PHAGOCYTE FUNCTION IN HEALTH AND DISEASE.....	2R01 AI13251-03	122,886
ROSENBAUM, JOEL L.....	SYNTHESIS AND ASSEMBLY OF MICROTUBULES.....	5R01 GM14642-12	99,902
ROSENBERG, LEON E.....	TRANSPORT AND METABOLISM OF AMINO ACIDS.....	5R01 AM09527-14	111,602
ROSENBERG, LEON E.....	TISSUE CULTURE STUDIES OF INBORN METABOLIC ERRORS.....	5R01 AM12579-10	160,926
ROSENBERG, LEON E.....	STUDY OF HUMAN GENETICS AND INHERITED DISEASE.....	2P50 GM20124-06	781,557
ROSENZWEIG, MARK R.....	DETERMINANTS OF CHILD MORTALITY.....	1R01 HD12172-01	77,224
RUDDLE, FRANK H.....	GENETIC ANALYSIS OF SOMATIC CELL POPULATIONS.....	5R01 GM09966-17	306,515
RUDDLE, NANCY H.....	PROPAGATION OF THYMUS-DERIVED LYMPHOCYTE LINES.....	2R01 CA16885-03	69,308
RUDDLE, NANCY H.....	MURINE LEUKEMIA VIRUS INDUCTION AND REPLICATION.....	5R01 CA21333-02	61,527
RUDNICK, GARY W.....	ION AND 5-HYDROXYTRYPTAMINE TRANSPORT BY PLATELETS.....	1R01 HL21217-01A1	72,822
SAHA, SUBRATA.....	A NEW METHOD TO MEASURE THE RATE OF FRACTURE HEALING.....	2R01 AM18360-04	73,667
SARTORELLI, ALAN C.....	BIOCHEMICAL PHARMACOLOGY OF ANTINEOPLASTIC AGENTS.....	2R01 CA02817-22	321,252
SASAKI, CLARENCE T.....	POSTNATAL RESPIRATORY DEVELOPMENT AS RELATED TO SIDS.....	2R01 HD09494-04	80,779
SCHAFFER, DAVID E.....	PHYSICAL STUDIES OF ENTEROTOXIN-MEMBRANE INTERACTIONS.....	1R01 GM24704-01	40,290
SCHENKMAN, JOHN B.....	MICROSOME ENZYMES: MEMBRANE LOCATION AND INTERACTION.....	1R01 GM24478-01	21,258
SCHENKMAN, JOHN B.....	ACTIVE OXYGEN GENERATION BY HEPATIC MICROSOMES.....	1R01 GM24530-01	20,036
SEARS, MARVIN L.....	PHYSIOLOGIC STUDIES OF INTRAOCULAR PRESSURE.....	5R01 EY00237-17	227,486
SEARS, MARVIN L.....	VISION RESEARCH CENTER.....	3P30 EY00785-07S1	90,404
SEARS, MARVIN L.....	VISION RESEARCH CENTER.....	5P30 EY00785-08	322,714
SHEPHERD, GORDON M.....	INTEGRATIVE MECHANISMS OF CORTICAL NEURONS.....	5R01 NS07609-12	84,132
SHERWIN, ROBERT S.....	INSULIN GLUCAGON AND SOMATOSTATIN IN DIABETES.....	5R01 AM20495-02	61,842
SHOPE, ROBERT E.....	CONTROL OF ARBOVIRUS INFECTIONS OF MAN.....	5P01 AI11132-07	207,153
SHOPE, ROBERT E.....	ANTIGENIC PROPERTIES OF BACULOVIRUSES.....	5R01 AI13727-02	63,105

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
SIMMONDS, SOFIA.....	METABOLIC FUNCTIONS OF BACTERIAL PEPTIDASES.....	5R01 GM23202-03	60,573
SLAYMAN, CAROLYN W.....	GENETIC STUDY OF ION TRANSPORT IN NEUROSPORA.....	5R01 GM15761-10	94,892
SLAYMAN, CLIFFORD L, JR.....	ELECTROGENIC PUMPS IN NEUROSPORA: PROPERTIES, CONTROL.....	2R01 GM15858-11	120,706
SLIGAR, STEPHEN G.....	HEME PROTEIN REDUCTASES.....	1R01 GM24976-01	57,518
SOLL, DIETER G.....	TRANSFER RNA.....	5R01 GM22854-03	128,679
SOMAN, VIJAY R.....	GLUCAGON AND INSULIN RECEPTORS IN GLUCOSE METABOLISM.....	5R01 AM21158-02	39,116
STEEER, ALLEN C.....	LYME ARTHRITIS: A NEW EPIDEMIC DISEASE.....	5R01 AM20358-02	259,434
STEITZ, JOAN A.....	CONTROL OF GENE EXPRESSION IN VIRAL INFECTION.....	5R01 AI10243-08	81,251
STEVENS, CHARLES F.....	MECHANISM OF NERVE EXCITATION.....	5R01 NS12961-03	73,807
STEVENS, CHARLES F.....	BASIC NEURAL MECHANISMS.....	5R01 NS12962-04	81,780
STURTEVANT, JULIAN M.....	PHYSICOCHEMICAL STUDIES OF BIOCHEMICAL REACTIONS.....	5R01 GM04725-22	85,326
SUMMERS, WILLIAM C.....	GENETIC STUDY OF ANIMAL VIRUSES.....	5R01 CA13515-06	67,321
SUSSEX, IAN M.....	EXPRESSION OF GENES CODING FOR BEAN STORAGE PROTEIN.....	1R01 GM24775-01	105,911
TANAKA, KAY.....	STUDIES OF DISEASES OF ORGANIC ACID METABOLISM.....	5R01 AM17453-06	108,734
TIGNOR, GREGORY H.....	RABIES SEROGROUP VIRUS INFECTIONS: IMMUNOPATHOLOGY.....	2R22 AI12541-04	71,514
TOMITA, TSUNEO.....	CELLULAR ORIGIN OF TRANSRETINAL POTENTIALS.....	1R01 EY02528-01	104,757
TRINKAUS, JOHN P.....	CONTACT BEHAVIOR OF DEVELOPING AND TRANSFORMED CELLS.....	5R01 CA22451-05	71,425
TSIEN, RICHARD W.....	PHARMACOLOGICAL CONTROL OF CARDIAC MEMBRANE CURRENTS.....	2R01 HL13306-08	103,183
WADE, JAMES B.....	PHYSIOLOGY OF EPITHELIA AND MEMBRANE STRUCTURE.....	5R01 AM19344-03	39,124
WAKSMAN, BYRON H.....	SPECIFICITY AND INFORMATION TRANSFER IN SENSITIVITY.....	2R01 AI06455-14	117,300
WAKSMAN, BYRON H.....	IMMUNE RESPONSE IN EXPERIMENTAL TRYPANOSOMIASIS.....	5R01 AI13949-02	113,565
WAKSMAN, BYRON H.....	THE BEHAVIOR OF CELL SUSPENSIONS IN VITRO AND IN VIVO.....	9R01 CA23887-15	87,959
WARSHAW, JOSEPH B.....	CELLULAR ENERGY METABOLISM DURING FETAL DEVELOPMENT.....	2R01 HD08293-05A1	126,420
WARSHAW, JOSEPH B.....	PREVENTION OF PULMONARY OXYGEN TOXICITY IN THE NEWBORN.....	1R01 HD10949-01A1	69,150
WASSERMAN, HARRY H.....	NEW SYNTHETIC METHODS APPLIED TO THE PENICILLIN FIELD.....	5R01 GM07874-17	62,004
WASSERMAN, HARRY H.....	SINGLET OXYGEN REACTIONS WITH ORGANIC SUBSTRATES.....	2R01 GM13854-12	89,077
WATERMAN, TALBOT H.....	SENSORY MECHANISMS IN VISUAL ORIENTATION.....	3R01 EY00405-10S1	32,391
WEISS, ROBERT M.....	AGE DEPENDENT FACTORS IN URETERAL FUNCTION.....	5R01 AG00112-02	48,830
WEISSMAN, SHERMAN M.....	VIRAL TRANSFORMATION MOLECULAR BASIS-DNA VIRUS.....	5P01 CA16038-05	956,939
WEISSMAN, SHERMAN M.....	FUNCTION OF SV40 GENE PRODUCTS.....	2R01 CA16106-04	60,243
WYMAN, ROBERT J.....	CENTRAL NERVOUS GENERATION OF MOTOR OUTPUT PATTERNS.....	2R01 NS07314-12	90,127
YU, ROBERT K.....	GLYCOSPHINGOLIPIDS IN NORMAL AND MS NERVOUS SYSTEMS.....	2R01 NS11853-04	69,498
ZARET, BARRY L.....	SEQUENTIAL MULTINUCLIDE STUDY OF ACUTE INFARCTION.....	5R01 HL21690-02	148,214
ZIEGLER, FREDERICK E.....	SYNTHETIC STUDIES OF CYTOTOXIC NATURAL PRODUCTS.....	5R01 CA16432-05	81,639
ZIGLER, EDWARD F.....	COGNITION AND MOTIVATION IN RETARDED INDIVIDUALS.....	2P01 HD03008-12	283,510
ORGANIZATION TOTAL	273	33,477,372	

STORRS

UNIVERSITY OF CONNECTICUT		ZIP CODE 06268		
ALLEN, LINDSAY H.....	DIETARY PROTEIN, OSTEOPOROSIS AND PERIODONTAL DISEASE.....	5R01 DE04295-03		41,681
AMBELLAN, ELISABETH H.....	GLUCOCORTICOID EFFECTS ON PROTEIN SYNTHESIS IN VITRO.....	5R01 AM19725-02		56,847
BAILEY, WILLIAM F.....	WEAR OF DENTAL RESTORATIVE MATERIALS.....	5R23 DE04708-02		16,453
BERG, CLAIRE M.....	TRANSPOSABLE ELEMENT MUTAGENESIS IN ESCHERICHIA COLI.....	5R01 AI14278-02		45,056
CHOVNIK, ARTHUR.....	GENETIC STUDIES IN DROSOPHILA MELANOGASTER.....	5R01 GM09886-17		171,673
CLARK, HUGH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07014-13		111,103
COHEN, STEVEN D.....	ORGANOPHOSPHATE ESTERASE INHIBITION & DRUG TOXICITY.....	5R01 ES01093-02		59,826
FREDRICKSON, TORGNY N.....	ETIOLOGY AND PATHOBIOLOGY OF GENITAL CANCERS.....	5R01 CA19837-03		97,062
FULLER, JAMES H.....	MUSCULAR CONTROL OF HEAD MOVEMENTS.....	1R01 NS13809-01A1		62,613
GOETINCK, PAUL F.....	MOLECULAR BASIS OF NORMAL AND MUTANT LIMB DEVELOPMENT.....	5R01 HD09174-04		87,328
GOLDMAN, BRUCE D.....	PHOTOPERIODIC REGULATION OF MAMMALIAN REPRODUCTION.....	5R01 HD05481-08		60,349
GOLDMAN, BRUCE D.....	ENVIRONMENTAL AND HORMONAL FACTORS IN HIBERNATION.....	5R01 HD10478-02		38,664
GORDON, MALCOLM W.....	TYROSYLATION OF TUBULIN IN DIFFERENTIATING TISSUES.....	1R01 NS14240-01		46,664
HALL, BARRY G.....	EXPERIMENTAL EVOLUTION OF LACTOSE UTILIZATION.....	1R01 AI14766-01		63,911
HEYWOOD, STUART M.....	MOLECULAR CONTROLS IN MUSCLE DIFFERENTIATION.....	2R01 HD03316-10A1		99,343
HIGHTOWER, LAWRENCE E.....	NDV INFECTION: ANALYSIS AT THE SUBCELLULAR LEVEL.....	1R01 HL23588-01		26,384
HITE, GILBERT J.....	SYNTHESIS AND EVALUATION OF DES-4-AZAPENICILLINS.....	1R01 AI13773-01A1		29,749
JENSEN, ROBERT G.....	LIPID STRUCTURE OF NORMAL AND HYPERLIPOPROTEINS.....	5R01 HL16807-02		74,977
KEGELES, GERSON.....	RELAXATION KINETICS OF RIBOSOME SUBUNIT INTERACTION.....	5R01 GM24062-02		44,284

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CONNECTICUT—Continued			
KNOX, JAMES R.....	A NEW APPROACH TO ENZYME-RESISTANT PENICILLINS	5R01 AI10925-06	66,861
PAMER, PAUL A.....	SPECIAL INITIATIVE GRANT FOR RESEARCH ON AGING	1R21 AG01168-01	87,970
RIDER, HALLIE M.....	BRDU EFFECTS ON THE RIBOSOMAL DNA OF DROSOPHILA.....	1R01 GM23605-01	94,539
LANGNER, RONALD O.....	LIPID FLUX AND COLLAGEN SYNTHESIS IN ATHEROSCLEROSIS.....	5R01 HL15478-05	54,543
LAUDER, JEAN M.....	HORMONAL AND HUMORAL INFLUENCES ON BRAIN DEVELOPMENT.....	5R01 NS13481-02	48,838
LEADBETTER, EDWARD R.....	GRAM-NEGATIVE BACTERIA OF DENTAL PLAQUES: PROPERTIES.....	7R01 DE05348-01	80,021
LUCAS-LENARD, JEAN M.....	TRANSLATIONAL CONTROL MECHANISMS	5R01 CA12144-08	83,095
MARCUS, PHILIP I.....	STUDY OF GENETICS	3P01 CA14733-05S1	80,853
MARCUS, PHILIP I.....	HOST CELL INTERACTION OF ANIMAL VIRUSES.....	5R01 CA20882-08	72,941
MAXSON, STEPHEN C.....	EARLY EXPERIENCE, GENOTYPE, ENVIRONMENT AND BEHAVIOR.....	5R01 HD11220-02	60,333
MUGNAINI, ENRICO.....	ORGANIZATION AND DEVELOPMENT OF NERVOUS TISSUES.....	5R01 NS09904-08	95,944
PILAR, GUILLERMO R.....	GANGLIONIC SYNAPTIC TRANSMISSION	5R01 NS10338-08	93,845
ROMANO, ANTONIO H.....	SUGAR TRANSPORT AND MALIGNANT TRANSFORMATION.....	5R01 CA14274-05	51,468
ROSENBERG, PHILIP.....	PROPERTIES OF CHEMICALLY MODIFIED PHOSPHOLIPASE A.....	1R01 NS14521-01	72,627
ROTH, JAY S.....	DNASES AND LEUKEMIA	1R01 CA18543-01A2	50,321
ROTH, JAY S.....	REDUCTION OF RIBONUCLEOTIDES IN NORMAL AND TUMOR TISSUES.....	1R01 CA22329-01A1	35,230
SACHS, BENJAMIN D.....	ANALYSIS OF MASCULINE BEHAVIOR	2R01 HD08933-04	52,625
SCHUSTER, TODD M.....	BIOPHYSICAL STUDIES OF VIRUS ASSEMBLY.....	2R01 AI11573-05	76,336
SCHWARTING, ARTHUR E.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09078-01	108,836
SIMONELLI, ANTHONY P.....	THE STUDY OF DISSOLUTION MECHANISMS FOR RENAL CALCULI.....	1R01 AM18891-01A1	57,820
SOMES, RALPH G, JR.....	REGISTRY OF SPECIALIZED GENETIC STOCKS.....	2P40 RR00529-10	6,600
SPEYER, JOSEPH F.....	MOLECULAR MECHANISMS OF INFORMATION TRANSFER.....	5R01 GM15697-11	78,305
YANG, TSU-JU T.....	CELLS INVOLVED IN SPONTANEOUS REGRESSION OF TUMORS.....	1R01 CA23469-01	62,327
ZEAMAN, BETTY H.....	READING-LIKE BEHAVIOR IN NONREADING RETARDED ADULTS.....	2R01 HD11158-02	51,953
ORGANIZATION TOTAL	43	2,858,198	
WEST HARTFORD			
UNIVERSITY OF HARTFORD	ZIP CODE 06117		
BECK, ANN F.....	SCIENCE, MEDICINE AND DEVELOPMENT IN EAST AFRICA.....	3R01 LM01803-04S1	9,334
ORGANIZATION TOTAL	1	9,334	
STATE TOTAL	455	45,743,942	
DELAWARE			
NEWARK			
UNIVERSITY OF DELAWARE	ZIP CODE 19711		
BOARD, ROBERT L.....	LATERAL LINE PROJECTIONS-ELASMOBRANCH	3R01 NS11272-04S1	1,651
BOARD, ROBERT L.....	LATERAL LINE PROJECTIONS-ELASMOBRANCH	5R01 NS11272-05	35,417
COLMAN, ROBERTA F.....	EFFECT OF COENZYMES ON ENZYME STRUCTURE AND FUNCTION.....	3R01 AM17552-05S1	4,711
COLMAN, ROBERTA F.....	EFFECT OF COENZYMES ON ENZYME STRUCTURE AND FUNCTION.....	5R01 AM17552-06	101,986
COLMAN, ROBERTA F.....	AFFINITY LABELS OF NUCLEOTIDE SITES IN DEHYDROGENASES.....	5R01 GM21200-05	40,031
FRANCIS, DAVID W.....	GENETIC STUDIES ON DEVELOPMENT OF POLYSPHONDYLUM.....	1R01 GM24847-01	55,437
GRANDA, ALLEN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07016-05	55,354
JAIN, MAHENDRA K.....	FACTORS GOVERNING THE ACTION OF PHOSPHOLIPASES.....	5R01 GM23122-03	25,503
MOLLOY, GEORGE R.....	STRUCTURE OF NUCLEAR RNA AND MESSENGER RNA FORMATION.....	5R01 CA19535-03	47,517
MUNSON, BURNABY.....	CI-MS STUDIES OF THERMOLABILE BIOMEDICAL COMPOUNDS.....	1R01 GM25269-01	55,569
RECHNITZ, GARRY A.....	CLINICAL ANALYSIS WITH SELECTIVE MEMBRANE ELECTRODES.....	7R01 GM25308-01	60,571
SCOTT, THOMAS R, JR.....	NEURAL CODING OF TASTE INFORMATION	3R01 NS10405-04A1S1	1,449
SCOTT, THOMAS R, JR.....	NEURAL CODING OF TASTE INFORMATION	5R01 NS10405-05	37,591
SKEEN, LESLIE C.....	ORGANIZATION AND FUNCTIONS OF PREFRONTAL NEOCORTEX.....	1R01 NS14535-01	54,240
TRIPP, MARENES R.....	EFFECTS OF HYDROCARBONS ON DEFENSE MECHANISMS.....	5R01 ES01531-02	59,321
WAGNER, ROGER C.....	MICROPINOCYTOSIS IN ISOLATED CAPILLARY ENDOTHELIUM.....	5R01 HL16666-05	40,593
WETLAUFER, DONALD B.....	KINETICS AND MECHANISMS OF PROTEIN SELF-ASSEMBLY.....	2R01 GM23713-03	69,465
WHITE, HAROLD B, III.....	VITAMIN TRANSPORT	5R01 GM19620-06	36,609
WHITE, HAROLD B, III.....	GLYCEROL 3-PHOSPHATE DEHYDROGENASE SEQUENCE.....	5R01 GM22343-03	36,552

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
DELAWARE—Continued			
WRISTON, JOHN C, JR	GLYCOSYLATED L-ASPARAGINASE AND GLYCOSYLATED LIPOSOMES.....	1R01 GM25378-01	53,669
ORGANIZATION TOTAL	20 873,236		
WILMINGTON			
WILMINGTON MEDICAL CENTER ZIP CODE 19801			
FRELICK, ROBERT W.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20743-02	31,828
ORGANIZATION TOTAL	1 31,828		
STATE TOTAL	21 905,064		
DIST OF COL			
WASHINGTON			
AMERICAN CHEMICAL SOCIETY ZIP CODE 20036			
WALBORG, EARL F, JR	GLYCOPROTEINS AND GLYCOLIPIDS IN DISEASE PROCESSES	1R13 CA24513-01	5,000
WALBORG, EARL F, JR	GLYCOPROTEINS AND GLYCOLIPIDS IN DISEASE PROCESSES	1R13 GM25226-01	4,000
ORGANIZATION TOTAL	2 9,000		
AMERICAN INSTITUTES FOR RESEARCH ZIP CODE 20007			
EHRlich, PAUL S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05615-11	32,452
ORGANIZATION TOTAL	1 32,452		
AMERICAN NATIONAL RED CROSS ZIP CODE 20006			
GREENWALT, TIBOR J.....	STUDIES OF BLOOD GROUP ANTIGENS AND ANTIBODIES	5R01 HL11154-12	77,727
INGHAM, KENNETH C	SUBUNIT INTERACTIONS IN GLYCOPROTEIN HORMONES	5R01 AM19719-02	43,247
INGHAM, KENNETH C	PRECIPITATION OF PROTEINS WITH POLY(ETHYLENE GLYCOL).....	1R01 HL21791-01	52,736
JAMIESON, GRAHAM A.....	ROLE OF PLATELET MEMBRANES IN HEMOSTASIS.....	5R01 HL14697-07	99,325
JAMIESON, GRAHAM A.....	MEMBRANE GLYCOPROTEINS OF PLATELETS AND LEUKOCYTES.....	5R01 HL20971-10	82,626
JAMIESON, GRAHAM A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05737-07	40,596
KOSOW, DAVID P.....	ENZYMATIC REGULATION OF PLATELET FUNCTION.....	5R01 HL18502-03	32,709
KOSOW, DAVID P.....	REGULATION OF THE ACTIVATION OF HUMAN FACTOR X.....	5R01 HL19282-03	26,396
MAZZUR, SCOTT R.....	GENETIC AND CULTURAL STUDIES OF AUSTRALIA ANTIGEN.....	5R01 GM21736-04	6,037
MERYMAN, HAROLD T.....	PRESERVATION OF ORGANS BY FREEZING.....	5R01 GM17959-06	81,690
SCHANFIELD, MOSES S.....	SELECTED BLOOD TRANSFUSION TOPICS.....	1R01 HL23654-01	35,863
WICKERHAUSER, MILAN.....	SUPPORT FOR NATIONAL FRACTIONATION CENTER.....	5R01 HL13881-08	98,159
ORGANIZATION TOTAL	12 677,111		
AMERICAN REGISTRY OF PATHOLOGY ZIP CODE 20306			
FINE, BEN S.....	ELECTRON MICROSCOPY IN OCULAR PATHOLOGY.....	2R01 EY00133-09	76,889
ORGANIZATION TOTAL	1 76,889		
AMERICAN SOCIETY OF ALLIED HEALTH PROFESSIONS ZIP CODE 20036			
PERRY, J WARREN.....	INDEX OF GRADUATE THESES AND PROJECTS IN ALLIED HEALTH.....	1R01 LM03193-01	5,659
ORGANIZATION TOTAL	1 5,659		
AMERICAN UNIVERSITY ZIP CODE 20016			
BREYERE, EDWARD J.....	THE MATERNAL-FETAL ALLOGRAFT RELATION.....	3R01 CA05660-17S1	18,266
SLOTNICK, BURTON M.....	ANATOMICAL BASIS OF OLFACTORY DISCRIMINATION.....	1R01 NS13057-01A1	39,393
ORGANIZATION TOTAL	2 57,659		
BROOKINGS INSTITUTION ZIP CODE 20036			
RUSSELL, LOUISE B.....	THE BABY BOOM GENERATION: AN ECONOMIC 'HISTORY'.....	1R01 HD11693-01	93,999
ORGANIZATION TOTAL	1 93,999		
CATHOLIC UNIVERSITY OF AMERICA ZIP CODE 20017			
ATABEK, BULENT H.....	FLOW FIELD IN AORTA AND ITS MAJOR BRANCHES.....	5R01 HL12083-11	67,698

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
HUNT, JOHN B.....	SPIN-LABELLED PURINE NUCLEOSIDES AND NUCLEOTIDES.....	1R01 GM24664-01	42,260
MC MANUS, FREDERICK R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07123-10	28,064
SMUTS, MARY E.....	CHARACTERIZATION OF EARLY PRIMARY PALATE FORMATION.....	3R23 DE04670-01S1	12,933
YOUNISS, JAMES.....	DEVELOPMENT OF IMAGERY: STRUCTURE AND PROCESS.....	5R01 HD10390-02	29,354
ZON, GERALD.....	STEREOCHEMISTRY OF CYCLOPHOSPHAMIDE METABOLISM.....	5R01 CA17421-03	26,340
ZON, GERALD.....	4-HYDROXYCYCLOPHOSPHAMIDE/ALDOPHOSPHAMIDE CHEMISTRY.....	1R01 CA21345-01A1	56,099
ORGANIZATION TOTAL	7	262,748	
CHILDREN'S HOSPITAL NATIONAL MEDICAL CENTER ZIP CODE 20010			
BARNET, ANN B.....	SENSORY EVOKED EEG AND BEHAVIORAL RESPONSES IN CHILDREN.....	3R01 HD02296-12S1	29,417
GALIOTO, FRANK M, JR.....	INFANT LUNG AND HEART STUDY BY THE REBREATHING METHOD.....	5R01 HD11652-02	34,259
LEIKIN, SANFORD L.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA03888-21	118,698
LEIKIN, SANFORD L.....	CLINICAL CANCER EDUCATION PROGRAM/PEDIATRICS.....	1R25 CA21241-01A1	82,472
PARROTT, ROBERT H.....	NEW VIRUSES IN RELATION TO CLINICAL DISEASE.....	5R01 AI01528-22	93,566
PARROTT, ROBERT H.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00284-12	257,040
PARROTT, ROBERT H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05515-16	28,168
ORGANIZATION TOTAL	7	643,620	
GALLAUDET COLLEGE ZIP CODE 20002			
PICKETT, JAMES M.....	PERCEPTION OF COMPLEX AUDITORY STIMULI BY THE DEAF.....	5R01 NS05464-14	104,406
PICKETT, JAMES M.....	SPEECH-FEATURE DISCRIMINATION TESTING.....	5R01 NS13190-03	66,044
TITZE, INGO R.....	CLINICAL TECHNIQUES FOR EVALUATION OF PHONATORY CONTROL.....	1R01 NS14364-01	115,786
ORGANIZATION TOTAL	3	286,236	
GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
ABRAMSON, FRED P.....	MASS SPECTROMETRIC INVESTIGATION OF DES DISPOSITION.....	1R01 CA20753-01A2	61,323
ABRAMSON, FRED P.....	CARDIOVASCULAR DRUG INTERACTIONS: METABOLISM MODELS.....	1R01 HL22718-01	55,615
ANDERSON, REBECCA J.....	DETECTION OF NEUROTOXICITY OF ENVIRONMENTAL AGENTS.....	1R01 ES01951-01	40,751
BAILEY, J MARTYN.....	PROSTAGLANDIN SYNTHESIS IN TRANSFORMED CELLS.....	5R01 CA15356-04	59,798
BAILEY, J MARTYN.....	LIPID METABOLISM IN CULTURED CELLS.....	5R01 HL05062-18	73,950
BAILEY, J MARTYN.....	PROSTACYCLIN-THROMBOXANES IN THE CARDIOVASCULAR SYSTEM.....	1R01 HL22527-01	88,572
BLOOM, SHERMAN.....	STRUCTURE-FUNCTION PATHOLOGY OF ISOLATED HEART CELLS.....	5R01 HL22137-02	21,690
BRADLEY, EILEEN W.....	LATE EFFECTS OF FAST NEUTRONS ON CORD-BRAIN-LUNG.....	2R01 CA18143-04	242,810
CORNFIELD, JEROME.....	MULTIPARAMETER METHODS FOR CARDIOVASCULAR RESEARCH.....	5R01 HL15191-07	112,485
DOBBINS, WILLIAM O, III.....	COLONIC CANCER IN ULCERATIVE COLITIS.....	3R26 CA17776-03S1	11,339
DRUM, BRUCE A.....	ROLES OF TONIC AND PHASIC NEURAL SYSTEMS IN VISION.....	3R01 EY01672-03S1	13,889
ECKELMAN, WILLIAM C.....	BIOLOGIC TRACERS LABELED WITH GAMMA EMITTING ISOTOPES.....	2R01 CA18675-04	148,357
FINKELSTEIN, JAMES D.....	SULFUR AMINO ACID METABOLISM IN MAMMALS.....	5R01 AM13048-11	51,473
GOLDSTEIN, ALLAN L.....	CHEMICAL & IMMUNOLOGICAL CHARACTERISTICS OF THYMOSIN.....	7R01 CA25017-01	63,710
JACKSON, MICHAEL J.....	DRUG TRANSPORT IN THE GI TRACT AND OTHER EPITHELIA.....	5R01 GM22369-03	40,987
JOHNSON, KURT E.....	ROLE OF EXTRACELLULAR MATRIX IN FROG GASTRULATION.....	1R01 HD11634-01A1	43,534
KLUBES, PHILIP.....	SYNERGISM DURING COMBINATION CANCER CHEMOTHERAPY.....	2R01 CA17601-04	64,027
LEONARD, FRED.....	MAXILLOFACIAL MATERIALS.....	5R01 DE03860-05	59,207
LEONARD, FRED.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05359-17	137,777
MANDEL, H GEORGE.....	METHODS FOR STUDYING ACTIONS OF TUMOR-INHIBITORY DRUGS.....	5R01 CA02978-21	153,391
MANTEL, NATHAN.....	CANCER EPIDEMIOLOGY: STATISTICAL METHODS.....	5R01 CA15686-04	118,852
MUESING, RICHARD A.....	THE MECHANISM OF PLASMA CHOLESTEROL ESTERIFICATION.....	5R01 HL19250-03	30,274
ORNITZ, ROBERT D.....	MANTA NEUTRON CLINICAL TRIAL FOR LOCALIZED CANCERS.....	5P01 CA17465-04	354,447
PIPBERGER, HUBERT V.....	DIGITAL COMPUTER ANALYSIS OF THE ELECTROCARDIOGRAM.....	5R01 HL15047-06	400,530
PIPBERGER, HUBERT V.....	CLASSIFICATION CODE FOR FRANK ORTHOGONAL ECG.....	2R01 HL18850-03	61,377
REBA, RICHARD C.....	SYNTHESIS OF MOLECULES FOR MYOCARDIAL IMAGING.....	5R01 HL19127-03	63,837
RZSZOTARSKI, WACLAW J.....	CARDIOSELECTIVITY OF BETA-ADRENOCEPTOR ANTAGONISTS.....	1R01 HL22522-01	77,892
SIDRANSKY, HERSCHEL.....	CHEMICAL PATHOLOGY OF AMINO ACID DEFICIENCIES.....	5R01 AM21079-02	88,871
SIDRANSKY, HERSCHEL.....	EFFECT OF NUTRITIONAL STRESS ON CARCINOGENESIS.....	5R01 CA22997-02	103,982
SLABY, FRANK J.....	ROLE OF MYOINOSITOL METABOLISM IN PANCREAS SECRETION.....	1R01 AM20865-01A1	73,349
SMITH, JAMES C, JR.....	CHARACTERIZING ZINC BINDING PROTEINS IN HYPERZINCEMIA.....	5R01 AM20420-02	29,256
SOLOMON, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07019-13	50,363
STRAW, JAMES A.....	PHARMACOKINETICS OF RESCUE FROM ANTIFOLATE TOXICITY.....	1R01 CA22866-01	60,954
TREADWELL, CARLETON R.....	REGULATION OF CHOLESTEROL ESTER LEVELS IN BLOOD & TISSUE.....	5R01 HL02033-23	69,376
VAHOUNY, GEORGE V.....	SYNTHESIS AND ROLE OF PROSTAGLANDINS IN ADRENAL CELLS.....	5R01 AM20014-02	39,000

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
VAHOUNY, GEORGE V.....	MYOCARDIAL LIPID METABOLISM AND REGULATION.....	3R01 HL09489-12S1	14,522
VAHOUNY, GEORGE V.....	MYOCARDIAL LIPID METABOLISM AND REGULATION.....	2R01 HL09489-13	63,838
ORGANIZATION TOTAL	37 3,245,405		
GEORGETOWN UNIVERSITY ZIP CODE 20007			
BARKER, WINONA C.....	HOMOLOGOUS PHYSIOLOGICAL SYSTEMS IN HUMAN DEVELOPMENT.....	3R01 HD09547-03S1	20,253
BATES, RICHARD D, JR.....	MOLECULAR DYNAMICS OF HYDROGEN BONDING IN FLUIDS.....	5R01 GM23670-02	34,349
BELLANTI, JOSEPH A.....	INTERDISCIPLINARY RESEARCH IN IMMUNOLOGIC DISEASES.....	1P50 AI15321-01	175,137
BELLANTI, JOSEPH A.....	CELLULAR AND IMMUNOLOGICAL BASIS OF PULMONARY DISEASES.....	5P01 HL16748-05	358,635
BLECHER, MELVIN.....	MECHANISMS OF ACTION OF HORMONES AND CYCLIC NUCLEOTIDES.....	5R01 AM05475-17	87,233
CALDERONE, RICHARD A.....	EXPERIMENTAL CANDIDA ALBICANS ENDOCARDITIS.....	1R23 HL21370-01A1	26,620
CHIRIKJIAN, JACK G.....	RNA MODIFYING ENZYMES IN NORMAL AND NEOPLASTIC CELLS.....	2R01 CA16914-03A1	61,464
CUTLER, SIDNEY J.....	EVALUATION & MANAGEMENT OF PATIENTS WITH BLADDER CANCER.....	5R26 CA23078-02	255,345
DOUKAS, HARRY M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05306-17	16,392
DOUKAS, HARRY M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05360-17	117,502
FELLER, WILLIAM F.....	CHARACTERIZATION OF DNA POLYMERASES IN HUMAN MILK.....	5R01 CA17623-04	57,741
GABRIEL, OTHMAR.....	METABOLISM AND FUNCTION OF DEOXSUGARS.....	5R01 AI07241-13	41,569
HAMOSH, MARGIT.....	PERINATAL FAT DIGESTION, ROLE OF OROPHARYNGEAL LIPASE.....	5R01 HD10823-02	75,248
HAMOSH, MARGIT.....	BLOOD TRIGLYCERIDE AND LIPOPROTEIN LIPASE IN THE LUNG.....	5R01 HL19056-03	53,099
HAMOSH, PAUL.....	EFFECT OF PROLACTIN ON LUNG MATURATION.....	1R01 HD11353-01	56,085
HARBERT, JOHN C.....	ACTA-SCAN DIAGNOSIS OF PANCREATIC CARCINOMA.....	5R26 CA19397-03	9,930
HERZBERG, DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07136-07	31,496
HOWARD, DARLENE V.....	AGING AND SEMANTIC STRUCTURE.....	1R23 AG00713-01A1	33,543
KAO, CARL C.....	STUDIES OF REGENERATED AXONS IN GRAFTED SPINAL CORDS.....	5R01 NS14413-02	70,966
KATZ, EDWARD.....	BIOSYNTHESIS OF ACTINOMYCIN, AN ANTITUMOR AGENT.....	5R01 CA06926-16	72,480
KUMAR, SOMA.....	SYNTHESIS OF FATTY ACIDS IN MAMMALIAN TISSUES.....	5R01 AM16086-06	55,786
LEMP, MICHAEL A.....	EFFECT OF SYSTEMIC DRUGS ON TEAR PRODUCTION.....	1R01 EY02228-01A1	44,158
LORBER, MORTIMER.....	THE CAPSULE AS A DELIMITER OF SALIVARY GLAND REPAIR.....	1R01 DE04817-01	42,157
MACGREGOR, CAROLYN H.....	CELL MEMBRANE PROTEASES.....	5R01 GM25153-02	42,197
MC CURDY, PAUL R.....	ABNORMAL HEMOGLOBIN SYNDROMES.....	5R01 HL14131-18	31,492
MOSSMAN, KENNETH L.....	EFFECTS OF NEUTRONS ON TASTE AND SALIVA IN HUMANS.....	3R01 CA18865-02S1	1,540
NEEFE, JOHN R.....	DEFECTIVE SELF-RECOGNITION AS A CAUSE OF CANCER.....	1R01 CA23882-01	67,163
NEEFE, JOHN R.....	MURINE T LYMPHOCYTE RECEPTORS FOR ALLOANTIGENS.....	1R01 CA25041-01	61,629
PANCAKE, SAMUEL J.....	ANTIGENS INDUCED BY POLYOMA VIRUS TRANSFORMATION.....	5R01 CA21912-02	42,249
POPE, MICHAEL T.....	STABLE ORGANIC DERIVATIVES OF HETEROPOLY ACIDS.....	5R01 GM23263-03	85,109
POPPER, ARTHUR N.....	PROCESSING OF ACOUSTIC INFORMATION.....	7R01 NS15090-01	37,528
POTTER, JOHN F.....	VINCENT T LOMBARDI CANCER RESEARCH CENTER SUPPORT.....	5P30 CA14626-05	427,408
POTTER, JOHN F.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19028-03	111,204
PREUSS, HARRY G.....	OXIDATIVE METABOLISM OF GLUTAMINE BY THE KIDNEY.....	5R01 AM15458-07	63,194
PRINCIOTTO, JOSEPH V.....	TRANSFERRIN, IRON DONATION AND ACQUISITION.....	5R01 AM19030-02	62,784
RAINES, ARTHUR.....	EFFECTS OF ANTICONVULSANTS ON CEREBELLAR FUNCTION.....	5R01 NS10667-04	44,494
RAMWELL, PETER W.....	ROLE OF ANDROGEN AS A RISK FACTOR IN ATHEROGENESIS.....	2R01 HL17516-04	179,389
RAMWELL, PETER W.....	PROSTAGLANDIN PRECURSORS AND VASCULAR REACTIVITY.....	2R01 HL18718-04	222,482
REcant, LILLIAN.....	PANCREATIC AND INTESTINAL GLUCAGONS IN RATS AND MAN.....	5R01 AM19610-02	45,772
SAUM, WILLIAM R.....	FUNCTIONAL CHARACTERISTICS OF ATRIAL RECEPTORS.....	5R23 HL22245-02	36,146
SCHEIN, PHILIP S.....	PHARMACOLOGY OF NONMYELOSUPPRESSIVE ANTITUMOR AGENTS.....	5R01 CA17583-03	60,186
SINKS, LUCIUS F.....	CANCER AND LEUKEMIA GROUP B.....	5R10 CA21083-02	56,574
SLOTKOFF, LAWRENCE M.....	REGULATION OF SODIUM EXCRETION.....	3R01 HL12827-08S1	8,354
SMULSON, MARK E.....	MAMMALIAN RNA SYNTHESIS DURING AMINO ACID DEPRIVATION.....	5R01 CA11950-08	61,172
SMULSON, MARK E.....	HISTONE ADP-RIBOSYLATION AND HELA CELL REPLICATION.....	5R01 CA13195-06	58,489
STANDAERT, FRANK G.....	PROGRAM PROJECT IN NEUROPHARMACOLOGY.....	5P01 NS12566-03	460,854
STEINHARDT, JACINTO.....	STUDIES IN THE POLYMERIZATION OF SICKLE-CELL HEMOGLOBIN.....	5R01 HL12256-15	87,587
WALTERS, LEROY B.....	DEVELOPING AN INFORMATION SYSTEM FOR BIOETHICS.....	5R01 LM01702-05	77,354
WOOLLEY, PAUL V.....	BINDING OF METHYL-NITROSOUREA IN PANCREATIC TISSUE.....	5R26 CA19744-02	38,061
YANG, DAVID C.....	EMBRYONIC CELL ASSOCIATION & DEVELOPMENT.....	1R01 GM25363-01	45,799
ORGANIZATION TOTAL	50 4,313,398		
GORGAS MEMORIAL INSTITUTE OF TROPICAL AND PREVENTIVE MEDICINE ZIP CODE 20006			
BENENSON, ABRAM S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05769-03	15,854
GALINDO, PEDRO.....	ECOLOGY OF VECTOR BORNE VIRUSES IN PANAMA.....	5R01 AI02984-19	193,562

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
JUSTINES, GUSTAVO	LATENT INFECTION OF EPIZOOTIC VEE VIRUS IN EQUINES.....	5R01 AI13478-03	36,670
READ, ROBERT G.....	MICROCLIMATE AND ECOLOGY OF VECTOR BORNE DISEASE.....	5R01 AI11889-05	29,797
ORGANIZATION TOTAL	4 275,883		
HOWARD UNIVERSITY ZIP CODE 20001			
ALAM, ZAHUR.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	5R10 CA21185-02	53,282
ASHE, WARREN K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05361-17	107,020
ASHE, WARREN K.....	CENTER FOR THE HEALTH SCIENCES SUPPORT.....	3S06 RR08157-01S1	2,664
ASHE, WARREN K.....	CENTER FOR THE HEALTH SCIENCES SUPPORT.....	5S06 RR08157-02	275,946
BAROFSKY, ANNA-LISA.....	SEROTOMINERGIC MECHANISMS IN OVULATION INHIBITION.....	2R01 HD10676-02A1	83,581
BROADWATER, TOMMY L.....	BIOMEDICAL INTERDISCIPLINARY PROJECT.....	3S06 RR08016-07S1	2,995
BROADWATER, TOMMY L.....	BIOMEDICAL INTERDISCIPLINARY PROJECT.....	5S06 RR08016-08	560,794
CALHOUN, NOAH R.....	ZINC DEFICIENCY AND DENTAL CARIES.....	5R01 DE04760-02	16,636
COSTELLO, LESLIE C.....	PROSTATE CITRATE METABOLISM.....	5R01 HD08420-04	63,030
DUNSTON, GEORGIA M.....	IN VITRO CELLULAR IMMUNITY OF REGIONAL LYMPH NODES.....	5R01 CA19520-03	77,022
FRANKLIN, RENTY B.....	THE EFFECTS OF CALCITONIN ON CITRATE REGULATION.....	5R01 AM19049-03	29,131
HAKIM, RAZIEL S.....	METAPLASIA IN A NONDIVIDING CELL SYSTEM.....	5R01 HD11918-02	51,119
HAWTHORNE, EDWARD W.....	HYPERTENSION AND LEFT VENTRICULAR HYPERTROPHY.....	5R01 HL01015-27	105,370
HAWTHORNE, EDWARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07117-06	47,054
HUDRLIK, PAUL F.....	APPROACHES TO ALPHA-METHYLENE-LACTANE TUMOR INHIBITORS.....	5R01 CA23037-02	55,478
JACKSON, MARVIN A.....	EPIDEMIOLOGIC STUDY OF PROSTATIC CARCINOMA.....	5R26 CA15448-05	149,506
LAING, CALBERT A.....	STUDIES ON SOLUBLE ANTIGENS ON MTV INDUCED MAMMARY TUMOR.....	1R01 CA23372-01	64,092
LANGFORD, GEORGE M.....	CALCIUM INDUCTION OF COILED SHEET POLYMERS OF TUBULIN.....	1R01 GM24446-01	31,285
LEAK, LEE V.....	THE LYMPHATIC SYSTEM IN HEALTH AND IN INFLAMMATION.....	5R01 AI10639-08	48,745
LEAK, LEE V.....	ONTOGENY, ULTRASTRUCTURE FUNCTION IN LYMPHATIC SYSTEM.....	5R01 HL13901-08	55,245
MORRIS, HAROLD P.....	INDUCTION-CHARACTERIZATION-MINIMAL DEVIATION HEPATOMAS.....	3R01 CA10729-10S1	247,061
RHOADS, ALLEN R.....	REGULATION OF CYCLIC 3' 5'-NUCLEOTIDE PHOSPHODIESTERASES.....	5R01 AM19364-02	23,317
SCOTT, ROLAND B.....	SUPPORT FOR CENTER FOR SICKLE CELL DISEASE.....	5P60 HL15160-07	1,008,699
SILVA, OMEGA L.....	CALCITONIN AS A MARKER FOR CANCER OF THE BREAST.....	5R01 CA22137-02	26,350
WHITE, JACK E.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA14718-06	515,413
WHITE, JACK E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19376-03	114,999
ORGANIZATION TOTAL	26 3,815,834		
INDIVIDUAL AWARD-D'AMORE, ARCANGELO R. ZIP CODE 20008			
D'AMORE, ARCANGELO R.....	PSYCHOANALYSIS: THE WASHINGTON-BALTIMORE EXPERIENCE.....	1R01 LM03119-01	16,819
ORGANIZATION TOTAL	1 16,819		
INTERNATIONAL ASSOCIATION FOR THE STUDY OF PAIN ZIP CODE 20036			
BONICA, JOHN J.....	SECOND WORLD CONGRESS ON PAIN.....	2R13 DE04368-02	32,471
ORGANIZATION TOTAL	1 32,471		
NATIONAL ACADEMY OF SCIENCES ZIP CODE 20418			
BROWN, MYRTLE L.....	NUTRITION AND DENTAL HEALTH.....	1R13 DE04269-01	31,095
ORGANIZATION TOTAL	1 31,095		
NATIONAL BIOMEDICAL RESEARCH FOUNDATION ZIP CODE 20007			
BARKER, WINONA C.....	HOMOLOGOUS PHYSIOLOGICAL SYSTEMS IN HUMAN DEVELOPMENT.....	2R01 HD09547-04	75,744
DAYHOFF, MARGARET O.....	COMPUTER STUDY OF SEQUENCES OF AMINO ACIDS IN PROTEINS.....	5R01 GM08710-18	248,247
ORGANIZATION TOTAL	2 323,991		
PAN AMERICAN HEALTH ORGANIZATION ZIP CODE 20037			
DELGADO, HERNAN L.....	MATERNAL NUTRITION AND BIRTH INTERVAL COMPONENTS.....	1R01 HD12631-01	55,067
ORGANIZATION TOTAL	1 55,067		
TRINITY COLLEGE ZIP CODE 20017			
SANSBURY, RICHARD V.....	THE MULTIPLE-CHANNEL THEORY FOR SPATIAL VISION.....	5R01 EY01743-03	32,232
ORGANIZATION TOTAL	1 32,232		
U.S. DEPARTMENT OF THE ARMY-WALTER REED ARMY MEDICAL CENTER ZIP CODE 20012			
PARK, ROBERT C.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA23501-01	12,134

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
DIST OF COL—Continued			
ORGANIZATION TOTAL	1	12,134	
U.S. SMITHSONIAN INSTITUTION ZIP CODE 20560			
HOROWITZ, DONALD L.....	ETHNIC POLITICS AND POPULATION COMPOSITION.....	5R01 HD07817-04	9,030
ORGANIZATION TOTAL	1	9,030	
UNIVERSITIES RESEARCH ASSOCIATION ZIP CODE 20037			
COHEN, LIONEL.....	FERMILAB NUCLEON THERAPY FACILITY.....	3P01 CA18081-03S1	27,997
COHEN, LIONEL.....	FERMILAB NUCLEON THERAPY FACILITY.....	5P01 CA18081-04	958,317
ORGANIZATION TOTAL	2	986,314	
UNIVERSITY OF THE DISTRICT OF COLUMBIA ZIP CODE 20008			
KONDO, NORMAN S.....	ENVIRONMENTAL CARCINOGENS & OTHER BIOMEDICAL PROBLEMS.....	3S06 RR08005-07S1	900
KONDO, NORMAN S.....	ENVIRONMENTAL CARCINOGENS & OTHER BIOMEDICAL PROBLEMS.....	5S06 RR08005-08	149,136
ORGANIZATION TOTAL	2	150,036	
WASHINGTON HOSPITAL CENTER ZIP CODE 20010			
MAUGER, ANTHONY B.....	ACTINOMYCINS: CONFORMATION AND ACTIVITY.....	5R01 CA11627-12	56,577
ORGANIZATION TOTAL	1	56,577	
STATE TOTAL	168	15,501,659	
FLORIDA			
CORAL GABLES			
UNIVERSITY OF MIAMI ZIP CODE 33124			
CORBETT, MICHAEL D.....	HYDROXAMIC ACID PRODUCTION BY MARINE ORGANISMS.....	5R01 CA21992-02	65,724
CORBETT, MICHAEL D.....	HYDROXAMIC ACID PRODUCTION IN MICROBIAL ECOSYSTEMS.....	1R01 CA23492-01	65,686
ECKSTEIN, EUGENE C.....	PLATELET CONCENTRATION IN THE MARGINAL LAYER.....	1R01 HL22455-01	37,221
KURSUNOGLU, BEHRAM.....	THE KINETICS OF SOLID AND LIQUID IONIC CONDUCTORS.....	5R01 GM20284-06	78,576
MAN, EUGENE H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07022-11	20,516
METZ, CHARLES B.....	ISOLATION AND STUDY OF MAMMALIAN SPERM ISOANTIGENS.....	2R01 HD06663-03A1	66,611
WINTERS, RAY W.....	SINGLE CELL STUDIES IN OPTIC TRACT.....	5R01 EY00701-05	47,670
ORGANIZATION TOTAL	7	382,004	
DAYTONA BEACH			
BETHUNE-COOKMAN COLLEGE ZIP CODE 32015			
COPELAND, RICHARD F.....	BIOMEDICAL RESEARCH AND TRAINING PROGRAM.....	3S06 RR08119-04S1	1,350
COPELAND, RICHARD F.....	BIOMEDICAL RESEARCH AND TRAINING PROGRAM.....	5S06 RR08119-05	103,833
ORGANIZATION TOTAL	2	105,183	
GAINESVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA--UNIVERSITY OF FLORIDA ZIP CODE 32611			
ALDRICH, HENRY C.....	MEMBRANE STRUCTURE, CELL CONTACT AND CELL FUSION.....	2R01 GM21825-03	44,418
ALLEN, CHARLES M, JR.....	BIOSYNTHESIS OF UNDECAPRENOL CARBOHYDRATE-CARRIERS.....	5R01 GM23193-03	50,324
ALLEN, CHARLES M, JR.....	BIOSYNTHESIS OF DOLICHYL PHOSPHATE IN ANIMAL CELLS.....	1R01 GM25496-01	30,227
ALLEN, DON L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05728-07	14,753
AYOUB, ELIA M.....	HOST FACTORS IN THE PATHOGENESIS OF RHEUMATIC FEVER.....	5R01 HL20533-09	82,516
BAZER, FULLER W.....	PROGESTERONE-INDUCED PROTEINS IN THE PREGNANT UTERUS.....	2R01 HD08560-04	74,229
BERNSTEIN, JERALD J.....	REGENERATION IN THE CENTRAL NERVOUS SYSTEM.....	5R01 NS06164-13	74,687
BIRDSELL, DALE C.....	MECHANISM OF VIRULENCE OF ACTINOMYCETES VISCOSSUS T14V.....	5R01 DE04617-02	56,518
BIRDSELL, DALE C.....	ROLE OF THE IMMUNE SYSTEM IN PERIODONTAL DISEASE.....	5R01 DE04655-02	42,496
BLEIWEIS, ARNOLD S.....	CELL-WALL ANTIGENS OF CARIOGENIC STREPTOCOCCI.....	2R01 DE02901-10	66,874
BLOCK, A JAY.....	SLEEP APNEA AND DESATURATION-MECHANISMS AND INCIDENCE.....	1R01 HL22622-01	58,166

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
BLOCK, EDWARD R	OXYGEN TOXICITY PREVENTION WITH SUPEROXIDE DISMUTASE	1R01 HL21115-01	18,247
BRAYLAN, RAUL C	FLOW ANALYSIS OF HUMAN MALIGNANT LYMPHOID CELLS	1R01 CA23393-01	106,119
BRIGHT, ROBERT W	SURGICAL CORRECTION OF PARTIAL GROWTH PLATE CLOSURE	5R01 AM19219-03	58,453
BROWNELL, WILLIAM E	PHYSIOLOGICAL STUDIES OF HEARING	2R01 NS12209-04	47,283
BURCHARDT, HANS	EVALUATION OF ANTICANCER CHEMOTHERAPY ON BONE GRAFTS	1R01 CA22763-01	57,183
CATON, DONALD	STUDY OF FETAL GROWTH AND DEVELOPMENT	5R01 HD05659-08	56,188
CERUTTI, PETER A	REPAIR OF DNA DAMAGE IN BACTERIAL AND MAMMALIAN CELLS	5R01 GM18617-08	71,654
CLEM, L WILLIAM	THE MOLECULAR BASIS OF IMMUNITY IN INVERTEBRATES	5R01 AI14137-02	48,370
COHEN, ROBERT J	CYCLIC NUCLEOTIDES IN THE MODEL SYSTEM PHYCOMYCES	5R01 GM19390-07	45,998
CORNELIUS, C E	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05788-02	26,931
DEAL, WILLIAM B	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER	2M01 RR00082-16	416,334
DEAL, WILLIAM B	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05362-17	136,236
DRUMMOND, WILLA H	MECHANISMS OF FETAL & NEONATAL ASPHYXIC SYNDROMES	7R01 HD12987-01	77,303
DUCKWORTH, DONNA H	EXTRA-CHROMOSOMAL GENETIC ELEMENTS AND THE CELL SURFACE	5R01 AI12056-04	26,572
DUNN, BEN M	PEPSIN INHIBITOR: STRUCTURE-FUNCTION MANIPULATIONS	2R01 AM18865-04	85,074
DUNN, BEN M	QUANTITATIVE AFFINITY CHROMATOGRAPHY	5R01 GM22421-03	35,323
ENNEKING, WILLIAM F	QUANTITATION OF BONE TRANSPLANT REPAIR	5R01 AM14063-07	44,240
ENNEKING, WILLIAM F	RADICAL LOCAL RESECTION IN MUSCULOSKELETAL SARCOMA	3R01 CA16559-04S1	15,393
ENNEKING, WILLIAM F	RADICAL LOCAL RESECTION IN MUSCULOSKELETAL SARCOMA	5R01 CA16559-05	66,092
ENOCH, JAY M	THE ETIOLOGY OF REDUCED VISUAL FUNCTION	2R01 EY01418-04	183,948
FELDHERR, CARL M	THE FUNCTION OF THE NUCLEAR ENVELOPE	5R01 GM21531-05	27,160
FINLAYSON, BIRDWELL	UROLITHIASIS CENTER	3P50 AM20586-01S1	7,600
FINLAYSON, BIRDWELL	UROLITHIASIS CENTER	5P50 AM20586-02	325,475
FISHER, WALDO R	STUDIES OF THE STRUCTURE OF LOW DENSITY LIPOPROTEIN	2R01 HL10316-13	99,455
FISHER, WALDO R	POLYDISPERSE LDL: STRUCTURE, METABOLISM AND FUNCTION	5R01 HL20391-03	107,106
FREGLY, MELVIN J	ORAL CONTRACEPTIVES AND HYPERTENSION	3R01 HL14526-06S1	2,613
FREGLY, MELVIN J	ORAL CONTRACEPTIVES AND HYPERTENSION	2R01 HL14526-07	72,481
GABBAY, EDMOND J	STEREOSPECIFIC BINDING OF PROTEINS TO DNA	2R01 GM17503-08	41,323
GELATT, KIRK N	INHERITED GLAUCOMA	2R01 EY01932-02A1	64,780
GELATT, KIRK N	CONGENITAL CATARACTS	1R01 EY02199-01	48,964
GIBBS, CHARLES H	INVESTIGATION OF FUNCTIONAL MANDIBULAR MOVEMENTS	2R01 DE04157-05	84,900
GIBBS, CHARLES H	INVESTIGATION OF TOOTH FORCES AND TOOTH MOBILITY	5R01 DE04350-03	24,583
GOLDBERG, EUGENE P	INTRAOCULAR LENS COATINGS TO PREVENT CORNEA DAMAGE	1R01 EY02063-01A1	54,380
GREGG, JAMES H	CELL SLIME MOLD INTERACTION/REGULATION/DIFFERENTIATION	2R01 GM10138-16	60,335
GURIN, SAMUEL	HOMARINE AND PYRIDINE CARBOXYLIC ACIDS IN CRUSTACEA	5R01 GM22744-03	9,185
HALLIWELL, RICHARD E	ANIMAL RHEUMATOID ARTHRITIS AS AN EXPERIMENTAL MODEL	5R01 AM21590-02	69,415
HEILMAN, KENNETH M	THE NEGLECT SYNDROME IN MAN	5R01 NS12218-02	21,608
HENCH, LARRY L	INTERFACIAL BEHAVIOR OF BIOMATERIALS	1R01 GM24858-01	95,767
HOLLIE, HARRY	A COMMUNICATION SCIENCES RESEARCH PROGRAM	5P01 NS06459-13	229,387
INGRAM, LONNIE O	PHOSPHOLIPID METABOLISM DURING SYNCHRONOUS DIVISION	1R01 GM24059-01	42,202
JACKSON, ERIC	SYSTEMATIC DESENSITIZATION OF DENTAL FEARS	2R01 DE04143-03	55,502
KALLENBACH, ERNST A	TRACER AND FINE STRUCTURE STUDIES OF THE ENAMEL ORGAN	2R01 DE02241-13	21,098
KALRA, PUSHPA S	STEROIDS AND HYPOTHALAMIC INTERACTIONS IN MALE RATS	1R01 HD11362-01	36,680
KARLAN, MARC S	BIOGLASS-SOFT TISSUE BIOMATERIALS IN THE EAR	1R01 NS14556-01	39,387
KING, GREGORY J	STUDIES ON STRESS-RELATED BONE RESORPTION	1R23 DE04844-01	21,020
KITZMILLER, JAMES B	GENETICS OF ANOPHELINE MOSQUITOES	7R01 AI15015-01	42,955
KLEIN, PAUL A	IMMUNOGENICITY OF MEMBRANE AND TUMOR ANTIGENS	3R01 CA13384-06S1	11,107
KOLTS, BYRON E	IMMUNOCHEMICAL STUDIES OF SECRETIN	5R01 AM19425-03	45,138
LARKIN, LYNN H	ROLE OF RELAXIN IN GESTATION AND PARTURITION	2R01 HD08552-04	52,303
LEONARD, CHRISTIANA M	NEURAL SUBSTRATE OF BEHAVIORAL DEVELOPMENT	5R01 NS13516-02	53,876
MACLAREN, NOEL K	FACTORS AFFECTING CHEMICALLY INDUCED MURINE DIABETES	1R01 AM25403-01	65,481
MAHAN, PARKER	JAW MOVEMENTS AND RELATED MUSCLE ACTIVITIES IN MAN	1R23 DE04924-01	27,848
MANGOS, JOHN A	STUDIES OF EXOCRINE GLAND FUNCTION IN CYSTIC FIBROSIS	5R01 AM19200-04	102,719
MAREN, THOMAS H	NEW APPROACHES TO GLAUCOMA AND LENS PHARMACOLOGY	1R01 EY02227-01	133,907
MAREN, THOMAS H	NEW PHARMACOLOGY ASPECTS RELATED TO CARBONIC ANHYDRASE	1R01 HL22258-01	72,062
MC GUIGAN, JAMES E	IMMUNOLOGY AND DISEASES OF THE GASTROINTESTINAL TRACT	5R01 AM13711-09	97,328
MC GUIRE, PETER M	THE GENETIC TOXICOLOGY OF TWO S-TRIAZINE HERBICIDES	1R01 ES01652-01	60,631
MERIMEE, THOMAS J	INSULIN AND HGH: SECRETION AND METABOLIC ACTIONS	5R01 AM18130-05	74,451
MERIMEE, THOMAS J	PITUITARY MODULATION OF MICRO- & MACRO-VASCULAR DISEASE	5R01 HL19175-03	82,792
METCALF, JOSEPH F	IMMUNOCYTOCHEMICAL STUDIES OF HERPETIC KERATITIS	2R01 EY01580-03A1	65,734

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
MORELAND, ALVIN F.....	RESOURCE FOR INVESTIGATION OF LABORATORY ANIMAL DISEASE.....	3P40 RR00685-06S1	63,233
MOSCOVICI, CARLO.....	SPECIFICITY OF AVIAN MYELOBLASTOSIS VIRUS.....	5R01 CA10697-12	58,756
NOONAN, KENNETH D.....	CONTROL OF LECTIN RECEPTOR MOBILITY.....	5R01 GM23227-03	42,655
NORMANN, SIGURD J.....	MONOCYTE FUNCTION IN NEOPLASIA.....	5R01 CA22517-02	34,596
O'BRIEN, THOMAS W.....	CHARACTERIZATION OF MAMMALIAN MITOCHONDRIAL RIBOSOMES.....	3R01 GM15438-09S1	4,056
O'BRIEN, THOMAS W.....	CHARACTERIZATION OF MAMMALIAN MITOCHONDRIAL RIBOSOMES.....	5R01 GM15438-10	43,537
O'RAND, MICHAEL G.....	ISOLATION OF SPERM MEMBRANE AUTOANTIGENS.....	5R01 HD10618-02	29,052
OTIS, ARTHUR B.....	POWER OUTPUT OF BREATHING.....	5R01 HL19829-02	20,815
PIOTROWSKI, GEORGE.....	STUDIES OF SYNOVIAL JOINTS.....	1R01 AM20339-01A1	37,584
POLACK, FRANK M.....	CHANGES IN CORNEAL GRAFTS AND TISSUE.....	3R01 EY00415-09S1	8,959
POLACK, FRANK M.....	ULTRAMICROSCOPIC CHANGES IN CORNEA AND CORNEAL GRAFTS.....	2R01 EY00415-10	43,223
POLACK, FRANK M.....	EXTERNAL OCULAR DISEASE CENTER.....	5P50 EY00446-10	252,783
PRESTON, JAMES F.....	AMANITIN-PROTEIN CONJUGATES AS POTENTIAL INHIBITORS.....	5R01 CA19043-03	28,747
RASBURY, WILEY C.....	BEHAVIORAL CORRELATES OF RENAL FAILURE IN CHILDREN.....	1R01 AM19095-01A2	52,438
RHOTO, ALBERT L, JR.....	BRAIN STEM SENSORY CONNECTIONS.....	5R01 NS10978-05	19,407
ROBERTS, R MICHAEL.....	SEX STEROID ACTION ON CULTURED UTERINE EPITHELIAL CELLS.....	5R01 HD10436-02	33,916
ROMRELL, LYNN J.....	SPERM SPECIFIC MEMBRANE PROTEINS IN SPERMATOGENESIS.....	1R01 HD10852-01A1	44,448
SCHWARTZ, MICHAEL A.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09077-01	155,601
SELMAN, KELLY.....	BLOCKS TO POLYSPERMY DURING MAMMALIAN FERTILIZATION.....	5R01 HD09604-03	23,256
SHANDS, JOSEPH W, JR.....	ENDOTOXIN AND PATHOGENESIS OF INFECTION.....	5R01 AI07257-12	56,080
SILVERMAN, DAVID N.....	CATALYTIC MECHANISM OF CARBONIC ANHYDRASE.....	1R01 GM25154-01	85,950
SISLER, HARRY H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07021-13	100,516
SMALL, PARKER A, JR.....	LOCAL IMMUNOLOGIC REACTIONS.....	5R01 AI07713-12	75,125
SMITH, RICHARD T.....	CELLULAR MECHANISMS IN TUMOR-SPECIFIC IMMUNITY.....	3R01 CA15334-05S1	17,288
SMITH, RICHARD T.....	ONTOGENY OF IMMUNE MECHANISMS.....	5R01 HD00384-21	97,000
STEIN, GARY S.....	REGULATION OF EXPRESSION OF RNA TUMOR VIRUSES.....	5R01 CA18874-03	51,259
VIERCK, CHARLES J, JR.....	SPINAL SOMESTHETIC PATHWAYS.....	5R01 NS07261-12	52,372
WAGNER, PATRICIA A.....	SUPPLEMENTAL ZINC, TASTE & HEALTH IN AGING WOMEN.....	1R01 AG00833-01	55,850
WEBB, WILSE B.....	CHANGES OF SLEEP PATTERNS IN THE AGING.....	5R01 AG00805-02	83,055
WINEFORDNER, JAMES D.....	MOLECULAR SPECTROMETRIC METHODS FOR DRUGS.....	5R01 GM11373-16	63,707
ORGANIZATION TOTAL	101	6,604,151	
JACKSONVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF NORTH FLORIDA ZIP CODE 32216			
HUEBNER, JAY S.....	PHOTO-ELECTRIC MEMBRANE PROBES.....	5R01 GM23250-03	43,648
ORGANIZATION TOTAL	1	43,648	
MELBOURNE			
FLORIDA INSTITUTE OF TECHNOLOGY ZIP CODE 32901			
BURCHFIELD, HARRY P.....	METABOLISM AND CARCINOGENICITY OF ORGANOHALOGENS.....	5R01 ES01883-02	150,580
WEBSTER, GEORGE C.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09032-02	94,538
ORGANIZATION TOTAL	2	245,118	
MIAMI			
PAPANICOLAOU CANCER RESEARCH INSTITUTE ZIP CODE 33136			
AHMAD, FAZAL.....	REGULATION OF FATTY ACID BIOSYNTHESIS IN MAMMARY TUMORS.....	2R01 CA15196-04A1	74,683
AHMAD, FAZAL.....	BIOCHEMICAL STUDIES ON CENTRAL NERVOUS SYSTEM MYELIN.....	1R01 NS13646-01A1	46,016
ALTMAN, NORMAN H.....	PRODUCTION OF RATS WITH ISOLOGOUSLY TRANSPLANTED R3327.....	5R26 CA18625-04	52,758
BLOCK, RONALD E.....	CHARACTERIZATION OF BIOLOGICAL TISSUES BY NMR.....	2R01 CA13056-05A2	67,141
BRADA, ZBYNEK.....	ETHIONINE METABOLISM IN HYPERPLASTIC NODULES IN LIVER.....	1R01 CA23516-01	81,823
KOHEN, ELLI.....	MICROFLUOROMETRY OF CULTIVATED PANCREATIC ISLETS.....	5R01 AM21330-02	23,037
KOHEN, ELLI.....	INTRACELLULAR ENZYME KINETICS AND CARCINOGENS.....	5R01 CA21153-02	62,406
KOHEN, ELLI.....	REGULATION OF INTRA & INTERCELLULAR COMMUNICATION.....	5R01 GM20866-05	52,123
MELOCHE, H PAUL.....	MICROENVIRONMENTAL GEOMETRY OF C-C LYASE ACTIVE SITES.....	5R01 GM24926-02	69,746
SCHULTZ, JULIUS.....	BIOCHEMICAL STUDIES IN CANCER.....	5R01 CA10904-10	74,645
SCHULTZ, JULIUS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05690-08	21,609

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
ORGANIZATION TOTAL	11	625,987	
UNIVERSITY OF MIAMI ZIP CODE 33152			
ADACHI, KENJI.....	ROLE OF CYCLIC NUCLEOTIDES IN PATHOGENESIS OF PSORIASIS.....	5R01 AM17179-05	98,340
ANDERSON, DOUGLAS R.....	EXPERIMENTAL PATHOLOGY OF THE OPTIC NERVE.....	2R01 EY00031-08	138,769
ANDERSON, DOUGLAS R.....	OPHTHALMIC RESEARCH CORE FACILITY.....	1P30 EY02180-01	284,059
AWAD, WILLIAM M, JR.....	CHARACTERIZATION OF PRONASE ENZYMES.....	5R01 GM22468-03	67,482
BARRETT, ELLEN F.....	NEUROTRANSMITTER RELEASE KINETICS.....	2R01 NS12404-04	49,478
BARRETT, JOHN N.....	PACEMAKER MECHANISMS IN NEURONS AND HEART CELLS.....	2R01 NS12207-04	69,290
BASSETT, ARTHUR L.....	EFFECT OF DRUGS ON DEVELOPMENT OF CARDIAC FAILURE.....	5R01 HL19044-03	72,769
BOUCEK, ROBERT J, JR.....	STUDIES ON AGING: EFFECTS OF SEX HORMONES.....	2R01 HL17865-04	90,600
BOUCEK, ROBERT J, JR.....	DRUG TREATMENT OF VASCULAR SCLEROPROTEIN DEFECTS.....	2R01 HL17909-04	111,855
BOUCEK, ROBERT J, JR.....	REGULATION OF LYSYL-CROSS-LINKING IN VASCULAR TISSUE.....	1R01 HL22040-01	128,539
BOURGOIGNIE, JACQUES.....	UREMIA: PATHOGENESIS, EFFECTS, AND POSSIBLE PREVENTION.....	5R01 AM19822-03	267,469
BREW, KEITH.....	CHEMICAL STUDIES OF ENZYMES AND PROTEINS.....	5R01 GM21363-05	77,706
BRILL, EARL.....	AROMATIC AMINE N-OXIDATION IN BLADDER CANCER.....	2R26 CA16900-04	55,231
CASWELL, ANTHONY H.....	ISOLATED T TUBULES AND TRIADS OF MUSCLE.....	1R01 AM21601-01	85,472
CHAMBERS, EDWARD L.....	ROLE OF IONS IN ACTIVATION OF THE EGG.....	3R01 HD07213-05S1	9,275
CLAFLIN, ALICE J.....	MEMBRANE ANTIGENS OF RAT PROSTATE ADENOCARCINOMA.....	1R26 CA21696-01A1	70,352
CLARKSON, JOHN G.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY.....	1R10 EY02468-01	80,190
FITZGERALD, DOROTHEA B.....	CARIOGENESIS OF PLAQUE BACTERIA IN TEST MODELS.....	2R01 DE04265-04	116,406
FLETCHER, MARY A.....	IMMUNOCHEMICAL STUDIES OF MONONUCLEOSIS ANTIBODIES.....	5R01 AM16763-07	110,683
FLYNN, JOHN T.....	RETROLENTAL FIBROPLASIA: THE EVOLUTION OF THE LESION.....	5R01 EY01236-04	75,701
FORSTER, RICHARD K.....	MANAGEMENT OF FUNGAL KERATITIS AND ENDOPHTHALMITIS.....	2R01 EY00674-07	74,063
GANJU-KRISHAN, AWTAR.....	CELL KINETICS AND CANCER CHEMOTHERAPY.....	5R01 CA23688-02	36,488
GELBAND, HENRY.....	A PROSPECTIVE STUDY: BLOOD PRESSURE IN NEWBORN TWINS.....	5R01 HL19930-03	167,914
GOLDBERG, STEPHEN J.....	INDUCTION OF MAMMALIAN RETINAL REGENERATION.....	5R01 EY01981-02	35,028
GREEN, BARTH A.....	OUTCOME VS EMERGENCY CARE IN SPINAL CORD INJURY.....	1R01 NS14468-01	172,726
HAINES, HAROLD G.....	DENGUE INFECTION AND COMMUNITY HEALTH.....	5R22 AI13380-03	68,909
HAMASAKI, DUCO I.....	EFFECT OF VISUAL DEPRIVATION ON VISION.....	2R01 EY00376-09A1	121,851
HARKNESS, DONALD R.....	SUPPORT FOR SICKLE CELL CENTER.....	3P60 HL15999-05S1	38,912
HAYNES, DUNCAN H.....	MEMBRANE PHOTODAMAGE INDUCED BY ANTIDIABETIC DRUGS.....	5R01 AM20086-02	37,052
HAYNES, DUNCAN H.....	SARCOPLASMIC RETICULUM: CA20 TRANSPORT AND RELEASE.....	1R01 GM23990-01A1	82,746
HAYNES, DUNCAN H.....	BINDING, TRANSPORT OF CALCIUM AND POTASSIUM IONOPHORES.....	1R01 HL23392-01	45,038
HERSCHLER, JONATHAN.....	AQUEOUS HUMOR AND CONJUNCTIVAL FIBROBLASTS.....	1R01 EY02436-01	57,819
HINKLEY, ROBERT E, JR.....	ANESTHETIC ALTERATION OF CELL STRUCTURE AND FUNCTION.....	7R01 GM25586-01	9,436
HOLADAY, DUNCAN A.....	METABOLISM OF VOLATILE FLUORINATED ANESTHETICS.....	5R01 GM16498-10	77,742
HOWELL, DAVID S.....	ROLE OF PHOSPHOLIPIDS IN MINERALIZATION OF OSTEOID.....	5R01 AM08662-15	110,810
HSIA, SUNG L.....	SERUM CHOLESTEROL BINDING RESERVE IN DIABETES.....	5R01 HL20418-03	68,373
ISAACKS, RUSSELL E.....	REGULATION OF 2,3 DIPHOSPHOGLYCERATE IN ERYTHROCYTES.....	1R01 AM20815-01	32,575
LEE, ERNEST Y.....	PHOSPHOPROTEIN PHOSPHATASES: PROPERTIES AND REGULATION.....	5R01 AM18512-04	72,123
LEHOTAY, DENIS.....	A UNIQUE PEPTIDE INHIBITOR OF ADENYLATE CYCLASE.....	5R01 AM19192-03	64,510
LEMAIRE, WILLIAM J.....	MECHANISM OF OVULATION.....	3R01 HD08747-03S1	7,877
LEMAIRE, WILLIAM J.....	MECHANISM OF OVULATION.....	2R01 HD08747-04	79,542
LESSNER, HOWARD E.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA05641-18	318,580
LEVEY, GERALD S.....	STUDIES OF MYOCARDIAL ADENYL CYCLASE.....	5R01 HL13715-08	134,132
LOEWENSTEIN, WERNER R.....	A PROGRAM ON THE ETIOLOGY AND DIAGNOSIS OF CANCER.....	5R01 CA14464-05	194,931
MACHEMER, ROBERT.....	VITRECTOMY THROUGH THE PARS PLANA.....	3R01 EY00841-06S1	26,902
MAGLEBY, KARL L.....	MECHANISMS OF VARIABLE SYNAPTIC EFFICACY.....	5R01 NS10277-06	87,205
MALININ, THEODORE I.....	PROSTATE CANCER TISSUE COLLECTION CENTER.....	5R26 CA15480-05	178,263
MANSSELL, PETER W.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17912-04	125,771
MARSH, JOHN M.....	MECHANISM OF GONADOTROPIN ACTION.....	2R01 HD03142-12	128,343
MASSARO, DONALD J.....	PROTEIN TURNOVER AND AMINO ACID TRANSPORT BY LUNG.....	2R01 HL20366-03	75,938
MASSARO, GLORIA D.....	CELLULAR BASIS OF SMALL AIRWAYS FUNCTION.....	1R01 HL22333-01	70,857
MC CABE, MEAD M.....	CELL ADHERENCE OF DENTAL PLAQUE FORMING STREPTOCOCCI.....	2R01 DE04321-04	92,845
MILLER, JOSHUA.....	ENHANCEMENT & GRAFT ADAPTATION IN ORGAN TRANSPLANTATION.....	5R01 AM25243-02	86,983
MUENCH, KARL H.....	STRUCTURE OF TRYPTOPHANYL-TRNA SYNTHETASE OF E. COLI.....	5R01 GM23188-03	121,570
MYERBURG, ROBERT J.....	STUDIES OF SURVIVORS OF PREHOSPITAL CARDIAC ARREST.....	2R01 HL18769-04	130,395
MYERBURG, ROBERT J.....	ELECTROPHYSIOLOGY AFTER HEALED MYOCARDIAL INFARCTION.....	1R01 HL21735-01	66,327
NORTON, EDWARD W.....	CLINICAL STUDY OF MACULAR DISEASE.....	5P50 EY00338-13	119,208

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
PAPPER, EMANUEL M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00261-13	702,160
PAPPER, EMANUEL M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05363-17	200,462
PENNELL, J PHILLIP.....	EFFECT OF ISLET IMPLANTS ON DIABETIC NEPHROPATHY.....	5R01 AM20735-02	72,146
PENNEYS, NEAL S.....	CUTANEOUS INHIBITORS OF PROSTAGLANDIN SYNTHESIS.....	5R01 AM19079-03	55,968
POTTER, LINCOLN T.....	ACETYLCHOLINE RECEPTOR-CHANNEL MOLECULES.....	1R01 NS14651-01	93,433
RADOMSKI, JACK L.....	ENVIRONMENTAL BLADDER CARCINOGENS.....	5R26 CA14927-05	117,310
REISS, ERIC.....	RADIOIMMUNOASSAY OF PARATHYROID HORMONE IN MAN.....	5R01 AM16768-07	107,220
RIBBONS, DOUGLAS W.....	ENZYMES OF AROMATIC OXIDATIONS FROM MICROORGANISMS.....	2R01 GM20172-04A1	93,285
ROSENTHAL, MYRON.....	IN SITU STUDIES OF DRUG ACTIONS ON CNS METABOLISM.....	2R01 NS14319-02	114,602
ROSENTHAL, MYRON.....	CEREBRAL ISCHEMIA, VIABILITY AND OXIDATIVE METABOLISM.....	3R01 NS14325-01S1	6,454
ROSENTHAL, MYRON.....	CEREBRAL ISCHEMIA, VIABILITY AND OXIDATIVE METABOLISM.....	5R01 NS14325-02	95,167
ROWE, MARC I.....	SHOCK IN INFANCY: METABOLIC AND HEMODYNAMIC ASPECTS.....	5R01 HD04154-10	78,045
RUBIN, ROBERT W.....	THE ROLE OF MICROTUBULES IN MALIGNANT TRANSFORMATION.....	5R01 CA19855-03	70,121
RUSSELL, THOMAS R.....	PROSTAGLANDINS AND CYCLIC GMP IN DIFFERENTIATION.....	5R01 AM21575-02	54,194
RYAN, JAMES W.....	HUMORAL MEDIATORS OF PULMONARY INFLAMMATION.....	5R01 HL22087-02	119,365
RYAN, JAMES W.....	IMMEDIATE METABOLIC FATES OF KININS AND ANGIOTENSINS.....	1R01 HL22896-01	130,004
RYAN, UNA S.....	CELL BIOLOGY OF THE ALVEOLAR-CAPILLARY UNIT.....	5R01 HL21568-02	121,944
SARMIENTO, AUGUSTO.....	THE FUNCTION OF THE INTEROSSEOUS MEMBRANE.....	3R01 AM19133-02S1	3,713
SCHEINBERG, PERITZ.....	RESEARCH CENTER FOR CEREBRAL VASCULAR DISEASE.....	5P50 NS05820-13	418,446
SCOTT, MARCIA S.....	MEMORY IN YOUNG CHILDREN.....	5R01 HD09819-03	55,606
SCOTT, WALTER A.....	ORGANIZATION OF HISTONES ON SV40 AND VARIANT DNA.....	2R01 AI12852-04	24,276
SCOTT, WALTER A.....	PANCREATIC ISLET CELL TRANSFORMATION BY SV40 MUTANTS.....	5R01 AM21213-02	59,714
SEIBERT, G BURTON, JR.....	CANCER PATIENT DATA CONTROL EXPLORATORY STUDIES.....	5R10 CA21186-02	89,677
SELAWRY, HELENA P.....	THE IMPLANTATION OF ISLETS OF LANGERHANS.....	5R01 AM20346-02	63,334
SMITH, ERIC E.....	INHIBITION OF DEXTRANSUCRASES OF CARIOGENIC ORGANISMS.....	5R01 DE03118-08	56,344
SOMANI, PITAMBAR.....	CARDIOVASCULAR PHARMACOLOGY OF IONOPHORES.....	3R01 HL18599-02S1	4,304
THOMAS, VERA F.....	KINETICS OF UPTAKE AND EXCRETION OF VAPORS IN MAN.....	2R01 ES01029-04	44,131
VIAMONTE, MANUEL, JR.....	EVALUATION OF VASOSPASM IN CORD INJURY BY X-RAY MEDIA.....	5R01 NS12779-03	56,172
WEINSTEIN, GERALD D.....	PATHOPHYSIOLOGY & CHEMOTHERAPY IN PSORIASIS & CANCER.....	5R01 AM14887-12	138,145
WERNER, RUDOLF K.....	MECHANISM OF DNA CHAIN GROWTH IN MAMMALIAN CELLS.....	1R01 GM22510-01A3	58,389
WHELAN, WILLIAM J.....	SYNTHESIS AND STRUCTURE OF MAMMALIAN LIVER GLYCOGEN.....	5R01 AM12532-11	151,495
WHELAN, WILLIAM J.....	THE MECHANISM OF STARCH DIGESTION IN MAMMALS.....	5R01 AM17733-04	78,645
WIESER, PAUL B.....	CARNITINE AND ADIPOSE TISSUE METABOLISM.....	1R01 AM21251-01	62,288
WILSON, DAVID L.....	AXOPLASMIC TRANSPORT OF PROTEINS.....	1R01 NS14328-01	58,975
WISE, GARY E.....	SICKLE CELL CRISIS: ROLE OF THE ERYTHROCYTE MEMBRANE.....	5R01 HL21096-02	52,305
WOESSNER, J FREDERICK, JR.....	HUMAN CARTILAGE PROTEASES IN ARTHRITIS.....	2R01 AM16940-06	78,315
WOESSNER, J FREDERICK, JR.....	TISSUE COLLAGENASE AND ITS CONTROL BY STEROIDS.....	5R01 HD06773-07	80,806
WOODSIDE, KENNETH H.....	STUDIES OF PULMONARY ALVEOLAR MACROPHAGE FUNCTION.....	1R01 HL21140-01A1	57,781
YUNIS, ADEL A.....	PATHOGENETIC MECHANISMS IN BLOOD DISEASES.....	5P01 AM09001-13	243,777
YUNIS, ADEL A.....	PANCREATIC CARCINOMA IN CONTINUOUS CULTURE.....	5R26 CA19182-03	78,011
ZIBOH, VINCENT A.....	BIOCHEMICAL BASIS OF PROSTAGLANDIN ACTION IN THE SKIN.....	5R01 AM14941-06	99,814
ZUBROD, C GORDON.....	COMPREHENSIVE CANCER CENTER FOR THE STATE OF FLORIDA.....	3P30 CA14395-05S1	10,366
ZUBROD, C GORDON.....	COMPREHENSIVE CANCER CENTER FOR THE STATE OF FLORIDA.....	5P30 CA14395-06	1,138,148
ZUBROD, C GORDON.....	CYTOKINETICS AND CHEMOTHERAPY OF HUMAN SOLID TUMORS.....	5P01 CA19321-03	399,127
ORGANIZATION TOTAL	101	11,373,434	
MIAMI BEACH			
MIAMI HEART INSTITUTE ZIP CODE 33140			
MAYROVITZ, HARVEY N.....	ROLE OF BIOELECTRIC POTENTIALS IN PLATELET ADHERENCE.....	3R01 HL22738-01S1	7,543
ORGANIZATION TOTAL	1	7,543	
MOUNT SINAI MEDICAL CENTER ZIP CODE 33140			
SACKNER, MARVIN A.....	VOLUMES AND COMPLIANCE OF PULMONARY CIRCULATION.....	5R01 HL10622-12	50,899
WANNER, ADAM.....	PATHOPHYSIOLOGY OF BRONCHIAL ASTHMA.....	1R01 HL20989-01A1	65,836
ORGANIZATION TOTAL	2	116,735	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
SAINT PETERSBURG			
ECKERD COLLEGE ZIP CODE 33733			
DEMBROSKI, THEODORE M.....	CORONARY-PRONE BEHAVIOR AND CARDIOVASCULAR REACTIVITY.....	1R01 HL22809-01	73,786
ORGANIZATION TOTAL	1 73,786		
LIFE SCIENCES, INC.—BIOMEICAL RESEARCH INSTITUTE ZIP CDDE 3371D			
NONOYAMA, MEIHAN.....	ONCOGENICITY OF EPSTEIN-BARR VIRUS.....	5R01 CA21665-03	95,643
ORGANIZATION TOTAL	1 95,643		
SARASOTA			
MOTE MARINE LABORATORY ZIP CDDE 33581			
TAVOLGA, WILLIAM N.....	ECHOLOCATION AND ACOUSTIC ORIENTATION.....	5R01 NS13746-02	24,542
ORGANIZATION TOTAL	1 24,542		
TALLAHASSEE			
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 32307			
SHETTY, A SUBBAYYA.....	ENZYMATIC DETOXIFICATION OF HYDROXYANTHRANILIC ACID.....	5R01 CA18817-02	30,717
TTERLIKIS, LAMBROS P.....	NUCLEOSIDE ANALOGS WITH ANTITUMOR ACTIVITY.....	5S06 RR08111-06	40,475
TTERLIKIS, LAMBROS P.....	BIOCHEMICAL AND PHARMACOLOGICAL INVESTIGATIONS.....	2S06 RR08111-07	281,462
ORGANIZATION TOTAL	3 352,654		
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306			
BAKER, HOWARD D.....	VERY EARLY DARK ADAPTATION FROM INTENSE BLEACHES.....	5R01 EY01394-04	30,580
BERKLEY, KAREN J.....	CONVERGENCE OF SOMATOSENSORY PATHWAYS IN THALAMUS.....	5R01 NS11892-05	50,683
BERKLEY, MARK A.....	NEURAL MECHANISMS IN SPATIAL VISION.....	2R01 EY00953-07	77,930
DE BUSK, A GIB.....	CELL SURFACE FUNCTION AND CELLULAR AGING.....	5R01 AG00194-04	30,302
DOUGHERTY, RALPH C.....	NEW SCREENING METHODS FOR TOXIC SUBSTANCES.....	1R01 ES01878-01	65,337
ELAM, JOHN S.....	STUDY OF AXONAL GLYCOPROTEINS AND GLYCOSAMINOGLYCANS.....	5R01 NS11456-06	44,616
FREEMAN, MARC E.....	CONTROL OF PROLACTIN SECRETION.....	1R01 HD11669-01	45,033
FREEMAN, MARC E.....	CONTROL OF LUTEINIZING HORMONE SECRETION.....	1R01 HD12233-01	39,551
FRIEDEN, EARL.....	AMPHIBIAN DEVELOPMENT; THYROID INDUCED METAMORPHOSIS.....	2R01 HD01236-23	109,685
GOEDKEN, VIRGIL L.....	STRUCTURAL AND REACTIVITY OF IRON AND COBALT COMPLEXES.....	5R01 HL20996-02	76,115
GRAZIADEI, PASQUALE P.....	FUNCTIONAL ANATOMY OF OLFATORY AND TASTE RECEPTORS.....	2R01 NS08943-08A1	49,179
GREENBERG, MICHAEL J.....	PHARMACOLOGY OF MOLLUSCAN HEARTS.....	2R01 HL09283-14	90,473
HERZ, WERNER.....	ANTITUMOR LACTONES—PHYTOCHEMISTRY.....	2R01 CA13121-20	81,520
HOFER, KURT G.....	TUMOR CELL HYPOXIA AS A FACTOR IN CANCER THERAPY.....	1R01 CA21673-01A1	61,025
JOHNSON, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07020-13	77,004
KENSHALO, DANIEL R.....	PSYCHOPHYSICAL AND NEURAL RESPONSE TO THERMAL STIMULI.....	5R01 NS02992-18	75,775
LIGHT, ROBLEY J.....	METABOLISM OF HYDROXY FATTY ACIDS AND GLYCOLIPIDS.....	5R01 AM15150-07	57,748
LINDER, BRUNO.....	ATTRACTION OF INTERMEDIATE TO LARGE MOLECULES.....	2R01 GM23223-03	54,366
MANDELKERN, LEO.....	CONFORMATIONAL AND OPTICAL PROPERTIES OF POLYPEPTIDES.....	2R01 GM20860-04	39,835
MARZLUFF, WILLIAM F, JR.....	CONTROL OF HISTONE MRNA SYNTHESIS: AN APPROACH TO AGING.....	2R01 AG00413-04	69,370
MARZLUFF, WILLIAM F, JR.....	CONTROL OF MILK PROTEIN SYNTHESIS IN MAMMARY TUMORS.....	5R01 CA20428-02	28,896
MASTERTON, R BRUCE.....	ANALYSIS OF SENSORY CORTEX.....	3R01 NS07726-11S1	9,759
MASTERTON, R BRUCE.....	SENSORY CORTEX.....	2R01 NS07726-12	94,440
RILL, RANDOLPH L.....	CHARACTERIZATION OF CHROMATIN SUBUNITS.....	2R01 GM21126-04	76,474
TUCKER, DON.....	RELATION OF NEURAL RESPONSES TO ODOR PROPERTIES.....	5R01 NS08814-09	35,452
TUNKL BLUMSACK, JUDITH E.....	TECTAL FUNCTION IN VISION: A BEHAVIORAL ANALYSIS.....	1R01 EY02259-01	33,211
WALBORSKY, HARRY M.....	CHIRAL FREE RADICALS AND CHIRAL SOLVATED ELECTRONS.....	5R01 CA04065-20	46,679
WELLER, ROBERT H.....	FEMALE EMPLOYMENT STATUS & SUBSEQUENT FERTILITY.....	1R01 HD10974-01A1	38,949
WILLIAMS, THEODORE P.....	DAMAGING EFFECTS OF VISIBLE LIGHT.....	1R01 EY02250-01	66,286
WINCHESTER, JOHN W.....	TRACE ELEMENT DEPOSITION IN AMBIENT AEROSOL INHALATION.....	5R01 ES01326-03	67,245
ORGANIZATION TOTAL	30 1,723,518		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FLORIDA—Continued			
TAMPA			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF SOUTH FLORIDA ZIP CODE 33620			
BAKER, CARLETON H.....	MICROVASCULAR FLOW, VOLUME, AND REACTIVITY.....	5R01 HL18866-02	33,757
BALIS, JOHN U.....	ULTRASTRUCTURE OF NORMAL AND ALTERED SURFACTANT.....	7R01 HD12624-01	76,861
BOREN, HOLLIS G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05749-06	48,971
BROWN, JOHN L.....	VISION: SPATIAL, TEMPORAL AND ADAPTING EFFECTS.....	7R01 EY02921-01	54,273
BYVOET, PAUL.....	INTERCALATING AGENTS AS PROBES OF CHROMATIN STRUCTURE.....	5R01 CA20038-03	50,382
CHUANG, HANSON Y.....	PLASMA PROTEINS ADSORBED TO ARTIFICIAL ORGANS.....	1R01 HL22585-01	46,043
CORY, JOSEPH G.....	CYTOTOXICITY AND RIBOSOMAL RNA MATURATION.....	2R01 CA14762-04	49,139
CORY, JOSEPH G.....	TUMOR CELL INHIBITION BY NUCLEOTIDE ALDEHYDE ANALOGS.....	5R01 CA15577-05	56,124
EIKMAN, EDWARD A.....	OBJECTIVE INTERPRETATION OF LIVER IMAGES.....	5R01 GM22890-03	30,445
HARTMANN, ROBERT C.....	CELLULAR DEFECTS IN NOCTURNAL HEMOGLOBINURIA.....	5R01 HL18012-04	32,892
KELLER, RONALD K.....	GLYCOPROTEIN BIOSYNTHESIS IN THE OVIDUCT.....	5R01 GM23160-03	28,529
KELLER, RONALD K.....	REGULATION OF GLYCOPROTEIN SYNTHESIS.....	1R01 GM25364-01	33,515
MARTIN, DEAN F.....	MANAGEMENT OF RED TIDE ENVIRONMENTAL HEALTH HAZARDS.....	5R01 ES01485-02	53,443
MASON, REGINALD G, JR.....	ULTRASTRUCTURAL STUDY OF ENDOTHELIUM IN THROMBOSIS.....	5R01 HL22583-02	61,206
MASON, REGINALD G, JR.....	AN INHIBITOR OF PLATELET ADHESION TO ARTIFICIAL ORGANS.....	1R01 HL22627-01	39,947
NESS, GENE C.....	HORMONE REGULATION OF CHOLESTEROL METABOLISM IN AGING.....	2R01 HL18094-04	41,033
OLSSON, RAY A.....	CORONARY FLOW REGULATION BY ADENOSINE.....	1R01 HL20782-01A2	61,527
PHELPS, CHRISTOPHER P.....	FUNCTIONAL RESPONSES TO HYPOTHALAMIC DAMAGE.....	1R01 HD11345-01	43,767
POLLET, ROBERT J.....	INSULAR RECEPTOR CHARACTERIZATION OF HUMAN LYMPHOCYTES.....	2R01 AM18608-04	43,852
PRICE, JOEL M.....	PARAMETRIC MECHANICAL STUDIES OF HYPERTENSIVE ARTERIES.....	1R01 HL21103-01A1	39,042
SCHIMMEL, STEVEN D.....	MEMBRANE DEVELOPMENT IN NORMAL VS DYSTROPHIC MUSCLE.....	5R01 NS12558-03	33,532
SCHNELLER, STEWART W.....	ANALOGS OF DEAZAADENOSINE ANTINEOPLASTIC AGENTS.....	3R01 CA17878-03S1	11,189
SHANNON, ROGER.....	RESPIRATORY MUSCLE AFFERENTS IN RESPIRATORY CONTROL.....	5R01 HL17715-04	26,172
SOLOMONSON, LARRY P.....	NITRATE REDUCTASE: REGULATION AND PROPERTIES.....	5R01 GM23407-03	34,360
TEDESCO, THOMAS A.....	CHARACTERIZATION OF GALACTOSE ENZYME MUTANTS IN MAN.....	5R01 AM18719-03	59,982
WIGGINS, JAY R.....	DRUGS AND EXCITATION-CONTRACTION COUPLING IN HEART.....	1R01 HL22685-01	28,721
ORGANIZATION TOTAL	26	1,118,704	
VERO BEACH			
FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES—FLORIDA MEDICAL ENTOMOLOGY LABORATORY ZIP CODE 32960			
BIDLINGMAYER, WILLIAM L.....	MOSQUITO FLIGHT PATHS IN RELATION TO THE ENVIRONMENT.....	2R01 AI11921-04	60,355
LINLEY, JOHN R.....	THE BIOLOGY OF CULICOIDES.....	2R01 AI09354-09	40,920
NAYAR, JAI K.....	THE NATURAL HISTORY OF MOSQUITOES.....	5R01 AI06587-14	125,363
VAN HANDEL, EMILE.....	COMPARISONS BETWEEN ARTHROPOD AND VERTEBRATE METABOLISM.....	5R01 AI09363-06	20,076
ORGANIZATION TOTAL	4	246,714	
STATE TOTAL	294	23,139,364	
GEORGIA			
ALBANY			
UNIVERSITY SYSTEM OF GEORGIA—ALBANY STATE COLLEGE ZIP CODE 31705			
SMITH, CLIFFORD L.....	INTERDISCIPLINARY BIOMEDICAL SCIENCE RESEARCH.....	3S06 RR08023-07S1	1,200
SMITH, CLIFFORD L.....	INTERDISCIPLINARY BIOMEDICAL SCIENCE RESEARCH.....	5S06 RR08023-08	80,835
ORGANIZATION TOTAL	2	82,035	
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601			
AGOSIN, MOISES.....	MICROSOMAL HEMOPROTEINS IN TRYPANOSOMATIDAE.....	2R01 AI12244-04	38,258
AGOSIN, MOISES.....	JUVENOID METABOLISM IN TRIATOMA INFESTANS AND MAMMALS.....	5R01 AI13633-02	50,174
CARLTON, BRUCE C.....	CIRCULAR DNA ELEMENTS IN BACILLUS MEGATERIUM.....	5R01 GM18936-07	59,885

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
CHAMPNEY, W SCOTT	GENETICS OF E. COLI RIBOSOMAL PROTEIN BIOSYNTHESIS	5R01 GM22450-03	47,521
CLARK, JAMES D	ANIMAL RESOURCE IMPROVEMENT	1P40 RR01167-01	145,122
COLE, RONALD S	REPAIR OF CROSS-LINKED DNA IN BACTERIA AND ANIMAL CELLS	5R01 CA14396-06	47,804
DAMIAN, RAYMOND T	SCHISTOSOME IMMUNITY MECHANISMS	2R22 AI12065-05	100,311
DERVARTANIAN, DANIEL V	HIGH-ENERGY INTERACTIONS IN MULTI-HEME SYSTEMS	5R01 GM18895-08	72,105
DOUGLAS, CHARLES H	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07025-13	97,664
DURE, LEON S, III	REGULATION OF TRANSLATION IN A DEVELOPMENT SYSTEM	1R01 GM24787-01	47,820
FOSTER, JUDITH A	ELASTIN STRUCTURE, FIBROGENESIS AND DISEASE	5R01 HL22208-02	85,560
GILES, NORMAN H	GENETIC REGULATORY MECHANISMS IN NEUROSPORA	5R01 GM23051-03	123,298
HILL, RICHARD K	STEREOCHEMICAL STUDIES OF BIOSYNTHETIC REACTIONS	5R01 GM16944-08	41,047
HIMEL, CHESTER M	CHOLINERGIC NEURAL SYSTEMS	5R01 NS12471-03	42,776
HOLL, JAMES E	ADRENOCEPTOR INTERCONVERSION AND HORMONE HOMEOSTASIS	1R01 HL22873-01	25,063
KEY, JOE L	RNA METABOLISM IN DEVELOPMENT AND HORMONAL REGULATION	5R01 CA11624-09	80,125
KOCHERT, GARY D	PROGRAMMED DEVELOPMENT AND SENESCENCE IN VOLVOX	5R01 AG00127-02	49,121
KUSHNER, SIDNEY R	A BIOCHEMICAL ANALYSIS OF GENETIC RECOMBINATION	2R01 GM21454-04	54,082
LANE, ROBERT H	IRON-SULFUR PROTEIN-FLAVOPROTEIN INTERACTIONS	5R01 GM22592-03	29,568
LANSMAN, ROBERT A	MAMMALIAN MITOCHONDRIAL DNA IN BACTERIAL PLASMIDS	5R01 GM23246-03	56,087
LEA, ARDEN O	ENDOCRINOLOGY OF MOSQUITO REPRODUCTION AND BEHAVIOR	5R01 AI09410-09	66,524
LJUNGDAHL, LARS G	BIOCHEMISTRY OF VITAMIN B12 AND FOLIC ACID COMPOUNDS	2R01 AM12913-10	76,724
MARTIN, ROY J	GESTATIONAL DIABETES	7R01 AM25610-01	36,203
MARTIN, ROY J	METABOLIC REGULATION OF GROWTH AND DEVELOPMENT	7R01 HD12947-01	89,576
MC RORIE, ROBERT A	ACROLYSIN-ACROSIN IN FERTILITY EVALUATION AND CONTROL	5R01 HD10791-02	65,351
MENDICINO, JOSEPH F	ENZYME INTERACTIONS IN METABOLIC REGULATION	5R01 AM13150-11	28,775
MENDICINO, JOSEPH F	BIOSYNTHESIS OF CARCINOEMBRYONIC ANTIGEN	1R01 CA23703-01	80,020
MENDICINO, JOSEPH F	REGULATION OF GLYCOPROTEIN BIOSYNTHESIS IN LUNG	5R01 HL20868-02	28,570
OWENS, WILLIAM A	A DEVELOPMENTAL INTEGRATIVE INVESTIGATION	5R01 HD04135-10	49,511
PELLETIER, S WILLIAM	TUMOR-INHIBITORY AGENTS IN PLANTS OF SOUTHEASTERN U.S.	1R01 CA24180-01	82,745
PROENZA, LUIS M	ELECTROPHYSIOLOGY OF RETINAL CELLS IN VISION	5R01 EY00973-06	42,926
SCHIERMAN, LOUIS W	IMMUNOGENETIC STUDY OF A HERPES VIRUS INDUCED LYMPHOMA	5R01 CA23660-02	74,805
SRIVASTAVA, PRAKASH N	ACROSOMAL ENZYMES AND THEIR INHIBITORS IN FERTILIZATION	5R01 HD10871-02	65,394
STAMMER, CHARLES H	DEHYDROPEPTIDE RENIN SUBSTRATES	5R01 HL17896-03	26,576
TRAVIS, JAMES	PROTEOLYTIC ENZYMES AND INHIBITORS IN LUNG DISEASE	5R01 HL14778-10	62,547
VAPNEK, DANIEL	PLASMID REPLICATION AND RECOMBINATION IN E. COLI	1R01 AI14989-01	91,788
VAPNEK, DANIEL	TRANSCRIPTION OF PLASMID DNA IN ESCHERICHIA COLI	5R01 GM20160-06	35,374
WADE, ADELBERT E	DIET AND CHEMICAL CARCINOGENESIS	3R01 CA20695-01A1S1	3,488
WADE, ADELBERT E	DIET AND CHEMICAL CARCINOGENESIS	5R01 CA20695-02	39,857
ORGANIZATION TOTAL	39	2,340,145	
ATLANTA			
ATLANTA UNIVERSITY ZIP CODE 30314			
LUMB, JUDITH R	ALKALINE PHOSPHATASE IN MOUSE LEUKEMIA	5R01 CA18952-03	42,163
ORGANIZATION TOTAL	1	42,163	
ATLANTA UNIVERSITY CENTER ZIP CODE 30310			
JOHNSON, JOE, JR	BIOMEDICAL SCIENCES RESEARCH IMPROVEMENT SUPPORT	3S06 RR08006-07S2	3,810
JOHNSON, JOE, JR	BIOMEDICAL SCIENCES RESEARCH IMPROVEMENT SUPPORT	5S06 RR08006-08	1,367,972
SULLIVAN, WALTER W	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07172-02	50,465
ORGANIZATION TOTAL	3	1,422,247	
CYSTIC FIBROSIS FOUNDATION ZIP CODE 30326			
LOBECK, CHARLES C, JR	WORKING CONFERENCE ON CYSTIC FIBROSIS	1R13 AI15658-01	30,000
LOBECK, CHARLES C, JR	WORKING CONFERENCE ON CYSTIC FIBROSIS	1R13 AM25246-01	40,000
ORGANIZATION TOTAL	2	70,000	
EMORY UNIVERSITY ZIP CODE 30322			
BESHARSE, JOSEPH C	DISK RENEWAL IN RETINAL VISUAL CELLS	1R01 EY02414-01	67,754
BINKLEY, FRANCIS	MIXED DISULFIDES AND METABOLIC CONTROL	1R01 AM20979-01	41,398
BINKLEY, FRANCIS	MILK, MAMMARY TISSUE AND GLUTAMYL TRANSFERASE	1R01 HD11431-01	41,398

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
CAMPBELL, WALLACE G, JR.....	PATHOLOGY OF HYPERTENSIVE-ASSOCIATED ARTERITIS.....	5R01 HL19539-03	71,188
CAVANAGH, H DWIGHT.....	BIOCHEMICAL CONTROL OF GROWTH IN CORNEAL EPITHELIUM.....	5R01 EY01920-03	95,886
DANNER, DEAN J.....	BRANCHED-CHAIN ALPHA KETOACID METABOLISM.....	2R01 HD08388-04	69,098
DE HAAN, ROBERT L.....	DIFFERENTIATION OF THE HEART-CELL MEMBRANE.....	5R01 HL16567-04	97,730
DI GIROLAMO, MARIO.....	CONTROL MECHANISMS OF GLUCOSE METABOLISM IN FAT CELLS.....	5R01 AM17403-05	58,472
EAMES, WILMER B.....	A CLINICAL STUDY OF DENTAL MATERIALS AND TECHNIQUES.....	2R01 DE03504-09A1	40,403
EGAN, ROBERT L.....	DIAGNOSTIC BREAST CANCER-HIGH RISK FACTORS.....	5R01 CA14712-06	38,408
ELMER, WILLIAM A.....	EARLY NORMAL AND ABNORMAL LIMB DEVELOPMENT.....	1R01 HD10945-01	31,976
ENGLISH, ARTHUR W.....	MEDIAL GASTROCNEMIUS MUSCLE FUNCTION IN LOCOMOTION.....	1R01 AM19916-01A1	48,592
FARAJ, BAHJAT A.....	THE ROLE OF TYROSINE METABOLISM IN LIVER DISEASE.....	1R01 AM21646-01	62,077
FINNERTY, VICTORIA M.....	A NEW SYSTEM FOR SCREENING ENVIRONMENTAL MUTAGENS.....	1R01 ES01804-01	41,660
FINNERTY, VICTORIA M.....	REGULATION OF GENE EXPRESSION IN DROSOPHILA.....	2R01 GM23736-02	77,082
FRITZ, MICHAEL E.....	ION TRANSPORT IN SALIVARY GLANDS.....	5R01 DE02879-08	86,377
FRITZ, ROBERT B.....	IMMUNE FUNCTION IN EXP. ALLERGIC ENCEPHALOMYELITIS.....	5R01 NS10721-06	52,358
GOLDSMITH, DAVID J.....	THE SYNTHESIS OF ANTIFEEDING AGENTS.....	5R01 ES01615-02	54,025
GRAHAM, CHARLES E.....	CARCINOGENIC ACTION OF ESTROGENS IN PRIMATES.....	3R01 CA15656-02S1	7,477
HARTZELL, H CRISS, JR.....	INNERVATION OF THE HEART: ACETYLCHOLINE RECEPTORS.....	5R01 HL21195-02	43,195
HERSEY, STEPHEN J.....	INTRACELLULAR REACTIONS IN GASTRIC MUCOSA.....	5R01 AM14752-08	82,347
HUGULEY, CHARLES M, JR.....	CANCER CENTER SUPPORT GRANT (MULTIDISCIPLINARY).....	3P30 CA16255-03S1	59,308
HUGULEY, CHARLES M, JR.....	CLINICAL CANCER EDUCATION PROGRAM (GENERAL).....	5R25 CA17998-04	180,376
HUMPHREY, DONALD R.....	CORTICAL NEURONAL MECHANISMS OF MOTOR CONTROL.....	2R01 NS10183-07	81,067
HUNT, LINDSAY M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05308-17	27,940
ISRAILI, ZAFAR H.....	PHARMACOKINETIC AND PHASE I STUDY OF AMINOPTERIN.....	1R01 CA22863-01	49,960
JOHNSON, LEWIS D.....	STUDY OF BASEMENT MEMBRANE GLYCOPROTEIN AND COLLAGEN.....	2R01 CA14797-04A2	43,949
KANN, HERBERT E.....	ANTINEOPLASTIC DRUGS: MOLECULAR PHARMACOLOGIC STUDIES.....	2R01 CA16620-04	72,105
KELLER, JAMES W.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA03227-22	405,350
KIBLER, ROBERT F.....	STUDIES IN DEMYELINATING DISEASES.....	2P50 NS11418-05	303,629
KINKADE, JOSEPH M, JR.....	QUANTITATIVE STUDIES ON GRANULOCYTE DIFFERENTIATION.....	5R01 CA22294-02	55,449
KOSTYO, JACK L.....	GROWTH HORMONE: STRUCTURE-FUNCTION RELATIONSHIPS.....	5P01 HD04485-08	135,409
KUCK, JOHN F, JR.....	LENS METABOLISM IN NORMAL AND PRECATARACTOUS STATES.....	5R01 EY00260-16	81,281
KUO, JYH-FA.....	MECHANISM AND ROLE OF CYCLIC GMP IN HEART.....	5R01 HL15696-06	80,187
LA VIA, MARIANO F.....	B LYMPHOCYTE ACTIVATION IN YOUNG AND AGED MICE.....	5R01 AG00132-02	43,107
LERMAN, SIDNEY.....	LENS PROTEINS & FLUORESCENCE: IN VIVO & IN VITRO STUDY.....	2R01 EY01575-04	132,313
LESTER, CHARLES T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07023-13	74,536
LETBETTER, WILLIAM D.....	ANATOMICAL BASIS OF SPINAL SENSORY-MOTOR ORGANIZATION.....	2R01 NS11949-04	32,610
MANDELL, LEON.....	NMR SPECTROSCOPY OF BIOLOGICALLY IMPORTANT COMPOUNDS.....	5R01 GM10848-22	71,033
MANNING, JOHN W.....	INTEGRATED CONTROL OF CARDIOVASCULAR ACTIVITY.....	2R01 HL16648-16	67,033
MANOCHA, SOHAN L.....	PROTEIN MALNUTRITION AND PRENATAL ALTERATION OF BRAIN.....	3R22 HD06087-03S1	5,669
MC BRIDE, RUSSELL L.....	SOMATO-VISCERAL INTEGRATION IN LATERAL HABENULA.....	1R01 NS13945-01A1	28,979
MENGER, FREDRIC M.....	INVESTIGATION OF BIO-ORGANIC SYSTEMS BY DYNAMIC NMR.....	2R01 GM21457-04	56,099
MYERS, ORIE E, JR.....	SUPPORT FOR YERKES REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00165-18	1,803,618
NEILL, JIMMY D.....	THE PHYSIOLOGIC CONTROL OF PROLACTIN SECRETION.....	2R01 HD04312-10	97,074
NIXON, DANIEL W.....	METABOLIC STUDY OF CANCER PATIENTS.....	5R01 CA20997-02	126,235
NOE, BRYAN D.....	ROLE OF PROGLUCAGON IN GLUCAGON BIOSYNTHESIS.....	2R01 AM16921-04	37,359
NOE, BRYAN D.....	LOCALIZATION OF CONVERSION OF PROGLUCAGON TO GLUCAGON.....	5R01 AM19890-02	28,267
POOLER, JOHN P.....	PHOTOCHEMICAL MODIFICATION OF EXCITABLE MEMBRANES.....	5R01 NS09040-09	51,498
POPOVIC, VOJIN P.....	FREEZING AND ELECTROMAGNETIC THAWING OF PLATELETS.....	5R01 HL20716-02	49,814
PRIEST, JEAN H.....	DERMATOGLYPHICS AND CLINICAL DISEASE.....	5R01 GM19268-05	24,452
PRIEST, ROBERT E.....	DIFFERENTIATION IN HUMAN AMNIOTIC FLUID CELLS.....	1R01 HD11379-01	48,700
RAGAB, ABDELSALAM H.....	SOUTHWEST ONCOLOGY GROUP (CLINICAL).....	2R10 CA20549-02	128,603
REICHERT, LEO E, JR.....	TESTICULAR RECEPTORS OF FOLLICLE STIMULATING HORMONE.....	5R01 HD08228-05	103,352
RICHARDSON, ARTHUR P.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00039-18	625,878
RICHARDSON, ARTHUR P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05364-17	161,477
RINARD, GILBERT A.....	HORMONAL CONTROL OF TRACHEOBRONCHIAL CYCLIC AMP.....	5R01 HL19115-02	44,490
RUDMAN, DANIEL.....	PITUITARY ADIPOKINETIC SUBSTANCES.....	5R01 AM13129-12	127,285
RUDMAN, DANIEL.....	ABNORMAL METABOLISM OF CANCER PATIENTS.....	3R01 CA12646-06S1	34,120
RUDMAN, DANIEL.....	ABNORMAL METABOLISM OF CANCER PATIENTS.....	2R01 CA12646-07	83,148
RUMBAUGH, DUANE M.....	LANGUAGE FORMATION STUDIES.....	5P01 HD06016-08	206,740
SCOTT, JOHN W, JR.....	PHYSIOLOGICAL ANALYSIS OF THE OLFACTORY PROJECTIONS.....	1R01 NS12400-01A3	52,256
SCOTT, JUNE R.....	LYSOGENY AND BACTERIOPHAGE P1.....	5R01 CA11673-09	96,837

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
SHAPIRA, RAYMOND.....	STRUCTURE, METABOLISM & FUNCTION OF MYELIN PROTEINS.....	2R01 NS08278-09	57,498
SHOJI, MAMORU.....	CYCLIC GMP SYSTEM IN CELL PROLIFERATION.....	1R01 CA23391-01	89,430
SILBERMAN, MORTON S.....	ANIMAL CARE PROGRAM AND FACILITY IMPROVEMENT.....	1P40 RR01149-01	266,354
SMITH, P DENNIS.....	ENVIRONMENTAL MUTAGENESIS AND DNA REPAIR.....	2R01 ES01101-04	112,261
SUTIN, JEROME.....	PLASTICITY AND REGENERATION IN A NORADRENERGIC SYSTEM.....	1R01 NS14778-01	38,837
TAKEI, YOSHIO.....	SYSTEM DEGENERATION OF CNS—EXPERIMENTAL APPROACH.....	5R01 EY01967-02	68,150
TIGGES, JOHANNES W.....	THE EFFERENT FIBERS OF THE VISUAL CORTICES.....	2R01 EY00638-07	60,147
WAITZMAN, MORTON B.....	METABOLIC SYSTEMS IN AQUEOUS HUMOR DYNAMICS.....	5R01 EY00243-15	83,396
WALDRON, CHARLES A.....	CLINICAL CANCER EDUCATION (DENTAL).....	5R25 CA19253-03	26,361
WARREN, W DEAN.....	CIRRHOIS SHUNT SURGERY, AND NITROGEN METABOLISM.....	5R01 AM15736-08	158,533
WHITE, JOHN F.....	GUT SUGAR TRANSPORT: ELECTROPHYSIOLOGY AND ENERGETICS.....	5R01 AM17361-05	22,200
WILHELMI, ALFRED E.....	ANTERIOR PITUITARY HORMONES.....	5R01 HD01231-27	61,502
WILLIS, ISAAC.....	PHOTOAugMENTATION AND CARCINOGENESIS.....	2R01 CA17555-04	45,233
WOODS, WENDELL D.....	BIOCHEMICAL REGULATION IN OCULAR TISSUES.....	5R01 EY00945-07	79,243
YOUNG, LEONA G.....	MAMMALIAN SPERMATOZOAN MOTILITY.....	5R01 HD06491-06	38,017
ORGANIZATION TOTAL	78	8,434,655	
MOREHOUSE COLLEGE ZIP CODE 30314			
BAILEY, GORDON B.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09081-01	150,268
ORGANIZATION TOTAL	1	150,268	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332			
BURDETTE, EVERETTE C.....	DIELECTRIC MEASUREMENTS OF NORMAL & NEOPLASTIC TISSUE.....	1R01 CA22771-01	64,819
CRENSHAW, JOHN W, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07024-13	54,238
DUSENBERY, DAVID B.....	GENETICS OF THERMAL ACCLIMATION, MEMBRANES AND AGING.....	1R01 AG00942-01	86,604
FELTON, RONALD H.....	PORPHYRIN IONS AND RADICALS IN METABOLIC PROCESSES.....	2R01 AM14344-09	70,075
GIDDENS, DON P.....	SIGNAL ANALYSIS OF TURBULENCE STUDY IN BLOOD.....	5R01 HL20835-02	37,327
GIDDENS, DON P.....	HEMODYNAMICS OF NORMAL AND DISEASED CAROTID ARTERIES.....	1R01 HL22635-01	74,382
HALL, CAROLE L.....	FATTY ACYL COA DEHYDROGENASE AND ETF.....	1R01 GM25494-01	67,045
HALL, DWIGHT H.....	ORGANIZATION AND EXPRESSION OF THE GENOME OF PHAGE T4.....	5R01 GM24455-02	65,220
HOUSE, HERBERT O.....	ENHANCING THE SPECIFICITY OF SYNTHETIC PROCEDURES.....	2R01 GM20197-08	130,579
MAREK, MIROSLAV.....	EFFECT OF LOCALIZED CORROSION ON DENTAL AMALGAMS.....	5R01 DE03601-06	32,084
MAY, SHELDON W.....	NON-HEME IRON OXYGENASE CATALYSIS.....	5R01 GM23474-02	57,003
POWERS, JAMES C.....	TRITATION OF PROTEINS AND OTHER BIOMOLECULES.....	1R01 GM25181-01	90,309
POWERS, JAMES C.....	SYNTHETIC PROTEASE INHIBITORS.....	2R01 HL18679-04	48,401
POWERS, JAMES C.....	ACTIVE SITE STUDIES ON BLOOD PROTEASES.....	1R01 HL22530-01	45,949
WARTELL, ROGER M.....	CONFORMATIONS OF LIGAND-DNA COMPLEXES AND DNA OLIGOMERS.....	1R01 GM24734-01	51,133
YOUNG, ROBERT A.....	TOOTH ENAMEL APATITE AT THE ATOMIC LEVEL.....	2R01 DE01912-15	153,105
YU, NAI-TENG.....	COMPARATIVE RAMAN STUDIES OF HUMAN AND ANIMAL LENSES.....	5R01 EY01746-03	20,294
YU, NAI-TENG.....	LASER-EXCITED RAMAN SPECTROSCOPY OF BIOPOLYMERS.....	2R01 GM18894-08	97,664
ZALKOW, LEON H.....	THE ANTITUMOR AGENT OF ALOPAPPUS HETEROPHYLLUS.....	5R01 CA18819-03	52,149
ZALKOW, LEON H.....	CARCINOGENIC PLANTS OF THE DEAD SEA AREA.....	5R01 CA19946-03	43,720
ZALKOW, LEON H.....	NATURAL ANTITUMOR AGENTS FROM THE SENECEIONEAE.....	1R01 CA23277-01	40,081
ORGANIZATION TOTAL	21	1,382,181	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA STATE UNIVERSITY ZIP CODE 30303			
BROWN, JOSEPHINE V.....	PREMATURITY, EARLY INTERACTION, AND SOCIAL COMPETENCE.....	5R01 HD11209-02	118,261
VANKER, ANTHONY D.....	MODEL NEUROTOXICITY STUDIES.....	1R01 NS14338-01	21,105
WILSON, W DAVID.....	INTERACTION OF ANTHRACYCLINE DRUGS WITH DNA.....	1R01 CA24454-01	25,780
ORGANIZATION TOTAL	3	165,146	
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
ABDEL-LATIF, ATA A.....	METABOLISM AND FUNCTION OF GLYCEROLIPIDS IN THE IRIS.....	1R01 EY02181-01A1	46,636
ABDEL-LATIF, ATA A.....	NEUROTRANSMITTERS & POLYPHOSPHOINOSITIDE TURNOVER.....	9R01 EY02918-09A1	44,374
BEST, GARY K.....	STAPHYLOCOCCAL TOLERANCE AND GRANULOCYTTIC FUNCTION.....	1R01 AI14656-01	61,264
BHALLA, VINOD K.....	INTERACTION OF GONADOTROPIN WITH TESTIS.....	5R01 HD08910-03	59,334
BLACK, OWEN, JR.....	EFFECTS OF CARCINOGENS ON MACROMOLECULAR EVENTS.....	1R26 CA16263-01A4	47,530

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
BOCKMAN, DALE E.....	ANTIGEN ABSORPTION AND B CELL RESPONSE IN GUT	1R01 AI14222-01A1	44,939
BOCKMAN, DALE E.....	EXPERIMENTALLY-INDUCED PANCREATIC ADENOCARCINOMA.....	5R26 CA22063-02	42,493
BOINEAU, JOHN P.....	DELAYED & ASYMMETRIC VENTRICULAR CONDUCTION MECHANISMS	2R01 HL18398-04	56,781
BULKACZ, JAIME.....	PHOSPHOLIPASE ACTIVITY OF PLAQUE MICROORGANISMS	1R01 DE04799-01	34,564
CIARLONE, ALFRED E.....	CHANGES IN BRAIN AMINES BY DENTAL LOCAL ANESTHETICS	1R23 DE04824-01	28,284
COSTOFF, ALLEN.....	THE HYPOTHALAMO-HYPOPHYSEAL-OVARIAN AXIS IN AGING.....	5R01 AG00756-02	32,012
DIRKSEN, THOMAS R.....	BIOMEDICAL RESEARCH	1S07 RR05795-01	14,594
DIRKSEN, THOMAS R.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09043-02	67,121
FAIRHURST, CARL W.....	BONDING OF PORCELAIN TO SEMI- AND NON-PRECIOUS METALS	2R01 DE04252-04	167,782
FELDMAN, ELAINE B.....	X-IRRADIATION, BILE SALTS AND INTESTINAL TRANSPORT	3R01 AM18406-03S1	9,974
GALLAGHER, BRIAN B.....	CLINICAL PHARMACOLOGY OF ANTICONVULSANTS.....	5R01 NS14279-02	53,289
GARVER, FREDERICK A.....	STRUCTURAL STUDIES OF UNIQUE MYELOMA IMMUNOGLOBULINS	5R01 CA15215-04	45,681
GELFANT, SEYMOUR.....	THE CELL CYCLE IN PSORIASIS	5R01 AM19735-02	76,631
GOODALE, FAIRFIELD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05365-17	96,365
GREEN, KEITH.....	ROLE OF DRUGS ON THE COMPONENTS OF AQUEOUS FORMATION	5R01 EY01329-03	73,481
GREEN, KEITH.....	ION AND WATER MOVEMENT IN OCULAR TISSUES.....	5R01 EY01413-05	65,795
HILL, JAMES M.....	IONTOPHORESIS OF ARA-AMP TO HERPES VIRUS LESIONS.....	1R01 DE04917-01	76,164
HODGE, LON D.....	METABOLISM OF ADENOVIRUS RNA	7R01 CA25727-01	84,582
HODGE, LON D.....	REGULATORY PROCESSES BIOCHEMISTRY IN SYNCHRONIZED CELLS.....	7R01 CA25735-01	87,012
HUISMAN, TITUS H.....	INHOMOGENEITY OF HEMOGLOBIN TYPES	5R01 HL05168-19	117,004
HUISMAN, TITUS H.....	COMPREHENSIVE SICKLE CELL CENTER	2P60 HL15158-07	1,104,409
HULL, DAVID S.....	DRUGS, PATHOLOGIC CONDITIONS AND CORNEA ENDOTHELIUM.....	1R01 EY02386-01	23,468
HUMPHRIES, ARTHUR L, JR.....	STORAGE OF KIDNEY BY HYPOTHERMIA AND PERFUSION.....	5R01 GM08472-17	60,716
JELENKO, CARL, III.....	BIOCHEMICAL EFFECTS OF BURNING OF SKIN.....	5R01 GM16973-09	80,536
KAROW, ARMAND M, JR.....	CRYOPRESERVATION OF RABBIT KIDNEYS.....	3R01 AM17816-03S1	3,652
KAROW, ARMAND M, JR.....	PANCREAS ISLET CELLS PRESERVED TO TRANSPLANTATION.....	5R01 AM19013-03	31,257
KOLBECK, RALPH C.....	MYOCARDIAL SUBCELLULAR LOCALIZATION OF CALCIUM.....	3R01 HL16710-03S1	8,365
LAPP, DAVID F.....	TREHALOSE METABOLISM IN THE PARASITIC NEMATODE ASCARIS	2R01 AI11732-04A1	39,460
MAHESH, VIRENDRA B.....	EFFECT OF PROGESTERONE ON GONADOTROPIN SECRETION.....	1R01 HD10795-01A1	62,702
MERCHANT, HUBERT W.....	NUTRITIONAL FACTORS IN ORAL ULCERS: ZN, B12, FOLATE.....	1R01 DE04725-01	38,412
MULDOON, THOMAS G.....	REGULATION OF STEROID HORMONE RECEPTOR ACTIVITY.....	2R01 AM17650-04A1	47,894
OGLE, THOMAS F.....	INTERACTIONS BETWEEN ADRENAL-PLACENTAL FUNCTION.....	1R01 HD12139-01	29,086
OKABE, TORU.....	AMALGAMATION KINETICS ON AG-SN (OX) ALLOYS	2R01 DE04262-04	67,293
OUTHWAITE, WILLIAM C.....	PIN AND SLOT RETENTION IN AMALGAM AND COMPOSITE MATERIAL.....	5R01 DE04394-02	33,010
PASHLEY, DAVID H.....	PERMEABILITY CHARACTERISTICS OF DENTIN.....	5R01 DE03780-06	24,876
REICHARD, SHERWOOD M.....	CHROMOSOMAL ABERRATIONS AND RADIATION PLASMA FACTORS.....	1R01 CA23791-01	15,083
ROTH, MICHAEL.....	MARIJUANA AND GLAUCOMA	5R01 EY01590-02	27,457
SMITH, LINDA L.....	IMMUNOGLOBULINS ASSOCIATED WITH SERUM HYPERVISCOSITY.....	5R01 HL19456-03	27,299
SOHAL, GURKIRPAL S.....	CELL DEATH AND CYTODIFFERENTIATION.....	5R01 GM23484-02	23,497
SPRINKLE, TERRY J.....	2',3'CYCLIC NUCLEOTIDE-3'PHOSPHOHYDROLASE BIOCHEMISTRY	7R01 NS15307-01	58,452
STOMING, TERRANCE A.....	METABOLISM OF 3-METHYLCHOLANTHRENE IN LIVER AND LUNG.....	5R01 CA21481-02	24,635
TYLER, JEAN M.....	STRUCTURAL REQUIREMENTS OF ISLET GLUCOSE RECEPTORS	5R01 AM18178-02	37,763
WEBSTER, PAUL D, III.....	CONTROL OF PANCREATIC DUCTAL AND ACINAR CELL FUNCTION.....	5R01 AM13131-11	80,473
WHITFORD, GARY M.....	INFLUENCE OF ACID-BASE STATUS ON FLUORIDE METABOLISM.....	5R23 DE04332-03	21,652
WHITFORD, GARY M.....	DETERMINANTS OF FLUORIDE IN THE ORAL ENVIRONMENT.....	1R01 DE04832-01	50,874
ORGANIZATION TOTAL	50	3,556,007	

CLAXTON

EVANS COUNTY HEALTH DEPARTMENT		ZIP CODE 30417	
HAMES, CURTIS G.....	EPIDEMIOLOGICAL STUDY OF ATHEROSCLEROSIS IN EVANS COUNTY.....	5R01 HL03341-22	48,627
ORGANIZATION TOTAL	1	48,627	

FORT VALLEY

UNIVERSITY SYSTEM OF GEORGIA-FORT VALLEY STATE COLLEGE		ZIP CODE 31030	
BLACK, DAN T.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES	3S06 RR08084-04S1	476
BLACK, DAN T.....	BIOMEDICAL SCIENCES	5S06 RR08084-05	52,570
ORGANIZATION TOTAL	2	53,046	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
GEORGIA—Continued			
SAVANNAH			
UNIVERSITY SYSTEM OF GEORGIA—SAVANNAH STATE COLLEGE ZIP CODE 31404			
EMEH, CHUKWUDI O	BIOMEDICAL SCIENCE SUPPORT (MULTIDISCIPLINARY)	3S06 RR08144-03S2	1,950
EMEH, CHUKWUDI O	BIOMEDICAL SCIENCE SUPPORT (MULTIDISCIPLINARY)	5S06 RR08144-04	143,245
ORGANIZATION TOTAL	2 145,195		
STATESBORO			
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA SOUTHERN COLLEGE ZIP CODE 30458			
OLIVER, JAMES H, JR	REPRODUCTION IN TICKS AND MITES	2R01 AI09556-09	55,505
ORGANIZATION TOTAL	1 55,505		
STATE TOTAL	206 17,947,220		
HAWAII			
HONOLULU			
BERNICE P. BISHOP MUSEUM ZIP CODE 96819			
GOFF, MADISON L	LARVAL TROMBICULIDAE (ACARINA) OF PAPUA, NEW GUINEA	3R01 AI13893-01S1	3,143
GOFF, MADISON L	LARVAL TROMBICULIDAE (ACARINA) OF PAPUA, NEW GUINEA	5R01 AI13893-02	31,038
STEFFAN, WALLACE A	BIOSYSTEMATICS OF TOXORHYNCHITES	3R01 AI12168-02S1	16,676
STEFFAN, WALLACE A	BIOSYSTEMATICS OF TOXORHYNCHITES	5R01 AI12168-03	79,652
ORGANIZATION TOTAL	4 130,509		
EAST-WEST CENTER ZIP CODE 96848			
PALMORE, JAMES A, JR	CHILD SPACING IN KOREA AND THE PHILIPPINES	1R01 HD12071-01	54,019
ORGANIZATION TOTAL	1 54,019		
KAPIOLANI-CHILDREN'S MEDICAL CENTER ZIP CODE 96826			
MELISH, MARIAN E	HOST RESPONSE TO STAPHYLOCOCCAL EPIDERMOLYTIC TOXIN	7R01 AI14998-01	42,844
SETO, DEXTER S	VIRAL HYPERSENSITIVITY IN SUDDEN INFANT DEATH SYNDROME	5R01 HD11671-02	77,881
ORGANIZATION TOTAL	2 120,725		
QUEEN'S MEDICAL CENTER ZIP CODE 96813			
MC NAMARA, JOSEPH J	MYOCARDIAL PRESERVATION AND CORONARY REPERFUSION	2R01 HL14571-05	99,652
ORGANIZATION TOTAL	1 99,652		
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822			
BEARDEN, JAMES C, JR	CLONING AND CHARACTERIZATION OF RAT RIBOSOMAL DNA	1R01 GM24305-01	12,700
BENEDICT, ALBERT A	IMMUNOGLOBULINS AND IMMUNE RESPONSES	5R01 AI05660-15	82,151
BRYANT-GREENWOOD, GILLIAN	THE RADIOIMMUNOASSAY OF RELAXIN AND ITS APPLICATIONS	2R01 HD06633-06	82,229
COLE, ROBERT E	GENOTYPE AND ENVIRONMENT IN BEHAVIORAL PROCESSES	1R01 HD09459-01A1	39,387
COLE, ROBERT E	FAMILY RESEMBLANCES IN INFORMATION PROCESSING	1R01 HD10785-01	65,999
COOKE, IAN M	CARDIAC PACEMAKER: BIOPHYSICAL INTEGRATIVE MECHANISMS	2R01 NS11808-04	60,006
CROWELL, DAVID H	NEONATAL NEUROPHYSIOLOGY AND METABOLIC DERANGEMENT	5R01 HD09981-03	123,995
FURUSAWA, EIICHI	STUDIES OF NARCISSUS ALKALOID WITH ANTILEUKEMIC ACTIVITY	5R01 CA12733-07	64,882
GIBBONS, IAN R	STRUCTURAL BASIS OF SPERMATOZOAN MOTILITY	5R01 HD06565-12	106,234
GIBBONS, IAN R	ANTIBODIES TO FLAGELLAR PROTEINS	5R01 HD09707-03	13,781
GIBBONS, IAN R	PROPERTIES OF DYNEIN ISOENZYMES	5R01 HD10002-03	61,572
GILLARY, HOWARD L	VISUAL MECHANISMS IN A REGENERATING GASTROPOD RETINA	2R01 EY01531-03A1	49,702
GREENWOOD, FREDERICK C	BIOMEDICAL SCIENCES	3S06 RR08125-04S1	3,450
GREENWOOD, FREDERICK C	BIOMEDICAL SCIENCES	5S06 RR08125-05	137,420
GUILLORY, RICHARD J	MEMBRANE INTERACTIONS IN ENERGY LINKED REACTIONS	5R01 GM19269-06	37,898
GUILLORY, RICHARD J	COMPLEX I CHARACTERIZATION WITH PHOTOAFFINITY LABELS	1R01 GM24348-01	40,327
HADFIELD, MICHAEL G	DEVELOPING OPISTHOBRANCH MODELS FOR MEDICAL RESEARCH	5R01 RR01057-02	69,424

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
HAWAII—Continued			
HALSTEAD, SCOTT B	INFECTION ENHANCEMENT—AN EXPERIMENTAL MODEL OF SIDS	3R01 HD08693-04S1	4,403
HALSTEAD, SCOTT B	INFECTION ENHANCEMENT—AN EXPERIMENTAL MODEL OF SIDS	2R01 HD08693-05	74,666
HARTLINE, DANIEL K	QUANTITATIVE SIMULATION OF SIMPLE NEURONAL NETS	7R01 NS15314-01	65,905
HELFRICH, PHILIP	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07026-13	96,404
HUMPHREYS, TOM D	ISOLATION AND CHARACTERIZATION OF INDIVIDUAL GENES	5R01 GM22575-03	108,335
HUMPHREYS, TOM D	DEVELOPMENTAL REGULATION OF MACROMOLECULAR SYNTHESIS	2R01 HD06574-08	62,972
JACOBS, PATRICIA A	A PROGRAM OF RESEARCH IN POPULATION CYTOGENETICS	5R01 HD07879-05	121,783
JACOBS, PATRICIA A	THE CHROMOSOME CONSTITUTION OF HUMAN SPERMATOZOA	1R01 HD11419-01	55,831
KANE, ROBERT E	CELL PROTEINS IN DIVISION AND EARLY DEVELOPMENT	5R01 GM14363-13	33,393
KOLONEL, LAURENCE N	DIETARY COMPONENTS & CANCER DEVELOPMENT EPIDEMIOLOGY	5R01 CA20897-03	26,023
KOLONEL, LAURENCE N	REASONS FOR VARIATION IN CANCER PATIENT SURVIVAL BY RACE	5R01 CA21828-02	52,662
LIND, NANCY K	MECHANISM OF ACTION OF FIRE ANT VENOM	1R01 ES01687-01	32,767
LIU, ROBERT S	NEW GEOMETRIC ISOMERS OF VITAMIN A AND CAROTENE	5R01 AM17806-04	79,370
LYTTLE, TERRENCE W	POPULATION GENETICS OF DROSOPHILA Y-CHROMOSOME DRIVE	1R01 GM24083-01	32,563
MATSUMOTO, HIROMU	METABOLISM OF CYCASIN-RELATED COLON CARCINOGENS	5R26 CA18631-03	55,033
MOORE, RICHARD E	ANTICANCER COMPOUNDS FROM MARINE ORGANISMS	5R01 CA12623-06	70,313
MORISHIGE, WALTER K	HORMONAL REGULATION OF LUNG FUNCTION	5R01 HL19195-03	27,322
MORTON, NEWTON E	A RESEARCH PROGRAM IN POPULATION GENETICS	5R01 GM17173-09	107,849
MORTON, NEWTON E	CHROMOSOME MAPPING IN MAN	2R01 GM23021-03	51,511
MORTON, NEWTON E	GENETIC RISKS AS AN OUTCOME OF SEGREGATION ANALYSIS	5R01 GM23498-02	43,100
MORTON, NEWTON E	GENETIC EPIDEMIOLOGY OF HYPERLIPEMIA	5R01 HL16774-04	58,771
NORTON, TED R	EVALUATION OF HEART STIMULANTS IN SEA ANEMONES	5R01 HL15991-05	45,286
OISHI, NOBORU	CLINICAL CANCER EDUCATION PROGRAM	2R25 CA17984-04	127,304
PATIL, SURESH S	BIOCHEMISTRY OF RESISTANCE OF PSEUDOMONADS	5R01 AI09477-09	38,254
PIETTE, LAWRENCE H	ESR STUDIES OF BIOLOGICAL FREE RADICAL MECHANISMS	5R01 CA10977-14	75,674
PIETTE, LAWRENCE H	CANCER CENTER SUPPORT GRANT	3P30 CA15655-03S1	648,403
PORTA, EDUARDO A	DIETARY FACTORS IN AGING	5R01 AG00143-04	76,301
RAD, DABEERU C	PATH ANALYSIS OF FAMILY RESEMBLANCE	1R01 GM24941-01	37,203
ROGERS, BEVERLY J	ANALYSIS OF HUMAN SPERM FERTILIZING ABILITY	1R01 HD11555-01	32,102
ROGERS, TERENCE A	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05599-12	47,942
SCHATZ, IRWIN J	MULTIPURPOSE ARTHRITIS CENTER OF HAWAII	1P60 AM22060-01	259,304
SCHUEER, PAUL J	THE STRUCTURE OF THE PALYTOXINS	5R01 HL18253-03	39,467
SOOD, SATYA P	BIOLOGICAL, BIOCHEMICAL, BIOPHYSICAL STUDIES	3S06 RR08073-07S1	1,071
SOOD, SATYA P	BIOLOGICAL, BIOCHEMICAL, BIOPHYSICAL STUDIES	5S06 RR08073-08	48,045
YANAGIMACHI, RYUZO	EVENTS IN MAMMALIAN SPERMATOZOA LEADING TO FERTILIZATION	5R01 HD03402-11	88,321
YASUNOBU, KERRY T	STUDIES OF CYTOCHROME P-450 AND CYTOCHROME OXIDASE	2R01 GM22556-03	51,702
ORGANIZATION TOTAL	53	3,928,512	
STATE TOTAL	61	4,333,417	

IDAHO

MOSCOW

UNIVERSITY OF IDAHO ZIP CODE 83843

EROSCHENKO, VICTOR P	EFFECT OF KEPONE ON QUAIL OVIDUCT EGG SHELL STRUCTURE	1R01 ES01642-01	39,937
HASS, GEORGE M	PROTEINASE INHIBITORS IN POTATOES	5R01 GM22748-03	23,560
KLUETZ, MICHAEL D	DIAMINE OXIDASE: ITS ACTION AND ROLE IN RAPID GROWTH	5R01 GM23436-02	19,537
MEAD, RODNEY A	HORMONAL CONTROL OF DELAYED IMPLANTATION	2R01 HD06556-07	39,954
MILLER, LOIS K	GENETIC CHARACTERIZATION OF BACULOVIRUSES	5R01 ES01567-02	40,671
RITTER, ROBERT C	BEHAVIORAL BIOLOGY OF GLUCOPRIVIC FEEDING	1R01 AM20035-01A1	38,687
WILLETT, JAMES D	HORMONES AND AGING IN NEMATODES	5R01 AG00293-03	42,607
WILLETT, JAMES D	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07170-02	16,831
ORGANIZATION TOTAL	8	261,784	
STATE TOTAL	8	261,784	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS			
CARBONDALE			
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE		ZIP CODE 62901	
BOLEN, DAVID W.....	ELEMENTARY STEPS IN ENZYME CATALYSIS.....	2R01 GM22300-04	40,337
BORGIA, PETER T.....	REGULATORY ROLE OF CYCLIC NUCLEOTIDES IN MUCOR.....	1R01 GM25176-01	33,036
DINGERSON, MICHAEL R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07118-09	22,014
HARGRAVE, PAUL A.....	RHODOPSIN STRUCTURE AND FUNCTION.....	5R01 EY01275-05	87,286
HARGRAVE, PAUL A.....	RHODOPSIN TOPOGRAPHY IN THE ROD CELL DISC MEMBRANE.....	1R01 EY02875-01	83,512
HAYNES, STEPHEN N.....	ASSESSMENT OF MUSCLE-CONTRACTION HEADACHE.....	1R01 NS14739-01	56,649
LIT, ALFRED.....	EFFECTS OF ILLUMINATION ON BINOCULAR SPACE PERCEPTION.....	3R01 EY00383-14S1	9,305
PETERSON, RUDOLPH N.....	MOTILITY AND METABOLISM OF HUMAN SPERMATOZOA.....	5R01 HD10947-03	48,295
RUSSELL, LONNIE D.....	SERTOLI-SERTOLI AND SERTOLI-GERM CELL INTERRELATIONS.....	5R01 HD11823-02	34,208
SUNG, MICHAEL T.....	HISTONE H5 AND AVIAN ERYTHROPOIESIS.....	5R01 HL20300-02	59,280
ORGANIZATION TOTAL	10 473,922		
CHAMPAIGN			
HARLAN E. MOORE HEART RESEARCH FOUNDATION		ZIP CODE 61820	
KUMMEROW, FRED A.....	ANIMAL MODEL FOR STUDIES ON AVERTING ATHEROSCLEROSIS.....	3R01 HL15504-05S1	2,309
ORGANIZATION TOTAL	1 2,309		
CHARLESTON			
EASTERN ILLINOIS UNIVERSITY		ZIP CODE 61920	
FERGUSON, KAREN A.....	EFFECT OF STEROL ON MEMBRANE-BOUND ENZYMES.....	5R01 GM22915-03	16,684
ORGANIZATION TOTAL	1 16,684		
CHICAGO			
AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE		ZIP CODE 60601	
SMITH, ALFRED R.....	AAPM CHARGED PARTICLE BEAM DOSIMETRY TASK GROUP.....	5R01 CA22286-02	55,565
ORGANIZATION TOTAL	1 55,565		
AMERICAN COLLEGE OF SURGEONS		ZIP CODE 60611	
BEAHR, OLIVER H.....	AMERICAN JOINT COMMITTEE (CANCER STAGING).....	5R01 CA11606-10	57,548
ORGANIZATION TOTAL	1 57,548		
AMERICAN DENTAL ASSOCIATION		ZIP CODE 60611	
STANFORD, JOHN W.....	STANDARD TEST METHODS FOR BIOMATERIALS & INSTRUMENTATION.....	5R01 DE03505-10	114,988
ORGANIZATION TOTAL	1 114,988		
AMERICAN DENTAL ASSOCIATION HEALTH FOUNDATION		ZIP CODE 60611	
BOWEN, RAFAEL L.....	IMPROVEMENT OF PREVENTIVE AND RESTORATIVE MATERIALS.....	7R01 DE05129-01	100,215
BROWN, WALTER E.....	MECHANISM OF DENTAL CARIES.....	5R01 DE04385-03	47,842
BROWN, WALTER E.....	DESIGN AND DEVELOPMENT OF IMPROVED COMPOSITES.....	1R13 DE04936-01	7,200
BROWN, WALTER E.....	CHEMISTRY OF CALCIUM PHOSPHATES.....	2R01 DE05030-02	154,693
BROWN, WALTER E.....	PREVENTION OF DENTAL CARIES.....	1R01 DE05354-01	144,143
BROWN, WALTER E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	7S07 RR05689-10	41,195
MABIE, CURTIS P.....	DENTAL PORCELAIN IMPROVEMENT WITH INORGANIC POLYMERS.....	7R01 DE05353-01	31,950
RUPP, NELSON W.....	AMALGAM: IMPROVED ALLOY AND MANIPULATION TECHNIQUES.....	5R01 DE05029-02	32,784
WATERSTRAT, RICHARD M.....	CONSTITUTION DIAGRAMS FOR ALLOYS OF THE NOBLE METALS.....	5R01 DE05031-02	39,536
WOZNAK, WAYNE T.....	IMPROVED LUMINOPHORS FOR DENTAL PORCELAIN.....	5R01 DE04709-02	32,911
ORGANIZATION TOTAL	10 632,469		
CHICAGO HEALTH DEPARTMENT		ZIP CODE 60602	
WHIPPLE, IRA T.....	MYOCARDIAL FUNCTION, RISK FACTORS AND FUTURE CHD.....	5R01 HL16908-04	23,614
ORGANIZATION TOTAL	1 23,614		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
CHICAGO STATE UNIVERSITY ZIP CODE 60628			
MYLROIE, AUGUSTA A.....	FACULTY AND STUDENT RESEARCH DEVELOPMENT.....	3S06 RR08043-07S1	1,650
MYLROIE, AUGUSTA A.....	FACULTY AND STUDENT RESEARCH DEVELOPMENT.....	5S06 RR08043-08	96,561
SHERMAN, WARREN V.....	LIGHT RESPONSE OF THE PURPLE MEMBRANE OF H. HALOBIUM.....	1R01 EY02219-01	55,229
ORGANIZATION TOTAL	3 153,440		
CHILDREN'S MEMORIAL HOSPITAL ZIP CODE 60614			
HONIG, GEORGE R.....	REGULATION OF HEMOGLOBIN SYNTHESIS.....	5R01 AM19046-03	48,465
HONIG, GEORGE R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA07431-15	144,752
NADLER, HENRY L.....	2-MACROGLOBULIN-PROTEASE COMPLEX IN CYSTIC FIBROSIS.....	2R01 AM18462-04	104,782
NADLER, HENRY L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05475-16	29,074
PACHMAN, LAUREN M.....	IMMUNOGENETIC STUDY OF JUVENILE DERMATOMYOSITIS.....	1R01 AM21589-01	44,501
WESSEL, HANS U.....	EXERCISE PERFORMANCE IN CHILDREN WITH HEART DISEASE.....	5R01 HL17578-04	63,885
ORGANIZATION TOTAL	6 435,459		
DE PAUL UNIVERSITY ZIP CODE 60604			
YI, PON N.....	TUMOR HYPERTHERMIA: MEMBRANE POTENTIAL AND FLUIDITY.....	5R01 CA19758-02	32,728
ORGANIZATION TOTAL	1 32,728		
HEALTH AND HOSPITALS GOVERNING COMMISSION OF COOK COUNTY—COOK COUNTY HOSPITAL ZIP CODE 60612			
BURKE, GERALD.....	THYROID STIMULATORS AND THYROID STIMULATION.....	5R01 AM17561-05	97,737
ORGANIZATION TOTAL	1 97,737		
HEKTOEN INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 60612			
LEV, MAURICE.....	CONGENITAL HEART DISEASE RESEARCH PROGRAM.....	5R01 HL07605-16	74,229
ORGANIZATION TOTAL	1 74,229		
IIT RESEARCH INSTITUTE ZIP CODE 60616			
EHRlich, RICHARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05744-03	23,629
EISENBERG, WALTER C.....	SINGLET MOLECULAR OXYGEN AND LUNG PATHOGENESIS.....	1R01 ES01524-01A1	43,410
KATZ, SIDNEY.....	A STUDY OF THERAPEUTIC AEROSOLS.....	5R01 HL19647-03	30,577
KROTOSZYNSKI, BOGUSLAW K.....	DEVELOPMENT OF BIOCHEMICAL MARKERS FOR DIABETES MELLITUS.....	5R01 AM21030-02	82,898
MOON, RICHARD C.....	REPRODUCTIVE AGE AND MAMMARY CARCINOGENESIS.....	5R01 CA18968-03	45,390
RYAN, JON M.....	A STUDY OF LENS CELL DIVISION AND DIFFERENTIATION.....	1R01 EY02298-01	39,625
THOMAS, GAIL B.....	AIR POLLUTANTS INTERACTION WITH CHRONIC RESPIRATORY DIS.....	1R23 ES01729-01	35,547
ORGANIZATION TOTAL	7 301,076		
ILLINOIS CANCER COUNCIL ZIP CODE 60603			
STEINER, JAN W.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	3P20 CA18237-02S1	149,120
STEINER, JAN W.....	CANCER CENTER PATIENT DATA SYSTEM PROPOSAL.....	5R10 CA21898-02	119,325
ORGANIZATION TOTAL	2 268,445		
ILLINOIS COLLEGE OF OPTOMETRY ZIP CODE 60616			
CHINO, YUZO M.....	STEREOPSIS IN ANIMALS.....	3R01 EY01444-03S1	5,508
ORGANIZATION TOTAL	1 5,508		
ILLINOIS DEPARTMENT OF MENTAL HEALTH AND DEVELOPMENTAL DISABILITIES—ILLINOIS MENTAL HLTH INST ZIP CODE 60612			
BERKSON, GERSHON.....	SOCIAL AFFILIATIONS OF THE ADULT MENTALLY RETARDED.....	5R01 HD10321-03	62,988
KARRER, RATHE.....	RESPONSE PREPARATION AND RETARDED DEVELOPMENT.....	2R01 HD08265-04	39,965
ORGANIZATION TOTAL	2 102,953		
ILLINOIS INSTITUTE OF TECHNOLOGY ZIP CODE 60616			
GROSSWEINER, LEONARD I.....	FAST PHOTSENSITIZED REACTIONS OF AROMATIC COMPOUNDS.....	5R01 GM20117-15	67,902
GURALNICK, SIDNEY A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07027-13	33,329
HOSKIN, FRANCIS C.....	BIOCHEMICAL BASIS OF OP PESTICIDE EFFECTS ON FUNCTION.....	9R01 ES02116-09	71,612
KOPPLE, KENNETH D.....	CONFORMATION AND PROPERTIES OF PEPTIDES.....	5R01 GM14069-13	93,692
KUSANO, KIYOSHI.....	ELECTROPHYSIOLOGY OF SYNAPTIC TRANSMISSION.....	5R01 NS12275-04	29,724
RAJAN, KRISHNASWAMY S.....	METAL CHELATES OF L-DOPA FOR PARKINSONISM.....	5R01 NS11556-04	39,497
ROTH, ROBERT M.....	GENETIC CONTROL OF REPLICATION DURING MEIOSIS.....	5R01 GM19330-06	57,695

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
TIMKOVICH, RUSSELL.....	BIOLOGICAL FUNCTION OF CYTOCHROME C AND RELATED PROTEINS.....	5R01 GM23869-02	42,509
ORGANIZATION TOTAL	8 435,960		
INDIVIDUAL AWARD—KING, LESTER S. ZIP CODE 60657			
KING, LESTER S.....	THE PERSISTENT PROBLEMS OF MEDICINE.....	1R01 LM03157-01	14,000
ORGANIZATION TOTAL	1 14,000		
LOYOLA UNIVERSITY OF CHICAGO ZIP CODE 60611			
YOST, WILLIAM A.....	TEMPORAL SEQUENCING IN BINAURAL PROCESSING.....	5R01 NS14270-02	39,189
ORGANIZATION TOTAL	1 39,189		
MERCY HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
BLAIR, WILLIAM H.....	ANIMAL MODEL: OAT CELL LUNG CARCINOMA.....	1R01 CA22346-01	47,038
ORGANIZATION TOTAL	1 47,038		
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
COE, FREDRIC L.....	SPECIALIZED CENTER OF RESEARCH IN UROLITHIASIS.....	5P50 AM20585-02	369,148
COHEN, SIDNEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05476-16	90,899
FRIED, WALTER.....	FACTORS REGULATING HEMATOPOIESIS.....	2R01 AM19455-02A1	71,897
FROHMAN, LAWRENCE A.....	NEUROENDOCRINE CONTROL OF GROWTH HORMONE AND PROLACTIN.....	5R01 AM18722-03	103,453
GOTOFF, SAMUEL P.....	NEONATAL GROUP B STREPTOCOCCAL INFECTIONS.....	5R01 HD09700-02	73,120
GOTOFF, SAMUEL P.....	PERINATAL IMMUNITY—GROUP B BETA HEMOLYTIC STREPTOCOCCI.....	1R01 HD11576-01	82,947
HIRSCH, LEROY J.....	PHYSIOLOGICAL CONTROL OF THE SPLANCHNIC CIRCULATION.....	5R01 HL15607-06	129,006
LEVITSKY, LYNNE L.....	FUNCTIONAL MATURATION OF THE ENDOCRINE PANCREAS.....	5R01 HD08948-05	28,007
LIM, VICTORIA S.....	THE EFFECT OF UREMIA ON REPRODUCTIVE BIOLOGY.....	5R01 HD10918-02	60,447
PICK, RUTH.....	ATHEROSCLEROSIS STUDIES.....	5R01 HL19112-03	111,637
ROBBINS, KENNETH C.....	PLASMINOGEN: ACTIVATION & STRUCTURE-FUNCTION RELATIONS.....	5R01 HL04366-19	128,446
SCHNEIDER, ARTHUR B.....	RADIATION-INDUCED THYROID CANCER.....	5R01 CA21518-02	68,449
SHERWOOD, LOUIS M.....	REGULATION OF THE PARATHYROID GLANDS.....	5R01 AM19236-03	79,413
SHERWOOD, LOUIS M.....	CHEMISTRY AND PHYSIOLOGY OF PLACENTAL LACTOGEN.....	2R01 HD08225-05	71,909
STACHURA, MAXIMILLIAN E.....	SYNTHESIS STORAGE AND RELEASE OF PITUITARY GH AND PRL.....	5R01 AM19640-02	42,371
ORGANIZATION TOTAL	15 1,511,149		
MOUNT SINAI HOSPITAL MEDICAL CENTER OF CHICAGO ZIP CODE 60608			
DAVIDSOHN, ISRAEL.....	EARLY DIAGNOSIS OF CANCER AND CANCER METASTASES.....	5R01 CA17089-04	78,113
ORGANIZATION TOTAL	1 78,113		
NEWBERRY LIBRARY ZIP CODE 60610			
JENSEN, RICHARD J.....	OLD AGE IN AMERICA, 1855-1970: A DEMOGRAPHIC HISTORY.....	5R01 AG00350-03	59,193
ORGANIZATION TOTAL	1 59,193		
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
ANDERSON, BYRON E.....	STUDY OF RHEUMATOID ARTHRITIS.....	5R01 AM16326-06	50,614
ATKINSON, ARTHUR J, JR.....	CLINICAL PHARMACOLOGY OF COMMONLY USED DRUGS.....	5R01 GM22371-03	88,027
BERLIN, NATHANIEL I.....	CANCER CENTER SUPPORT GRANT.....	2P30 CA15145-04	637,822
BERRY, ROBERT W.....	REGULATION OF NEURONAL PROTEIN SYNTHESIS STUDIES.....	5R01 NS11519-05	31,412
BORENSZTAJN, JAYME.....	PHYSICAL EXERCISE AND LIPOPROTEIN LIPASE ACTIVITY.....	5R01 AM25232-02	66,144
BOYNE, ALAN F.....	THE MECHANISM OF CHOLINERGIC NEUROSECRETION.....	5R01 NS13043-02	54,627
BREWER, JOHN I.....	TROPHOBLASTIC DISEASE—CLINICAL & IMMUNOLOGICAL.....	5R01 CA12109-08	264,497
CORCORAN, JOHN W.....	SOLUBLE CYTOCHROME P-450 HYDROXYLASE FROM S. ERYTHREUS.....	5R01 GM22349-03	38,870
DAL CANTO, MAURO C.....	VIRUS-INDUCED DEMYELINATION.....	5R01 NS13011-03	34,610
DE WYS, WILLIAM D.....	CLINICAL TRIALS—EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA17145-04	222,379
DE WYS, WILLIAM D.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18004-04	98,629
DISTERHOFT, JOHN F.....	AUDITORY NEUROPSYCHOLOGY.....	2R01 NS12317-04	69,317
DUNCAN, JAMES L.....	STREPTOLYSIN O ACTION ON MAMMALIAN CELL MEMBRANES.....	5R01 AI11644-06	39,435
ECKENHOFF, JAMES E.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00048-17	673,201
ECKENHOFF, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05370-17	162,347
EISENSTEIN, REUBEN.....	ORGANIZATION OF ARTERIAL GROUND SUBSTANCE.....	5R01 HL18625-03	50,359
FARBMAN, ALBERT I.....	DIFFERENTIATION OF ORAL EPITHELIUM.....	2R01 DE03934-04	76,369
FARBMAN, ALBERT I.....	CYTOLOGICAL STUDIES OF INDUCTION DURING DEVELOPMENT.....	5R01 NS06181-11	34,955

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
FLOURET, GEORGE R	SYNTHETIC ANTIOVULATORY AGENTS.....	2R01 HD08869-04	101,488
FREINKEL, NORBERT.....	CONTROL MECHANISMS IN DIABETES AND NORMAL METABOLISM.....	5R01 AM10699-14	209,911
FREINKEL, NORBERT.....	DIABETES IN PREGNANCY.....	5P50 HD11021-02	634,062
FREINKEL, RUTH K.....	ROLE OF DEGRADATIVE EVENTS IN KERATINIZATION.....	2R01 AM16441-12	72,004
GANOTE, CHARLES E.....	IRREVERSIBLE MYOCARDIAL INJURY.....	5R01 HL19000-03	66,180
GHOSH, SANTIBRATA.....	ARTERIAL UPTAKE OF LIPOPROTEIN: KINETIC ANALYSIS.....	5R01 HL16419-03	47,943
GRAYHACK, JOHN T.....	ENZYMES IN DIAGNOSIS AND STAGING OF PROSTATIC CANCER.....	5R26 CA16736-05	48,013
GREENER, EVAN H.....	PROPERTIES OF HIGH COPPER CONCENTRATION AMALGAMS.....	5R01 DE03637-04	58,217
GUTMANN, DAVID L.....	THE PSYCHOLOGY OF AGING AMONG THE GOLAN DRUZE.....	7R01 AG01343-01	9,607
HARRIS, STANLEY C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05311-17	30,914
HAST, MALCOLM H.....	CEREBRAL REPRESENTATION OF THE LARYNGEAL MUSCLE.....	1R01 NS14103-01	62,045
HOLLENBERG, PAUL F.....	HEMOPROTEIN-CATALYZED OXYGENATIONS OF CARCINOGENS.....	2R01 CA16954-03A1	66,087
HOUK, JAMES C.....	NEURAL MECHANISMS FOR SENSORIMOTOR INTEGRATION.....	1R01 NS14703-01	69,374
JANIS, RONALD A.....	CALCIUM REGULATION AND HYPERTENSION.....	1R01 HL21030-01A1	62,514
JUNGMANN, RICHARD A.....	KINETIC STUDY OF ADENYLATE AND GUANYLATE CYCLASE.....	5R01 GM23127-03	28,643
JUNGMANN, RICHARD A.....	PROTEIN KINASE TRANSLOCATION AND GENE EXPRESSION.....	1R01 GM23895-01	62,565
JUNGMANN, RICHARD A.....	GONADOTROPHIN ACTION IN FOLLICLES AND CORPORA LUTEA.....	1R01 HD11356-01	86,463
JUNGMANN, RICHARD A.....	PROTEIN KINASE AND CHOLESTEROL METABOLISM IN AORTA.....	5R01 HL18682-03	34,206
KOENIG, HAROLD.....	SECRETORY PROCESSES IN THE RAT VENTRAL PROSTATE.....	5R01 HD09729-03	79,650
KOENIG, HAROLD.....	DRUG-INDUCED PHOSPHOLIPIDOSIS IN BRAIN.....	1R01 NS14700-01	48,580
KOUSHANPOUR, ESMAIL.....	MECHANISMS OF BARORECEPTOR ADAPTATION IN HYPERTENSION.....	1R01 HL22667-01	38,825
KURAMITSU, HOWARD K.....	SUCROSE METABOLIZING ENZYMES OF STREPTOCOCCUS MUTANS.....	5R01 DE03258-07	49,940
LEE, CHUNG.....	STUDY ON GROWTH AND REGRESSION IN RAT MAMMARY TUMORS.....	2R01 CA14727-05	40,567
LEE, CHUNG.....	STUDY OF CASTRATION-INDUCED REGRESSION IN RAT PROSTATE.....	1R01 HD11611-01	43,384
LESCH, MICHAEL.....	MYOCARDIAL PROTEIN DEGRADATION.....	3R01 HL19648-02S1	956
LESCH, MICHAEL.....	MYOCARDIAL PROTEIN DEGRADATION.....	5R01 HL19648-03	96,330
LIPTON, HOWARD L.....	THEILER'S VIRUS-INDUCED DEMYELINATING DISEASE IN MICE.....	5R01 AI14139-02	54,767
MARSHALL, SALLY J.....	X-RAY AND SEM ANALYSIS OF CU RICH DENTAL AMALGAM.....	5R23 DE04704-02	21,134
NARAHASHI, TOSHIO.....	MODE OF ACTION OF INSECTICIDES: ELECTROPHYSIOLOGY.....	2R01 NS14143-02	110,130
NARAHASHI, TOSHIO.....	CELLULAR NEUROPHARMACOLOGICAL STUDY OF DRUG ACTION.....	5R01 NS14144-02	105,686
NARAHASHI, TOSHIO.....	CELLULAR PHARMACOLOGY OF NEUROMUSCULAR TRANSMISSION.....	5R01 NS14145-02	48,674
NOFFSINGER, PAUL D.....	OUTPATIENT RESEARCH CENTER FOR SENSORINEURAL DEAFNESS.....	5P50 NS07791-11	122,464
OKITA, GEORGE T.....	ROLE OF NA,K-ATPASE INHIBITION ON DIGITALIS ACTION.....	5R01 HL18598-03	34,114
ORR, MARY F.....	DEVELOPMENT AND CYTODIFFERENTIATION OF THE INNER EAR.....	5R01 NS08569-10	38,490
OYASU, RYOICHI.....	IN VIVO BLADDER CARCINOGENESIS OF NITROSOAMINES.....	5R26 CA14649-05	70,009
PATERSON, PHILIP Y.....	IMMUNE BASIS OF DISEASE-ALLERGIC ENCEPHALOMYELITIS.....	5R01 NS06262-14	125,912
PATERSON, ROY.....	ALLERGIC DISEASES CENTERS GRANT.....	2P50 AI11403-06	139,218
PATERSON, ROY.....	CLINICAL & LABORATORY STUDIES RELATING TO LUNG DISEASE.....	5P01 AI11759-05	96,690
PERRY, DENNIS.....	STREPTOCOCCAL SURFACE ANTIGENS AND DENTAL CARIES.....	5R01 DE03615-06	55,952
PHILLIPS, LAWRENCE S.....	METABOLIC FUELS, DIABETES, AND SOMATOMEDIN ACTIVITY.....	1R01 AM21483-01	55,627
PONZIO, NICHOLAS M.....	MODELS OF LYMPHOCYTE MIGRATION AND LOCALIZATION.....	1R01 AI15247-01	62,021
PONZIO, NICHOLAS M.....	LYMPHOCYTE RESPONSES TO SYNGENEIC ANTIGENS.....	1R01 CA22544-01	51,888
PYSH, JOSEPH J.....	MORPHOLOGY AND CYTOPHYSIOLOGY OF SYNAPTIC TRANSMISSION.....	2R01 NS11325-04A1	38,352
RABINOWITZ, STANLEY G.....	PATHOGENESIS—SLOW VESICULAR STOMATITIS VIRUS INFECTION.....	5R01 NS13045-03	46,134
RAFFERTY, NANCY S.....	ETIOLOGY OF CATARACT.....	5R01 EY00698-08	28,939
RANNEY, DAVID F.....	CHALONE REGULATION OF HUMAN LYMPHOID NEOPLASMS.....	2R01 CA15673-05	52,600
REDDY, JANARDAN K.....	BIOLOGY OF TRANSPLANTABLE PANCREATIC CARCINOMA OF RAT.....	1R26 CA23055-01	49,522
REDDY, JANARDAN K.....	BIOLOGIC STUDIES WITH LIVER PEROXISOME PROLIFERATORS.....	5R01 GM23750-03	42,610
RUNDELL, MARY K.....	STRUCTURAL ANALYSIS OF THE SV40 TUMOR ANTIGEN.....	5R01 CA21327-02	45,276
SILINSKY, EUGENE M.....	ADENINE NUCLEOTIDE RELEASE FROM MOTOR NERVE ENDINGS.....	5R01 NS12782-03	23,285
SMITH, DAVID W.....	TRANSFER RNA OF RED BLOOD CELL PRECURSORS.....	1R01 AM19617-01A1	96,952
SPEHLMANN, RAINER.....	PHARMACOLOGY OF SYNAPTIC TRANSMISSION IN THE BRAIN.....	2R01 NS06820-10A1	39,904
STAMLER, JEREMIAH.....	CV DISEASE EPIDEMIOLOGY—SECOND GENERATION STUDIES.....	5R01 HL15174-06	92,290
STAMLER, JEREMIAH.....	GLYCEMIA, OTHER TRAITS AND CV DEATH IN 40,000 PERSONS.....	5R01 HL21010-02	133,486
STERN, PAULA H.....	EFFECT OF HORMONES ON BONE RESORPTION IN VITRO.....	2R01 AM11262-12A1	95,444
TAYLOR, SAMUEL G, IV.....	ADJUVANT CHEMOTHERAPY IN HEAD & NECK SQUAMOUS CANCER.....	1R01 CA22620-01	6,837
VEIS, ARTHUR.....	THE STRUCTURE AND ORGANIZATION OF COLLAGEN FIBERS.....	5R01 AM13921-18	106,275
VEIS, ARTHUR.....	MATRIX COMPONENT INTERACTIONS IN CALCIFIED TISSUES.....	5R01 DE01374-18	66,157
WILBER, JOHN F.....	THYROTROPIN RELEASING FACTOR SECRETION AND ACTIONS.....	2R01 AM14997-08	44,313
YEH, JAY Z.....	MOLECULAR MECHANISM OF LOCAL ANESTHETIC ACTION.....	1R01 GM24866-01A1	44,870

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
ORGANIZATION TOTAL	78	7,088,104	
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER--RUSH UNIVERSITY ZIP CODE 60612			
ADLER, SOLOMON S.....	HEMOPOIETIC MICROENVIRONMENT VIABILITY STUDIES.....	1R01 CA22736-01	53,198
ANDERSON, KENNING M.....	CONTROL OF PROSTATE CELL GROWTH AND CELL DIVISION.....	1R01 CA22246-01	66,770
ANDRIACCHI, THOMAS P.....	BIOCHEMICAL STUDY OF TOTAL KNEE REPLACEMENT.....	1R01 AM20702-01	82,550
BOOYSE, FRANCOIS M.....	CHARACTERIZATION OF CULTURED AORTIC ENDOTHELIAL CELLS.....	5R01 HL17973-04	73,358
BRUESCHKE, ERICH E.....	DEVELOPMENT OF A TRANSCUTANEOUS POWER TRANSFER SYSTEM.....	5R01 HL21632-02	106,158
CLASEN, RAYMOND A.....	EXPERIMENTAL CEREBRAL INJURY AND EDEMA.....	5R01 NS03677-16	36,205
COLE, EDMOND R.....	STUDY OF PLASMINOGEN ACTIVATORS FROM TISSUES.....	5R01 HL15817-06	59,087
DONALDSON, SUE K.....	CARDIAC CONTRACTILITY: ISCHEMIA AND HYPOXIA.....	1R01 HL23128-01	56,549
ECONOMOU, STEVEN G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20371-02	50,660
EISENBERG, ROBERT S.....	ANALYSIS OF THE ACTION POTENTIAL OF CARDIAC MUSCLE.....	5R01 HL20230-02	77,870
FLANAGAN, MALACHI J.....	NATIONAL BLADDER CANCER COLLABORATIVE GROUP A.....	2R26 CA16886-05	67,749
FOX, JACOB H.....	CEREBRAL DECLINE IN AGING.....	1P01 AG00905-01	264,279
GALANTE, JORGE O.....	TOTAL SURGICAL REPLACEMENT OF THE HUMAN HIP JOINT.....	5R01 AM16485-07	140,452
GEWURZ, HENRY.....	STUDIES OF THE BIOLOGY OF THE C-REACTIVE PROTEINS.....	3R01 AI12870-03S1	39,442
GOTTLIEB, GERALD L.....	BIOENGINEERING INVESTIGATION OF THE HUMAN MOTOR SYSTEM.....	1R01 NS12877-01A2	71,120
HEGYVARY, CSABA.....	DIGITALIS-RECEPTOR OF THE HEART.....	5R01 HL16611-04	60,086
HEJNA, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05477-16	103,094
HENDRICKSON, FRANK R.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12255-06	60,387
KNOSPE, WILLIAM H.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA12640-07	127,367
KUETTNER, KLAUS E.....	BIOCHEMISTRY OF BONE AND CONNECTIVE TISSUE.....	5R01 AM09132-13	114,725
KUETTNER, KLAUS E.....	ANTITUMOR INVASION FACTORS DERIVED FROM CARTILAGE.....	5R01 CA21566-02	99,851
PAULI, BENDICHT U.....	LOCAL REGULATION OF INVASIVENESS IN BLADDER TUMORS.....	1R26 CA25034-01	115,933
PLATE, JANET M.....	IMMUNOLOGICAL EFFECTS ON TUMOR GROWTH & REJECTION.....	1R01 CA25612-01	115,932
PRANCAN, ARTHUR V.....	CONTROL OF PLATELET AGGREGATION IN SHOCK.....	1R01 HL23114-01	27,390
SCHAUF, CHARLES L.....	STUDIES OF NEUROTOXIC AGENTS IN MULTIPLE SCLEROSIS.....	5R01 NS12423-03	29,220
SHEKELLE, RICHARD B.....	A PROSPECTIVE STUDY OF PERSONALITY AND RISK OF CANCER.....	1R01 CA22536-01	98,958
TAYLOR, SAMUEL G, IV.....	ADJUVANT CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CANCER.....	7R01 CA25793-01	78,855
TROBAUGH, FRANK E, JR.....	STUDIES OF MYELOID LEUKEMIA IN RFM MICE.....	1R01 CA22011-01A1	84,189
ORGANIZATION TOTAL	28	2,361,434	
UNIVERSITY OF CHICAGO ZIP CODE 60637			
ARNASON, BARRY G.....	SIALOADENECTOMY--EPIDERMAL GROWTH FACTOR & TUMOR GROWTH.....	5R01 CA21043-03	86,691
ARNASON, BARRY G.....	MYASTHENIA GRAVIS: ROLE OF ACETYLCHOLINE RECEPTORS.....	5R01 NS13526-03	155,840
BOWMAN, JAMES E.....	COMPREHENSIVE SICKLE CELL CENTER.....	2P60 HL16005-05	956,752
BOYER, JAMES L.....	MECHANISMS OF BILE SECRETION AND CHOLESTASIS.....	5R01 AM17153-05	5,272
BUTLER, ROBERT A.....	THE ROLE OF SPECTRAL CUES IN SOUND LOCALIZATION.....	5R01 NS11154-04	63,185
CHIANG, KWEN-SHENG.....	MEIOSIS AND REPRODUCTION.....	5R01 HD05804-08	120,794
CIFONELLI, J ANTHONY.....	THE CHEMISTRY AND BIOLOGICAL EFFECTS OF HEPARIN.....	5R01 HL19820-02	75,933
COZZARELLI, NICHOLAS R.....	ENZYMOLOGICAL AND GENETIC STUDIES OF DNA POLYMERASES.....	5R01 GM21397-04	73,363
COZZARELLI, NICHOLAS R.....	RNA LIGASE FUNCTION AND USE IN DNA SYNTHESIS.....	5R01 GM22729-03	61,185
CREWE, ALBERT V.....	SCANNING MICROSCOPE LABORATORY FOR GENERAL FACULTY USE.....	5P41 RR00984-03	199,507
CUTILLETTA, ANTHONY F.....	A STUDY OF THE REGULATION OF MYOCARDIAL HYPERTROPHY.....	5R01 HL18886-02	68,929
DAWSON, GLYN.....	GLYCOSPHINGOLIPID METABOLISM AND MENTAL RETARDATION.....	2R01 HD06426-07	69,855
DE BRUYN, PETER P.....	LEUKOPOIETIC MECHANISMS.....	5R01 CA05493-18	155,547
DE GROOT, LESLIE J.....	BIOSYNTHESIS AND ACTION OF THYROID HORMONE.....	5R01 AM13377-11	129,255
DE SOMBRE, EUGENE R.....	STUDIES OF MAMMARY TUMOR PEROXIDASE.....	5R01 CA21525-02	83,113
DORFMAN, ALBERT.....	BIOCHEMISTRY AND BIOLOGY OF CONNECTIVE TISSUE.....	5P01 AM05996-17	164,050
DORFMAN, ALBERT.....	MENTAL RETARDATION RESEARCH CENTER.....	5P30 HD04583-10	358,444
DORFMAN, ALBERT.....	BIOLOGICAL BASIS OF MENTAL RETARDATION.....	5P01 HD09402-04	330,296
DORFMAN, ALBERT.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	5M01 RR00305-12	546,722
EATON, PHILIP E.....	SYNTHESIS OF DODECAHEDRANE AND 16-HEXAQUINACENE.....	5R01 CA12961-06	105,444
EMMANOUEL, DIMITRIOS S.....	ENDOCRINE ABNORMALITIES IN UREMIA.....	5R01 AM19250-03	49,564
EPSTEIN, WOLFGANG.....	REGULATION OF CYCLIC AMP IN E. COLI.....	5R01 AI12924-03	48,388
EPSTEIN, WOLFGANG.....	BIOCHEMICAL STUDIES OF ATP-DRIVEN BACTERIAL TRANSPORT.....	2R01 GM22323-04	46,910
EPSTEIN, WOLFGANG.....	FUNCTION OF THE RECA PROTEIN OF E. COLI.....	2R01 GM23016-03	55,198
ESPOSITO, MICHAEL S.....	GENETIC CONTROL OF MEIOTIC RECOMBINATION.....	5R01 GM23277-02	85,172
FIELD, MICHAEL.....	MECHANISMS REGULATING INTESTINAL FLUID TRANSPORT.....	5R01 AM21345-02	69,373

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
FITCH, FRANK W.....	ANTIBODY FORMATION BY LYMPHOID CELLS.....	2R01 AI04197-17	105,645
FITCH, FRANK W.....	SPECIFIC SUPPRESSION OF CELL-MEDIATED IMMUNE RESPONSE.....	5R01 AI09268-10	88,398
FOZZARD, HARRY A.....	CELL BIOLOGY OF CARDIAC AND SKELETAL MUSCLE.....	5P01 HL20592-02	523,311
FRIED, JOSEF.....	SYNTHESIS OF PROSTAGLANDINS AND PROSTAGLANDIN ANALOGS.....	5R01 AM11499-12	76,769
FRIED, JOSEF.....	TOTAL SYNTHESIS OF MAYTANSINOIDS.....	5R01 CA20905-02	86,554
FRIEDMANN, HERBERT C.....	ENZYME STUDIES ON VITAMIN B12 AND ITS CONSTITUENTS.....	5R01 AM09134-13	59,900
GARBER, BEATRICE B.....	NEURAL CELL RECOGNITION FACTORS IN BRAIN HISTOGENESIS.....	5R01 NS10714-06	63,573
GOLDBERG, JAY M.....	PHYSIOLOGY OF VESTIBULAR SYSTEM.....	5R01 NS01330-22	118,092
GOLDBERG, LEON I.....	CLINICAL PHARMACOLOGY CENTER.....	5P50 GM22220-03	412,737
GOLDWASSER, EUGENE.....	HEMOPOIETIC STEM CELLS AND INDUCED DIFFERENTIATION.....	2R01 CA18375-04	63,045
GOLDWASSER, EUGENE.....	PURIFICATION AND PROPERTIES OF ERYTHROPOIETIN.....	5R01 HL21676-02	86,454
GRIEM, MELVIN L.....	RADIATION & DRUG STUDIES IN GROWING & RESTING HAIR.....	3R01 CA20692-02S1	9,223
GROBSTEIN, PAUL.....	DEVELOPMENT OF CONNECTIVITY IN ANURAN VISUAL SYSTEMS.....	5R01 EY01658-03	29,367
GROSS, MARTIN.....	TRANSLATIONAL CONTROL OF PROTEIN SYNTHESIS BY HEMIN.....	1R01 GM24949-01	55,193
GROSSMAN, SEBASTIAN P.....	ROLE OF SUBTHALAMIC MECHANISMS IN INGESTIVE BEHAVIOR.....	9R01 AM25245-03	75,346
GUILLERY, RAINER W.....	ABNORMALITIES IN VISUAL PATHWAYS.....	5R01 EY02374-02	10,483
GUILLERY, RAINER W.....	ABNORMALITIES IN VISUAL PATHWAYS.....	2R01 EY02374-03	117,849
GUILLERY, RAINER W.....	ARCHITECTONIC AND SYNAPTIC ORGANIZATION IN THE BRAIN.....	5R01 NS14283-02	106,072
GUNN, ROBERT B.....	MOLECULAR MECHANISMS OF ANION TRANSPORT.....	2R01 HL20365-03	67,626
GUNN, ROBERT B.....	MECHANISMS AND CELLULAR FUNCTIONS OF ION TRANSPORT.....	5R01 HL20725-02	50,273
GURNEY, CLIFFORD W.....	PATHOPHYSIOLOGY AND THERAPY OF PANCYTOPENIA.....	5R01 CA22039-02	107,548
HALPERN, JACK.....	METAL COMPLEXES RELATED TO VITAMIN B12.....	2R01 AM13339-10	77,663
HARVEY, RONALD G.....	CHEMISTRY OF CARCINOGENIC HYDROCARBONS.....	2R01 CA11968-07	108,959
HASELKORN, ROBERT.....	PROTEIN SYNTHESIS IN VIRUS-INFECTED BACTERIA.....	5R01 AI09315-14	118,295
HASELKORN, ROBERT.....	DIFFERENTIATION IN NITROGEN-FIXING BLUE-GREEN ALGAE.....	2R01 GM21823-04	89,101
HELLER, ALFRED.....	ONTOGENESIS AND NEUROCHEMISTRY OF BRAIN FUNCTION.....	5P01 NS12324-04	450,892
HERBST, ARTHUR L.....	MATERNAL STILBESTROL: CARCINOGENIC EFFECT ON OFFSPRING.....	2R01 CA20084-02	76,015
HOLLYDAY, MARGARET.....	DEVELOPMENT OF SPECIFIC NEURONAL CONNECTIONS.....	1R01 NS14066-01	52,658
HORWITZ, DAVID L.....	ENDOGENOUS AND EXOGENOUS INSULIN IN DIABETES MELLITUS.....	5R01 AM19206-03	44,297
HUGGINS, CHARLES B.....	HORMONAL CONTROL OF MAMMARY CANCER AND LEUKEMIA.....	3R01 CA11603-09S3	89,846
HUNTER, ROBERT L.....	SELECTIVE STIMULATION OF CELL-MEDIATED CANCER IMMUNITY.....	5R01 CA14364-06	74,131
HUTCHISON, CLYDE A, JR.....	LOCAL STRUCTURE IN ENZYMES—A NEW APPROACH.....	2R01 GM21668-04	91,596
HUTTENLOCHER, JANELLEN.....	CONCEPTUAL DEVELOPMENT AND LANGUAGE COMPREHENSION.....	5R01 HD09283-05	66,071
HUTTENLOCHER, PETER R.....	SYNAPTIC AND DENDRITIC DEVELOPMENT AND MENTAL DEFECT.....	5R01 HD09335-04	54,803
JARABAK, JOSEPH W.....	PROSTAGLANDIN METABOLISM IN THE HUMAN PLACENTA.....	5R01 HD07045-07	75,323
JENSEN, ELWOOD V.....	STEROIDS AND GROWTH.....	5R01 CA02897-22	112,085
JOHNSON, D GALE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07029-13	125,056
JOSEPHS, ROBERT.....	1 MEV SCANNING TRANSMISSION ELECTRON MICROSCOPE.....	2R01 GM19079-07	155,635
JOSEPHS, ROBERT.....	MOLECULAR STRUCTURE OF SICKLE CELL FIBERS.....	1R01 HL22654-01	44,113
KAISER, EMIL T.....	THE MECHANISM OF CARBOXYPEPTIDASE ACTION.....	5R01 AM07957-14	54,987
KAISER, EMIL T.....	CHEMICAL AND BIOCHEMICAL APPLICATIONS OF OXIMES.....	2R01 CA17150-04	71,201
KAPLAN, EDWIN L.....	GASTROINTESTINAL INFLUENCES ON CALCIUM HOMEOSTASIS.....	5R01 AM19942-02	69,047
KATZ, ADRIAN I.....	NA-K-ATPASE AND RENAL TUBULAR TRANSPORT OF SODIUM.....	2R01 AM13601-07	82,572
KAUFMAN, GARY E.....	ULTRASOUND EFFECTS ON MAMMALIAN CELLS IN MONOLAYER.....	1R23 CA25785-01	28,104
KIEFF, ELLIOTT D.....	EBV INTERACTION WITH LYMPHOBLASTS IN VITRO & IN VIVO.....	2R01 CA17281-04	86,303
KIRSTEN, WERNER H.....	TRANSFORMATION OF HUMAN CELLS.....	5R01 CA14898-06	132,141
KLEIN, PETER D.....	METABOLISM OF 13C COMPOUNDS IN DIGESTIVE DISEASES.....	5R01 AM18741-03	154,982
KOHLER, HEINZ.....	ANTIGEN AND ANTIBODY IN THE IMMUNE RESPONSE.....	5R01 AI11080-06	76,068
KOHLER, HEINZ.....	ANALYSIS OF IDIOTYPE MUTANTS.....	1R01 CA22958-01	48,835
KOHLER, HEINZ.....	STRUCTURE OF THE MAJOR RED CELL MEMBRANE POLYPEPTIDE.....	1R01 GM25687-01	94,568
LARRAMENDI, LUIS M.....	E.M. STUDIES OF NEUROGENESIS AND SYNAPTOGENESIS.....	2R01 NS10454-07	69,638
LAW, JOHN H.....	STUDY OF LIPID METABOLISM.....	5R01 GM13863-13	121,653
LEVI-SETTI, RICCARDO.....	EXPERIMENTAL 100 KEV PROTON SCANNING MICROSCOPE.....	5R01 GM20869-05	101,935
LEWERT, ROBERT M.....	PHILIPPINE SCHISTOSOMIASIS JAPONICA: IMMUNE RESPONSES.....	5R22 AI07724-12	111,001
LIAO, SHUTSUNG.....	MACROMOLECULAR SYNTHESIS IN ACCESSORY GENITAL ORGANS.....	5R01 AM09461-14	119,135
LIM, RAMON.....	STUDIES OF BRAIN PROTEINS.....	5R01 NS09228-05	101,712
LIM, RAMON.....	STUDIES OF BRAIN CELL DIFFERENTIATION.....	1R01 NS14316-01	51,900
LINDHEIMER, MARSHALL D.....	THE KIDNEY AND VOLUME REGULATION IN PREGNANCY.....	2R01 HD05572-07	88,975
LOKEN, MICHAEL R.....	B LYMPHOCYTE DIFFERENTIATION AND MATURATION.....	1R01 AI14872-01	49,467
MAKINEN, MARVIN W.....	ENZYME COMPLEXES IN CRYSTALS—A NEW APPROACH.....	2R01 GM21900-04	126,146

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
MANASEK, FRANCIS J.....	FACTORS REGULATING EMBRYONIC CARDIAC MORPHOGENESIS.....	5R01 HL13831-08	116,184
MARKOVITZ, ALVIN.....	CAPSULE SYNTHESIS, DIVISION AND RADIATION SENSITIVITY.....	5R01 A106966-13	102,612
MARTIN, TERENCE E.....	RNA SYNTHESIS AND TRANSPORT IN MAMMALIAN CELLS.....	2R01 CA12550-07	115,122
MAUSOLF, FREDERICK A.....	EXPERIMENTAL HYPERVISCOISITY RETINOPATHY.....	1R01 EY01921-01A1	47,007
MEIER, PAUL.....	STATISTICAL INFERENCE IN CLINICAL RESEARCH.....	5R01 GM22648-03	65,249
MEWISSEN, DIEUDONNE J.....	POTENTIAL CARCINOGENIC AND GENETIC EFFECTS OF TRITIUM.....	5R01 CA13080-07	162,031
MOLTZ, HOWARD.....	CHEMICAL CONTROL OF MATERNAL BEHAVIOR.....	5R01 HD06872-07	53,101
MOSCONA, ARON A.....	THE CELL SURFACE IN CELL RECOGNITION AND DIFFERENTIATION.....	5R01 HD01253-20	203,587
MOULDER, JAMES W.....	PHAGOCYTOSIS OF CHLAMYDIAE.....	2R01 AI13175-04	72,411
NAUNTON, RALPH F.....	SENSORY DISEASE CLINICAL RESEARCH CENTER.....	5P50 NS03358-17	528,403
NEUGARTEN, BERNICE L.....	ADULT LIVES AND PATTERNS OF AGING IN AN URBAN SETTING.....	5P01 AG00123-03	221,152
OVERTON, JANE H.....	CELL-CELL AND CELL-SUBSTRATE ADHESION.....	1R01 GM24041-01A1	53,726
PAGE, ERNEST.....	CARDIAC ION TRANSPORT AND ULTRASTRUCTURE.....	2R01 HL10503-13	124,934
PERI, BARBARA A.....	DEVELOPMENT OF IMMUNITY TO CARIOGENIC STREP.....	5R23 DE04771-02	27,715
PETES, THOMAS D.....	YEAST CHROMOSOME STRUCTURE AND REPLICATION.....	3R01 GM24110-01S1	6,838
PETES, THOMAS D.....	YEAST CHROMOSOME STRUCTURE AND REPLICATION.....	5R01 GM24110-02	76,942
POKORNY, JOEL M.....	PSYCHOPHYSICAL STUDIES OF COLOR-DEFECTIVE OBSERVERS.....	5R01 EY00901-05	54,222
QUINTANS, JOSE.....	IDIOTYPES, LYMPHOCYTES AND MACROPHAGES.....	1R01 AI14530-02	32,835
RABINOWITZ, MURRAY.....	MITOCHONDRIAL ASSEMBLY AND REPLICATION.....	5R01 HL04442-20	124,461
RABINOWITZ, MURRAY.....	PROTEIN AND RNA SYNTHESIS IN HEART MUSCLE.....	5R01 HL09172-15	146,586
RAHMAN, YUEH-ERH.....	NEW IRON CHELATOR DELIVERY SYSTEM FOR COOLEY'S ANEMIA.....	1R01 AM21592-01	67,255
RAHMAN, YUEH-ERH.....	ENHANCED CANCER CHEMOTHERAPY BY LIPOSOMAL CARRIERS.....	5R01 CA21556-02	56,463
RECKARD, CRAIG R.....	EFFECTS OF PANCREATIC ISLET TRANSPLANTATION.....	5R01 AM20756-02	55,630
REFETOFF, SAMUEL.....	METABOLISM OF THYROID HORMONE BY CELLS IN TISSUE CULTURE.....	5R01 AM15070-07	93,212
RESNEKOV, LEON.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17648-04	1,155,365
RICE, STUART A.....	WATER: EXPERIMENTAL AND THEORETICAL STUDIES.....	5R01 GM22728-03	56,460
ROBERTSON, ANTHONY D.....	GENETIC ANALYSIS OF SLIME MOLD AGGREGATION.....	5R01 HD04722-06	129,221
ROIZMAN, BERNARD.....	MECHANISMS OF VIRAL INFECTION IN RELATION TO CANCER.....	5R01 CA08494-14	133,395
ROSENBERG, IRWIN H.....	ABSORPTION OF MONOGLUTAMYL AND POLYGLUTAMYL FOLATES.....	5R01 AM15351-08	157,786
ROSENFELD, ROBERT L.....	FREE PLASMA SEX HORMONE AND ANDROGEN ACTION.....	2R01 HD06308-07	83,741
ROTHBERG, RICHARD M.....	IMMUNE RESPONSES OF NEWBORNS TO INGESTED ANTIGENS.....	2R01 AI07854-10A1	78,501
ROTHMAN-DENES, LUCIA B.....	NOVEL TRANSCRIBING ACTIVITIES IN N-4-INFECTED E. COLI.....	2R01 AI12575-04	91,229
ROWLEY, DONALD A.....	PATHOLOGIC STUDIES ON INFLAMMATION AND IMMUNITY.....	2R01 AI10242-17A1	94,044
ROWLEY, JANET D.....	CHROMOSOME ABERRATIONS IN CANCER.....	5R01 CA16910-03	79,462
ROWLEY, JANET D.....	ACUTE LEUKEMIA AFTER RADIATION AND/OR CHEMOTHERAPY.....	1R01 CA23954-01	117,414
RUBENSTEIN, ARTHUR H.....	PROINSULIN AND C-PEPTIDE: SECRETION AND METABOLISM.....	5R01 AM13941-09	84,054
RUBENSTEIN, ARTHUR H.....	DIABETES RESEARCH AND TRAINING CENTER.....	5P60 AM20595-02	1,147,167
SCANU, ANGELO M.....	LIPOPROTEINS-CELL SURFACE INTERACTIONS.....	5P01 HL18577-03	363,633
SCHREIBER, HANS.....	PATHOBIOLOGY OF MYELOMA AND ANTI-IDIOTYPIC IMMUNITY.....	1R01 CA22677-01	49,958
SCHWARTZ, ERIC A.....	DEVELOPMENT OF PHOTORECEPTORS IN A VERTEBRATE EYE.....	1R01 EY02440-01	88,892
SCHWARTZ, NANCY B.....	REGULATION OF BIOSYNTHESIS OF PROTEOGLYCAN.....	5R01 AM19622-02	60,998
SCHWARTZ, STEPHEN A.....	MOLECULAR CHARACTERIZATION OF ODONTOGENESIS.....	1R23 DE04970-01	25,693
SHAPIRO, JAMES A.....	DNA INSERTION MECHANISMS: TRANSPOSONS AND CARCINOGENS.....	1R01 GM24960-01	111,150
SIGLER, PAUL B.....	STRUCTURAL ANALYSIS OF BIOLOGICAL MACROMOLECULES.....	5R01 GM15225-10	75,936
SIGLER, PAUL B.....	MOLECULAR INTERACTIONS AT THE CELL SURFACE.....	2R01 GM22324-04	60,030
SIGLER, PAUL B.....	SPECIFIC MOLECULAR INTRATIONS AT THE CELL SURFACE.....	5R01 GM25234-02	47,421
SMITH, VIVIANNE C.....	TRICHROMACY IN PROTANOPEs AND DEUTERANOPEs.....	5R01 EY01876-02	28,861
SPARGO, BENJAMIN H.....	ULTRASTRUCTURAL RENAL PATHOLOGY.....	3R01 HL10980-11S1	12,380
SPEAR, PATRICIA G.....	HERPESVIRUS GENE EXPRESSION IN TRANSFORMED CELLS.....	5R01 CA21776-02	63,786
STECK, THEODORE L.....	MECHANISMS OF MORPHOGENESIS IN CELLULAR SLIME MOLDS.....	2R01 GM22321-04	98,647
STEINER, DONALD F.....	STUDIES OF PANCREATIC HORMONES.....	5R01 AM13914-09	198,683
STOCK, LEON M.....	FREE RADICAL REACTIONS IN CHEMICAL CARCINOGENESIS.....	3R01 CA20049-01S1	25,316
STRAUSS, BERNARD S.....	A STUDY OF THE MODE OF ACTION OF CHEMICAL MUTAGENS.....	5R01 GM07816-19	103,010
STUART, FRANK P.....	IMMUNOLOGICAL ENHANCEMENT OF RENAL ALLOGRAFTS.....	5R01 CA20091-11	138,088
TAGER, HOWARD S.....	BIOSYNTHESIS AND SECRETION OF PEPTIDE HORMONES.....	5R01 AM18347-05	61,424
THROCKMORTON, LYNN H.....	PROTEIN DIFFERENTIATION IN DROSOPHILA.....	5R01 GM23007-03	114,370
TOBACK, FREDERICK G.....	BIOCHEMICAL REGULATION OF CONTROLLED RENAL GROWTH.....	2R01 AM18413-04	62,554
TOBACK, FREDERICK G.....	MEMBRANES AND PHOSPHOLIPIDS IN RENAL HYPERPLASIA.....	2R01 GM22328-04	118,069
TRIPATHI, RAMESH C.....	PHYSIOPATHOLOGY OF AQUEOUS HUMOUR OUTFLOW SYSTEM.....	1R01 EY02046-01	69,354
ULINSKI, PHILIP S.....	ANATOMY OF THE THALAMUS.....	2R01 NS12518-04	61,305

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
ULTMANN, JOHN E.....	CANCER RESEARCH CENTER.....	5P30 CA14599-05	914,687
ULTMANN, JOHN E.....	VIRAL ONCOLOGY RESEARCH CENTER PROGRAM.....	5P01 CA19264-03	507,400
ULTMANN, JOHN E.....	CANCER BIOLOGY RESEARCH CENTER.....	5P01 CA19265-03	824,338
ULTMANN, JOHN E.....	CLINICAL CANCER RESEARCH CENTER.....	5P01 CA19266-03	673,992
URETZ, ROBERT B.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00055-17	695,267
URETZ, ROBERT B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05367-17	200,462
WADE, MICHAEL J.....	THE GENETICAL CONSEQUENCES OF DISPERSAL AND EXTINCTION.....	5R01 GM22523-03	52,454
WEISS, SAMUEL B.....	VIRUS DEVELOPMENT AND TRANSLATIONAL CONTROL.....	2R01 AI12479-07	92,267
WESTLEY, JOHN L.....	SULFANES IN METABOLISM.....	5R01 GM18939-07	77,501
WIED, GEORGE L.....	AUTOMATED CANCER CELL DIAGNOSIS BY THE TICAS METHOD.....	5R01 CA13271-10	308,345
WILLIAMS-ASHMAN, HOWARD G.....	BIOCHEMISTRY OF THE MALE GENITAL TRACT.....	5R01 HD04592-10	128,157
WILSON, HUGH R.....	THE SPATIOTEMPORAL BASIS OF GRATING PERCEPTION.....	1R01 EY02158-01	49,196
WISSLER, ROBERT W.....	STUDY OF LIPOPROTEINS, ARTERY WALL, AND ATHEROSCLEROSIS.....	5P50 HL15062-07	1,334,892
WOOL, IRA G.....	ENDOCRINE REGULATION OF PROTEIN SYNTHESIS.....	5R01 AM04842-17	58,778
WOOL, IRA G.....	THE STRUCTURE AND FUNCTION OF EUKARYOTIC RIBOSOMES.....	5R01 GM21769-04	108,585
YANG, NIEN-CHU C.....	MOLECULAR MECHANISMS OF MUTAGENESIS AND CARCINOGENESIS.....	3R01 CA10220-09S1	4,981
YANG, NIEN-CHU C.....	MOLECULAR MECHANISMS OF MUTAGENESIS AND CARCINOGENESIS.....	2R01 CA10220-10	90,083
YANG, NIEN-CHU C.....	PHOTOCHEMICAL SYNTHESIS OF ORGANIC COMPOUNDS.....	2R01 GM20329-12	96,285
ZAK, RADOVAN H.....	DEVELOPMENT AND REGRESSION OF CARDIAC HYPERTROPHY.....	5R01 HL16637-04	111,390
ORGANIZATION TOTAL	165 24,609,284		
UNIVERSITY OF HEALTH SCIENCES/CHICAGO MEDICAL SCHOOL ZIP CODE 60612			
BLIVAISS, BEN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05366-17	28,444
EZDINLI, EDIZ Z.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14144-06	127,917
HANSEN, TIMOTHY R.....	VASCULAR SMOOTH MUSCLE IN HYPERTENSION.....	5R01 HL19226-03	30,283
KELLER, JOHN M.....	ANIMAL CELL SURFACE GLYCOSAMINOGLYCANS.....	5R01 CA23016-02	60,721
KELLER, JOHN M.....	BIOCHEMISTRY OF HEPARAN SULFATE.....	1R01 HD11770-01	66,748
KEMP, ROBERT G.....	ALLOSTERIC PROPERTIES OF PHOSPHOFRUCTOKINASE.....	2R01 AM19912-03	89,309
KEMP, ROBERT G.....	METABOLIC EVENTS IN VIRUS-INDUCED LEUKEMOGENESIS.....	5R01 CA21631-03	74,967
MARCUS, FRANK.....	CONTROL OF ENZYMES OF GLUCONEOGENESIS IN DIABETIC MICE.....	5R01 AM21167-02	40,456
TSE, WARREN W.....	ATRIOVENTRICULAR NODE & ADJACENT TISSUES AUTOMATICITY.....	1R01 HL21574-01	23,605
ORGANIZATION TOTAL	9 542,450		
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE ZIP CODE 60680			
GORENSTEIN, DAVID G.....	NMR PROBES OF ENZYMES AND NUCLEIC ACIDS.....	2R01 GM17575-07	54,961
HULETT, F MARION.....	MEMBRANE PROTEIN-MEMBRANE REASSOCIATION STUDIES.....	5R01 GM21909-03	43,903
KAGAN, JACQUES.....	PHOTOTOXICITY OF A-TERTHIENYL AND RELATED COMPOUNDS.....	1R01 GM24144-01A1	45,099
KHAN, M A.....	EFFECTS AND METABOLISM OF PHOTOISOMERS OF CYCLODIENES.....	5R01 ES01479-02	89,621
KOSOBUD, RICHARD F.....	POPULATION IN ECONOMIC GROWTH, TREND SOLUTION STUDY.....	5R01 HD06966-06	41,070
LEVINE, MICHAEL W.....	ROD AND CONE SYSTEMS: PROPERTIES AND INTERACTIONS.....	5R01 EY01951-02	54,255
LIEBMAN, SUSAN W.....	NONSENSE SUPPRESSION AND ANTISUPPRESSION IN YEAST.....	5R01 GM24189-02	44,626
MC CORMICK, BRUCE H.....	IMAGE PROCESSING FOR CLINICAL OPHTHALMOSCOPY.....	5R01 EY01261-04	266,325
OSCAI, LAWRENCE B.....	EFFECT OF EXERCISE ON LIPID METABOLISM.....	5R01 AM17357-05	47,401
OSCAI, LAWRENCE B.....	EFFECTS OF REGULATION OF APPETITE IN THE NEWBORN.....	1R01 HD10987-01	49,790
ROCEK, JAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07158-03	74,506
SCHULTZ, ALBERT B.....	BIOMECHANICAL STUDIES OF IDIOPATHIC SCOLIOSIS.....	2R01 AM15575-07	120,454
ORGANIZATION TOTAL	12 932,011		
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
ANDERSON, CONWELL H.....	HYPOTHALAMIC MATURATION PARALLELING PUBERTY.....	5R01 HD05865-06	22,511
ANDERSON, TRUMAN O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05369-17	157,996
BARANY, MICHAEL.....	PROTEIN PHOSPHORYLATION IN MUSCLE.....	2R01 NS12172-04	43,660
BENEVENTO, LOUIS A.....	VISUAL, SENSORY, MOTOR AND ASSOCIATIONAL SYSTEMS.....	1R01 EY02940-01	55,600
BENNETT, THOMAS O.....	HISTOCOMPATIBILITY IN ANIMAL PENETRATING KERATOPLASTY.....	5R01 EY01989-02	60,727
BURNS, ELIZABETH M.....	NEUROPATHOLOGICAL CORRELATES OF MENTAL RETARDATION.....	5R01 HD09792-02	43,953
COHEN, CARL.....	THE IMMUNOBIOLOGY OF THE LABORATORY RABBIT.....	5R01 GM18350-08	46,357
CORDELL, GEOFFREY A.....	ANTITUMOR PRINCIPLES OF CATHARANTHUS & RHAZYA SPECIES.....	5R01 CA20164-02	29,486
DAS GUPTA, TAPAS K.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17954-04	183,736
DE SIMONE, JOSEPH.....	CONTROL OF HEMOGLOBIN SYNTHESIS.....	1R01 HL20920-01A1	67,738
DOUGHTY, CLYDE C.....	HUMAN CATARACTS AND ALDOSE REDUCTASE PROPERTIES.....	2R01 EY00449-07A1	30,196

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
DRAY, SHELDON.....	IMMUNOGLOBULIN ALLOTYPES.....	5R01 AI07043-14	190,350
DRAY, SHELDON.....	TUMOR IMMUNOTHERAPY WITH 'IMMUNE' RNA.....	5R01 CA18241-03	148,000
EPSTEIN, SAMUEL S.....	CHEMICAL CARCINOGENS IN THE PANCREAS.....	5R26 CA20914-03	29,473
EPSTEIN, SAMUEL S.....	CARCINOGENICITY OF ORALLY ADMINISTERED ASBESTOS.....	5R01 CA21684-02	73,974
FIAT, DANIEL.....	OXYGEN-17 NMR STUDIES OF PEPTIDE CONFORMATION.....	1R01 GM24813-01	85,414
FRIEDENSON, BERNARD A.....	IGG ANTIBODIES WITH THE SAME HEAVY OR LIGHT CHAIN.....	3R01 AI12363-03S1	3,193
GIBORI, GEULA.....	REGULATION OF LUTEAL FUNCTION IN THE PREGNANT RAT.....	1R01 HD11119-01	51,661
GOLDBERG, MORTON F.....	OPHTHALMIC RESEARCH CENTER CORE GRANT.....	1P30 EY01792-01A1	90,339
HANLY, W CAREY.....	REGULATION AND FUNCTION OF THE SECRETORY IGA SYSTEM.....	5R01 HD10855-02	64,927
HARVATH, LIANA.....	ALVEOLAR MACROPHAGE FUNCTION IN PSEUDOMONAS INFECTION.....	5R23 HL21212-02	32,377
HOLIAN, OKSANA M.....	EFFECT OF HORMONES ON PROTEIN KINASE IN THE PANCREAS.....	1R01 AM20838-01	8,880
HORNG, WAYNE J.....	REGULATION OF IG VH REGION ALLOTYPES.....	1R01 AI15228-01	56,597
JAFFE, RANDAL C.....	THYROID HORMONE REGULATION OF TADPOLE METAMORPHOSIS.....	5R01 AM18985-03	36,326
JAMPOL, LEE M.....	A LONGITUDINAL STUDY OF HYPERTENSIVE RETINOPATHY.....	1R01 EY02214-01	50,818
JONASSON, OLGA.....	DIABETES AND ISLET CELL STUDIES IN THE PRIMATE.....	5R01 AM18284-03	176,447
KNIGHT, KATHERINE L.....	STRUCTURE AND GENETIC CONTROL OF RABBIT IGA.....	5R01 AI11234-06	92,013
KURTZMAN, NEIL A.....	CONTROL OF RENAL HYDROGEN ION SECRETION.....	1R01 AM20170-01	52,874
LASKIN, DANIEL M.....	PSYCHOPHYSIOLOGY OF TMJ & OTHER FACIAL PAIN SYNDROMES.....	5R01 DE02899-10	107,223
LEVITSKY, SIDNEY.....	INTRAOPERATIVE PROTECTION OF THE MYOCARDIUM.....	5R01 HL18288-04	105,524
LEVITSKY, SIDNEY.....	PHRENIC NERVE PACING: NONINVASIVE DIAPHRAGM ANALYSIS.....	1R01 HL22844-01	135,036
LOURENCO, RUY V.....	DEFENSE MECHANISMS IN PATHOGENESIS OF EMPHYSEMA.....	5R01 HL13824-06	107,147
MADISON, VINCENT S.....	ROLE OF PEPTIDE-SOLVENT AND PEPTIDE-LIPID COMPLEXES.....	3R01 GM22514-02S1	4,492
MADISON, VINCENT S.....	ROLE OF PEPTIDE-SOLVENT AND PEPTIDE-LIPID COMPLEXES.....	5R01 GM22514-03	39,777
MEYER, JULIA.....	STUDIES ON NORMAL AND ALTERED ORAL MUCOSA.....	2R01 DE02342-09	86,120
MOLNAR, JANOS.....	BIOCHEMICAL STUDIES OF A MAJOR OPSONIC PROTEIN.....	9R01 CA25047-04A1	36,810
NYHUS, LLOYD M.....	SYMPATHETIC NERVOUS SYSTEM AND GASTRIC SECRETION.....	1R01 AM20724-01	14,235
OMACHI, AKIRA.....	ERYTHROCYTE METABOLISM IN MUSCULAR DISEASE.....	1R01 NS14134-01	32,223
ORTH, DAVID H.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY.....	1R10 EY02467-01	55,689
OSTRO, MARC J.....	CELLULAR TRANSLATION OF LIPOSOMALLY-DELIVERED MRNA.....	1R23 HL22839-01	44,262
PROUDFIT, HERBERT K.....	BULBOSPINAL MECHANISMS INVOLVED IN MORPHINE ANALGESIA.....	2R01 NS12649-04	58,721
PRUZANSKY, SAMUEL.....	STUDY OF CRANIOFACIAL ANOMALIES.....	5P01 DE02872-09	322,833
RABB, MAURICE F.....	COMPREHENSIVE SICKLE CELL CENTER.....	5P60 HL15168-07	1,105,788
REYNOLDS, WYNETKA A.....	TOXICITY OF ORGANIC MERCURY FOR THE FETUS AND NEWBORN.....	5R01 ES00820-05	82,241
REYNOLDS, WYNETKA A.....	PERINATAL RESEARCH SOCIETY-ANNUAL MEETING.....	1R13 HD11653-01	7,500
RICHARDS, N MARK.....	CELLULAR IMMUNE RESPONSES OF THE LUNG.....	1R01 HL19760-01A1	29,717
ROSEN, KENNETH M.....	PROSPECTIVE STUDIES OF CONDUCTION DISEASE.....	2R01 HL18794-04	119,824
ROTKIN, I D.....	EPIDEMIOLOGIC AND GENETIC STUDIES IN PROSTATIC CANCER.....	3R26 CA16925-04S1	27,502
SACHS, HOWARD G.....	DEVELOPMENT OF NORMAL AND MYOPATHIC MAMMALIAN HEART.....	3R01 HL18032-03S1	1,087
SCHLESINGER, DAVID H.....	PROTEIN INHIBITORS OF CALCIUM PHOSPHATE PRECIPITATION.....	1R01 DE05059-01	58,473
SCHLISELFELD, LOUIS H.....	HEART, PLATELET, MUSCLE MYOSINS AND ACTOMYOSINS.....	3R01 HL18179-03S1	3,108
SHARP, JOHN T.....	RESPIRATORY MUSCLES AND VENTILATORY CONTROL IN MAN.....	5R01 HL08789-11	51,847
SPRINGER, ALAN D.....	NEUROPEPTIDE FACILITATION OF MEMORY IN SENESCENCE.....	1R01 AG00871-01	34,464
SUGAR, JOEL.....	TRIGGER MECHANISMS OF RECURRENT HERPES KERATITIS.....	1R01 EY02426-01	50,978
TAO, ROBERT V.....	BIOCHEMISTRY AND METABOLISM OF LENTICULAR CERAMIDES.....	3R01 EY01821-01S1	31,225
TAO, ROBERT V.....	BIOCHEMISTRY AND METABOLISM OF LENTICULAR CERAMIDES.....	5R01 EY01821-02	42,189
TEODORESCU, MARIUS C.....	DIFFERENTIAL COUNTING OF LYMPHOCYTE SUBPOPULATIONS.....	5R01 AM19414-03	56,762
TEODORESCU, MARIUS C.....	BINDING OF BACTERIA TO NORMAL & LEUKEMIC LYMPHOCYTES.....	5R01 CA21399-02	29,600
TICHY, ANNA M.....	POST BURN GASTRIC MICROCIRCULATION.....	5R01 GM23405-02	28,564
TISSOT, ROBERT G.....	THE MAJOR HISTOCOMPATIBILITY COMPLEX OF THE RABBIT.....	5R01 CA23026-02	37,730
TISSOT, ROBERT G.....	IMMUNOBIOLOGY OF THE LABORATORY RABBIT.....	2P40 RR00627-08	155,736
TSO, MARK O.....	PATHOLOGY OF RETINAL DYSFUNCTION.....	5R01 EY01903-03	96,963
TSO, MARK O.....	PATHOLOGY AND PATHOGENESIS OF EDEMA OF OPTIC DISC.....	5R01 EY01904-03	94,476
TSO, MARK O.....	PATHOLOGY OF AN INHERITED RETINAL DYSTROPHY IN ANIMALS.....	1R01 EY02596-01	60,776
VAINISI, SAMUEL J.....	STUDIES ON OPHTHALMIC DISEASES.....	5R01 EY00874-07	77,855
VAN ALTEN, PIERSON J.....	ONTOGENY OF ADAPTIVE IMMUNITY.....	5R01 CA20172-03	52,288
VARY, JAMES C.....	MECHANISM OF BACTERIAL SPORE GERMINATION.....	5R01 AI12678-03	42,199
VENTON, DUANE L.....	ANTITUMOR AGENTS-SYNTHESIS OF 5'-NUCLEOSIDE CHELATORS.....	1R01 CA24047-01	63,009
VERHAGE, HAROLD G.....	HORMONAL CONTROL OF THE OVIDUCT.....	1R01 HD11404-01	48,313
VYGANTAS, CHARLES M.....	DIABETIC RETINOPATHY IN NONHUMAN PRIMATES.....	1R01 EY02183-01	71,779
WALTER, RODERICH W.....	BIOFUNCTIONAL CONFORMATION OF PEPTIDE HORMONES.....	5R01 AM18399-04	163,208

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
WEISSMANN, BERNARD.....	STRUCTURAL STUDY OF LUNG HEPARINOID POLYSACCHARIDES.....	1R01 HL21615-01	70,279
WERLEY, HARRIET H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05776-02	28,346
WILENSKY, JACOB T.....	DIAGNOSIS AND THERAPY OF ANGLE-CLOSURE GLAUCOMA.....	3R01 EY01754-01S1	5,180
WOLFF, ARTHUR H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05789-02	19,657
ZANEVELD, LOURENS J.....	HUMAN SPERM ENZYMES, INHIBITORS AND FERTILIZATION.....	5R01 HD09868-03	61,261
ORGANIZATION TOTAL	76 6,045,639		
DE KALB			
NORTHERN ILLINOIS UNIVERSITY ZIP CODE 60115			
BRILES, WORTHIE E.....	IMMUNOGENETICS OF TUMOR RELATED ALLOANTIGENS.....	2R01 CA12796-07	74,344
ERMAN, JAMES E.....	THE MECHANISM OF CYTOCHROME C PEROXIDASE CATALYSIS.....	2R01 GM18648-07	70,062
HAMPEL, ARNOLD E.....	AMINOACYL-TRNA SYNTHETASES AND RNAS IN CHO CELLS.....	5R01 GM19506-06	52,108
MITCHELL, JOHN L.....	REGULATION OF ORNITHINE DECARBOXYLASE ACTIVITY.....	2R01 AM17949-04	51,299
MITTLER, SIDNEY.....	HYPERTHERMIA AND RADIATION INDUCED GENETIC DAMAGE.....	1R01 CA23245-01	43,038
STEPHENS, M IRENE.....	A LONGITUDINAL STUDY OF S-MISARTICULATING CHILDREN.....	1R01 NS15069-01	60,410
VAN DUYN, H JOHN.....	RATE OF WORD PRESENTATION AND EAR-ASYMMETRY IN CHILDREN.....	1R01 NS14042-01	6,463
ORGANIZATION TOTAL	7 357,724		
EDWARDSVILLE			
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT EDWARDSVILLE ZIP CODE 62025			
BROWN, DAVID G.....	SALIVARY GLANDS, POLYAMINES AND CHEMOTHERAPY.....	5R23 DE04447-02	23,853
LEVY, MICHAEL R.....	FACTORS INFLUENCING RATES OF ENZYME DEGRADATION.....	5R01 GM23281-03	40,754
MATTA, MICHAEL S.....	POLAR EFFECTS IN MODEL SUBSTRATES OF CHYMOTRYPSIN.....	2R01 GM18652-07	65,347
WHITSON, S WILLIAM.....	HISTOCHEMISTRY OF CADMIUM AND ZINC IODIDE OSMIUM.....	5R23 DE04509-03	28,180
ORGANIZATION TOTAL	4 158,134		
EVANSTON			
AMERICAN ACADEMY OF PEDIATRICS ZIP CODE 60204			
D'ANGIO, GIULIO J.....	NATIONAL WILMS' TUMOR STUDY.....	5R10 CA11722-10	172,377
ORGANIZATION TOTAL	1 172,377		
EVANSTON HOSPITAL ZIP CODE 60201			
SPRINGER, GEORG F.....	HUMAN BREAST CANCER-ASSOCIATED ANTIGENS AND CYTOTOXIN.....	5R01 CA19083-03	51,380
SPRINGER, GEORG F.....	STRUCTURE AND HUMAN CANCER RELATION OF BLOOD GROUP MN.....	5R01 CA22540-17	96,271
ZUCKERMAN, LEON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05629-11	17,322
ORGANIZATION TOTAL	3 164,973		
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
BASOLO, FRED.....	SYNTHETIC OXYGEN CARRIERS.....	5R01 HL13412-17	93,115
BERGMAN, RICHARD N.....	QUANTITATIVE STUDIES OF METABOLIC ORGAN DYNAMICS.....	5R01 AM20443-02	73,333
BLAKE, R RANDOLPH.....	SPATIAL VISION IN NORMAL AND VISUALLY DEPRIVED ANIMALS.....	2R01 EY01596-03	67,441
CAMPBELL, CONSTANCE S.....	REPRODUCTIVE RHYTHMICITY: IMPACT OF THE ENVIRONMENT.....	5R01 HD10050-03	46,183
COHEN, ISAAC.....	COUPLING OF PLATELET CONTRACTILE PROTEINS TO FIBRIN.....	5R01 HL20106-02	75,720
DALLOS, PETER J.....	STIMULUS-RELATED DC POTENTIALS OF THE COCHLEA.....	5R01 NS06730-12	90,863
DUMAS, LAWRENCE B.....	EUKARYOTIC CELL PROTEINS THAT INITIATE DNA SYNTHESIS.....	5R01 GM23443-02	52,885
ENROTH-CUGELL, CHRISTINA A.....	RETINAL GANGLION CELL RESPONSES TO TIME-VARYING STIMULI.....	5R01 EY00206-18	91,439
EPSTEIN, MAX.....	MATERIALS AND COMPONENTS FOR MINIATURE FIBERSCOPES.....	2R01 GM21367-04	82,277
GESTELAND, ROBERT C.....	ROLE OF CELLULAR ORGANELLES IN OLFACTORY RECEPTION.....	1R01 NS14663-01	47,490
GILBERT, LAWRENCE I.....	BIOCHEMICAL ANALYSIS OF THE ACTION OF HORMONES.....	5R01 AM02818-20	109,986
GOLDBERG, ERWIN.....	REPRODUCTIVE BIOCHEMISTRY OF TESTES SPECIFIC LDH-X.....	2R01 HD05863-07	93,840
HINES, RODERICK L.....	ELECTRON PHASE MICROSCOPY OF BIOMOLECULES ON CRYSTALS.....	1R01 GM25443-01	22,579
HOFFMAN, BRIAN M.....	COBOLGLOBINS: COBALT SUBSTITUTED MYO- AND HEMOGLOBINS.....	5R01 HL13531-06	62,941
IBERS, JAMES A.....	MOLECULAR OXYGEN CARRIERS—SYNTHESIS, STRUCTURE, BONDING.....	5R01 HL13157-09	88,172
JACOBS, JOHN E.....	HIGH-SPEED FAR INFRARED SYSTEM FOR THERMAL IMAGING.....	5R01 GM22471-03	27,558
JACOBS, JOHN E.....	NEW METHODS OF STUDYING BLOOD COAGULATION KINETICS.....	5R01 HL17769-03	68,786
JACOBS, JOHN E.....	NON-INVASIVE SYSTEM FOR ARTERIOSCLEROSIS STUDIES.....	1R01 HL22604-01	81,333

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
KAUFFMAN, JOHN W.....	RAMAN SPECTROSCOPY OF ERYTHROCYTE AND MODEL MEMBRANES.....	1R01 HL21404-01A1	60,772
KERTESZ, ANDREW E.....	FUNCTIONAL ASPECTS OF PANUM'S FUSIONAL AREAS.....	3R01 EY01055-06S1	11,788
KERTESZ, ANDREW E.....	FUNCTIONAL ASPECTS OF PANUM'S FUSIONAL AREAS.....	5R01 EY01055-07	45,213
KLOTZ, IRVING M.....	STABILITY OF HYDROGEN BONDS IN PROTEINS.....	5R01 GM09280-17	105,920
KLOTZ, IRVING M.....	MOLECULAR BIOLOGY OF HEMERYTHRIN AND HEMOCYANIN.....	5R01 HL08299-16	108,653
LETSINGER, ROBERT L.....	NEW METHODS FOR THE SYNTHESIS OF POLYNUCLEOTIDES.....	5R01 GM10265-16	113,815
LOACH, PAUL A.....	STRUCTURE AND FUNCTION OF PHOTOSYNTHETIC MEMBRANES.....	5R01 GM11741-12	86,130
LORAND, LASZLO.....	COAGULATION OF BLOOD.....	5R01 HL02212-23	117,865
LORAND, LASZLO.....	ENZYME ASSAYS IN BLOOD CLOTTING.....	2R01 HL16346-09	112,353
MACDONALD, ROBERT C.....	NORMAL AND NEOPLASTICALLY TRANSFORMED CELL SURFACES.....	5R01 GM23153-03	47,293
MACK, RAYMOND W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07028-13	139,208
MARGOLIASH, EMANUEL.....	ANTIGENICITY OF GLOBULAR PROTEINS.....	5R01 AI12001-05	73,564
MARGOLIASH, EMANUEL.....	MITOCHONDRIAL MEMBRANE METABOLIC ROLE OF CYTOCHROME C.....	5R01 GM19121-07	151,670
MARGOLIASH, EMANUEL.....	A QUANTITATIVE STUDY TO IMPROVE THE EDMAN CHEMISTRY.....	1R01 GM24806-01	90,650
MARGOLIASH, EMANUEL.....	AMINO ACID ANALYZER FOR BIOCHEMICAL RESEARCH.....	2R01 HL11119-17	55,140
MARSHALL, JAMES A.....	SYNTHESIS OF TUMOR INHIBITORY COMPOUNDS.....	2R01 CA11089-16	80,206
MOCKROS, LYLE F.....	ARTIFICIAL LUNGS.....	5R01 HL16582-05	106,985
NERLOVE, MARC L.....	WOMEN'S LIFE CYCLE TIME ALLOCATION—ECONOMETRIC STUDY.....	1R01 HD12037-01	85,121
NEUHAUS, FRANCIS C.....	BIOSYNTHESIS OF BACTERIAL CELL-WALL COMPONENTS.....	5R01 AI04615-17	114,694
OLIVIER, THOMAS J.....	GEOGRAPHICAL AND GENETIC VARIATION IN OLIVE BABOONS.....	1R01 GM24407-01	37,336
PIERCE, SUSAN K.....	CELLULAR MECHANISMS REGULATING IMMUNE RESPONSES.....	1R01 AI14765-01	71,424
SCHWARTZ, NEEHA B.....	ENVIRONMENTAL AND HORMONAL INTERPLAY OF OVULATION.....	5R01 HD07504-06	104,334
SHEMIN, DAVID.....	PORPHYRINS: ENZYMIC MECHANISMS AND CONTROL OF SYNTHESIS.....	2R01 AM13091-11	98,175
SILVERMAN, RICHARD B.....	MECHANISM OF ACTION AND DESIGN OF ANTITUMOR AGENTS.....	5R01 CA21156-02	59,554
SPEAR, BRIAN B.....	ORGANIZATION OF GENE-SIZED DNA PIECES IN OXYTRICHA.....	5R01 GM23440-02	34,267
TUREK, FRED W.....	REPRODUCTION: ROLE OF PHOTOPERIOD AND GONADAL HORMONES.....	5R01 HD09885-03	43,650
WIGHTMAN, FREDERIC L.....	AUDITORY SPECTRAL PATTERN PERCEPTION—PITCH PERCEPTION.....	5R01 NS12045-03	55,880
WU, TAI T.....	ATTEMPTS TO PREDICT 3-D PROTEIN BACKBONE STRUCTURE.....	2R01 GM21482-04	19,796
ORGANIZATION TOTAL	46	3,507,397	
HINES			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 60141			
GREENLEE, HERBERT B.....	LIVER ABNORMALITIES AFTER JEJUNOILEAL BYPASS.....	1R01 AM21833-01	46,391
LAWRENCE, ANN M.....	CHARACTERIZATION OF SUBMAXILLARY GLAND 'BIG' GLUCAGON.....	5R01 AM20307-02	25,139
ORGANIZATION TOTAL	2	71,530	
MAYWOOD			
LDYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153			
BLOOR, BYRON M.....	CEREBRAL HEMODYNAMICS IN SUBARACHNOID HEMORRHAGE.....	5R01 NS11169-04	32,883
CASTRO, ANTHONY J.....	NEURAL PLASTICITY IN THE MOTOR SYSTEM.....	5R01 NS13230-04	31,410
DAVIS, JOSEPH R.....	PHARMACOLOGICAL STUDIES ON THE TESTICULAR CAPSULE.....	5R01 HD09416-03	45,302
FARRAND, STEPHEN K.....	MOLECULAR GENETICS OF AGROBACTERIUM PLASMIDS.....	5R01 CA19402-03	31,629
FRANKFATER, ALLEN.....	THE BIOCHEMISTRY OF AUTONOMIC CONTROL AND SIDS.....	5R01 HD10311-02	29,028
GAIK, GERALDINE C.....	QUAIL CELL GRAFTS AND THE CHICK TRIGEMINAL GANGLION.....	1R01 DE04785-01	7,763
HOERMAN, KIRK C.....	AGING AND OPTICAL CHANGES IN TISSUES.....	5R01 DE04659-02	31,444
KARCZMAR, ALEXANDER G.....	ACTION OF CHOLINERGIC AND OTHER DRUGS AT SEVERAL SITES.....	5R01 NS06455-13	87,997
LANGE, CHARLES F.....	IMMUNOCHEMISTRY OF AGING KIDNEY—NEONATE TO ADULT.....	1R01 AG00497-01A1	37,698
NORTH, RICHARD A.....	SINGLE NEURON ACTIVITY.....	5R01 NS06672-12	49,745
O'MORCHOE, CHARLES C.....	THE ORIGIN AND FORMATION OF RENAL LYMPH.....	2R01 AM18473-04	86,325
PEISS, CLARENCE N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05368-17	68,849
PEREZ-TAMAYO, RUHERI.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA19053-03	77,988
RANDALL, WALTER C.....	REGULATION OF THE CARDIOVASCULAR SYSTEM.....	5P01 HL08682-15	638,571
SAYEED, MOHAMMED M.....	CELLULAR ASPECTS OF LUNG INJURY.....	5R01 HL20878-02	62,527
SCHMIDT, ROBERT S.....	NEUROETHOLOGY.....	2R01 NS06673-13	50,667
SCHULTZ, RICHARD M.....	THERMODYNAMIC STUDIES OF ENZYME-SUBSTRATE ASSOCIATION.....	5R01 AM16733-05	29,708
SPENCER, HERTA.....	INTERACTION OF FLUORIDE WITH MINERALS IN MAN.....	5R01 DE02486-10	67,213
YOTIS, WILLIAM W.....	BINDING OF FLUORIDE BY CARIOGENIC BACTERIA.....	1R01 DE05027-01	44,098

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
ORGANIZATION TOTAL	19	1,510,845	
NORMAL			
ILLINOIS STATE UNIVERSITY ZIP CODE 61761			
RICHARDSON, ARLAN G	EFFECT OF AGING ON RAT LIVER MESSENGER RNA.....	5R01 AG00344-03	38,257
ORGANIZATION TOTAL	1	38,257	
NORTH CHICAGO			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 60064			
BREEN, MOIRA	ISOLATION AND CHARACTERIZATION OF THE PROTEOGLYCAN.....	1R01 AG00902-01	30,101
ORGANIZATION TOTAL	1	30,101	
PEORIA			
UNIVERSITY OF ILLINOIS PEORIA SCHOOL OF MEDICINE ZIP CODE 61605			
DIETRICH, JOHN W.....	MEMBRANE-RELATED EVENTS IN BONE, CALCIUM METABOLISM.....	1R01 AM20901-01	27,025
ORGANIZATION TOTAL	1	27,025	
URBANA			
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801			
ALGER, NELDA E.....	NOSEMA ALGERAE AS A BIOLOGICAL CONTROL OF MOSQUITOES.....	5R01 AI11123-06	60,343
BALDWIN, THOMAS O.....	THE MECHANISM OF AGE-RELATED ENZYME MODIFICATION.....	1R01 AG00884-01	44,773
BARR, LLOYD.....	ISOLATION AND ANALYSIS OF HEART NA CHANNEL.....	5R01 HL21342-02	59,225
BAUMRUCKER, CRAIG R.....	CALCIUM TRANSPORT AND DISTRIBUTION IN MAMMARY CELLS.....	1R01 HD10942-01	50,928
BEAK, PETER A.....	NEW SYNTHETIC METHODS USEFUL FOR CHEMOTHERAPEUTICS.....	5R01 GM18874-07	64,005
BILGER, ROBERT C.....	UNDERLYING CONSTRUCTS IN AUDITION.....	5R01 NS14499-02	85,875
BROWN, ANN L.....	STRATEGIES FOR STUDYING PROSE PASSAGES.....	2R01 HD06864-07	51,782
BROWN, THEODORE L.....	METAL ION BINDING STUDIES.....	5R01 GM23395-02	55,062
BUETOW, DENNIS E.....	PROTEIN BIOSYNTHESIS IN MITOCHONDRIA.....	5R01 GM19641-05	48,559
BUETOW, DENNIS E.....	RESTRICTION NUCLEASE MAPPING OF ORGANELLE DNA.....	5R01 GM22431-03	56,936
CAMPIONE, JOSEPH C.....	STUDY OF COGNITION IN THE RETARDED CHILD.....	5P01 HD05951-08	323,477
CLARK, JOHN M, JR.....	THE MECHANISM OF MESSENGER-RNA TRANSLATION.....	5R01 GM08647-17	51,588
COATES, ROBERT M.....	THE 6-AZA-CLAISEN REARRANGEMENT IN CARCINOGENESIS.....	5R01 CA20436-02	50,393
COATES, ROBERT M.....	BIOGENESIS AND BIOSYNTHESIS OF TERPENES AND STEROLS.....	5R01 GM13956-13	62,749
COHEN, LESLIE B.....	INFORMATION PROCESSING IN THE HUMAN INFANT.....	2R01 HD03858-09	66,834
CONRAD, H EDWARD.....	VARIABILITY OF CARBOHYDRATE STRUCTURE AND ACTIVITY.....	5R01 HD08057-15	101,763
CONRAD, H EDWARD.....	HEPARIN AND HEPARIN SULFATE: STRUCTURE AND ACTIVITY.....	9R01 HL21763-09	66,341
COOK, KELSEY D.....	MASS SPECTROMETRY OF NON-VOLATILE, ORGANIC COMPOUNDS.....	5R01 GM19749-04	55,235
CRONAN, JOHN E, JR.....	GENETIC APPROACHES TO REGULATION OF LIPID METABOLISM.....	7R01 AI15650-01	45,444
DEBRUNNER, PETER G.....	RESONANCE SPECTROSCOPY OF ENZYMES.....	2R01 GM16406-10	77,024
DIERKS, RICHARD E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05460-16	14,959
DUCOFF, HOWARD S.....	SPLIT-DOSE REPAIR—DIVIDING VS. POSTMITOTIC CELLS.....	2R01 CA13779-06	40,789
DUNN, FLOYD.....	ULTRASONIC ABSORPTION BY BIOLOGICAL MATERIALS.....	5R01 GM12281-15	52,715
EBREY, THOMAS G.....	STUDIES ON THE MECHANISM OF VISUAL EXCITATION.....	5R01 EY01323-06	51,478
FENG, ALBERT S.....	PLASTICITY OF DENDRITIC DEVELOPMENT.....	1R01 NS14488-01	59,369
FRAUENFELDER, HANS.....	HEME PROTEIN REACTIONS.....	5R01 GM18051-07	95,096
GENNIS, ROBERT B.....	PROTEIN-LIPID INTERACTION.....	5R01 HL16101-05	44,914
GETZ, LOWELL L.....	DISPERSAL AS A POPULATION REGULATORY MECHANISM.....	5R01 HD09328-04	30,218
GLASER, MICHAEL.....	LIPID METABOLISM AND MEMBRANE STRUCTURE AND FUNCTION.....	2R01 GM21953-04	71,729
GUNSALUS, IRWIN C.....	METABOLIC MECHANISMS.....	5R01 AM00562-26	247,597
GUNSALUS, IRWIN C.....	PROTEIN STRUCTURE MODIFICATION AND OXIDATION.....	5R01 GM21161-04	49,343
HAGER, LOWELL P.....	BIOCHEMICAL STUDIES ON T ANTIGEN AND TRANSFORMED CELLS.....	5R01 CA17619-03	63,541
HAGER, LOWELL P.....	ENZYMATIC ACTIVATION MECHANISMS.....	2R01 GM07768-19	119,568
HAIGHT, GILBERT P.....	BIOENERGY CYCLES: REDOX-INDUCED P-O-P BOND REACTIONS.....	5R01 GM22887-03	62,814
HELMAN, SANDY I.....	ELECTROPHYSIOLOGY: RENAL TUBULES AND OTHER EPITHELIA.....	2R01 AM16663-07	76,816
HENDRICKSON, DAVID N.....	METAL SITES IN METALLOPROTEINS.....	5R01 HL13652-08	59,968

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ILLINOIS—Continued			
HIXON, JAMES E.....	LUTEOTROPIC AND LUTEOLYTIC EFFECTS OF PGF 2-ALPHA.....	1R01 HD11759-01	71,618
JACKSON, GARY L.....	CONTROL OF LUTEINIZING HORMONE BIOSYNTHESIS.....	5R01 HD09659-03	57,435
JONAS, ANA.....	STRUCTURE AND FUNCTION OF SERUM LIPOPROTEINS.....	5R01 HL16059-06	39,784
KAPLAN, SAMUEL.....	INDUCTION AND BIOGENESIS OF SUBCELLULAR ORGANELLES.....	5R01 GM15590-12	63,221
KATZENELLENBOGEN, BENITA S.....	ANTIESTROGENS: REPRODUCTIVE TISSUE AND TUMOR GROWTH.....	5R01 CA18119-03	69,231
KATZENELLENBOGEN, BENITA S.....	EFFECTS OF ESTROGEN ON HUMAN UTERUS TISSUE IN VITRO.....	2R01 HD06726-07	88,222
KATZENELLENBOGEN, JOHN A.....	UTERINE ESTROGEN RECEPTOR: AFFINITY LABELING.....	5R01 AM15556-08	51,820
KEMPER, BYRON W.....	BIOSYNTHESIS OF PARATHYROID HORMONE.....	5R01 AM18866-03	40,826
KONISKY, JORDAN.....	MODE OF ACTION OF I-COLICINS ON ESCHERICHIA COLI.....	5R01 AI10106-08	39,449
LARSEN, JOSEPH R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07030-13	200,462
LEONARD, NELSON J.....	NUCLEOSIDES, NUCLEIC ACIDS, AND CELL DIVISION FACTORS.....	5R01 GM05829-20	113,349
MALMSTADT, HOWARD V.....	ANALYTICAL/CLINICAL REACTION-RATE METHODOLOGY.....	2R01 GM21984-04	80,672
MANGEL, WALTER F.....	CONTROL OF GENE EXPRESSION BY THE DNA TUMOR VIRUSES.....	5R01 CA19084-03	56,848
MARTIN, JAMES C.....	SYNTHETIC AND PHYSICAL STUDIES OF ANTICANCER AGENTS.....	5R01 CA13963-06	59,861
MEINS, FREDERICK, JR.....	HERITABLE CHANGES IN PLANT TUMOR DEVELOPMENT.....	5R01 CA20053-03	62,401
METCALF, ROBERT L.....	NEUROTOXICITY OF HALOGENATED PHOSPHONATE ESTERS.....	5R01 ES01492-02	52,060
MILNER, JOHN A.....	ARGININE DEFICIENCY AND OROTIC ACIDURIA.....	5R01 AM19294-02	44,686
NANNEY, DAVID L.....	AGING AND TEMPORAL PATTERNING IN TETRAHYMENA.....	5R01 AG00010-02	54,683
NANNEY, DAVID L.....	GENETIC STUDIES WITH TETRAHYMENA.....	5R01 GM07779-17	105,463
NISHIDA, TOSHIRO.....	ROLE OF PLASMA LIPOPROTEINS IN ATHEROSCLEROSIS.....	5R01 HL17597-05	69,006
O'BRIEN, WILLIAM D, JR.....	ULTRASONIC PROPAGATION PROPERTIES IN INTACT TISSUE.....	1R01 GM24994-01	186,979
OLDFIELD, ERIC.....	HIGH-FIELD NMR STUDIES OF RESPIRATORY PROTEINS.....	5R01 HL19481-03	26,919
ORDAL, GEORGE W.....	PHOTOTACTIC AND CHEMOTACTIC BEHAVIOR OF BACTERIA.....	5R01 GM21130-05	64,265
PAUL, IAIN C.....	X-RAY STUDIES ON BIOLOGICALLY IMPORTANT MOLECULES.....	5R01 GM19336-07	67,667
PLEWA, MICHAEL J.....	A MAIZE MONITOR FOR ENVIRONMENTAL GENOTOXINS.....	1R01 ES01895-01	45,561
PROSSER, C LADD.....	MEMBRANE PROPERTIES OF GASTROINTESTINAL MUSCLES.....	5R01 AM12768-10	54,806
REICHMANN, MANFRED E.....	AUTOINTERFERENCE IN VIRUS INFECTIONS AND MALIGNANCY.....	5R01 AI12070-05	104,726
RHOTEN, WILLIAM B.....	DYNAMICS OF INSULIN SECRETION DURING DIFFERENTIATION.....	5R01 AM19538-02	28,080
RINEHART, KENNETH L, JR.....	CHEMISTRY AND BIOCHEMISTRY OF CERTAIN ANTIBIOTICS.....	5R01 AI01278-22	83,240
RINEHART, KENNETH L, JR.....	MASS SPECTRA OF ANTIBIOTICS AND RELATED COMPOUNDS.....	5R01 AI04769-17	75,738
RINEHART, KENNETH L, JR.....	HIGH RESOLUTION MASS SPECTRA OF BIOORGANIC COMPOUNDS.....	5R01 CA11388-09	82,076
SAVAGE, DWAYNE C.....	INFLUENCES OF NORMAL MICROFLORA ON GUT HISTOLOGY.....	3R01 AI11858-05S1	10,812
SAVAGE, DWAYNE C.....	INFLUENCES OF NORMAL MICROFLORA ON GUT HISTOLOGY.....	5R01 AI11858-06	74,567
SCHOEN, ROBERT.....	COHORT MARRIAGE, DIVORCE AND FERTILITY IN 4 NATIONS.....	1R01 HD11756-01	49,732
SEGRE, DIEGO.....	PARAMETERS OF THE IMMUNE RESPONSE IN AGED MICE.....	5R01 AG00451-06	69,420
SHAPIRO, DAVID J.....	REGULATION OF HMG-COA REDUCTASE AND STEROL SYNTHESIS.....	2R01 HL17882-04	37,434
SHAW, PAUL D.....	MECHANISM OF ACTION OF MARINE ANTIMICROBIAL AGENTS.....	5R01 AI14048-02	47,523
SHERWOOD, ORRIN D.....	RELAXIN: BIOCHEMICAL AND PHYSIOLOGICAL STUDIES.....	2R01 HD08700-04	46,429
STEFFENSEN, DALE M.....	GENE MAPPING BY IN SITU HYBRIDIZATION.....	2R01 GM21123-04A1	58,921
SWITZER, ROBERT L.....	NOVEL CONTROL MECHANISMS IN ENDOSPORE FORMATION.....	5R01 AI11121-06	33,137
SWITZER, ROBERT L.....	REGULATION AND MECHANISM OF PRPP SYNTHETASE.....	2R01 AM13488-10	66,757
TEITELBAUM, PHILIP.....	EFFECT OF LEARNING ON LATERAL HYPOTHALAMIC RECOVERY.....	5R01 NS11671-06	90,893
UHLENBECK, OLKE C.....	STRUCTURE AND FUNCTION OF RIBONUCLEIC ACID.....	2R01 GM19059-07	113,242
VISEK, WILLARD J.....	DIETARY PROTEIN-FAT INTERACTIONS IN DMBA MAMMARY CANCER.....	1R01 CA22326-01A1	44,052
WEBER, GREGORIO.....	PROTEIN CONFIGURATION BY FLUORESCENCE TECHNIQUES.....	2R01 GM11223-16	189,127
WEBER, MICHAEL J.....	BIOLOGICAL SAFETY (P3) FACILITY.....	1P30 AI15312-01	53,800
WEBER, MICHAEL J.....	EARLY CELL-SURFACE CHANGES IN VIRAL ONCOGENESIS.....	5R01 CA12467-07	74,173
WEBER, MICHAEL J.....	MEMBRANE LIPIDS IN ROUS SARCOMA VIRUS INFECTION.....	5R01 CA20410-02	49,894
WEBER, MICHAEL J.....	PROTEASE-ACTIVATED PRO-DRUGS IN CANCER CHEMOTHERAPY.....	1R01 CA23498-01	70,529
WILLIS, JOHN S.....	ION TRANSPORT IN CELLS OF HIBERNATING MAMMALS.....	5R01 GM11494-15	81,950
WILLIS, JUDITH H.....	ANALYSIS OF DEVELOPMENT IN INSECTS.....	2R01 AG00248-07	100,024
WOLFE, RALPH S.....	A NEW MICROBIAL VITAMIN-COENZYME RELATIONSHIP.....	5R01 AI12277-05	41,881
WONG, PAUL K.....	GENETICS OF HELPER-INDEPENDENT MOUSE SARCOMA VIRUS.....	5R01 CA19723-03	64,472
ZEHR, JOHN E.....	CENTRAL NERVOUS CONTROL OF RENIN AND BLOOD PRESSURE.....	5R01 HL15307-06	59,901
ORGANIZATION TOTAL	90	6,389,074	
STATE TOTAL	621	59,039,675	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA			
BLOOMINGTON			
INDIANA UNIVERSITY AT BLOOMINGTON ZIP CODE 47401			
ALLERHAND, ADAM.....	CARBON-13 NMR STUDIES OF SPECIFIC SITES IN PROTEINS.....	5R01 GM22620-03	61,853
ASLIN, RICHARD N.....	PERCEPTION OF SPEECH AND NONSPEECH SOUNDS IN INFANTS.....	1R01 HD11915-01	73,500
BLUMENTHAL, THOMAS.....	QBETA REPLICASE AND PROTEIN SYNTHESIS FACTORS.....	5R01 GM21024-05	59,916
BRIGGS, ROBERT W.....	GENE ACTION IN OOGENESIS AND EMBRYONIC DEVELOPMENT.....	5R01 GM05850-20	54,417
CASTELLAN, N JOHN, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07031-13	128,889
CHOOI, YEAN W.....	RIBOSOMAL TRANSCRIPTION UNITS IN D. MELANOGASTER.....	1R01 GM23410-01A1	63,471
CORDES, EUGENE H.....	THE CHEMISTRY OF HUMAN PLASMA LIPOPROTEINS.....	5R01 GM19631-15	65,568
CRAIG, JAMES C.....	CUTANEOUS PATTERN PERCEPTION.....	5R01 NS09783-08	57,075
GURD, FRANK R.....	STRUCTURE AND REACTIVITY OF PROTEINS AND LIPOPROTEINS.....	5R01 HL05556-19	123,013
GURD, FRANK R.....	SPECIFIC ENRICHMENT OF MYOGLOBINS FOR CARBON-13 NMR.....	5R01 HL14680-07	70,253
GURD, RUTH S.....	STRUCTURE-FUNCTION RELATIONSHIPS OF GLUCAGON.....	5R01 AM21121-02	30,746
HARMONY, JUDITH A.....	INTERACTION OF PLASMA LIPOPROTEINS WITH ERYTHROCYTES.....	5R01 HL20882-02	44,944
HAUROWITZ, FELIX.....	ALLOTYPY AND DIVERSITY OF HAPTEN-SPECIFIC ANTIBODIES.....	5R01 AI09752-29	8,700
HAYES, JOHN M.....	STABLE ISOTOPE RATIO MEASUREMENT.....	5R01 GM18979-07	63,582
HIEFTJE, GARY M.....	CYBERNATION PROCEDURES IN INSTRUMENTAL ANALYSIS.....	5R01 GM17904-06	40,564
HIRS, CHRISTOPHE H.....	STRUCTURE AND FUNCTION OF PANCREATIC ENZYMES.....	5R01 AM14307-09	45,287
HOFSTETTER, HENRY W.....	MYOPIA STUDY.....	1R01 EY02411-01	28,872
JASKUNAS, S RICHARD.....	REGULATION OF RIBOSOME BIOSYNTHESIS.....	5R01 GM24347-02	69,442
KAUFMAN, THOMAS C.....	ORGANIZATION OF THE DROSOPHILA GENOME.....	5R01 GM24299-02	38,368
KOCHI, JAY K.....	MODELS FOR BIOLOGICAL ELECTRON TRANSPORT.....	5R01 GM23535-02	20,340
MAHLER, HENRY R.....	THE BIOSYNTHESIS OF RESPIRATORY ENZYMES.....	5R01 GM12228-15	116,316
MAHLER, HENRY R.....	DYNAMICS OF NEURONAL MEMBRANE PROTEINS.....	5R01 NS08309-08	76,053
MAHOWALD, ANTHONY P.....	ULTRASTRUCTURAL STUDIES OF DROSOPHILA DEVELOPMENT.....	5R01 HD07983-05	63,786
MALACINSKI, GEORGE M.....	REGULATION OF GENE ACTION IN EARLY EMBRYOGENESIS.....	1R01 HD11295-01	28,788
NOVOTNY, MILOS V.....	HIGH-RESOLUTION GC METABOLIC PROFILES.....	5R01 GM23668-02	48,348
NOVOTNY, MILOS V.....	IMPROVE BIOCHEM. HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY.....	1R01 GM24349-01A1	39,857
PISONI, DAVID B.....	AUDITORY AND PHONETIC PROCESSES IN SPEECH PERCEPTION.....	5R01 NS12179-04	57,587
POLISKY, BARRY A.....	EUCARYOTIC DNA EXPRESSION IN BACTERIA.....	5R01 GM24212-02	58,467
PREER, JOHN R, JR.....	GENETICS AND GENERAL BIOLOGY OF PARAMECIUM.....	5R01 GM20038-05	56,813
PUTNAM, FRANK W.....	BLOOD PLASMA PROTEINS: STRUCTURE AND FUNCTION.....	5R01 AM19221-03	96,217
PUTNAM, FRANK W.....	ABNORMAL PROTEINS IN MULTIPLE MYELOMA.....	5R01 CA08497-14	170,893
RAFF, RUDOLF A.....	REGULATION OF PROTEIN SYNTHESIS IN EARLY DEVELOPMENT.....	3R01 HD06902-06S1	8,926
RAFF, RUDOLF A.....	REGULATION OF PROTEIN SYNTHESIS IN EARLY DEVELOPMENT.....	5R01 HD06902-07	63,697
RANDOLPH, POLLEY A.....	PHYSIOLOGY AND GENETICS OF REPRODUCTION IN MAMMALS.....	5R01 HD11264-02	31,972
RICHARDSON, JOHN P.....	FACTORS THAT CONTROL RNA TRANSCRIPTION.....	5R01 AI10142-08	56,085
SCHROEDER, DOLORES M.....	ANATOMICAL ORGANIZATION OF INFRARED SYSTEM.....	1R01 NS14031-01	51,433
SONNEBORN, TRACY M.....	NORMAL AND ABNORMAL CELL GROWTH AND HEREDITY.....	5R01 GM15410-11	61,550
SURZYCKI, STEFAN J.....	ADENOVIRUS GENE EXPRESSION IN VITRO AND IN VIVO.....	5R01 AI13382-03	65,550
SURZYCKI, STEFAN J.....	TRANSCRIPTION OF CHLOROPLAST DNA OF C. REINHARDI.....	5R01 GM22968-03	50,815
WILSON, STEPHEN R.....	THE TOTAL SYNTHESIS OF SELECTED PYRROLIZIDINE ALKALOIDS.....	5R01 GM24438-02	36,294
ORGANIZATION TOTAL	40	2,388,247	
GOSHEN			
GOSHEN COLLEGE ZIP CODE 46526			
JACOBS, MERLE E.....	EFFECTS OF BETA-ALANINE ON BEHAVIOR AND STRUCTURE.....	2R01 GM18680-07	39,483
ORGANIZATION TOTAL	1	39,483	
INDIANAPOLIS			
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS ZIP CODE 46202			
ALDO-BENSON, MARLENE A.....	ROLE OF HAPTEN-BEARING CELL IN TOLERANCE.....	1R01 CA23886-01A1	37,509
ALLMANN, DAVID W.....	EFFECT OF FLUORIDE ON CAMP AND GLUCOSE METABOLISM.....	5R01 DE04387-02	43,508
ARMSTRONG, WILLIAM M.....	ION TRANSPORT IN SMALL INTESTINE.....	2R01 AM12715-10	64,546
BAEHNER, ROBERT L.....	LEUKOCYTE METABOLISM RELATED TO RECURRENT INFECTION.....	5R01 AI10892-06	75,464

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
BAEHNER, ROBERT L.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA13809-06	164,488
BAEHNER, ROBERT L.....	BIOCHEMICAL BASIS OF OXYGEN DAMAGE TO LUNG CELLS.....	5R01 HL19779-03	69,061
BEERING, STEVEN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05371-17	189,943
BEN-JONATHAN, NIRA.....	CONTROL OF PROLACTIN SECRETION BY CATECHOLAMINES.....	1R01 NS13243-01A1	59,261
BENSON, MERRILL D.....	PROTEIN SAA IN NEOPLASTIC DISEASE.....	5R01 CA22141-02	23,998
BESCH, HENRY R, JR.....	EXPERIMENTAL STUDIES OF GLUCAGON.....	5R01 AM18958-02	47,515
BIXLER, DAVID.....	ORAL-FACIAL VARIATIONS IN RELATIVES OF CLEFT PROBANDS.....	5R01 DE03707-05	36,349
BIXLER, DAVID.....	WORKSHOP ON THE ETIOLOGY OF FACIAL CLEFTING.....	1R13 DE05213-01	26,000
BOCKRATH, RICHARD C.....	RADIATION INDUCED CELLULAR MUTAGENESIS AND DNA REPAIR.....	2R01 GM21788-04	60,633
BOHLEN, HAROLD G.....	MICROVASCULAR RESPONSES DURING INTESTINAL ABSORPTION.....	5R01 HL20605-02	24,179
BOXER, LAURENCE A.....	THE MECHANICS OF MOVEMENT IN THE LEUKOCYTE.....	5R01 AI13586-03	71,761
BRANDT, KENNETH D.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20582-02	148,282
CHRISTIAN, JOE C.....	MEDICAL SCHOOL HUMAN GENETICS CENTER.....	5P50 GM21054-04	574,864
CLARK, CHARLES M, JR.....	DIABETES RESEARCH AND TRAINING CENTER.....	5P60 AM20542-02	661,929
DAVIS, ELDRED J.....	REGULATORY MECHANISMS IN ENERGY METABOLISM.....	5R01 AM13939-08	69,220
EDENBERG, HOWARD J.....	ENZYMOLGY OF SV40 DNA REPLICATION: IN VITRO STUDIES.....	1R01 GM25681-01	67,567
EHRlich, CLARENCE E.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA21720-01A1	32,692
FINEBERG, S EDWIN.....	DECREASED INSULIN SENSITIVITY IN DIABETES MELLITUS.....	5R01 AM21353-02	84,029
FISCH, CHARLES.....	MECHANISMS AND THERAPY OF CIRCULATORY DISEASE.....	2P01 HL06308-18	737,906
FRIEDMAN, JULIUS J.....	THE DYNAMICS OF MICROCIRCULATORY FUNCTION.....	5R01 HL16094-06	28,006
FRIEDMAN, JULIUS J.....	ELECTROLYTE PERMEABILITY OF SINGLE CAPILLARIES.....	5R01 HL19674-02	26,878
GIBSON, DAVID M.....	INSULIN INDUCTION OF LIPOGENIC ENZYMES IN HEPATOCYTES.....	5R01 AM19299-03	69,427
GIBSON, DAVID M.....	INTERCONVERTIBILITY OF LIVER HMG COA REDUCTASE IN VITRO.....	1R01 AM21278-01A1	39,021
GRIM, CLARENCE E.....	HYPERTENSION: PSYCHOPHYSIOLOGIC & GENETIC PRECURSORS.....	5R01 HL20034-03	103,865
HARRIS, ROBERT A.....	REGULATION OF LEUCINE OXIDATION.....	2R01 AM19259-03	53,971
HARRIS, ROBERT A.....	HORMONAL CONTROL OF HEPATIC GLUCOSE AND FAT SYNTHESIS.....	5R01 AM21178-02	49,989
HODES, MARION E.....	GENETIC AND BIOCHEMICAL STUDIES OF HUMAN AMYLASE.....	5R01 GM19178-07	65,695
JACKSON, ROBERT C.....	EXPERIMENTAL CHEMOTHERAPY OF HEPATOMAS BY ANTIFOLATES.....	5R01 CA18129-03	42,041
JOHNSTON, C CONRAD, JR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00750-06	467,745
KAPLAN, JEROME I.....	NUCLEAR MAGNETIC RESONANCE AND MYOCARDIAL ISCHEMIA.....	5R01 HL21706-02	68,076
KARN, ROBERT C.....	STUDIES OF PROTEIN GLYCOSYLATION IN DIABETES MELLITUS.....	1R01 AM21177-01	38,811
LINDSETH, RICHARD E.....	A DYNAMIC ORTHOTIC DEVICE TO ASSIST PELVIC EXTENSION.....	5R01 AM18701-03	63,579
LLOYD, THOMAS C, JR.....	PULMONARY FACTORS IN CIRCULATORY REGULATION.....	5R01 HL15694-06	42,037
MC BRIDE, WILLIAM J.....	ROLE OF TAURINE IN THE CEREBELLUM.....	5R01 NS13925-02	31,037
MEALEY, JOHN, JR.....	CHEMOTHERAPY OF INTRACRANIAL NEOPLASMS.....	3R01 CA06145-16S1	8,688
MEISS, RICHARD A.....	SMOOTH MUSCLE STIFFNESS AND CONTRACTILE MECHANISMS.....	5R01 HD10898-02	26,421
MILLER, CHRIS H.....	PLAQUE FORMATION BY ACTINOMYCES NAESLUNDII.....	5R01 DE03537-02	27,295
OCHS, SIDNEY.....	ANALYSIS OF AXOPLASMIC TRANSPORT.....	5R01 NS08706-10	90,085
PHILLIPS, RALPH W.....	CREEP AND EVALUATION TECHNICs OF AMALGAM FAILURE.....	5R01 DE04367-03	29,279
PHILLIPS, RALPH W.....	F DISTRIBUTION IN TEETH USING SILICATE CEMENT MODEL.....	1R01 DE04904-01	60,391
QUEENER, SHERRY I.....	MEMBRANE ENZYME FUNCTION IN DIABETIC KIDNEY.....	5R01 AM21289-02	33,028
RHOADES, RODNEY A.....	NUTRITION & HORMONAL INTERACTION IN LUNG DEVELOPMENT.....	5R01 HD10670-03	43,176
RHOADES, RODNEY A.....	LACTATE METABOLISM IN THE LUNG.....	5R01 HL20566-02	37,176
ROBERTSON, GARY L.....	THIRST AND VASOPRESSIN SECRETION IN DIABETES MELLITUS.....	5R01 AM21102-02	42,717
ROMAN, ANN.....	INTRACELLULAR CONTROL OF DNA TUMOR VIRUS REPLICATION.....	5R01 CA19708-03	37,615
ROSENTHAL, RAOUL S.....	ROLE OF GONOCOCCAL PEPTIDOGLYCAN IN INFLAMMATION.....	1R01 AI14826-01	76,182
ROTHe, CARL F.....	REFLEX CONTROL OF VASCULAR CAPACITANCE IN SHOCK.....	2R01 HL07723-15	28,608
SCHLOEMER, ROBERT H.....	GLYCOPROTEINS OF RHABDO AND ONCOGENIC VIRUSES.....	5R01 CA19292-03	44,716
SHAfer, WILLIAM G.....	CLINICAL CANCER-DENTAL.....	5R25 CA19194-03	43,259
SIAKOTOS, ARISTOTLE N.....	OCULAR LYSOSOMES IN HEREDIATRY RETINAL DEGENERATIONS.....	5R01 EY01806-02	86,224
SNODGRASS, PHILIP J.....	INDUCTION AND SUPPRESSION OF UREA CYCLE ENZYMES.....	5R01 AM17299-06	54,562
VINICOR, FRANK.....	MATERNAL HYPERGLYCEMIA AND NEONATAL HEPATIC FUNCTION.....	5R01 AM21235-02	38,096
WATANABE, AUGUST M.....	MECHANISMS OF ADRENERGIC-CHOLINERGIC ANTAGONISM.....	2R01 HL18795-04	54,653
WEBER, GEORGE.....	METABOLIC PATTERNS IN NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA05034-18	140,612
WEBER, GEORGE.....	CORRELATED STUDY OF METABOLIC REGULATION IN NEOPLASIA.....	2P01 CA13526-07	595,967
WEINBERGER, MYRON H.....	SPECIALIZED CENTER OF RESEARCH IN HYPERTENSION.....	5P50 HL14159-08	837,877
ORGANIZATION TOTAL	60	6,997,509	
INDIANAPOLIS CENTER FOR ADVANCED RESEARCH ZIP CODE 46202			
FRANKLIN, THOMAS D, JR.....	MICROVASCULAR RESPONSES TO ULTRASOUND.....	1R01 HL20869-01A1	84,799

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
FRY, FRANCIS J.....	TRANSKULL FOCAL BRAIN LESIONS.....	1R01 NS14087-01	74,166
FRY, FRANCIS J.....	DIAGNOSIS OF INTRACRANIAL DISEASE.....	1R01 NS14201-01	142,548
KAPLAN, JEROME I.....	THE DEVELOPMENT OF A DENTAL X-RAY AIMING DEVICE.....	2R01 OE04783-02	24,233
ORGANIZATION TOTAL	4	325,746	
MUNCIE			
BALL STATE UNIVERSITY ZIP CODE 47306			
COSTILL, DAVIO L.....	HYPERLIPIDEMIA IN DIABETICS DURING MUSCULAR TRAINING.....	5R01 HL20408-03	45,261
ORGANIZATION TOTAL	1	45,261	
NOTRE DAME			
UNIVERSITY OF NOTRE DAME ZIP CODE 46556			
BASU, SUBHASH C.....	METABOLISM OF GLYCOSPHINGOLIPIDS IN CELLS.....	5R01 NS09541-08	56,770
CASTELLINO, FRANCIS J.....	STRUCTURE-FUNCTION STUDIES ON PLASMINOGEN AND PLASMIN.....	5R01 HL13423-08	60,452
CASTELLINO, FRANCIS J.....	BLOOD COAGULATION PROTEIN-METAL ION-LIPID INTERACTIONS.....	5R01 HL19982-02	65,971
CRAIG, GEORGE B, JR.....	GENETICS AND VECTOR COMPETENCE OF ANOPLURAN MOSQUITOES.....	2R01 AI02753-19	143,691
FUCHS, MORTON S.....	REPRODUCTIVE PHYSIOLOGY OF ANOPLURAN MOSQUITOES.....	2R01 AI10707-07	122,212
GOROON, ROBERT E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07033-13	68,432
HAYES, ROBERT G.....	CORE ABSORPTION SPECTROSCOPY OF METALLOPORPHYRINS.....	1R01 GM25453-01	38,767
HAYES, ROBERT G.....	X-RAY PHOTOELECTRON SPECTROSCOPY OF HEME COMPOUNDS.....	2R01 HL13651-07	61,978
NOWAK, THOMAS.....	NMR STUDIES OF METALS IN KINASES AND RELATED ENZYMES.....	5R01 AM17049-06	65,629
POLLARO, MORRIS.....	COLORECTAL CARCINOGENESIS IN GERM-FREE RATS.....	5R26 CA15957-05	74,572
POLLARD, MORRIS.....	INVESTIGATIONS ON PROSTATE ADENOCARCINOMAS IN RATS.....	3R26 CA17559-03S1	8,358
POLLARD, MORRIS.....	INVESTIGATIONS ON PROSTATE ADENOCARCINOMAS IN RATS.....	2R26 CA17559-04A1	72,142
POLLARD, MORRIS.....	DEVELOPMENT AND MAINTENANCE OF GERM-FREE ANIMAL COLONIES.....	5P40 RR00294-13	141,355
SAZ, HOWARD J.....	INTERMEDIARY METABOLISM OF HELMINTHS.....	5R01 AI09483-09	90,362
SAZ, HOWARD J.....	CHEMOTHERAPY AND METABOLISM OF FILARIALS.....	5R22 AI10512-08	28,283
SCHIEDT, W ROBERT.....	X-RAY AND CHEMICAL STUDIES OF METALLOPORPHYRINS.....	5R01 HL15627-06	57,511
WEINSTEIN, PAUL P.....	DEVELOPMENT OF PARASITIC HELMINTHS IN VITRO.....	5R01 AI09625-09	90,224
WOSTMANN, BERNARD S.....	ROLE OF ENTERIC ANTIGEN IN AGE-RELATED IMMUNE CHANGES.....	5R01 AG00022-03	100,401
WOSTMANN, BERNARD S.....	CHARACTERIZATION OF NUTRITIONALLY DEFINED GNOTOBIOTE.....	5P40 RR00640-06	82,724
ORGANIZATION TOTAL	19	1,429,834	
TERRE HAUTE			
INDIANA STATE UNIVERSITY ZIP CODE 47809			
DUSANIC, DONALD G.....	BIOLOGY AND IMMUNOLOGY OF T. CRUZI METACYCLIC FORMS.....	1R01 AI14642-01	32,054
ORGANIZATION TOTAL	1	32,054	
WEST LAFAYETTE			
PURDUE UNIVERSITY ZIP CODE 47907			
ANDREWS, FREDERICK N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07032-13	187,146
ARNOTT, STRUTHER.....	MOLECULAR GEOMETRIES OF NUCLEIC ACIDS.....	5R01 GM17371-07	74,150
ARNOTT, STRUTHER.....	STRUCTURE OF EXTRACELLULAR MATRIX POLYSACCHARIDES.....	5R01 GM20682-05	57,241
ARONSON, ARTHUR I.....	MORPHOGENETIC PROCESSES IN BACTERIAL SPORULATION.....	5R01 GM20606-05	98,878
ARONSON, ARTHUR I.....	MECHANISM AND FUNCTION OF NUCLEAR RNA TURNOVER.....	5R01 GM23226-03	55,653
BOURLANO, JOE D.....	CATHETER VENTRICULAR DEFIBRILLATION STUDIES.....	5R01 HL20629-02	57,248
BOURLANO, JOE D.....	CARDIAC OUTPUT FROM THE PNEUMOCARDIOGRAM.....	1R01 HL22321-01	45,067
BRENCHLEY, JEAN E.....	CHARACTERIZATION OF T RNA MATURATION MUTANTS.....	5R01 GM25251-02	48,991
BROWN, HERBERT C.....	STEREOSPECIFIC SYNTHESIS VIA HYDROBORATION.....	5R01 GM10937-16	88,025
BUTLER, LARRY G.....	RELATIONSHIPS OF TWO INTESTINAL PHOSPHOHYDROLASES.....	5R01 GM23028-03	49,836
BYRN, STEPHEN R.....	STRUCTURAL STUDIES OF PHYSIOLOGICALLY ACTIVE AGENTS.....	5R01 ES00929-05	64,636
BYRN, STEPHEN R.....	SOLID STATE REACTIONS IN MEDICINAL CHEMISTRY.....	2R01 GM21174-03A1	57,205
CAPALDI, EGIOIO J.....	SEQUENTIAL PROCESSES IN INSTRUMENTAL LEARNING.....	5R01 HD04379-10	51,874
CARLSON, DON M.....	STUDIES ON GLYCOPROTEINS AND PROLINE-RICH PROTEINS.....	2R01 AM19175-04	66,801
CHANG, CHING JER.....	INTERACTIONS OF ALKYLATING AGENTS AND NUCLEIC ACIDS.....	1R01 CA22987-01	95,120

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CLEGG, ERIC D.....	SUBCELLULAR INVESTIGATION OF PIG SPERM CAPACITATION.....	5R01 HD07013-06	77,760
CRAMER, WILLIAM A.....	THE MECHANISM OF ACTION OF COLICIN.....	5R01 GM18457-08	57,852
CRANE, FREDERICK L.....	HORMONE CONTROL OF PLASMA MEMBRANE REDOX FUNCTION.....	1R01 AM25235-01	86,925
CUSHMAN, MARK S.....	NEW BENZOPHENANTHRIDINE AND PROTOBERBERINE SYNTHESSES.....	5R01 CA19204-03	43,470
DAS, GOPAL D.....	TRANSPLANTATION OF NEURAL TISSUES AND NEUROGENESIS.....	2R01 NS08817-08	69,313
DILLEY, RICHARD A.....	PROTON-MEMBRANE INTERACTIONS IN BIOENERGETICS.....	2R01 GM19595-06A1	52,286
DIXON, JACK E.....	THE MECHANISM OF INSULIN DEGRADATION.....	5R01 AM18024-03	38,232
DIXON, JACK E.....	THYROTROPIN RELEASING HORMONE: SYNTHESIS, DEGRADATION.....	5R01 AM18849-03	35,720
DYKHUIZEN, DANIEL E.....	EXPERIMENTAL TEST OF ALLOZYME NEUTRALITY.....	1R01 GM24886-01	64,220
FETH, LAWRENCE L.....	FREQUENCY DISCRIMINATION AND PITCH OF COMPLEX TONES.....	2R01 NS12235-04	41,032
FLOSS, HEINZ G.....	STUDY OF BIOLOGICALLY ACTIVE MICROBIAL METABOLITES.....	2R01 AI11728-05	102,655
FLOSS, HEINZ G.....	BIOSYNTHESIS OF ERGOT ALKALOIDS.....	2R01 CA17482-10	87,679
FLOSS, HEINZ G.....	STEREOCHEMISTRY OF ENZYME REACTIONS.....	2R01 GM18852-08	81,815
FUCHS, PHILIP L.....	TOTAL SYNTHESIS OF ALKALOIDAL ANTILEUKEMIA AGENTS.....	5R01 CA19689-03	61,117
FUCHS, PHILIP L.....	SYNTHESIS OF QUASSINOIDAL ANTILEUKEMIA AGENTS.....	1R01 CA21840-01A1	66,469
GEDDES, LESLIE A.....	FUNDAMENTAL STUDIES IN ELECTROSURGERY.....	1R01 GM23103-01A2	132,009
GILHAM, PETER T.....	STUDIES ON THE FINE STRUCTURE OF NUCLEIC ACIDS.....	5R01 GM11518-14	54,947
GILHAM, PETER T.....	METHODS FOR THE SEQUENCE ANALYSIS OF DNA.....	5R01 GM18533-07	52,996
GILHAM, PETER T.....	SYNTHESIS OF POLYRIBONUCLEOTIDES OF DEFINED SEQUENCE.....	5R01 GM19395-07	69,420
GOLUB, EDWARD S.....	THE INDUCTION OF IMMUNOLOGICAL TOLERANCE.....	5R01 AI08800-09	75,121
GOLUB, EDWARD S.....	BRAIN ASSOCIATED HEMATOPOIETIC ANTIGENS.....	2R01 CA18641-04	74,349
GRAHAM, DALE E.....	THE EUKARYOTE GENOME: EVOLVING STRUCTURE AND FUNCTION.....	5R01 GM21954-04	66,468
HEINSTEIN, PETER.....	BIOSYNTHESIS OF GOSSYPOL.....	5R01 GM23249-03	59,528
HERMODSON, MARK A.....	AMINO ACID SEQUENCES OF BINDING PROTEINS.....	1R01 GM24602-01A1	78,096
HERRMANN, KLAUS M.....	BIOCHEMICAL AND GENETIC STUDIES OF DAHP-SYNTHEASE.....	2R01 GM17678-07	54,784
HORNEMANN, ULFERT.....	BIOSYNTHESIS OF THE MITOMYCIN ANTIBIOTICS.....	5R01 CA14378-09	94,555
HORNEMANN, ULFERT.....	BIOSYNTHESIS OF ANTIBIOTICS CONTAINING N-N BONDS.....	5R01 CA18587-03	60,791
JAFFE, LIONEL F.....	ELECTRICAL CONTROLS OF NERVE REGENERATION.....	2R01 NS11545-04A1	60,381
KEENAN, THOMAS W.....	ENDOMEMBRANE INTERCONVERSION IN MILK FORMATION.....	5R01 GM23889-02	70,503
KENT, CLAUDIA M.....	ANALYSIS OF SURFACE MEMBRANES OF DEVELOPING MUSCLE CELLS.....	5R01 HD10580-02	44,692
KIM, KI-HAN.....	INSULIN CONTROL OF KEY ENZYMES FOR GLUCOSE HOMEOSTASIS.....	2R01 AM12865-10	58,752
KIRKSEY, AVANELLE.....	LONG TERM OCA USE AND VITAMIN B-6 NEEDS IN PREGNANCY.....	1R01 HD11996-01	48,851
KIRKSEY, AVANELLE.....	VITAMIN B6 IN DEVELOPMENT OF CENTRAL NERVOUS SYSTEM.....	1R01 NS14005-01A1	45,275
KISSINGER, PETER T.....	ANALYSIS OF TYROSINE METABOLITES IN BODY FLUIDS.....	2R01 GM22713-03	58,320
KOHLHAW, GUNTER B.....	REGULATION OF LEUCINE BIOSYNTHESIS.....	5R01 GM15102-11	73,551
KOIVO, ANTTI J.....	THE USE OF MICROPROCESSORS IN MEDICAL APPLICATIONS.....	1R01 HL22417-01	41,403
LASKOWSKI, MICHAEL, JR.....	PROTEIN PROTEINASE INHIBITORS.....	5R01 GM10831-20	193,791
LIGHT, ALBERT.....	INTESTINAL BOVINE ENTEROKINASE.....	5R01 GM22261-04	47,246
LIGHT, ALBERT.....	MECHANISM OF FOLDING OF SERINE PROTEINASES.....	1R01 GM23628-01A1	52,108
LOUDON, GORDON M.....	NEW METHODS OF PROTEIN SEQUENCING AND MODIFICATION.....	5R01 GM25143-02	63,692
LOW, PHILIP S.....	ANION EXCHANGE ACROSS ERYTHROCYTE MEMBRANES.....	5R01 GM24417-02	44,668
MARGERUM, DALE W.....	METAL ION TRANSFER AND CATALYSIS IN PEPTIDE COMPLEXES.....	5R01 GM12152-14	86,984
MARGERUM, DALE W.....	ACTIVATION OF MOLECULAR OXYGEN BY METAL PEPTIDES.....	2R01 GM19775-07	59,352
MARKLEY, JOHN L.....	NMR SPECTROSCOPY IN PROTEIN CHEMISTRY.....	5R01 GM19907-06	78,191
MARKLEY, JOHN L.....	A REGIONAL NMR RESOURCE FOR BIOMOLECULAR RESEARCH.....	5P41 RR01077-02	108,150
MC MILLIN, DAVID R.....	CHEMICAL AND PHYSICAL STUDIES OF COPPER PROTEINS.....	5R01 GM22764-03	47,699
MORRE, D JAMES.....	GLYCOSPHINGOLIPID METABOLISM AND TUMORIGENESIS.....	1R01 CA18801-01A2	81,588
MORRE, D JAMES.....	CANCER DETECTION BY SERUM ANALYSIS OF HETEROGLYCANS.....	5R01 CA21958-02	33,184
MORRE, D JAMES.....	CANCER CENTER SUPPORT (CORE).....	1P30 CA23168-01	167,195
MORRE, D JAMES.....	DICTYOSOME-LIKE STRUCTURES IN REPRODUCTIVE DEVELOPMENT.....	1R01 HD11508-01	39,928
MORRISON, HARRY A.....	SKIN PHOTOBIOLOGY-PHOTOCHEMISTRY OF UROCANIC ACID.....	1R01 CA18267-01A1	44,642
MORTENSON, LEONARD E.....	MICROBIAL ENZYMES INVOLVED IN NITROGEN METABOLISM.....	5R01 AI04865-17	92,033
NAKAJIMA, YASUKO.....	ULTRASTRUCTURE AND FUNCTION OF NERVE AND MUSCLE.....	2R01 NS10457-06A1	53,675
OFFENBACH, STUART I.....	DEVELOPMENT OF COLOR-FORM PREFERENCE AND PERCEPTION.....	5R01 HD09514-04	27,430
OSTROY, SANFORD E.....	RELATED MOLECULAR AND PHYSIOLOGICAL EVENTS IN VISION.....	5R01 EY00413-10	70,377
PAK, WILLIAM L.....	SENSORY EXCITATION AND INFORMATION FLOW IN THE RETINA.....	5R01 EY00033-09	90,080
PAK, WILLIAM L.....	CONDUCTANCE FLUCTUATIONS IN PHOTORECEPTORS OF LIMULUS.....	1R01 EY02590-01	27,821
PEPPERBERG, DAVID R.....	VISUAL PIGMENT AND PHOTO-RECEPTOR ADAPTATION.....	5R01 EY02103-02	63,057
PINTO, LAWRENCE H.....	INTERMEDIATE PROCESSES IN PHOTORECEPTORS.....	5R01 EY01221-05	40,376
PINTO, LAWRENCE H.....	MAMMALIAN VISUAL MUTANTS.....	1R01 EY02536-01	59,071

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
INDIANA—Continued			
PROHOFSKY, EARL W.....	CONFORMATIONAL INSTABILITY OF NUCLEOTIDE SEQUENCES.....	1R01 GM24443-01	50,375
RAY, WILLIAM J, JR.....	MECHANISM OF THE GROUP TRANSFER PROCESS.....	2R01 GM08963-16	106,916
REGNIER, FRED E.....	HIGH SPEED LIQUID CHROMATOGRAPHY OF PROTEINS.....	1R01 GM25431-01	57,464
RODWELL, VICTOR W.....	CONTROL OF CHOLESTEROGENESIS IN LEUKOCYTES AND LIVER.....	5R01 HL19223-03	65,806
ROSSMANN, MICHAEL G.....	STRUCTURE OF A SMALL SPHERICAL VIRUS.....	5R01 AI11219-06	89,457
ROSSMANN, MICHAEL G.....	STRUCTURAL STUDIES OF PROTEIN SUBUNITS.....	2R01 GM10704-16	122,976
SMITH, L DENNIS.....	CYTOPLASMIC REGULATION IN EARLY CELL DIFFERENTIATION.....	5R01 HD04229-10	143,039
SOMERVILLE, RONALD L.....	REGULATORY MECHANISMS IN TRYPTOPHAN BIOSYNTHESIS.....	2R01 GM22131-04	82,782
TACKER, WILLIS A, JR.....	DEFIBRILLATION ELECTRODE STUDIES.....	1R01 HL22699-01	39,024
TACKER, WILLIS A, JR.....	REGIONAL MYOCARDIAL BLOOD FLOW DURING HYPOTHERMIA.....	1R01 HL22759-01	48,741
TESSMAN, ETHEL S.....	REGULATORY MECHANISMS IN SMALL DNA PHAGES.....	2R01 AI11853-05	84,784
TESSMAN, IRWIN.....	REPAIR AND MUTAGENESIS OF DNA.....	5R01 CA22239-02	75,723
TOBIAS, R STUART.....	EFFECTS OF ELECTROPHILIC ATTACK ON POLYNUCLEOTIDES.....	2R01 AM16101-07	90,087
TSAI, CHIA-YIN.....	REGULATION OF ZEIN SYNTHESIS IN MAIZE ENDOSPERM.....	1R01 GM25045-01	64,639
TYLER, VARRO E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05586-11	46,308
UMBARGER, H EDWIN.....	ENZYMIC MECHANISMS IN BIOSYNTHETIC PATHWAYS.....	5R01 GM12522-14	190,410
VAN ETEN, ROBERT L.....	THE ACTIVE SITES OF ACID PHOSPHATASES.....	5R01 CA10585-09	68,704
VAN ETEN, ROBERT L.....	THE ANOMALOUS KINETICS OF ARYL SULFATASE A.....	5R01 GM22933-03	53,410
WEITH, H LEE.....	SEQUENCING OF RSV DNA INTEGRATION SITES.....	1R01 CA23332-01	56,427
WIEBERS, JOYCE L.....	IDENTITY AND LOCALE OF ALKYLATED NUCLEOSIDES IN DNA.....	1R01 CA23859-01	16,145
WILLIAMS, LUTHER S.....	REGULATION OF AMINOACYL-TRNA SYNTHETASE FORMATION.....	5R01 GM21878-05	68,451
ZALKIN, HOWARD.....	REGULATORY ENZYMES IN TRYPTOPHAN SYNTHESIS.....	5R01 GM24658-08	68,821
ORGANIZATION TOTAL	97 6,802,035		
STATE TOTAL	223 18,060,169		

IOWA

AMES

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ANGELICI, ROBERT J.....	METAL COMPLEX CATALYSIS OF BIOLOGICAL REACTIONS.....	5R01 GM12626-14	43,306
APPLEQUIST, JON B.....	THEORY OF MOLECULAR OPTICAL PROPERTIES.....	5R01 GM13684-12	27,480
APPLEQUIST, JON B.....	CONFORMATIONAL INDUCTION IN COPOLYPEPTIDES.....	5R01 GM21585-03	20,652
COX, GEORGE S.....	MECHANISM OF ECTOPIC HORMONE SYNTHESIS BY TUMOR CELLS.....	5R01 CA21534-02	41,033
DELLMANN, H DIETER.....	HERRING BODY AND PITUITARY IN NEUROSECRETION.....	1R01 NS14062-01	41,635
DUPONT, JACQUELINE.....	DIETARY FAT, CHOLESTEROL AND BILE ACID TURNOVER.....	7R01 HL23598-01	65,573
FRENCH, DEXTER.....	MECHANISM OF AMYLASE ACTION.....	5R01 GM08822-17	78,580
FROMM, HERBERT J.....	REGULATION OF BRAIN AND TUMOR PHOSPHOTRANSFERASE.....	5R01 NS10546-13	44,877
GOUGH, PATRICIA M.....	ORAL TRANSMISSION OF RABIES VIRUS IN WILDLIFE.....	5R22 AI14132-02	44,466
GRAVES, DONALD J.....	ENZYMIC INTERCONVERSION AND REGULATION.....	5R01 GM09587-17	63,810
KRAUS, GEORGE A.....	SYNTHESIS OF TRICHOHECENE LACTONES.....	1R01 CA23663-01	47,517
KRAUS, GEORGE A.....	ANNELATIONS WITH BUTENOLIDES.....	1R01 GM24474-01	47,174
LANDO, HARRY A.....	LONG-TERM ELIMINATION OF CHRONIC SMOKING BEHAVIOR.....	5R01 CA22102-02	53,945
LAROCK, RICHARD C.....	SYNTHESIS OF PROSTAGLANDIN ANALOGUES AND ANTAGONISTS.....	1R01 AM21795-01	41,790
LAROCK, RICHARD C.....	SYNTHESIS OF BIOLOGICALLY ACTIVE LACTONES AND LACTAMS.....	5R01 GM24254-02	48,784
MASON, MILDRED.....	SPATIAL REDUNDANCY, ITEM IDENTIFICATION, AND READING.....	5R01 EY01813-03	25,046
METZLER, DAVID E.....	THE ACTION OF B VITAMINS IN ENZYMIC CATALYSIS.....	5R01 AM01549-22	97,609
NORDSKOG, ARNE W.....	HISTOCOMPATIBILITY IMMUNE RESPONSE GENES IN CHICKENS.....	3R01 AI12746-03S1	8,222
POLLAK, EDWARD.....	RESEARCH IN MATHEMATICAL AND STATISTICAL GENETICS.....	5R01 GM13827-12	45,493
ROBYT, JOHN F.....	BIOSYNTHETIC STUDY OF DENTAL PLAQUE POLYSACCHARIDES.....	2R01 DE03578-07	59,825
STADLER, JOAN K.....	MUTANTS OF MEMBRANE FUNCTION IN LYMPHOCYTIC CELLS.....	1R01 GM25728-01	42,572
THOMAS, JAMES A.....	CONTROL OF GLYCOGEN SYNTHESIS IN HEART.....	5R01 HL13630-08	50,586
YOUNG, DONALD F.....	EFFECT OF STENOTIC OBSTRUCTIONS ON FLOW IN ARTERIES.....	3R01 HL11717-09S1	7,212
YOUNG, JERRY W.....	GLUCONEOGENESIS IN RUMINANTS.....	5R01 AM10706-10	54,709
ZAFFARANO, DANIEL J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07034-13	64,740
ORGANIZATION TOTAL	25 1,166,636		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
IOWA CITY			
AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS ZIP CODE 52242			
EARLE, KENNETH M	SYMPOSIUM ON BRAIN TUMORS	1R13 NS13864-01	16,938
EARLE, KENNETH M	SYMPOSIUM ON AGING OF THE BRAIN	1R13 NS13865-01	15,528
ORGANIZATION TOTAL	2 32,466		
UNIVERSITY OF IOWA ZIP CODE 52242			
ABBOUD, FRANCOIS M	REGULATION OF THE CIRCULATION IN PATHOLOGICAL STATES	5P01 HL14388-07	1,394,947
ANURAS, SINN	CONTROL MECHANISMS OF COLONIC MOTILITY	5R01 AM20448-02	56,513
ARNONE, ARTHUR	X-RAY STUDIES OF HEMOGLOBIN AND REGULATORY ENZYMES	2R01 AM17563-05	77,643
BAR, ROBERT S	INSULIN RECEPTORS AND INSULIN-MODULATED IMMUNE FUNCTION	1R01 AM21250-01	57,694
BENTON, ARTHUR L	PERFORMANCE TESTS IN CEREBRAL DISEASE	5R01 NS00616-25	46,366
BHALLA, RAMESH C	CALCIUM & CYCLIC AMP IN CAUSATION OF HYPERTENSION	5R01 HL19027-03	41,983
BHATNAGAR, RANBIR K	EFFECTS OF DRUGS ON NEUROCHEMICAL MATURATION OF BRAIN	2R01 NS12121-04	61,337
BLAKLEY, RAYMOND L	ALLOSTERIC REGULATION OF MONOMERIC ENZYMES	5R01 CA11165-10	57,446
BLAKLEY, RAYMOND L	STRUCTURAL STUDIES ON DIHYDROFOLATE REDUCTASE	5R01 CA13840-07	101,857
BLAKLEY, RAYMOND L	INHIBITORS OF HUMAN RIBONUCLEOTIDE REDUCTASE	2R01 CA16254-04	30,806
BUCHSBAUM, HERBERT J	GYNECOLOGIC ONCOLOGY GROUP	2R10 CA19502-02	106,628
BURMEISTER, LEON F	FARMING AS AN OCCUPATIONAL RISK FOR CANCER	1R01 CA24302-01	177,550
BURNS, CHARLES P	LIPID METABOLISM OF LEUKOCYTES	2R01 CA17283-04	58,094
CAPLAN, RICHARD M	CLINICAL CANCER EDUCATION PROGRAM	2R25 CA18017-04	159,879
CHALKLEY, ROGER G	AGING OF THE MAMMALIAN CHROMOSOME	5R01 AG00753-02	64,741
CHALKLEY, ROGER G	STRUCTURE AND FUNCTION OF CHROMOSOMAL NUCLEOHISTONE	5R01 CA10871-11	100,926
CHALKLEY, ROGER G	ESTROGENS AND BREAST CANCER	5R01 CA20509-02	61,415
CHRISTENSEN, JAMES	STUDIES OF THE SMALL INTESTINAL SLOW WAVE	2R01 AM08901-13	90,436
CHRISTENSEN, JAMES	REGULATION OF THE LOWER ESOPHAGEAL SPHINCTER	5R01 AM11242-12	81,863
CHRISTENSEN, JAMES	SYMPOSIUM ON CHRONIC INTESTINAL PSEUDO-OBSTRUCTION	1R13 AM25169-01	9,961
CONWAY, THOMAS W	PROTEIN SYNTHESIS IN T4 BACTERIOPHAGE-INFECTED CELLS	5R01 AI11301-06	68,472
COOPER, GEORGE, IV	THE MECHANICAL BASIS OF MYOCARDIAL ENERGETICS	1R01 HL21570-01A2	82,872
COX, CHARLES D, JR	IN VIVO GROWTH OF PSEUDOMONAS AERUGINOSA	5R01 AI13120-02	34,726
CRAWFORD, IRVING P	MUTATIONAL PERTURBATION OF SUBUNIT INTERACTIONS	7R01 GM25735-01	60,199
CULP, DAVID A	EVALUATION AND TREATMENT OF PATIENTS WITH BLADDER CANCER	2R26 CA15933-05	101,952
DAVIS, LEODIS	SERINE AND THREONINE METABOLISM	5R01 AM16950-05	57,251
DAWSON, DAVID C	ION TRANSPORT BY THE COLON AND HORMONAL CONTROL	5R01 AM18776-03	44,058
DE GOWIN, RICHARD L	HEMOPOIETIC CONTROL MECHANISMS	2R01 CA11472-06A1	98,347
DENBURG, JEFFREY L	BIOCHEMISTRY OF CELL RECOGNITION IN NERVOUS SYSTEMS	1R01 NS14295-01	64,709
DONELSON, JOHN E	CHARACTERIZATION OF SPECIFIC EUKARYOTIC GENES AND MRNAS	1P30 AI15666-01	17,103
DONHAM, KELLEY J	THE PATHOGENESIS OF ASBESTOS RELATED BOWEL CANCER	2R26 CA16762-04	60,285
DONTA, SAM T	CHOLERA TOXIN AND ADRENAL CELLS IN TISSUE CULTURE	2R22 AI11416-06	49,000
DONTA, SAM T	E. COLI ENTEROTOXINS AND DIARRHEAL DISEASE	2R22 AI11794-04	56,590
DRYER, ROBERT L	METABOLIC REGULATION IN BROWN ADIPOSE MITOCHONDRIA	5R01 GM22035-03	36,387
ECKSTEIN, JOHN W	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER	2M01 RR00059-17	788,345
ECKSTEIN, JOHN W	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05372-17	200,462
ERENBERG, ALLEN P	THYROID HORMONES AND THE FETAL AND NEONATAL LUNG	5R01 HD09677-03	39,602
FALSETTI, HERMAN L	FLUID MECHANICS OF HEART VALVE PROSTHESES	5R01 HL20829-02	39,764
FEISS, MICHAEL G	VIRUS CHROMOSOME STRUCTURE: ROLE IN DEVELOPMENT	5R01 AI12851-03	55,627
FELLOWS, ROBERT E, JR	STRUCTURE & FUNCTION OF GROWTH & LACTOGENIC HORMONES	3R01 AM19901-03S1	46,020
FELLOWS, ROBERT E, JR	REGULATION OF BRAIN DEVELOPMENT	5R01 HD11184-02	56,788
FLATT, ADRIAN E	INFLUENCE OF WRIST PATHOMECHANICS ON HAND FUNCTION	2R01 AM14659-07A1	107,107
FOLKINS, JOHN W	STUDIES OF SPEECH ARTICULATION	5R01 NS07555-11	67,138
FOMON, SAMUEL J	GROWTH AND NUTRITION OF NORMAL INFANTS	5P01 HD07578-04	340,136
FORKER, EDSON L	MECHANISMS OF BILE FORMATION	5R01 AM09892-13	63,660
FRANKEL, JOSEPH	MUTATIONAL STUDY OF CILIATE DEVELOPMENT	5R01 HD08485-05	76,431
GEBHART, GERALD F	NEUROPHARMACOLOGY OF INTRACRANIALY-INDUCED ANALGESIA	2R01 NS12114-03A1	45,698
GINSBERG, BARRY H	RADIOIMMUNOASSAY OF THE SOMATOMEDINS IN DIABETES	5R01 AM21084-02	46,305
GINSBERG, BARRY H	INSULIN RECEPTORS DURING IN VITRO DIFFERENTIATION	1R01 AM21128-01A1	49,881
GISOLFI, CARL V	HYPOTHALAMIC FUNCTION IN EXERCISE THERMOREGULATION	1R01 NS14745-01	86,566
GRANNER, DARYL K	INSULIN RECEPTORS AND MECHANISM OF INSULIN ACTION	1R01 AM20858-01	58,345

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
GRANNER, DARYL K.....	HORMONAL REGULATION OF GLUCONEOGENIC ENZYME SYNTHESIS.....	1R01 AM24037-01	65,405
HALMI, NICHOLAS S.....	INVESTIGATION OF THE THYROID AND PITUITARY.....	5R01 AM02463-20	59,154
HART, MICHAEL N.....	MORPHOLOGIC EXAMINATION OF BRAIN PARENCHYMAL VESSELS.....	1R01 HL22149-01	50,405
HAYREH, SOHAN S.....	OCULAR VASCULAR OCCLUSIVE DISORDERS—CLINICAL.....	5R01 EY01151-04	130,435
HAYREH, SOHAN S.....	OCULAR VASCULAR OCCLUSIVE DISORDERS.....	5R01 EY01576-04	134,672
HEATH, EDWARD C.....	CHEMISTRY AND METABOLISM OF POLYSACCHARIDES.....	2R01 AM19850-03	147,722
HEIDGER, PAUL M, JR.....	VASECTOMY—MORPHOLOGICAL EFFECTS IN RHESUS MONKEYS.....	1R01 HD10571-01A1	37,763
HEISTAD, DONALD D.....	NEUROGENIC CONTROL OF THE CIRCULATION.....	5R01 HL16066-05	50,374
HERMSMEYER, R KENT.....	MEMBRANE ELECTRICAL PROPERTIES OF VASCULAR MUSCLE.....	5R01 HL16328-06	40,148
HOGBEN, C ADRIAN.....	ACTION OF FUROSEMIDE ON CHLORIDE TRANSPORT.....	5R01 AM19020-03	34,155
HUBEL, KENNETH A.....	WATER AND ELECTROLYTE TRANSPORT BY THE INTESTINE.....	5R01 AM18769-03	54,063
ISACSON, PETER.....	VACCINE AND DISEASE EPIDEMIOLOGY BY NATIONAL SURVEY.....	1R01 AI14610-01	57,207
JENNY, JOANNA.....	CONFERENCE ON ETHICS IN HUMAN DENTAL CARIES RESEARCH.....	1R13 DE05192-01	44,790
JEW, JEAN Y.....	DEVELOPMENT SUBSEQUENT TO JAUNDICE OF THE NEWBORN.....	1R01 HD11800-01	44,891
JEW, JEAN Y.....	STUDIES OF VASOMOTOR CONTROL.....	1R23 HL21914-01	38,124
JOCHIMSEN, PETER R.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12036-07	31,878
JOYNER, RONALD W.....	MECHANISM OF CARDIAC ACTION POTENTIAL PROPAGATION.....	2R01 HL22562-02	36,059
KAELBER, WILLIAM W.....	EXPERIMENTAL INVESTIGATIONS OF PAIN.....	5R01 GM23336-03	48,147
KALNITSKY, GEORGE.....	PROTEASES IN NORMAL AND IMMUNOLOGICALLY INJURED LUNG.....	2R01 HL16920-02A1	52,291
KARLSSON, ULF L.....	STRUCTURE-FUNCTION CORRELATES OF INTRADENTAL NERVES.....	3R01 DE04339-02S1	43,608
KATER, STANLEY B.....	INTEGRATION OF INTERCELLULAR COMMUNICATION.....	5R01 AM19858-02	54,709
KATER, STANLEY B.....	NEURAL CONTROL OF DISCRETE BEHAVIORAL PROCESSES.....	2R01 NS09696-07	46,976
KISKER, C THOMAS.....	DETECTION AND ADHERENCE OF FIBRIN MONOMER COMPLEXES.....	3R01 HL19105-02S1	9,493
LACHENBRUCH, PETER A.....	ESTIMATION OF PROGNOSIS USING SEER DATA.....	1R01 CA24089-01	138,067
LACHENBRUCH, PETER A.....	ROBUSTNESS OF DISCRIMINATION IN EPIDEMIOLOGY.....	5R01 GM23496-03	55,273
LAUER, RONALD M.....	CORONARY RISK FACTORS IN CHILDREN.....	5R01 HL20124-02	61,557
LOENING, STEFAN.....	CHEMOTHERAPY OF ADVANCED PROSTATIC CANCER.....	5R26 CA15108-05	90,220
LONG, JOHN P.....	STRUCTURE ACTIVITY STUDIES OF PHARMACOLOGIC AGENTS.....	5P01 GM22365-03	196,486
LONG, JOHN P.....	STUDIES ON AUTONOMIC TRANSMISSION.....	2R01 NS04431-16	34,876
LONGO, FRANK J.....	EFFECTS OF AGING ON OVULATED EGGS AND FERTILIZATION.....	1R01 HD12174-01	76,336
LUBAROFF, DAVID M.....	IMMUNOLOGIC ASPECTS OF PROSTATIC CANCER.....	3R26 CA18014-03S1	4,953
LUBAROFF, DAVID M.....	IMMUNOLOGIC ASPECTS OF PROSTATIC CANCER.....	2R26 CA18014-04A1	47,002
MACKENZIE, IAN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05313-17	92,972
MARCUS, MELVIN L.....	EFFECTS OF HYPERTROPHY ON THE CORONARY CIRCULATION.....	5R01 HL20827-02	47,619
MARKOVETZ, ALLEN J.....	INTESTINAL ANAEROBIC MICROFLORA OF AN INVERTEBRATE.....	5R01 AI13990-02	83,242
MARKOVETZ, ALLEN J.....	MICROBIAL AND INSECT METABOLISM OF ALIPHATIC COMPOUNDS.....	2R01 GM19809-07	77,301
MAURER, RICHARD A.....	REGULATION OF PROLACTIN SYNTHESIS.....	1R01 AM21803-01	51,054
MENNINGER, JOHN R.....	CONTROL AND MECHANISM OF PROTEIN-CHAIN TERMINATION.....	5R01 GM20626-06	71,899
MONTGOMERY, REX.....	STRUCTURES OF CARBOHYDRATE PROSTHETIC GROUPS.....	2R01 GM14013-08	86,329
MORRIS, HUGHLETT L.....	DIAGNOSTIC AND PROGNOSTIC TECHNIQUES IN CLEFT PALATE.....	5P01 DE00853-21	439,103
MYERS, MARTIN G.....	PATHOPHYSIOLOGY OF MALIGNANT VARICELLA INFECTION.....	5R01 AI13627-03	39,994
MYERS, MARTIN G.....	ACUTE RESPIRATORY ILLNESSES IN SURVIVORS OF INFANT RDS.....	1R01 HD10598-01	120,393
NEWLON, CAROL S.....	DNA REPLICATION IN THE YEAST, SACCHAROMYCES CEREVISIAE.....	2R01 GM21510-04	69,960
OSBORNE, JAMES W.....	CONTROL OF CELL PROLIFERATION IN THE INTESTINE.....	5R01 AM15758-05	37,062
OSBORNE, JAMES W.....	ENZYMOLGY OF RADIATION-INDUCED INTESTINAL CARCINOMA.....	5R01 CA18327-03	68,463
OWEN, WHYTE G.....	BIOCHEMISTRY OF PROTHROMBIN QUICK.....	1R01 HL22471-01	21,180
PEDRINI, VITTORIO A.....	PROTEOGLYCANS OF ANIMAL LUNG PARENCHYMA.....	1R01 HL21626-01	51,836
PESANTI, EDWARD L.....	INTERACTION OF ALVEOLAR MACROPHAGES WITH PNEUMOCYSTIS.....	1R01 AI15223-01	50,059
PIETRZYK, DONALD J.....	SEPARATION AND DETERMINATION OF CARCINOGENS.....	2R01 CA18555-04	33,795
PITKIN, ROY M.....	CALCIUM METABOLISM IN PREGNANCY AND PERINATAL PERIOD.....	5R01 HD09373-03	43,316
RAIZADA, MOHAN K.....	REGULATION OF INSULIN AND GLUCAGON RECEPTORS.....	1R01 AM21018-01A1	52,938
RICHERSON, HAL B.....	PULMONARY RESPONSES TO INHALED ANTIGEN.....	5R01 HL19873-03	74,202
RICHERSON, HAL B.....	PATHOGENESIS IN EXPERIMENTAL INTERSTITIAL PNEUMONITIS.....	1R01 HL22676-01	58,045
ROBILLARD, JEAN E.....	MATURATION OF THE FETAL KIDNEY.....	5R01 HD11466-02	74,914
ROSAZZA, JOHN P.....	MICROBIAL TRANSFORMATIONS—NATURAL ANTITUMOR AGENTS.....	5R01 CA13786-05	32,734
ROSKOSKI, ROBERT, JR.....	NEUROTRANSMITTER BIOSYNTHESIS.....	5R01 NS11310-05	57,999
RUBENSTEIN, PETER A.....	CONTRACTILE PROTEINS FROM SMOOTH MUSCLE CELLS.....	1R01 GM24702-01A1	61,944
RUSHTON, GERARD.....	RETIREMENT DECISION-MAKING: DETERMINANTS OF MIGRATION.....	1R21 AG01182-01	56,075
SANDQUIST, DEAN S.....	DIFFERENTIATION IN A MALIGNANT NEURAL TUMOR.....	1R23 CA24241-01	30,158
SATO, KENZO.....	MECHANISM OF ECCRINE SWEAT GLAND FUNCTION.....	7R01 AM25339-01	76,564

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
IOWA—Continued			
SCHEDL, HAROLD P.....	INTESTINAL TRANSPORT MECHANISMS AND THEIR REGULATION.....	5R01 AM02534-21	142,003
SCHMID, PHILLIP G.....	MECHANISMS OF CIRCULATORY REGULATION IN HEART FAILURE.....	5R01 HL20768-02	41,273
SHERMAN, BARRY M.....	CELL BIOLOGY OF HUMAN BREAST CANCER AND MAMMARY GLAND.....	3P01 CA17649-03S1	55,566
SILVERSTONE, LEON M.....	REMINERALIZATION OF ENAMEL CARRIES IN VITRO.....	5R01 DE04819-02	96,242
SINGH, DIWAN.....	CYCLIC AMP DEPENDENT PROTEIN KINASES IN HYPERTENSION.....	1R23 HL22984-01	39,200
SIX, ERICH W.....	GENETIC STUDIES OF PHAGE-PROPHAGE INTERACTIONS.....	5R01 AI04043-17	73,988
SOLURSH, MICHAEL.....	CONTROL OF EXTRACELLULAR MATRIX SYNTHESIS.....	2R01 HD05505-06	53,563
SPECTOR, ARTHUR A.....	A/S SCOR-LIPIDS, ATHEROSCLEROSIS AND THROMBOSIS.....	5P50 HL14230-07	906,738
SPECTOR, ARTHUR A.....	LIPID DEPOSITION IN MAMMALIAN CELLS.....	3R01 HL14781-07S1	1,980
SPECTOR, ARTHUR A.....	LIPID DEPOSITION IN MAMMALIAN CELLS.....	5R01 HL14781-08	113,691
SPECTOR, REYNOLD.....	DRUG, VITAMIN, AND HORMONE TRANSPORT IN SPINAL FLUID.....	1R01 NS15073-01	53,401
SPECTOR, REYNOLD.....	PTERIDINES IN BRAIN: HOMEOSTASIS AND FUNCTION.....	1R01 NS15074-01	70,952
SPRIESTERSBACH, DUANE C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07035-13	55,802
SQUIER, CHRISTOPHER A.....	EFFECTS OF VOMER SURGERY ON MIDFACIAL GROWTH.....	1R23 DE04922-01	29,567
STEINMETZ, PHILIP R.....	REGULATION OF URINARY ACIDIFICATION IN VITRO.....	5R01 AM17568-05	73,458
STELLWAGEN, EARLE C.....	STRUCTURE-FUNCTION STUDIES OF CYTOCHROME C.....	5R01 GM13215-13	75,460
STELLWAGEN, EARLE C.....	AFFINITY CHROMATOGRAPHY FOR THE DINUCLEOTIDE FOLD.....	2R01 GM22109-04	68,888
STINSKI, MARK F.....	CYTOMEGALOVIRUS REPLICATION.....	5R01 AI13562-03	54,270
STOKES, JOHN B, III.....	PROSTAGLANDINS AND ION TRANSPORT ACROSS RENAL TUBULES.....	1R01 AM25231-01	73,472
STRAUSS, JOHN S.....	EVALUATION OF PATHOGENIC FACTORS IN ACNE VULGARIS.....	7R01 AM22083-01	136,397
STRAUSS, RONALD G.....	NEUTROPHIL FUNCTIONS IN THE NEONATE.....	1R01 HD11964-01	25,759
TEPHLY, THOMAS R.....	BIOCHEMICAL TOXICOLOGY AND PHARMACOLOGY.....	5P50 GM12675-14	946,644
TEPHLY, THOMAS R.....	STUDIES ON METHANOL POISONING.....	2R01 GM19420-07	90,531
THAMES, MARC D.....	CARDIAC RECEPTORS WITH VAGAL C-FIBER AFFERENTS.....	5R01 HL21158-02	27,191
TIPTON, CHARLES M.....	INFLUENCE OF CHRONIC EXERCISE ON HYPERTENSIVES.....	5R01 HL21245-02	71,448
TOMANEK, ROBERT J.....	INFLUENCE OF AGING AND HYPERTENSION ON THE MYOCARDIUM.....	5R01 HL18629-04	39,915
VAN ALLEN, MAURICE W.....	FLUID RESTRICTION IN ACUTE SUBARACHNOID HEMORRHAGE.....	3R01 NS12496-03S1	49,397
WALLACE, ROBERT B.....	ANOVULATION AND THE EPIDEMIOLOGY OF BREAST CANCER.....	5R01 CA15104-05	89,417
WATZKE, ROBERT C.....	TOXOCARA CANIS INFECTION OF THE PRIMATE EYE.....	1R01 EY02280-01	41,572
WAZIRI, RAFIQ.....	APLYSIA NEUROPHYSIOL.—PRESYNAPTIC ELECTROTONIC COUPLING.....	1R01 NS14052-01	47,193
WEFEL, JAMES S.....	KINETICS AND MECHANISMS OF ACTION OF FLUORIDES.....	1R01 DE04486-01A2	56,788
WILLIAMS, TERENCE H.....	NEUROPLASTICITY, AND PROMOTING CENTRAL REGENERATION.....	2R01 NS11650-06	78,419
ORGANIZATION TOTAL	143	13,696,485	
MOUNT VERNON			
CORNELL COLLEGE ZIP CODE 52314			
JORDAN, TRUMAN H.....	SNF2 REACTION WITH APATITE AND OTHER CA/PO4 SYSTEMS.....	2R01 DE04192-04	21,831
ORGANIZATION TOTAL	1	21,831	
STATE TOTAL	171	14,917,418	
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
ANDERSON, HARRISON C.....	SECOND CONFERENCE OF MATRIX VESICLE CALCIFICATION.....	1R13 AM22063-01	6,875
ANDERSON, HARRISON C.....	MINERALIZATION STUDIES RELATED TO ORAL BIOLOGY.....	1R01 DE05262-01	51,297
ARNOLD, WILFRED N.....	CELL ENVELOPES OF PATHOGENIC YEASTS.....	5R01 AI13177-03	40,222
ATKINS, FLOYD L.....	CATECHOLAMINE METABOLISM AND THE HEART.....	1R23 HL21973-01	24,320
BAST, JOSEPH D.....	NEUROENDOCRINE REGULATION OF REPRODUCTION IN THE RAT.....	5R01 HD11103-02	44,230
BUNAG, RUBEN D.....	HYPERTENSION PRODUCED BY SYMPATHETIC DYSFUNCTION.....	5R01 HL14560-07	54,580
BUNAG, RUBEN D.....	CONTRACEPTIVE STEROIDS AND EXPERIMENTAL HYPERTENSION.....	5R01 HL19144-03	31,943
BUNAG, RUBEN D.....	NON-INVASIVE BLOOD PRESSURE MEASUREMENT.....	1R01 HL22854-01	42,672
BUTTERFIELD, EARL C.....	INFANT AUDITORY PERCEPTION AND LEARNING.....	5R01 HD04756-08	81,677
CHONKO, ARNOLD M.....	MECHANISM OF URIC ACID TRANSPORT IN THE NEPHRON.....	5R01 AM19624-02	39,579
CLANCY, JOHN, JR.....	GVHD: ROLE OF FC, C3 RECEPTORS AND LYMPHOCYTE HOMING.....	5R01 AI13029-02	31,959

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
COHN, DAVID V.....	PARATHYROID AND PROPARATHYROID HORMONE.....	5R01 AM18323-04	64,535
COHN, DAVID V.....	METABOLIC PATHWAYS IN BONE.....	1R01 DE05209-01	84,373
COOK, JAMES D.....	MUCOSAL IRON TRANSPORT.....	5R01 AM19011-03	59,575
COOKE, ALLAN R.....	MECHANISMS REGULATING GASTRIC EMPTYING AND MOTILITY.....	5R01 AM19924-03	46,422
DENTLER, WILLIAM L, JR.....	THE ROLE OF MICROTUBULES IN ORGANELLE MOTILITY.....	5R01 AM21672-02	31,804
EBNER, KURT E.....	MECHANISM OF LACTOSE SYNTHESIZING ENZYMES.....	5R01 AM18257-05	58,430
EBNER, KURT E.....	FUNCTION AND INTERACTIONS OF MAMMARY CARCINOMA CELLS.....	2R01 CA17478-04	36,396
FISHER, HARVEY F.....	STRUCTURE AND MECHANISMS OF ACTION OF ENZYMES.....	5R01 GM15188-12	74,992
FRENKEL, JACOB K.....	TOXOPLASMOSIS: ITS TRANSMISSION AND PREVENTION.....	5R01 AI07489-12	82,517
FRENKEL, JACOB K.....	IMMUNITY OF NONLYMPHOID CELLS TO INTRACELLULAR INFECTION.....	5R01 AI14056-02	54,448
GOLDBERG, IVAN D.....	A GENETIC APPROACH TO THE STUDY OF N. GONORRHOEAE.....	5R01 AI11168-06	55,436
GRANTHAM, JARED J.....	MECHANISMS OF TRANSPORT IN ISOLATED KIDNEY TUBULES.....	2R01 AM13476-09A1	91,396
GREENWALD, GILBERT S.....	FOLLICULAR AND LUTEAL REGULATION IN THE MAMMALIAN OVARY.....	5R01 HD00596-16	89,170
HELMKAMP, GEORGE M, JR.....	MEMBRANE-PHOSPHOLIPID EXCHANGE PROTEIN INTERACTIONS.....	5R01 GM24035-02	39,465
HOOGSTRA滕EN, BARTH.....	SOUTHWEST ONCOLOGY GROUP (OPERATIONS OFFICE).....	2R10 CA16943-04	531,670
HUDSON, BILLY G.....	STRUCTURE OF BASEMENT MEMBRANES.....	2R01 AM18381-05	85,132
HUDSON, BILLY G.....	PATHOGENESIS OF HUMAN DIABETIC NEPHROPATHY.....	1R01 AM21169-01A1	54,096
HUNG, KUEN-SHAN.....	DEVELOPMENT OF PULMONARY INNERVATION.....	2R01 HD10139-03	40,030
HUNT, LAWRENCE A.....	STRUCTURE AND FUNCTION OF VIRAL GLYCOPROTEINS.....	1R01 AI14757-01	61,244
HURWITZ, ARYEH.....	FACTORS AFFECTING THE RESPONSES TO DRUGS.....	2P50 GM15956-11	437,114
JEWELL, WILLIAM R.....	CANCER EDUCATION PROGRAM—MID-AMERICA CANCER CENTER.....	2R25 CA17959-04	106,261
JOHNSON, DONALD C.....	AGING EFFECTS ON OVARIAN TUMORIGENESIS.....	5R01 AG00665-02	60,117
KIMMEL, JOE R.....	STRUCTURE-FUNCTION RELATIONSHIPS IN PROTEINS.....	2R01 AM09072-14	78,595
KINSEY, JOHN A.....	GENETIC STUDIES OF GLUTAMATE DEHYDROGENASE MUTANTS.....	1R01 GM23967-01	44,212
KIRCHNER, FERNANDO R.....	RADIOISOTOPE SCANNING OF THE MIDDLE EARS AND SINUSES.....	2R01 NS12521-04	19,086
KLAASSEN, CURTIS D.....	HEPATIC UPTAKE AND BILIARY EXCRETION IN TOXICOLOGY.....	2R01 AM14513-09	60,515
KLAASSEN, CURTIS D.....	CADMIUM TOXICOLOGY.....	5R01 ES01142-04	47,435
KLEIN, ROBERT M.....	A CELL CYCLE STUDY OF DEVELOPING RAT SALIVARY GLANDS.....	1R23 DE04557-01	13,310
LEUNG, CHRISTOPHER C.....	STUDIES OF ABNORMAL EMBRYONIC DEVELOPMENT.....	1R01 HD10603-01A2	49,284
LOWMAN, JAMES T.....	NATIONAL CANCER RESEARCH AND DEMONSTRATION CENTER.....	5P30 CA15080-05	251,005
LOWMAN, JAMES T.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00828-05	289,840
MELNYKOVYCH, GEORGE.....	STEROID INDUCED CHANGES IN CULTURED MALIGNANT CELLS.....	5R01 CA08315-14	56,473
MILLS, RUSSELL C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05373-17	150,353
MOORE, WAYNE V.....	ROLE OF AGGREGATED AND MONOMERIC GROWTH HORMONE.....	1R01 AM19544-01A1	51,201
MORANTZ, ROBERT A.....	IMMUNOTHERAPY OF EXPERIMENTAL BRAIN TUMORS.....	5R01 CA19318-02	38,534
NELSON, STANLEY R.....	MECHANISMS OF BRAIN DEHYDRATION WITH OSMOTIC DIURETICS.....	1R01 NS14390-01	25,434
PARK, CHAN H.....	CHEMOTHERAPY OF NORMAL AND LEUKEMIC MARROW IN VITRO.....	5R01 CA20717-02	53,737
PARMELY, MICHAEL J.....	THE CELLULAR BASIS OF COLOSTRAL IMMUNITY.....	1R01 HD11787-01	58,359
POISNER, ALAN M.....	CELLULAR MECHANISMS OF RENIN SECRETION.....	5R01 HL20278-02	37,945
REISSMANN, KURT R.....	STUDIES ON ERYTHROPOIETIN.....	2R01 AM07239-15	50,797
REISSMANN, KURT R.....	SELECTIVE MYELOTXIC EFFECT OF ANTITUMOR DRUGS.....	5R01 CA08736-13	45,246
ROBINSON, RALPH G.....	CLINICAL EVALUATION OF 99MTC AS A LEUKOCYTE LABEL.....	5R01 GM22814-03	59,696
SAVIN, VIRGINIA J.....	ULTRAFILTRATION CHARACTERISTICS OF ISOLATED GLOMERULI.....	1R01 AM22040-01	65,548
SCHLOERB, PAUL R.....	KINETICS OF WATER AND ELECTROLYTES IN SHOCK.....	5R01 HL02363-20	67,222
SILVERSTEIN, RICHARD.....	PEP CARBOXYKINASE IN SUDDEN INFANT DEATH SYNDROME.....	5R01 HD10562-02	26,278
STEPHENS, RONALD L.....	SOUTHWEST ONCOLOGY GROUP STUDIES.....	2R10 CA12644-07	369,178
SUZUKI, TSUNEO.....	STUDIES OF ANTIGEN RECEPTOR ON HUMAN B LYMPHOCYTES.....	1R01 AI14876-01	61,236
SVOBODA, DONALD J.....	HEPATOCELLULAR RESPONSES TO DRUGS AND CARCINOGENS.....	5R01 CA05680-17	64,542
TARR, CHARLES M.....	CONTRACTILE ACTIVITY OF SINGLE CARDIAC CELLS.....	5R01 HL18943-03	22,494
VOOGT, JAMES L.....	PITUITARY HORMONES AND BRAIN AMINES DURING REPRODUCTION.....	5R01 HD11922-02	56,170
WELLING, LARRY W.....	ANALYTIC FORMULATION OF TRANSPORT IN SINGLE NEPHRONS.....	5R01 AM16968-06	71,206
WONG, KIN-PING.....	ACQUISITION OF NATIVE CONFORMATION OF PROTEIN.....	5R01 HL18905-04	38,974
WOOD, GARY W.....	ROLE OF MACROPHAGES IN TUMOR GROWTH AND METASTASIS.....	5R01 CA19333-03	38,163
WOOD, JACKIE D.....	FUNCTION OF THE ENTERIC NERVOUS SYSTEM.....	5R01 AM16813-05	30,801
YARBROUGH, LYNWOOD R.....	MOLECULAR MECHANISMS OF TUBULIN-LIGAND INTERACTIONS.....	1R01 GM24599-01	60,416
ORGANIZATION TOTAL	66	5,147,262	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
LAWRENCE			
U.S. DEPARTMENT OF THE INTERIOR—HASKELL INDIAN JUNIOR COLLEGE ZIP CODE 66044			
AHSHAPANEK, DON C.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	3S06 RR08137-02S1	1,800
AHSHAPANEK, DON C.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	5S06 RR08137-03	19,822
ORGANIZATION TOTAL	2 21,622		
UNIVERSITY OF KANSAS ZIP CODE 66045			
ADAMS, RALPH N.....	ELECTROCHEMISTRY—EPR OF BIOLOGICAL ELECTRON TRANSFER.....	5R01 NS08740-13	50,116
BELL, WILLIAM J.....	CYBERNETIC INVESTIGATIONS OF CHEMO-ORIENTATION.....	1R01 NS13798-01A1	45,138
BORCHARDT, RONALD T.....	STRUCTURAL ANALOGS OF S-ADENOSYLMETHIONINE.....	2R01 NS10198-05A1	64,536
BORCHARDT, RONALD T.....	INHIBITION OF CATECHOL-O-METHYLTRANSFERASE.....	5R01 NS10918-05	36,292
BURTON, PAUL R.....	EM STUDIES OF SPERM AND NERVE: FOCUS ON MICROTUBULES.....	9R01 GM24992-14	43,394
COBB, E BENTON.....	STATISTICAL METHODS FOR SMALL-SAMPLE BIOASSAY.....	2R01 GM23192-02	19,147
DAVIS, JOHN C.....	FSH ACTIONS ON MAMMALIAN TESTIS CELLS IN CULTURE.....	5R01 HD10953-03	54,093
DIXON, LOIS S.....	CONDITIONAL STIMULUS CONTROL OVER CHOICE RESPONDING.....	5R01 HD11194-02	47,390
FAIMAN, MORRIS D.....	DISULFIRAM-OXYGEN THERAPY: OXYGEN TOXICITY CONCEPTS.....	5R01 NS07797-07	52,070
FLYNN, CYNTHIA B.....	MIGRATION OF AGED IN THE UNITED STATES (1965-1970).....	3R01 AG00703-01S1	2,000
FLYNN, CYNTHIA B.....	MIGRATION OF AGED IN THE UNITED STATES (1965-1970).....	5R01 AG00703-02	33,660
FOX, J EUGENE.....	STUDIES ON A CYTOKININ-BINDING PROTEIN.....	5R01 GM22842-03	32,708
GIVENS, RICHARD S.....	EXPLORATORY AND SYNTHETIC PHOTOCHEMISTRY.....	5R01 GM16611-09	29,600
GRUNEWALD, GARY L.....	CONFORMATIONALLY DEFINED ADRENERGIC AMINES.....	5R01 GM22988-03	58,286
HANZLIK, ROBERT P.....	METABOLISM AND TOXICITY OF ORGANOMETALLIC AGENTS.....	5R01 ES01375-02	50,783
HANZLIK, ROBERT P.....	THE ROLE OF EPOXIDES IN METABOLISM AND DRUG TOXICITY.....	3R01 GM21784-03S1	8,076
HANZLIK, ROBERT P.....	THE ROLE OF EPOXIDES IN METABOLISM AND DRUG TOXICITY.....	2R01 GM21784-04	64,741
HERSH, ROBERT T.....	PROPERTIES OF ALPHA CRYSTALLIN OF THE LENS.....	5R01 EY01702-03	22,420
HIMES, RICHARD H.....	FORMYLTETRAHYDROFOLATE SYNTHETASE.....	5R01 AM07140-14	34,691
HIMES, RICHARD H.....	PROPERTIES OF MICROTUBULAR PROTEIN.....	5R01 NS11360-03	37,326
HOROWITZ, FRANCES D.....	INFANTS—INDIVIDUAL DIFFERENCES AND ENVIRONMENTS.....	5R01 HD10608-02	77,861
HOUSTON, L LUGENE.....	RICIN: A PLANT AGGLUTININ WITH ANTITUMOR PROPERTIES.....	5R01 CA16206-04	49,422
HOUSTON, L LUGENE.....	CYTOSKELETON-MEMBRANE INTERACTION IN EUKARYOTIC CELLS.....	1R01 GM24583-01	58,803
LEE, BYUNGKOOK.....	CRYSTALLOGRAPHIC STUDIES ON THE ENZYME L-ASPARAGINASE.....	5R01 CA16237-05	60,965
LINDENBAUM, SIEGFRIED.....	THERMODYNAMIC STUDIES OF BILE ACID MICELLAR SOLUTIONS.....	5R01 AM18084-05	46,406
MC CHESNEY, JAMES D.....	CYTOKININ GLYCOSIDES—POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19978-03	27,479
MERTES, MATHIAS P.....	COFACTOR INHIBITION OF THYMIDYLATE SYNTHETASE.....	2R01 CA07522-14	83,291
MERTES, MATHIAS P.....	CENTER FOR DRUG DESIGN.....	5P01 GM22357-03	341,973
MERTES, MATHIAS P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05606-12	67,942
MIKKELSON, THOMAS J.....	QUANTITATION OF DRUG UPTAKE BY CORNEAL EPITHELIUM.....	1R01 EY02328-01A1	34,133
MITSCHER, LESTER A.....	NEW ANTIBIOTICS—ISOLATION, SYNTHESIS, AND EVALUATION.....	5R01 AI13155-04	77,539
MULDER, JOHN B.....	IMPROVEMENT OF ANIMAL CARE SERVICES AND FACILITIES.....	3P40 RR00996-02S1	1,061
PATTON, THOMAS F.....	AGE-RELATED DOSAGE MODIFICATIONS FOR OPHTHALMIC DRUGS.....	1R01 EY01945-01A1	43,190
ROBERTSON, DONALD C.....	PATHOGENICITY OF ENTEROTOXIGENIC ESCHERICHIA COLI.....	2R22 AI12357-04	53,733
RUTLEDGE, CHARLES O.....	DRUGS ON RELEASE OF BIOGENIC AMINES AND BEHAVIOR.....	5R01 NS12760-04	76,746
SCHIEFELBUSCH, RICHARD L.....	PROGRAM FOR A RESEARCH CENTER IN MENTAL RETARDATION.....	5P30 HD02528-12	507,627
SCHIEFELBUSCH, RICHARD L.....	THE DEVELOPMENT OF CULTURALLY DEPRIVED CHILDREN.....	2P01 HD03144-11A1	396,186
SCHOWEN, RICHARD L.....	ENZYME EFFECTOR DESIGN.....	5R01 GM20198-05	62,827
SNYDER, HENRY L.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07037-13	118,860
SPRADLIN, JOSEPH E.....	COMMUNICATIONS RESEARCH WITH RETARDED CHILDREN.....	5P01 HD00870-15	508,334
STERNSON, LARRY A.....	OXIMES IN THE STUDY OF AMINE-MEDIATED CARCINOGENESIS.....	5R01 CA18615-04	29,321
STERNSON, LARRY A.....	THE ROLE OF ARYLHYDROXYLAMINES IN CARCINOGENESIS.....	5R01 CA19288-03	47,263
WENZEL, DUANE G.....	OZONE-LUNG MACROPHAGE-FIBROBLAST INTERACTIONS.....	5R01 ES01315-02	52,093
ZIMBRICK, JOHN D.....	EPR STUDIES ON DETECTION AND TREATMENT OF CANCER.....	2R01 CA14335-04	101,063
ZIMBRICK, JOHN D.....	STUDIES ON DNA BASE DAMAGE INDUCED BY GAMMA RADIATION.....	2R01 GM18927-07	59,886
ORGANIZATION TOTAL	45 3,770,471		
MANHATTAN			
KANSAS STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE ZIP CODE 66506			
BODE, VERNON C.....	BIOCHEMICAL STUDIES ON THE REGULATION OF DNA FUNCTION.....	5R01 GM18182-07	69,145

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
KANSAS—Continued			
CONRAD, GARY W.....	FIBROBLAST DIFFERENTIATION DURING EYE DEVELOPMENT	3R01 EY00952-06S1	4,996
CONRAD, GARY W.....	FIBROBLAST DIFFERENTIATION DURING EYE DEVELOPMENT	2R01 EY00952-07	92,967
CONRAD, GARY W.....	MOLLUSCAN POLAR LOBES: ROLE IN EMBRYONIC DEVELOPMENT.....	5R01 HD07193-05	39,577
CONSIGLI, RICHARD A.....	STUDIES IN POLYOMA TRANSFORMED CELLS—VIRION PROTEINS.....	5R01 CA07139-15	75,208
COX, DAVID J.....	SELF-ASSOCIATION REACTIONS OF MACROMOLECULES.....	2R01 GM22243-04	43,678
DAVIS, LAWRENCE C.....	DIRECT SCANNING GEL FILTRATION ON INTERACTING SYSTEMS.....	2R01 GM23039-03	41,667
FLORA, CORNELIA B.....	PERCEIVED ADVANTAGES & DISADVANTAGES OF CHILDBEARING.....	3R01 HD10681-02S1	11,723
HEDGCOTH, CHARLIE, JR.....	EFFECT OF VIRUS-INDUCED TRANSFORMATION ON TRNA.....	5R01 CA12741-07	40,853
KRUH, R F.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S07 RR07036-13	48,348
MANNEY, THOMAS R.....	GENE FUNCTIONS ASSOCIATED WITH MATING IN YEAST.....	2R01 GM19175-07	68,815
REECK, GERALD R.....	TUMOR-ENRICHED NONHISTONE CHROMATIN PROTEINS.....	3R01 CA17782-03S1	8,533
REECK, GERALD R.....	TUMOR-ENRICHED NONHISTONE CHROMATIN PROTEINS.....	2R01 CA17782-04	57,648
ROCHE, THOMAS E.....	REGULATION OF MAMMALIAN PYRUVATE DEHYDROGENASE.....	2R01 AM18320-04	41,263
RODKEY, L SCOTT.....	AUTOREGULATION OF IMMUNE PROCESSES.....	5R01 AI12389-04	44,356
ROUFA, DONALD J.....	GENETICS OF THE MAMMALIAN 80S RIBOSOME.....	5R01 GM23013-03	70,647
SHANTEAU, JAMES C.....	HEALTH CARE DECISIONS MADE BY EXPECTANT COUPLES.....	1R01 HD11857-01	17,887
SMITH, JOSEPH E.....	GLUTATHIONE DEFICIENCY IN RED CELLS.....	5R01 HL12972-09	37,648
SPOONER, BRIAN S.....	MICROFILAMENTS, MORPHOGENESIS, AND CYTODIFFERENTIATION.....	5R01 GM19289-07	61,070
WESTFALL, JANE A.....	ELECTRON MICROSCOPY OF NEURONS, AXONS AND SYNAPSES.....	2R01 NS10264-06	41,712
ORGANIZATION TOTAL	20	917,741	
TOPEKA			
MENNINGER FOUNDATION ZIP CODE 66601			
KOVACH, JOSEPH K.....	DEVELOPMENT OF A BEHAVIORAL PHENOTYPE.....	5R01 HD06770-06	98,107
ORGANIZATION TOTAL	1	98,107	
STATE TOTAL	134	9,955,203	
KENTUCKY			
FRANKFORT			
KENTUCKY STATE UNIVERSITY ZIP CODE 40601			
RIDGEL, GERTRUDE C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08124-04S1	1,950
RIDGEL, GERTRUDE C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08124-05	16,598
ORGANIZATION TOTAL	2	18,548	
LEXINGTON			
EPHRAIM MC DOWELL COMMUNITY CANCER NETWORK ZIP CODE 40503			
GOLDENBERG, DAVID M.....	EXPLORATORY STUDIES IN ENVIRONMENTAL CANCER.....	5P20 CA19467-02	78,382
GOLDENBERG, DAVID M.....	CANCER CENTER SUPPORT CORE GRANT.....	1P30 CA23154-01	107,825
ORGANIZATION TOTAL	2	186,207	
UNIVERSITY OF KENTUCKY ZIP CODE 40506			
BARKLEY, MARY D.....	PHYSICAL STUDIES OF THE LAC REPRESSOR.....	5R01 GM22873-04	52,038
BONNER, PHILIP H.....	INNERVATION AND MUSCLE CELL TYPES IN EARLY MYOGENESIS.....	5R01 HD10307-03	32,986
BROOKS, WILLIAM H.....	IMMUNOBIOLOGY OF PRIMARY INTRACRANIAL TUMORS.....	5R01 CA18234-03	46,794
BULLOCK, WARD E.....	IN VIVO STUDIES OF DELAYED HYPERSENSITIVITY IN LEPROSY.....	5R22 AI10094-08	82,937
BUTTERFIELD, D ALLAN.....	MEMBRANE ALTERATIONS IN HUNTINGTON'S DISEASE.....	1R01 NS13791-01A1	55,964
CHAN, SHUNG K.....	ALPHA-1-ANTITRYPSIN STRUCTURE IN RELATION TO EMPHYSEMA.....	5R01 HL16166-05	77,293
CLARK, JIMMY D.....	GENETIC ANALYSIS OF AGING IN THE TRUE SLIME MOLDS.....	1R23 AG00809-01	16,677
CLAWSON, D KAY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05374-17	119,770
COLE, JAMES S.....	DEVELOPMENT OF A PULSED DOPPLER VELOCITY DETECTOR.....	5R01 HL20630-03	59,339
COLEMAN, MARY S.....	TERMINAL TRANSFERASE IN MAMMALIAN HEMOPOIETIC CELLS.....	5R01 CA19492-03	42,591
CONTI, SAMUEL F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07114-10	23,153

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
KENTUCKY—Continued			
CRANDALL, MARJORIE A.....	GENETIC CONTROL OF MATING IN HANSENULA WINGEI.....	2R01 GM21889-03	45,720
DE SIMONE, PHILIP A.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA20255-02	79,988
DICKSON, ROBERT C.....	EUCARYOTIC ENZYME INDUCTION—YEAST BETA-GALACTOSIDASE.....	5R01 GM22749-03	43,722
GALLA, JOHN H.....	STEROID-INDUCED HYPERLIPIDEMIA AND HYPERTENSION.....	5R01 HL18923-02	60,807
GOCKERMAN, JON P.....	PLATELET TRANSFUSIONS IN ALLOIMMUNIZED PATIENTS.....	5R01 CA19107-03	34,461
GOLDENBERG, DAVID M.....	A MODEL FOR COLONIC CANCER-ASSOCIATED ANTIGENS.....	2R26 CA15799-04A1	114,166
GOLDENBERG, DAVID M.....	ROLE OF IN VIVO CELL FUSION IN NEOPLASIA.....	5R01 CA17198-04	69,048
GOLDENBERG, DAVID M.....	RADIOLOGICAL LOCALIZATION OF HUMAN TUMORS.....	3R01 CA17742-03S1	14,873
GOLDENBERG, DAVID M.....	RADIOLOGICAL LOCALIZATION OF HUMAN TUMORS.....	2R01 CA17742-04	78,768
GOLDENBERG, DAVID M.....	SELECTIVE RADIOIMMUNOTHERAPY OF COLON CANCER.....	1R26 CA24204-01	82,916
GUTHRIE, GORDON P, JR.....	ADRENAL STEROIDS IN ADOLESCENT AND ADULT HYPERTENSION.....	1R23 HL21917-01	42,136
HOLLAND, PHILLIP C.....	TERMINAL TRANSFERASE AND SURFACE MARKERS IN LEUKEMIA.....	5R01 CA19842-03	67,679
HURLEY, LAURENCE H.....	PYRROLO(1,4)BENZODIAZEPINE ANTITUMOR ANTIBIOTICS.....	2R01 CA17047-04	100,436
JAMES, ERIC.....	RECOMBINANT DNA FACILITIES.....	1P30 GM25712-01	31,743
KOTCHEN, JANE M.....	HIGH BLOOD PRESSURE IN THE YOUNG.....	5R01 HL19956-03	80,846
KOTCHEN, THEODORE A.....	RENIN KINETICS IN HYPERTENSIVE AND UREMIC PLASMA.....	5R01 HL15528-05	56,562
KOTCHEN, THEODORE A.....	EFFECT OF CHLORIDE ON RENIN.....	1R01 HL22390-01	50,784
LAINE, ROGER A.....	CHEMISTRY OF CELL-SURFACE AND RELEASED GLYCOPROTEINS.....	5R01 GM23902-02	47,282
LESNAW, JUDITH A.....	REPLICATION OF NEGATIVE STRAND RNA VIRUSES.....	2R01 AI13574-03	70,763
LESTER, ROBERT L.....	THE BIOCHEMISTRY OF INOSITOL PHOSPHOLIPIDS IN FUNGI.....	5R01 AI12299-04	90,023
LUKE, ROBERT G.....	STUDIES OF RENAL CHLORIDE TRANSPORT.....	5R01 AM13859-08	70,538
MARKESBERY, WILLIAM R.....	BRAIN TRACE ELEMENT ANALYSIS IN ALZHEIMER'S AND AGING.....	1R01 NS14221-01	55,693
MARUYAMA, YOSH.....	STUDY OF TUMOR RADIOBIOLOGY.....	5R01 CA13849-05	41,317
MARUYAMA, YOSH.....	RADIATION THERAPY ONCOLOGY PROGRAM.....	5P01 CA17786-04	235,434
MILLER, RALPH E.....	NEURAL REGULATION OF INSULIN SECRETION RATE.....	5R01 AM17082-05	31,904
OTT, COBERN E.....	RENAL REGULATION OF SALT AND WATER BALANCE.....	5R01 AM19693-02	45,433
PAPKA, RAYMOND E.....	AUTONOMIC NERVOUS ELEMENTS IN THE DEVELOPING HEART.....	1R01 HL22226-01	42,709
PRIMUS, F JAMES.....	IMMUNOLOGICAL HETEROGENEITY OF CEA.....	1R01 CA24376-01	57,883
RANDALL, DAVID C.....	BEHAVIORAL INFLUENCES ON CARDIAC CONTRACTILITY.....	2R01 HL19343-03	74,167
RHOADS, ROBERT E.....	REGULATION OF OVALBUMIN SYNTHESIS IN CHICK OVIDUCT.....	5R01 GM20818-05	87,580
ROSENTHAL, GERALD A.....	NON-PROTEIN AMINO ACID BIOCHEMISTRY AND TOXICITY.....	2R01 AM17322-05	31,816
SAMMON, PATRICK J.....	METABOLISM OF PARATHYROID HORMONE.....	5R23 DE04280-03	36,033
STEINER, MARION R.....	MEMBRANE PROTEINS AND LIPIDS IN MAMMARY CARCINOMA.....	1R01 CA25730-01	61,703
STEINER, SHELDON M.....	CARCINOGEN SCREENING IN EPITHELIAL CELLS.....	1R01 CA25431-01	46,288
WISEMAN, RALPH F.....	PRODUCTION OF IMPROVED GERMFREE ANIMALS.....	5R01 RR01042-03	63,788
YOUNG, ALFRED B.....	POST-TRAUMATIC EPILEPSY PROPHYLAXIS.....	5R01 NS13454-02	89,934
ZECHMAN, FRED W.....	CONTROL OF VENTILATION IN HEALTH AND DISEASE.....	5P01 HL16878-05	179,031
ZIMMER, STEPHEN G.....	MOLECULAR PATHOLOGY OF DNA ONCOGENIC VIRUSES.....	5R01 CA21339-02	48,526
ZIMMER, STEPHEN G.....	EARLY GENE TRANSCRIPTION IN ADENOVIRUS 2 INFECTED CELLS.....	5R01 CA21807-02	41,230
ORGANIZATION TOTAL	50 3,213,272		

VETERANS ADMINISTRATION HOSPITAL ZIP CODE 40507

ANDERSON, JAMES W.....	HIGH CARBOHYDRATE & HIGH FIBER DIETS FOR DIABETICS.....	5R01 AM20889-02	49,057
ORGANIZATION TOTAL	1 49,057		

LOUISVILLE

UNIVERSITY OF LOUISVILLE ZIP CODE 40208

BARROWS, GEORGE H.....	STEROID UPTAKE IN HORMONALLY DEPENDENT CANCERS.....	1R01 CA23848-01	33,427
BENZ, FREDERICK W.....	UNFOLDING OF PANCREATIC RIBONUCLEASE AND DERIVATIVES.....	1R01 GM26529-01	45,550
BURZYNSKI, NORBERT J.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	2R25 CA18006-04	60,488
COBBS, GARY A.....	INVESTIGATION OF SENSITIVITY OF GEL ELECTROPHORESIS.....	1R01 GM25108-01	45,395
DOYLE, RONALD J.....	POTENTIAL ANTICARCINOGENS.....	1R01 DE05102-01	53,632
FLOWERS, NANCY C.....	RECORDING AND ANALYSIS OF LOW LEVEL CARDIAC SIGNALS.....	5R01 HL19768-02	44,050
FONDA, MARGARET L.....	REGULATION OF MAMMALIAN PYRIDOXAL PHOSPHATE METABOLISM.....	1R01 AM19507-01	38,264
HOFFMAN, JERALD L.....	METHIONINE ADENOSYLTRANSFERASE AND NEOPLASIA.....	5R01 CA22166-02	62,072
HORAN, LEO G.....	MULTIPOLAR LINKAGE BETWEEN HEART GEOMETRY AND SURFACE.....	2R01 HL16901-05	77,751
KALSOW, CAROLYN M.....	OCULAR AUTOIMMUNITY INVOLVING RETINA OR UVEA.....	2R01 EY01516-04	51,798
KEENEY, ARTHUR H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05375-17	50,217

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
KENTUCKY—Continued			
LIVERY, J PATRICK.....	THE RHEOLOGY OF HUMAN CHORIOAMNIOTIC MEMBRANES.....	1R01 HD11237-01	51,050
LIU, PINGHUI V.....	HEMOLYSINS OF STAPHYLOCOCCI AND PSEUDOMONAS AERUGINOSA.....	5R01 AI05283-16	43,316
MOORE, CONDUCT.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17985-04	127,259
MUSACCHIA, X J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07153-03	14,198
POTTS, ALBERT M.....	THE ACTION OF DRUGS AND POISONS ON THE EYE.....	5R01 EY01591-02	64,567
POTTS, ALBERT M.....	PATHOPHYSIOLOGICAL STUDIES ON OPTIC NERVE.....	5R01 EY01704-04	86,747
RAO, VENKATESWARA C.....	PROSTAGLANDIN; GONADOTROPIN RECEPTORS IN CORPORA LUTEA.....	5R01 HD09577-03	67,420
STAAT, ROBERT H.....	DENTAL PLAQUE GLUCANOHYDROLASES AND CARIES FORMATION.....	5R01 DE04666-03	58,669
SUDDICK, RICHARD P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05315-13	17,007
SWARTZ, FRANK J.....	POLYPLOIDIZATION OF NORMAL AND DIABETIC ISLETS.....	5R01 AM21120-02	23,015
TAYLOR, JOHN F.....	FACTORS MODIFYING THE REACTION PROPERTIES OF HB S.....	1R01 HL22780-01	34,060
WACKER, WALDON B.....	AUTO AND ISO-IMMUNE RESPONSE TO OCULAR TISSUES.....	3R01 EY00254-11S1	2,222
WESTPHAL, ULRICH F.....	STEROID-PROTEIN INTERACTIONS.....	5R01 AM06369-17	113,743
WILLIAMS, DONALD E.....	DERIVATION OF NONBONDED POTENTIAL PARAMETERS.....	5R01 GM16260-10	49,013
WILSON, RONALD S.....	HERITABILITY AND MENTAL DEVELOPMENT.....	5R01 HD07200-04	55,813
YANKEELOV, JOHN A, JR.....	COVALENT CONTROL OF CORNEA-DAMAGING COLLAGENASE.....	5R01 EY00969-07	85,062
ORGANIZATION TOTAL	27	1,455,805	
STATE TOTAL	82	4,922,889	
LOUISIANA			
BATON ROUGE			
GULF SOUTH RESEARCH INSTITUTE		ZIP CODE 70808	
WALSH, GERALD P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05672-08	21,751
ORGANIZATION TOTAL	1	21,751	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AT BATON ROUGE		ZIP CODE 70803	
BESCH, EVERETT D.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09087-01	127,478
CHANG, SIMON H.....	ROLE OF TRANSFER RNA MODIFICATION IN CELLULAR AGING.....	5R01 AG00454-05	36,343
CULLEY, DUDLEY D, JR.....	LABORATORY MANAGEMENT OF RANA CATESBEIANA.....	2P40 RR00635-07	76,328
FISCHER, NIKOLAUS H.....	SESQUITERPENE LACTONES FROM MELAMPODIINAE (COMPOSITAE).....	5R01 CA19800-03	36,553
HALES, BRIAN J.....	RADICAL INTERACTIONS IN RIGID MEDIA.....	5R01 GM23272-03	33,143
HALES, BRIAN J.....	ORIENTATION OF MOLECULES IN MEMBRANES.....	1R01 GM25049-01	54,780
HOUK, KENDALL N.....	APPLICATIONS OF NEW CYCLOADDITIONS TO DRUG SYNTHESIS.....	2R01 GM17652-04	46,479
LEE, WILLIAM R.....	QUANTITATIVE GENETIC STUDY OF ENVIRONMENTAL MUTAGENS.....	5R01 ES00320-11	77,900
PRYOR, WILLIAM A.....	BIO-ORGANIC CHEMISTRY OF OZONE, NO2 AND TOBACCO SMOKE.....	5R01 HL16029-05	95,676
RIOPELLE, ARTHUR J.....	PRE- & POSTNATAL UNDERNUTRITION & ADAPTIVE CAPACITY.....	2R22 HD07479-04A1	113,144
TRAYNHAM, JAMES G.....	BIOMEDICAL SCIENCES SUPPORT GRANT.....	5S07 RR07039-07	36,292
YOUNATHAN, EZZAT S.....	PHOSPHOFRUCTOKINASE IN NORMAL AND DIABETIC STATES.....	1R01 AM21307-01	56,137
ORGANIZATION TOTAL	12	790,253	
SOUTHERN UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE BATON ROUGE		ZIP CODE 70813	
CHRISTIAN, FRED A.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08025-07S1	1,470
CHRISTIAN, FRED A.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08025-08	263,824
ORGANIZATION TOTAL	2	265,294	
COVINGTON			
TULANE UNIVERSITY		ZIP CODE 70433	
BRIZZEE, KENNETH R.....	PRENATAL LOW-DOSE IRRADIATION EFFECTS ON PRIMATE BRAIN.....	5R01 HD09942-03	74,626
LI, YU-TEH.....	GLYCOSIDASES AS RELATED TO SPHINGOLIPIDOSES.....	5R01 NS09626-08	80,277
LOWRIE, ROBERT C, JR.....	ARTHROPOD VECTORS OF FILARIAE.....	5R22 AI13555-03	19,068
ORIHEL, THOMAS C.....	STUDY OF FILARIAE OF MAN IN PRIMATES.....	5R22 AI10269-07	58,167
ROBERTS, JAMES A.....	HOST-PARASITE INTERACTION IN PYELONEPHRITIS.....	2R01 AM14681-09	120,399
WALSH, JOHN J.....	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER.....	2P40 RR00164-17	1,640,269
ORGANIZATION TOTAL	6	1,992,806	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
GRAMBLING			
GRAMBLING STATE UNIVERSITY ZIP CODE 71245			
HILL, FRANKLIN D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08054-06	31,414
HILL, FRANKLIN D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08054-07	62,008
ORGANIZATION TOTAL	2 93,422		
NEW ORLEANS			
ALTON OCHSNER MEDICAL FOUNDATION ZIP CODE 70121			
BOWEN, JOHN C.....	GASTRIC MUCOSAL INTEGRITY: INTRACELLULAR HYPOXIA.....	5R01 AM19897-02	55,479
FROHLICH, EDWARD D.....	REGIONAL HEMODYNAMICS IN SPONTANEOUS HYPERTENSION.....	3R01 HL20542-02S1	3,054
FROHLICH, EDWARD D.....	HEMODYNAMICS OF THE CLINICAL HYPERTENSIONS.....	1R01 HL22506-01	83,640
FROHLICH, EDWARD D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05518-16	16,351
PEGRAM, BARBARA L.....	REGIONAL HEMODYNAMICS IN SPONTANEOUS HYPERTENSION.....	5R01 HL20542-03	34,998
TRIPPADO, NICK C.....	COMPLIANCE OF FLUID SPACES IN ADVANCING HYPERTENSION.....	1R01 HL22261-01	36,924
ORGANIZATION TOTAL	6 230,446		
DILLARD UNIVERSITY ZIP CODE 70122			
VERRETT, JOYCE M.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08064-07S1	1,750
VERRETT, JOYCE M.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08064-08	105,812
ORGANIZATION TOTAL	2 107,562		
GULF SOUTH RESEARCH INSTITUTE—LAKE PONTCHARTRAIN LABORATORIES ZIP CODE 70146			
EHRlich, KENNETH C.....	BIOCHEMISTRY OF LUNG PROTEOGLYCANS.....	5R01 HL21617-02	59,873
MAY, PAUL D.....	CHLORINATED POLYETHYLENE FOR MAXILLOFACIAL PROSTHESES.....	5R01 DE04392-03	97,569
ORGANIZATION TOTAL	2 157,442		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119			
BAGBY, GREGORY J.....	HORMONE-SUBSTRATE INTERACTION IN DIABETIC MYOCYTE.....	5R01 HL22101-02	54,098
BEAZLEY, ROBERT M.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA17916-01A2	80,754
BERENSON, GERALD S.....	BIOCHEMISTRY OF CARDIOVASCULAR CONNECTIVE TISSUE.....	5R01 HL02942-22	123,530
BERENSON, GERALD S.....	A/S SCOR—EARLY NATURAL HISTORY OF ARTERIOSCLEROSIS.....	5P50 HL15103-07	1,022,225
BERLIN, CHARLES I.....	PERIPHERAL AND CENTRAL AUDITORY MECHANISMS.....	5P50 NS11647-04	478,414
BIUNDO, JOSEPH J, JR.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM21147-02	148,204
BOCKMAN, EMMA L.....	BLOOD FLOW REGULATION IN MUSCLE.....	2R01 HL17932-04	25,334
CLAYCOMB, WILLIAM C.....	CELL PROLIFERATION IN THE HEART DURING DEVELOPMENT.....	1R01 HL21065-01A1	42,480
COHN, ISIDORE, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	3R10 CA12031-05S3	700
COHN, ISIDORE, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	2R10 CA12031-06A1	31,644
COHN, ISIDORE, JR.....	ADMINISTRATION OF NATIONAL PANCREATIC CANCER PROJECT.....	5R26 CA17500-04	196,900
FRANKLIN, RUDOLPH M.....	SECRETORY IMMUNE SYSTEM—RELATIONSHIP TO OCULAR DISEASE.....	7R01 EY03028-01	56,513
HALPERIN, VICTOR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18703-03	30,992
HARTMAN, ARTHUR D.....	ADIPOCYTE METABOLISM AS RELATED TO CELL SIZE.....	2R01 AM19995-02A1	41,723
HENEGHAN, JAMES B.....	GASTROINTESTINAL PHYSIOLOGY IN GNOTOBIOTES.....	5R01 AM18886-03	60,762
HOSSLER, FRED E.....	THE SITE AND MECHANISM OF PLASMA MEMBRANE RENEWAL.....	1R01 GM24953-01	22,333
HOWE, CALDERON.....	IMMUNOCHEMICAL STUDY OF VIRUS RECEPTORS & INFECTED CELLS.....	2R01 AI10945-07A1	78,305
KAUFMAN, HERBERT E.....	CORNEAL PRESERVATION AND KERATOPLASTY.....	1R01 EY02580-01	112,134
KAUFMAN, HERBERT E.....	OCULAR HERPES SIMPLEX.....	7R01 EY02672-01	130,213
LARSON, PAUL F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05376-17	118,983
LEVITZKY, MICHAEL G.....	VENTILATION, PERFUSION, AND SYSTEMIC ARTERIAL REFLEXES.....	1R01 HL22641-01	31,140
LOPEZ-S, ALFREDO.....	LUNG CANCER AND VITAMIN A.....	1R01 CA23205-01	76,709
MATTHEWS, MURRAY A.....	PHARMACOLOGIC MODIFICATION OF AFFERENT INPUT.....	1R01 NS14699-01	29,780
MORGAN, LEE R.....	BIOCHEMICAL MARKERS IN DISEASES OF THE LARGE BOWEL.....	3R26 CA16766-03S1	8,781
NANCE, FRANCIS C.....	SURGICAL PATHOPHYSIOLOGY IN GNOTOBIOTIC ANIMALS.....	5R01 AI10095-07	89,878
NARAYANAN, C H.....	TRIGEMINAL NECK REFLEX—DEVELOPMENT AND CONTROL.....	1R01 HD12064-01	44,602
OLSON, RANDALL J.....	CORNEAL PHYSIOLOGY AND KERATOPLASTY INDUCED GLAUCOMA.....	1R01 EY02626-01	48,550
RADHAKRISHNAMURTHY, B.....	BIOCHEMISTRY OF LUNG PROTEOGLYCANS.....	1R01 HL21649-01	72,156
RAWLS, HENRY R.....	F-RELEASING AND ACID BARRIER-POLYMER CARRIES THERAPIES.....	5R01 DE04749-02	3,778
RAYSON, JACK H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05704-08	16,697

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
REEVES, RICHARD E.....	BIOCHEMISTRY OF ENTERIC AMOEBA AND RELATED ORGANISMS	2R01 AI02951-17	40,915
REEVES, RICHARD E.....	GROWTH REQUIREMENTS FOR AXENIC AMEBAE	1R01 AI15090-01	26,983
ROHEIM, PAUL S.....	HYPERLIPOPROTEINEMIA	5R01 HL20954-02	91,055
SARKAR, NIKHIL K.....	CREEP AND CORROSION OF DENTAL AMALGAMS	1R01 DE05126-01	56,284
STARY, HERBERT C.....	EVOLUTION & PROGRESSION OF PEDIATRIC ATHEROSCLEROSIS.....	1R01 HL22739-01	71,235
STRONG, JACK P.....	NATURAL AND EXPERIMENTAL ATHEROSCLEROSIS.....	2P01 HL08974-14	573,840
UPDYKE, BRUCE V.....	VISUAL AND ASSOCIATION CONNECTIONS OF PULVINAR	5R01 EY01925-02	24,020
VILLAREJOS, VICTOR M.....	EPIDEMIOLOGY OF HEPATITIS B ANTIGEN AND VIRAL HEPATITIS	5R01 AI12910-03	218,160
WEBSTER, DOUGLAS B.....	CENTRAL PROJECTIONS OF RESIDUAL SPIRAL GANGLION CELLS	5R01 NS12510-03	38,686
WILBER, JOHN F.....	THYROTROPIN RELEASING FACTOR SECRETION AND ACTIONS.....	7R01 AM25482-01	43,104
ZELEDON, RODRIGO A.....	EPIDEMIOLOGY AND IMMUNITY OF LEISHMANIASIS	5R01 AI13572-03	57,243
ORGANIZATION TOTAL	41 4,519,837		
LOUISIANA STATE UNIVERSITY OF NEW ORLEANS ZIP CODE 70122			
BRYAN, SARA E.....	METALLOTHIONEIN INDUCTION BY CADMIUM, COPPER, MERCURY	2R01 ES00802-07	86,174
GITHENS, SHERWOOD, III.....	CARCINOGENESIS OF PANCREATIC DUCTAL TISSUE IN VITRO.....	5R26 CA19177-03	42,997
GRIFFIN, GARY W.....	SYNTHESIS, PHOTO AND THERMOCHEMISTRY OF ARENE OXIDES	5R01 CA18346-03	56,876
GUILBAULT, GEORGE G.....	ELECTRODE PROBES USING ENZYMES.....	5R01 GM17268-07	31,820
LASETER, JOHN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07169-02	16,404
ORGANIZATION TOTAL	5 234,271		
TOURO INFIRMARY ZIP CODE 70115			
HYMAN, EDWARD S.....	A SEARCH FOR PHOSPHOLIPID CHANNELS IN NA-K-ATP-ASE.....	5R01 AM12718-08	27,340
ORGANIZATION TOTAL	1 27,340		
TULANE UNIVERSITY ZIP CODE 70118			
AGRAWAL, KRISHNA C.....	DEVELOPMENT OF ANTITUMOR AND RADIOSENSITIZING AGENTS	5R01 CA21050-03	61,601
ARCOS, JOSEPH C.....	WRITING OF 'CHEMICAL INDUCTION OF CANCER' VOL. IIC.....	5R01 LM03036-02	36,701
ARIMURA, AKIRA.....	PHYSIOLOGY OF HYPOTHALAMIC NEUROHORMONES.....	2R01 AM09094-13	94,210
BANTA, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05444-17	51,456
BEAVER, PAUL C.....	OCCULT HELMINTHIC INFECTIONS.....	5R01 AI04919-16	34,338
BOWERS, CYRIL Y.....	STUDIES ON HYPOTHALAMIC THYROTROPIN-RELEASING FACTOR.....	5R01 AM06164-16	90,269
CHANDRAN, KRISHNAN B.....	HEMODYNAMICS IN CURVED ARTERIES.....	3R01 HL18156-02S1	7,736
CHAPNICK, BARRY M.....	PROSTAGLANDIN PRECURSORS AND INTESTINAL VASCULATURE.....	5R01 HL19997-02	30,675
COWIN, STEPHEN C.....	BONE REMODELING OF THE FEMUR.....	1R01 AM20240-01	44,903
COY, DAVID H.....	SYNTHESIS AND BIOLOGY OF ANALOGUES OF SOMATOSTATIN.....	5R01 AM18370-04	43,721
DEKERNION, JEAN B.....	CHEMOTHERAPY OF PROSTATIC CANCER.....	1R26 CA22387-01	54,856
DI LUZIO, NICHOLAS R.....	DEVELOPMENTAL THERAPEUTICS: GLUCAN.....	1R01 CA24326-01	112,638
DOMER, JUDITH E.....	HOST RESPONSES IN EXPERIMENTAL CANDIDIASIS.....	2R01 AI12806-04	64,775
EHRlich, MELANIE.....	5-METHYLCYTOSINE-RICH DNA: CANCER AND DEVELOPMENT.....	5R01 CA19942-02	46,587
EVANICH, MYRON J.....	BIO-TELEMETRY IN THE STUDY OF VENTILATORY CONTROL.....	1R01 HL21743-01	101,629
FISHER, JAMES W.....	KIDNEY CONTROL OF ERYTHROPOIETIN PRODUCTION.....	2R01 AM13211-09A1	44,731
FISHER, JAMES W.....	PURIFICATION OF ERYTHROPOIETIN.....	5R01 HL21701-02	59,238
GERALL, ARNOLD A.....	HORMONAL BASIS OF AGING IN REPRODUCTIVE BEHAVIOR.....	5R01 HD00867-16	64,606
HAMLIN, JAMES T, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05377-17	130,599
HEWITT, ROBERT L.....	CARDIAC ANOXIA: PROTECTIVE EFFECT OF CARBOHYDRATE.....	5R01 HL15813-05	67,481
HYMAN, ALBERT L.....	CARDIOVASCULAR SURGICAL RESEARCH.....	5R01 HL11802-10	143,786
IGNARRO, LOUIS J.....	BIOREGULATION OF HUMAN NEUTROPHIL FUNCTION.....	2R01 AM17692-04A1	61,530
JOHNSON, MARY K.....	ROLE OF MICROBIAL CYTOLYSINS IN OCULAR INFECTIONS.....	2R01 EY00424-10	56,488
KADOWITZ, PHILIP J.....	HUMORAL CONTROL OF PULMONARY AND SYSTEMIC CIRCULATION.....	5R01 HL15580-06	64,359
KADOWITZ, PHILIP J.....	REGULATION OF INTRAPULMONARY AIRWAYS AND VESSELS.....	2R01 HL18070-04	33,687
KASTIN, ABBA J.....	CONTROL OF MSH RELEASE AND ROLE OF MIF.....	3R01 NS07664-09S1	6,528
KASTIN, ABBA J.....	CONTROL OF MSH RELEASE AND ROLE OF MIF AND MSH.....	2R01 NS07664-10A1	57,444
KENDRICK, MILDRED A.....	THE ROLE OF BCG VACCINATION IN PREVENTING CANCER.....	5R01 CA23183-02	16,878
KING, JOAN C.....	GONADOTROPIN RELEASING HORMONE DYNAMICS AND BEHAVIOR.....	1R01 HD10505-01	55,079
KLAWITTER, JEROME J.....	COMPARE ALUMINUM OXIDE & CARBON DENTAL IMPLANTS.....	5R01 DE04653-02	53,363
LEHRER, SAMUEL B.....	HUMORAL AND CELLULAR IGE SYNTHESIS IN THE MOUSE.....	1R23 AI14891-01	41,571
LITTLE, MAURICE D.....	HOOKWORM BEHAVIOR IN MAMMALIAN HOSTS.....	5R01 AI13452-03	38,130
LIU, YOUNG K.....	THE TRAUMATOLOGY OF THE HEAD AND SPINE.....	5R01 GM19107-06	84,988
MEYERS, CHESTER A.....	BIOLOGICAL STUDIES ON PANCREATIC POLYPEPTIDES.....	1R01 AM22156-01	51,607

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
LOUISIANA—Continued			
ORIHÉL, THOMAS C.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10050-18	614,681
SALVAGGIO, JOHN E.....	ENVIRONMENTAL-OCCUPATIONAL CHEST DISEASES.....	2P50 AI13401-04	132,007
SCHALLY, ANDREW V.....	NEUROCHEMISTRY OF THE DIENCEPHALON.....	5R01 AM07467-15	125,101
STUCKEY, WALTER J.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	2R10 CA03389-20	90,262
WADE, LESTER A.....	BRAIN CAPILLARY TRANSPORT OF PEPTIDES AND AMINO ACIDS.....	1R01 NS13914-01A1	38,570
WEILL, HANS.....	IMMUNE & FIBROTIC RESPONSES TO OCCUPATIONAL ENVIRONMENT.....	5P50 HL15092-07	590,623
WEINSTEIN, ALLAN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07040-11	21,379
ORGANIZATION TOTAL	41 3,620,811		
XAVIER UNIVERSITY ZIP CODE 70125			
CORRINGTON, JOYCE H.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08008-07S1	1,471
CORRINGTON, JOYCE H.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08008-08	260,457
ORGANIZATION TOTAL	2 261,928		
SHREVEPORT			
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT SHREVEPORT ZIP CODE 71101			
BERG, RODNEY D.....	EFFECT OF ANTAGONISM AND S-IGA INDIGENOUS ANAEROBES.....	1R01 AI14235-01A1	55,909
BURK, RAYMOND F, JR.....	NUTRITIONAL AND METABOLIC SIGNIFICANCE OF SELENIUM.....	7R01 ES01992-01	102,847
DIANA, JOHN N.....	PROTECTION OF ISCHEMIC MYOCARDIUM.....	7R01 HL23653-01	39,697
MC DONALD, JOHN C.....	THE HETEROPHILE SYSTEM IN HUMAN RENAL TRANSPLANTATION.....	5R01 AM21346-02	65,062
STEWART, JOHN J.....	CENTRAL ACTIONS OF DRUGS ON SMALL INTESTINE.....	1R01 GM25324-01	25,580
WELBOURNE, TOM C.....	RENAL CONTROL OF UREA AND GLUTAMINE FORMATION.....	1R01 AM21026-01	50,731
WOLF, ROBERT E.....	DEVELOPMENT OF A MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20612-02	77,627
ORGANIZATION TOTAL	7 417,453		
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 71130			
GRIMES, SIDNEY R.....	BASIC SPERMATIDAL PROTEIN MRNA IN RAT TESTIS.....	1R01 HD11796-01	45,717
ORGANIZATION TOTAL	1 45,717		
STATE TOTAL	131 12,786,333		
MAINE			
BAR HARBOR			
JACKSON LABORATORY ZIP CODE 04609			
BAILEY, DONALD W.....	NON-H-2 HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI13130-03	224,132
BAILEY, DONALD W.....	GENETIC STABILITY OF MOUSE ZYGOTES IN FROZEN STORAGE.....	5R01 GM22878-03	76,501
BEAMER, WESLEY G.....	INHERITED GROWTH DISORDERS OF ENDOCRINE SYSTEMS.....	5R01 AM17947-05	87,465
BERNSTEIN, SELDON E.....	ANALYSES AND THERAPY OF NEONATAL BLOOD DISORDERS.....	5R01 HD00254-18	47,518
CHEN, HARRY W.....	CHOLESTEROL-MEMBRANE FUNCTION/CELL GROWTH/MALIGNANCY.....	5R01 GM22900-03	61,378
COLEMAN, DOUGLAS L.....	HEREDITARY DIABETES IN THE MOUSE.....	5R01 AM14461-09	66,783
COLEMAN, DOUGLAS L.....	BIOCHEMISTRY OF PIGMENTATION AND INHERITED DISORDERS.....	5R01 AM20725-17	49,005
COLLINS, ROBERT L.....	LATERALIZATION OF FUNCTION: BEHAVIOR GENETIC ANALYSIS.....	5R01 GM23618-02	67,648
EICHER, EVA M.....	CYTOGENETICS OF THE MOUSE.....	5R01 GM20919-05	110,312
EICHER, EVA M.....	A MOUSE MUTANT GENE RESOURCE.....	1P40 RR01183-01	82,557
FOX, RICHARD R.....	HEREDITARY DISEASES.....	3R01 EY01408-03S2	35,288
HARRISON, DAVID E.....	DECLINE OF IMMUNE RESPONSE WITH AGE.....	5R01 AG00594-05	64,727
HARRISON, DAVID E.....	SPLEEN AND MARROW ALLOGRAFTS IN HEREDITARY ANEMIA.....	5R01 HL16119-05	51,781
HEINIGER, HANS-JORG.....	CHOLESTEROL IN NORMAL AND MALIGNANT LYMPHOCYTES.....	5R01 CA19305-02	74,696
HOPPE, PETER C.....	DEVELOPMENT OF PARTHENOGENETIC ACTIVATED MOUSE EGGS.....	1R01 HD10381-01A1	72,432
KANDUTSCH, ANDREW A.....	STEROID METABOLISM IN TUMORS AND NORMAL TISSUES.....	2R01 CA02758-23	177,279
KOZAK, LESLIE P.....	REGULATION OF ENZYME LEVELS IN BRAIN.....	5R01 HD06712-07	53,204
KOZAK, LESLIE P.....	BIOCHEMICAL GENETICS OF OVARIAN AND TESTICULAR TERATOMAS.....	5R01 HD08431-05	49,478
LEITER, EDWARD H.....	GENETIC CONTROL OF HYPERPLASIA IN THE ENDOCRINE PANCREAS.....	5R01 AM17631-05	72,624
MEIER, HANS.....	PATHOGENESIS OF HEREDITARY NEUROLOGICAL DISORDERS.....	5R01 NS06448-12	35,326
MURPHY, EDWIN D.....	GENE MECHANISMS IN LYMPHOMA AND LYMPHOPROLIFERATION.....	1R01 CA22948-01	100,482

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MAINE—Continued			
PREHN, RICHMOND T.....	MECHANISMS OF CARCINOGENESIS.....	3R01 CA20920-02S1	148,649
PREHN, RICHMOND T.....	SUPPORT FOR INBRED AND MUTANT ANIMALS RESOURCE.....	5P40 RR00251-13	95,808
PREHN, RICHMOND T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05545-16	128,105
RODERICK, THOMAS H.....	STUDY OF MAMMALIAN CHROMOSOMAL INVERSIONS.....	5R01 GM19656-07	59,234
RUSSELL, ELIZABETH S.....	PHYSIOLOGICAL GENETICS OF THE MOUSE.....	3R01 CA01074-28S1	32,117
SHULTZ, LEONARD D.....	IMMUNODEFICIENCY AND TUMORIGENESIS.....	5R01 CA20408-02	66,789
SPROTT, RICHARD L.....	ANALYSIS OF GENETIC EFFECTS ON AGING.....	5P01 AG00250-08	276,757
SPROTT, RICHARD L.....	GENETIC ANALYSIS OF AVOIDANCE BEHAVIOR IN MICE.....	5R01 GM21266-04	15,510
STEVENS, LEROY C.....	INVESTIGATIONS ON TERATOCARCINOGENESIS.....	5R01 CA02662-24	142,431
TAYLOR, BENJAMIN A.....	GENETIC ANALYSIS OF COMPLEX INFIRMITIES.....	5R01 GM18684-07	58,245
WAYMOUTH, CHARITY.....	CONTROL OF CELL GROWTH, DIFFERENTIATION, AND FUNCTION.....	5R01 CA11339-09	78,514
WAYMOUTH, CHARITY.....	HORMONE AND CARCINOGEN EFFECTS ON PROSTATE IN VITRO.....	5R26 CA20226-03	27,050
WHITTEN, WESLEY K.....	OVARIAN TUMORS IN YOUNG MICE.....	1R01 CA24145-01	72,600
WHITTEN, WESLEY K.....	MAMMALIAN EGGS AND PHEROMONES.....	2R01 HD04083-10	64,818
ORGANIZATION TOTAL	35	2,927,243	
ORONO			
UNIVERSITY OF MAINE AT ORONO ZIP CODE 04473			
BLAKE, RICHARD D.....	ASPECTS OF EUKARYOTIC CHROMOSOME STRUCTURE.....	5R01 GM22827-03	30,418
ELIAS, MERRILL F.....	INFORMATION PROCESSING: AGE AND HYPERTENSION.....	5R01 AG00868-02	95,881
JERKOFKY, MARY ANN.....	CELLULAR DNA SYNTHESIS AND HERPES VIRUS REPLICATION.....	5R01 CA23690-02	41,534
LERNER, JOSEPH.....	GENETIC ASPECTS OF AMINO ACID TRANSPORT SYSTEMS.....	5R01 AM19445-02	43,361
NICHOLSON, BRUCE L.....	PISCINE ERYTHROCYTIC NECROSIS IN THE ATLANTIC COD.....	2R01 HL19164-03	45,010
ROBERTS, FRANKLIN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07161-03	18,039
TYLER, MARY.....	TISSUE INTERACTIONS IN THE CRANIOFACIAL REGION.....	1R23 DE04859-01	23,005
WOHLGEMUTH, ANDREW.....	INFORMATION FROM IMMUNOLOGICAL REACTION TABLES.....	5R01 CA20105-03	13,116
ORGANIZATION TOTAL	8	310,364	
PORTLAND			
MAINE MEDICAL CENTER ZIP CODE 04102			
RAND, PETER W.....	ERYTHROCYTE FUNCTION IN DIABETES MELLITUS.....	1R01 AM20829-01	62,809
RAND, PETER W.....	THE ROLE OF THE RED CELL IN DIABETIC ATHEROSCLEROSIS.....	5R01 HL22123-02	51,483
ORGANIZATION TOTAL	2	114,292	
UNIVERSITY OF MAINE AT UNIVERSITY OF SOUTHERN MAINE ZIP CODE 04103			
BONNER, R ALAN.....	INFANT CARDIORESPIRATORY REFLEXES—SIDS MODEL.....	3R01 HD09368-03S1	55,566
HODGKIN, BRIAN C.....	DIPOLE MOMENT MEASUREMENT OF CARDIAC MASS.....	5R01 HL19486-03	80,053
ORGANIZATION TOTAL	2	135,619	
SALSBUARY COVE			
MOUNT OESERT ISLAND BIOLOGICAL LABORATORY ZIP CODE 04672			
KINTER, WILLIAM B.....	PHYSIOLOGY AND MORPHOLOGY OF CELL TRANSPORT.....	5R01 AM15973-07	76,419
KINTER, WILLIAM B.....	MEMBRANE TOXICITY THEORY AND ENVIRONMENTAL POLLUTANTS.....	5R01 ES00920-06	70,804
MILLER, DAVID S.....	ENVIRONMENTAL POLLUTANTS AND MEMBRANE TRANSPORT.....	1R01 ES01678-01	60,758
MYERS, JACK D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05764-04	19,533
SCHMIDT-NIELSEN, BODIL M.....	BIOLOGY OF EXCRETORY AND OSMOREGULATORY MECHANISMS.....	3R01 AM15972-07S1	25,077
ORGANIZATION TOTAL	5	252,591	
WEST BOOTHBAY HARBOR			
NORTHEASTERN RESEARCH FOUNDATION ZIP CODE 04575			
YENTSCH, CLARICE M.....	ASSESSMENT OF HEALTH HAZARDS FROM TOXIC RED TIDE CYSTS.....	5R01 ES01329-02	31,900
ORGANIZATION TOTAL	1	31,900	
STATE TOTAL	53	3,772,009	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND			
BALTIMORE			
BALTIMORE CITY HOSPITALS ZIP CODE 21224			
LIEBSON, IRA	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05556-16	28,982
ORGANIZATION TOTAL	1 28,982		
CARNEGIE INSTITUTION OF WASHINGTON, D. C. ZIP CODE 21210			
BROWN, DONALD D.	THE SOMATIC AND OOCYTE 5S RNA GENES IN XENOPUS	5R01 GM22395-04	67,069
BROWN, DONALD D.	BIOMEDICAL RESEARCH	1S07 RR05799-01	29,467
GEARHART, PATRICIA J.	B CELL EXPRESSION OF IMMUNOGLOBULIN V AND C REGIONS	1R01 CA25507-01	56,282
PAGANO, RICHARD E.	PHOSPHOLIPID-CHOLESTEROL DYNAMICS IN MAMMALIAN CELLS	5R01 GM22942-03	53,378
SUZUKI, YOSHIKI	REGULATORY MECHANISMS OF SILK FIBROIN GENES	5R01 GM23469-02	71,522
ORGANIZATION TOTAL	5 277,718		
INTERNATIONAL SYMPOSIUM ON OCULAR IMMUNOLOGY AND IMMUNOPATHOLOGY ZIP CODE 21205			
SILVERSTEIN, ARTHUR M.	INT'L SYMPOSIUM—OCULAR IMMUNOLOGY AND IMMUNOPATHOLOGY	1R13 EY02345-01	27,225
ORGANIZATION TOTAL	1 27,225		
JOHN F. KENNEDY INSTITUTE ZIP CODE 21205			
CATALDO, MICHAEL F.	A BEHAVIORAL MEDICINE APPROACH TO KINETICS DISORDERS	1R01 NS14634-01	76,389
KISHIMOTO, YASUO	SPHINGOLIPID METABOLISM AND BRAIN DEVELOPMENT	5R01 NS13559-03	49,865
KISHIMOTO, YASUO	BRAIN 2-HYDROXY FATTY ACID METABOLISM AND MYELINATION	2R01 NS13569-03	80,414
MOSER, HUGO W.	GENETIC AND TOXIC CAUSES OF MENTAL RETARDATION	1P01 HD10981-01	279,520
MOSER, HUGO W.	BRAIN LIPIDS IN DIFFUSE DEMYELINATIVE DISEASES	2R01 NS13513-02	81,006
ORGANIZATION TOTAL	5 567,194		
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218			
ACKERS, GARY K.	MOLECULAR SIEVE CHROMATOGRAPHY OF INTERACTING PROTEINS	5R01 GM24486-02	115,436
ADKINSON, N FRANKLIN, JR.	STUDY OF ALLERGIC REACTIONS TO DRUGS	5R01 AI11936-05	66,473
AMZEL, LEON M.	3-DIMENSIONAL STRUCTURE OF PROTON TRANSLOCATING ATPASES	1R01 GM25432-01	41,357
ANDERSON, DAVID E.	VASCULAR EFFECTS OF INHIBITORY BEHAVIORAL ADAPTATIONS	5R01 HL17970-04	73,512
ANNAU, ZOLTAN	TOXICITY OF PRENATAL CARBON MONOXIDE EXPOSURE	5R01 ES01589-02	74,328
AUGUST, J THOMAS	GENETIC EXPRESSION OF CELLULAR ONCORNAVIRUSES	5R01 CA19471-02	134,924
AURELIAN, LAURE	CMI TO HSV-2 ANTIGENS IN GENITAL HERPES INFECTIONS	1R01 AI14341-01A1	73,923
BAKER, FRANK H.	THALAMIC MECHANISMS IN VISUAL PROCESSING	5R01 EY01494-03	40,670
BANG, FREDERIK B.	UPPER RESPIRATORY ANTIVIRAL DEFENSE IN MALNUTRITION	5R01 AI12458-04	60,064
BANG, FREDERIK B.	INTRANASAL HOMEOSTASIS VIRUSES & POLLUTANT GASES	5R01 ES01477-02	52,020
BAYLIN, STEPHEN B.	HISTAMINASE AND AMINES IN NEURAL CREST TUMORS	3R01 CA18404-03S1	14,525
BAYLIN, STEPHEN B.	HISTAMINASE AND AMINES IN NEURAL CREST TUMORS	2R01 CA18404-04	54,360
BECKER, LEWIS C.	VASODILATORS IN EXPERIMENTAL MYOCARDIAL INFARCTION	5R01 HL19937-02	52,223
BENBOW, ROBERT M.	CONTROL OF DNA SYNTHESIS IN EARLY EMBRYOS OF XENOPUS	5R01 GM22610-03	45,395
BESSMAN, MAURICE J.	ENZYMATIC SYNTHESIS OF NUCLEOTIDES AND DNA	5R01 GM18649-20	79,276
BHATNAGAR, GOPAL M.	CONTRACTILE PROTEINS OF EPIDERMIS AND DERIVATIVES	5R01 AM21357-02	90,622
BLOSS, ELLIOTT M.	THE ONTOGENY OF INGESTIVE BEHAVIOR	2R01 AM18560-04	63,633
BODIAN, DAVID	STRUCTURE AND SYNAPTIC RELATIONS OF ORGAN OF CORTI	5R01 NS12641-04	74,037
BRAND, LUDWIG	FLUORESCENCE PROBES IN STUDIES OF PROTEINS AND MEMBRANES	5R01 GM11632-16	122,916
BRUSILOW, SAUL W.	UREA CYCLE ENZYMOPATHIES: GENETICS, METABOLISM & THERAPY	5R01 HD11134-02	112,315
BUEDING, ERNEST	CARCINOGENICITY OF NITROHETEROCYCLES	5R01 CA18251-03	77,657
BURKE, PHILIP J.	EXPERIMENTAL THERAPY OF MYELOID LEUKEMIA IN REMISSION	1R01 CA23973-01	66,058
CALKINS, JOSEPH L.	HOLOGRAPHIC STRESS-TESTING OF THE SURGICAL CORNEA	3R01 EY01312-03S1	13,506
CALKINS, JOSEPH L.	HOLOGRAPHIC STRESS-TESTING OF THE SURGICAL CORNEA	2R01 EY01312-04	95,109
CAMERON, JOHN L.	ACUTE PANCREATITIS: PATHOPHYSIOLOGY AND TREATMENT	5R01 AM19646-02	85,487
CAMPBELL, JAMES N.	NEUROPHYSIOLOGICAL AND PSYCHOPHYSICAL STUDIES OF PAIN	1R01 NS14447-01	60,744
CARAMAZZA, ALFONSO	COMPREHENSION DEFICITS IN THE APHASICS	1R01 NS14099-01	65,734
CARLSON, FRANCIS D.	THE STRUCTURAL BASIS OF CELLULAR FUNCTION	5R01 AM12803-20	95,662
CARLSON, FRANCIS D.	A STUDY OF MUSCULAR CONTRACTION	5R01 AM16315-23	25,173
CEBRA, JOHN J.	PRODUCT ANALYSIS TO ASSESS LYMPHOID CELL POTENTIAL	5R01 AI09652-09	108,246
CHARACHE, SAMUEL	STUDY OF ABNORMAL HEMOGLOBINS	5R01 HL02799-22	160,376
CHEN, CHUNG-HO	BIOCHEMICAL STUDIES OF PROLIFERATIVE RETINOPATHIES	5R01 EY01399-04	99,860

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
CHEN, LI-TSUN	MICROCIRCULATION OF HEMATOPOIETIC TISSUE.....	1R01 AM19535-01A1	22,764
CHILDS, BARTON.....	STUDIES IN HUMAN GENETICS	5R01 HD00486-23	129,834
CHOW, LIEN P.....	EPIDEMIOLOGICAL STUDY ON ORAL CONTRACEPTIVE AND STROKE.....	1R01 HD11536-01A1	99,904
COFFEY, DONALD S.....	PROGRAMMATICAL STUDIES ON BENIGN PROSTATIC HYPERPLASIA.....	5P01 AM19300-03	438,734
COFFEY, DONALD S.....	REGULATION OF PROSTATIC GROWTH BY ANDROGENS	9R01 AM22000-07	82,751
COFFEY, DONALD S.....	CHEMOTHERAPEUTIC AGENTS AND PROSTATIC DNA SYNTHESIS.....	5R26 CA15416-05	141,508
COHEN, ALAN M.....	DIFFERENTIATION OF ADRENERGIC NEUROBLASTS IN VITRO.....	2R01 HD07389-04A1	65,831
COHEN, BERNICE H.....	SYMPOSIUM ON GENETICS IN EPIDEMIOLOGY	1R13 GM25972-01	5,000
COHEN, STEVEN R.....	IMMUNOCHEMICAL STUDY OF MYELINATION AND DEMYELINATION.....	1R01 NS14167-01	45,507
COLE, GERALD A.....	IMMUNOSUPPRESSION AND EXPERIMENTAL VIRAL INFECTION.....	5R01 NS11286-08	120,122
COLVIN, MICHAEL O.....	PHARMACOLOGY OF CYCLOPHOSPHAMIDE AND NITROSOUREAS.....	5R01 CA16783-05	93,513
COLVIN, MICHAEL O.....	SYNTHESIS OF METABOLICALLY ACTIVATED NITROSOUREAS.....	1R01 CA22691-01	77,549
CONE, RICHARD A.....	VISUAL EXCITATION ROLE OF VISUAL PIGMENT	5R01 EY00520-10	56,737
COYLE, JOSEPH T.....	HUNTINGTON'S CHOREA MODEL: STRIATAL LESION BY KAINATE.....	5R01 NS13584-02	35,739
CRAIG, SUSAN W.....	CELL SURFACE CONTROL OF LYMPHOCYTE PHYSIOLOGY.....	5R01 AI13700-02	48,636
CUTILLETTA, ANTHONY F.....	A STUDY OF THE REGULATION OF MYOCARDIAL HYPERTROPHY.....	7R01 HL23626-01	15,336
DE VOE, ROBERT D.....	ANALYSIS OF FLICKER RETINAL ACTION POTENTIALS	5R01 EY00008-16	69,396
DINTZIS, HOWARD M.....	REGULATION OF IMMUNITY AT THE MOLECULAR LEVEL.....	1R01 CA25043-01	98,714
DRACHMAN, DANIEL B.....	NERVE-MUSCLE INTERACTIONS IN DEVELOPMENT.....	5R01 HD04817-09	94,037
DROLLER, MICHAEL J.....	CELLULAR IMMUNE RESPONSE MECHANISMS IN BLADDER CANCER.....	1R26 CA24592-01	74,911
DURAND, RALPH E.....	SIMULATED TUMOR THERAPY WITH AN IN VITRO MODEL.....	5R01 CA23511-02	59,265
EDIDIN, MICHAEL A.....	CHEMISTRY & DEVELOPMENT OF TRANSPLANTATION ANTIGENS.....	9R01 AI14584-12	82,921
EDIDIN, MICHAEL A.....	GENETICS OF CELL ADHESION AND CLEFT PALATE FORMATION.....	1R01 DE04481-01	48,226
ENGLUND, PAUL T.....	STRUCTURE AND MECHANISM OF ACTION OF DNA POLYMERASE.....	5R01 CA13602-10	104,827
EWING, LARRY L.....	REGULATION OF ANDROGEN SECRETION IN MAMMALIAN TESTES.....	2R01 HD07204-06	82,304
FARA, JOHN W.....	HORMONAL CONTROL OF MESENTERIC CIRCULATION	7R01 HL22561-01	42,325
FARRELL, RICHARD A.....	LIGHT SCATTERING STUDIES OF OCULAR TISSUES	5R01 EY01019-06	84,347
FENSELAU, ALLAN H.....	CONTROL OF TUMOR-INDUCED VASCULARIZATION.....	2R01 CA15381-04	93,095
FENSELAU, CATHERINE C.....	NEW APPLICATIONS OF MASS SPECTROMETRY IN PHARMACOLOGY.....	5R01 GM21248-04	114,053
FINE, STUART L.....	SENILE MACULA: NATURAL COURSE: CLINICAL TRIAL (LASER).....	3R01 EY01900-01S1	54,956
FINKELSTEIN, DANIEL.....	BRANCH VEIN OCCLUSION: NATURAL HISTORY AND TREATMENT.....	3R01 EY01780-01S2	22,774
FINKELSTEIN, DANIEL.....	PATHOGENESIS OF PRIMARY RETINITIS PIGMENTOSA.....	5R01 EY01791-03	74,633
FINKELSTEIN, DANIEL.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY: COORD. CTR.....	1R10 EY02466-01	90,614
FINKELSTEIN, DANIEL.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY.....	1R10 EY02469-01	53,448
FLOWER, ROBERT W.....	PROSTAGLANDINS IN PREMATURE INFANT VASCULAR PHYSIOLOGY.....	1R01 EY02482-01	95,446
FORTUIN, NICHOLAS J.....	ECHO CHANGES IN WALL MOTION WITH MYOCARDIAL ISCHEMIA.....	3R01 HL19232-02S1	16,481
FORTUIN, NICHOLAS J.....	ECHO CHANGES IN WALL MOTION WITH MYOCARDIAL ISCHEMIA.....	5R01 HL19232-03	135,740
FRANKLIN, RUDOLPH M.....	SECRETORY IMMUNE SYSTEM-RELATIONSHIP TO OCULAR DISEASE.....	1R01 EY02459-01	4,613
FREED, JOHN H.....	STRUCTURAL STUDIES OF THE PRODUCTS OF THE H-2 COMPLEX.....	5R01 CA20820-03	90,487
FREEDBERG, IRWIN M.....	STUDIES OF EPIDERMAL MACROMOLECULAR METABOLISM.....	2R01 AM21358-02	169,917
FRIEDMAN, MORTON H.....	CORRELATION OF ARTERIAL HEMODYNAMICS AND MORPHOLOGY.....	1R01 HL21270-01A1	104,646
GAFFNEY, BETTY J.....	SPIN-LABELING RECEPTORS ON NORMAL AND MALIGNANT CELLS.....	5R01 CA15997-05	54,497
GANN, DONALD S.....	HEMODYNAMIC CONTROL OF PITUITARY ADRENAL FUNCTION.....	5R01 AM14952-09	153,610
GANN, DONALD S.....	HORMONAL AND CARDIOVASCULAR RESPONSE TO TRAUMA.....	5R01 GM23145-02	142,580
GIBSON, D WADE.....	HERPES VIRUS PROTEIN SYNTHESIS AND VIRION ASSEMBLY.....	5R01 AI13718-02	64,050
GILLESPIE, ELIZABETH.....	PHOSPHATIDYLINOSITOL METABOLISM AND INFLAMMATION.....	1R01 AI14959-01	41,132
GORDIS, LEON.....	EPIDEMIOLOGY OF CONGENITAL DIGESTIVE DEFECTS: MEGACOLON.....	5R01 AM18407-02	113,641
GORDIS, LEON.....	ENVIRONMENTAL EPIDEMIOLOGIC STUDY OF PANCREATIC CANCER.....	5R26 CA21642-02	121,235
GOTT, VINCENT L.....	PROTECTION OF THE MYOCARDIUM DURING CARDIAC SURGERY.....	3R01 HL19414-02S1	10,961
GOTT, VINCENT L.....	PROTECTION OF THE MYOCARDIUM DURING CARDIAC SURGERY.....	5R01 HL19414-03	204,168
GRAHAM, GEORGE G.....	ROLE OF STAPLE FOODS IN INFANT NUTRITION.....	5R01 HD10111-03	135,589
GRAVES, IRVING L.....	INFLUENZA IN WILD SWANS AND GEESE.....	5R01 AI13048-02	78,493
GREEN, LAWRENCE W.....	BEHAVIORAL APPROACHES TO ADOLESCENT HYPERTENSION.....	1R01 HL22934-01	149,955
GREEN, WILLIAM R.....	OCULAR CLINICO-PATHOLOGIC CORRELATION.....	5R01 EY01684-03	78,618
GRIFFIN, JOHN W.....	AXONAL TRANSPORT IN MODELS OF NEUROFILAMENTOUS PATHOLOGY.....	1R01 NS14784-01	56,798
GROSSMAN, LAWRENCE.....	ENZYMATIC EXCISION-REPAIR MECHANISM STUDIES.....	2R01 GM22846-04	81,831
HANKS, JOHN H.....	ENERGETICS AND CULTIVATION OF M. LEPRAE.....	5R22 AI14442-02	107,862
HARDY, PAUL H.....	IMMUNOLOGY AND IMMUNOPATHOLOGY OF SYPHILIS.....	5R01 AI02336-19	77,382
HARRINGTON, WILLIAM F.....	BIOPHYSICAL CHEMICAL STUDIES OF MUSCLE PROTEINS.....	5R01 AM04349-19	208,927
HARRIS, ALAN H.....	CIRCULATORY EFFECTS OF OPERANT CARDIOVASCULAR CONTROL.....	2R01 HL17958-04	87,322

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
HARTMAN, PHILIP E.....	GENETIC MECHANISMS AND GENE ACTION.....	2R01 AI01650-21	118,768
HAYWARD, GARY S.....	STRUCTURAL ORGANIZATION OF HERPES VIRUS DNA MOLECULES.....	5R01 CA22130-02	86,008
HEDREEN, JOHN C.....	CORTICOSTRIATAL AND CORTICOPONTINE NEURONS.....	1R01 NS13812-01A1	49,533
HELING, KNUD J.....	FACTORS ASSOCIATED WITH MORTALITY AFTER WIDOWHOOD.....	1R01 AG00940-01	65,378
HELTNE, PAUL G.....	LONG TERM CAPTIVE REPRODUCTION OF AOTUS TRIRGATUS.....	1R01 RR01172-01	90,380
HEPTINSTALL, ROBERT H.....	EXPERIMENTAL HYPERTENSION AND RENAL CIRCULATION.....	2R01 HL07835-17	210,284
HEPTINSTALL, ROBERT H.....	GENESIS OF ATHEROSCLEROTIC LESIONS.....	2R01 HL18473-04	59,973
HIRST, LAWRENCE W.....	ASSESSMENT OF CORNEAL ENDOTHELUM IN VIVO.....	1R01 EY02476-01	68,887
HOCHHEIMER, BERNARD F.....	STUDIES OF ANGIOGRAPHIC DYES.....	5R01 EY01763-02	68,149
HOLLENBERG, MORLEY.....	GROWTH FACTOR RECEPTORS IN NORMAL & TUMORIGENIC CELLS.....	1R01 AM21921-01	65,393
HOLLIS, DONALD P.....	NMR STUDY OF ENZYME-SUBSTRATE INTERACTIONS.....	5R01 GM17172-10	71,090
HOLLIS, DONALD P.....	PHOSPHORUS NUCLEAR MAGNETIC RESONANCE ON CARDIAC TISSUE.....	1R01 HL22080-01	63,532
HOOPEES, JOHN E.....	METABOLIC STUDY OF SKIN FLAPS.....	5R01 AM18732-03	57,904
HUANG, P C.....	GENETIC STUDIES OF HUMAN CHROMOSOMAL DISEASES.....	5R01 ES01596-02	93,422
HUANG, RU-CHIH C.....	NUCLEOCYTOPLASMIC INTERACTIONS IN DEVELOPMENT AND AGING.....	5R01 AG00472-05	85,387
HUANG, RU-CHIH C.....	CONTROL OF MYELOMA TUMOR GROWTH.....	5R01 CA13953-06	141,476
HUGHES, WALTER T.....	HABITAT & TRANSMISSION OF PNEUMOCYSTIS CARINII.....	1R01 AI14769-01	81,232
HUNGERFORD, DAVID S.....	ISCHEMIC NECROSIS OF BONE: CLINICAL-LABORATORY STUDY.....	1R01 AM20798-01	145,832
HUNT, RICHARD K.....	CELLULAR MECHANISMS IN NEURONAL SPECIFICITY & PLASTICITY.....	1R01 NS14807-01	86,065
HUTCHINS, GROVER M.....	SYMBOLIC LOGIC ANALYSIS OF CONGENITAL HEART DISEASE.....	1R01 HL22963-01	24,127
ISHIZAKA, KIMISHIGE.....	RELATION OF GAMMA GLOBULIN STRUCTURE TO HYPERSENSITIVITY.....	5R01 AI10060-09	144,734
ISHIZAKA, KIMISHIGE.....	REGULATION OF REAGINIC ANTIBODY RESPONSE.....	2R01 AI11202-06	127,677
ISHIZAKA, KIMISHIGE.....	ONTOGENY AND DIFFERENTIATION OF IGE-B LYMPHOCYTES.....	1R01 AI14784-01	60,239
JACOBUS, WILLIAM E.....	MYOCARDIAL ENERGY TRANSPORT-CREATINE KINASE.....	1R01 HL20658-01A1	68,177
JAKAB, GEORGE J.....	BRONCHOPULMONARY RESISTANCE TO BACTERIAL INFECTION.....	3R01 HL22029-01S1	22,400
JAKAB, GEORGE J.....	BRONCHOPULMONARY RESISTANCE TO BACTERIAL INFECTION.....	5R01 HL22029-02	62,451
JOHNS, RICHARD J.....	A NEUROSENSORY INTERDISCIPLINARY RESEARCH PROGRAM.....	2P01 NS07226-09A1	241,855
KANTNER, JOHN F.....	POPULATION STUDIES.....	2P30 HD06268-06A1	278,633
KANTNER, JOHN F.....	RURAL BANGLADESH-DEMOGRAPHIC STUDY.....	5R01 HD10113-02	99,921
KAZAZIAN, HAIG H, JR.....	THE GENETIC CONTROL OF HEMOGLOBIN SYNTHESIS.....	2R01 AM13983-09	153,501
KESSLER, IRVING I.....	A PROSPECTIVE STUDY OF CANCER RISK IN TUBERCULOSIS.....	5R01 CA16975-03	43,518
KETNER, GARY W.....	TRANSFORMATION AND GENE REGULATION BY ADENOVIRUSES.....	5R01 CA21309-02	51,304
KOREEDA, MASATO.....	CHEMICAL STUDIES OF CARCINOGENIC POLYCYCLIC EPOXIDES.....	5R01 CA18580-03	49,433
KOREEDA, MASATO.....	STUDIES ON THE BIO-TOXICITY OF ACTIVATED OLEFINS.....	1R01 ES01778-01	68,784
KOWARSKI, AVINOAM.....	PRODUCTION RATE AND CONCENTRATION OF HORMONES.....	5R01 HD06284-07	70,066
KRAG, SHARON S.....	MUTANTS ALTERED IN GLYCOSYLATION OF MEMBRANE PROTEINS.....	5R01 CA20421-02	58,783
KWITEROVICH, PETER O.....	CELL MEMBRANES AND PLASMA LIPOPROTEINS.....	3R01 HL17898-03S1	5,611
LANE, M DANIEL.....	CARBOXYLASE ACTIVATION AND CONTROL OF LIPID SYNTHESIS.....	5R01 AM14574-09	75,861
LANE, M DANIEL.....	MECHANISMS OF ACTIONS OF REGULATORY ENZYMES.....	5R01 AM14575-10	117,851
LANGHAM, MAURICE E.....	ADRENERGIC PHYSIOLOGY OF THE EYE.....	5R01 EY01352-05	95,443
LARRABEE, MARTIN G.....	METABOLISM AND FUNCTION IN SYMPATHETIC NEURONS.....	2R01 NS00702-24	49,832
LEE, YUAN C.....	CHEMISTRY AND BIOCHEMISTRY OF GLYCOCONJUGATES.....	5R01 AM09970-13	96,623
LEHNINGER, ALBERT L.....	ENZYMATIC ACTIVITIES OF MITOCHONDRIA.....	5R01 GM05919-20	180,939
LENHARD, RAYMOND E, JR.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA16116-05	56,228
LENNARZ, WILLIAM J.....	LIPID CARRIERS IN MEMBRANE GLYCOPROTEIN SYNTHESIS.....	5R01 GM21451-04	63,991
LENNARZ, WILLIAM J.....	ENZYMATIC CONVERSION OF PROTEINS TO GLYCOPROTEINS.....	1R01 GM24821-01	71,812
LENNARZ, WILLIAM J.....	PLASMA MEMBRANE CHANGES IN FERTILIZATION AND DEVELOPMENT.....	5R01 HD08357-04	99,539
LEVENTHAL, BRIGID G.....	CANCER AND LEUKEMIA GROUP B.....	5R10 CA21971-02	66,607
LEVIN, JACK.....	BLOOD COAGULATION AND HEMORRHAGIC DISEASE.....	3R01 HL01601-29S1	28,214
LEVIN, JACK.....	BLOOD COAGULATION AND HEMORRHAGIC DISEASE.....	2R01 HL01601-30	91,917
LICHTENSTEIN, LAWRENCE M.....	IN VITRO STUDIES OF HUMAN ANAPHYLAXIS.....	5R01 AI07290-13	134,822
LICHTENSTEIN, LAWRENCE M.....	AN IN VITRO APPROACH TO PROBLEMS OF CLINICAL ALLERGY.....	5R01 AI08270-11	186,425
LICHTENSTEIN, LAWRENCE M.....	PHARMACOLOGIC CONTROL OF HYPERSENSITIVITY PHENOMENA.....	9R01 HL23586-06	101,369
LIETMAN, PAUL S.....	ADVERSE EFFECTS OF ANTIBIOTIC-HOST CELL INTERACTIONS.....	5R01 GM23716-03	89,798
LILIENFELD, ABRAHAM M.....	FAMILIAL AGGREGATION OF INFLAMMATORY BOWEL DISEASE.....	1R01 AM20467-01	153,860
LILIENFELD, ABRAHAM M.....	CANCER EPIDEMIOLOGY CORE GRANT.....	5P01 CA11489-09	349,963
LILIENFELD, ABRAHAM M.....	HISTORICAL DEVELOPMENT OF EPIDEMIOLOGICAL CONCEPTS.....	1R01 LM03114-01	19,730
LILIENFELD, ABRAHAM M.....	PROGRAM FOR STUDY OF CEREBROVASCULAR DISEASES.....	5P50 NS06229-12	313,612
LIN, DIANE C.....	THE ROLE OF CONTRACTILE PROTEINS IN ERYTHROCYTE AGING.....	1R23 AG00993-01	45,862
LIN, SHIN.....	MOLECULAR BASIS OF ACTION OF CYTOCHALASIN B.....	2R01 GM22289-04	77,021

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
LITTLEFIELD, JOHN W.....	HYBRIDIZATION, DNA FUNCTION, MUTATION IN CELL CULTURE.....	5R01 CA16754-05	225,142
LOVE, WARNER E.....	X-RAY STRUCTURE ANALYSIS OF BIOLOGICAL MOLECULES.....	5R01 AM02528-20	82,931
LOVE, WARNER E.....	X-RAY CRYSTAL STRUCTURE OF SICKLE CELL HEMOGLOBIN.....	5R01 AM16446-06	75,044
MACLEAN, WILLIAM C, JR.....	LACTOSE DIGESTION IN INFANTS AND CHILDREN.....	1R01 HD11172-01A1	69,384
MALONEY, PETER C.....	ION GRADIENTS AND ENERGY COUPLING IN BACTERIA.....	5R01 GM24195-02	35,326
MARGOLIS, SIMEON.....	HORMONAL CONTROL OF LIPID AND LIPOPROTEIN SYNTHESIS.....	5R01 HL15930-06	86,837
MARGOLIS, SIMEON.....	LASER SPECTROSCOPY OF LIPOPROTEINS.....	5R01 HL19095-03	36,555
MARSH, DAVID G.....	GENETICS OF IMMUNE RESPONSE IN MAN.....	5P01 AI13370-03	198,638
MARZILLI, LUIGI G.....	STRUCTURE OF NUCLEIC ACID AND NUCLEOTIDE METAL SPECIES.....	2R01 GM20544-04	92,849
MATANOSKI, GENEVIEVE M.....	CANCER RISKS IN VIROLOGISTS.....	1R01 CA24606-01	35,674
MATTOON, JAMES R.....	GENETIC MODIFICATION OF MITOCHONDRIA.....	5R01 GM15884-13	79,191
MAUMENEE, A EDWARD.....	CORE CENTER GRANT—THE WILMER INSTITUTE.....	5P30 EY01765-03	101,292
MAUMENEE, IRENE H.....	GENETICS IN OPHTHALMOLOGY.....	5R01 EY01773-03	113,556
MAYER, MANFRED M.....	MECHANISM OF CYTOLYSIS BY COMPLEMENT.....	5R01 AI02566-20	136,349
MAYER, MANFRED M.....	BIOCHEMICAL STUDIES OF LYMPHOKINES AND RELATED AGENTS.....	9R01 CA24441-04	101,002
MC HUGH, PAUL R.....	HYPOTHALAMUS IN FEEDING BEHAVIOR.....	5R01 AM19302-04	71,446
MC INTYRE, PATRICIA A.....	STUDIES OF PLATELET KINETICS IN MAN USING INDIUM-III.....	1R01 AM20812-01	47,628
MC KHANN, GUY M.....	DEVELOPMENT AND REGENERATION IN THE NERVOUS SYSTEM.....	5P01 NS10920-06	821,397
MC KUSICK, VICTOR A.....	CATALOGS OF MENDELIAN TRAITS IN MAN.....	2R01 GM18676-07	42,048
MC MACKEN, ROGER L.....	ENZYMOLGY OF THE REPLICATION OF LAMBDA DNA IN VITRO.....	1R01 GM24282-01A1	71,120
MENKES, HAROLD A.....	LUNG CENTER SUPPORT—CHRONIC DISEASES OF AIRWAYS.....	5P50 HL14153-07	925,655
MIGEON, BARBARA R.....	GENETIC STUDIES OF HUMAN SOMATIC CELLS.....	5R01 HD05465-08	151,551
MIGEON, CLAUDE J.....	RELATION OF HORMONES TO GROWTH AND DEVELOPMENT.....	5R01 AM00180-27	116,166
MILLER, NEIL R.....	CLINICAL INVESTIGATIONS IN OCULAR MOTILITY DISORDERS.....	1R01 EY02272-01	71,213
MILMAN, GREGORY.....	BIOCHEMISTRY OF MUTATION IN HUMAN CELLS.....	2R01 CA21650-03	106,440
MILNOR, WILLIAM R.....	DYNAMICS OF PULSATILE BLOOD FLOW.....	3R01 HL12607-09S1	5,229
MILNOR, WILLIAM R.....	DYNAMICS OF PULSATILE BLOOD FLOW.....	2R01 HL12607-10	65,283
MOLLIVER, MARK E.....	PARAMETERS OF ONTOGENESIS OF CORTICAL NEURONS.....	3R01 NS08153-06S1	3,775
MONEY, JOHN.....	LONGITUDINAL AND RELATED PSYCHOHORMONAL STUDIES.....	5R01 HD00325-22	132,456
MONJAN, ANDREW A.....	OCULAR DISEASE OF VIRAL ETIOLOGY.....	5R01 EY00938-06	63,554
MORRISON, NORMAN E.....	THYMOSIN IMMUNOTHERAPY OF CHEMICALLY INDUCED TUMORS.....	5R01 CA23383-02	32,758
MORROW, JOHN F.....	EUKARYOTIC GENE ISOLATION AND EXPRESSION.....	1R01 GM26557-01	104,632
MOUNTCASTLE, VERNON B.....	SENSORY AND MOTOR SYSTEMS, AND CEREBRAL CORTEX.....	5P01 NS06828-12	517,027
MOXON, E RICHARD.....	THE STUDY OF HEMOPHILUS INFLUENZAE-INDUCED CNS INJURY.....	2R01 NS12554-04	63,204
MURPHY, DOUGLAS B.....	THE MOLECULAR MECHANISM OF INTRACELLULAR MOTILITY.....	7R01 GM26155-01	58,979
MURPHY, EDMOND A.....	THEORETICAL ASPECTS OF CLINICAL GENETICS.....	1R01 GM24736-01	74,000
MURPHY, PATRICK A.....	CHEMISTRY AND PHYSIOLOGY OF LEUKOCYTE PYROGEN.....	5R01 AI03772-18	86,707
NAGER, GEORGE T.....	A HISTOPATHOLOGIC STUDY OF HUMAN TEMPORAL BONES.....	5R01 NS02182-19	60,736
NAGER, GEORGE T.....	SUPPORT FOR NATIONAL CENTER FOR TEMPORAL BONE BANKS.....	5R01 NS11447-06	66,781
NARAYAN, OPENDRA.....	PATHOGENESIS OF VISNA, A SLOW DEMYELINATING DISEASE.....	2R01 NS12127-04	101,966
NATHANS, DANIEL.....	PROGRAM ON MOLECULAR BIOLOGY OF VIRAL TUMORIGENESIS.....	5P01 CA16519-04	707,598
NATHANSON, CONSTANCE A.....	SEX DIFFERENCES IN MORBIDITY AMONG THE AGING.....	1R01 AG01098-01	20,805
NATHANSON, CONSTANCE A.....	ORGANIZATION AND PRACTICE OF ABORTION IN MARYLAND.....	3R01 HD09269-03S1	5,861
NATHANSON, CONSTANCE A.....	ORGANIZATION AND PRACTICE OF ABORTION IN MARYLAND.....	2R01 HD09269-04	70,026
NATHANSON, NEAL.....	IMMUNOPATHOGENESIS OF VISNA.....	2R01 NS11451-06	142,473
NEWBALL, HAROLD H.....	KININS AND THE HUMAN LUNG.....	5R01 HL18526-03	79,052
NEWMAN, PETER K.....	MALARIA AND FERTILITY: THE CASE OF SRI LANKA.....	5R01 HD11016-02	24,172
NORMAN, PHILIP S.....	A STUDY OF ALLERGY TO RAGWEED POLLEN.....	5R01 AI04866-16	88,571
NORMAN, PHILIP S.....	CLINICAL CENTER FOR ALLERGIC DISEASES.....	5P50 AI10304-08	161,341
OLIVE, PEGGY L.....	ACTIVATION AND REACTIVITY OF NITROHETEROCYCLES.....	1R01 CA24519-01	44,202
OWENS, ALBERT H, JR.....	REGIONAL ONCOLOGY RESEARCH CENTER.....	2P30 CA06973-16	2,003,828
OWENS, ALBERT H, JR.....	EXPLORATORY STUDIES OF CANCER PATIENT DATA CONTROL.....	5R10 CA21188-02	115,507
PATZ, ARNALL.....	DEVELOPMENT OF MICROANGIOPATHY IN JUVENILE DIABETES.....	5R01 AM20826-02	143,353
PATZ, ARNALL.....	RETINA AND RETINAL VESSELS.....	5R01 EY00205-18	142,478
PATZ, ARNALL.....	DIABETIC RETINOPATHY: INHIBITION OF NEOVASCULARIZATION.....	1R01 EY02603-01	113,150
PATZ, ARNALL.....	ROLE OF SYSTEMIC HYPERTENSION OF DIABETES RETINOPATHY.....	5R01 HL20455-03	130,901
PEDERSEN, PETER L.....	CONTROL OF ENZYMIC PHOSPHATE TRANSFER IN MITOCHONDRIA.....	5R01 CA10951-11	68,929
PERMUTT, SOLBERT.....	CARDIOVASCULAR, PULMONARY, AND BEHAVIORAL STUDIES.....	2P01 HL10342-13	754,993
PIERCE, NATHANIEL F.....	STUDIES OF INFECTIOUS DIARRHEAL DISEASES.....	1P01 AI14480-01	338,077
PIGIET, VINCENT P, JR.....	STRUCTURAL BASIS FOR REGULATION OF RIBOTIDE REDUCTASE.....	5R01 GM20122-06	42,741

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
PIGIET, VINCENT P, JR.....	IN VITRO RECONSTITUTION OF POLYOMA DNA REPLICATION.....	1R01 GM23813-01A1	81,311
PITHA, PAULA M.....	HUMAN INTERFERON-MECHANISM OF INDUCTION AND ACTION.....	2R01 AI10944-06A1	87,390
PITHA, PAULA M.....	ANTITUMOR EFFECT OF INTERFERON.....	5R01 CA19061-03	34,022
PLAUT, MARSHALL.....	HISTAMINE IN MODULATION OF CELL-MEDIATED IMMUNITY.....	2R01 AI12810-04	41,404
POLJAK, ROBERTO J.....	STRUCTURE OF IMMUNOGLOBULINS.....	2R01 AI08202-11	189,568
POLLACK, IRVIN P.....	EXPERIMENTAL AND CLINICAL STUDIES OF LASERS IN GLAUCOMA.....	5R01 EY01554-03	76,627
POLLARD, THOMAS D.....	ACTOMYOSIN-MICROTUBULE INTERACTIONS IN CELL DIVISION.....	7R01 GM26132-01	69,847
POLLARD, THOMAS D.....	THE MOLECULAR MECHANISM OF CELLULAR MOTILITY.....	7R01 GM26338-01	82,690
PRENDERGAST, ROBERT A.....	CELLULAR SPECIFICITY IN DELAYED HYPERSENSITIVITY.....	5R01 AI06927-13	42,276
PRICE, DONALD L.....	EFFECT OF TOXINS ON NERVE CELLS AND AXONS.....	5R01 NS10580-04	50,643
PROCTOR, LEONARD R.....	STUDY OF VESTIBULAR PATHWAYS IN THE CEREBELLUM.....	2R01 NS13780-02	61,168
PROVOST, THOMAS T.....	IMMUNOLOGIC STUDIES IN CUTANEOUS LUPUS.....	7R01 AM25650-01	30,515
QUIGLEY, HARRY A.....	THE PATHOGENESIS OF GLAUCOMATOUS OPTIC NERVE DAMAGE.....	5R01 EY02120-02	80,543
ROBINSON, CECIL H.....	SELECTIVE INHIBITORS OF STEROID-TRANSFORMING ENZYMES.....	5R01 AM15918-06	82,421
ROBINSON, CECIL H.....	STEROIDS WITH CYTOTOXIC EFFECTS ON THE PROSTATE.....	5R26 CA16418-05	74,502
ROBINSON, CECIL H.....	SELECTIVE INHIBITORS OF PLACENTAL STEROID AROMATASE.....	1R01 HD11840-01	59,330
ROBINSON, DAVID A.....	STUDY OF OCULOMOTOR CONTROL SYSTEM.....	3R01 EY00598-09S1	354
ROBINSON, DAVID A.....	STUDY OF OCULOMOTOR CONTROL SYSTEM.....	5R01 EY00598-10	88,702
ROSEMAN, SAUL.....	STUDIES OF NORMAL AND MALIGNANT CELL MEMBRANES.....	5P01 CA21901-02	564,189
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00035-18	896,910
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00052-17	440,799
ROSS, RICHARD S.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	2M01 RR00722-06	229,133
ROSS, RICHARD S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05378-17	200,462
ROTH, STEPHEN A.....	SURFACE ENZYMES ON MALIGNANT AND NONMALIGNANT CELLS.....	5R01 CA18827-03	47,540
ROTH, STEPHEN A.....	MORPHOGENESIS IN EMBRYONIC AND PATHOLOGICAL SYSTEMS.....	5R01 HD05297-08	72,024
RUBIN, ROBERT J.....	BIOLOGICAL EFFECTS OF ENVIRONMENTAL AGENTS.....	5P01 ES00454-10	671,911
SACHS, MURRAY B.....	STIMULUS ENCODING IN THE AUDITORY SYSTEM.....	5R01 NS12112-04	108,072
SACK, GEORGE H, JR.....	GENETICS OF SV40 VIRAL TRANSFORMATION OF HUMAN CELLS.....	5R01 CA20619-02	79,293
SACK, R BRADLEY.....	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH.....	5R07 AI10048-18	533,121
SAFFRAN, ELEANOR M.....	READING MECHANISMS IN PHONEMIC DYSLEXICS AND NORMALS.....	5R01 NS13992-02	41,654
SAGAWA, KIICHI.....	A NEW INDEX OF CARDIAC CONTRACTILITY.....	5R01 HL14903-07	65,801
SAGAWA, KIICHI.....	MECHANICS OF HEART MUSCLE CONTRACTION.....	5R01 HL18912-03	46,203
SANTOS, GEORGE W.....	BONE MARROW TRANSPLANTATION IN HUMAN DISEASE.....	5P01 CA15396-06	1,108,520
SCHILLER, EVERETT L.....	EXOANTIGENS OF SCHISTOSOMA MANSONI.....	5R22 AI13449-02	85,028
SCHOENRICH, EDYTH H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05445-17	200,462
SCHRAMM, LAWRENCE P.....	ANALYSIS OF INTERACTION BETWEEN CNS VASOMOTOR SYSTEMS.....	5R01 HL16315-05	66,046
SCHUETZ, ALLEN W.....	OOCYTE GROWTH, MATURATION AND ACTIVATION.....	2R01 HD07041-03	71,720
SCHWARTZ, MYRNA F.....	SEMANTIC MEMORY LOSS IN DEMENTIA.....	1R01 AG01152-01	72,782
SCOCCA, JOHN J.....	MOLECULAR MECHANISMS IN NUCLEIC ACID TRANSPORT.....	5R01 GM21890-03	48,683
SCOTT, WILLIAM W.....	CHEMOTHERAPY OF PROSTATIC CANCER.....	5R26 CA15407-05	62,360
SENSENBRENNER, LYLE L.....	THYMIC MODIFICATION OF LEUKEMOGENESIS.....	1R01 CA22735-01A1	75,097
SHAH, KEERTI V.....	INVESTIGATION OF SV40-RELATED INFECTIONS OF MAN.....	3R01 CA13478-06S1	10,305
SHAH, KEERTI V.....	INVESTIGATION OF SV40-RELATED INFECTIONS OF MAN.....	2R01 CA13478-07	117,926
SHANE, BARRY.....	REGULATION OF FOLATE POLY-Y GLUTAMATE SYNTHESIS.....	1R01 CA22717-01	53,845
SHEARN, ALLEN D.....	DETERMINATION AND TRANSDETERMINATION IN DROSOPHILA.....	5R01 GM20429-05	77,850
SHIN, HYUN S.....	TUMOR IMMUNITY.....	3R01 CA14113-05S1	38,823
SHIN, HYUN S.....	TUMOR DEFENSE BY PLATELETS AND MACROPHAGES.....	2R01 CA14113-06A1	114,147
SHOUKAS, ARTIN A.....	CIRCULATION STUDIES BY ONE VERSUS TWO CIRCUIT MODEL.....	5R01 HL19039-03	28,317
SILVERSTEIN, ARTHUR M.....	STUDY OF OCULAR HYPERSENSITIVITY.....	5R01 EY00217-18	48,448
SILVERSTEIN, ARTHUR M.....	PATHOGENESIS OF UVEITIS.....	5R01 EY00279-15	66,971
SILVERSTEIN, ARTHUR M.....	THE PATHOBIOLOGY OF THE CORNEA.....	1R01 EY02650-01	99,603
SKOFF, ROBERT P.....	THE STUDY OF NORMAL AND ABNORMAL GLOIIOGENESIS.....	5R01 NS13402-02	82,970
SMITH, KIRBY D.....	QUANTITATIVE GENETIC CONTROL OF PROTEIN SYNTHESIS.....	5R01 HL15026-12	75,982
SOFER, WILLIAM H.....	ENVIRONMENTAL MUTAGENS: THEIR MECHANISMS OF ACTION.....	5R01 ES01527-02	62,295
SOFER, WILLIAM H.....	A SYSTEM FOR ANALYSIS OF GENE CONTROL IN DROSOPHILA.....	5R01 GM18254-07	85,596
SOUTHWICK, CHARLES H.....	PRIMATE POPULATION STUDIES.....	5R01 RR00910-05	22,764
SPIVAK, JERRY L.....	ROLE OF ERYTHROPOIETIN IN TRANSCRIPTIONAL CONTROL.....	5R01 AM16702-06	85,215
SPIVAK, JERRY L.....	PURIFICATION OF ERYTHROPOIETIN.....	5R01 HL21692-02	12,458
SPRINKLE, TERRY J.....	BIOCHEM.-2':3' CYCLIC NUCLEOTIDE 3' PHOSPHOHYDROLASE.....	1R01 NS14348-01	6,015
STARK, WALTER J.....	THE ROLE OF HL-A ANTIGENS IN CORNEAL TRANSPLANTATION.....	3R01 EY01302-03S1	52,829

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
STARK, WALTER J.....	HISTOCOMPATIBILITY (HLA) ANTIGENS IN KERATOPLASTY.....	2R01 EY01302-04	78,639
STEVENS, MARY B.....	MULTIPURPOSE ARTHRITIS CENTER SUPPORT.....	5P60 AM20558-02	165,973
STRANDBERG, JOHN D.....	ANIMAL RESOURCE FOR BIOMEDICAL RESEARCH.....	5P40 RR00130-15	201,036
SUN, TUNG-TIEN.....	STUDIES OF CORNEAL EPITHELIAL DIFFERENTIATION.....	1R01 EY02472-01	104,555
SUSKIND, SIGMUND R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07041-13	142,230
SWIFT, DAVID L.....	RESPIRATORY TRACT DEPOSITION OF HYGROSCOPIC AEROSOLS.....	5R01 HL19715-02	98,947
TALALAY, PAUL.....	BIOCHEMICAL PHARMACOLOGY OF STEROID HORMONES.....	5R01 AM07422-15	106,166
TALALAY, PAUL.....	DESIGN OF CHEMOTHERAPEUTIC AGENTS.....	2P01 GM16492-10	357,452
TALAMO, BARBARA R.....	OCTOPAMINE: ITS ROLE IN THE VERTEBRATE NERVOUS SYSTEM.....	5R01 NS12839-03	57,792
TALAMO, RICHARD C.....	STUDIES IN CYSTIC FIBROSIS AND BRONCHIOLITIS.....	5P50 HL19157-02	346,125
TAYLOR, CARL E.....	INTERACTIONS BETWEEN HEALTH CARE AND FAMILY PLANNING.....	5R01 HD10180-02	102,836
TENNEKON, GIHAN.....	CEREBROSIDE SULFOTRANSFERASE: ROLE IN MYELINATION.....	1R01 NS14670-01	81,803
TORGERSON, WARREN S.....	STRUCTURE OF PERCEIVED PAIN AND PAIN PATIENT TYPOLOGY.....	5R01 GM24398-02	52,246
TOWNSEND, CRAIG A.....	BIOSYNTHESIS OF B-LACTAM ANTIBIOTICS.....	1R01 AI14937-01	53,990
TOWNSEND, CRAIG A.....	BIOSYNTHESIS OF AFLATOXIN.....	1R01 ES01670-01	48,211
TRACEY, DANIEL E.....	CYTOTOXIC K CELLS WITHIN MURINE TUMORS.....	5R01 CA19483-03	82,099
TRPIS, MILAN.....	GENETICS OF THE Aedes SCUTELLARIS COMPLEX.....	5R01 AI13396-03	50,834
TRPIS, MILAN.....	GENETICS OF FILARIAL INFECTION IN MOSQUITOES.....	1R22 AI14520-01	54,384
TS'0, PAUL O.....	NUCLEIC ACID INVOLVEMENT IN NEOPLASTIC TRANSFORMATION.....	3P01 CA16043-03S1	104,786
TS'0, PAUL O.....	ESR STUDY ON HYDROCARBON RADICALS AND CARCINOGENESIS.....	5R01 ES01659-06	79,792
TS'0, PAUL O.....	NUCLEIC ACID CHEMISTRY AND ITS BIOMEDICAL APPLICATION.....	2R01 GM16066-11	173,195
TSAN, MIN-FU.....	STUDY OF NEUTROPHIL METABOLISM AND FUNCTION.....	5R01 AI13004-03	36,116
TSONG, TIAN Y.....	DYNAMICS OF ARTIFICIAL AND BIOLOGICAL MEMBRANES.....	3R01 HL18048-03S1	7,511
TSONG, TIAN Y.....	DYNAMICS OF SYNTHETIC AND BIOLOGICAL MEMBRANES.....	2R01 HL18048-04	68,442
TYSON, JOHN E.....	FETAL HOMEOSTASIS: OSMOREGULATION BY PROLACTIN.....	5R01 HD08061-03	53,851
VALLE, DAVID L.....	MAMMALIAN PROLINE METABOLISM.....	5R01 AM20328-02	17,405
WAGNER, HENRY N, JR.....	DISTRIBUTION AND RETENTION OF INHALED POLLUTANTS.....	5R01 ES01543-02	66,526
WAGNER, HENRY N, JR.....	NUCLEAR INSTRUMENTATION AND CHEMISTRY IN MEDICINE.....	2P01 GM10548-16	280,605
WAGNER, HENRY N, JR.....	EVALUATION OF CARDIAC FUNCTION WITH RADIOACTIVE TRACERS.....	5R01 HL20674-02	79,849
WALKER, DONALD G.....	STUDIES OF OSTEOPETROSIS AND ISOLATED OSTEOCLASTS.....	2R01 AM12491-10	94,490
WALSER, MACKENZIE.....	IONIC INTERACTIONS IN ELECTROLYTE METABOLISM.....	5R01 AM02306-20	80,180
WALSER, MACKENZIE.....	AMINO ACID ANALOGUES IN NUTRITION.....	5P01 AM18020-05	303,380
WALSH, PATRICK C.....	STUDIES OF STEROID RECEPTORS IN PROSTATIC CARCINOMA.....	5R26 CA16924-05	85,752
WANG, SHIH Y.....	CHEMICAL ANALYSIS OF NON-DIMERIC UV DAMAGE IN DNA.....	1R01 GM24238-01	61,092
WARR, GLENN A.....	PHAGOCYtic AND IMMUNE DEFENSE MECHANISMS OF THE LUNG.....	1R23 HL22823-01	44,105
WEINBERG, ERIC S.....	HISTONE GENES AND THEIR TRANSCRIPTION.....	2R01 GM22155-04	110,770
WEISFELDT, MYRON L.....	STUDY OF ISCHEMIC HEART DISEASE.....	3P50 HL17655-03S2	7,054
WEISFELDT, MYRON L.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17655-04	1,098,928
WHITE, EMIL H.....	CANCER AND ANTICANCER ACTIVITY OF NITROSO.....	5R01 CA18387-02	26,211
WHITE, EMIL H.....	CHEM- AND BIOLUMINESCENCE.....	2R01 GM19488-21	67,228
WIGGINS, JAMES W.....	ELECTRON MICROSCOPE TECHNIQUES FOR MEMBRANE STRUCTURE.....	1R01 GM24237-01	106,905
WILLIAMSON, JOHN W.....	CONSENSUAL VALIDITY IN HEALTH CARE—A CRITICAL REVIEW.....	1R01 LM03060-01	26,842
WILLOUGHBY, WILLIAM F.....	MITOGEN INDUCED INTERSTITIAL PNEUMONITIS.....	5R01 HL19819-03	109,968
WINKELSTEIN, JERRY A.....	THE ROLE OF COMPLEMENT IN ANTIBACTERIAL IMMUNITY.....	5R01 AI11637-05	43,327
YOUNG, ERIC D.....	PROPERTIES OF INFERIOR COLLICULUS AND COCHLEAR NUCLEUS.....	2R01 NS12524-04	47,714
ZEE, DAVID S.....	OCULOMOTOR DISORDERS: CLINICAL AND EXPERIMENTAL STUDY.....	3R01 EY01849-02S1	11,857
ZEE, DAVID S.....	OCULOMOTOR DISORDERS: CLINICAL AND EXPERIMENTAL STUDY.....	5R01 EY01849-03	22,695
ZELNIK, MELVIN.....	USE AND NON-USE OF CONTRACEPTION AMONG ADOLESCENTS.....	1R01 HD11107-01A1	421,520
ZIERLER, KENNETH L.....	FLUXES ACROSS BIOMEMBRANES AND PEPTIDE HORMONE ACTION.....	5R01 AM17574-05	111,538
ZIRKIN, BARRY R.....	SPERMIOGENESIS AND FERTILIZATION IN MAMMALS.....	5R01 HD09921-03	77,361
ORGANIZATION TOTAL	322 38,518,513		
SINAI HOSPITAL OF BALTIMORE ZIP CODE 21215			
SERRANO, JOSE A.....	CHEMOTHERAPY OF CANCER—EXPERIMENTAL AND CLINICAL.....	2R01 CA02478-24	29,530
ORGANIZATION TOTAL	1 29,530		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
ABZUG, CHARLES.....	SPATIAL ORGANIZATION OF THE VESTIBULAR NUCLEI.....	5R01 NS12736-03	32,971
ADAMS, ELIJAH.....	METABOLISM OF CERTAIN AMINO ACIDS.....	2R01 GM11105-16	164,306
ALBUQUERQUE, EDSON X.....	MUSCLE REINNERVATION AND NEUROTROPHIC INFLUENCE.....	5R01 NS12063-05	100,856

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
BARRACLOUGH, CHARLES A	CENTRAL NERVOUS SYSTEM REGULATION OF REPRODUCTION	2R01 HD02138-17	132,352
BENVENISTE, KATHY B	COLLAGEN SYNTHESIS IN DILANTIN GINGIVAL HYPERPLASIA	1R01 DE04776-01	56,850
BRINLEY, FLOYD J, JR.	ION FLUXES IN NERVE AND MUSCLE	2R01 NS13420-03	41,167
BRINLEY, FLOYD J, JR.	ELECTRICAL AND BIOCHEMICAL PROPERTIES OF EXCITABLE CELLS	1P01 NS14800-01	518,826
BUCCI, CLARA F	STUDY OF FOLDING OF POLYPEPTIDE CHAINS IN HEMOGLOBIN	5R01 HL16891-05	57,774
BUCCI, ENRICO	INTERACTION OF A AND B CHAINS OF HUMAN HEMOGLOBIN	5R01 HL13164-07	51,826
BURKE, MORRIS	CONTRACTION OF SKELETAL MUSCLE	1R01 NS13401-01A1	41,619
BURNETT, JOSEPH W	A TOXICOLOGICAL & CHEMICAL STUDY OF SEA NETTLE VENOM	5R01 ES01474-02	72,824
BYRON, JOSEPH W	REGULATION OF THE HEMOPOIETIC STEM CELL	5R01 CA16147-05	76,896
CHANG, YUNG-FENG	AMINO ACIDS AND CELL WALL BIOSYNTHESIS	5R01 DE04116-03	33,480
CHANG, YUNG-FENG	METABOLISM AND NEUROCHEMISTRY OF LYSINE IN THE BRAIN	2R01 NS11822-04	67,223
CHANNING, CORNELIA P	THE MECHANISM OF LUTEINIZATION IN VITRO AND IN VIVO	5R01 HD08834-05	65,574
CHEUNG, AUGUSTINE Y	MICROWAVE HYPERTHERMIA SYSTEMS FOR CANCER TREATMENT	1R01 CA22577-01A1	40,155
DENNIS, JOHN M	SUPPORT FOR INTERNATIONAL CENTER FOR MEDICAL RESEARCH	5R07 AI10049-19	499,417
DENNIS, JOHN M	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05379-17	143,941
ELDEFRAWI, AMIRA T	TOXICOLOGICAL STUDIES OF INSECT ACH-RECEPTORS	2R01 AI13640-03	55,045
ELIAS, E GEORGE	PRIMARY CANCER THERAPY GROUP (NSABP)	1R10 CA20196-01A2	29,185
GOLDMAN, LAWRENCE	STUDIES OF ELECTRICAL EXCITATION	5R01 NS07734-10	31,215
GREISMAN, SHELDON E	BACTERIAL ENDOTOXINS IN INFECTION	5R01 AI07052-16	4,329
GUTH, LLOYD	REGENERATION IN THE SPINAL CORD	5R01 NS12847-03	43,683
HALL-CRAGGS, ERNEST C	SKELETAL MUSCLE REGENERATION IN ADULTS	5R01 NS13296-02	62,642
HARRISON, GEORGE H	RADIOLOGIC PROPERTIES OF HIGH ENERGY NEUTRON BEAMS	5R01 CA18807-03	60,325
HORN, LYLE W	TRANSPORT OF ANIONIC AMINO ACIDS IN GIANT AXONS	1R01 NS14569-01	38,180
HUANG, SHIH-WEN	ETIOLOGY OF DIABETES MELLITUS IN INFANCY AND CHILDHOOD	5R01 AM19256-02	63,788
JANOSKI, ALFONSO H	PHYSIOLOGIC ROLE OF 16-HYDROXYLATED STEROIDS	5R01 HD09598-03	72,655
JONES, RAYMOND T	IN VITRO PANCREATIC CARCINOGENESIS	5R26 CA19197-03	38,388
KAUFFMAN, FREDERICK C	PHARMACOLOGY OF CARCINOGEN ACTIVATION IN INTACT CELLS	5R01 CA20807-02	46,315
KAUFFMAN, FREDERICK C	METABOLISM IN INJURED AND REGENERATING NEURAL TISSUE	1R01 NS14728-01	53,130
KESSLER, IRVING I	A PROSPECTIVE STUDY OF CANCER RISK IN TUBERCULOSIS	7R01 CA25018-01	70,515
KESSLER, IRVING I	MALE ROLE IN CERVICAL CANCER	5R01 CA25019-02	84,164
KESSLER, IRVING I	A PROSPECTIVE STUDY OF LYMPHOID TISSUES IN NEOPLASIA	7R01 CA25020-01	57,026
KIRTLEY, MARY E	STUDY OF GLYCOLYTIC ENZYMES BOUND TO MEMBRANES	5R01 GM19394-06	54,185
KIRTLEY, MARY E	DEHYDROGENASE STRUCTURE AND FUNCTION	5R01 GM20294-05	33,376
KNATTERUD, GENELL L	THE RELATION OF TREATMENT TO DIABETIC COMPLICATIONS	2R01 AM06876-16	99,139
LOBERG, MICHAEL D	PREPARATION OF RADIOPHARMACEUTICALS FROM DRUG ANALOGS	2R01 HL18744-03	54,375
MC DILL, MARY S	MATERNAL SMOKING AND INFANT BIRTH WEIGHT	1R01 HD10659-01	163,511
MC WILLIAMS, ROGER W	ROLE OF THE REGIONAL LYMPH NODE IN ORAL NEOPLASIA	1R23 DE04774-01	10,000
MERGNER, WOLFGANG J	MICROPROBE ANALYSIS/METABOLITE LEVELS OF I. MYOCARDIUM	1R01 HL22281-01	36,115
MINAH, GLENN E	DEVELOPMENT OF FISSURAL DENTAL PLAQUE	5R23 DE04795-02	30,545
MULLINS, LORIN J	THE ION SELECTIVITY OF THE EXCITABLE MEMBRANE	5R01 NS05846-12	61,321
NELSON, ERLAND R	ELEVENTH PRINCETON CONFERENCE ON CEREBROVASCULAR DISEASE	1R13 HL20765-01	15,000
NELSON, ERLAND R	CEREBROVASCULAR CLINICAL RESEARCH CENTER	5P50 NS06779-10	550,486
NELSON, ERLAND R	ELEVENTH PRINCETON CONFERENCE ON CEREBROVASCULAR DISEASE	5R13 NS13647-02	35,162
PADMANABHAN, RADHAKRISHNAN ..	DNA SEQUENCE ANALYSIS ON HUMAN ADENOVIRUS GENOMES	5R01 CA20369-02	57,511
PINTER, GABRIEL G	VASCULAR DISEASE IN EXPERIMENTAL DIABETES	5R01 AM17093-05	94,192
POLAKIS, S EFTHIMIOS	DIFFERENTIATION OF 3T3-L1 FIBROBLASTS TO ADIPOCYTES	5R01 GM23057-03	57,953
PURNELL, DALLAS M	PRECURSORS OF HYPERPLASTIC NODULES OF MAMMARY GLAND	5R01 CA23659-02	53,766
RASH, JOHN E	STUDIES OF EXCITABLE MEMBRANES	1R01 NS14648-01	56,863
REGGIARDO, ZULEMA R	MECHANISM OF TUMOR ABOGATION BY GLYCOLIPID A1	1R01 CA21367-01A1	68,851
REIER, PAUL J	NEURON-GLIAL DYNAMICS DURING REGENERATION	5R01 NS13836-02	39,275
RICHARDS, RICHARD D	HISTO-/BIO-CHEMICAL CHANGES IN EXPERIMENTAL CATARACTS	2R01 EY01292-04A1	41,245
ROBINSON, J EUGENE	RADIATION AND HYPERTHERMIC CANCER THERAPY	5R01 CA18872-03	55,005
ROBINSON, J EUGENE	X-RAY AND MICROWAVE HYPERTHERMIA FOR CANCER TREATMENT	1R01 CA22617-01	51,575
ROSEN, BARRY P	BIOENERGETICS OF MICROBIAL MEMBRANE FUNCTIONS	2R01 GM21648-04	68,564
RUCHKIN, DANIEL S	EMITTED POTENTIALS AND COGNITIVE ACTIVITY	5R01 NS11199-04	14,048
SELMANOFF, MICHAEL K	TUBEROINFUNDIBULAR DOPAMINE NEURONS AND PROLACTIN	1R01 NS14611-01	44,397
SHEAR, CHARLES R	POSTEMBRYONIC STRIATED MUSCLE GROWTH	2R01 AM20131-03	42,751
STEINSCHNEIDER, ALFRED	BIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF SIDS	5P50 HD10982-02	759,888
STRUM, JUDY M	NEOPLASTIC MAMMARY GLAND: STRUCTURE/FUNCTION	5R01 CA20764-03	36,012
TRAUB, ROBERT	STUDIES OF CERTAIN IMPORTANT GENERA OF SIPHONAPTERA	5R01 AI04242-17	124,958

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
VARMA, SHAMBHU D.....	ALDOSE REDUCTASE IN OCULAR PATHOLOGY.....	1R01 EY02160-01	65,905
WAECHTER, CHARLES J.....	THE ROLE OF POLYPRENOLS IN BRAIN GLYCOPROTEIN ASSEMBLY.....	2R01 NS12296-04	73,695
ZIELKE, H RONALD.....	GLUTAMINE METABOLISM IN HUMAN CULTURED FIBROBLASTS.....	1R01 GM23827-01A1	45,300
ORGANIZATION TOTAL	66	6,003,611	
BETHESDA			
NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS ZIP CODE 20014			
NEY, W ROGER.....	RADIATION PROTECTION AND MEASUREMENTS.....	5R01 CA18001-13	71,020
TAYLOR, LAURISTON S.....	HISTORY OF RADIATION PROTECTION STANDARDS.....	5R01 LM02676-02	9,006
ORGANIZATION TOTAL	2	80,026	
RADIATION RESEARCH SOCIETY ZIP CODE 20014			
ELKIND, MORTIMER M.....	VI INT. CONGR. OF RADIATION RESEARCH, TOKYO, MAY 1979.....	1R13 CA23872-01	115,000
ORGANIZATION TOTAL	1	115,000	
TRANSNATIONAL FAMILY RESEARCH INSTITUTE ZIP CODE 20034			
DAVID, HENRY P.....	RESOLUTION OF ADOLESCENT PREGNANCY: DANISH EXPERIENCE.....	5R01 HD11068-02	100,098
ORGANIZATION TOTAL	1	100,098	
U.S. DEPARTMENT OF DEFENSE—UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES ZIP CODE 20014			
BOLLUM, FREDERICK J.....	DNA POLYMERASES IN NORMAL AND LEUKEMIC LYMPHOID CELLS.....	5R01 CA23262-02	121,436
CARPENTER, MALCOLM B.....	VESTIBULAR SYSTEM.....	3R01 NS14802-01S1	17,846
CHANG, LUCY M.....	FUNCTION OF DNA POLYMERASES IN NORMAL AND CANCER CELLS.....	5R01 CA23365-02	51,750
HADDY, FRANCIS J.....	EFFECT OF CATIONS, ANIONS, AND WATER UPON BLOOD VESSELS.....	5R01 HL21525-02	10,000
HOLMES, RANDALL K.....	CONTROL OF BACTERIAL TOXINS BY VIRUSES AND PLASMIDS.....	5R22 AI14107-03	10,400
KRANTZ, DAVID S.....	CORONARY ARTERY DISEASE AND CORONARY-PRONE BEHAVIOR.....	7R23 HL23674-01	11,388
MULDOON, SHEILA M.....	GENERAL ANESTHETICS AND VASCULAR NEUROEFFECTOR SYSTEMS.....	7R01 GM25926-01	27,100
ORGANIZATION TOTAL	7	249,920	
UNDERSEA MEDICAL SOCIETY ZIP CODE 20014			
SHILLING, CHARLES W.....	SEMINAL DOCUMENTS OF DEEP SEA DIVING, 1860-1960.....	1R01 LM03050-01	14,110
ORGANIZATION TOTAL	1	14,110	
UNIVERSITIES ASSOCIATED FOR RESEARCH AND EDUCATION IN PATHOLOGY ZIP CODE 20014			
FISHBEIN, WILLIAM N.....	UREASE AND DEAMINASES IN CHEMISTRY AND MEDICINE.....	3R01 AM10960-11S1	1,364
FISHBEIN, WILLIAM N.....	UREASE AND DEAMINASES IN CHEMISTRY AND MEDICINE.....	5R01 AM10960-12	62,732
TRUMP, BENJAMIN F.....	HISTOPATHOLOGICAL GRADING OF CARCINOMA OF PROSTATE.....	5R26 CA15798-05	72,008
WISSLER, ROBERT W.....	SUPPORT FOR REGISTRY OF COMPARATIVE PATHOLOGY.....	5R01 RR00301-13	171,599
ZIMMERMAN, LORENZ E.....	IMPROVED DIAGNOSIS AND THERAPY IN OPHTHALMOLOGY.....	5R01 EY01386-03	60,484
ORGANIZATION TOTAL	5	368,187	
CATONSVILLE			
FRIENOS MEDICAL SCIENCE RESEARCH CENTER ZIP CODE 21228			
BLACK, PERRY.....	EXPERIMENTAL STUDIES ON SPINAL CORD TRAUMA.....	5R01 NS13327-02	61,275
BLACK, PERRY.....	'SPONTANEOUS' SEIZURES AND CEREBELLAR STIMULATION.....	5R01 NS13499-02	52,314
BLACK, PERRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05546-16	35,895
SALACH, JAMES I, JR.....	MONOAMINE OXIDASE IN THE CNS AND OTHER TISSUES.....	1R01 NS14222-01	54,412
ORGANIZATION TOTAL	4	203,896	
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND BALTIMORE COUNTY CAMPUS ZIP CODE 21228			
GETHMANN, RICHARD C.....	GENETIC CONTROL OF THE MEIOTIC PROCESS.....	2R01 GM22050-04	34,542
HAYS, JOHN B.....	RECOMBINATION OF DNA IN A CELL-FREE SYSTEM.....	3R01 GM22586-02S1	2,900
HAYS, JOHN B.....	RECOMBINATION OF DNA IN A CELL-FREE SYSTEM.....	5R01 GM22586-03	46,706
KARPEL, RICHARD L.....	PHYSIOLOGICAL ROLES OF RNA UNWINDING PROTEINS.....	5R01 CA21374-02	49,253
LOVETT, PAUL S.....	PLASMIDS, PHAGES, AND BACTERIAL SPORULATION.....	2R01 AI10331-06A1	21,012
LOVETT, PAUL S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07159-03	26,555
ROTH, THOMAS F.....	SELECTIVE PROTEIN UPTAKE IN DEVELOPING OOCYTES.....	2R01 HD09549-04	79,194

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
ROTH, THOMAS F.....	CELLULAR ASPECTS OF MATERNAL-FETAL IGG TRANSPORT.....	1R01 HD11519-01	81,097
STEINER, ROBERT F.....	CONFORMATIONAL TRANSITIONS OF ALLOSTERIC ENZYMES.....	5R01 AM16688-06	63,165
ORGANIZATION TOTAL	9 404,424		
CHEVY CHASE			
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 20015			
KRAMER, SIMON.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA21661-03	408,351
KRAMER, SIMON.....	PARTICLE PROGRAM—CLINICAL TRIALS.....	1R10 CA23113-01	185,636
ORGANIZATION TOTAL	2 593,987		
COLLEGE PARK			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY COLLEGE ZIP CODE 20742			
GREENE, REBECCA S.....	WORLD WAR II & EMERGENCE OF MODERN AMERICAN PSYCHIATRY.....	1R01 LM03169-01	13,451
ORGANIZATION TOTAL	1 13,451		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742			
BRAUTH, STEVEN E.....	COMPARATIVE NEUROBIOLOGY OF THE BASAL GANGLIA.....	5R01 NS13018-03	27,082
BRINKLEY, HOWARD J.....	FUNCTIONING OF CORPORA LUTEA.....	5R01 HD00739-13	64,957
COLWELL, RITA R.....	ECOLOGY OF PATHOGENIC VIBRIOS.....	5R22 AI14242-02	49,841
DOETSCH, RAYMOND N.....	MARTEN'S NEW THEORY—ANTECEDENTS AND INFLUENCE.....	5R01 LM02669-02	836
GORMALLY, JAMES F.....	PREDICTING OUTCOME IN BEHAVIORAL OBESITY TREATMENT.....	1R01 HD11666-01	29,877
HAMLET, SANDRA L.....	PHYSIOLOGICAL STUDY OF SPEECH ADAPTATION.....	5R01 DE03631-05	46,986
HENERY-LOGAN, KENNETH R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07042-13	73,159
HODOS, WILLIAM.....	A BEHAVIORAL ANALYSIS OF VISUAL SYSTEM EVOLUTION.....	5R01 EY00735-08	100,809
KELLOGG, R BRUCE.....	MATHEMATICAL PROBLEMS IN KIDNEY MODELING.....	1R01 AM20373-01	14,797
LEVINSON, JOHN Z.....	SPATIAL AND TEMPORAL PROPERTIES OF HUMAN VISION.....	5R01 EY01640-03	51,154
MARTIN, JAMES G.....	PERCEPTION AND PRODUCTION OF CONNECTED SPEECH.....	1R01 NS13645-01A1	69,642
MAZZOCCHI, PAUL H.....	CONFORMATIONS OF THYROID AND B-ADRENERGIC ANALOGS.....	2R01 AM17458-04A1	51,921
NELSON, JUDD O.....	DINITROANILINE HERBICIDE METABOLISM & TOXICOLOGY.....	1R23 ES01646-01	46,636
PENNER, MERRILYNN J.....	TEMPORAL ANALYSIS OF AUDITORY STIMULI.....	3R01 NS13673-02S1	1,582
PIERCE, SIDNEY K.....	CELLULAR WATER BALANCE: THE INVERTEBRATE MECHANISM.....	5R01 GM23731-02	45,405
ROWAN, ROBERT, III.....	NMR STUDIES ON MYELIN BASIC PROTEIN/LIPID INTERACTIONS.....	5R01 NS13934-02	52,182
SISLER, HUGH D.....	MODE OF TOXIC AND ANTIPATHOGENIC ACTION OF FUNGICIDES.....	2R01 AI00225-26	48,627
SMITH-GILL, SANDRA J.....	MITOTIC CONTROLS IN THYROXIN-INDUCED DIFFERENTIATION.....	5R01 AM20518-03	43,805
VIJAY, INDER K.....	BIOSYNTHESIS OF MAMMARY GLYCOPROTEINS.....	1R01 AM19682-01A1	43,784
YORKE, JAMES A.....	MODELING THE EPIDEMIOLOGY AND CONTROL OF GONORRHEA.....	2R01 AI13233-02	36,796
ZAJAC, FELIX E, III.....	MOTOR UNIT ORGANIZATION DURING LOCOMOTION.....	5R01 NS11518-04	12,411
ZAJAC, FELIX E, III.....	EXPERIMENTAL AND ANALYTICAL STUDY OF MOVEMENT.....	5R01 NS11971-04	73,973
ORGANIZATION TOTAL	22 986,262		
PRINCESS ANNE			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND EASTERN SHORE ZIP CODE 21853			
WUTOH, JOSEPH G.....	MARINE AND ESTUARINE PHARMACOLOGY.....	3S06 RR08079-04S1	1,500
WUTOH, JOSEPH G.....	MARINE AND ESTUARINE PHARMACOLOGY.....	5S06 RR08079-05	144,879
ORGANIZATION TOTAL	2 146,379		
SILVER SPRING			
INSTITUTE FOR BEHAVIORAL RESEARCH ZIP CODE 20910			
PARSONS, H MC ILVAINE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05636-12	30,796
TAUB, EDWARD.....	RAYNAUD'S DISEASE AND TEMPERATURE SELF-REGULATION.....	5R01 HL21323-02	94,524
ORGANIZATION TOTAL	2 125,320		
JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY ZIP CODE 20910			
HOCHHEIMER, BERNARD F.....	POLARIZED LIGHT RETINAL PHOTOGRAPHY.....	5R01 EY02054-02	14,642
KIM, BORIS F.....	HIGH RESOLUTION SPECTROSCOPY OF PORPHYRINS.....	2R01 GM21897-04	79,885

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MARYLAND—Continued			
ORGANIZATION TOTAL	2	94,527	
STATE TOTAL	462	48,948,360	
MASSACHUSETTS			
AMHERST			
AMHERST COLLEGE ZIP CODE 01002			
CZAP, PETER, JR.....	RUSSIAN FERTILITY AND HOUSEHOLD STRUCTURE 1780-1897.....	5R01 HD10798-02	20,859
GEORGE, STEPHEN A.....	VISION IN TRIPLOID ANIMALS.....	5R01 EY01662-04	34,318
KIDDER, GEORGE W.....	METABOLIC STUDIES OF ANIMAL MICROORGANISMS.....	2R01 AM01005-26	40,273
KROPF, ALLEN.....	PHOTOCHEMISTRY OF THE VISUAL PIGMENTS.....	5R01 EY00201-17	31,962
PEASE, LILA G.....	PEPTIDE CONFORMATIONS AND INTERACTIONS WITH MEMBRANES.....	1R01 GM23691-01A1	36,584
POCCIA, DOMINIC L.....	ACTIVATION OF SPERM NUCLEUS AT FERTILIZATION.....	1R01 HD12982-01	64,670
WAGGONER, ALAN S.....	EARLY MOLECULAR EVENTS IN VISUAL EXCITATION.....	2R01 EY00930-07	40,416
WAGGONER, ALAN S.....	OPTICAL PROBES OF NERVE EXCITATION.....	2R01 NS10489-07	54,388
ZIMMERMAN, WILLIAM F.....	RETINAL PIGMENT EPITHELIUM, SUBCELLULAR BIOCHEMISTRY.....	2R01 EY00675-07	31,826
ZIMMERMAN, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07110-11	19,397
ORGANIZATION TOTAL	10	374,693	
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE 01002			
BLACK, DONALD L.....	HORMONAL CONTROL OF OVUM TRANSPORT.....	5R01 HD11252-02	44,734
BRANDTS, JOHN F.....	FREE ENERGY OF FOLDING OF GLOBULAR PROTEINS.....	2R01 GM11071-16	80,644
BRANDTS, JOHN F.....	STRUCTURAL STUDIES OF THE HUMAN ERYTHROCYTE MEMBRANE.....	2R01 HL17878-04	75,740
CANALE-PAROLA, ERCOLE.....	SPIROCHETES INDIGENOUS TO HUMANS.....	5R01 AI12482-04	56,735
CARPINO, LOUIS A.....	NEW AMINO-PROTECTING GROUPS.....	5R01 GM09706-13	44,040
CLIFTON, RACHEL K.....	AUDITORY COMPETENCE AND LEARNING IN HUMAN INFANTS.....	5R01 HD06753-05	51,070
COX, C D.....	CULTIVATION OF VIRULENT TREPONEMA PALLIDUM.....	5R01 AI10982-06	66,576
EDMAN, JOHN D.....	BITING FLY-VERTEBRATE HOST INTERRELATIONSHIPS.....	1R01 AI13981-01A1	33,555
FOURNIER, MAURILLE J, JR.....	BIOSYNTHESIS OF TRANSFER RIBONUCLEIC ACID.....	2R01 GM19351-07	79,177
FRIEDMAN, MARK I.....	ENERGY METABOLISM, HUNGER, AND FEEDING.....	5R01 AM20022-02	27,532
HEPLER, PETER K.....	CALCIUM FLUCTUATION AND LOCALIZATION DURING MITOSIS.....	5R01 GM25120-02	74,386
HOLMES, ROBERT R.....	PHOSPHATE MODEL FOR RIBONUCLEASE ACTION.....	2R01 GM21466-04	50,260
HOLT, STANLEY C.....	CHARACTERISTICS OF DISEASE-RELATED CAPNOBACTERIA.....	1R01 DE05123-01	59,395
HONIGBERG, BRONISLAW M.....	PATHOGENICITY IN TRICHOMONADS AND TRYPANOSOMATIDS.....	5R01 AI00742-23	97,169
JACOBSON, BRUCE S.....	PLASMA MEMBRANES INVERTED ON BEADS: ACTIN BINDING.....	1R01 GM25461-01	84,650
LESSIE, THOMAS G.....	PSEUDOMONAS CEPACIA AND ITS UNUSUAL PHAGE, CP1.....	2R01 GM21198-10	46,080
LEVIN, BRUCE R.....	PROTEIN VARIATION AND SELECTION MECHANISMS IN E. COLI.....	5R01 GM19848-05	40,819
MASON, THOMAS L.....	A GENETIC APPROACH TO MEMBRANE ASSEMBLY.....	5R01 GM20909-06	39,149
NORKIN, LEONARD C.....	DEFECTIVE VIRUS FROM SIMIAN VIRUS 40 CARRIER CULTURES.....	5R01 AI14049-02	45,758
PIEDMONT, EUGENE B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07048-13	84,106
RAYNER, KEITH.....	FOVEAL AND PARAFOVEAL CUES IN READING.....	1R01 HD12727-01	48,269
SEARCY, DENNIS G.....	FUNCTION OF THERMOPLASMA ACIDOPHILUM HISTONE.....	5R01 GM22838-03	32,668
SLAKEY, LINDA L.....	ENZYME REGULATION IN CULTURED ARTERIAL CELLS.....	1R01 HL22486-01	47,188
SMYTH, J ROBERT, JR.....	A GENETIC EYE DEFECT AND AMELANOSIS IN THE CHICKEN.....	1R01 EY02575-01	68,384
WADE, GEORGE N.....	SEX HORMONES AND BEHAVIOR: EFFECTS OF DIABETES.....	5R01 AM20785-02	49,030
WADE, GEORGE N.....	HORMONES, BRAIN FUNCTION AND BEHAVIOR.....	5R01 NS10873-06	41,790
WESTHEAD, EDWARD W, JR.....	DIVALENT CATIONS IN ENOLASE AND OTHER BIOLOGICAL SYSTEMS.....	2R01 GM14945-12	78,003
WESTHEAD, EDWARD W, JR.....	STRUCTURE OF THE CHROMAFFIN GRANULE MEMBRANE.....	1R01 GM24197-01A1	68,704
WIARDA, HOWARD J.....	POPULATION POLICY IN LATIN AMERICA: THE OUTPUT SIDE.....	3R01 HD06604-04S1	2,955
WOODCOCK, CHRISTOPHER L.....	STRUCTURE OF NATIVE AND RECONSTITUTED CHROMATIN.....	1R01 GM25305-01	98,474
ZIMMERMANN, ROBERT A.....	PHOTOCHEMICAL PROBES OF RIBOSOME ARCHITECTURE.....	5R01 GM22807-03	44,641
ORGANIZATION TOTAL	31	1,761,671	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BELMONT			
MASSACHUSETTS GENERAL HOSPITAL—MCLEAN HOSPITAL DIVISION ZIP CODE 02178			
DE MARNEFFE, FRANCIS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05484-16	84,274
HAUSER, GEORGE.....	BIOCHEMISTRY OF INOSITOL AND PHOSPHOINOSITIDES.....	3R01 NS06399-09S1	4,757
SAKURA, J DAVID.....	CHEMICAL STUDIES ON PROTEOLIPID APOPROTEINS.....	3R01 HL18746-02S1	7,316
SELKOE, DENNIS J.....	AGING IN THE BRAIN: ROLE OF THE FIBROUS PROTEINS.....	7R01 AG01307-01	27,530
SHASHOUA, VICTOR E.....	BRAIN METABOLISM AND THE BIOCHEMISTRY OF LEARNING.....	2R01 NS09407-05A1	76,779
SHASHOUA, VICTOR E.....	ACID SOLUBLE SYNAPTOSOMAL PROTEINS.....	5R01 NS11712-03	38,838
ORGANIZATION TOTAL	6 239,494		
BOSTON			
AFFILIATED HOSPITALS CENTER—BOSTON HOSPITAL FOR WOMEN ZIP CODE 02115			
GIANNOPOULOS, GEORGE.....	HORMONE DEPENDENCE IN ENDOMETRIAL AND BREAST CANCER.....	5R01 CA22342-02	82,187
GIANNOPOULOS, GEORGE.....	HORMONAL CONTROL OF THE INITIATION OF PARTURITION.....	1R01 HD12202-01	44,683
KITZMILLER, JOHN L.....	FETAL HYPOXIA-STREPTOZOTOCIN TREATED RHESUS PREGNANCY.....	1R01 HD12138-01	50,668
STARK, ANN R.....	RESPIRATORY MUSCLES IN REGULATION OF INFANT BREATHING.....	1R23 HL21405-01	49,438
ORGANIZATION TOTAL	4 226,976		
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
ABBAS, ABUL K.....	REGULATION OF ANTIBODY SYNTHESIS AND SECRETION.....	1R23 A114478-01	38,484
ABRAMS, HERBERT L.....	CINEANGIOGRAPHIC STUDIES OF THE CARDIOVASCULAR SYSTEM.....	3R01 HL20895-02S1	8,422
ABRAMS, HERBERT L.....	CINEANGIOGRAPHIC STUDIES OF THE CARDIOVASCULAR SYSTEM.....	5R01 HL20895-03	210,676
ADAMS, DOUGLASS F.....	COMPUTED CARDIAC TOMOGRAPHY IN INFARCT SIZING.....	1R01 HL21719-01	111,299
BRAUNWALD, EUGENE.....	DETERMINANTS OF IRREVERSIBLE ISCHEMIC INJURY IN HEART.....	1R01 HL23140-01	138,959
BRAUNWALD, EUGENE.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00888-04	785,064
BRENNER, BARRY M.....	CONTROL OF FLUID EXCHANGES IN THE MAMMALIAN KIDNEY.....	5R01 AM19467-03	190,601
BUNN, H FRANKLIN.....	HEMOGLOBIN ALC IN PATIENTS WITH DIABETES MELLITUS.....	5R01 AM18223-04	67,354
BUNN, H FRANKLIN.....	STRUCTURE AND FUNCTION OF NORMAL AND ABNORMAL HEMOGLOBIN.....	5R01 HL16927-05	85,056
BUNN, H FRANKLIN.....	THE ACETYLTATION OF FETAL HEMOGLOBIN.....	1R01 HL20925-01A1	38,559
CAREY, MARTIN C.....	ALIMENTARY TRACT LIPIDS IN HEALTH AND DISEASE.....	2R01 AM18559-04	87,756
COTRAN, RAMZI S.....	CARDIOPULMONARY AND RENAL PATHOLOGY RESEARCH CENTER.....	5P01 HL06370-17	326,908
FALCHUK, Z MYRON.....	PATHOGENESIS OF SPRUE & INFLAMMATORY BOWEL DISEASE.....	5R01 AM17684-05	62,508
GALPER, JONAS B.....	MUSCARINIC RECEPTORS IN THE DEVELOPING HEART.....	1R23 HL22775-01	37,979
GROSSMAN, WILLIAM.....	DIASTOLIC PROPERTIES OF THE LEFT VENTRICLE.....	5R01 HL19089-03	34,071
GROSSMAN, WILLIAM.....	REGRESSION OF CARDIAC HYPERTROPHY: MYOCARDIAL AND RENAL.....	5R01 HL19246-03	48,999
HANDIN, ROBERT I.....	ROLE OF PF-4 IN DETECTING AND PROMOTING THROMBOSIS.....	2R01 HL17513-04	73,509
HASSAN, WILLIAM E, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05489-16	135,063
HESEL, SAMUEL J.....	THE PERCEPTUAL PROCESS IN THE DIAGNOSIS OF LUNG DISEASE.....	1R01 GM23891-01	40,329
HOLLENBERG, NORMAN K.....	RENAL VASCULAR REACTIVITY IN THE HYPERTENSIVE PATIENT.....	2R01 HL14944-07	74,661
INGRAM, ROLAND H, JR.....	LOCALIZATION OF AIRWAYS OBSTRUCTION AND RESPONSES.....	5R01 HL16463-05	55,105
INGWALL, JOANNE S.....	CARDIAC ENERGY METABOLISM AND PROTEIN SYNTHESIS.....	1R01 HL22290-01	61,295
KASS, EDWARD H.....	CHRONIC INFECTIONS AND THE ORIGINS OF CHRONIC DISEASE.....	5P01 HD11924-02	307,395
KASS, EDWARD H.....	ORIGINS OF HYPERTENSION.....	5R01 HL22298-02	233,066
LAMONT, JOHN T.....	STRUCTURE AND FUNCTION OF COLONIC GLYCOPROTEINS.....	1R01 AM21892-01	85,618
LARSEN, PHILIP R.....	THE PHYSIOLOGICAL ROLE OF THYROXINE BINDING PROTEINS.....	2R01 AM18616-04	89,351
MANNICK, JOHN A.....	CLINICAL AND LABORATORY STUDIES IN CELLULAR IMMUNITY.....	3R01 CA21644-02S1	43,677
MAROKO, PETER R.....	DRUG-INDUCED ALTERATIONS IN INFARCT SIZE IN THE RAT.....	5R01 HL20199-02	52,110
MATHEWS-ROTH, MICHELINE M.....	CAROTENOIDS AS ANTITUMOR AGENTS FOR SKIN TUMORS.....	5R01 CA23053-02	45,938
MC FADDEN, EDWARD R, JR.....	PATHOPHYSIOLOGY OF EXERCISE-INDUCED ASTHMA.....	2R01 HL17873-04	33,941
MIRSKY, ISRAEL.....	A MATHEMATICAL APPROACH TO CARDIOVASCULAR MECHANICS.....	5R01 HL12711-09	74,512
NEER, EVA J.....	ADENYLATE CYCLASE AND THE PLASMA MEMBRANE.....	5R01 AM19277-03	70,100
PENNINGTON, JAMES E.....	PULMONARY IMMUNOPATHOLOGY IN THE COMPROMISED HOST.....	1R23 HL21997-01A1	38,074
SAUNDERS, NICHOLAS A.....	RESPIRATORY FAILURE: CONTROL AND MUSCLE DYSFUNCTION.....	5R23 HL20968-02	13,469
SMITH, THOMAS W.....	DIGITALIS: MECHANISM AND REVERSAL STUDIES.....	5R01 HL18003-05	55,237
SONIS, STEPHEN T.....	CELL-MEDIATED IMMUNITY IN PERIODONTAL DISEASE.....	5R01 DE04677-02	61,346
SPEIZER, FRANK E.....	A PROSPECTIVE COHORT FOR RISKS IN BREAST CANCER.....	5R01 CA23645-02	247,660
STROM, TERRY B.....	INSULIN RECEPTOR LYMPHOCYTES: NATURE & SIGNIFICANCE.....	5R01 AM21094-02	66,117

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
SZABO, SANDOR.....	CHARACTERIZATION OF BIOLOGIC ACTIONS OF ACRYLONITRILE	1R01 ES01876-01	85,311
TAEGTMEYER, HEINRICH.....	AMINO ACID METABOLISM IN NORMAL AND HYPOXIC MYOCARDIUM.....	5R01 HL21381-02	38,892
TAGER, IRA B.....	EARLY RISK PREDICTORS FOR CHRONIC PULMONARY DISEASE	5R01 HL22528-02	88,363
TISHLER, PETER V.....	GONOSOMAL ANEUPLOIDY IN CITY HOSPITAL POPULATIONS	5R01 GM26373-02	27,063
TRIER, JERRY S.....	FUNCTIONAL MORPHOLOGY OF THE ALIMENTARY TRACT	2R01 AM17537-06	155,702
VATNER, STEPHEN F.....	CARDIOVASCULAR CONTROL IN NORMAL AND DISEASE STATES.....	2R01 HL15416-06	166,590
VATNER, STEPHEN F.....	MYOCARDIAL ISCHEMIA.....	3R01 HL17459-03S1	35,040
WILLIAMS, GORDON H.....	HORMONES IN HYPERTENSION.....	5R01 HL18882-02	96,873
ORGANIZATION TOTAL	46 4,924,102		
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
AUSTEN, K FRANK.....	IN VITRO STUDIES OF THE MECHANISM OF ANAPHYLAXIS	5R01 AI07722-12	206,724
AUSTEN, K FRANK.....	IMMUNOLOGIC RELEASE OF CHEMICAL MEDIATORS IN MAN.....	5P50 AI10356-08	213,857
AUSTEN, K FRANK.....	CLINICAL RESEARCH UNIT IN RHEUMATIC DISEASES	5P01 AM05577-17	155,432
AUSTEN, K FRANK.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20580-02	165,107
AUSTEN, K FRANK.....	CHEMICAL MEDIATORS OF ACUTE PULMONARY DISORDERS.....	5P01 HL17382-05	183,418
AUSTEN, K FRANK.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05669-11	91,771
CHURCHILL, WINTHROP H, JR.....	MECHANISMS OF MACROPHAGE MEDIATED TUMOR CYTOTOXICITY.....	5R01 CA19403-03	99,582
DAVID, JOHN R.....	CELLULAR HYPERSENSITIVITY	5R01 AI07685-13	205,150
DAVID, JOHN R.....	MACROPHAGE ACTIVATION AND CELLULAR IMMUNITY.....	5R22 AI10921-07	68,012
GOETZL, EDWARD J.....	REGULATION OF HYPERSENSITIVITY REACTIONS IN THE LUNG.....	5R01 HL19777-03	60,303
LEWIS, ROBERT A.....	LOCALIZATION OF MEDIATORS IN DISPERSED LUNG CELLS	5R23 HL21089-02	43,381
REMOLD, HEINZ G.....	MACROPHAGE INTERACTIONS WITH LYMPHOCYTE MEDIATORS	5R01 AI12110-05	85,396
ROCKLIN, ROSS E.....	MECHANISMS OF CELLULAR HYPERSENSITIVITY IN MAN.....	5R01 AI11729-05	61,107
SCHUR, PETER H.....	RHEUMATIC DISEASES: IMMUNE COMPLEXES & IMMUNOGENETICS.....	2R01 AM11414-12	92,653
SHER, F ALAN.....	MECHANISMS OF HOST REACTION TO SCHISTOSOMULA.....	5R22 AI14185-02	87,831
SOTER, NICHOLAS A.....	MEDIATORS OF INFLAMMATION IN DERMATOLOGIC DISEASES.....	5R23 AI14292-02	43,560
SPRAGG, JOCELYN.....	HUMAN KININ & FIBRINOLYTIC SYSTEMS AND RENAL DISEASE.....	1R01 HL22939-01	76,414
STEINBERG, JAMES.....	CHONDROCYTE-MATRIX INTERACTIONS IN ARTHRITIC DISEASE.....	3R01 AM18268-03S1	31,028
TAUBER, ALFRED I.....	MODULATION OF GRANULOCYTE MIGRATION AND CYTOTOXICITY.....	1R23 AI15116-01	41,034
TRENTHAM, DAVID E.....	IMMUNOLOGIC PROPERTIES OF COLLAGEN.....	1R01 AM21490-01	68,926
ORGANIZATION TOTAL	20 2,080,686		
BETH ISRAEL HOSPITAL ZIP CODE 02215			
ALS, ANN V.....	RADIOGRAPHIC CONTRAST TOXICITY IN THE ISCHEMIC HEART.....	1R01 HL21589-01	60,293
BING, OSCAR H.....	COMPUTER FEEDBACK STUDY OF CARDIAC MUSCLE MECHANICS.....	5R01 HL18338-04	34,401
BLEICH, HOWARD L.....	BIBLIOGRAPHIC RETRIEVAL FOR THE HOSPITAL LIBRARY	1R01 LM03123-01	63,673
DICHTER, MARC A.....	CNS CELL CULTURE PHYSIOLOGY & MECHANISMS OF EPILEPSY.....	5R01 NS12731-02	48,146
EPSTEIN, FRANKLIN H.....	WATER AND ELECTROLYTES IN HEALTH AND DISEASE.....	5R01 AM18078-07	117,238
EPSTEIN, FRANKLIN H.....	GENERAL CLINICAL RESEARCH CENTER	2M01 RR01032-03	639,921
GOLDMAN, PETER.....	CARCINOGEN METABOLISM BY HOST INTESTINAL BACTERIA.....	5R01 CA15260-05	59,457
INGBAR, SIDNEY H.....	NORMAL AND DISORDERED THYROID HORMONE ECONOMY.....	5R01 AM18416-04	246,349
LANDSBERG, LEWIS.....	CATECHOL METABOLISM AND TRANSPORT IN GUT MUCOSA.....	5R01 AM20062-02	33,446
LANDSBERG, LEWIS.....	CARBOHYDRATE METABOLISM AND CATECHOLAMINES.....	5R01 AM20378-02	75,480
PANDYA, DEEPAK N.....	CONNECTIONS OF THE CEREBRAL CORTEX.....	2R01 NS09211-08	66,829
PAULIN, SVEN J.....	HIGH PRECISION DENSITOMETRY OF CORONARY ANGIOGRAMS.....	5R01 HL19003-03	73,333
RABKIN, MITCHELL T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05479-16	123,510
ROBINSON, STEPHEN H.....	ORIGIN AND FATE OF BILE PIGMENTS.....	2R01 AM09834-14	31,192
ROBINSON, STEPHEN H.....	FACTORS REGULATING HEMOPOIETIC CELL DIFFERENTIATION.....	2R01 AM17148-04A1	107,502
ROWE, JOHN W.....	PROGRAM PROJECT IN BIOMEDICAL ASPECTS OF AGING	5P01 AG00599-02	236,722
SALZMAN, EDWIN W.....	PROGRAM PROJECT IN THROMBOSIS AND ATHEROSCLEROSIS.....	3P01 HL11414-10S1	19,171
SALZMAN, EDWIN W.....	PROGRAM PROJECT IN THROMBOSIS AND ATHEROSCLEROSIS.....	2P01 HL11414-11	365,740
SALZMAN, EDWIN W.....	POSTOPERATIVE THROMBOEMBOLISM IN SURGICAL PATIENTS.....	5R01 HL13754-08	139,375
SCHNIPPER, LOWELL E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19085-03	57,336
SILEN, WILLIAM.....	G. I. MUCOSAL BARRIER IN HEALTH AND SURGICAL DISEASE.....	5R01 AM15681-07	111,892
SIMON, MORRIS.....	DEVELOPMENT OF MEMORY-ALLOY-FILTERS FOR VENOUS EMBOLI.....	5R01 HL20554-02	77,499
SKILLMAN, JOHN J.....	ALBUMIN SYNTHESIS: EFFECT OF FEEDING SURGICAL PATIENTS.....	5R01 AM19794-02	59,395
SLACK, WARNER V.....	COUNSELING IN NUTRITION BY COMPUTER.....	5R01 LM02810-03	89,284
STEER, MICHAEL L.....	PATHOPHYSIOLOGY OF ACUTE PANCREATITIS.....	5R01 AM20302-02	38,554
STEER, MICHAEL L.....	EARLY EVENTS FOLLOWING STIMULATION OF HUMAN PLATELETS.....	5R01 HL20956-02	53,357

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
WEINTRAUB, RONALD M.....	MYOCARDIAL PROTECTION DURING CARDIOPULMONARY BYPASS.....	5R01 HL20720-02	62,910
WHITE, AUGUSTUS A, III.....	ANALYSIS OF THORACIC SPINE CLINICAL STABILITY.....	1R01 AM25601-01	56,088
ZOLL, PAUL M.....	EXTERNAL CARDIAC STIMULATION WITH MICROWAVE RADIATION.....	5R01 HL20077-02	63,294
ORGANIZATION TOTAL	29	3,211,387	
BOSTON BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 02114			
DAVISON, PETER F.....	PROTEIN CATABOLISM AND ERROR THEORIES OF AGING.....	5R01 AG00584-02	86,752
FISHER, ROBERT J.....	MAMMALIAN MITOCHONDRIAL BIOGENESIS.....	5R01 GM23422-02	88,675
FUJIMORI, EIJI.....	BLUE-FLUORESCENT LENS PROTEINS.....	5R01 EY01810-03	53,880
GERGELY, JOHN.....	BIOCHEMISTRY OF MUSCLE CONTRACTION.....	5R01 HL05949-18	157,372
GERGELY, JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05711-08	83,854
IKEMOTO, NORIAKI.....	STRUCTURE AND FUNCTION OF SARCOPLASMIC RETICULUM.....	5R01 AM16922-06	99,569
JACOBSON, BERNARD J.....	CLEFT PALATE: TERATOGENIC ROLE OF CORTISONE.....	1R01 DE04507-01A1	63,604
JACOBSON, BERNARD J.....	ROLE OF HYALOCYTES IN THE VITREOUS.....	5R01 EY00810-05	74,846
JULIAN, FRED J.....	CONTRACTILITY IN HEART AND OTHER STRIATED MUSCLES.....	5R01 HL16606-11	166,684
KILLICK, KATHLEEN A.....	MECHANISMS OF ENZYME LATENCY DURING CELLULAR AGING.....	1R01 AG00922-01	40,057
LEAVIS, PAUL C.....	REGULATION OF CARDIAC AND SKELETAL MUSCLE CONTRACTION.....	1R01 HL20464-01A2	32,135
LEHRER, SHERWIN S.....	INTRAOCULAR MUSCLE-BIOCHEMICAL STUDIES.....	1R01 EY02464-01	38,519
LEHRER, SHERWIN S.....	CARDIAC TROPOMYOSIN AND TROPOMYOSIN-ACTION INTERACTIONS.....	1R01 HL22461-01	72,032
LU, RENNE C.....	STRUCTURE-FUNCTION STUDIES ON BRAIN TUBULIN AND ACTIN.....	1R01 GM24666-01	55,132
MITCHELL, DAVID H.....	GENETIC ANALYSIS OF AGING IN THE NEMATODE.....	5R23 AG00645-02	1,410
MITCHELL, DAVID H.....	A GENETIC ANALYSIS OF AGING.....	1R01 AG00952-01	73,701
NUSSBAUM, ALEXANDER L.....	CHEMICAL SYNTHESIS OF BIOLOGICALLY SIGNIFICANT DNA.....	1R01 GM24369-01	120,927
PAULUS, HENRY.....	EFFECT OF CELLULAR AGING ON ENZYME REGULATION.....	1R01 AG00804-01	62,339
PAULUS, HENRY.....	PEPTIDE ANTIBIOTICS AND BACTERIAL SPORULATION.....	2R01 GM23149-02A1	99,642
SANADI, D RAO.....	OXIDATIVE PHOSPHORYLATION IN HEART MITOCHONDRIA.....	5R01 GM13641-12	115,482
SARKAR, NILIMA.....	INVOLVEMENT OF RNA IN DNA SYNTHESIS.....	1R01 GM25022-01	51,220
SARKAR, SATYAPRIYA.....	BIOSYNTHESIS OF CARDIAC AND SKELETAL MUSCLE PROTEINS.....	2R01 AM13238-10	85,752
SEIDEL, JOHN C.....	EPR STUDIES ON ROTATIONAL MOTION OF MYOSIN AND ACTIN.....	2R01 HL15391-07	122,150
SEIDEL, JOHN C.....	ACTIN-MYOSIN INTERACTION IN PULMONARY SMOOTH MUSCLE.....	1R01 HL23249-01	62,700
TAO, TERENCE C.....	ENERGY TRANSFER STUDIES ON MUSCLE PROTEINS.....	3R01 AM21673-01S1	457
TAO, TERENCE C.....	ENERGY TRANSFER STUDIES ON MUSCLE PROTEINS.....	5R01 AM21673-02	38,874
THOMAS, DAVID A.....	HEXOSE METABOLISM AS A FUNCTION OF AGING IN SLIME MOLDS.....	5R23 AG00649-02	48,807
WOHLRAB, HARTMUT.....	THE DEVELOPMENT-AGING TRANSITION IN MUSCLE TISSUES.....	5R01 AG00100-02	79,200
WRIGHT, BARBARA E.....	PHYSIOLOGICAL CONTROL OF DIFFERENTIATION.....	5R01 AG00260-11	68,086
WRIGHT, BARBARA E.....	COMPUTER ANALYSIS OF DIFFERENTIATION.....	5R01 AG00433-09	54,971
ORGANIZATION TOTAL	30	2,198,829	
BOSTON HEALTH AND HOSPITALS DEPARTMENT—BOSTON CITY HOSPITAL ZIP CODE 02118			
GOTTLIEB, LEONARD S.....	STUDIES OF A NEW COLONIC CANCER MARKER (ZGM).....	2R26 CA18620-03A1	50,401
LEVIN, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05569-14	100,762
MC CABE, WILLIAM R.....	BIOLOGY AND IMMUNOLOGY OF GRAM-NEGATIVE BACILLI.....	5R01 AI14789-02	129,869
REIF, ARNOLD E.....	EXPERIMENTAL STUDIES ON IMMUNITY TO CANCER CELLS.....	3R01 CA15952-05S1	30,664
ROMAN, STANFORD A, JR.....	A COMPREHENSIVE CENTER FOR SICKLE CELL DISEASE.....	5P60 HL15157-07	852,836
VAITUKAITIS, JUDITH L.....	MECHANISMS MEDIATING GONADOTROPIN ACTION.....	5R01 HD09358-03	62,532
ZAMCHECK, NORMAN.....	PATHOLOGY OF THE DIGESTIVE TRACT MUCOUS MEMBRANE.....	5P01 CA04486-19	256,975
ORGANIZATION TOTAL	7	1,484,039	
BOSTON UNIVERSITY ZIP CODE 02215			
ALEXANDER, EDWARD A.....	RENAL CONTROL OF SODIUM EXCRETION.....	2R01 HL17458-04	96,760
BENNETT, MICHAEL.....	IMMUNOBIOLOGY OF VIRAL LEUKEMIA AND ITS TREATMENT.....	5R01 CA15369-05	47,824
BENNETT, MICHAEL.....	CARDIAC ALLOGRAFTS IN AUTOLOGOUS RADIATION CHIMERAS.....	3R01 HL18186-03S1	7,657
BENNETT, MICHAEL.....	CARDIAC ALLOGRAFTS IN AUTOLOGOUS RADIATION CHIMERAS.....	2R01 HL18186-04	59,016
BROITMAN, SELWYN A.....	DIET, FLORA AND COLON TUMORIGENESIS.....	2R26 CA16750-04A1	71,165
CERMAK, LAIRD S.....	DEVELOPMENTAL DEFICITS IN INFORMATION PROCESSING.....	5R01 HD09508-03	24,527
CHATTORAJ, SATI C.....	ROLE OF CATECHOL ESTROGENS IN MAMMALIAN REPRODUCTION.....	1R01 HD11223-01A1	50,376
CHOBANIAN, ARAM V.....	ARTERIAL METABOLISM, DIABETES AND ATHEROGENESIS.....	2R01 HL12869-09	98,113
CHOBANIAN, ARAM V.....	PATHOGENESIS AND COMPLICATIONS OF HYPERTENSION.....	5P50 HL18318-03	1,279,773
CLARKE, RICHARD H.....	CARCINOGEN-DNA COMPLEXES: STRUCTURE AND INTERACTIONS.....	5R01 CA17922-03	34,157
COHEN, ALAN S.....	SYNOVIAL MEMBRANE AND RELATED CONNECTIVE TISSUES.....	2R01 AM04599-18	207,831

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
COHEN, ALAN S.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20613-02	283,469
COOPERBAND, SIDNEY R.....	NEW APPROACHES TO TUMOR IMMUNOTHERAPY.....	3P01 CA15848-03S1	83,311
CORWIN, LAURENCE M.....	VITAMIN E FATTY ACIDS AND MEMBRANE FUNCTION.....	1R01 AM21618-01	55,678
COUSER, WILLIAM G.....	IMMUNOLOGIC MECHANISMS OF GLOMERULAR INJURY.....	5R01 AM17722-05	88,716
DEYKIN, DANIEL.....	ROLE OF PLATELET LIPIDS IN HEMOSTASIS AND THROMBOSIS.....	5R01 HL18586-03	33,389
ECKNER, ROBERT J.....	BIOLOGICAL AND PHYSICAL PROPERTIES OF FRIEND VIRUS.....	5R01 CA19562-03	62,074
EGDAHL, RICHARD H.....	ENDOCRINE AND METABOLIC RESPONSE TO SHOCK AND TRAUMA.....	5R01 GM23870-03	145,619
FEINGOLD, DAVID S.....	CHEMICAL DETECTION OF NEISSERIA GONORRHOEAE.....	5R01 AI13185-03	40,173
FINE, RICHARD E.....	ACTIN AND OTHER FILAMENTS IN THE GROWING NEURON.....	5R01 NS10582-06	71,816
FRANZBLAU, CARL.....	RESPONSE OF THE LUNG TO INJURY.....	5P01 HL19717-02	1,043,607
FRANZBLAU, CARL.....	PULMONARY VASCULAR SMOOTH MUSCLE CELL DYNAMICS.....	1R01 HL23542-01	63,020
GOLDMAN, HENRY M.....	CLINICAL CANCER EDUCATION PROGRAM--ORAL ONCOLOGY.....	1R25 CA22980-01	54,734
GOODGLASS, HAROLD.....	APHASIA RESEARCH CENTER SUPPORT.....	2P50 NS06209-13A1	209,337
GORMAN, ANTHONY L.....	VISUAL RESPONSES TO LIGHT DECREMENT.....	5R01 EY01157-05	80,308
GORMAN, ANTHONY L.....	INTRACELLULAR CALCIUM EFFECTS ON MEMBRANE PERMEABILITY.....	5R01 NS11429-05	87,369
GUTERMAN, SONIA K.....	BACTERIAL MUTANTS WITH DEFECTIVE RNA POLYMERASE.....	5R01 GM24461-02	55,134
HALL, DIANA L.....	BRITISH AND AMERICAN SEX ENDOCRINOLOGY, 1890-1940.....	5R01 LM02719-02	17,757
HINDS, JAMES W.....	SERIAL SECTION ANALYSIS OF DEVELOPING MOUSE RETINA.....	5R01 EY01398-04	54,055
HOLLANDER, WILLIAM.....	ROLE OF THE ARTERIAL WALL IN ATHEROSCLEROSIS.....	3P01 HL13262-06S1	16,824
HOLLANDER, WILLIAM.....	ROLE OF THE ARTERIAL WALL IN ATHEROSCLEROSIS.....	5P01 HL13262-07	969,050
HOOD, WILLIAM B, JR.....	PATHOPHYSIOLOGY OF MYOCARDIAL ISCHEMIA.....	5R01 HL14646-05	75,835
HOYT, RICHARD F, JR.....	CHARACTERIZATION OF SMALL-GRANULE CELLS IN THE LUNG.....	5R01 HL19379-03	64,978
JACKSON, BENJAMIN T.....	BASIC FACTORS IN SURGERY: DEVELOPMENT OF HEMOPOIESIS.....	1R01 HD11471-01A1	72,524
JACKSON, BENJAMIN T.....	ROLE OF CATECHOLAMINES IN FETAL HOMEOSTASIS.....	1R01 HD12194-01	94,402
JENKINS, C DAVID.....	RECOVERY AFTER HEART SURGERY: BIO-BEHAVIORAL FACTORS.....	5R01 HL20637-02	260,598
JICK, HERSHEL.....	ACUTE AND LONG-TERM CLINICAL TOXICITY OF DRUGS.....	5R01 GM23430-02	331,845
KAGAN, HERBERT M.....	PROPERTIES OF CONNECTIVE TISSUE LYSYL OXIDASE.....	5R01 AM18880-03	57,867
KELMAN, ASHER D.....	MOLECULAR MECHANISMS OF PLATINUM AND RUTHENIUM DRUGS.....	5R01 CA18522-03	77,173
KUMAR, VINAY.....	STUDIES OF ISOLATED MARROW-DEPENDENT M CELLS.....	5R01 CA21401-02	58,064
LAING, RONALD A.....	STUDIES OF THE CORNEAL ENDOTHELIUM OF THE EYE.....	5R01 EY01227-04	90,978
LANG, FREDERICK.....	DEVELOPMENT OF NEURAL CONNECTIONS IN AN EMBRYO.....	1R01 NS14383-01	49,586
LANG, MICHAEL A.....	CELL VOLUME REGULATION DURING OSMOTIC STRESS.....	5R01 AM20403-02	32,104
LAURSEN, RICHARD A.....	STRUCTURE AND FUNCTION OF HUMAN PLASMIN.....	5R01 HL15535-06	59,367
LEHMAN, WILLIAM J.....	REGULATION OF MUSCULAR CONTRACTION: A COMPARATIVE STUDY.....	2R01 AM17062-04A1	62,529
LEIBOWITZ, HOWARD M.....	STUDIES IN CORNEAL TRANSPLANTATION.....	3R01 EY00544-08S1	24,849
LEIBOWITZ, HOWARD M.....	STUDIES IN CORNEAL TRANSPLANTATION.....	2R01 EY00544-09	141,250
LESLIE, CRYSTAL A.....	ADRENERGIC RECEPTOR-CYCLASE SYSTEM IN SENSITIZED LUNG.....	1R23 HL22011-01	41,887
LESSELL, SIMMONS.....	EXPERIMENTAL OPTIC NEUROPATHIES.....	5R01 EY00013-12	85,561
LIANG, CHANG-SENG.....	METABOLIC CONTROL OF CARDIAC OUTPUT.....	3R01 HL17403-03S1	13,417
LOGERFO, FRANK W.....	APPLIED PULSATILE HEMODYNAMICS IN VASCULAR SURGERY.....	1R01 HL21796-01A1	87,170
MAKARSKI, JOSEPH S.....	REGULATION OF PULMONARY ENDOTHELIAL CELL ACTIVITIES.....	1R23 HL21189-01	38,612
MATHE, ALEKSANDER A.....	AUTONOMIC NERVOUS SYSTEM FUNCTION IN BRONCHIAL ASTHMA.....	5R01 HL15677-06	25,444
MATOLTSY, ALEXANDER G.....	CHEMISTRY OF KERATINS AND THEIR PRECURSORS.....	2R01 AM05924-16A1	138,328
MC LAUGHLIN, ROBERT J.....	CONTRACTILE AND ELASTIC PROPERTIES OF CARDIAC MUSCLE.....	5R01 HL19133-03	74,512
MOZDEN, PETER J.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18019-04	208,023
NILES, RICHARD M.....	BIOCHEMICAL FACTORS INVOLVED IN TUMOR CELL METASTASIS.....	5R01 CA18913-03	44,141
NIMBERG, RICHARD B.....	OSTEOCLAST ACTIVATING FACTOR IN METASTATIC CANCER.....	5R01 CA22062-02	72,447
O'BRYAN, PAUL M, JR.....	EARLY RECEPTOR POTENTIALS IN SINGLE VERTEBRATE CONES.....	5R01 EY01812-03	72,154
O'SULLIVAN, JOHN B.....	QUARTER CENTURY FOLLOW-UP OF THE OXFORD STUDY.....	1R01 AM21881-01	80,020
PETERS, ALAN.....	STRUCTURE AND ORGANIZATION OF THE CEREBRAL CORTEX.....	2R01 NS07016-12	91,789
POLGAR, PETER.....	PROSTAGLANDINS, CYCLIC NUCLEOTIDES AND CELLULAR AGING.....	5R01 AG00455-04	77,747
RAVIOLA, GIUSEPPINA E.....	FUNCTIONAL ANATOMY OF THE ANTERIOR SEGMENT OF THE EYE.....	5R01 EY01349-04	56,861
RITTENHOUSE-SIMMONS, SUSAN.....	ROLE OF PHOSPHOINOSITIDES IN HUMAN PLATELET SECRETION.....	1R01 HL22502-01	38,175
ROSENBERG, ISADORE N.....	IODINE METABOLISM OF THE THYROID GLAND.....	5R01 AM02535-21	126,668
ROTHSCHILD, KENNETH J.....	BIOPHYSICAL STUDY OF ORIENTED PHOTORECEPTOR MEMBRANE.....	5R01 EY02142-02	60,985
RYSER, HUGUES J.....	PENETRATION OF MACROMOLECULES INTO MAMMALIAN CELLS.....	5R01 CA14551-06	81,878
SAIDE, JUDITH D.....	PROPERTIES AND ASSEMBLY OF Z-DISC PROTEINS.....	1R01 HL22985-01	68,672
SANDSON, JOHN I.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00533-10	521,312
SANDSON, JOHN I.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05380-17	200,462
SCHMID, KARL.....	CHEMISTRY OF HUMAN PROTEINS AND GLYCOPROTEINS.....	2R01 GM10374-16	132,188

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
SCHWARTZ, JOHN H.....	ENERGETICS OF URINARY ACIDIFICATION: THE PENTOSE SHUNT.....	1R01 AM20611-01	82,316
SHAPIRO, JERROLD M.....	LASER CONTOUR ANGIOGRAPHY IN EXPERIMENTAL GLAUCOMA.....	3R01 EY01788-02S1	15,295
SHAPIRO, JERROLD M.....	GLAUCOMA RISK FROM TREATMENT OF SYSTEMIC HYPERTENSION.....	2R01 EY01788-03	98,291
SHEPRO, DAVID.....	ENDOTHELIAL CELL COMMUNICATION IN HOMEOSTASIS.....	5R01 HL16714-05	119,282
SIMONS, ELIZABETH R.....	THE NATURE OF THE COLLAGEN-PLATELET INTERACTION.....	5R01 HL15335-06	52,600
SIMONS, ELIZABETH R.....	INVESTIGATIONS OF HEMOGLOBIN S PROPERTIES.....	2R01 HL16375-04A1	47,162
SINEX, F MAROTT.....	AGING IN CONNECTIVE TISSUE, BRAIN AND AUDITORY SYSTEM.....	5P01 AG00001-07	264,173
SLECHTA, ROBERT F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07043-13	44,860
SMALL, DONALD M.....	PHYSICAL CHEMISTRY OF BIOLOGICALLY ACTIVE LIPIDS.....	5R01 HL18623-12	348,746
SMITH, BARBARA D.....	COLLAGEN AND ITS RELATIONSHIP TO TUMORS.....	1R01 CA23540-01	37,340
STANLEY, H EUGENE.....	RAMAN FTIR STUDIES OF MEMBRANE LIPID FLEXIBILITY.....	5R01 EY01996-02	109,539
STANLEY, H EUGENE.....	NORMAL AND ABNORMAL MECHANISMS OF VISION.....	3R01 EY02006-02S1	6,102
STEEL, R KNIGHT.....	A PROPOSAL TO INITIATE INNOVATIVE RESEARCH IN AGING.....	1R21 AG01178-01	27,536
TAMARIN, ROBERT H.....	EXPERIMENTAL MANIPULATION OF POPULATIONS.....	1R01 HD11682-01	44,770
TROXLER, ROBERT F.....	SYNTHESIS OF BILE PIGMENTS IN PLANTS.....	5R01 GM22822-03	28,877
ULLRICK, WILLIAM C.....	STUDIES ON THE Z-LINES OF TENOTOMIZED MUSCLE.....	5R01 NS14033-02	73,297
WALSH, CAROL T.....	NEONATAL G.I. ABSORPTION OF LEAD, CADMIUM AND MERCURY.....	1R23 ES01708-01	22,355
WARR, WILLIAM B.....	THE STRUCTURE AND PROJECTIONS OF THE COCHLEAR NUCLEI.....	5R01 NS07720-11	12,335
WEINSTEIN, MARK J.....	PURIFICATION, STRUCTURE AND FUNCTION OF FACTOR VIII.....	1R01 HL22355-01	65,090
WEINTRAUB, LEWIS R.....	IRON METABOLISM.....	5R01 AM18550-03	105,420
WILLIAMS, LESTER F, JR.....	ROLE OF THE GALL BLADDER IN PATHOGENESIS OF GALLSTONES.....	2R01 AM15304-07	119,883
WOTIZ, HERBERT H.....	ETIOLOGIC AND PROGNOSTIC FACTORS IN BREAST CANCER.....	5P01 CA18226-03	206,539
YOUNG, DELANO V.....	TRANSFORMED CELL GROWTH: SERUM PEPTIDE, LIPID FACTORS.....	5R01 CA20040-03	43,998
ZOLLER, LAWRENCE C.....	STRUCTURE AND FUNCTION OF SPECIALIZED GRANULOSA CELLS.....	7R01 HD12684-01	25,506
ZURIF, EDGAR B.....	COMMUNICATION IN APHASIA: MECHANISMS AND REHABILITATION.....	5R01 NS11408-06	90,947
ORGANIZATION TOTAL	96	11,577,300	
CENTER FOR BLOOD RESEARCH ZIP CODE 02115			
ALPER, CHESTER A.....	THE MOLECULAR BASIS FOR HEREDITARY ANGIONEUROTIC EDEMA.....	5R01 AI13626-03	81,349
ALPER, CHESTER A.....	INVESTIGATIONS OF HUMAN COMPLEMENT.....	9R01 AI14157-09	125,773
ALPER, CHESTER A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05626-12	43,559
ANDREWS, JUDITH A.....	ACTIVATION OF THE FIRST COMPONENT OF BOVINE COMPLEMENT.....	1R23 AI14779-01	46,226
ANTONIADES, HARRY N.....	CHARACTERIZATION OF SERUM FACTORS INDUCING MITOSIS.....	5R01 CA15388-05	109,903
BING, DAVID H.....	SPECIFICITY OF PROTEASES CLR, CLS, PLASMIN AND THROMBIN.....	5R01 AM17351-06	84,860
CHAO, FRANCIS C.....	PLATELETS, FIBRINOGEN, SOLUBLE FIBRIN INTERACTION.....	5R01 HL18935-03	60,069
DAVIS, ALVIN E, III.....	INTERACTION OF THE COMPLEMENT AND COAGULATION SYSTEMS.....	1R23 HL22799-01	43,940
REMOLD-O'DONNELL, EILEEN.....	MACROPHAGE ACTIVATION BY LYMPHOCYTE MEDIATORS.....	5R01 CA21225-03	75,436
SHAEFFER, JOSEPH R.....	HEMOGLOBIN SYNTHESIS IN SICKLE CELL TRAIT INDIVIDUALS.....	9R01 HL24021-02	71,113
ORGANIZATION TOTAL	10	742,228	
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
AUSPRUNK, DIANNA H.....	STRUCTURE AND DEVELOPMENT OF REGENERATING CAPILLARIES.....	1R01 HL21994-01	68,817
AVERY, MARY ELLEN.....	GENERAL CLINICAL RESEARCH CENTER SUPPORT.....	5M01 RR00128-14	650,202
BARLOW, CHARLES F.....	MENTAL RETARDATION RESEARCH PROGRAM.....	5P30 HD06276-07	487,860
BERNHARD, WILLIAM F.....	LEFT VENTRICULAR-AORTIC BYPASS AND COMPOSITE PROSTHESIS.....	5R01 HL20037-02	60,188
BOREL, YVES R.....	IMMUNOLOGIC TOLERANCE TO DNA IN MURINE LUPUS NEPHRITIS.....	5R01 AI13867-03	107,368
BRAZELTON, T BERRY.....	DEVELOPMENT OF PRE- AND FULL-TERM INFANTS.....	5R01 HD10889-02	161,046
BRESLOW, JAN L.....	CYSTIC FIBROSIS: A CELL CULTURE APPROACH.....	5R01 AM20010-02	62,260
BRESLOW, JAN L.....	IN VITRO STUDY OF LIPOPROTEINS IN VASCULAR DISEASE.....	5R01 HL15895-05	66,181
BROSEGHINI, ALBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05482-16	200,462
CARLSON, MARY L.....	CONSEQUENCES OF PARIETAL LESIONS.....	3R01 NS14261-01S1	7,359
COLTEN, HARVEY R.....	BIOSYNTHESIS OF SERUM COMPLEMENT.....	5R01 AI12791-07	81,316
COLTEN, HARVEY R.....	HUMAN SERUM COMPLEMENT GENETICS.....	1P01 AI15033-01	264,829
COLTEN, HARVEY R.....	LUNG CELL METABOLISM IN VITRO.....	1R01 HL22487-01	93,951
DAVIDSON, RICHARD L.....	BUDR DEPENDENCE, MALIGNANCY, AND DIFFERENTIATION.....	5R01 CA16751-05	100,821
DE LUCA, CARLO J.....	FORCE-EMG SIGNAL RELATION FOR ISOMETRIC CONTRACTIONS.....	5R01 AM19665-02	67,529
DUFFY, FRANK H.....	THE ROLE OF INHIBITION IN EXPERIMENTAL AMBLYOPIA.....	3R01 EY01901-02S1	8,400
DUFFY, FRANK H.....	THE ROLE OF INHIBITION IN EXPERIMENTAL AMBLYOPIA.....	5R01 EY01901-03	125,867
EDELSON, PAUL J.....	MECHANISMS OF MACROPHAGE ANTITUMOR ACTIVATION.....	5R01 CA23503-02	79,802
ELLISON, ROBERT C.....	CHILDHOOD DETERMINANTS OF BLOOD PRESSURE.....	5R01 HL19922-03	102,655

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
FOLKMAN, MOSES J.....	TUMOR ANGIOGENESIS: A CONTROL POINT IN TUMOR GROWTH.....	5R01 CA14019-05	231,350
FOX, THOMAS O.....	STEROID RECEPTOR MECHANISMS IN DEVELOPING MOUSE BRAIN.....	5R01 HO10818-02	47,606
GABBAY, KENNETH H.....	NEUROPATHY IN DIABETES: ROLE OF SORBITOL PATHWAY.....	3R01 AM15019-07S1	7,273
GABBAY, KENNETH H.....	NEUROPATHY IN DIABETES: ROLE OF SORBITOL PATHWAY.....	5R01 AM15019-08	90,056
GABBAY, KENNETH H.....	BLOOD GLUCOSE, HGB A1C, AND DIABETIC VASCULAR DISEASE.....	3R01 HL20539-02S1	1,263
GABBAY, KENNETH H.....	BLOOD GLUCOSE HGB A1C, AND DIABETIC VASCULAR DISEASE.....	5R01 HL20539-03	259,741
GALLOP, PAUL M.....	FIBROBLASTS & CONNECTIVE TISSUES IN DEVELOPMENT.....	2P01 AG00376-04	367,310
GALLOP, PAUL M.....	PROTEIN STRUCTURE AND COLLAGEN MATURATION.....	5R01 AM16754-06	68,400
GALLOP, PAUL M.....	ELASTIN & CALCIFICATION IN PULMONARY & VASCULAR DISEASE.....	5R01 HL20764-02	114,959
GERALO, PARK S.....	GENETIC AND CYTOGENETIC STUDY OF MENTAL RETARDATION.....	5P01 HD04807-10	479,604
GERALD, PARK S.....	GENETIC STUDIES OF LYSOSOMAL DISORDERS.....	2R01 HD06285-07	115,166
GILLES, FLOYD H.....	EPIDEMIOLOGIC PATHOLOGY OF CHILDHOOD BRAIN TUMORS.....	5R01 CA20462-02	138,872
GLIMCHER, MELVIN J.....	THE BIOLOGY OF SKELETAL AND OTHER CONNECTIVE TISSUES.....	3P01 AM15671-07S1	533,459
GLIMCHER, MELVIN J.....	THE BIOLOGY OF SKELETAL AND MINERALIZED TISSUES.....	2P01 AM15671-08	381,300
GRANO, RICHARD J.....	DEVELOPMENT AND CONTROL OF SYNTHESIS AND SECRETION.....	5R01 AM14523-09	131,212
GREENE, LLOYD A.....	NEUROCHEMICAL STUDIES ON CULTURED SYMPATHETIC NEURONS.....	5R01 NS11557-05	64,871
HOLTROP, MARIJKE E.....	ULTRASTRUCTURAL ANALYSIS OF BONE CELL METABOLISM.....	2R01 AM17834-04	100,700
HOYER, JOHN R.....	PATHOGENESIS OF IMMUNOLOGIC RENAL DISEASE.....	5R01 AM19810-03	45,108
JACKSON, ANDREW C.....	LUNG AIRWAY PROPERTIES BY ACOUSTIC IMPULSE REFLECTION.....	1R01 HL22178-01	93,181
KIRSCHNER, DANIEL A.....	MYELIN MEMBRANE STRUCTURE: STABILITY AND PATHOLOGY.....	7R01 NS14326-01	94,714
KLASBRUN, MICHAEL.....	GROWTH CONTROL BY A MITOGEN PURIFIED FROM CARTILAGE.....	5R01 CA21763-02	93,861
LATT, SAMUEL A.....	PROTEIN-DNA INTERACTIONS IN HUMAN CHROMOSOMES.....	5R01 GM21121-05	107,508
LEVEY, RAPHAEL H.....	INTRATHYMIC EVENTS IN T-CELL DIFFERENTIATION.....	5R01 CA20171-03	74,424
LEVITON, ALAN.....	CLASSIFICATION AND ETIOLOGY OF CHILDHOOD BRAIN TUMORS.....	5R01 CA21819-02	184,747
LEW, KENNETH K.....	GENETIC AND HORMONAL FACTORS IN GONADAL AGING.....	1R01 AG00971-01	95,141
LIAN, JANE B.....	ROLE OF γ -CARBOXYGLUTAMIC ACID IN BONE AND ENAMEL.....	5R23 DE04641-02	39,456
LUX, SAMUEL E, IV.....	PATHOPHYSIOLOGY OF RED CELL MEMBRANE DISEASES.....	1R01 AM21836-01	136,364
MITCHELL, ALLEN A.....	INTENSIVE DRUG SURVEILLANCE IN HOSPITALIZED CHILDREN.....	1R01 GM24781-01	163,583
MULLEN, RICHARD J.....	DEVELOPMENT GENETICS OF THE CENTRAL NERVOUS SYSTEM.....	1R01 NS13877-01	110,326
NADAS, ALEXANDER S.....	A MULTIDISCIPLINARY STUDY OF CONGENITAL HEART DISEASE.....	5P01 HL10436-13	560,687
NAOAS, ALEXANDER S.....	MANAGEMENT OF PATENT DUCTUS IN PREMATURE INFANTS.....	1R10 HL23121-01	1,028,459
NATHAN, DAVIO G.....	LEUKOCYTE OXIDASE ACTIVITY & SUSCEPTIBILITY TO INFECTION.....	5R01 AI08173-11	52,188
NATHAN, DAVIO G.....	LYSIS OF RED CELLS BY HEMOGLOBIN AND MEMBRANE DISEASE.....	5R01 AM15322-13	167,226
NATHAN, DAVIO G.....	IRON OVERLOAD IN HOMOZYGOUS BETA THALASSEMIA.....	5R01 HL20000-03	77,215
NEEULEMAN, HERBERT L.....	DEVELOPMENTAL EFFECTS OF LOW LEVEL LEAD EXPOSURE.....	3P01 HD08945-03S1	114,406
NORWOOD, WILLIAM I.....	HYPOTHERMIC CIRCULATORY ARREST—CEREBRAL VASCULAR CHANGE.....	5R01 HL20143-02	88,557
ORKIN, STUART H.....	EXPRESSION OF HUMAN GLOBIN IN THALASSEMIA.....	5R23 HL21428-02	22,309
REIO, LYNNE M.....	TYPES AND MECHANISMS OF PULMONARY HYPERTENSION.....	5R01 HL19225-02	157,812
REIO, LYNNE M.....	BRONCHIAL MUCUS PRODUCTION IN ORGAN CULTURE.....	1R01 HL22444-01	116,570
REIO, LYNNE M.....	EFFECT OF HYPOXIA ON PVSM AND ITS PRECURSOR CELLS.....	1R01 HL23232-01	53,739
ROSEN, FRED S.....	REACTIONS AND METABOLISM OF IMMUNE PROTEINS AND CELLS.....	5P01 AI05877-15	335,154
ROSEN, FRED S.....	IMMUNOLOGIC MECHANISMS IN RENAL DISEASES IN CHILDHOOD.....	5P01 AM16392-06	281,291
SIOMAN, RICHARD L.....	BRAIN DEVELOPMENT IN NORMALS AND MUTANTS.....	5R01 NS11237-06	309,730
SIDMAN, RICHARD L.....	GROWTH AND REGENERATION IN THE NERVOUS SYSTEM.....	5P01 NS12200-03	251,139
SIDMAN, RICHARD L.....	NEURAL CELL SURFACE COMPONENTS.....	5R01 NS12659-03	22,547
SIDMAN, RICHARD L.....	SYNTHETIC GUIDANCE SYSTEM FOR NERVE FIBER GROWTH.....	1R01 NS14768-01	271,379
SNODGRASS, S ROBERT.....	ABNORMAL MOVEMENTS AND PHARMACOLOGY OF THE FOREBRAIN.....	2R01 NS12368-04	88,656
SNOGRASS, S ROBERT.....	DEVELOPMENTAL PHARMACOLOGY OF CNS SYNAPSES IN CULTURE.....	1R01 NS14454-01	50,466
WATKINS, JOHN B.....	BILE ACID METABOLISM IN INFANCY AND CHILDHOOD.....	3R01 HO08489-03S1	26,120
WATKINS, JOHN B.....	BILE ACID METABOLISM IN INFANCY AND CHILDHOOD.....	2R01 HD08489-04	90,052
ORGANIZATION TOTAL	69	11,334,170	
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
ADOLPH, ALAN R.....	RETINAL SYNAPTIC MECHANISMS AND VISUAL FUNCTION.....	5R01 EY01703-02	72,692
ALLANSMITH, MATHEA R.....	OCULAR ANAPHYLAXIS.....	5R01 EY02099-02	75,423
BERMAN, MICHAEL B.....	REGULATION OF COLLAGENASE ACTIVITY IN ULCERATION.....	5R01 EY01246-05	99,054
CHAKRABARTI, BIRESWAR.....	ROLE OF HYALURONIC ACID IN THE VITREOUS STRUCTURE.....	5R01 EY01760-03	60,278
CINTRON, CHARLES.....	CORNEAL WOUND HEALING.....	5R01 EY01199-05	92,782
OELORI, FRANCOIS C.....	TRICHROMATIC OXIMETRY OF RETINAL VESSELS.....	1R01 EY02094-01	66,299
DOANE, MARSHALL G.....	THE INTERACTION OF LIDS AND TEARS IN CORNEAL WETTING.....	5R01 EY01846-02	72,260

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
HARTLINE, PETER H.....	PHOTORESPONSE KINETIC: EFFECTS OF ADAPTATION.....	5R01 EY02491-02	46,174
HIROSE, TATSUO.....	HUMAN VER AND ERG WITH FOCAL RETINAL STIMULATION.....	3R01 EY01259-03S1	9,325
HOLLY, FRANK J.....	INVESTIGATION OF TEAR FILM PHYSIOLOGY.....	1R01 EY02356-01	13,641
HULTSCH, ERWIN.....	CHEMISTRY & MORPHOLOGY OF VITREOUS REGENERATION.....	1R01 EY02427-01	106,214
LIU, HSIAO-SU.....	SUSTAINED-RELEASE CHEMOTHERAPY FOR OCULAR MALIGNANCY.....	1R01 EY02917-01	89,803
MC MEEL, J WALLACE.....	STUDY OF RETINAL CIRCULATION IN DIABETES.....	1R01 EY02164-01	84,521
MUKAI, NORITSUGU.....	PATHOGENESIS OF DIABETIC RETINOPATHY.....	1R01 EY02062-01	80,884
NEUFELD, ARTHUR H.....	TROPHIC INFLUENCES ON THE CORNEAL EPITHELIUM.....	5R01 EY02360-02	32,686
NEUFELD, ARTHUR H.....	MEDIATORS THAT REGULATE AQUEOUS HUMOR DYNAMICS.....	2R01 EY02367-02	81,584
PECZON, BENIGNO D.....	OCULAR BASEMENT MEMBRANES IN DIABETIC RETINOPATHY.....	2R01 EY01564-04	58,509
POMERANTZEFF, OLEG.....	OPTICS APPLIED TO DIAGNOSIS AND TREATMENT OF EYE DISEASE.....	5R01 EY01975-02	131,194
POMERANTZEFF, OLEG.....	HIGH RESOLUTION, WIDE-ANGLE TV OPHTHALMOSCOPE.....	1R01 EY02521-01	127,410
POMERANTZEFF, OLEG.....	THE KRYPTON LASER IN PHOTOCOAGULATION THERAPY.....	1R01 EY02725-01	134,069
REFOJO, MIGUEL F.....	SYNTHETIC HYDROPHILIC POLYMERS FOR EYE SURGERY.....	2R01 EY00327-13	93,507
REIF-LEHRER, LIANE.....	BIOCHEMICAL CONTROL IN NORMAL AND DISEASED RETINAS.....	5R01 EY02171-02	128,743
RIVA, CHARLES E.....	FLOW AND DIFFUSION OF FLUORESCIN IN THE OCULAR FUNDUS.....	5R01 EY01242-05	104,278
RIVA, CHARLES E.....	HUMAN RETINAL BLOOD FLOW AND LASER VELOCIMETRY.....	2R01 EY01303-04	66,371
SCHEPENS, CHARLES L.....	EYE RESEARCH CORE SERVICES SUPPORT.....	5P30 EY01784-03	318,927
SCHEPENS, CHARLES L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05527-16	84,946
SNODDERLY, D MAX, JR.....	FUNCTIONAL DESCRIPTION OF VISUAL MECHANISMS.....	3R01 EY01520-03S1	46,637
THOFT, RICHARD A.....	METABOLISM OF OCULAR SURFACE EPITHELIUM.....	5R01 EY01830-02	62,080
TREMPE, CLEMENT L.....	BRANCH VEIN OCCLUSION COLLABORATIVE STUDY.....	1R10 EY02470-01	48,128
ORGANIZATION TOTAL	29	2,488,419	
FORSYTH DENTAL CENTER ZIP CODE 02115			
GIBBONS, RONALD J.....	MICROBIAL ECOLOGY AND ITS RELATION TO DENTAL DISEASE.....	2P01 DE02847-10	468,845
GRON, POUL.....	INTERACTION OF TOPICAL FLUORIDE WITH HUMAN ENAMEL.....	1R01 DE05067-01	74,654
HAY, DONALD I.....	TOOTH-SALIVA INTERFACE PHENOMENA AND DENTAL CARIES.....	5R01 DE03915-05	105,890
HEELEY, JOHN D.....	ADAPTIVE GROWTH POTENTIAL OF EMBRYONIC CARTILAGE.....	5R01 DE04236-02	57,348
HEIN, JOHN W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05483-16	102,547
HILLMAN, JEFFREY D.....	MUTANT ANALYSIS OF THE ADHESION OF ORAL BACTERIA.....	5R01 DE04529-03	64,214
KASHKET, SHELBY.....	INTERACTIONS OF SALIVA PROTEINS AND BACTERIA.....	5R01 DE03430-06	81,937
KASHKET, SHELBY.....	FLUORIDE AND THE METABOLISM OF PLAQUE BACTERIA.....	2R01 DE03917-04	45,555
LEES, SIDNEY.....	MINERALIZATION DYNAMICS STUDY BY ULTRASOUND.....	5R01 DE03992-03	80,013
MOORREES, COENRAAD F.....	FACIAL AND DENTAL GROWTH IN PRE- AND POST-ADOLESCENTS.....	2R01 DE02873-11	75,865
MORENO, EDGARD C.....	TRANSPORT IN ENAMEL & SOLUBILITY OF FLUORIDATED APATITE.....	5R01 DE03187-07	171,910
SKOBE, ZIEDONIS.....	COMPARATIVE ULTRASTRUCTURE OF MAMMALIAN AMELOGENESIS.....	2R01 DE04230-04	49,170
SOCRANSKY, SIGMUND S.....	MICROBIAL COMPOSITION OF DEVELOPING DENTAL PLAQUE.....	5R01 DE03488-07	93,066
SOCRANSKY, SIGMUND S.....	CENTER FOR CLINICAL RESEARCH IN PERIODONTAL DISEASES.....	5P50 DE04881-02	471,043
TAUBMAN, MARTIN A.....	IMMUNE PHENOMENA IN EXPERIMENTAL PERIODONTAL DISEASE.....	5R01 DE03420-06	67,340
TAUBMAN, MARTIN A.....	SECRETORY IMMUNE RESPONSE AND S. MUTANS ENZYME ANTIGENS.....	5R01 DE04733-02	129,662
ORGANIZATION TOTAL	16	2,139,059	
HARVARD UNIVERSITY ZIP CODE 02138			
ABRAMS, HERBERT L.....	DIAGNOSTIC RADIOLOGY RESEARCH CENTER.....	2P50 GM18674-07	687,280
ADELSTEIN, S JAMES.....	CYTOCHEMICAL AND MACROMOLECULAR RADIATION EFFECTS.....	5R01 AM04219-19	101,206
ADELSTEIN, S JAMES.....	THERAPEUTIC/TOXIC ACTION OF ELECTRON-EMITTING NUCLIDES.....	5R01 CA15523-05	81,071
ALBERTINI, DAVID F.....	MEMBRANE DIFFERENTIATION DURING FOLLICULOGENESIS.....	1R01 HD11769-01	73,948
AMOS, HAROLD.....	SUGARS, GLYCOPROTEINS: NORMAL AND MALIGNANT CELLS.....	5R01 CA19015-03	99,657
ANDERSON, EVERETT.....	COMPARATIVE CYTOLOGY STUDIES.....	5R01 HD06822-07	90,490
AULD, DAVID S.....	TRANSIENT INTERMEDIATES IN ENZYME CATALYSIS.....	1R01 GM24968-01	87,800
BARGER, A CLIFFORD.....	KIDNEY FUNCTION IN EXPERIMENTAL HEART FAILURE.....	5R01 HL02493-22	129,606
BARGER, A CLIFFORD.....	REGULATION OF BLOOD PRESSURE.....	5R01 HL19467-03	140,028
BECKWITH, JONATHAN R.....	REGULATION OF TRANSCRIPTION INITIATION AND TERMINATION.....	5R01 GM13017-14	47,221
BEEUWKES, REINIER, III.....	ELECTRON PROBE STUDIES OF THE RENAL MEDULLA.....	2R01 AM18249-04	69,424
BELLVE, ANTHONY R.....	MAMMALIAN SPERMIOGENESIS: ANALYSIS OF NUCLEAR PROTEIN.....	2R01 HD08270-05	117,583
BENACERRAF, BARUJ.....	LYMPHOCYTE BIOLOGY PROGRAMS.....	1P01 AI14732-01	769,866
BENACERRAF, BARUJ.....	STUDY OF EXPERIMENTAL CANCER IMMUNOLOGY.....	2P01 CA14723-06	1,101,699
BENJAMIN, THOMAS L.....	MECHANISM OF CELL TRANSFORMATION BY POLYOMA VIRUS.....	5R01 CA19567-02	158,622
BERSON, ELIOT L.....	ELECTROPHYSIOLOGICAL STUDIES OF RETINAL DEGENERATIONS.....	5R01 EY00169-08	80,633

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BERSON, ELIOT L.....	STUDIES OF RETINITIS PIGMENTOSA AND ALLIED DISEASES.....	5P50 EY02014-02	190,113
BIGGERS, JOHN D.....	REPRODUCTION GAMETOGENESIS TO IMPLANTATION.....	5P01 HD06916-05	333,533
BIGNAMI, AMICO.....	BRAIN SPECIFIC PROTEIN (GFA PROTEIN) IN ASTROCYTES.....	5R01 NS13034-04	78,265
BISWAS, DEBAJIT K.....	CONTROL OF GENE EXPRESSION IN PITUITARY TUMOR CELLS.....	5R01 GM22834-03	89,432
BLOUT, ELKAN R.....	PEPTIDES AND PROTEINS.....	5R01 AM07300-16	69,491
BLOUT, ELKAN R.....	PEPTIDES AND PROTEINS.....	2R01 AM07300-17	149,222
BLOUT, ELKAN R.....	SYNTHESIS OF OLIGOPEPTIDES AND CYCLIC PEPTIDES.....	5R01 AM10794-12	89,624
BLUMBERG, PETER M.....	MECHANISM OF ACTION OF PHORBOL DIESTERS IN VITRO.....	1R01 CA22895-01	60,604
BRAIN, JOSEPH D.....	FACTORS INFLUENCING DEPOSITION OF INHALED PARTICLES.....	5R01 ES01016-04	69,219
BRAIN, JOSEPH D.....	PULMONARY SCOR-CHRONIC DISEASES OF THE AIRWAYS.....	5P50 HL19170-02	550,790
BRAUNWALD, EUGENE.....	THE DEVELOPMENT AND REGRESSION OF CARDIAC HYPERTROPHY.....	5P01 HL20552-02	593,160
CARRAWAY, ROBERT E.....	ISOLATION AND CHEMISTRY OF NEUROTENSIN-LIKE SUBSTANCES.....	5R01 AM19428-03	71,404
CARRAWAY, ROBERT E.....	STRUCTURE AND ROLE(S) OF GASTRIC AND THYMIC PEPTIDES.....	1R01 AM21271-01	74,499
CERNY, JAN.....	REGULATORY MECHANISMS OF NEOPLASIA.....	5R01 CA14922-06	93,464
CHYLACK, LEO T, JR.....	LENS METABOLISM AND CATARACT FORMATION.....	3R01 EY01276-04S2	705
CHYLACK, LEO T, JR.....	LENS METABOLISM AND CATARACT FORMATION.....	5R01 EY01276-05	190,040
COHEN, JONATHAN B.....	NEUROCHEMICAL BASIS OF CHOLINERGIC EXCITABILITY.....	2R01 NS12408-04	64,566
COHN, LAWRENCE H.....	LONG-TERM EFFECTS OF MYOCARDIAL PROTECTION.....	1R01 HL21786-01	66,663
COONS, ALBERT H.....	ANTIBODY FORMATION.....	5R01 CA20811-23	125,766
COTRAN, RAMZI S.....	PATHOPHYSIOLOGY OF THE ENDOTHELIUM.....	1P01 HL22602-01	535,550
DAVIS, BERNARD D.....	RIBOSOME FUNCTION: ANTIBIOTIC ACTION.....	5R01 GM16835-10	126,975
DAVIS, MICHAEL A.....	CHEMISTRY OF TECHNETIUM RELATED TO NUCLEAR MEDICINE.....	5R01 GM23270-02	116,890
DAWIDOWICZ, ELIEZAR A.....	PHYSICAL STUDY OF LIPID MOTION IN RED CELL MEMBRANES.....	2R01 GM22175-03	73,965
DE PAMPHILIS, MELVIN L.....	TUMOR VIRUS DNA REPLICATION: A PROBE INTO ONCOGENESIS.....	5R01 CA15579-05	81,568
DIAMANDOPOULOS, GEORGE T.....	VIRAL CARCINOGENESIS WITH SPECIAL REFERENCE TO SV40.....	2R01 CA08731-13	141,718
DICE, JAMES F, JR.....	PROTEIN DEGRATAION IN DIABETES AND STARVATION.....	7R01 AM25307-01	82,742
DRAGER, URSULA C.....	DEVELOPMENTAL DEFECTS IN VISUAL SYSTEM OF MICE.....	5R01 EY01938-02	27,524
DYM, MARTIN.....	THE ROLE OF THE SERTOLI CELL IN SPERMATOGENESIS.....	5R01 HD06969-05	56,881
DYM, MARTIN.....	HORMONAL CONTROL OF THE TESTIS.....	5R01 HD10004-03	61,440
DYM, MARTIN.....	MONKEY REPRODUCTIVE TRACT AFTER VASECTOMY.....	1R01 HD11606-01	80,077
EBERT, ROBERT H.....	NEW ENGLAND REGIONAL PRIMATE RESEARCH CENTER.....	2P40 RR00168-17	1,942,353
EDWARDS, ROSS B.....	STUDIES OF PIGMENT EPITHELIUM IN VITRO: PHAGOCYTOSIS.....	5R01 EY02028-02	81,257
ENGEL, LEWIS L.....	PATTERNS OF STEROID METABOLISM IN CANCER.....	5R01 CA01393-28	136,168
ESSEX, MYRON E.....	ONCORNAVIRUS-ASSOCIATED CELL MEMBRANE ANTIGENS.....	2R01 CA13885-04A1	85,742
ESSEX, MYRON E.....	STUDY OF (FLV) LEUKEMIA VIRUS.....	5R01 CA18216-03	92,647
EVANS, CARLA A.....	THE PERIOSTEAL INTERFACE IN CRANIOFACIAL DEVELOPMENT.....	5R01 DE04684-02	43,055
FAWCETT, DON W.....	MEMBRANE STRUCTURE & CELL INTERACTIONS IN REPRODUCTION.....	5R01 HD02344-13	94,556
FELDMAN, HENRY A.....	MATHEMATICAL MODELS OF BRANCHING IN THE HUMAN LUNG.....	1R23 HL21855-01	36,150
FERRIS, BENJAMIN G, JR.....	EFFECTS OF SO2 AND RESPIRABLE PARTICULATES ON HEALTH.....	5R01 ES01108-04	762,444
FIELDS, BERNARD N.....	GENETICS OF REOVIRUS.....	5R01 AI13178-03	103,536
FISCHBACH, GERALD D.....	SYNAPSE FORMATION IN LOW DENSITY CELL CULTURES.....	5R01 NS11160-06	124,386
FITZPATRICK, THOMAS B.....	SKIN REACTION TO LIGHT-NORMAL, PHOTSENSITIVITY, CANCER.....	5R01 CA05003-20	158,956
FLUCK, MICHELE M.....	THE ROLE OF TWO POLYOMA EARLY GENES IN TRANSFORMATION.....	1R23 CA24765-01	40,731
FRAENKEL, DAN G.....	ENZYMOLGY OF GLYCOLYTIC MUTANTS.....	5R01 GM21098-05	79,709
FRANK, ERIC.....	DEVELOPMENT AND PLASTICITY OF SENSORY-MOTOR SYNAPSES.....	1R01 NS14451-01	44,602
FUJIWARA, KEIGI.....	MOLECULAR BASIS FOR CLEAVAGE.....	1R01 GM25637-01	108,340
FURSHPAN, EDWIN J.....	NEUROPHYSIOLOGICAL AND NEUROCHEMICAL STUDIES.....	5P01 NS02253-19	429,127
FURSHPAN, EDWIN J.....	CELL INTERCONNECTIONS.....	2R01 NS03273-18	82,683
GARFIELD, JOSEPH M.....	BEHAVIORAL MODEL FOR ASSESSMENT OF ANESTHETIC ACTION.....	5R01 GM23794-02	16,376
GEYER, ROBERT P.....	SPECIFIC FATTY ACIDS AND CHOLESTEROL METABOLISM.....	2R01 HL12399-13	94,348
GEYER, ROBERT P.....	TOTAL BLOOD REPLACEMENT BY FLUOROCARBONS AND POLYOLS.....	2R01 HL15520-06	117,578
GEYER, ROBERT P.....	ARTIFICIAL BLOOD SUBSTITUTES: O2-BINDING IRON CHELATES.....	3R01 HL17844-03S1	79,670
GEYER, ROBERT P.....	ARTIFICIAL BLOOD SUBSTITUTES: O2-BINDING IRON CHELATES.....	2R01 HL17844-04	42,026
GIMBRONE, MICHAEL A, JR.....	CULTURED BLOOD VESSEL CELLS: PATHOPHYSIOLOGY.....	5R01 HL20054-02	127,781
GITTES, RUBEN F.....	HORMONAL DEPENDENCE OF PROSTATE CANCER.....	5R26 CA19213-03	132,948
GOLDBERG, ALFRED L.....	MECHANISMS OF GROWTH AND ATROPHY OF SKELETAL MUSCLE.....	5R01 NS10571-07	164,272
GOLDBERG, IRVING H.....	MOLECULAR PHARMACOLOGY OF ANTICANCER DRUGS.....	5R01 GM12573-14	128,542
GOLDHABER, PAUL.....	THE MECHANISM AND TREATMENT OF PERIODONTAL DISEASE.....	5P01 DE02849-11	348,789
GOLDHABER, PAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05318-17	64,597
GOLDMAN, PETER.....	DETECTION OF ULTIMATE CARCINOGENS IN THE COLON.....	5R26 CA21681-02	80,442

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
GOODENOUGH, DANIEL A.....	LENS METABOLIC COOPERATION, GAP JUNCTIONS & CATARACT.....	1R01 EY02430-01	45,875
GOODENOUGH, DANIEL A.....	STRUCTURE & FUNCTION OF LIVER & HEART GAP JUNCTIONS.....	5R01 GM18974-07	48,160
HARTLEY, LOREN H.....	EVALUATION OF EXERCISE CARDIAC REHABILITATION PROGRAM.....	1R01 HL20187-01A1	87,040
HAY, ELIZABETH D.....	ROLE OF EXTRACELLULAR MATRIX IN MORPHOGENESIS.....	5R01 HD00143-19	120,228
HAYES, KENNETH C.....	NUTRITIONAL REQUIREMENTS OF THE VISUAL PROCESS.....	5R01 EY00631-08	68,900
HAYES, KENNETH C.....	LIPID METABOLISM AND ATHEROSCLEROSIS IN PRIMATES.....	5R01 HL15797-05	162,047
HECHTMAN, HERBERT B.....	CARDIOPULMONARY FAILURE FOLLOWING SHOCK AND TRAUMA.....	5R01 GM24891-02	179,841
HEGSTED, DAVID M.....	NUTRITIVE VALUE OF PROTEINS.....	5R01 AM09520-13	104,206
HEGSTED, DAVID M.....	MALNUTRITION AND BEHAVIORAL DEVELOPMENT.....	5R22 HD07032-05	250,171
HELLMAN, SAMUEL.....	PROLIFERATION AND DIFFERENTIATION OF STEM CELLS.....	5R01 CA10941-11	141,834
HELLMAN, SAMUEL.....	CANCER RESEARCH CENTER.....	5P01 CA12662-07	786,281
HENNEMAN, ELWOOD.....	ORGANIZATION OF THE MOTONEURON POOL AND ITS INPUTS.....	2R01 NS10857-05	50,428
HERRERA, M GUILLERMO.....	MALNUTRITION AND PSYCHOLOGIC DEVELOPMENT.....	3R01 HD06774-04S1	23,872
HERZFELD, JUDITH.....	KINETIC COOPERATIVITY AND HALF-SITE REACTIVITY.....	1R01 AM21077-01	40,084
HERZFELD, JUDITH.....	NMR STUDIES OF BIOLOGICAL MEMBRANES.....	2R01 GM23316-03	44,196
HOLMAN, B LEONARD.....	ACUTE MYOCARDIAL INFARCT SCINTIGRAPHY.....	2R01 HL17739-04	79,152
HUANG, ALICE S.....	REPLICATION OF VESICULAR STOMATITIS VIRUS.....	5R01 AI10100-07	97,504
HUBEL, DAVID H.....	ORGANIZATION OF THE VISUAL SYSTEM.....	2R01 EY00605-19	247,182
HUBER, AGNES M.....	LEAD RETENTION IN RELATION TO NUTRIENT INTAKE.....	5R01 ES01507-02	50,867
HUTCHISON, GEORGE B.....	COOPERATIVE STUDY OF HODGKIN'S DISEASE.....	5R10 CA13607-07	69,301
HUTCHISON, GEORGE B.....	SECOND CANCERS IN PATIENTS WITH HODGKIN'S DISEASE.....	1R01 CA22849-01	46,613
HUTCHISON, GEORGE B.....	AN EPIDEMIOLOGIC STUDY OF CANCER OF THE OVARY.....	1R01 CA24209-01	96,016
ITO, SUSUMU.....	STUDY OF ISOLATED AND SEPARATED GASTRIC CELL TYPES.....	5R01 AM17255-06	104,309
JANDL, JAMES H.....	DESTRUCTION OF RED BLOOD CELLS IN HEMOLYTIC ANEMIAS.....	5R01 HL07652-14	84,381
KARNOVSKY, MANFRED L.....	BIOCHEMICAL BASIS OF PHAGOCYTOSIS.....	2R01 AI03260-19	71,978
KARNOVSKY, MORRIS J.....	ULTRASTRUCTURAL IMMUNOCYTOCHEMISTRY OF CELL SURFACES.....	5R01 AI10677-07	83,927
KARNOVSKY, MORRIS J.....	THE ULTRASTRUCTURAL BASIS OF GLOMERULAR PERMEABILITY.....	5R01 AM13132-09	94,895
KARNOVSKY, MORRIS J.....	ULTRASTRUCTURAL CYTOCHEMISTRY.....	5R01 HL09125-14	103,639
KARNOVSKY, MORRIS J.....	ENDOTHELIAL INJURY AND REGENERATION.....	5R01 HL17747-04	60,195
KENNEDY, ANN R.....	RADIATION AND CHEMICAL IN VITRO MALIGNANT TRANSFORMATION.....	1R01 CA22704-01	193,646
KENNEDY, EUGENE P.....	METABOLISM AND FUNCTION OF COMPLEX LIPIDS.....	2R01 GM19822-19	77,602
KENNEDY, EUGENE P.....	BIOGENESIS AND FUNCTION OF MEMBRANES.....	5R01 GM22057-04	109,969
KITZ, RICHARD J.....	ANESTHESIOLOGY CENTER FOR RESEARCH AND TEACHING.....	2P50 GM15904-11	927,974
KITZMILLER, JOHN L.....	PROBLEMS OF HUMAN REPRODUCTION—IMMUNOLOGIC MECHANISMS.....	5R01 HD10026-03	63,903
KOHN, HENRY I.....	ANALYSIS AND PRODUCTION OF HISTOCOMPATIBILITY MUTANTS.....	5R01 AI14039-02	86,044
KRAVITZ, EDWARD A.....	STUDIES OF SYNAPTIC CHEMISTRY IN THE NERVOUS SYSTEM.....	5R01 NS07848-11	107,381
KRAWCZYK, WALTER S.....	CONTRACTILE PROTEINS IN NORMAL PALATE MORPHOGENESIS.....	5R01 DE04380-03	52,295
KUFFLER, STEPHEN W.....	MICROPHYSIOLOGY OF SYNAPTIC TRANSMISSION.....	5R01 NS13288-02	136,311
KUNDSIN, RUTH B.....	UREAPLASMA UREALYTICUM—THREAT TO PERINATAL SURVIVAL.....	1R01 HD10984-01A1	132,836
KUSHMERICK, MARTIN J.....	MUSCLE ENERGY METABOLISM.....	5R01 AM14485-07	75,826
LE VAY, SIMON.....	DEVELOPMENT AND PLASTICITY OF THE VISUAL SYSTEM.....	5R01 EY01960-02	56,062
LECHENE, CLAUDE P.....	ELECTRONPROBE MICROANALYSIS OF NEPHRON FUNCTION.....	5R01 AM16898-06	99,054
LECHENE, CLAUDE P.....	ELECTRONPROBE MICROANALYSIS OF RED BLOOD CELLS.....	3R01 AM19449-02S1	5,269
LECHENE, CLAUDE P.....	ELECTRONPROBE MICROANALYSIS OF RED BLOOD CELLS.....	5R01 AM19449-03	56,087
LECHENE, CLAUDE P.....	BIOTECHNOLOGY RESOURCE IN ELECTRONPROBE MICROANALYSIS.....	3P41 RR00679-06S1	15,795
LECHENE, CLAUDE P.....	BIOTECHNOLOGY RESOURCE IN ELECTRONPROBE MICROANALYSIS.....	5P41 RR00679-07	383,547
LEEMAN, SUSAN E.....	PURIFICATION AND FUNCTION OF HYPOTHALAMIC PEPTIDES.....	5R01 AM16510-07	134,003
LIN, EDMUND C.....	REGULATION OF GLYCEROL TRANSPORT & METABOLISM.....	5R01 GM11983-15	72,652
LIN, EDMUND C.....	GENETICS OF ENERGY GENERATION FROM GLYCEROPHOSPHATE.....	5R01 GM22906-03	37,689
LINCK, RICHARD W.....	MOLECULAR MECHANISM OF CILIARY AND FLAGELLAR MOTILITY.....	2R01 GM21527-04	121,390
LITTLE, JOHN B.....	EFFECTS OF RADIATION ON STATIONARY CELLS.....	5R01 CA11751-09	146,556
LIU, ALICE Y.....	PROTEIN SYNTHESIS REGULATION BY CYCLIC AMP AND STEROID.....	5R01 AM20274-02	73,668
LORING, STEPHEN H.....	DYNAMIC AIRWAY BEHAVIOR.....	1R23 HL22920-01	40,470
LOWN, BERNARD.....	SUDDEN DEATH AND CARDIAC ARRHYTHMIAS.....	5R01 HL07776-15	193,380
LOWN, BERNARD.....	VPBS ELECTRICAL INSTABILITY & ANTIARRHYTHMIC MEASURE.....	2R01 HL18783-04	82,565
MACMAHON, BRIAN.....	CANCER EPIDEMIOLOGY AND PREVENTION RESEARCH CENTER.....	5P01 CA06373-17	403,618
MACMAHON, BRIAN.....	CHILDHOOD ENVIRONMENT AND HODGKIN'S DISEASE.....	5R01 CA19619-02	194,463
MC ALISTER, ALFRED L.....	EXPERIMENTAL SYSTEMS TO IMPROVE YOUTH HEALTH BEHAVIOR.....	7R23 HL22947-01	26,971
MEAD, JERE.....	RESPIRATORY MECHANICS—CHEST WALL MECHANICS & BREATHING.....	5P01 HL14580-07	521,452
MELLER, SAMUEL M.....	HUMAN PALATAL DEVELOPMENT: A STUDY OF EPITHELIAL FUSION.....	5R01 DE04695-03	61,213

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MILLETTE, CLARKE F.....	MAMMALIAN SPERMATOGENESIS: CELL MEMBRANE BIOCHEMISTRY.....	5R01 HD11267-02	68,832
MOORE-EDE, MARTIN C.....	NEURAL CONTROL OF CIRCADIAN BEHAVIOR AND PHYSIOLOGY.....	5R01 NS13921-02	67,474
MOORE, FRANCIS D.....	SURGICAL CARE: METABOLISM AND BIORHYTHMS.....	2P01 GM22085-21	277,754
MORRISON, ALAN S.....	INTERNATIONAL CASE-CONTROL STUDY OF BLADDER CANCER.....	5R26 CA18660-03	207,165
MOYLE, WILLIAM R.....	ROLE OF CYCLIC AMP IN ADRENAL TUMOR STEROIDOGENESIS.....	5R01 CA15155-05	80,371
MURPHY, JOHN R.....	VIRULENCE FACTORS OF CORYNEBACTERIUM DIPHTHERIAE.....	5R01 AI12500-04	62,028
MURPHY, JOHN R.....	VIBRIO CHOLERAE: DEVELOPMENT OF A LIVE ORAL VACCINE.....	5R22 AI13938-02	86,923
MURPHY, RICHARD A.....	NERVE GROWTH FACTOR IN THE CENTRAL NERVOUS SYSTEM.....	7R01 NS14865-01	46,502
NEUTRA, MARIAN R.....	MUCUS SECRETION IN CYSTIC FIBROSIS & NORMAL INTESTINE.....	1R01 AM21505-01	45,328
OFNER, PETER.....	ANDROGENS IN PROSTATIC AND EPIDIDYMAL CULTURE.....	5R01 CA13417-05	69,538
PALAY, SANFORD L.....	THE FINE STRUCTURE OF THE NERVOUS SYSTEM.....	5R01 NS03659-17	137,431
PATTERSON, PAUL H.....	NEURONAL DEVELOPMENT & CELLULAR INTERACTION IN VITRO.....	5R01 NS11027-06	74,769
PERLMAN, ROBERT L.....	ADRENAL CATECHOLAMINE SECRETION.....	2R01 HL18148-04	79,712
POTTER, DAVID D.....	DEVELOPMENT OF SYMPATHETIC JUNCTIONS IN CULTURE.....	5R01 NS11576-05	51,365
RANDO, ROBERT R.....	THE NEUROPHARMACOLOGY OF SPECIFIC ENZYME INACTIVATORS.....	2R01 NS11550-04	92,764
RAVIOLA, ELIO.....	FREEZE-FRACTURE STUDIES OF THE RETINA.....	5R01 EY01344-04	96,778
RICHARDSON, CHARLES C.....	STRUCTURE & SYNTHESIS OF DNA-E COLI, BACTERIOPHAGE.....	5R01 AI06045-15	181,872
RIORDAN, JAMES F.....	METALLOENZYMES AND DISEASE.....	1R01 HL22387-01	154,161
RUDERMAN, JOAN V.....	RNA SYNTHESIS AND UTILIZATION IN SEA URCHIN OOGENESIS.....	5R01 HD10994-02	62,791
RYAN, KENNETH J.....	CENTER FOR POPULATION RESEARCH.....	5P30 HD06645-07	408,411
RYAN, KENNETH J.....	STEROID HORMONE METABOLISM.....	5R01 HD07923-06	108,404
SALHANICK, HILTON A.....	MODE OF ACTION & SYNTHESIS OF PROGESTATIONAL HORMONES.....	5R01 AM10081-13	110,717
SANDOR, TAMAS.....	RECOGNITION OF VERY SMALL TUMORS.....	1R01 CA23246-01	81,491
SCHMIDT, SUSAN Y.....	BIOCHEMICAL STUDIES OF RETINA AND PIGMENT EPITHELIUM.....	5R01 EY01687-03	82,486
SCHNITMAN, PAUL A.....	CONFERENCE—DENTAL IMPLANTS: BENEFIT OR RISK.....	1R13 DE04860-01	36,708
SHKLAR, GERALD.....	ORAL CARCINOGENESIS, VITAMIN A AND RETINOIDS.....	1R01 CA23524-01	76,607
SHULMAN, LEONARD B.....	CARBON DENTAL IMPLANTS.....	5R01 DE03755-06	101,148
SILHAVY, THOMAS J.....	OUTER MEMBRANE PROTEIN LOCALIZATION IN E. COLI.....	1R01 GM25524-01	77,570
SILVERSON, JACOB B.....	DIFFUSION OF PREVENTIVE HEALTH MEASURES TO SCHOOLS.....	1R01 DE05115-01	198,453
SOLOMON, ARTHUR K.....	STUDIES OF RED CELL ION TRANSPORT AND LIPID BILAYERS.....	2R01 GM15692-11	103,796
SOLOMON, ARTHUR K.....	FACTORS AFFECTING PHYSIOLOGY OF BIOLOGICAL MEMBRANES.....	5R01 HL14820-07	94,404
SOROKIN, SERGEI P.....	RESPONSE OF ALVEOLAR MACROPHAGES TO INHALED PARTICLES.....	5R01 ES00583-08	119,538
STUART, ANN E.....	NEURAL MECHANISMS IN PROCESSING VISUAL INFORMATION.....	5R01 EY01188-06	61,435
SYVANEN, MICHAEL.....	ONCOGENIC MECHANISMS: ENZYMOLOGY OF VIRAL INTEGRATION.....	5R01 CA18217-03	55,519
SZABO, GEORGE.....	ULTRASTRUCTURE AND PHYSIOLOGY OF ORAL MUCOSA.....	9R01 AM20669-16	133,178
TASHJIAN, ARMEN H, JR.....	HORMONES AFFECTING MINERAL METABOLISM.....	5R01 AM10206-13	122,218
TASHJIAN, ARMEN H, JR.....	DIFFERENTIATED FUNCTION IN DISPERSED CELL CULTURES.....	5R01 AM11011-13	213,794
THENEN, SHIRLEY W.....	METABOLIC ASPECTS OF OBESITY.....	5R01 AM02911-20	120,416
TILNEY, NICHOLAS L.....	ALLOGRAFT REJECTION AND ENHANCEMENT.....	5R01 CA23024-05	113,145
TOSTESON, DANIEL C.....	ION TRANSPORT ACROSS LIPID BILAYER MEMBRANES.....	7R01 GM25277-01	151,334
TOSTESON, DANIEL C.....	MEMBRANES IN HYPERTENSION AND OTHER SYNDROMES.....	1R01 GM25686-01	166,603
TOSTESON, DANIEL C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05381-17	200,462
UNANUE, EMIL R.....	STUDIES ON ANTIGENIC STIMULATION.....	5R01 AI10091-08	123,974
VALLEE, BERT L.....	THE BIOLOGICAL FUNCTION OF METALS.....	2P01 GM15003-17	223,714
VALLEE, BERT L.....	THE FUNCTION AND DETECTION OF ZINC IN CELL BIOLOGY.....	1R01 GM24989-01	170,748
VEATCH, WILLIAM R.....	MEMBRANE CHANNEL STRUCTURE: SPECTROSCOPIC APPROACHES.....	1R01 AI15311-01	50,016
VENKATACHALAM, MANJERI A.....	RENAL PATHOPHYSIOLOGY: NORMAL AND ALTERED STRUCTURE.....	5R01 AM16749-06	85,179
VILLEE, CLAUDE A.....	RNA-MEDIATED EFFECTS OF STEROID SEX HORMONES.....	3R01 HD09424-03S1	8,650
VON LICHTENBERG, FRANZ C.....	SCHISTOSOMIASIS AND GRANULOMA FORMULATION.....	2R22 AI02631-20	113,533
WANER, JOSEPH L.....	SPOTTED FEVER IN TICKS, DOGS AND MAN ON CAPE COD.....	5R01 AI13552-03	72,824
WASSARMAN, PAUL M.....	TUMOR VIRUS CHROMATIN: STRUCTURE AND REPLICATION.....	5R01 CA20841-03	88,232
WEICHSSELBAUM, RALPH R.....	INTERACTIONS OF DRUGS, RADIATION AND HORMONES.....	1R01 CA21848-01	98,057
WEINER, HOWARD L.....	MOLECULAR PATHOGENESIS OF REOVIRUS INDUCED DISEASE.....	1R01 NS14401-01	59,172
WELLER, THOMAS H.....	STUDY OF PATHOGENIC AGENTS USING IN VITRO TECHNIQUES.....	5R01 AI01023-22	135,622
WHITTENBERGER, JAMES L.....	OCCUPATIONAL AND ENVIRONMENTAL HEALTH.....	2P30 ES00002-16	1,004,537
WHITTENBERGER, JAMES L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05446-17	181,964
WIESEL, TORSTEN N.....	STUDIES OF THE VISUAL SYSTEM.....	5R01 EY00606-15	210,024
WIESEL, TORSTEN N.....	EXPERIMENTAL MYOPIA IN PRIMATES.....	5R01 EY01966-02	42,664
WIESEL, TORSTEN N.....	STUDIES OF BASIC MECHANISMS IN VISION.....	5P30 EY01995-02	135,047
WILLIAMS, JERRY R.....	DNA METABOLISM AND HUMAN AGING.....	2R01 AG00414-04	121,024

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
WILLIAMS, JERRY R.....	NATURAL HISTORY OF SENESCING, TRANSFORMING & DYING CELLS.....	1R01 AG00950-01	81,830
WILSON, T HASTINGS.....	COMPARATIVE PHYSIOLOGY OF MEMBRANE TRANSPORT.....	5R01 AM05736-17	126,567
YOSHINAGA, KOJI.....	ONSET OF PARTURITION: RAT MODEL.....	5R01 HD10184-03	85,879
ZIGMOND, RICHARD E.....	EXPERIENCE AND THE NEUROCHEMISTRY OF THE SYNAPSE.....	5R01 NS12651-03	22,817
ORGANIZATION TOTAL	200 30,282,117		
JOSLIN DIABETES FOUNDATION ZIP CODE 02215			
CAHILL, GEORGE F, JR.....	PHYSIOLOGY, PATHOLOGY, AND BIOCHEMISTRY OF DIABETES.....	5R01 AM15191-09	296,892
CAHILL, GEORGE F, JR.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM20530-01	821,620
CAHILL, GEORGE F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05673-09	66,937
CHICK, WILLIAM L.....	PANCREATIC ISLET AND BETA CELL STUDIES.....	2R01 AM15398-08	120,308
CHICK, WILLIAM L.....	STUDIES TOWARDS DEVELOPMENT OF AN ARTIFICIAL PANCREAS.....	5R01 AM21222-02	112,294
RAND, LAWRENCE I.....	CASE CONTROL STUDY OF DIABETIC RETINOPATHY.....	1R01 EY02636-01	198,870
SOELDNER, JOHN S.....	DIABETES—PATHOGENESIS, DETECTION, AND ORAL AGENTS.....	2R01 AM09748-12	330,826
SOELDNER, JOHN S.....	THE DEVELOPMENT OF AN IMPLANTABLE GLUCOSE SENSOR.....	2R01 AM18352-03	295,247
SOELDNER, JOHN S.....	PATHOGENESIS OF MICROANGIOPATHY IN DIABETES.....	2R01 EY01421-17	109,018
SPIRO, ROBERT G.....	STUDY OF THE STRUCTURE OF GLYCOPROTEINS.....	5R01 AM17325-06	102,190
SPIRO, ROBERT G.....	STUDY OF BIOSYNTHESIS OF GLYCOPROTEINS.....	5R01 AM17477-06	95,533
ORGANIZATION TOTAL	11 2,549,735		
LAHEY CLINIC FOUNDATION ZIP CODE 02215			
WATKINS, ELTON, JR.....	MODIFICATION OF SIALYL INHIBITION OF IMMUNE RESPONSE.....	5R01 CA18938-03	65,776
ORGANIZATION TOTAL	1 65,776		
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE 02114			
ALBERT, DANIEL M.....	HISTOPATHOLOGIC STUDY OF PIGMENTED OCULAR TUMORS.....	5R01 EY01917-03	139,702
ALBERT, DANIEL M.....	NEW ANTIVIRAL NUCLEOSIDES FOR OCULAR AND OTHER HERPES.....	1R01 EY02268-01	160,194
ALBERT, DANIEL M.....	OCULAR MELANOMA MODEL.....	1R01 EY02678-01	66,506
DOHLMAN, CLAES H.....	OPHTHALMIC RESEARCH CORE FACILITIES.....	5P30 EY01537-04	194,095
DOHLMAN, CLAES H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05485-16	69,271
DONALDSON, DAVID D.....	OPHTHALMIC INSTRUMENTATION RESEARCH.....	5R01 EY00999-05	110,539
DUEKER, DAVID K.....	PATHOGENESIS OF IRIS NEOVASCULARIZATION.....	5R01 EY01750-02	64,223
EPSTEIN, DAVID L.....	METABOLISM OF THE TRABECULAR MESHWORK.....	5R01 EY01894-02	88,885
GRANT, W MORTON.....	PRESSURE-REGULATING MECHANISMS IN GLAUCOMA.....	5R01 EY00002-26	109,986
GRANT, W MORTON.....	GLAUCOMA CLINICAL RESEARCH CENTER.....	1P50 EY02518-01	259,257
JEDZINIAK, JUDITH A.....	ISOLATION/CHARACTERIZATION OF PROTEINS FROM HUMAN LENS.....	5R01 EY01964-02	83,097
KIANG, NELSON Y.....	BASIC AND CLINICAL STUDIES OF THE AUDITORY SYSTEM.....	3P01 NS13126-02S1	57,235
KIANG, NELSON Y.....	BASIC AND CLINICAL STUDIES OF THE AUDITORY SYSTEM.....	5P01 NS13126-03	711,347
KIMURA, ROBERT S.....	ELECTRON MICROSCOPY OF THE INNER EAR.....	5R01 NS03932-17	86,217
RICHARDSON, THOMAS M.....	TISSUE ELEMENTS IN THE TRABECULAR MESHWORK.....	1R01 EY02655-01	66,149
SCHUKNECHT, HAROLD F.....	OTOPATHOLOGY BY LIGHT MICROSCOPY.....	5R01 NS05881-13	46,261
SCHUKNECHT, HAROLD F.....	VESTIBULAR ABLATION.....	5R01 NS13425-02	17,157
ORGANIZATION TOTAL	17 2,330,121		
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
ALPERT, ELLIOT E.....	STUDIES OF LIVER INJURY.....	5P01 AM19124-03	226,843
ALPERT, ELLIOT E.....	IMMUNOCHEMICAL STUDIES OF GASTROINTESTINAL CANCER.....	5R01 CA12389-08	60,667
ALPERT, NATHANIEL M.....	RADIOISOTOPE DATA PROCESSING AND DISPLAY.....	5R01 GM16712-10	121,808
AMES, ADELBERT, III.....	ENERGY METABOLISM AND FUNCTION IN RETINA.....	1R01 EY02245-01	62,398
AREES, EDWARD A.....	DEVELOPMENT OF OPTIC PATHWAY DURING EMBRYOGENESIS.....	3R01 EY01287-03S2	12,268
ATHANASOULIS, CHRISTOS A.....	BOWEL PROTECTION WITH VASOPRESSIN DURING RADIOTHERAPY.....	5R01 AM19811-03	50,995
AUSIELLO, DENNIS A.....	STUDY OF PROTEIN PHOSPHORYLATION AND HORMONE ACTION.....	5R01 AM19406-02	27,681
AVRUCH, JOSEPH.....	RED CELL CATION TRANSPORT AND CONTRACTILE FUNCTIONS.....	5R01 AM16914-05	67,963
AVRUCH, JOSEPH.....	STUDIES ON PHOSHOPEPTIDE METABOLISM IN ADIPOCYTES.....	5R01 AM17776-04	62,806
BADEN, HOWARD P.....	BIOSYNTHESIS OF KERATIN—EPIDERMAL FIBROUS PROTEINS.....	5R01 AM06838-16	128,490
BARLOW, JOHN S.....	COMPUTER STUDIES OF BRAIN POTENTIALS IN MAN.....	5R01 NS03752-17	101,430
BECK, WILLIAM S.....	THE METABOLISM OF NORMAL AND LEUKEMIC LEUKOCYTES.....	5R01 CA03728-21	91,122
BISWAS, CHITRA.....	MAMMALIAN COLLAGENASE IN TUMOR INVASION.....	5R01 CA19158-03	53,792
BLACK, PAUL H.....	MECHANISMS OF TRANSFORMATION BY ONCOGENIC VIRUSES.....	5R01 CA10126-12	168,537
BLANK, IRVIN H.....	PHYSICAL AND CHEMICAL NATURE OF THE CUTANEOUS BARRIER.....	5R01 AM15461-13	88,446

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
BROWNELL, GORDON L.....	TRANSVERSE SECTION X-RAY CAMERA.....	5R01 CA15882-05	80,804
BUCHER, NANCY L.....	THE ROLE OF NUCLEOTIDES IN CELL PROLIFERATION.....	5R01 AM19435-03	40,713
BUCHER, NANCY L.....	CYTOPLASMIC FACTORS IN CELLULAR GROWTH.....	5R01 CA02146-25	97,105
BURKE, JOHN F.....	BURN TRAUMA CENTER.....	2P50 GM21700-04	326,141
BURTON, JAMES A.....	SYNTHESIS OF INHIBITORS FOR THE STUDY OF RENAL RENIN.....	5R01 HL19517-03	35,027
CARES, HERBERT L.....	LOW-RISK INTRAVASCULAR TECHNIQUES AND THE CNS.....	2R01 NS09349-08	29,085
CAREY, ROBERT W.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	5R10 CA12449-08	73,867
CHESLER, DAVID A.....	GATED IMAGING WITH THE MGH X-RAY CAMERA.....	5R01 HL20274-02	45,090
CODINGTON, JOHN F.....	MASKING OF ANTIGENS AT CANCER CELL SURFACES.....	2R01 CA18600-03	51,224
COGGINS, CECIL H.....	STUDY OF THE ADULT IDIOPATHIC NEPHROTIC SYNDROME.....	5R01 AM15646-08	96,012
COLVIN, ROBERT B.....	CELL INTERACTION AND THE CLOTTING SYSTEM.....	5R01 CA20822-03	66,568
CGRI, CARL F.....	CELLULAR REGULATION OF ENZYME ACTIVITY.....	5R01 AM11448-11	63,222
CROWELL, ROBERT M.....	REVERSIBILITY OF FOCAL CEREBRAL ISCHEMIA.....	5R01 NS13165-03	52,639
DAGGETT, WILLARD M.....	EXTRINSIC FACTORS INFLUENCING MYOCARDIAL PERFORMANCE.....	5R01 HL12322-10	73,319
DAGGETT, WILLARD M.....	MECHANISMS IN CARDIAC PERFORMANCE.....	5R01 HL12777-09	66,557
DALY, JAMES J.....	CHEMOTHERAPY FOR TRANSPLANTED HUMAN BLADDER CANCER.....	1R26 CA21647-01A1	70,969
DONAHOE, PATRICIA K.....	MULLERIAN INHIBITING SUBSTANCE.....	2R01 CA17393-04	148,457
DVORAK, ANN M.....	BASOPHIL/MAST CELL FUNCTION IN THE CONTROL OF CANCER.....	5R01 CA19141-03	86,161
DVORAK, HAROLD F.....	PATHOGENESIS OF CELLULAR IMMUNITY AND TOLERANCE.....	2R01 AI09529-09	84,413
DVORAK, HAROLD F.....	BASOPHILIC LEUKOCYTES IN HUMAN ALLERGIC DISEASE.....	5R01 AI10496-08	65,344
DVORAK, HAROLD F.....	BIOLOGY OF SOLID TUMOR GROWTH AND IMMUNE REJECTION.....	2R01 CA16881-04	88,963
EHRlich, H PAUL.....	THE CONTROL AND MODIFICATION OF SCAR FORMATION.....	1R01 GM25561-01	53,523
EPP, EDWARD R.....	FAST TIME PROCESSES IN CANCER RADIOBIOLOGY.....	5R01 CA18614-03	100,432
ERBE, RICHARD W.....	FOLATE METABOLISM AND MENTAL RETARDATION.....	5R01 HD06356-07	84,724
FISHER, CHARLES M.....	A CLINICAL, RADIOLOGIC AND PATHOLOGIC STUDY OF STROKES.....	2R01 NS05152-15	69,590
FOZARD, JAMES L.....	TALLAND CONFERENCES ON MEMORY, PERSONALITY AND AGING.....	1R13 AG00972-01	20,611
GERWECK, LEO E.....	METABOLIC FACTORS IN HEAT AND RADIATION LETHALITY.....	1R01 CA22860-01	65,951
GROSS, JEROME.....	CORNEAL COLLAGENASE: CELLULAR AND BIOCHEMICAL CONTROL.....	1R01 EY02252-01	72,112
HABER, EDGAR.....	SEQUENCE, SHAPE AND SPECIFICITY OF ANTIBODIES.....	9R01 CA24432-16	158,262
HABER, EDGAR.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17665-04	1,124,240
HABER, EDGAR.....	DIGOXIN SPECIFIC ANTIBODY IN HUMAN THERAPY.....	5P01 HL19259-03	346,046
HACKETT, THOMAS P.....	IMPACT OF EMOTION ON CORONARY ARTERIES.....	5R01 HL19567-03	72,198
HARRIS, WILLIAM H.....	PREVENTION OF POSTOPERATIVE VENOUS THROMBI.....	3R01 HL18738-02S1	6,399
HIRSCH, MARTIN S.....	IMMUNE REACTIVITY AND ONCOGENIC VIRUS INFECTIONS.....	5R01 CA12464-08	82,945
HOCHBERG, FRED H.....	EPIDEMIOLOGY OF BRAIN TUMORS.....	1R01 CA22533-01	70,967
HOLMES, LEWIS B.....	THE EXTRACELLULAR MATRIX IN HEREDITARY LIMB MALFORMATION.....	5R01 HD09689-03	34,134
HOLMES, LEWIS B.....	DEVELOPMENTAL SIGNIFICANCE OF MINOR ANOMALIES.....	1R01 HD10910-01	56,096
HYSLOP, NEWTON E, JR.....	ALLERGY TO PENICILLIN AND CEPHALOSPORIN ANTIBIOTICS.....	5R01 AI14010-02	89,715
IRWIN, DAVID.....	RIBONUCLEOPROTEIN COMPLEXES IN RENAL CARCINOMA.....	5R01 CA20634-02	41,007
ISSELBACHER, KURT J.....	INTESTINAL CELL MEMBRANES—STRUCTURE AND FUNCTION.....	5R01 AM01392-22	91,663
ISSELBACHER, KURT J.....	METABOLIC STUDIES OF INTESTINAL MUCOSA.....	5R01 AM03014-20	62,782
ISSELBACHER, KURT J.....	TUMOR ASSOCIATED CHANGES OF INTESTINAL AND LIVER CELLS.....	2P01 CA14294-04A1	287,058
JACOBY, LEE B.....	MUTATION AND REGULATION IN NORMAL OR NEOPLASTIC CELLS.....	5R01 CA14534-06	103,230
JEANLOZ, ROGER W.....	CHEMISTRY AND BIOCHEMISTRY OF BACTERIAL CELL WALL.....	5R01 AI06692-13	60,430
JEANLOZ, ROGER W.....	STUDY OF MESENCHYMAL TISSUES AND THEIR DISEASES.....	5P01 AM03564-19	883,021
JEANLOZ, ROGER W.....	STUDY OF GLYCOPROTEINS FROM CANCER CELLS.....	3R01 CA08418-13S1	17,901
JOHNSON, ROBERT A.....	DIGOXIN IN HEART FAILURE WITH SINUS RHYTHM.....	1R01 HL22750-01	47,103
KOPANS, DANIEL.....	LOW-DOSE SCREENING TECHNIQUES FOR MAMMOGRAPHY.....	5R01 CA19622-03	21,883
KUMAR, AJIT.....	MESSENGER RNA METABOLISM IN MAMMALIAN CELLS.....	2R01 CA16797-04	48,457
LEAF, ALEXANDER.....	SUPPORT FOR METABOLIC DISEASE RESEARCH CENTER.....	2P01 AM04501-17	201,039
LEAF, ALEXANDER.....	CARDIOPULMONARY FUNCTION IN REMEDIABLE VASCULAR DISEASE.....	5P01 HL06664-17	413,708
LEAF, ALEXANDER.....	GENERAL CLINICAL RESEARCH CENTER.....	1M01 RR01066-01	560,726
LEHRICH, JAMES R.....	AMYOTROPHIC LATERAL SCLEROSIS—IMMUNOVIROLOGIC MODELS.....	5R01 NS09675-08	85,947
LEVINE, DAVID N.....	DISTURBANCES OF VISUAL PERCEPTION IN CEREBRAL DISEASE.....	5R01 NS13102-03	41,890
LINSENMEYER, THOMAS F.....	CORNEAL STROMA: SYNTHESIS AND ASSEMBLY OF COLLAGENS.....	1R01 EY02261-01	63,400
LIPPIELLO, LOUIS.....	EFFECT OF PROSTAGLANDINS ON ARTICULAR CARTILAGE.....	5R01 AM19111-03	52,080
LONG, JOHN C.....	AN ANTIGEN IN HODGKIN'S DISEASE TISSUE CULTURES.....	5R01 CA19514-03	69,428
MALOOF, FARAHE.....	THYROID PEROXIDASE: CONTROL, MEMBRANE, IODIDE, GOITROGEN.....	1R01 AM21945-01	99,690
MALT, RONALD A.....	STUDY OF NEPHRECTOMY AT BIRTH AND DURING GROWTH.....	5R01 AM12769-13	83,239
MALT, RONALD A.....	ENTERIC INTERRELATIONS IN CANCER OF THE COLON.....	5R26 CA17324-04	53,361

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MANKIN, HENRY J.....	NUCLEIC ACID AND PROTEIN METABOLISM IN CARTILAGE.....	5R01 AM16265-07	109,840
MANKIN, HENRY J.....	BIOCHEMICAL AND IMMUNOLOGIC STUDY OF CHONDROSARCOMA.....	5R01 CA15614-04	74,985
MARTIN, DONALD B.....	GLUCOSE AND INSULIN INTERACTIONS WITH CELL MEMBRANE.....	5R01 AM13774-08	42,470
MASLAND, RICHARD H.....	NEUROTRANSMISSION IN MAMMALIAN RETINA.....	5R01 EY01075-05	26,030
MC CLUSKEY, ROBERT T.....	IMMUNOLOGIC FACTORS IN TUBULOINTERSTITIAL NEPHRITIS.....	5R01 AM18729-03	99,177
MC CLUSKEY, ROBERT T.....	LYMPHOCYTES IN TUMOR, CELLULAR AND AUTO-IMMUNITY.....	5R01 CA19393-03	55,850
MEDEARIS, DONALD N, JR.....	INFECTION OF THE CENTRAL NERVOUS SYSTEM OF MICE.....	1R01 NS14763-01	40,526
MILLER, KEITH W.....	ACTION OF ANESTHETICS ON MEMBRANE IONOPHORES.....	5R01 GM22671-03	26,662
ORKIN, ROSLYN W.....	CELL-MATRIX INTERACTIONS.....	5R23 DE04734-02	24,322
PLATE, JANET M.....	IMMUNOLOGICAL EFFECTS ON TUMOR GROWTH & REJECTION.....	3R01 CA17754-03S1	16,461
POHOST, GERALD M.....	THALLIUM AND ANTIMYOSIN IN ISCHEMIA AND INFARCTION.....	5R01 HL21751-02	141,030
POTTS, JOHN T, JR.....	HORMONAL CONTROL OF CALCIUM METABOLISM.....	3P01 AM11794-10S1	68,289
POTTS, JOHN T, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05486-16	200,462
POWELL, WILLIAM J, JR.....	PHARMACOLOGIC STUDIES OF NEUROGENIC DIGITALIS EFFECTS.....	5R01 HL18657-03	54,138
PROUT, GEORGE R, JR.....	CHEMOTHERAPY FOR PATIENTS WITH PROSTATIC CARCINOMA.....	5R26 CA15284-06	66,741
PROUT, GEORGE R, JR.....	EVALUATION OF MANAGEMENT OF BLADDER CARCINOMA PATIENTS.....	2R26 CA15944-05	94,383
PROUT, GEORGE R, JR.....	NATIONAL BLADDER CANCER COLLABORATIVE STUDY.....	1R26 CA23082-01	82,123
RAPAPORT, ELIEZER.....	THE ROLE OF AP4A IN MALIGNANT TRANSFORMATION.....	1R01 CA22904-01	69,245
ROBINSON, DWIGHT R.....	PROSTAGLANDINS IN RHEUMATIC DISEASES.....	5R01 AM19427-03	53,308
RUSKIN, JEREMY N.....	CNS-MEDIATED EFFECTS OF ANTIARRHYTHMIC DRUGS.....	1R01 HL22862-01	26,705
RUSSELL, PAUL S.....	TISSUE SPECIFICITY STUDIES.....	5R01 AM07055-16	89,699
RUSSELL, PAUL S.....	STUDIES BASIC TO HEART TRANSPLANTATION.....	5P01 HL18646-03	352,478
SHANNON, DANIEL C.....	SIDS-RESPIRATORY CONTROL DEVELOPMENT.....	1R01 HD11965-01	71,680
SHARP, GEOFFREY W.....	MECHANISM OF INSULIN RELEASE.....	3R01 AM18460-03S1	39,097
SHIH, VIVIAN E.....	NEW AMINO ACID DISORDERS IN CEREBRAL DISEASE.....	5R01 NS05096-16	161,209
SILVER, DONALD M.....	TOLERANCE AND DOMINANT NONRESPONSIVENESS TO F-ANTIGEN.....	5R01 AI13984-02	65,368
SLATER, EVE E.....	PURIFICATION OF HUMAN RENAL RENIN.....	5R23 HL21247-02	38,074
SMITH, GENE M.....	EXPERIMENTAL AND PERIODONTAL SURGICAL PAIN.....	1R01 DE04939-01	64,481
STINSON, THOMAS W, III.....	MECHANICS OF CHOLINERGIC RECEPTORS AND BIOMEMBRANES.....	1R23 GM25566-01	43,170
STOSSEL, THOMAS P.....	LEUKOCYTE ANTIBODIES AND SUPPORT OF CANCER PATIENTS.....	5R01 CA20414-02	25,391
STOSSEL, THOMAS P.....	PHAGOCYTOSIS: INGESTION IN ALVEOLAR MACROPHAGES.....	5R01 HL19429-03	74,167
SUIT, HERMAN D.....	MODIFICATION OF TUMOR RESPONSE TO LOCAL IRRADIATION.....	5R01 CA13311-07	180,306
SUIT, HERMAN D.....	PROTON RADIATION THERAPY RESEARCH.....	5P01 CA21239-02	727,143
SWANN, DAVID A.....	MOLECULAR BASIS OF JOINT LUBRICATION.....	5R01 AM19834-02	144,635
SWANN, DAVID A.....	CHEMISTRY AND BIOLOGY OF VITREOUS STRUCTURAL PROTEINS.....	5R01 EY01030-05	63,312
TAVERAS, JUAN M.....	AN INTERDEPARTMENTAL STROKE PROGRAM.....	5P50 NS10828-05	278,229
TOOLE, BRYAN P.....	MORPHOGENETIC ROLE OF GLYCOSAMINOGLYCANS.....	5R01 DE04220-04	103,755
TRELSTAD, ROBERT L.....	CARDIOVASCULAR MATRIX: MORPHOGENESIS AND MATURATION.....	2R01 HL18714-04	101,907
WALKER, W ALLAN.....	INTESTINAL UPTAKE OF MACROMOLECULES.....	5R01 AM16269-05	58,897
WANDS, JACK R.....	HORMONAL PROTECTION AND REPAIR IN HEPATOCELLULAR INJURY.....	5R01 AM20309-02	68,166
WEISER, MILTON M.....	CELL SURFACE ALTERATIONS IN MALIGNANCY.....	2R01 CA16703-04	25,700
WINN, HENRY J.....	TUMOR IMMUNOLOGY.....	5R01 CA17800-04	129,515
WINN, HENRY J.....	TRANSPLANTATION IMMUNOLOGY.....	5R01 CA20044-13	120,673
WITTERS, LEE A.....	REGULATION OF HEPATIC METABOLISM BY INSULIN.....	5R01 AM19270-02	59,116
WOOD, WILLIAM C.....	HUMORAL CYTOTOXIC RESPONSE IN GLIOMA PATIENTS.....	1R01 CA22613-01	56,664
WRAY, SHIRLEY H.....	DEMYELINATION AND THE OPTIC NERVE.....	3R01 NS11551-04S1	14,500
WRAY, SHIRLEY H.....	DEMYELINATION AND THE OPTIC NERVE.....	5R01 NS11551-05	110,354
YOUNG, DAVID M.....	NERVE GROWTH FACTOR FUNCTION & SECRETION BY CANCER CELLS.....	2R01 CA17137-04	92,061
YOUNG, DAVID M.....	SALIVA NERVE GROWTH FACTOR: NATURALLY OCCURRING FORM.....	1R01 NS14152-01	44,374
ZAPOL, WARREN M.....	MEMBRANE LUNG PERFUSION FOR ACUTE RESPIRATORY FAILURE.....	2R01 HL16154-05	117,950
ZAPOL, WARREN M.....	PULMONARY SCOR: ADULT RESPIRATORY FAILURE.....	1P50 HL23591-01	820,302
ORGANIZATION TOTAL	126	14,679,034	
MASSACHUSETTS OFFICE OF HUMAN SERVICES—MASSACHUSETTS MENTAL HEALTH CENTER ZIP CODE 02115			
GRINSPOON, LESTER.....	PSYCHEDELIC DRUGS IN PERSPECTIVE.....	1R01 LM03118-01	17,112
ORGANIZATION TOTAL	1	17,112	
MEDICAL FOUNDATION ZIP CODE 02116			
WECHSLER HENRY.....	THE SOCIAL CONTEXT OF MEDICAL RESEARCH.....	1R01 LM03131-01	18,224
ORGANIZATION TOTAL	1	18,224	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
NEW ENGLAND DEACONESS HOSPITAL ZIP CODE 02215			
BISTRIAN, BRUCE R.....	METABOLIC RESPONSE TO ACUTE INFECTION.....	1R01 GM24401-01A1	86,449
BLACKBURN, GEORGE L.....	NEW CONCEPTS IN PARENTERAL PROTEIN SPARING THERAPY.....	5R01 GM22691-04	101,420
BLACKBURN, GEORGE L.....	BRANCHED CHAIN AMINO ACID FEEDING DURING INJURY.....	1R01 GM24206-01	68,676
HERZFELD, ANNEMARIE.....	LYMPHOMA: DIAGNOSIS BY BLOOD AND LIVER TESTS.....	1R01 CA22065-01A1	75,039
KNOX, W EUGENE.....	REGULATION OF ENZYME CONCENTRATION IN TISSUES.....	5R01 AM00567-25	101,402
MC DERMOTT, WILLIAM V, JR.....	EARLY DIAGNOSIS OF CARCINOMA OF THE PANCREAS.....	5R26 CA19232-03	74,829
MC DERMOTT, WILLIAM V, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05591-14	45,804
MONACO, ANTHONY P.....	IMMUNOSUPPRESSION AND SPECIFIC UNRESPONSIVENESS.....	2R01 AI14551-02	107,629
MONACO, ANTHONY P.....	IMMUNODIAGNOSTIC ASSAY OF BLADDER CARCINOMA.....	2R26 CA20888-03	87,382
ORGANIZATION TOTAL	9	748,630	
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111			
AGNELLO, VINCENT.....	STUOY OF HUMAN IMMUNE COMPLEX OISEASES.....	5R01 AM16984-06	70,800
BABIOR, BERNARD M.....	THE FUNCTION OF NORMAL AND MALIGNANT PHAGOCYTTIC CELLS.....	3R01 AI11827-05S1	7,084
BABIOR, BERNARD M.....	THE FUNCTION OF NORMAL AND MALIGNANT PHAGOCYTTIC CELLS.....	5R01 AI11827-06	81,453
BABIOR, BERNARD M.....	STUOY OF COENZYME B12 AND RELATED COMPOUNOS.....	5R01 AM16589-06	88,080
BABIOR, BERNARD M.....	BIOMEIOICAL RESEARCH SUPPORT GRANT.....	5S07 RR05598-13	123,565
BAUM, JULES L.....	OCULAR PENETRATION OF ANTIBIOTICS IN A MODEL.....	3R01 EY01517-03S1	15,960
BAUM, JULES L.....	OCULAR PENETRATION OF ANTIBIOTICS IN A MOOEL.....	2R01 EY01517-04	114,484
BAUM, JULES L.....	BIOCHEMISTRY OF NORMAL AND OYSTROPHIC CORNEAS IN CULTURE.....	5R01 EY01793-03	106,329
BERKMAN, EUGENE M.....	STUOIES ON GRANULOCYTE ANTIGEN ANTIBOOY INTERACTION.....	1R01 AM21027-01	37,909
COHEN, JORDAN J.....	REGULATION OF ELECTROLYTE AND ACID-BASE EQUILIBRIUM.....	2R01 HL00759-29	153,638
COHEN, JORDAN J.....	ELECTROLYTE PHYSIOLOGY AND RESPIRATORY ACIO-BASE.....	2R01 HL15810-06	217,221
DATTA, SYAMAL K.....	MURINE LEUKEMIA VIRUSES IN NEW ZEALANO MICE.....	5R01 CA19575-03	63,165
DONOWITZ, MARK.....	ABSORPTION AND SECRETION IN DIARRHEAL OISEASES.....	1R01 AM20700-01	89,622
FANBURG, BARRY L.....	HUMORAL AND METABOLIC ASPECTS OF CARDIAC FUNCTION.....	5R01 HL06924-16	64,455
FANBURG, BARRY L.....	LUNG METABOLISM—ENZYMES IN THE PULMONARY CIRCULATION.....	5R01 HL14456-07	120,033
FANBURG, BARRY L.....	DEFENSES OF LUNG CELLS AGAINST OXYGEN TOXICITY.....	5R01 HL20352-02	59,286
FURIE, BARBARA C.....	METAL-DEPENDENT COMPLEXES IN BLOOD COAGULATION.....	2R01 HL18834-04	66,129
FURIE, BRUCE.....	STRUCTURE-FUNCTION RELATION OF BLOOD CLOTTING PROTEINS.....	5R01 HL21543-02	39,032
JACKSON, IVOR.....	SECRETION OF TRH AND OTHER NEURAL PEPTIDES.....	1R01 AM21863-01	86,153
KAPLAN, MARSHALL M.....	ENZYME REGULATION IN LIVER OISEASE.....	5R01 AM10571-12	101,970
LEVINE, HERBERT J.....	CARDIODYNAMICS AND METABOLISM OF CONGESTIVE FAILURE.....	5R01 HL07139-17	103,988
MOLITCH, MARK E.....	SHORT-LOOP FEEOBACK CONTROL OF PITUITARY HORMONES.....	1R01 AM20870-01	75,054
PLAUT, ANOREW G.....	MUCOSAL DEFENSE AGAINST GONOCOCCAL INFECTIONS.....	1R01 AI14648-01	80,599
PLAUT, ANOREW G.....	PROTEOLYTIC MECHANISMS IN HUMAN COLON CONTENTS.....	5R01 AM17194-06	84,492
REICHLIN, SEYMOUR.....	ACTION AND CLINICAL EVALUATION OF GROWTH HORMONE.....	5R01 AM01567-22	73,857
REICHLIN, SEYMOUR.....	NEURAL CONTROL MECHANISMS OF METABOLIC FUNCTIONS.....	5R01 AM16684-07	153,988
REICHLIN, SEYMOUR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00054-17	543,280
SCHWARTZ, BERNARD.....	RESPONSE OF OCULAR PRESSURE TO CORTICOSTEROIDS.....	3R01 EY00024-09S1	18,278
SCHWARTZ, BERNARD.....	RESPONSE OF OCULAR PRESSURE TO CORTICOSTEROIDS.....	2R01 EY00024-10	124,730
SCHWARTZ, BERNARD.....	CHANGES IN THE OPTIC DISC IN PATIENTS WITH GLAUCOMA.....	5R01 EY00936-05	126,707
SCHWARTZ, ROBERT S.....	IMMUNOSUPPRESSION.....	5R01 AM07937-15	140,697
SCHWARTZ, ROBERT S.....	STUOY OF SYSTEMIC LUPUS ERYTHEMATOSUS.....	5R01 AM09351-13	230,432
SCHWARTZ, ROBERT S.....	EXPERIMENTAL MOOEL OF MALIGNANT LYMPHOMA.....	5R01 CA10018-13	209,588
SOKOL, SAMUEL.....	ERG AND VECP AS INDICES OF PHOTOPIC DYSFUNCTION.....	5R01 EY00926-05	35,449
WEITER, JOHN J.....	STUDIES OF NORMAL AND PATHOLOGICAL RETINAL PO2.....	1R01 EY02246-01	77,142
ORGANIZATION TOTAL	35	3,784,649	
NORTHEASTERN UNIVERSITY ZIP CODE 02115			
ARMINGTON, JOHN C.....	STIMULUS ALTERNATION AND VISUAL POTENTIALS.....	2R01 EY00589-11	72,211
DAVIS, MICHAEL A.....	SYNTHESIS OF NOVEL 75SE PANCREATIC IMAGING AGENTS.....	5R01 CA19898-03	55,872
FINE, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07143-07	33,116
GIESE, ROGER W.....	NEW ANALYTICAL METHODOLOGY FOR HORMONE ANALYSIS.....	1R01 AM21797-01	110,640
KUHNKE, LA VERNE J.....	A NATIONAL HEALTH CARE VENTURE IN 19TH CENTURY EGYPT.....	1R01 LM03172-01	29,286
MAHUT, HELEN S.....	HIPPOCAMPUS: A NEUROPSYCHOLOGICAL DEVELOPMENTAL STUOY.....	2R01 H008135-04A1	56,009
MILLER, JOANNE L.....	TUNING PROPERTIES OF FEATURE DETECTORS FOR SPEECH.....	1R01 NS14394-01	47,690
SCHARF, BERTRAM.....	LOUDNESS SUMMATION, LATERALIZATION, AND FUSION.....	2R01 NS07270-07A1	57,580

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
SKAVENSKI, ALEXANDER A.....	EYE MOVEMENT AND MECHANISMS OF VISUAL LOCALIZATION	1R01 EY02409-01	55,239
STRAUSS, PHYLLIS R.....	THYMIDINE METABOLISM AT THE CELL SURFACE.....	1R01 CA24283-01	51,004
VOUROS, PAUL.....	MASS SPECTROMETRY OF BIOLOGICALLY SIGNIFICANT COMPOUNDS	5R01 GM22787-03	46,056
YERGANIAN, GEORGE.....	CELL TYPE/HOST ASSAY OF MUTAGEN-CARCINOGEN ACTIVITY.....	1R01 CA25772-01	31,997
ORGANIZATION TOTAL	12 646,700		
SIDNEY FARBER CANCER INSTITUTE ZIP CODE 02115			
CANTOR, HARVEY I.....	T-CELL SUBPOPULATIONS IN TRANSPLANTATION IMMUNITY	5R01 A112184-04	75,687
CANTOR, HARVEY I.....	IMMUNOBIOLOGY OF LY0 T CELL SUBCLASSES.....	5R01 A113600-03	108,955
CHAYKOVSKY, MICHAEL.....	NEW FOLATE ANTAGONISTS IN CANCER CHEMOTHERAPY.....	5R01 CA17718-03	65,737
CHEN, LAN B.....	STUDIES OF PROTEINS INVOLVED IN CELL INTERACTION	1R01 CA22659-01	97,199
COOPER, GEOFFREY M.....	INFECTIOUS DNA FOR ENDOGENOUS RNA TUMOR VIRUS GENES.....	5R01 CA18689-03	79,803
FREI, EMIL, III.....	COMPREHENSIVE CANCER CENTER SUPPORT.....	2P30 CA06516-15	2,358,179
FREI, EMIL, III.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17979-04	261,357
FREI, EMIL, III.....	CLINICAL CANCER RESEARCH CENTER.....	5P01 CA19589-03	1,534,605
FREI, EMIL, III.....	COLLABORATIVE THERAPEUTIC RESEARCH IN HUMAN LEUKEMIA.....	1P01 CA22719-01	194,734
FREI, EMIL, III.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05526-16	168,499
HASELTINE, WILLIAM A.....	REPLICATION OF RNA TUMOR VIRUSES	5R01 CA19341-03	67,108
ISRAEL, MERVYN.....	PREPARATION OF ADRIAMYCIN ANALOGS AND DERIVATIVES.....	2R01 CA17263-04	179,438
LAZARUS, HERBERT.....	CYSTINE AUXOTROPHY IN HUMAN MALIGNANCY—IMPLICATIONS.....	5R01 CA19126-03	95,038
LIVINGSTON, DAVID M.....	STRUCTURE AND FUNCTION OF SV40 NON-VIRION PROTEINS.....	5R01 CA15751-05	102,302
LIVINGSTON, DAVID M.....	ISOLATION AND FUNCTION OF SMALL SV40 T ANTIGEN.....	1R01 CA24715-01	33,283
MAYER, ROBERT J.....	BEDSIDE APPROACH TO THE ETIOLOGY OF CANCER.....	5R01 CA19727-03	50,848
MODEST, EDWARD J.....	BIOCHEMICAL PHARMACOLOGY OF A NEW ADRIAMYCIN ANALOG.....	5R01 CA19118-03	130,229
NATHAN, DAVID G.....	CHILDHOOD LEUKEMIA-ABELSON VIRUS.....	2P01 CA18662-04	570,091
PARDEE, ARTHUR B.....	IN VIVO PROTECTION AGAINST ANTINEOPLASTIC AGENTS.....	5R01 CA19864-02	44,702
PARDEE, ARTHUR B.....	DRUG RESISTANCE ASSAY OF NEOPLASTIC TRANSFORMATION	5R01 CA19949-03	66,259
PARDEE, ARTHUR B.....	MOLECULAR ANALYSIS OF MALIGNANT TRANSFORMATION	1P01 CA22427-01	453,661
PARDEE, ARTHUR B.....	BIOCHEMISTRY OF G0/G1 REGULATION IN ANIMAL CELLS.....	1R01 GM24571-01	119,542
REINISCH, CAROL L.....	IMMUNOSUPPRESSION BY ADJUVANT-STIMULATED T CELLS.....	5R01 CA21100-02	102,065
ROSENBERG, ROBERT D.....	HYPERCOAGULABILITY AND ASSAYS FOR ITS DETECTION.....	5R01 HL19131-04	193,461
ROSOWSKY, ANDRE.....	BRANCHED SUGAR NUCLEOSIDES AS ANTICANCER AGENTS.....	1R01 CA22738-01	62,563
ROSOWSKY, ANDRE.....	DEVELOPMENT OF POTENTIAL NEW AGENTS AGAINST MELANOMA.....	1R01 CA23151-01	88,832
RUBIN, GERALD M.....	CONTROL OF GENE EXPRESSION IN ANIMAL CELLS—DROSOPHILA	5R01 GM23614-02	59,797
SAGER, RUTH.....	CYTOPLASMIC GENES IN NORMAL AND TUMORIGENIC CELLS.....	5R01 CA21365-02	87,471
SAGER, RUTH.....	CYTOPLASMIC GENETIC CONTROL SYSTEMS.....	5R01 GM22874-04	145,059
SALLAN, STEPHEN.....	EFFECTS OF PRECONCEPTION AND IN UTERO IMMUNOSUPPRESSION.....	5R01 CA19711-03	56,964
SAMY, T S.....	BIOCHEMICAL PHARMACOLOGY OF NEOCARZINOSTATIN.....	2R01 CA17305-04	108,619
SAMY, T S.....	BIOCHEMICAL PHARMACOLOGY OF ANTITUMOR PROTEIN MACROMYCIN	1R01 CA24406-01	56,169
SCHAFFER, PRISCILLA A.....	TRANSFORMING GENES OF HERPES SIMPLEX VIRUS.....	5R01 CA20260-02	104,200
SCHLOSSMAN, STUART F.....	STUDY OF ISOLATION AND GENETIC CONTROL OF IMMUNOCYTES.....	5R01 A112069-05	161,775
SENGUPTA, SISIR K.....	BIOCHEMICAL PHARMACOLOGY OF NEW ACTINOMYCIN D ANALOGS.....	2R01 CA17409-04	83,127
SLAYTER, HENRY S.....	ELECTRON MICROSCOPY OF MACROMOLECULAR STRUCTURES	2R01 GM14237-11A1	74,047
SLAYTER, HENRY S.....	PLATELET GLYCOPROTEIN.....	1R01 HL22270-01	91,356
STEELE, GLENN D, JR.....	MINIMAL RESIDUAL DISEASE AFTER RAT COLON CA. EXCISION.....	1R01 CA22513-01	67,429
STILES, CHARLES D.....	ROLE OF SERUM IN THE FOREIGN BODY RESPONSE.....	5R01 CA22042-02	65,086
STROMINGER, JACK L.....	CHEMICAL AND SEROLOGICAL STUDIES OF LYMPHOCYTE SURFACES.....	1R01 A115669-01	121,590
STROMINGER, JACK L.....	MOLECULAR BASIS OF VIRAL ONCOGENESIS.....	5P01 CA21082-02	160,760
TERHORST, CORNELIS P.....	CELL SURFACE RECEPTORS ON HUMAN CYTOTOXIC T CELLS.....	1R01 A115066-01	80,341
THORLEY-LAWSON, DAVID A.....	HOST IMMUNITY TO EBV INFECTION IN VITRO AND IN VIVO	1R01 A115310-01	75,729
UREN, JACK R.....	ENZYMATIC CYST(E)INE DEPLETION THERAPY OF CANCER	5R01 CA18917-03	72,895
WILLIAMS, R MICHAEL.....	GENETIC CONTROL OF TUMOR RESISTANCE AND IMMUNITY.....	5R01 CA19791-03	63,740
WILLIAMS, R MICHAEL.....	IMMUNOGENETICS & EPIDEMIOLOGY IN GUILLAIN-BARRE SYN.....	1R01 NS14387-01	107,482
YANKEE, RONALD A.....	AUTOLOGOUS STEM CELL RECONSTITUTION IN CANCER THERAPY	5R01 CA18412-03	106,301
YUNIS, EDMOND J.....	GENETIC ANALYSIS OF NORMAL AND MALIGNANT LYMPHOCYTES.....	5R01 CA20531-02	154,554
YUNIS, EDMOND J.....	IMMUNOLOGICAL ASPECTS OF AGING.....	5R01 CA21084-03	63,240
YUNIS, EDMOND J.....	IMMUNOLOGIC FACTORS IN SPONTANEOUS MAMMARY CARCINOMA.....	5R01 CA21672-03	61,039
ZAIA, JOHN A.....	CORRELATION OF ZOSTER IMMUNITY AND VIRUS REACTIVATION.....	5R23 A114373-02	47,558
ZELLEN, MARVIN.....	CANCER CLINICAL INVESTIGATIONS COORDINATING CENTER A.....	2R10 CA23318-02	889,836
ZELLEN, MARVIN.....	STATISTICAL MODELS OF BIOMEDICAL PHENOMENA.....	5R01 CA23415-02	114,805

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
ORGANIZATION TOTAL	53	10,585,146	
SIMMONS COLLEGE ZIP CODE 02115			
CHEN, CHING-CHIH.....	HEALTH SCIENCES INFORMATION SOURCES.....	1R01 LM03117-01	27,725
ORGANIZATION TOTAL	1	27,725	
ST. ELIZABETH'S HOSPITAL OF BOSTON ZIP CODE 02135			
GUREWICH, VICTOR.....	PATHOGENESIS OF PULMONARY THROMBOEMBOLIC DISEASE.....	3R01 HL21548-01S1	30,134
ORGANIZATION TOTAL	1	30,134	
ST. MARGARET'S HOSPITAL FOR WOMEN ZIP CODE 02125			
MITCHELL, GEORGE W, JR.....	HOST-PARASITE RELATIONSHIPS IN PREGNANCY.....	2R01 HD01805-12A1	40,924
ORGANIZATION TOTAL	1	40,924	
TUFTS UNIVERSITY ZIP CODE 02111			
BLOOMQUIST, EUNICE I.....	SMOOTH MUSCLE OF RESISTANCE VESSELS IN HYPERTENSION.....	5R01 HL19012-03	49,529
BLUMENSTEIN, MICHAEL.....	NMR STUDIES OF PEPTIDE-MACROMOLECULE INTERACTION.....	5R01 HD10616-02	27,786
BORYSENKO, MYRIN.....	COMPARATIVE IMMUNOBIOLOGY.....	5R01 CA20093-06	44,480
BOYD, DANA H.....	FUNCTION OF STRUCTURES INVOLVED IN TRANSCRIPTION.....	2R01 GM22170-04	68,504
BRAWERMAN, GEORGE.....	THE ROLE OF NUCLEIC ACIDS IN CELL DIFFERENTIATION.....	5R01 GM17973-09	89,465
CATALDO, EDMUND F.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA20849-01	63,180
CATHOU, RENATA E.....	CONFORMATION AND STRUCTURAL DYNAMICS OF ANTIBODIES.....	5R01 AI10115-08	48,462
CAVAZOS, LAURO F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05382-17	135,511
COFFIN, JOHN M.....	RELATIONSHIP OF AVIAN TUMOR VIRUS RNA AND HOST GENOME.....	5R01 CA17659-03	51,395
COHEN, JONATHAN B.....	ASSAY OF TISSUE REACTION TO IMPLANTED MATERIALS.....	5R01 AM18591-06	58,130
COOPER, AMIEL G.....	STRUCTURE AND SYNTHESIS OF LEUKEMIC PLASMA MEMBRANES.....	5R01 AI12875-04	95,800
COOPER, AMIEL G.....	ROLE OF SURFACE AND SHED GLYCOPROTEIN IN METASTASIS.....	5R01 CA19987-03	50,024
DOUGLAS, WILLIAM H.....	SURFACTANT SYNTHESIS BY TYPE II CELLS IN VITRO.....	7R01 HL23969-01	99,113
DRYSDALE, JAMES W.....	MAMMALIAN ISOFERRITINS—STRUCTURE AND METABOLISM.....	5R01 AM17775-05	111,984
EL-BERMANI, AL-WALID I.....	INNERVATION OF THE LUNG.....	3R01 HL20548-02S1	9,992
GOLDBERG, EDWARD B.....	GENETIC CONTENT AND RECOMBINATION OF DNA FRAGMENTS.....	5R01 GM13511-13	79,978
HITCHCOCK, KAREN R.....	THE LUNG SURFACTANT SYSTEM: CONTROL MECHANISMS.....	5R01 HL15316-07	79,940
HUBER, BRIGITTE T.....	B LYMPHOCYTES: DIFFERENTIATION AND TRIGGERING.....	1R01 AI14910-01	56,088
KISLIUK, ROY L.....	FOLATE ENZYMES, COENZYMES, AND ANALOGS.....	2R01 CA10914-10	94,384
KRISCHER, JEFFREY P.....	CRANIOFACIAL ANOMALIES: TREATMENT EVALUATION.....	1R23 DE04551-01A1	35,905
LIN, CHI-WEI.....	HISTAMINASE AS A CANDIDATE CARCINOPLACENTAL ISOENZYME.....	3R01 CA17194-03S1	7,552
LIN, CHI-WEI.....	HISTAMINASE AS A BIOCHEMICAL MARKER FOR HUMAN CANCER.....	2R01 CA17194-04	51,547
LIN, CHI-WEI.....	BETA-GLUCURONIDASE TRANSPORT & MOLECULAR MODIFICATION.....	5R01 GM21755-03	57,457
NAJJAR, VICTOR A.....	TISSUE ENZYMES AND PLASMA PROTEINS.....	5R01 AI09116-10	97,752
NATHANSON, LARRY.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17983-04	154,157
OFNER, PETER.....	PROSTATIC DIFFERENTIATION AND SEX HORMONE METABOLISM.....	3R01 CA15776-03S1	19,101
OFNER, PETER.....	PROSTATIC DIFFERENTIATION AND SEX HORMONE METABOLISM.....	2R01 CA15776-04	63,309
OKUN, MILTON R.....	PEROXIDASE IN NORMAL AND NEOPLASTIC MELANOGENESIS.....	1R01 CA21629-01A1	69,354
OWEN, FRANCES L.....	DIFFERENTIATION AND SPECIFICITY OF T CELL RECEPTORS.....	1R01 AI15262-01	79,450
PLANTE, LAURENCE T.....	DEUTERIUM & CARBON-13 LABELED ENZYMES & ANTIFOLATES.....	5R01 CA20539-03	41,349
RESNICK, ROBERT H.....	DISTAL SPLENORENAL VS PORTALSYSTEMIC ANASTOMOSIS.....	5R01 AM18702-04	50,737
ROCKLIN, ROSS E.....	MECHANISMS OF CELLULAR HYPERSENSITIVITY IN MAN.....	7R01 AI15912-01	85,266
ROSENBERG, NAOMI E.....	ABELSON LEUKEMIA VIRUS TRANSFORMATION OF LYMPHOCYTES.....	1R01 CA24220-01	79,769
SCHAECHTER, MOSELIO.....	BACTERIAL CELL MEMBRANE ROLE IN GROWTH AND CELL DIVISION.....	2R01 AI09465-09	80,498
SCHMIDT, GERHARD.....	METABOLIC STUDIES WITH PLASMALOGENS AND SPHINGOLIPIDS.....	5R01 NS11250-05	21,520
SCHWARTZ, EDITH R.....	METABOLISM OF OSTEOARTHRITIC ARTICULAR CARTILAGE.....	5R01 AM22057-02	126,046
SCHWARTZ, EDITH R.....	VITAMIN C EFFECT ON SURGICALLY INDUCED OSTEOARTHRITIS.....	1R01 AM22149-01	95,784
SHAPIRO, EVERETT.....	PULSATING FORCES IN ORTHODONTICS.....	5R01 DE04487-02	49,995
SILBERT, JEREMIAH E.....	METABOLISM OF MUCOPOLYSACCHARIDES.....	5R01 AM08816-14	47,561
SONENSHEIN, ABRAHAM L.....	ROLE OF RNA POLYMERASE IN BACTERIAL DIFFERENTIATION.....	5R01 GM19168-07	49,304
SONNENSCHNEIN, CARLOS.....	MECHANISM OF HORMONE ACTION ON TARGET CELLS IN CULTURE.....	5R01 CA13410-05	98,432
STADECKER, MIGUEL J.....	THE ROLE OF MACROPHAGES IN TUMOR GROWTH CONTROL.....	1R23 CA24481-01	29,271
STEARNS, NORMAN S.....	DOCUMENTED READING FOR IMPROVED PATIENT CARE.....	3R01 LM02543-02S2	75,930
STOLBACH, LEO L.....	ONCOLOGY STUDIES: EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA07190-16	155,590
STOLLAR, BERNARD D.....	IMMUNOCHEMICAL BASIS FOR INDUCING TOLERANCE TO DNA.....	5R01 AI14534-02	43,193

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
TECCE, JOSEPH J.....	NEUROPSYCHOLOGICAL STUDIES OF ATTENTION AND AGING.....	5R01 AG00515-03	90,194
TERRES, GERONIMO, JR.....	SOMATIC CELL HYBRIDIZATION OF IMMUNE CYTOLYTIC T-CELLS.....	1R01 CA22664-01	82,403
WOLFE, HUBERT J.....	CARCINOEMBRYONIC PROTEINS & NEOPLASTIC TRANSFORMATION.....	3P01 CA12924-06S1	343,924
WOLFE, HUBERT J.....	C-CELL HYPERPLASIA AND THYROID MEDULIARY CARCINOMA.....	2R01 CA17389-04	102,445
WORTIS, HENRY H.....	NEOPLASIA IN NUDE (ATHYMIC) MICE.....	5R01 CA16172-04	88,592
WORTIS, HENRY H.....	LYMPHOCYTE BINDING TO MACROPHAGES.....	5R01 CA21348-02	65,618
WRIGHT, ANDREW.....	STRUCTURE AND FUNCTION OF THE CELL MEMBRANE.....	5R01 GM15837-11	57,310
ORGANIZATION TOTAL	52 3,910,060		
TUFTS-NEW ENGLAND MEDICAL CENTER ZIP CODE 02111			
BRENNER, JOHN F, III.....	T- AND B-CELL IMAGE QUANTITATION AND RADIATION THERAPY.....	5R01 CA18742-03	116,652
GORBACH, SHERWOOD L.....	CHOLERA-LIKE TOXIGENIC COLIFORM DIARRHEA IN CHILDREN.....	5R22 AI13164-03	39,950
GORBACH, SHERWOOD L.....	DIET AND ITS EFFECT ON ENZYMES LINKED TO COLON CANCER.....	2R26 CA17511-04	104,180
MIKKELSEN, ROSS B.....	CA20 METABOLISM IN NORMAL AND TRANSFORMED LYMPHOCYTES.....	5R01 CA22269-02	64,283
PIRO, ANTHONY J.....	RADIOTHERAPY ONCOLOGY CENTER.....	3P01 CA12178-07S1	244,813
PIRO, ANTHONY J.....	RADIOTHERAPY ONCOLOGY CENTER.....	2P01 CA12178-08	463,977
SCHMIDT-ULLRICH, RUPERT.....	CHARACTERIZATION OF SV40-SPECIFIC MEMBRANE ANTIGENS.....	1R01 CA23642-01	71,813
ORGANIZATION TOTAL	7 1,105,668		
UNIVERSITY HOSPITAL ZIP CODE 02118			
CHIDECKEL, ELLIOTT W.....	FUEL AND AMINO ACID METABOLISM IN THE PRIMATE BRAIN.....	5R01 AM21081-02	67,986
CLARK, ROBERT A.....	NEUTROPHIL-MEDIATED TUMOR CELL CYTOTOXICITY.....	1R01 CA24353-01	104,069
COFFMAN, JAY D.....	ANTILIPEMIC REGIMES IN PERIPHERAL ARTERIOSCLEROSIS.....	5R01 HL13654-08	61,380
COFFMAN, JAY D.....	FINGERTIP BLOOD FLOW IN NORMALS AND RAYNAUD'S DISEASE.....	5R01 HL18467-03	23,977
COFFMAN, JAY D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05487-16	103,405
DECKERS, PETER J.....	ADJUVANT PRIMARY BREAST CANCER THERAPY GROUP (NASBP).....	1R10 CA22489-01	46,716
DIAMOND, RICHARD D.....	PULMONARY AND SYSTEMIC KILLING OF OPPORTUNISTIC FUNGI.....	1R01 AI15338-01	105,043
GOODMAN, MICHAEL N.....	METABOLIC ADAPTATION TO STARVATION: AN ANIMAL MODEL.....	5R01 AM19469-03	80,424
HARRIS, LAURAN D.....	CONTROL OF SPHINCTER STRENGTH.....	5R01 AM11907-11	84,235
HOLLANDER, WILLIAM.....	DRUG TREATMENT OF ATHEROSCLEROSIS.....	5R01 HL16437-05	62,102
KRAMSCH, DIETER M.....	DRUG TREATMENT OF STENOSING PRIMATE ATHEROSCLEROSIS.....	5R01 HL15512-06	89,757
KRAMSCH, DIETER M.....	EXERCISE AND CORONARY ATHEROSCLEROTIC HEART DISEASE.....	5R01 HL18060-04	133,369
LANGE, YVONNE.....	CHOLESTEROL DISTRIBUTION IN ERYTHROCYTE MEMBRANES.....	5R01 HL20303-03	36,400
LEVINSKY, NORMAN G.....	HYPOTENSION, RENAL ISCHEMIA AND EFFECT OF MANNITOL.....	1R01 HL22172-01	175,064
LEVY, ELINOR M.....	CONTROL OF IMMUNOSUPPRESSOR CELL ACTIVATION FUNCTION.....	1R01 CA25039-01	66,325
LOWENSTEIN, LEAH M.....	A NEW CYCLE FOR AMMONIA PRODUCTION IN THE KIDNEY.....	2R01 AM17713-03A1	83,761
LOWENSTEIN, LEAH M.....	THE REGULATION OF RENAL COMPENSATORY ADAPTATION.....	1R01 AM21596-01	87,285
MELBY, JAMES C.....	SUPPORT FOR CLINICAL METABOLIC RESEARCH UNIT.....	3P01 AM08657-13S1	206,176
MELBY, JAMES C.....	MECHANISMS REGULATING ADRENOCORTICAL SECRETION.....	5R01 AM12027-11	130,267
MIRSKY, ALLAN F.....	NEUROBEHAVIORAL STUDIES IN PETIT MAL EPILEPSY.....	5R01 NS12201-04	88,574
OLSSON, CARL A.....	STEROID HORMONE RECEPTORS IN HUMAN PROSTATE TISSUE.....	1R26 CA23666-01	132,949
POCHI, PETER E.....	SEBACEOUS GLANDS, ACNE AND ANDROGEN METABOLISM.....	1R01 HD11632-01	73,075
REDINGER, RICHARD N.....	INTERRELATION OF BILIARY LIPID AND PLASMA LIPOPROTEIN.....	1R01 AM21986-01	122,820
RUDERMAN, NEIL B.....	GLUCOSE AND AMINO ACID METABOLISM IN SKELETAL MUSCLE.....	3R01 AM19514-02S1	52,911
STRAUS, MARC J.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA11109-10	93,854
STRAUS, MARC J.....	CELLULAR KINETICS OF CLINICAL CANCER CHEMOTHERAPY.....	3P01 CA18837-02S1	42,673
WOTIZ, HERBERT H.....	CELLULAR KINETICS OF CLINICAL CANCER CHEMOTHERAPY.....	5P01 CA18837-03	336,635
ORGANIZATION TOTAL	27 2,691,232		
UNIVERSITY OF MASSACHUSETTS AT BOSTON ZIP CODE 02125			
LIPKE, HERBERT.....	SCLEROTIN PRECURSORS IN DIPTERANS.....	1R01 AI14753-01	70,204
ORGANIZATION TOTAL	1 70,204		
VETERANS ADMINISTRATION OUTPATIENT CLINIC ZIP CODE 02108			
FOZARD, JAMES L.....	MENTAL PERFORMANCE AND AGING.....	3R01 AG00467-03S1	2,928
FOZARD, JAMES L.....	MENTAL PERFORMANCE AND AGING.....	5R01 AG00467-04	65,477
POON, LEONARD W.....	AGE, IMAGERY, REWARD AND PRACTICE IN VERBAL LEARNING.....	5R23 AG00738-02	13,470
ORGANIZATION TOTAL	3 81,875		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
CAMBRIDGE			
BIO-RESEARCH INSTITUTE	ZIP CODE 02141		
HOMBURGER, FREDDY.....	INBRED LINES AND MUTANT STOCKS OF THE SYRIAN HAMSTER.....	5P40 RR01033-03	89,585
ORGANIZATION TOTAL	1	89,585	
HARVARD UNIVERSITY	ZIP CODE 02138		
BLOCH, KONRAD E.....	BIOSYNTHESIS AND FUNCTION OF LIPIDS.....	3R01 HL02477-22S1	4,471
BLOCH, KONRAD E.....	BIOSYNTHESIS AND FUNCTION OF LIPIDS.....	5R01 HL02477-23	201,535
BOGORAD, LAWRENCE.....	MOLECULAR MECHANISMS OF INTRACELLULAR INTEGRATION.....	2R01 GM20470-06	91,089
BRANTON, DANIEL.....	ORGANIZATION OF NORMAL AND TRANSFORMED CELL MEMBRANES.....	2R01 GM20396-06	106,229
BRANTON, DANIEL.....	MOLECULAR STUDIES OF RED BLOOD CELL SPECTRIN.....	2R01 HL17411-04	47,755
BRENNER, MICHAEL.....	STUDIES OF ADENYLATE AND GUANYLATE CYCLASES.....	1R01 GM23487-01A1	56,238
COREY, ELIAS J.....	ANTITUMOR/ANTIBIOTIC SUBSTANCES: SYNTHESIS & CHEMISTRY.....	5R01 CA16421-04	263,551
COREY, ELIAS J.....	COMPUTER-ASSISTED ANALYSIS OF CHEMICAL SYNTHESIS.....	5R01 GM18519-08	131,410
CREWS, DAVID P.....	NEUROENDOCRINE CONTROL OF REPRODUCTIVE BEHAVIOR.....	1R01 NS15305-01	78,680
DOTY, PAUL M.....	CHROMATIN, SPECIAL GENES AND RNA IN DEVELOPMENT.....	5R01 HD01229-27	154,204
DOWLING, JOHN E.....	ANATOMICAL ORGANIZATION OF THE VISUAL SYSTEM.....	5R01 EY00811-07	57,466
DOWLING, JOHN E.....	FUNCTIONAL ORGANIZATION OF VERTEBRATE VISUAL SYSTEMS.....	5R01 EY00824-08	64,295
DOWLING, JOHN E.....	PHYSIOLOGY OF PHOTORECEPTORS OF THE RETINA.....	1R01 EY02418-01	39,385
DRESSLER, DAVID H.....	MOLECULAR MECHANISMS IN DNA REPLICATION.....	5R01 GM17088-09	183,577
ELGIN, SARAH C.....	NONHISTONE CHROMOSOMAL PROTEINS OF DROSOPHILA.....	5R01 GM20779-05	71,841
ELGIN, SARAH C.....	RECONSTITUTION OF DROSOPHILA CHROMATIN.....	5R01 GM24069-02	1,586
GELBART, WILLIAM M.....	GENETIC CONTROL OF DROSOPHILA ACETYLCHOLINESTERASE.....	5R01 GM23522-02	58,065
GILBERT, WALTER.....	CONSTRUCTION OF AN INSULIN-PRODUCING BACTERIAL STRAIN.....	5R01 AM21240-02	122,383
GILBERT, WALTER.....	ROLE OF RIBONUCLEIC ACID IN PROTEIN SYNTHESIS.....	5R01 GM09541-17	386,547
GILBERT, WALTER.....	INTERACTION OF PROTEINS WITH DNA.....	2R01 GM21514-04	77,149
GILL, D MICHAEL.....	MECHANISM OF ACTION OF CHOLERA TOXIN.....	5R22 AI13083-03	84,645
GREEN, DAVID M.....	TEMPORAL FACTORS IN MASKING.....	5R01 NS11620-05	101,113
GREER, HELEN A.....	GENE REGULATION OF HISTIDINE BIOSYNTHESIS IN YEAST.....	1R01 GM25207-01	97,334
GUIDOTTI, GUIDO.....	STRUCTURE AND FUNCTION OF MEMBRANE PROTEINS.....	5R01 HL08893-14	100,047
HARRISON, STEPHEN C.....	VIRUS STRUCTURE AND ASSEMBLY.....	5R01 CA13202-07	92,023
HASTINGS, JOHN W.....	MOLECULAR AND CELLULAR MECHANISMS OF BIOLOGICAL RHYTHMS.....	2R01 GM19536-06	82,863
KAFATOS, FOTIS C.....	REGULATION AND EVOLUTION OF A MULTIGENE FAMILY.....	5R01 GM24225-02	58,646
KAFATOS, FOTIS C.....	STUDIES IN DEVELOPMENTAL BIOLOGY.....	5R01 HD04701-09	83,772
KAGAN, JEROME.....	COGNITIVE AND AFFECTIVE DEVELOPMENT IN INFANCY.....	5R01 HD10094-02	88,991
KARPLUS, MARTIN.....	THEORETICAL STUDIES OF BIOMOLECULES.....	5R01 EY00062-09	90,090
KESSIN, RICHARD H.....	CONTROL OF AGGREGATION IN D. DISCOIDEUM.....	2R01 GM21809-04	109,069
KISHI, YOSHITO.....	SYNTHESIS OF ANTITUMOR NATURAL PRODUCTS.....	1R01 CA22215-01	119,306
KISHI, YOSHITO.....	SYNTHETIC STUDIES ON COMPLEX NATURAL PRODUCTS.....	2R01 NS12108-04	160,018
KLECKNER, NANCY E.....	ILLEGITIMATE RECOMBINATION BY DRUG RESISTANCE ELEMENTS.....	1R01 GM25326-01	71,521
KLOTZ, LYNN C.....	PHYSICAL STUDIES OF CHROMOSOMAL DNA.....	5R01 GM20798-04	34,088
KNOWLES, JEREMY R.....	ENZYME-CATALYZED PHOSPHATE TRANSFER REACTIONS.....	5R01 GM21659-04	101,188
KNOWLES, JEREMY R.....	PHOTOGENERATED REAGENTS FOR BIOLOGICAL RECEPTORS.....	5R01 GM22961-03	81,083
KRONAUER, RICHARD E.....	CONE INPUTS TO HUMAN SPATIAL DETECTORS.....	5R01 EY01808-03	49,097
KRONAUER, RICHARD E.....	BREATHING PATTERNS IN MAN.....	5R01 HL16325-03	50,677
LEVINE, ROBERT A.....	CULTURAL FACTORS IN FAMILY SUPPORT FOR THE ELDERLY.....	1R01 AG01095-01	89,537
LEWONTIN, RICHARD C.....	GENETIC VARIATION OF PROTEINS IN NATURAL POPULATIONS.....	5R01 GM21179-05	121,082
LEWONTIN, RICHARD C.....	GENETIC VARIATION DETECTABLE BY ELECTROPHORESIS.....	1R01 GM24849-01	46,928
LIPSCOMB, WILLIAM N.....	STRUCTURE & FUNCTION OF BIOLOGICALLY ACTIVE MOLECULES.....	5R01 GM06920-20	248,298
LOSICK, RICHARD M.....	ROLE OF RNA POLYMERASE IN BACTERIAL DIFFERENTIATION.....	5R01 GM18568-06	100,648
MC CLURE, WILLIAM R.....	MECHANISM AND REGULATION OF E. COLI RNA POLYMERASE.....	5R01 GM21052-04	55,041
MC MAHON, THOMAS A.....	MUSCLE FORCE DURING RUNNING BY X-RAY CINE.....	5R01 AM19638-02	53,880
MC MAHON, THOMAS A.....	SERVO-SIMULATED COMPLIANCE CHANGES: A REVERSIBLE M.I.....	5R01 HL21425-02	48,702
MESELSON, MATTHEW S.....	NUCLEAR AND MESSENGER RNA OF DROSOPHILA.....	5R01 GM22274-04	158,757
MILLER, KENNETH R.....	STRUCTURE OF THE PHOTOSYNTHETIC MEMBRANE.....	5R01 GM24078-02	45,028
PTASHNE, MARK S.....	BACTERIOPHAGE REPRESSORS.....	2R01 GM22526-03	125,839
RADIN, ERIC L.....	AN INVESTIGATION OF JOINT DEGENERATION.....	5R01 AM18069-04	88,349
RADIN, ERIC L.....	BONE-CEMENT INTERFACE AFTER JOINT REPLACEMENT.....	5R01 AM19801-02	228,752

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
ROSOVSKY, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07046-13	200,462
SATO, VICKI L.....	FUNCTIONAL STUDIES OF ANTIGEN-REACTIVE T LYMPHOCYTES.....	5R01 CA20103-03	53,133
SATO, VICKI L.....	IMMUNOBIOLOGY OF EARLY LYMPHOCYTE DEVELOPMENT.....	1R01 CA24368-01	102,578
SEGAL, DAVID.....	THE ECONOMICS OF NEIGHBORHOOD CHOICE.....	1R01 HD11651-01	54,552
STROMINGER, JACK L.....	BIOCHEMISTRY—MECHANISM OF ACTION OF ANTIBIOTICS.....	5R01 AI09152-10	86,709
STROMINGER, JACK L.....	STRUCTURAL AND BIOSYNTHETIC STUDIES OF HL-A DETERMINANTS.....	5R01 AI10736-04	118,411
STROMINGER, JACK L.....	BIOSYNTHESIS OF COMPLEX POLYSACCHARIDES.....	5R01 AM13230-10	49,198
TAYLOR, C RICHARD.....	LOCOMOTION: IDLING METABOLISM AND GAIT DYNAMICS.....	2R01 AM18140-04	72,947
TAYLOR, DOUGLASS L.....	MUSCLE CONTRACTION AND CYTOPLASMIC STREAMING.....	3R01 AM18111-03S1	14,248
TAYLOR, DOUGLASS L.....	STRUCTURAL AND CHEMICAL DYNAMICS OF CELL MOVEMENT.....	2R01 AM18111-04	81,356
WALD, GEORGE.....	CHEMISTRY AND PHYSIOLOGY OF VISUAL EXCITATION.....	5R01 EY00508-10	91,170
WANG, JAMES C.....	PHYSICOCHEMICAL STUDIES OF NUCLEIC ACIDS.....	3R01 GM24544-01S1	38,915
WANG, JAMES C.....	PHYSICOCHEMICAL STUDIES OF NUCLEIC ACIDS.....	5R01 GM24544-02	198,703
WARE, BENNIE R.....	FLUCTUATION ANALYSIS OF NITELLA AND PHYSARUM.....	5R01 GM21910-04	28,131
WARE, BENNIE R.....	AUTOMATED ELECTROPHORETIC ANALYSIS OF LIVING CELLS.....	2R01 GM23788-02	65,654
WENDER, PAUL A.....	SYNTHETIC STUDIES ON CYTOTOXIC SESQUITERPENES.....	5R01 CA21136-02	58,467
WESTHEIMER, FRANK H.....	MECHANISM OF ENZYME ACTION.....	5R01 GM04712-22	83,945
WILEY, DON C.....	VIRAL MEMBRANE AND GLYCOPROTEIN STRUCTURE.....	5R01 AI13654-02	76,908
WILLIAMS, CARROLL M.....	NEW STRATEGIES IN THE SELECTIVE CONTROL OF INSECTS.....	5R01 AI12604-04	106,246
WOODWARD, ROBERT B.....	STUDIES IN THE CHEMISTRY OF NATURAL PRODUCTS.....	5R01 GM04229-24	297,395
ORGANIZATION TOTAL	72	7,142,996	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
ADELSTEIN, S JAMES.....	NUCLEAR TECHNIQUES IN METABOLISM & BONE DISEASE.....	3R01 AM17930-03S1	43,266
AMDUR, MARY O.....	FACTORS AFFECTING IRRITANT POTENCY OF GASES AND AEROSOLS.....	7R01 ES01939-01	76,472
ARCHER, MICHAEL C.....	MECHANISM OF NITROSAMINE ALKYLATION OF DNA AND RNA.....	5R01 CA21951-02	37,357
BALDWIN, JACK E.....	OXIDATION OF ESSENTIAL FATTY ACIDS.....	5R01 GM22639-03	29,017
BALDWIN, JACK E.....	CHELATING AGENTS AS BLOOD SUBSTITUTES.....	3R01 HL17794-03S1	40,784
BALTIMORE, DAVID.....	MOLECULAR BIOLOGY OF RNA VIRUSES.....	5R01 AI08388-11	115,016
BARRETT, ALAN H.....	NONINVASIVE SENSING OF SUBCUTANEOUS TEMPERATURES.....	5R01 GM20370-06	142,614
BAUM, MICHAEL J.....	MATING BEHAVIOR, ANDROGEN METABOLISM, AND MONOAMINES.....	1R01 HD12002-01	69,089
BELL, EUGENE.....	ANALYSIS OF AGING IN CELL LINEAGES.....	5P01 AG00354-02	190,777
BENEDEK, GEORGE B.....	PHYSICAL AND CHEMICAL BASIS OF LENS OPACITY.....	5R01 EY00797-07	130,870
BERCHTOLD, GLENN A.....	ANTICANCER AGENTS: SYNTHESIS AND ACTIVITY STUDIES.....	5R01 CA18888-03	63,375
BEVAN, MICHAEL J.....	CYTOTOXIC RESPONSE TO HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI14269-02	81,163
BIEMANN, KLAUS.....	MASS SPECTROMETRIC SEQUENCING OF PROTEINS.....	5R01 GM05472-20	103,287
BIEMANN, KLAUS.....	MASS SPECTROMETRY FACILITY FOR BIOMEDICAL RESEARCH.....	5P41 RR00317-12	143,333
BIZZI, EMILIO.....	STUDY OF EYE-HEAD COORDINATION.....	3R01 NS09343-08S1	3,000
BIZZI, EMILIO.....	STUDY OF EYE-HEAD COORDINATION.....	2R01 NS09343-09	139,737
BOTSTEIN, DAVID.....	DNA REPLICATION OF PHAGE P22.....	5R01 GM18973-07	40,424
BOTSTEIN, DAVID.....	MOLECULAR GENETICS OF MORPHOGENETIC PATHWAYS.....	5R01 GM21253-04	89,743
BRAIDA, LOUIS D.....	INTENSITY PERCEPTION AND LOUDNESS.....	5R01 NS11153-03	75,382
BRAIDA, LOUIS D.....	HEARING-AID RESEARCH.....	5R01 NS12846-03	145,354
BROWN, GENE M.....	BIOSYNTHESIS OF B VITAMINS.....	5R01 AM03442-20	84,599
BUCHANAN, JOHN M.....	NUCLEOTIDE AND NUCLEIC ACID METABOLISM.....	3R01 CA02015-25S1	38,250
BUCHI, GEORGE H.....	THE CHEMISTRY OF NATURAL PRODUCTS.....	5R01 GM09686-17	137,714
CAREY, SUSAN E.....	DEVELOPMENT OF VISUAL FORM RECOGNITION IN CHILDREN.....	5R01 HD09179-04	53,196
CHOUCRI, NAZLI.....	INTERSTATE MIGRATION IN THE MIDDLE EAST.....	1R01 HD09804-01A1	50,000
COHEN, DAVID.....	MAGNETIC DETECTION OF INJURY CURRENT FROM TUMORS.....	5R01 CA20631-02	71,815
COLEMAN, JOHN W.....	AUGER ELECTRON MICROSCOPY FOR BIOLOGICAL RESEARCH.....	1R01 GM23597-01	101,786
COLTON, CLARK K.....	TRANSPORT OF LDL IN ARTERIAL WALL.....	5R01 HL21429-02	186,423
CORNELIUS, WAYNE A.....	IMPACT OF GOVERNMENT POLICIES ON RURAL OUT-MIGRATION.....	5R01 HD11161-02	105,022
CRAVALHO, ERNEST G.....	CRYOPRESERVATION OF THE ISOLATED HEART.....	5R01 HL20219-02	82,116
DEEN, WILLIAM M.....	PHYSICOCHEMICAL ASPECTS OF RENAL TRANSPORT PROCESSES.....	5R01 AM20368-02	38,702
DEUTSCH, MARTIN.....	BIOLOGICAL CRYSTALLOGRAPHY, A PRECISION AREA DETECTOR.....	1R01 GM24918-01	171,284
DEWEY, C FORBES, JR.....	UNSTEADY FLOW IN ARTERIAL BIFURCATIONS.....	1R01 HL21859-01	66,699
EISEN, HERMAN N.....	IMMUNITY TO MYELOMA TUMORS.....	5R01 CA15472-06	187,506
FODOR, JERRY A.....	PROCESSES IN UNDERSTANDING AND PRODUCING SENTENCES.....	2R01 HD05168-06A1	159,954
FOX, JAMES G.....	RESEARCH ANIMAL DIAGNOSTIC LABORATORY.....	5P40 RR01046-03	98,921
FOX, MAURICE S.....	GENETIC RECOMBINATION AND MICROBIAL DNA SYNTHESIS.....	2R01 AI05388-16	118,485

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
GETTER, MALCOLM L.....	REGULATORY MECHANISMS IN NORMAL AND NEOPLASTIC CELLS.....	5R01 AI13357-03	107,025
GETTER, MALCOLM L.....	MECHANISM AND CONTROL OF DNA REPLICATION.....	5R01 GM20363-06	79,400
GOTTLIEB, PAUL D.....	GENETIC MARKERS, LEUKEMOGENESIS, AND THYMIC FUNCTION.....	2R01 CA15808-05	98,648
GREEN, HOWARD.....	THE ADIPOSE CONVERSION OF 3T3 CELLS.....	1R01 AM21997-01	117,792
GREEN, HOWARD.....	STUDY OF GROWTH AND CELL CONTROL PROCESSES.....	2P01 CA12174-09	340,725
GREEN, HOWARD.....	GROWTH AND DIFFERENTIATED FUNCTION IN MAMMALIAN CELLS.....	5R01 CA12187-09	125,828
GREENE, FREDERICK D.....	CYCLIC AZO DIOXIDES, POTENTIAL IN CANCER CHEMOTHERAPY.....	1R01 CA23550-01	64,419
GRIFFIN, ROBERT G.....	SOLID STATE NMR STUDIES OF LIPID BILAYER STRUCTURE.....	5R01 GM23289-03	64,403
GRIFFIN, ROBERT G.....	SOLID STATE NMR STUDIES OF AMINO ACIDS AND PEPTIDES.....	5R01 GM23403-02	46,308
GRIFFIN, ROBERT G.....	DEUTERIUM NMR INVESTIGATIONS OF LIPID ASSOCIATION.....	1R01 GM25505-01	49,518
HALL, LINDA M.....	ANALYSIS OF A TETRODOTOXIN-SENSITIVE MUTANT.....	5R01 NS13881-02	85,542
HECHT, SIDNEY M.....	TOTAL SYNTHESIS OF BLEOMYCIN.....	1R01 CA22614-01	93,411
HELD, RICHARD M.....	VISION AND VISUOMOTOR MECHANISMS.....	5R01 EY01191-06	112,130
HELD, RICHARD M.....	CENTRAL VISUAL PROCESSES.....	1P30 EY02621-01	147,929
HELD, RICHARD M.....	DEVELOPMENT OF AMBLYOPIA IN EARLY CATARACT & STRABISMUS.....	1R01 EY02649-01	47,968
HERMANN, HOWARD T.....	COMPENSATORY VISUAL NEURAL CHANGES WITH EYE MOVEMENTS.....	5R01 EY01415-04	79,263
HOPKINS, NANCY H.....	ENDOGENOUS VIRUSES OF BALB/C MICE.....	5R01 CA19308-03	43,297
HORVITZ, H ROBERT.....	GENETIC ANALYSIS OF NEMATODE EGG-LAYING.....	1R01 GM24663-01	81,699
HORVITZ, H ROBERT.....	CONTROL OF CELL DIVISION IN THE NEMATODE C. ELEGANS.....	1R01 GM24943-01	77,782
HOUSMAN, DAVID E.....	ERYTHROID DIFFERENTIATION IN FRIEND LEUKEMIA CELLS.....	2R01 CA17575-04	72,247
HOUTSMA, ADRIANUS J.....	AUDITORY PITCH PROCESSING OF COMPLEX TONES.....	2R01 NS11680-02A2	58,482
HYNES, RICHARD O.....	CELL SURFACE STRUCTURE AND TRANSFORMATION.....	5R01 CA17007-04	65,697
INGRAM, VERNON M.....	DIFFERENTIATION OF ERYTHROPOIESIS AND MYOGENESIS.....	5R01 AM13945-09	265,687
KEMP, DANIEL S.....	SYNTHESIS AND REACTIONS OF PEPTIDES.....	5R01 GM13453-13	147,923
KHORANA, HAR G.....	STUDIES OF BIOLOGICAL MEMBRANES.....	5R01 AI11479-06	56,631
KHORANA, HAR G.....	SYNTHETIC AND BIOLOGICAL STUDIES OF NUCLEIC ACIDS.....	5R01 CA11981-09	327,028
KING, JOHN G.....	SURFACE STUDIES IN BIOLOGY MOLECULE MICROSCOPY.....	1R01 GM23678-01	97,802
KING, JONATHAN A.....	BACTERIOPHAGE ASSEMBLY AND ITS GENETIC CONTROL.....	2R01 GM17980-09	118,409
KOPITO, LOUIS.....	ZINC REQUIREMENTS AND ZINC STATUS IN ADULT MALES.....	1R22 AM19526-01A1	68,890
LEES, ROBERT S.....	LIPOPROTEINS, HEMOSTASIS AND ATHEROSCLEROSIS.....	5R01 HL21460-02	108,676
LELE, PADMAKAR P.....	LOCAL ULTRASONIC HYPERTHERMIA FOR CANCER THERAPY.....	5R01 CA16111-04	113,468
LETTVIN, JEROME Y.....	PHYSIOLOGY AND PSYCHOLOGY OF VISION.....	3R01 EY01149-03S3	15,803
LEVENE, MARTIN B.....	DOSE DISTRIBUTION IN CANCER RADIATION THERAPY.....	5P01 CA17588-04	440,627
LODISH, HARVEY F.....	TRANSLATION OF VIRAL MESSENGER RNAS.....	5R01 AI08814-11	103,605
LONDON, IRVING M.....	REGULATION OF HEMOGLOBIN SYNTHESIS AND HEMATOPOIESIS.....	5R01 AM16272-07	186,573
LONDON, IRVING M.....	CONTROL OF PROTEIN SYNTHESIS BY DOUBLE-STRANDED RNA.....	1R01 GM24825-01	96,485
LURIA, SALVADOR E.....	CELL CONTROL FUNCTIONS AND BACTERIOCIN ACTION.....	5R01 AI03038-20	95,132
LURIA, SALVADOR E.....	SUPPORT FOR CANCER BIOLOGY CENTER.....	5P01 CA14051-07	1,339,394
MAGASANIK, BORIS.....	SYNTHESIS OF HISTIDINE DEGRADING ENZYMES.....	5R01 AM13894-09	108,242
MAGASANIK, BORIS.....	REGULATION AND FUNCTION OF GLUTAMINE SYNTHETASE.....	5R01 GM07446-20	92,079
MANN, ROBERT W.....	PRESSURE DISTRIBUTION ACROSS HUMAN HIP JOINT.....	5R01 AM16116-05	163,562
MARCUS, RICHARD S.....	NETWORKS FOR AIDING BIOMEDICAL INFORMATION TRANSFER.....	1R01 LM03120-01	112,469
MARK, ROGER G.....	BIOMEDICAL ENGINEERING CLINICAL INSTRUMENTATION CENTER.....	5P50 GM22392-03	398,039
MUNRO, HAMISH N.....	NUTRITIONAL REGULATION OF PROTEIN METABOLISM.....	2R01 AM15364-08	87,003
NEURINGER, LEO J.....	NMR STUDIES OF NORMAL AND TRANSFORMED CELL MEMBRANES.....	1R01 GM25689-01	79,182
NEURINGER, LEO J.....	A NATIONAL NMR FACILITY FOR BIOMOLECULAR RESEARCH.....	5P41 RR00995-03	104,273
NEWBERNE, PAUL M.....	NUTRITION AND THE THYMOLYMPHATIC SYSTEM.....	5R22 HD06917-05	31,862
PARDUE, MARY L.....	GENE FUNCTION ANALYSIS BY POLYTENE CHROMOSOMES.....	5R01 GM21874-04	95,037
PARDUE, MARY L.....	ORGANIZATION OF SPECIFIC SEQUENCES IN EUKARYOTIC DNA.....	1R01 GM24635-01	64,156
PENMAN, SHELDON.....	TRANSCRIPTION AND TRANSLATION IN MAMMALIAN CELLS.....	5R01 CA08416-13	192,325
RAJBHANDARY, UTTAM L.....	STRUCTURE AND FUNCTION OF TRANSFER RIBONUCLEIC ACIDS.....	2R01 GM17151-09	84,407
RASTETTER, WILLIAM H.....	CHELATION-ANTIBIOTICS/TREATMENT OF IRON OVERLOAD.....	5R01 AM20452-02	42,699
RASTETTER, WILLIAM H.....	REACTIVE HETEROCYCLES—CANCER AND BIOMECHANISM.....	5R01 CA20574-02	67,608
RICH, ALEXANDER.....	MOLECULAR STRUCTURE OF NUCLEIC ACIDS AND PROTEINS.....	5R01 CA04186-20	148,983
RICHARDS, WHITMAN A.....	STUDIES OF BINOCULAR VISION.....	3R01 EY00742-06S1	6,113
ROBBINS, PHILLIPS W.....	CELL AND VIRUS GLYCOPROTEINS—SYNTHESIS AND FUNCTION.....	2R01 CA14142-16	158,204
ROSE, JOHN K.....	RIBOSOME RECOGNITION OF ANIMAL VIRUS MRNA.....	1R23 AI14566-01	44,562
ROSENBLITH, WALTER A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07047-13	200,462
SALZMAN, EDWIN W.....	THROMBORESISTANT MATERIALS.....	5R01 HL20079-02	407,032
SAMUELSON, PAUL A.....	ECONOMIC AND BIOLOGICAL ANALYSIS OF POPULATION.....	2R01 HD09081-03	51,903

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
SCHILLER, PETER H.....	STUDIES OF INTERACTION BETWEEN EYE MOVEMENT AND VISION.....	5R01 EY00676-08	90,497
SCHIMMEL, PAUL R.....	INVESTIGATIONS OF REACTIONS OF PHYSIOLOGICAL IMPORTANCE.....	5R01 GM15539-11	122,387
SCHIMMEL, PAUL R.....	GENETIC APPROACHES TO PROTEIN-NUCLEIC ACID INTERACTIONS.....	5R01 GM23562-02	45,727
SCHNEIDER, GERALD E.....	NEUROPSYCHOLOGICAL STUDIES OF THE VISUAL SYSTEM.....	5R01 EY00126-09	130,327
SCHNEIDERMAN, GARY.....	OXYGEN SUPPLY & BLOOD FLOW THROUGH AORTIC VASA VASORUM.....	1R23 HL21559-01	46,785
SCRIMSHAW, NEVIN S.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00088-15	684,034
SHAPIRO, ASCHER H.....	EXTERNAL PNEUMATIC COMPRESSION IN DEEP VENOUS THROMBOSIS.....	5R01 HL17974-03	76,396
SIEBERT, WILLIAM M.....	BINAURAL HEARING.....	5R01 NS10916-04	122,843
SOLOMON, EDWARD I.....	SPECTROSCOPIC STUDIES OF BINUCLEAR COPPER PROTEINS.....	5R01 AM20406-02	52,846
STEINER, LISA A.....	STRUCTURE AND DIVERSITY IN THE IMMUNE SYSTEM.....	2R01 AI08054-12	125,953
STEVENS, KENNETH N.....	PHYSIOLOGICAL AND ACOUSTICAL STUDIES OF SPEECH.....	2R01 NS04332-16	295,765
STEVENS, KENNETH N.....	SEGMENTAL TIMING IN SPEECH.....	5R01 NS13028-03	78,016
SZOLOVITS, PETER.....	LABORATORY FOR CLINICAL DECISION MAKING.....	5P41 RR01096-02	247,627
TANAKA, TOYOICHI.....	IN VIVO DETECTION OF PROTEIN AGGREGATES IN THE LENS.....	5R01 EY01696-03	36,003
TANAKA, TOYOICHI.....	QUANTITATIVE CHARACTERIZATION OF LENS OPACITIES.....	1R01 EY02433-01	73,813
TORRIANI-GORINI, ANNAMARIA.....	ENZYME SYNTHESIS, STRUCTURE--E COLI ALKALINE PHOSPHATASE.....	5R01 GM24009-02	77,404
TYLER, BONNIE M.....	REGULATION OF TRANSCRIPTION BY GLUTAMINE SYNTHETASE.....	5R01 GM22527-03	62,949
WALKER, GRAHAM C.....	MUTAGENESIS AND REPAIR OF DNA.....	5R01 CA21615-02	73,635
WALSH, CHRISTOPHER T.....	ENZYMATIC REACTION MECHANISMS.....	5R01 GM20011-06	61,872
WALSH, CHRISTOPHER T.....	COENZYME ANALOGUES AS PROBES OF FLAVOENZYME CATALYSIS.....	2R01 GM21643-04	75,253
WAUGH, DAVID F.....	BLOOD COAGULATION: PHYSICO-CHEMICAL INTERACTIONS.....	2R01 HL13198-21	71,054
WAUGH, JOHN S.....	HIGH RESOLUTION NMR IN SOLIDS.....	2R01 GM16552-10	129,900
WEINBERG, ROBERT A.....	INTERACTION OF SARCOMA AND LEUKEMIA GENOMES.....	2R01 CA17537-04	52,293
WHITESIDES, GEORGE M.....	SYNTHESIS OF PROTEIN-PROTEIN CONJUGATES.....	1R01 GM24025-01	71,689
WHITESIDES, GEORGE M.....	MAGNETIC SEPARATIONS IN BIOCHEMISTRY.....	1R01 GM24540-01	30,416
WOGAN, GERALD N.....	STUDY OF FOOD-BORNE ENVIRONMENTAL TOXICANTS.....	5P01 ES00597-08	621,922
WOGAN, GERALD N.....	HEALTH, EFFECTS OF FOSSIL FUELS UTILIZATION.....	1P01 ES01640-01	524,651
WOGAN, GERALD N.....	ENVIRONMENTAL HEALTH SCIENCES CENTER.....	1P30 ES02109-01	654,907
WOLF, GEORGE D.....	VITAMIN A-GLYCOPHOSPHOLIPIDS AND GLYCOPROTEINS.....	5R01 AM20476-02	73,722
WOLF, GEORGE D.....	VITAMIN A AND GLYCOPROTEINS OF SKIN TUMORS.....	5R01 CA13792-02	60,531
WOLF, GEORGE D.....	VITAMIN A AND GLYCOPROTEINS OF CORNEA.....	3R01 EY00515-09S1	2,852
WOLF, GEORGE D.....	VITAMIN A AND GLYCOPROTEINS OF CORNEA.....	5R01 EY00515-10	93,966
WURTMAN, RICHARD J.....	CONTROL OF AROMATIC AMINO ACID UTILIZATION IN MAMMALS.....	5R01 AM14228-09	90,985
YANNAS, IOANNIS V.....	DESIGN AND EVALUATION OF AN ARTIFICIAL SKIN.....	5R01 GM23946-02	104,946
YOUNG, IAN T.....	A SOLID STATE AUTOMATED MICROSCOPE.....	1R01 GM25107-01	172,581
YOUNG, VERNON R.....	DIETARY PROTEIN INTAKE AND HUMAN PROTEIN METABOLISM.....	2R22 AM15856-07	90,109
YOUNG, VERNON R.....	NUTRITION AND MUSCLE PROTEIN TURNOVER.....	5R01 AM16654-06	49,289
ORGANIZATION TOTAL	134	17,370,325	
CHESTNUT HILL			
BOSTON COLLEGE ZIP CODE 02167			
BADE, MARIA L.....	BIOCHEMISTRY OF INSECT CUTICLE.....	5R01 ES00650-06	37,738
BOGER, ELIAHU.....	BENZO (RST) PENTAPHENE AND FLUORO DERIVATIVES.....	3R01 CA18959-03S1	20,617
CLARKE, MICHAEL J.....	SYNTHESIS, CHEMISTRY OF TECHNETIUM RADIOPHARMACEUTICALS.....	1R23 CA24344-01	48,440
KELLY, T ROSS.....	SYNTHESIS OF THE ANTITUMOR AGENT HARRINGTONINE.....	5R01 CA14014-06	30,374
KELLY, T ROSS.....	PRACTICAL SYNTHESIS OF THE ANTICANCER DRUG ADRIAMYCIN.....	2R01 CA17631-04	77,075
KELLY, T ROSS.....	SYNTHESIS OF THE ANTICANCER AGENT TRIPDIOLIDE.....	1R01 CA22936-01	65,820
NUMAN, MICHAEL.....	MATERNAL BEHAVIOR: NEURAL SITE OF PROGESTERONE ACTION.....	5R01 HD10395-02	11,649
PETRI, WILLIAM H.....	CONTROL OF DIFFERENTIATION: DROSOPHILA CHORION GENES.....	5R01 GM24185-02	40,830
PLOCKE, DONALD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07156-03	36,053
RULE, ALLYN H.....	IMMUNE MECHANISMS IN REMISSION OF THE DUNNING LEUKEMIA.....	5R01 CA19430-03	50,343
ORGANIZATION TOTAL	10	418,939	
LOWELL			
UNIVERSITY OF LOWELL ZIP CODE 01854			
LYNCH, ROBERT D.....	CHANGES IN LIPID UNSATURATION AND IN VITRO CELL AGING.....	5R23 AG00747-02	38,805
ORGANIZATION TOTAL	1	38,805	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
MEDFORD			
TUFTS UNIVERSITY ZIP CODE 02155			
FELDBERG, ROSS S.....	THE NATURE AND REPAIR OF A NEW FORM OF DNA DAMAGE.....	5R01 CA19419-03	46,639
GERSHOFF, STANLEY N.....	EFFECT OF DIET ON VESICAL TUMOR AND STONE FORMATION.....	5R01 CA23714-02	65,567
KANAREK, ROBIN B.....	DIET SELECTION AND OBESITY.....	5R01 AM19821-02	26,922
KANAREK, ROBIN B.....	BEHAVIORAL AND NEUROANATOMICAL ASPECTS OF FOOD INTAKE.....	5R01 AM20683-02	88,199
SAMPSON, PHILIP B.....	BIOMEDICAL RESEARCH.....	1S07 RR07179-01	20,927
ORGANIZATION TOTAL	5 248,254		
NORTHAMPTON			
SMITH COLLEGE ZIP CODE 01060			
OLIVO, MARGARET A.....	A SINGLE SARCOMERE (POLYCHAETES).....	3R01 NS12196-03S1	2,569
OLIVO, MARGARET A.....	A SINGLE SARCOMERE (POLYCHAETES).....	2R01 NS12196-04	36,678
TEGHTSOONIAN, MARTHA.....	MODELS OF APPARENT SIZE AND DISTANCE.....	1R01 HD10857-01	41,149
TEGHTSOONIAN, ROBERT.....	DYNAMIC RANGE AND RESOLVING POWER OF SENSORY SYSTEMS.....	5R01 NS12597-03	58,932
ORGANIZATION TOTAL	4 139,328		
NORTH DARTMOUTH			
SOUTHEASTERN MASSACHUSETTS UNIVERSITY ZIP CODE 02747			
THOMAS, GEORGE J, JR.....	MOLECULAR STRUCTURE AND INTERACTIONS OF VIRUSES.....	2R01 AI11855-04	103,161
ORGANIZATION TOTAL	1 103,161		
NORTON			
WHEATON COLLEGE ZIP CODE 02766			
SMUTS, MARY E.....	CHARACTERIZATION OF EARLY PRIMARY PALATE FORMATION.....	7R23 DE05368-01	12,080
ORGANIZATION TOTAL	1 12,080		
SHREWSBURY			
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545			
ABERHART, DONALD J.....	STEREOCHEMISTRY IN VALINE AND LEUCINE METABOLISM.....	5R01 GM24420-02	47,802
BARIL, EARL F.....	DNA SYNTHESIS: REGULATION IN NORMAL AND CANCER CELLS.....	2R01 CA15187-03A1	85,724
BARTKE, ANDRZEJ.....	INFLUENCE OF PROLACTIN ON THE TESTIS.....	5R01 HD06867-05	50,221
BARTKE, ANDRZEJ.....	ANDROGENS IN RETE TESTIS FLUID AND SPERMATOGENESIS.....	5R01 HD09584-03	35,689
BRODIE, ANGELA M.....	AROMATASE INHIBITORS FOR CONTROL OF BREAST CANCER.....	2R01 CA18595-04	92,795
BRODIE, ANGELA M.....	ANTIFERTILITY COMPOUNDS—SYNTHESIS AND TESTING.....	5R01 HD10269-03	93,728
CASPI, ELIAHU.....	STUDIES WITH STEREOSPECIFICALLY LABELED MEVALONATES.....	2R01 AM12156-11A1	142,615
CASPI, ELIAHU.....	IODINATED ESTROGENS IN BREAST CANCER.....	5R01 CA16464-04	119,801
CHANG, MIN C.....	PHYSIOLOGY OF THE FEMALE TRACT.....	3R01 HD03003-17S1	23,770
CHANG, MIN C.....	PHYSIOLOGY OF MAMMALIAN FERTILIZATION.....	5R01 HD03472-16	79,806
CRAIN, WILLIAM R, JR.....	SYNTHESIS & PROCESSING OF HNRNA & MRNA IN HELA CELLS.....	1R01 GM25492-01	61,381
DAVIS, BRIAN K.....	SYNTHETIC AND NATURAL ANTIFERTILIZATION VESICLES.....	5R01 HD10206-03	118,331
FAIRBANKS, GRANT.....	MEMBRANE AND RED CELL DYSFUNCTION IN HEMOLYTIC ANEMIA.....	5R01 HL19933-02	70,749
FORBES, WILLIAM B.....	DIETARY RESTRICTION, LONGEVITY AND CNS AGING.....	5R23 AG00779-02	49,490
GUT, MARCEL.....	SYNTHESIS OF LABELED ADRENAL HORMONES.....	2R01 AM03419-18A1	145,602
HARRIS, MARY E.....	DIABETES-INDUCED TESTICULAR LESIONS.....	1R01 AM22184-01	86,058
HOAGLAND, MAHLON B.....	CANCER CENTER SUPPORT (CORE) GRANT.....	5P30 CA12708-08	691,266
HOAGLAND, MAHLON B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05528-16	131,195
KUPFER, DAVID.....	EFFECTS OF CHLORINATED HYDROCARBONS ON MAMMALIAN SYSTEMS.....	2R01 ES00834-05	105,424
KUPFER, DAVID.....	PROSTAGLANDINS: INTERACTIONS WITH MONOOXYGENASES.....	5R01 GM22688-03	78,000
LAU, IN-FAI.....	5 ALPHA-DHT, SPERM, MATURATION AND FERTILITY IN RABBIT.....	1R01 HD12216-01	51,668
LEAVITT, WENDELL W.....	HORMONE RECEPTOR ONTOGENY AND CANCER.....	1R01 CA23362-01	63,715
LEAVITT, WENDELL W.....	HORMONE RECEPTOR ONTOGENY AND CANCER.....	5R01 CA23693-02	55,190
LONGCOPE, CHRISTOPHER L.....	OVARIAN FUNCTION IN POSTMENOPAUSAL WOMEN.....	5R01 AG00058-02	107,021

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
LONGCOPE, CHRISTOPHER L.....	REPRODUCTIVE FUNCTION AND GONADAL STEROID DYNAMICS.....	2R01 HD08034-04A2	116,874
LUFTIG, RONALD B.....	VIRAL INTERACTION OF MICROTUBULES IN CANCER CELLS.....	5R01 CA18979-03	101,826
LUFTIG, RONALD B.....	ASSEMBLY OF MURINE LEUKEMIA VIRUSES.....	1R01 CA22652-01	41,635
MACRIDES, FOTEOS.....	OLFACTORY AND NEUROENDOCRINE FUNCTIONS.....	2R01 NS12344-04	144,589
MAUDSLEY, DAVID V.....	DIAMINES AND POLYAMINES IN TISSUE GROWTH.....	2R01 HD07476-04	72,123
MC CRACKEN, JOHN A.....	ENDOCRINE FUNCTION OF TRANSPLANTED UTERUS AND OVARY.....	5R01 HD08129-05	83,961
MC CRACKEN, JOHN A.....	BRAIN PROSTAGLANDINS AND GONADOTROPIN SECRETION.....	5R01 HD09731-03	73,699
O'CONNELL, ROBERT J.....	MECHANISMS OF OLFACTORY COMMUNICATION.....	2R01 NS14453-02	107,739
PEDERSON, THORU.....	STUDIES ON GENE TRANSCRIPTION IN EUKARYOTES.....	2R01 GM21595-04	164,425
PEDERSON, THORU.....	EUKARYOTIC CHROMOSOME STRUCTURE.....	1R01 GM23914-01A1	59,354
RESNICK, OSCAR.....	MATERNAL PROTEIN RESTRICTION AND MENTAL RETARDATION.....	5P01 HD06364-07	440,572
ROBERTS, JOHN S.....	OXYTOCIN SECRETION AND ACTION.....	2R01 HD09345-04	118,601
ROBINSON, HARRIET L.....	INHERITANCE AND EXPRESSION OF AVAIN C-TYPE VIRUSES.....	5R01 CA23086-02	129,388
VOGLMAYR, JOSEF K.....	SPERM MATURATION, AND ENDOCRINE FUNCTION OF THE TESTIS.....	3R01 HD09356-03S1	13,869
VOGLMAYR, JOSEF K.....	SPERM MATURATION, AND ENDOCRINE FUNCTION OF THE TESTIS.....	2R01 HD09356-04	100,309
WEIHING, ROBERT R.....	ACTIN & TUBULIN CANCER CELLS (HUMAN, ADENOVIRUS).....	2R01 CA15229-03A1	75,382
ORGANIZATION TOTAL	40 4,431,387		
SOUTH HADLEY			
MOUNT HOLYOKE COLLEGE ZIP CODE 01075			
COHEN, JOSEPH D.....	ADAPTATION IN NORMAL AND DEFICIENT COLOR VISION.....	1R01 EY02025-01A1	43,955
WILLIAMSON, KENNETH L.....	CONFORMATIONAL ANALYSIS BY NMR.....	9R01 AM21381-14	60,431
ORGANIZATION TOTAL	2 104,386		
SPRINGFIELD			
BAYSTATE MEDICAL CENTER ZIP CODE 01107			
DE CONTI, RONALD C.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA20182-02	22,034
ORGANIZATION TOTAL	1 22,034		
STOW			
RED ACRE FARM ZIP CODE 01775			
SERONDE, JOSEPH, JR.....	OBESITY—DIETARY, HORMONAL AND GENETIC DETERMINANTS.....	3R01 AM08272-14S1	17,652
YOUNG, RUTH A.....	MODELS FOR THE STUDY OF OBESITY AND GROWTH.....	2P40 RR00427-11	35,815
ORGANIZATION TOTAL	2 53,467		
WALTHAM			
BRANOEIS UNIVERSITY ZIP CODE 02154			
ABELES, ROBERT H.....	ANTITUMOR DRUG DEVELOPMENT.....	1R01 CA23496-01	86,068
ABELES, ROBERT H.....	ENZYME MECHANISMS AND ENZYME INHIBITORS.....	2R01 GM12633-15	114,913
AREND, LAWRENCE E.....	ANALYSIS OF FREQUENCY CHANNELS IN HUMAN VISION.....	5R01 EY01797-03	37,388
BIRNBAUM, SANFORD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07044-13	143,535
CANNON, LOVICK E.....	STRUCTURE AND GENETICS OF ANTIBODY VARIABLE REGIONS.....	1R01 CA25049-01	70,812
CASPAR, DONALD L.....	ASSEMBLY OF VIRUSES, MEMBRANES, AND TISSUE.....	5R01 CA15468-05	192,315
CASPAR, DONALD L.....	MYELIN MEMBRANE STABILITY AND DYNAMICS.....	1R01 NS14378-01	71,715
CHAN, IU-YAM.....	PHOSPHORESCENT TRIPLET STATE OF CARBONYL COMPOUNDS.....	5R01 GM20275-06	40,171
COHEN, CAROLYN.....	MUSCLE STRUCTURE AND THE CONTRACTILE MECHANISM.....	5R01 AM17346-06	155,271
DE ROSIER, DAVID J.....	STRUCTURAL STUDIES OF BIOLOGICAL COMPLEXES.....	5R01 GM21189-06	125,029
FASMAN, GERALD D.....	PROTEIN NUCLEIC ACID INTERACTIONS: MODEL STUDIES.....	5R01 GM17533-17	116,782
FREIFELDER, DAVID M.....	PHYSICOCHEMICAL AND GENETIC STUDIES OF DNA FUNCTION.....	2R01 GM14358-12	68,693
FULTON, CHANDLER M.....	CELL DIFFERENTIATION AND ORGANELLE MORPHOGENESIS.....	1R01 GM24444-01A1	150,284
HABER, JAMES E.....	CONTROL OF GAMETOGENESIS.....	5R01 GM20056-06	85,594
HALL, JEFFREY C.....	NEUROGENETICS OF DROSOPHILA REPRODUCTIVE BEHAVIOR.....	2R01 GM21473-04	75,768
HALVORSON, HARLYN O.....	STUDIES ON PROTEIN METABOLISM IN YEAST.....	5R01 AI10610-08	92,113
HALVORSON, HARLYN O.....	REGULATION OF DIFFERENTIATION IN BACILLUS SPORES.....	5R01 GM18904-07	101,708
HENDRICKSON, JAMES B.....	TOTAL SYNTHESIS OF OUASSINOIDS.....	1R01 CA24058-01	82,255

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
HONG, JEN-SHIANG.....	BIOCHEMISTRY AND GENETICS OF MEMBRANE FUNCTIONS.....	5R01 GM22576-03	52,702
HOPPER, JAMES E.....	MOLECULAR BASIS OF INTERCHROMOSOMAL GENE REGULATION.....	3R01 GM23717-02S1	3,214
HOPPER, JAMES E.....	MOLECULAR BASIS OF INTERCHROMOSOMAL GENE REGULATION.....	5R01 GM23717-03	81,779
HOPPER, JAMES E.....	INTER-GENOMIC FUNCTIONAL RELATIONSHIPS IN YEAST.....	1R01 GM25092-01	41,693
INGLE, DAVID J.....	MOTOR FUNCTIONS OF OPTIC TECTUM AND THALAMUS.....	5R01 NS13592-03	54,285
JENCKS, WILLIAM P.....	CHEMISTRY AND BIOCHEMISTRY OF ENERGY TRANSFER.....	5R01 GM20888-21	106,135
KUSTIN, KENNETH.....	CHEMICAL KINETICS STUDIED BY RELAXATION SPECTROMETRY.....	2R01 GM08893-15	55,493
LEVINE, LAWRENCE.....	PROSTAGLANDINS & ENZYMES IN NORMAL AND MALIGNANT TISSUES.....	5R01 CA17309-04	87,212
LEVINE, LAWRENCE.....	EFFECTS OF PROSTAGLANDINS ON TUMOR GROWTH IN VIVO.....	5R01 CA19416-03	54,468
LEVINE, LAWRENCE.....	PHYSIOLOGICAL ROLE OF PROSTAGLANDINS.....	5R01 HD07966-05	86,157
LISMAN, JOHN E.....	MECHANISMS OF ADAPTATION.....	5R01 EY01496-05	77,484
LOWENSTEIN, JOHN M.....	LIPOGENESIS AS A FUNCTION OF AGING.....	2R01 AG00120-04	73,876
LOWENSTEIN, JOHN M.....	ENZYMATIC & CHEMICAL REACTIONS OF ADENOSINE TRIPHOSPHATE.....	3R01 GM07261-17S1	23,541
LOWENSTEIN, JOHN M.....	ENZYMATIC & CHEMICAL REACTIONS OF ADENOSINE TRIPHOSPHATE.....	5R01 GM07261-18	53,147
LOWEY, SUSAN.....	CHEMISTRY OF MUSCLE PROTEINS.....	5R01 AM17350-06	115,654
MAKOWSKI, LEE.....	X-RAY DIFFRACTION ANALYSIS OF MACROMOLECULAR ASSEMBLIES.....	1R23 CA24407-01	32,164
MILLER, CHRISTOPHER.....	IONOPHORES OF THE SARCOPLASMIC RETICULUM MEMBRANE.....	5R01 AM19826-02	26,720
MURAKAMI, WILLIAM T.....	VIRUS-INDUCED NEOPLASTIC CONVERSIONS.....	5R01 CA06654-16	102,557
NISONOFF, ALFREDO.....	IDIOTYPE AND GENETIC CONTROL OF ANTIBODY BIOSYNTHESIS.....	5R01 AI12895-04	64,636
NISONOFF, ALFREDO.....	STRUCTURE AND BIOSYNTHESIS OF ANTIBODIES.....	5R01 AI12907-04	111,092
NISONOFF, ALFREDO.....	IMMUNOSUPPRESSION OF IDIOTYPIC SPECIFICITIES.....	5R01 AI12908-04	64,593
PARRY, RONALD J.....	BIOSYNTHESIS OF ANTILEUKEMIC CEPHALOTAXUS ALKALOIDS.....	2R01 GM19220-07	48,212
PRESS, JOAN L.....	IMMUNOGENETIC ANALYSIS OF B CELL DIFFERENTIATION.....	5R01 AI13725-02	68,484
REDFIELD, ALFREDO G.....	STRUCTURAL KINETIC STUDIES BY NUCLEAR MAGNETIC RESONANCE.....	5R01 GM20168-06	124,438
ROBERTS, BRYAN E.....	ORGANIZATION AND EXPRESSION OF GENES IN VIRAL DNAs.....	1R01 CA24233-01	132,018
ROSBASH, MICHAEL M.....	ORGANIZATION OF YEAST RIBOSOMAL PROTEIN GENES.....	5R01 GM23549-02	72,669
ROSBASH, MICHAEL M.....	MACROMOLECULAR SYNTHESIS IN OOGENESIS AND DEVELOPMENT.....	2R01 HD08887-04	95,356
ROSENBLUM, MYRON.....	ORGANOMETALLIC REAGENTS IN ORGANIC SYNTHESIS.....	2R01 GM16395-11	71,615
SCHIFF, JEROME A.....	STUDIES OF THE CONTINUITY OF CELLULAR ORGANELLES.....	5R01 GM14595-13	100,688
SCHLEIF, ROBERT F.....	ACTION MECHANISM OF ARABINOSIDE C GENE PROTEIN.....	5R01 GM18277-08	77,156
STAFFORO, WALTER F, III.....	MYOSIN-LINKED REGULATION IN VERTEBRATE SMOOTH MUSCLE.....	1R23 HL21488-01	49,887
STOUT, ROBERT O.....	T-LYMPHOCYTE DIFFERENTIATION AND ITS REGULATION.....	5R01 AI13806-02	81,711
STUBBS, GERALD J.....	STRUCTURE AND ASSEMBLY OF TOBACCO MOSAIC VIRUS.....	1R01 GM25236-01	83,055
SZENT-GYORGYI, ANOREW G.....	REGULATION IN STRIATED, SMOOTH AND CARDIAC MUSCLES.....	5R01 AM15963-13	147,802
TIMASHEFF, SERGE N.....	TUBULIN ASSOCIATIONS AND EFFECTS OF ANTICANCER DRUGS.....	5R01 CA16707-04	148,225
TIMASHEFF, SERGE N.....	STRUCTURE AND INTERACTIONS OF PROTEINS IN SOLUTION.....	5R01 GM14603-12	103,894
WENSINK, PIETER C.....	SEQUENCE ARRANGEMENT IN EUKARYOTIC DNA & CHROMOSOMES.....	2R01 GM21626-04	84,272
WINGFIELD, ARTHUR.....	OVERLOAD OF CENTRAL CAPACITY IN SPEECH PERCEPTION.....	1R01 NS14662-01	26,357
ORGANIZATION TOTAL	56	4,694,855	
EUNICE KENNEDY SHRIVER CENTER FOR MENTAL RETARDATION ZIP CODE 02154			
ADAMS, RAYMOND D.....	RESEARCH IN MENTAL RETARDATION.....	5P30 HD04147-10	505,717
ADAMS, RAYMOND O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05730-07	82,656
CAVINESS, VERNE S, JR.....	DEVELOPMENTAL NEUROPATHOLOGY.....	2R01 NS12005-04	109,606
JUNGALWALA, FIROZE B.....	BIOCHEMICAL ASPECTS OF EXPERIMENTAL BRAIN TUMORS.....	5R01 CA16853-05	77,530
LEES, MARJORIE B.....	RELATIONSHIP BETWEEN BRAIN PROTEINS AND LIPIDS.....	2R01 NS13649-03	129,971
LEES, MARJORIE B.....	CARBONIC ANHYDRASE AND MYELIN DEVELOPMENT.....	1R01 NS13710-01A1	19,566
MC CLUER, ROBERT H.....	BIOCHEMICAL AND GENETIC ASPECTS OF MENTAL RETARDATION.....	5P01 HD05515-09	704,255
MC CLUER, ROBERT H.....	IMPROVEMENT OF ANIMAL CARE FACILITY.....	5P40 RR01023-03	16,907
MILUNSKY, AUBREY.....	PRENATAL DETECTION OF NEURAL TUBE DEFECTS.....	3R01 HD09281-03S1	11,258
SCHWARTING, GERALD A.....	GLYCOLIPIDS OF NORMAL & TRANSFORMED HUMAN LYMPHOCYTES.....	1R23 CA24683-01	36,132
SIDMAN, MURRAY.....	MENTAL RETARDATION: BASIC AND APPLIED RESEARCH.....	5P01 HD05124-08	339,376
STOODARD, LAWRENCE T.....	AUTOMATED TEACHING PROGRAMS FOR THE SEVERELY RETARDED.....	5R01 HD10210-03	47,870
STOFFYN, PIERRE J.....	STRUCTURE OF GLYCOLIPIDS IN ONCOGENIC CELLS.....	5R01 CA17441-05	48,876
ORGANIZATION TOTAL	13	2,129,720	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
WELLESLEY			
WELLESLEY COLLEGE ZIP CODE 02181			
GAUTHIER, GERALDINE F.....	CYTOLOGICAL HETEROGENEITY OF SKELETAL MUSCLE FIBERS.....	5R01 AM17964-04	79,054
PADYKULA, HELEN A.....	CYCLIC UTERINE DIFFERENTIATION—ALBINO RAT AND HUMAN.....	5R01 HD09209-04	81,715
ORGANIZATION TOTAL	2 160,769		
WILLIAMSTOWN			
WILLIAMS COLLEGE ZIP CODE 01267			
CRISWELL, HUGH E.....	MORPHINE MICROINJECTION, ANALGESIA AND NEURAL FIRING.....	5R01 NS13147-03	18,192
DRICKAMER, LEE C.....	FACTORS AFFECTING SEXUAL MATURATION IN MAMMALS.....	2R01 HD08585-04	28,059
MC GILL, THOMAS E.....	THE GENETICS AND PHYSIOLOGY OF BEHAVIORAL DIFFERENCES.....	5R01 GM07495-17	43,908
ORGANIZATION TOTAL	3 90,159		
WOODS HOLE			
MARINE BIOLOGICAL LABORATORY ZIP CODE 02543			
COPELAND, DONALD E.....	SECRETION OF AQUEOUS, VITREOUS HUMOR IN FISH EYE.....	1R01 EY02647-01	36,207
EDDS, KENNETH T.....	THE FORMATION AND FUNCTION OF MICROFILAMENTOUS BUNDLES.....	5R01 GM23351-03	39,059
FEIN, ALAN.....	MECHANISMS OF VISION.....	5R01 EY01362-04	67,451
GROSS, PAUL R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05547-10	15,150
MACNICHOL, EDWARD F, JR.....	STUDIES OF SINGLE VISUAL RECEPTOR CELLS.....	1R01 EY02399-01	113,686
PORTER, KEITH R.....	THE PIGMENT MOTILITY MECHANISM IN CHROMATOPHORES.....	1R01 GM24121-01	37,528
STEPHENS, RAYMOND E.....	THE FORMATION AND FUNCTION OF MICROTUBULES.....	2R01 GM20644-06	63,815
ORGANIZATION TOTAL	7 372,896		
SOCIETY OF GENERAL PHYSIOLOGISTS ZIP CODE 02543			
GILULA, NORTON B.....	MEMBRANE-MEMBRANE INTERACTIONS—A SYMPOSIUM.....	1R13 GM25403-01	2,500
ORGANIZATION TOTAL	1 2,500		
WORCESTER			
CLARK UNIVERSITY ZIP CODE 01610			
GOODGLASS, HAROLD.....	NEW MEASURES OF APHASIC SYMPTOM VARIABLES.....	5R01 NS07615-19	59,518
STEIN, DONALD G.....	THE PSYCHOBIOLOGY OF AGING.....	5R01 AG00295-03	34,183
ORGANIZATION TOTAL	2 93,701		
ST. VINCENT HOSPITAL ZIP CODE 01604			
DRISCOLL, WALTER G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05660-04	43,985
FRIEDEL, GILBERT H.....	ADMINISTRATION OF THE NATIONAL BLADDER PROJECT.....	5R26 CA13859-07	325,418
FRIEDEL, GILBERT H.....	CENTRAL CYTOLOGY AND PATHOLOGY LABORATORY SUPPORT.....	2R26 CA15490-05	125,108
FRIEDEL, GILBERT H.....	STUDIES ON EXPERIMENTAL BLADDER TUMORS.....	5R26 CA15945-05	106,129
ORGANIZATION TOTAL	4 600,640		
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605			
BRATT, MICHAEL A.....	MOLECULAR BIOLOGY OF NEWCASTLE DISEASE VIRUS INFECTION.....	2R01 AI12467-03A1	98,086
BRAVERMAN, LEWIS E.....	REGULATION OF THYROID FUNCTION, T4 AND T3 KINETICS.....	3R01 AM18919-04S1	18,937
BROWN, NEAL C.....	THE STRUCTURE AND FUNCTION OF A DNA REPLICASE.....	5R01 CA15915-06	83,088
BULGER, RUTH E.....	EVOLUTION OF RENAL ULTRASTRUCTURE AND FUNCTION.....	5R01 AM19471-03	89,504
BUTCHER, REGINALD W.....	CONTROL OF CYCLIC AMP LEVELS.....	5R01 AM13904-09	110,795
BUTCHER, REGINALD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05712-07	95,064
CHLAPOWSKI, FRANCIS J.....	CYCLIC AMP METABOLISM IN TRANSITIONAL EPITHELIUM.....	5R26 CA21612-02	64,030
CLARK, RICHARD B.....	REGULATION OF ADENYL CYCLASE BY ADENOSINE.....	5R01 GM21420-05	39,496
DE GIROLAMI, UMBERTO.....	ISCHEMIA, DIABETES, AND THE MICROCIRCULATION.....	1R01 HL21843-01	107,180
DOBSON, JAMES G, JR.....	REGULATION OF CARDIAC CONTRACTILITY AND METABOLISM.....	5R01 HL18280-03	35,466
DOBSON, JAMES G, JR.....	ADENOSINE AND CATECHOLAMINE INTERACTION IN THE HEART.....	1R01 HL22828-01	55,759
EASTWOOD, GREGORY L.....	EPITHELIAL RENEWAL IN PEPTIC AND NEOPLASTIC DISORDERS.....	1R01 AM21951-01	48,010
FAY, FREDRIC S.....	GENERATION AND REGULATION OF FORCE IN SMOOTH MUSCLE.....	5R01 HL14523-07	98,693

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MASSACHUSETTS—Continued			
FLATT, JEAN-PIERRE.....	CONTROL OF LIPOGENESIS IN ADIPOSE TISSUE.....	5R01 AM17352-03	35,781
FLATT, JEAN-PIERRE.....	FAT MOBILIZATION AND PROTEIN SPARING THERAPY.....	5R01 AM17456-06	73,397
GOODMAN, H MAURICE.....	MECHANISM OF ACTION OF GROWTH HORMONE.....	5R01 AM19392-03	68,001
GOODMAN, H MAURICE.....	INSULIN EFFECT ON AMINO ACID METABOLISM IN ADIPOCYTES.....	5R01 AM21216-02	45,958
GRIGG, PETER.....	SEGMENTAL REFLEXES MEDIATED BY JOINT AFFERENT NEURONS.....	3R01 NS10783-05S1	14,287
GRIGG, PETER.....	SEGMENTAL REFLEXES MEOIATED BY JOINT AFFERENT NEURONS.....	5R01 NS10783-06	51,855
HOPPER, ANITA K.....	YEAST MUTANTS IN TRNA TRANSCRIPTION AND MATURATION.....	5R01 GM23209-03	56,662
JACOBSON, ALLAN S.....	THE RELATIONSHIP OF ELONGATION FACTOR.....	1R01 GM24755-01	56,834
KANE, EILEEN S.....	CENTRAL AUDITORY SYSTEM CONNECTIONS.....	3R01 NS14260-01S1	11,255
KRANT, MELVIN J.....	CLINICAL CANCER EDUCATION GRANT.....	1R25 CA22068-01A1	110,681
LIKE, ARTHUR A.....	ULTRASTRUCTURAL AND PHYSIOLOGIC STUDIES OF DIABETES.....	5R01 AM19155-04	181,781
MAJNO, GUIDO.....	CARDIOVASCULAR PATHOLOGY.....	5R01 HL16952-05	73,357
MARINUS, MARTIN G.....	FUNCTION OF METHYLATED BASES IN NUCLEIC ACIDS.....	2R01 GM22055-04	51,270
MARKS, SANDY C, JR.....	THE ORIGIN AND ROLE OF OSTEOCLASTS IN TOOTH ERUPTION.....	5R01 DE03818-05	30,740
MILLER, THOMAS B, JR.....	REGULATION OF HEPATIC GLYCOGEN SYNTHESIS.....	2R01 AM18269-04A1	46,400
MILLER, THOMAS B, JR.....	EFFECTS OF DIABETES ON CARDIAC PERFORMANCE.....	5R01 HL20476-03	54,073
MORRISON, TRUOY G.....	SYNTHESIS AND ASSEMBLY OF VIRAL MEMBRANES.....	1R01 AI13847-01A1	43,282
MULROY, MICHAEL J.....	INNERVATION OF THE INNER EAR.....	5R01 NS12801-03	24,715
NEMECEK, GEORGINA M.....	CYCLIC NUCLEOTIDE METABOLISM IN VASCULAR ENDOTHELIUM.....	5R23 HL21320-02	41,087
PARKER, DAVID C.....	ACTIVATION OF MOUSE B CELLS BY INSOLUBLE ANTI-IG.....	5R01 AI13447-03	37,036
PURTILO, DAVID T.....	IMMUNOPATHOLOGY X-LINKED LYMPHOPROLIFERATIVE SYNDROME.....	1R01 CA23561-01	129,395
ROSSINI, ALDO A.....	EXPERIMENTAL JUVENILE-TYPE DIABETES.....	7R01 AM25306-01	74,132
SMITH, EMIL R.....	SECRETORY PROCESSES IN THE PROSTATE GLAND.....	1R01 CA21607-01A1	21,264
SMITH, M SUSAN.....	CONTROL OF GONADOTROPIN SECRETION DURING LACTATION.....	2R01 HD09442-04	66,116
SUSSKIND, MIRIAM M.....	INTERACTING REGULATORS OF GENE EXPRESSION.....	5R01 GM22877-03	45,773
TIPPER, DONALD J.....	CONTROL OF BACTERIAL CELL-WALL SYNTHESIS AND BREAKDOWN.....	5R01 AI10806-05	51,868
TIPPER, DONALD J.....	INHIBITORS OF YEAST RNA POLYMERASES.....	2R01 GM20755-03A1	70,578
WAUD, DOUGLAS R.....	STUDY OF DRUG-RECEPTOR INTERACTIONS.....	5R01 NS12255-05	34,866
WHEELER, H BROWNELL.....	PLETHYSMOGRAPHIC EVALUATION OF CAROTID BLOOD FLOW.....	5R01 HL19038-02	53,411
WOLF, MERRILL K.....	DEVELOPMENT OF CENTRAL NERVOUS SYSTEM.....	2R01 NS11425-04A1	63,031
WRIGHT, GEORGE E.....	STRUCTURE OF NOVEL INHIBITORS OF A DNA REPLICASE.....	2R01 GM21747-04	47,790
ORGANIZATION TOTAL	44	2,710,784	
WORCESTER POLYTECHNIC INSTITUTE ZIP CODE 01609			
MUGGLETON-HARRIS, AUDREY L.....	CATARACT AND LENS DETERIORATION DUE TO MATURATION.....	1R01 EY02523-01	95,344
ORGANIZATION TOTAL	1	95,344	
STATE TOTAL	1,369	159,574,234	
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48109			
AGRANOFF, BERNARD W.....	PHOSPHOLIPIDS OF THE NERVOUS SYSTEM.....	5R01 NS03101-18	89,287
AGRANOFF, BERNARD W.....	BIOCHEMICAL CONCOMITANTS OF NERVE REGENERATION.....	5R01 NS13743-02	77,772
ALLEN, SALLY L.....	GENETICS OF TETRAHYMENA AND PARAMECIUM.....	5R01 GM15879-21	85,053
ALPERN, MATHEW.....	PSYCHOPHYSIOLOGICAL STUDIES OF OCULAR ABNORMALITIES.....	2R01 EY00197-21	133,678
AMINOFF, DAVID.....	BIOSYNTHESIS AND DEGRADATION OF BLOOD GROUP SUBSTANCES.....	5R01 HL17881-15	78,551
ASGAR, KAMAL.....	NATURE OF ALLOY SYSTEMS FOR CROWN & BRIDGE RESTORATIONS.....	1R01 DE04883-01	130,531
AVERY, JAMES K.....	ROLE OF NERVES IN DENTINOGENESIS.....	5R01 DE01604-15	58,356
AVERY, JAMES K.....	DEVELOPMENT SUPPORT FOR DENTAL RESEARCH INSTITUTE.....	5P50 DE02731-12	1,585,993
AXELROD, DANIEL.....	MOLECULAR MOTION IN DEVELOPING NERVE AND MUSCLE.....	1R01 NS14565-01	77,708
BAKER, BURTON L.....	HYPOPHYSEAL RESPONSE TO ESTROGENS AND PROGESTINS.....	5R01 HD03159-11	66,233
BALLOU, DAVID P.....	RAPID KINETICS STUDY OF BIOLOGICAL OXYGEN ACTIVATION.....	2R01 GM20877-04	81,034
BEIERWALTES, WILLIAM H.....	RADIONUCLIDE ADRENAL IMAGING IN HYPERTENSION.....	1R01 AM21477-01	126,423
BERNSTEIN, ISADORE A.....	NEOPLASTIC AND HYPERPLASTIC EPIDERMAL METABOLISM.....	5R01 AM15206-07	145,343
BERNSTEIN, ISADORE A.....	EPIDERMAL BIOCHEMISTRY CONFERENCE.....	3R13 AM16751-03S1	1,500

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
BERNSTEIN, ISADORE A.....	IN VITRO CHEMICAL CARCINOGENESIS.....	5R01 CA19988-03	146,312
BOETTNER, EDWARD A.....	A STUDY OF FIBROUS DUST PROPAGATION USING HOLOGRAPHY.....	5R01 ES01613-02	41,769
BOHR, DAVID F.....	MECHANISMS OF VASCULAR CHANGES IN HYPERTENSION.....	5P01 HL18575-03	416,742
BOLE, GILES G, JR.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20557-02	409,676
BRABEC, MICHAEL J.....	REPLACEMENT OF SULFITE OXIDASE AFTER CC14 DAMAGE.....	1R01 ES01919-01	81,458
BRADLEY, ROBERT M.....	ROLE OF TASTE BUDS IN SUDDEN INFANT DEATH SYNDROME.....	5R01 HD11081-02	31,202
BRINKLEY, LINDA L.....	TISSUE INTERACTION IN PALATAL SHELF CLOSURE.....	2R01 DE02774-10A1	85,535
BROCKMAN, WILLIAM W.....	ROLE OF SV40 GENE A IN CELLULAR TRANSFORMATION.....	5R01 CA19816-03	63,790
BURDI, ALPHONSE R.....	PRENATAL ORIGINS OF POSTNATAL DENTOFACIAL VARIABILITY.....	5R01 DE03443-07	69,261
CARLSON, BRUCE M.....	ADAPTIVE MECHANISMS IN EARLY MUSCLE TRANSPLANTS.....	5R01 NS13116-03	54,840
CARLSON, BRUCE M.....	REGENERATION OF A HORMONE-SENSITIVE MUSCLE.....	1R01 NS14358-01	37,514
CASEY, KENNETH L.....	NEURAL MECHANISMS OF THERMAL PAIN.....	5R01 NS12581-04	58,293
CASTOR, C WILLIAM.....	CONNECTIVE TISSUE ACTIVATION IN RHEUMATIC DISEASES.....	2R01 AM10728-12	129,746
CASTOR, C WILLIAM.....	PATHOGENESIS OF INFLAMMATION IN THE LUNG.....	5R01 HL19685-03	86,836
CHRISTENSEN, ALBERT K.....	LOCALIZATION OF RECEPTORS FOR REPRODUCTIVE HORMONES.....	7R01 HD12349-01	44,680
CHRISTENSEN, HALVOR N.....	SITES AND REACTANTS IN AMINO ACID TRANSPORT.....	2R01 HD01233-23	133,146
CHU, ERNEST H.....	GENETIC CONTROL OF MAMMALIAN CELL METABOLISM.....	5R01 GM20608-05	110,219
CLAFLIN, J LATHAM.....	REGULATION OF CLONOTYPE EXPRESSION.....	2R01 AI12533-04	96,453
CLEWELL, DON B.....	PLASMID-RELATED GENE AMPLIFICATION IN STREPTOCOCCI.....	2R01 AI10318-07A1	69,804
COHAN, BRUCE E.....	CONTOURING THE HUMAN OPTIC DISC.....	3R01 EY01076-04S3	82,170
COHAN, BRUCE E.....	THE OPTIC DISC: QUANTITATION OF TOPOGRAPHY.....	1R01 EY02513-01	119,920
COHEN, BENNETT J.....	SUPPORT FOR ANIMAL-CARE FACILITY.....	5P40 RR00200-15	217,388
COON, MINOR J.....	FUNCTION OF HYDROXYLASES AND OTHER OXIDATIVE ENZYMES.....	5R01 AM10339-13	108,278
COUNSELL, RAYMOND E.....	POTENTIAL TUMOR OR ORGAN IMAGING AGENTS.....	5R01 CA08349-12	121,325
DANTZKER, DAVID R.....	GAS EXCHANGE IN ACUTE RESPIRATORY FAILURE.....	5R01 HL19449-03	48,474
DATTA, PRASANTA.....	ALLOSTERIC ENZYMES AND METABOLIC REGULATION.....	5R01 GM21436-04	65,473
DAVENPORT, HORACE W.....	DAMAGE AND REPAIR OF THE GASTRIC MUCOSAL BARRIER.....	5R01 AM08716-15	42,229
DEKKER, EUGENE E.....	ENZYMIC PATHS AND MECHANISMS IN AMINO ACID METABOLISM.....	2R01 AM03718-19	115,798
EASTER, STEPHEN S, JR.....	VISUAL MECHANISMS IN LOWER VERTEBRATES.....	2R01 EY00168-09	77,274
ENSMINGER, WILLIAM D.....	METHOTREXATE WITH PROTECTION BY THYMIDYLATE PRECURSOR.....	7R01 CA25429-01	74,877
ERICKSON, ROBERT P.....	CONTROL OF GENE EXPRESSION DURING SPERMATOGENESIS.....	1R01 HD11738-01	62,487
FAJANS, STEFAN S.....	LONG-TERM STUDY OF ASYMPTOMATIC AND FUTURE DIABETES.....	2R01 AM00888-23	114,811
FAJANS, STEFAN S.....	CARBOHYDRATE METABOLISM.....	5R01 AM02244-20	113,160
FAJANS, STEFAN S.....	DIABETES RESEARCH AND TRAINING CENTER.....	5P60 AM20572-02	1,283,607
FAULKNER, JOHN A.....	CHARACTERISTICS OF MAMMALIAN WHOLE MUSCLE TRANSPLANTS.....	5R01 AM18727-03	51,483
FEE, JAMES A.....	MECHANISMS OF SUPEROXIDE DISMUTASES.....	5R01 GM21519-04	56,023
FISHER, LESLIE J.....	DEVELOPMENTAL ANALYSIS OF RETINAL SYNAPTIC ORGANIZATION.....	5R01 EY01281-04	36,838
FLYNN, GORDON L.....	PERMEATION OF BURN WOUNDS, METHODOLOGY AND MECHANISM.....	1R01 GM24611-01	61,898
FOLK, WILLIAM R.....	MAMMALIAN CELL TRANSFORMATION BY ONCOGENIC VIRUSES.....	5R01 CA13978-06	57,237
FOLK, WILLIAM R.....	ANALYSIS OF THE POLYOMA GENOME IN TRANSFORMED CELLS.....	5R01 CA21808-02	51,594
FOX, IRVING H.....	REGULATION OF HUMAN PURINE CATABOLISM.....	5R01 AM19674-02	46,134
FOX, JEFFREY L.....	HYDROXYAPATITE REMINERALIZATION: THE ROLE OF FLUORIDE.....	5R01 DE04600-02	43,675
FREEDMAN, DEBORAH S.....	LONGITUDINAL STUDY OF CORRELATES OF FERTILITY: 1962-77.....	5R01 HD10407-02	114,990
FREEDMAN, RONALD.....	FERTILITY AND FAMILY PLANNING IN TAIWAN.....	2R01 HD03002-11	215,140
FRETER, ROLF G.....	THE ROLE OF BACTERIAL CHEMOTAXIS IN INFECTIONS.....	1R22 AI15279-01	81,833
FRIEDMAN, DAVID I.....	HOST & VIRAL INFLUENCES ON PHAGE LAMBDA DEVELOPMENT.....	5R01 AI11459-06	86,143
FRIEDMAN, DAVID I.....	GENETICS OF HOST FACTORS IN INTEGRATIVE RECOMBINATION.....	5R01 AI14363-02	49,570
GAY, HELEN.....	CHROMOSOME STRUCTURE IN RELATION TO GENE ACTION.....	2R01 GM10499-16	56,719
GELEHRTER, THOMAS D.....	CELLULAR MARKERS OF GENETIC HETEROGENEITY IN DIABETES.....	1R01 AM22028-01	26,849
GELEHRTER, THOMAS D.....	HORMONAL REGULATION OF MEMBRANE PHENOTYPE.....	1R01 CA22729-01	115,090
GOLDSTEIN, IRWIN J.....	PROTEIN-CARBOHYDRATE INTERACTION.....	5R01 AM10171-13	73,711
GOLDSTEIN, IRWIN J.....	MURINE ASCITES TUMOR CELL GLYCOPROTEINS.....	5R01 CA20424-02	66,500
GREEN, DANIEL G.....	FUNCTIONAL ORGANIZATION OF THE RETINA.....	5R01 EY00379-11	66,224
GRONVALL, JOHN A.....	MULTICATEGORICAL CLINICAL RESEARCH CENTER.....	2M01 RR00042-18	811,562
GRONVALL, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05383-17	200,462
GROSSMAN, LAWRENCE I.....	MITOCHONDRIAL DNA FROM NEOPLASTIC AND NORMAL CELLS.....	1R01 GM26179-01	78,547
GROSSMAN, LAWRENCE I.....	GENES ON MITOCHONDRIAL DNA.....	7R01 GM26546-01	97,078
GUMUCIO, JORGE J.....	HETEROGENEITY OF THE LIVER ACINUS AND CHOLESTASIS.....	2R01 AM18409-04	112,243
HAJRA, AMIYA K.....	METABOLISM OF PHOSPHATIDIC ACID & ITS ANALOGS IN BRAIN.....	5R01 NS08841-10	68,187
HAND, JAMES H.....	CERAMIC-ELASTOMER BIOMATERIALS.....	5R01 GM22447-03	22,710

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
HANSEN, BARBARA W.....	OBESITY AND THE REGULATION OF APPETITE.....	5R01 AM20493-02	118,204
HANSEN, BARBARA W.....	BIOMEDICAL RESEARCH.....	1S07 RR05796-01	37,179
HARRIS, JAMES E.....	CRANIOFACIAL VARIATION AND MALOCCLUSION IN FAMILIES.....	5R01 DE03013-11	74,459
HAWKINS, JOSEPH E, JR.....	MICROSCOPIC STUDIES OF THE INNER EAR.....	5R01 NS05065-15	83,546
HAWKINS, JOSEPH E, JR.....	DISORDERS OF COCHLEAR HOMEOSTASIS AND FUNCTION.....	5R01 NS12881-03	37,267
HELLING, ROBERT B.....	CHLOROPLAST DNA FROM EUGLENA.....	1R01 GM25565-01	59,687
HERMALIN, ALBERT I.....	POPULATION STUDIES CENTER.....	5P30 HD10003-03	164,234
HEYN, RUTH M.....	COOPERATIVE STUDY OF CANCER AMONG CHILDREN.....	5R10 CA02971-22	150,365
HEYN, RUTH M.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19762-03	83,325
HICKS, SAMUEL P.....	DEVELOPMENT OF CORTICOSPINAL SYSTEM.....	5R01 NS10531-06	11,558
HIGGINS, MILLICENT W.....	EPIDEMIOLOGIC STUDY OF CHRONIC LUNG DISEASE.....	5R01 HL18632-02	281,427
HIGGINS, MILLICENT W.....	HIGH BLOOD PRESSURE IN YOUNG PEOPLE IN TECUMSEH.....	5R01 HL19962-03	153,324
HIGUCHI, WILLIAM I.....	PRODRUG BASED METHODS FOR TOPICAL DELIVERY OF ARA-A.....	1R01 AI14987-01	60,932
HIGUCHI, WILLIAM I.....	MECHANISMS OF CHOLESTEROL GALLSTONE DISSOLUTION.....	5R01 AM16694-05	64,964
HIGUCHI, WILLIAM I.....	QUANTITATION OF ENAMEL DEMINERALIZATION MECHANISMS.....	2R01 DE01830-16	94,058
HULTQUIST, DONALD E.....	REDOX SYSTEMS OF ERYTHROCYTES.....	2R01 AM09250-13	63,106
JACKSON, ETHEL N.....	VIRAL REGULATORY MECHANISMS IN INFECTION AND LYSDGENY.....	2R01 AI12369-04A1	46,312
JACQUEZ, JOHN A.....	IDENTIFICATION OF TRANSPORT ASSOCIATED PROTEINS.....	1R01 GM24507-01	45,028
JOHNSSON, LARS-GORAN.....	COCHLEAR NERVE DEGENERATION IN DEAFENED EARS.....	2R01 NS12706-04	80,118
JOKELAINEN, PENTTI T.....	MICROSCOPY OF SPONTANEOUSLY HYPERTENSIVE ARTERIAL LESION.....	5R01 HL18831-03	105,301
JONES, GARTH W.....	VIRULENCE DETERMINANTS OF SALMONELLAE.....	5R01 AI13842-02	48,273
JOURDIAN, GEORGE W.....	BIOCHEMISTRY OF MUCOPOLYSACCHARIDES.....	5R01 AM10531-13	48,612
JULIUS, STEVO.....	BLOOD VOLUME DISTRIBUTION IN HYPERTENSION.....	1R01 HL21893-01	89,022
JUNI, ELLIOT.....	GENETICS AND METABOLISM OF GRAM-NEGATIVE COCCOBACILLI.....	5R01 AI10107-08	90,466
KARSCH, FRED J.....	ROLE OF ESTROGEN IN FUNCTIONAL LUTEOLYSIS IN PRIMATES.....	5R01 HD07689-06	73,785
KELLEY, WILLIAM N.....	REGULATION OF PURINE METABOLISM IN HUMAN CELLS.....	5R01 AM19045-04	137,533
KEYES, JOHN W, JR.....	RADIONUCLIDE COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5R01 GM22678-03	71,330
KEYES, JOHN W, JR.....	QUANTIFICATION OF INFARCT SIZE BY EMISSION TOMOGRAPHY.....	1R01 HL21707-01	85,407
KEYES, PAUL L.....	REGULATION OF OVARIAN FUNCTION DURING PREGNANCY.....	2R01 HD07127-07	65,242
KIM, SUN-KEE.....	AGE-RELATED CHANGES IN SALIVARY GLAND SECRETORY CELLS.....	1R01 AG00944-01	32,167
KLUGER, MATTHEW J.....	EVOLUTION AND ADAPTIVE VALUE OF FEVER.....	5R01 AI13878-02	60,996
KOPELMAN, RAOUL.....	EXCITATIONS IN MOLECULAR AGGREGATES.....	2R01 NS08116-10A1	78,188
KORAN, ANDREW, III.....	MAXILLOFACIAL MATERIALS—COLOR STUDY.....	2R01 DE04136-04	110,329
KOREEDA, MASATO.....	CHEMICAL AND BIOSYNTHETIC STUDIES OF STEROID HORMONES.....	1R01 AI15664-01	66,966
KOREEDA, MASATO.....	BIOTOXICITY OF ACTIVATED OLEFINS.....	7R01 ES02133-01	33,986
KRIEWALL, TIMOTHY J.....	FETAL HEAD MOLDING: MECHANICAL TISSUE PROPERTIES.....	1R01 HD11202-01A1	47,840
KRIMM, SAMUEL.....	STUDIES OF HUMAN ERYTHROCYTE MEMBRANE STRUCTURE.....	5R01 HL18737-03	21,563
LANDEFELD, THOMAS D.....	GONADOTROPIN BIOSYNTHESIS.....	1R01 HD12016-01	68,733
LANDS, WILLIAM E.....	CONSEQUENCES OF SELECTIVE FATTY ACID ESTERIFICATION.....	5R01 AM05310-18	63,439
LAWRENCE, MERLE.....	STUDY OF CAUSES OF DEAFNESS.....	5P01 NS05785-14	886,325
LAWRENCE, MERLE.....	CONTROL OF INNER EAR MICROCIRCULATION.....	5R01 NS11731-05	60,231
LAWTON, RICHARD G.....	REAGENTS FOR EQUILIBRIUM PROTEIN CROSSLINKS.....	1R01 GM23679-01A2	67,227
LEVINE, MYRON.....	STUDY OF CELLULAR AND BIOCHEMICAL GENETICS.....	3P01 GM15419-10S1	47,106
LICHTER, PAUL R.....	CARBONIC ANHYDRASE INHIBITORS IN TREATING GLAUCOMA.....	1R01 EY02450-01	105,277
LILLIE, JOHN H.....	HUMAN ORAL MUCOSA IN VITRO: SUBSTRATE INTERACTIONS.....	1R23 DE04945-01	21,287
LDBUGLIO, ALBERT F.....	EFFECT OF CANCER ON HUMAN MONOCYTE CYTOTOXIC MECHANISMS.....	1R01 CA25641-01	68,923
LOESCHE, WALTER J.....	EFFECT OF CHEMOTHERAPY ON PLAQUE AND MICROBIAL ECOLOGY.....	2R01 DE03011-10	133,923
LOESCHE, WALTER J.....	ANALYSIS OF NORMAL AND DISEASE-ASSOCIATED PLAQUE.....	5R01 DE03423-06	25,658
LUCCHESI, BENEDICT R.....	ANALYSIS OF ANTIARRHYTHMIC AGENTS.....	2R01 HL05806-18	61,405
LUCCHESI, BENEDICT R.....	PHARMACOLOGIC STUDIES ON THE ISCHEMIC HEART.....	5R01 HL19782-02	65,250
LUDWIG, MARTHA L.....	STRUCTURE AND ACTIVITY OF ENZYMES IN CRYSTALLINE STATE.....	5R01 GM16429-11	110,866
MANN, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05321-17	67,131
MARINO, JOSEPH P.....	SYNTHETIC METHODS—SITE SPECIFIC/LATENT ANTITUMOR AGENTS.....	1R01 CA22237-01	29,229
MAPSHALL, JOHN C.....	MODULATION OF GnRH INDUCED GONADOTROPIN SECRETION.....	1R01 HD11489-01	94,365
MASDN, MERLE.....	REGULATION OF TRYPTOPHAN AND LYSINE CATABOLISM.....	5R01 AM18647-03	50,662
MASSEY, VINCENT.....	BIOLOGICAL OXIDATION MECHANISMS.....	2R01 GM11106-16	200,783
MATHEWS, KENNETH P.....	CLINICAL STUDY OF ALLERGIC DISEASES.....	5P50 AI10391-07	69,339
MATHEWS, KENNETH P.....	INHIBITOR DEFICIENCIES IN ANAPHYLACTOID REACTIONS.....	1R01 AI14950-01	60,874
MATTHEWS, ROWENA G.....	REGULATION OF FOLATE METABOLISM.....	1R01 GM24908-01	66,806
MC DONOUGH, PETER J.....	ELITE & MASS PREFERENCES FOR BIRTH CONTROL IN BRAZIL.....	2R01 HD09126-03	77,833

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
MC NAMARA, JAMES A, JR.....	ADAPTATIONS TO CHANGES IN MASTICATORY MUSCLE LENGTH.....	2R01 DE04227-04	78,111
MC REYNOLDS, JOHN S.....	FUNCTIONAL ORGANIZATION OF THE VERTEBRATE RETINA.....	5R01 EY01653-03	34,783
MEISLER, MIRIAM H.....	GENETIC REGULATION OF MOUSE ENZYMES.....	5R01 GM24872-02	52,193
MENON, K M.....	REGULATION OF OVARIAN FUNCTION BY GONADOTROPINS.....	5R01 HD06656-06	53,650
MENON, K M.....	REGULATION OF GONADOTROPIN SECRETION.....	2R01 HD07729-04A1	59,481
MIDGLEY, A REES, JR.....	HORMONES IN REPRODUCTION—NONHISTONE CHROMATIN PROTEINS.....	5P50 HD08333-05	482,459
MISTRETTA, CHARLOTTE M.....	NERVE-EPITHELIUM INTERACTION IN OROFACIAL DEVELOPMENT.....	2R01 DE04491-03	39,018
MORRIS, MICHAEL D.....	ANALYTICAL APPLICATIONS OF THE RESONANCE RAMAN EFFECT.....	5R01 GM22604-03	44,313
MOUW, DAVID R.....	MECHANISMS OF CNS-INDUCED CHANGES IN SODIUM EXCRETION.....	5R01 NS12825-03	53,825
MOYERS, ROBERT E.....	STUDY OF CRANIOFACIAL GROWTH AND DEVELOPMENT.....	5P01 DE03610-12	192,570
MURPHY, WILLIAM H.....	MECHANISMS OF IMMUNITY IN LEUKEMIA.....	3R01 CA13701-06S1	16,820
NACE, GEORGE W.....	AMPHIBIANS FOR HEALTH-RELATED RESEARCH.....	5P40 RR00572-08	177,326
NEIDHARDT, FREDERICK C.....	REGULATION OF BACTERIAL METABOLISM.....	2R01 GM17892-09	91,638
NORDMAN, CHRISTER E.....	X-RAY STRUCTURE ANALYSIS OF BIOLOGICAL COMPOUNDS.....	2R01 GM15259-15	102,589
NORTHCUTT, RICHARD G.....	VISION IN GARS—ANATOMICAL & BEHAVIORAL ORGANIZATION.....	1R01 EY02485-01	53,449
NORTHCUTT, RICHARD G.....	EVOLUTION OF THE TELENCEPHALON.....	2R01 NS11006-06A1	49,862
OAKLEY, BRUCE.....	NEURAL PLASTICITY IN TASTE AND CUTANEOUS SENSES.....	2R01 NS07072-12	76,527
OLSEN, RONALD H.....	EVOLUTION AND EPIDEMIOLOGY OF ANTIBIOTIC RESISTANCE.....	1R01 AI14880-01	55,318
OLSON, GARY M.....	INFANT MEMORY PROCESSES.....	5R01 HD10486-02	49,587
ONCLEY, J LAWRENCE.....	BIOPHYSICAL STUDIES OF PROTEINS.....	5R01 HL09739-13	90,903
OSTRANDER, LEON D, JR.....	DIABETES, HYPERGLYCEMIA AND CARDIOVASCULAR DISEASE.....	5R01 HL20508-03	71,390
OVERBERGER, CHARLES G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07050-13	178,431
OXENDER, DALE L.....	MEMBRANE TRANSPORT COMPONENTS IN BACTERIA.....	5R01 GM11024-15	61,116
OXENDER, DALE L.....	TRANSPORT COMPONENTS FROM EUKARYOTES.....	5R01 GM20737-05	63,858
PAUL, ARA G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05571-14	24,441
PAYNE, ANITA H.....	ROLE OF STEROID SULFATES IN GONADAL TISSUE.....	3R01 HD04064-09S1	9,747
PAYNE, ANITA H.....	MECHANISM OF ACTION OF GONADOTROPINS IN THE TESTIS.....	2R01 HD08358-03A1	106,124
PAYNE, FRANCIS E.....	VIRAL SUBACUTE AND CHRONIC NERVOUS SYSTEM DISEASE.....	5R01 NS09547-09	98,108
PEK, SUMER.....	PROSTAGLANDINS AND SECRETION OF GLUCAGON AND INSULIN.....	5R01 AM21192-02	88,720
POWERS, JOHN M.....	WEAR OF COMPOSITE RESTORATIVE RESINS.....	5R01 DE03416-07	76,125
PRATT, WILLIAM B.....	STEROID RECEPTORS IN MOUSE CELLS CULTURED IN VITRO.....	2R01 CA16041-04	45,919
PRINGLE, JOHN R.....	GENETIC STUDY OF CELL PROLIFERATION CONTROL IN YEAST.....	5R01 GM23936-02	62,605
RADIN, NORMAN S.....	CHEMOTHERAPY AND MODELS OF HERITABLE SPHINGOLIPIDOSES.....	5R01 HD07406-05	45,106
RADIN, NORMAN S.....	BRAIN GLYCOLIPIDS: METABOLISM AND PATHOLOGY.....	5R01 NS03192-19	169,926
REMINGTON, RICHARD D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05447-17	86,025
RICHARDS, JOANNE S.....	OVARIAN FOLLICULAR DEVELOPMENT AND HORMONE ACTION.....	5R01 HD09110-03	62,966
RICHARDSON, RUDY J.....	NEUROTOXIC ESTERASE: NORMAL AND PATHOGENIC ROLES.....	5R01 ES01611-02	62,605
RIGGS, THOMAS R.....	ACTION OF HORMONES ON AMINO ACID TRANSPORT SYSTEMS.....	5R01 AM03709-18	46,307
RIZKI, TAHIR M.....	CELL INTERACTIONS IN HEREDITARY TUMORS OF DROSOPHILA.....	5R01 CA16619-04	85,155
ROSS, MURIEL D.....	OTOCONIAL FORMATION AND DEGENERATION.....	5R01 AG00767-02	33,807
ROSS, MURIEL D.....	IDENTIFICATION OF SOURCE(S) OF COCHLEAR EFFERENTS.....	5R01 NS13428-02	28,940
RUCKNAGEL, DONALD L.....	BIOCHEMICAL GENETICS OF HUMAN HEMOGLOBIN VARIANTS.....	1R01 AM20964-01	147,600
SANDS, RICHARD H.....	REDOX REACTIONS BY OPTICAL AND EPR SPECTROMETRY.....	5R01 GM12176-15	182,958
SCHACHT, JOCHEN H.....	MECHANISMS OF ANTIBIOTIC INDUCED HEARING LOSS.....	5R01 NS13792-02	64,734
SCHMICKEL, ROY D.....	ISOLATION AND CHARACTERIZATION OF HUMAN RIBOSOMAL DNA.....	5R01 HD04569-08	57,012
SELLINGER, OTTO Z.....	BRAIN METHYLATION AND EPILEPTOGENESIS.....	2R01 NS06294-10A1	131,199
SHAFER, JULES A.....	REACTION MECHANISMS FOR ENZYMES.....	5R01 AM09276-14	75,395
SHAFER, JULES A.....	MACROMOLECULES FOR ISOLATING PROTEIN ON CELL SURFACES.....	9R01 CA24439-04	63,032
SMITH, AARON.....	CHANGING EFFECTS OF HEMISPHERECTOMY.....	2R01 NS10089-06	7,749
SOLOMON, WILLIAM R.....	ALLERGENICITY OF AIRBORNE PARTICULATES.....	5R01 AI10181-08	74,558
SPARKS, HARVEY V.....	DYNAMIC CONTROL OF CORONARY BLOOD FLOW.....	5R01 HL16760-05	76,013
SPARKS, HARVEY V.....	VASCULAR CONTROL IN EXPERIMENTAL DIABETES MELLITUS.....	5R01 HL20399-03	72,047
TANNEN, RICHARD L.....	HYDROGEN ION REGULATION BY THE MAMMALIAN NEPHRON.....	1R01 AM25248-01	100,846
TASHIAN, RICHARD E.....	EVOLUTION OF MAMMALIAN CARBONIC ANHYDRASES.....	1R01 GM24681-01	169,329
VOORHEES, JOHN J.....	MECHANISMS & THERAPY OF PSORIASIS: A PROGRAM PROJECT.....	3P01 AM15740-06S1	160,277
WEINHOLD, PAUL A.....	PHOSPHOLIPID METABOLISM DURING DEVELOPMENT.....	5R01 HD02871-12	42,498
WEINHOLD, PAUL A.....	LUNG ORGAN CULTURE AND SURFACTANT BIOSYNTHESIS.....	3R01 HL19669-02S1	4,455
WEINHOLD, PAUL A.....	LUNG ORGAN CULTURE AND SURFACTANT BIOSYNTHESIS.....	5R01 HL19669-03	95,514
WHITFIELD, CAROLYN D.....	CHARACTERIZATION OF ANIMAL CELL CARBOHYDRATE MUTANTS.....	5R01 AM19602-02	42,357
WILLIAMS, CHARLES H, JR.....	PYRIDINE NUCLEOTIDE-DISULFIDE OXIDOREDUCTASES.....	5R01 GM21444-14	44,701

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
WISEMAN, JOHN R.....	SYNTHESIS OF ANTHRACYCLINE ANTIBIOTICS.....	1R01 CA21935-01	70,903
ORGANIZATION TOTAL	195 20,824,240		
BERKLEY			
WILLIAM BEAUMONT HOSPITAL ZIP CODE 48072			
POULIK, MIROSLAV D.....	URINARY PROTEIN COMPONENTS: DIAGNOSTIC AND THEORETICAL.....	2R01 AI11335-07	55,348
ORGANIZATION TOTAL	1 55,348		
DETROIT			
CHILDREN'S HOSPITAL OF MICHIGAN ZIP CODE 48201			
KAPLAN, JOSEPH.....	LYMPHOCYTE DIFFERENTIATION IN CHILDHOOD LEUKEMIA.....	5R01 CA17534-04	60,926
ORGANIZATION TOTAL	1 60,926		
HENRY FORD HOSPITAL ZIP CODE 48202			
BEHER, WILLIAM T.....	ENZYMATIC DETERMINATION OF FECAL BILE ACIDS.....	1R01 AM20522-01	7,223
BICHER, HAIM I.....	PROTECTING MICROCIRCULATORY LIVER DAMAGE.....	7R01 CA25784-01	27,592
CARRETERO, OSCAR A.....	PHYSIOLOGICAL ROLE OF ISORENIN AND KALLIKREIN.....	5R01 HL15839-05	107,177
CARRETERO, OSCAR A.....	FACTORS OTHER THAN RENIN IN RENAL HYPERTENSION.....	5R01 HL21092-02	40,932
GOLDSTEIN, SIDNEY.....	PROSPECTIVE STUDY OF RESUSCITATED SUDDEN DEATH VICTIMS.....	2R01 HL18800-04	137,385
HALVORSON, HERBERT R.....	RELAXATION KINETICS OF SUBUNIT INTERACTIONS.....	5R01 GM23302-03	12,360
HETZEL, FREDRICK W.....	CHEMOTHERAPEUTIC DRUGS AS RADIATION SENSITIZERS.....	1R23 CA25782-01	26,864
JACKSON, CHARLES E.....	DETECTION OF MEDULLARY THYROID CANCER IN FAMILIES.....	1R01 CA22595-01	81,707
KAHN, RAYMOND H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05490-16	37,441
O'BRYAN, ROBERT M.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	2R10 CA04915-19	173,816
TURNER, ROBERT G.....	INNER EAR TRANSDUCTION PROCESSES.....	1R01 NS13462-01A1	48,097
ORGANIZATION TOTAL	11 700,594		
MERRILL-PALMER INSTITUTE ZIP CODE 48202			
FOX, GREER L.....	MOTHER-DAUGHTER COMMUNICATION PATTERNS RE SEXUALITY.....	3R01 HD11224-01S1	8,547
FOX, GREER L.....	MOTHER-DAUGHTER COMMUNICATION PATTERNS RE SEXUALITY.....	5R01 HD11224-02	93,038
ORGANIZATION TOTAL	2 101,585		
MICHIGAN CANCER FOUNDATION ZIP CODE 48201			
BRENNAN, MICHAEL J.....	DETROIT BREAST CANCER DEVELOPMENTAL RESEARCH UNIT.....	3P01 CA16175-03S1	48,783
BRENNAN, MICHAEL J.....	BREAST CANCER PROGNOSTIC STUDY.....	2P01 CA16175-04	382,577
BRENNAN, MICHAEL J.....	CANCER CENTER SUPPORT GRANT.....	1P30 CA22453-01	330,784
BUTLER, W BARKLEY.....	ESTROGEN RESPONSE IN A HUMAN BREAST CANCER CELL LINE.....	5R01 CA21606-02	56,193
CHLADEK, STANISLAV.....	THE STUDY OF PEPTIDYL TRANSFERASE RECOGNITION SITES.....	2R01 GM19111-07	91,021
HOROWITZ, SAMUEL B.....	REGULATION OF NUCLEAR-CYTOPLASMIC SOLUTE TRANSPORT.....	5R01 GM19548-07	102,054
HOROWITZ, JEROME P.....	STEROID SULFURYLATION INHIBITORS AS ANTITUMOR AGENTS.....	1R01 CA23079-01	89,112
KING, CHARLES M.....	MECHANISTIC APPROACHES TO CARCINOGENESIS.....	1R01 CA23386-01	125,994
MC GRATH, CHARLES M.....	ENDOGENOUS VIRUS AND HORMONES IN MAMMARY CANCER.....	5R01 CA18175-03	50,495
POWERS, WILLIAM E.....	COMMITTEE FOR RADIATION ONCOLOGY STUDIES.....	7R01 CA25791-01	114,182
RICH, MARVIN A.....	THE VIRAL ETIOLOGY OF CANCER.....	5R01 CA14100-06	146,433
RICH, MARVIN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05529-16	50,322
RUSSO, JOSE.....	STUDIES OF MAMMARY GLAND REFRACTORINESS TO CANCER.....	1R01 CA23539-01	51,836
WANG, CHING Y.....	PREVENTION OF FANFT URINARY BLADDER TUMORIGENESIS.....	1R26 CA23800-01	92,947
WEIGAND, RAY A.....	ASSEMBLY AND MATURATION OF MURINE LEUKEMIA VIRUSES.....	1R01 CA23470-01	28,420
ZEMLICKA, JIRI.....	METABOLICALLY STABLE ANALOGS OF PUROMYCIN.....	5R01 CA21388-02	51,743
ZEMLICKA, JIRI.....	TRANSITION STATE MODELS OF PROTEIN SYNTHESIS.....	2R01 GM21093-03	48,970
ORGANIZATION TOTAL	17 1,861,866		
SINAI HOSPITAL OF DETROIT ZIP CODE 48235			
FOA, PIERO P.....	INSULIN, PANCREATIC & GUT GLUCAGON IN DIABETES MELLITUS.....	5R01 AM06034-17	54,856
KANTROWITZ, ADRIAN.....	ACTIVE PROSTHETIC MYOCARDIUM: EFFECTS ON LV FUNCTION.....	1R01 HL22329-01	110,594
MOSKOWITZ, MITCHELL S.....	QUANTITATING IN-SERIES EFFECTS IN CARDIAC ARRHYTHMIAS.....	1R01 HL22274-01	65,319
ORGANIZATION TOTAL	3 230,769		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
UNIVERSITY OF DETROIT ZIP CODE 48221			
FORSTHOEFEL, PAULINUS F.....	ANALYSIS OF LIMB DEVELOPMENT USING MOUSE CHIMERAS.....	1R01 HD12110-01	53,408
WEMPLE, JAMES N.....	SYNTHETIC ROUTES TO NEW THIOL ESTER DERIVATIVES.....	5R01 CA17719-04	30,379
ORGANIZATION TOTAL	2 83,787		
WAYNE STATE UNIVERSITY ZIP CODE 48202			
AGER, JOEL W.....	CONSEQUENCES OF TEEN CONTRACEPTIVE PROGRAM DROP OUT.....	3R01 HD09361-03S1	6,516
ANDERSON, GORDON F.....	CELL MECHANISMS CONTROLLING URINARY BLADDER CONTINENCE.....	1R01 AM21012-01	20,196
BACH, ROBERT D.....	THE CHEMICAL BEHAVIOR OF ORGANOMERCURY COMPOUNDS.....	5R01 ES00761-07	44,121
BAGCHI, MIHIR.....	CELL BIOLOGY OF MAMMALIAN EYE LENS IN CULTURE.....	5R01 EY01848-03	28,717
BAKER, LAURENCE H.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA14028-05	186,197
BENJAMINS, JOYCE A.....	MYELINATION: ASSEMBLY OF LIPIDS AND PROTEINS.....	5R01 NS13143-02	57,646
BERGUER, RAMON.....	GRADING OF ATHEROSCLEROSIS BY CW DOPPLER ULTRASOUND.....	5R01 HL19406-03	44,616
BERK, RICHARD S.....	PSEUDOMONAS EYE INFECTIONS—AN EXPERIMENTAL MODEL.....	5R01 EY01935-02	27,561
BHAM, ASHOK K.....	BIOCHEMICAL PROPERTIES OF HUMAN CARDIAC MYOSIN.....	7R01 HL23994-01	32,566
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF ADRIAMYCIN AND RELATED ANTITUMOR AGENTS.....	2R01 CA15061-04	46,140
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF ANTILEUKEMIC AND ANTITUMOR LACTONES.....	5R01 CA17154-03	51,503
BOROS, DOV L.....	LYMPHOCYTE INTERACTION IN SCHISTOSOMIASIS MANSONI.....	5R22 AI12913-03	54,631
BOROS, DOV L.....	LYMPHOKINES IN PULMONARY GRANULOMATOUS INFLAMMATION.....	3R01 HL19732-02S1	4,075
BOROS, DOV L.....	LYMPHOKINES IN PULMONARY GRANULOMATOUS INFLAMMATION.....	5R01 HL19732-03	31,369
BOROS, DOV L.....	PULMONARY GRANULOMATOUS INFLAMMATIONS.....	3R01 HL20104-02S1	3,524
BOROS, DOV L.....	PULMONARY GRANULOMATOUS INFLAMMATIONS.....	5R01 HL20104-03	55,763
BOURGUIGNON, LILLY Y.....	IMMUNOCYTOCHEMICAL STUDIES ON LYMPHOCYTE MEMBRANES.....	1R01 AI15258-01	75,979
BROOKS, SAM C.....	FATE OF STEROID HORMONES IN BREAST TUMOR CELLS.....	1R01 CA22828-01	58,371
CHOE, BYUNG-KIL.....	IMMUNOCHEMICAL STUDIES OF PROSTATIC ACID PHOSPHATASE.....	3R26 CA18748-03S1	326
CHOE, BYUNG-KIL.....	IMMUNOCHEMICAL STUDIES OF PROSTATIC ACID PHOSPHATASE.....	2R26 CA18748-04	63,669
CROSSLAND, WILLIAM J.....	DEVELOPMENT AND MAINTENANCE OF VISUAL CONNECTIONS.....	5R01 EY01796-03	31,879
CURTIN, THOMAS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07051-13	68,416
ENDICOTT, JOHN F.....	REACTION MECHANISMS OF CYCLIC TETRAMINE COMPLEXES.....	5R01 AM14341-10	60,603
ESSNER, EDWARD S.....	CYTOCHEMICAL STUDIES OF RAT, RETINAL DYSTROPHIES.....	5R01 EY01889-02	37,874
FOOR, W EUGENE.....	BASIC STUDIES IN REPRODUCTION.....	5R01 HD10280-03	47,467
FOX, CLEMENT A.....	THE FINE STRUCTURE OF THE NERVOUS SYSTEM.....	5R01 NS06925-13	45,735
FRANK, ROBERT N.....	RETINAL MICROVESSELS: TISSUE CULTURE AND BIOCHEMISTRY.....	3R01 EY01857-02S1	1,106
FRANK, ROBERT N.....	RETINAL MICROVESSELS: TISSUE CULTURE AND BIOCHEMISTRY.....	5R01 EY01857-03	37,011
FRANK, ROBERT N.....	A PROPOSED MODEL FOR DIABETIC RETINOPATHY.....	1R01 EY02566-01	38,473
FUNG, LESLIE W.....	MOLECULAR STUDIES OF HUMAN ERYTHROCYTE MEMBRANES.....	1R01 HL22432-01	42,035
GIACOMELLI, FILIBERTO.....	PRIMARY MYOCARDIAL DISEASE IN THE DIABETIC MOUSE.....	7R01 AM25632-01	58,626
GLAROS, ALAN G.....	BEHAVIORAL CONTROL OF BRUXISM.....	5R23 DE04536-03	19,123
GORELL, JAY M.....	CNS ACETYLCHOLINE: HYPOGLYCEMIA, HYPOXIA AND RECOVERY.....	5R01 HD10890-02	56,447
HARDING, CLIFFORD V.....	TISSUE GROWTH IN THE NORMAL AND INJURED EYE.....	5R01 EY01874-02	66,379
HUDSON, RICHARD A.....	MECHANISM OF VENOM ALPHA-NEUROTOXIN ACTION.....	1R01 NS14491-01	28,512
HULL, FRANKLIN E.....	FATTY ACID BETA-OXIDATION IN NORMAL & ISCHEMIC HEART.....	2R01 HL14730-07	76,187
JAY, JAMES M.....	MINORITY BIOMEDICAL SUPPORT PROGRAM.....	1S06 RR08167-01	170,521
JOHNSON, JEAN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05718-07	15,834
JOHNSON, PAUL H.....	RESTRICTION ENDONUCLEASE MECHANISMS AND DNA STRUCTURE.....	5R01 GM23690-02	53,866
JOHNSON, ROBERT M.....	MOLECULAR ASPECTS OF ERYTHROCYTE MEMBRANE RESEALING.....	5R01 HL15793-06	35,571
KAHANA, EVA F.....	ATTITUDES TOWARD THE ELDERLY.....	1R01 AG00846-01	67,448
KESSEL, DAVID H.....	CELL-SURFACE AND MEMBRANE EFFECTS OF ANTITUMOR AGENTS.....	1R01 CA23243-01	70,062
KESSEL, DAVID H.....	MODE OF ACTION OF THE PHOTO-ACTIVATED PORPHYRINS.....	1R01 CA23378-01	47,180
KIMURA, TOKUJI.....	STEROID HYDROXYLASES STUDIES.....	5R01 AM12713-10	106,173
KING, ALBERT I.....	GAIT ANALYSIS WITH MINIATURE SHOE-BORNE LOAD CELLS.....	5R01 AM19777-02	85,914
KING, ALBERT I.....	STRUCTURAL AND MECHANICAL PROPERTIES OF THE SPINE.....	5R01 GM20201-06	69,182
LANDE, MAURICIO A.....	STUDIES OF HUMAN AND RABBIT KERATOCYTES IN CULTURE.....	1R01 EY02339-01	51,435
LEON, MYRON A.....	BIOLOGICAL ACTIVITIES OF HOMOGENEOUS MITOGENS.....	5R01 CA20812-04	54,454
LOUIS-FERDINAND, ROBERT T.....	EFFECTS OF LEAD EXPOSURE ON THE DEVELOPING RAT BRAIN.....	1R01 ES01638-01	70,551
MAISEL, HARRY.....	A STUDY OF STRUCTURAL LENS PROTEINS.....	3R01 EY01417-04S1	10,752
MAISEL, HARRY.....	A STUDY OF STRUCTURAL LENS PROTEINS.....	5R01 EY01417-05	53,588
MAISEL, HARRY.....	PLASMA MEMBRANE PROTEINS OF OCULAR LENS CELLS.....	5R01 EY01855-02	61,512
MARKS, BERNARD H.....	DISTRIBUTION AND METABOLISM OF LABELED DIGITALOIDS.....	5R01 HL17555-05	56,553

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
MARNETT, LAWRENCE J.....	MALONALDEHYDE STUDIES.....	5R01 CA22206-02	22,028
MARNETT, LAWRENCE J.....	PROSTAGLANDIN SYNTHETASE STUDIES.....	5R01 GM23642-02	26,446
MARRAZZI, MARY A.....	HYPOTHALAMIC GLUCORECEPTOR POTENTIALS—PHARMACOLOGY.....	5R01 AM21476-02	38,138
MC COY, LOWELL E.....	PROCOAGULANT LIPOPROTEINS: BIOCHEMISTRY & BIOACTIVITY.....	5R01 HL20317-02	48,725
MILLETTE, ROBERT L.....	HERPES SIMPLEX VIRUS GENE REGULATION.....	5R01 CA21065-03	60,570
MITCHELL, J ANDREW.....	P02 IN REPRODUCTIVE TRACT OF FEMALE ANIMALS.....	5R01 HD11266-02	13,792
PENNEY, DAVID G.....	EFFECT OF CARBON MONOXIDE ON THE DEVELOPING HEART.....	1R01 HL22859-01	49,584
PONTES, J EDSON.....	CHEMOTHERAPY IN CARCINOMA OF THE PROSTATE.....	1R26 CA22508-01A1	62,598
PRASAD, ANANDA S.....	REQUIREMENT FOR ZINC IN MAN.....	5R01 AM19338-02	27,324
PUTNEY, JAMES W, JR.....	CELLULAR PHARMACOLOGY OF SALIVARY SECRETION.....	2R01 DE04067-04	75,132
PUTNEY, JAMES W, JR.....	CELLULAR PHARMACOLOGY OF LACRIMATION.....	5R01 EY01978-02	51,118
RABAN, MORTON.....	IONIC BONDING CONFORMATIONAL BEHAVIOR OF ENOLATE ANIONS.....	5R01 GM22594-03	26,433
RILLEMA, JAMES A.....	REGULATION OF METABOLISM IN MAMMARY GLAND TUMORS.....	3R01 CA18296-03S1	7,101
RILLEMA, JAMES A.....	HORMONAL CONTROL OF METABOLISM IN THE MAMMARY GLAND.....	2R01 HD06571-07	42,441
RORABACHER, DAVID B.....	CYCLIC POLYTHIAETHERS IN METAL ION TRANSPORT.....	5R01 GM20424-05	91,370
ROSE, NOEL R.....	GENETICS OF THE RESPONSE TO SELF ANTIGENS.....	1R01 AM20023-01A1	97,218
ROSE, NOEL R.....	AUTOIMMUNE THYROIDITIS IN OS CHICKENS.....	5R01 AM20028-02	105,136
ROSE, NOEL R.....	ANTIGENIC COMPONENTS OF HUMAN PROSTATIC ADENOCARCINOMA.....	2R26 CA16426-05	130,684
ROSE, NOEL R.....	PROGRAM IN CANCER IMMUNOLOGY.....	5P01 CA18900-02	269,851
ROSEN, RUTH A.....	PREGNANCY RESOLUTION DECISION-MAKING AMONG MINORS.....	1R01 HD11099-01	75,284
ROTHSTEIN, HOWARD.....	HORMONAL CONTROL OF LENS GROWTH.....	1R01 EY02492-01	116,224
SACCO, ANTHONY G.....	IMMUNOCONTRACEPTION—ANTIBODIES TO ZONA PELLUCIDA.....	1R01 HD10189-01A1	56,683
SARDESAI, VISHWANATH M.....	THE EFFECT OF ALCOHOL ON THE HEART.....	5R01 HL20369-03	23,426
SCHAAP, A PAUL.....	ENZYMATICALLY GENERATED SINGLET OXYGEN IN CARCINOGENESIS.....	2R01 CA15874-04	42,734
SEEGERS, WALTER H.....	FORMATION AND PROPERTIES OF PROTHROMBIN DERIVATIVES.....	5R01 HL03424-21	106,898
SEEGERS, WALTER H.....	PROPERTIES OF THROMBIN AND AC-GLOBULIN.....	5R01 HL18435-03	23,152
SKOFF, ROBERT P.....	THE STUDY OF NORMAL AND ABNORMAL GILIOGENESIS.....	7R01 NS15338-01	69,796
SUNDICK, ROY S.....	EFFECT OF THYROXINE ON LYMPHOID TISSUES OF CHICKENS.....	5R23 AG00634-02	42,482
SWANBORG, ROBERT H.....	ENCEPHALITOGEMIC NATURE OF ALTERED BRAIN PREPARATION.....	5R01 NS06985-12	61,935
TCHEN, TCHE-TSING.....	CONVERSION OF CHOLESTEROL TO PREGNENOLONE.....	5R01 AM13724-09	70,333
TSENOGLOU, DEMETRIUS.....	X-RAY DIFFRACTION ANALYSIS OF THROMBIN AND NEUROTOXIN.....	5R01 HL15958-06	54,327
VAITKEVICIUS, VAINUTIS K.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17952-04	170,738
VINOGRADOV, SERGE N.....	QUATERNARY STRUCTURE OF ERYTHRO AND CHLOROCHLORINS.....	5R01 HL18634-03	21,149
WEINER, LAWRENCE M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05384-17	149,894
WEINSIEDER, ALLAN.....	EXTRA-OCULAR FACTORS AFFECTING LENS GROWTH.....	5R01 EY02105-02	36,928
WHITTEN, CHARLES F.....	COMPREHENSIVE SICKLE CELL CENTER SUPPORT.....	5P60 HL16008-06	978,427
WIENER, JOSEPH.....	MORPHOGENESIS OF HYPERTENSIVE VASCULAR DISEASE.....	1R01 HL23603-01	143,637
YAMAZAKI, RUSSELL K.....	HORMONAL REGULATION OF MITOCHONDRIAL FUNCTION.....	7R01 AM25258-01	60,223
ZWAS, FRED.....	PSYCHOPHYSICAL STUDIES OF RETINITIS PIGMENTOSA.....	3R01 EY01707-02S1	8,840
ZWAS, FRED.....	PSYCHOPHYSICAL STUDIES OF RETINITIS PIGMENTOSA.....	5R01 EY01707-03	26,769
ORGANIZATION TOTAL	93	6,275,523	
EAST LANSING			
MICHIGAN STATE UNIVERSITY ZIP CODE 48823			
AKERA, TAI.....	CARDIAC GLYCOSIDES: MECHANISM OF INOTROPIC ACTION.....	5R01 HL16052-05	119,384
ASHER, JAMES H, JR.....	GENETIC AND MOLECULAR ANALYSIS OF MESODERMAL INDUCTION.....	3R01 HD08134-03S1	23,846
AUST, STEVEN D.....	XENOBIOTIC CONJUGATION BY THE INTESTINE.....	5R01 GM22535-03	23,267
BAILIE, MICHAEL D.....	ANATOMICAL AND FUNCTIONAL DEVELOPMENT OF THE KIDNEY.....	3R01 HD06290-04S1	14,906
BARKER, ROBERT.....	MEMBRANE OLIGOSACCHARIDES.....	5R01 GM21731-04	75,197
BENNETT, JAMES L.....	DRUG DISRUPTION OF TREMATODE PHYSIOLOGICAL PROCESSES.....	5R22 AI14294-02	28,639
BENNETT, JAMES L.....	SCHISTOSOMIASIS: MODE OF ACTION OF NEW DRUGS.....	1R01 AI14993-01	54,648
BIEBER, LORAN L.....	SHORT-CHAIN ACYLCARNITINES—FUNCTION AND ENZYMOLOGY.....	2R01 AM18427-04	90,927
BOEZI, JOHN A.....	PHOSPHONOACETIC ACID: ANTIVIRAL AND CYTOTOXIC ACTION.....	5R01 AI14357-02	54,814
BREDECK, HENRY E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07049-13	92,908
BRUBAKER, ROBERT R.....	IRON-DEPENDENT ENHANCEMENT OF VIRULENCE IN YERSINIAE.....	5R01 AI13590-02	43,369
BULL, ROBERT W.....	IMMUNOHEMATOLOGICAL REFERENCE CENTER SUPPORT.....	2P40 RR00931-04	92,824
CHANG, CHIA-CHENG.....	MECHANISM OF MUTAGENESIS IN HUMAN AND MAMMALIAN CELLS.....	1R23 ES01809-01	43,223
CHOU, CHING-CHUNG.....	MECHANISMS OF HEMODYNAMIC CHANGES DURING DIGESTION.....	5R01 HL15231-05	45,779

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CLEMENS, LYNWOOD G.....	NEURAL CONTROL OF SEXUAL BEHAVIOR IN THE RAT.....	2R01 HD06760-07	82,079
CONVEY, EDWARD M.....	CONTROL OF BOVINE LUTEINIZING HORMONE SECRETION.....	5R01 HD10123-03	42,420
DEAL, WILLIAM C, JR.....	FATTY ACID SYNTHETASE AND A NEW HEMOPROTEIN, H-450.....	1R01 AM20523-01A1	52,238
DUKELOW, W RICHARD.....	CYTOGENETIC STUDIES OF PRIMATE DEVELOPMENT.....	2R01 HD07534-04A1	70,370
ESSELMAN, WALTER J.....	EXPRESSION OF T LYMPHOCYTE DIFFERENTIATION ANTIGENS.....	9R01 CA24437-04	60,451
FRAKER, PAMELA J.....	DIETARY ZINC: ITS EFFECT ON THE IMMUNE RESPONSE.....	5R01 HD10586-02	39,392
FROMM, PAUL O.....	COMPARATIVE PHYSIOLOGICAL STUDIES OF VERTEBRATE EYES.....	5R01 EY00009-15	50,264
GEBBER, GERARD L.....	CENTRAL NEURAL CONTROL OF CARDIOVASCULAR FUNCTION.....	5R01 HL13187-09	38,772
GERHARDT, PHILIPP.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05772-04	47,110
GOODMAN, JAY I.....	REPAIR SYNTHESIS OF DNA IN PRECANCEROUS RAT LIVER.....	5R01 CA13344-07	55,743
GREGA, GEORGE J.....	PATHOPHYSIOLOGY OF CIRCULATORY SHOCK.....	2R01 HL12421-10	65,735
HART, HAROLD.....	STUDIES IN ORGANIC SYNTHESIS.....	5R01 GM15997-09	70,998
HATTON, GLENN I.....	INTERNAL SENSING SYSTEMS AND DRINKING BEHAVIOR.....	5R01 NS09140-08	49,714
HEISEY, S RICHARD.....	EFFECTS OF BLOOD FLOW AND ANESTHESIA ON CSF DYNAMICS.....	5R01 NS13565-02	40,193
HOOK, JERRY B.....	FACTORS AFFECTING RENAL PHYSIOLOGY IN THE NEWBORN.....	5R01 AM10913-12	65,504
HOOK, JERRY B.....	PERINATAL PESTICIDE TOXICITY.....	5R01 ES00560-07	64,371
JORDAN, BRIGITTE.....	A CROSSCULTURAL INVESTIGATION OF CHILDBIRTH PRACTICES.....	1R01 HD11575-01	36,061
KABARA, JON J.....	SPECIFIC DIETARY LIPIDS AS ANTICARIOGENIC AGENTS.....	5R01 DE04077-02	29,875
KIERSZENBAUM, FELIPE.....	IMMUNOLOGY OF THY-1-BEARING LYMPHOCYTE SUBSETS.....	1R01 CA25042-01	52,426
KITAI, STEPHEN T.....	EXPERIMENTAL STUDIES OF SENSORY PATHWAYS.....	3R01 NS14866-01S1	266
LEW, GLORIA M.....	ORAL CONTRACEPTIVES AND HYPERTENSION.....	5R01 HL17724-03	15,386
MAHER, VERONICA M.....	ROLE OF MUTAGENESIS IN CHEMICAL CARCINOGENESIS.....	5R01 CA21247-03	121,149
MAHER, VERONICA M.....	INTERACTION OF CARCINOGENS WITH DNA—REPAIR OF LESIONS.....	5R01 CA21253-03	100,138
MATSUMURA, FUMIO.....	TOXIC EFFECT OF CHLORINATED AND PYRETHROID PESTICIDES.....	1R01 ES01963-01	82,895
MC CONNELL, DAVID G.....	STUDIES OF RETINAL ROD CYCLIC GMP PHOSPHODIESTERASE.....	5R01 EY01574-02	46,044
MC CORMICK, J JUSTIN.....	TRANSFORMATION OF HUMAN CELLS BY CHEMICAL CARCINOGENS.....	5R01 CA21289-02	71,274
MC CORMICK, J JUSTIN.....	HUMAN METABOLIC ACTIVATION SYSTEMS FOR MUTAGENESIS.....	1R01 CA23942-01	55,947
MEITES, JOSEPH.....	HYPOTHALAMO-PITUITARY-OVARIAN RELATIONSHIPS IN AGING RAT.....	5R01 AG00416-04	71,576
MEITES, JOSEPH.....	CONTROL OF SECRETION OF HYPOTHALAMIC HORMONES.....	5R01 AM04784-18	84,206
MEITES, JOSEPH.....	NEUROENDOCRINE CONTROL OF MAMMARY AND PITUITARY TUMORS.....	2R01 CA10771-11	83,998
MILLER, HAROLD C.....	IMMUNOGENESIS FROM BONE MARROW CELLS.....	2R01 CA13396-07	99,665
MOORE, KENNETH E.....	THE ROLE OF CATECHOLAMINES IN DRUG TOXICITY.....	2R01 NS09174-13	72,561
MORRIS, ALLAN J.....	THE EFFECTS OF MESSENGER RNA STRUCTURE ON TRANSLATION.....	2R01 AM08575-13A1	74,183
RIEGLE, GAIL D.....	STRESS EFFECTS ON PREGNANCY AND FETAL NORMALCY.....	1R01 HD10521-01A1	47,938
RIVERA, EVELYN M.....	CARCINOGEN-INDUCED RAT MAMMARY HYPERPLASIAS.....	3R01 CA17862-03S1	8,976
ROBINSON, NORMAN E.....	DEVELOPMENT OF COLLATERAL VENTILATION.....	5R01 HL17768-04	39,217
ROMSOS, DALE R.....	EFFECT OF MEAL PATTERN AND DIET ON ENERGY METABOLISM.....	5R01 AM15847-08	61,589
ROMSOS, DALE R.....	EFFECT OF DIET ON CARBOHYDRATE AND LIPID METABOLISM.....	5R01 AM18957-03	55,745
ROSENBERG, BARNETT.....	METAL COORDINATION COMPLEXES IN CANCER CHEMOTHERAPY.....	2R01 CA11349-10	101,444
ROTH, ROBERT A, JR.....	ENVIRONMENTAL AGENTS AND NONRESPIRATORY LUNG FUNCTION.....	1R23 ES01861-01	37,731
ROTTMAN, FRITZ M.....	CONTROL OF RNA PROCESSING IN NORMAL AND TUMOR CELLS.....	5R01 CA13175-07	112,232
SADOFF, HAROLD L.....	CELL DIFFERENTIATION IN PROCARYOTIC ORGANISMS.....	5R01 AI01863-21	64,936
SMITH, WILLIAM L.....	PROSTAGLANDIN SYNTHESIS IN KIDNEY COLLECTING TUBULES.....	1R01 AM22042-01	43,767
SMITH, WILLIAM L.....	REGULATION OF UTERINE PROSTAGLANDIN BIOSYNTHESIS.....	5R01 HD10013-03	39,217
SUELTER, CLARENCE H.....	COMPARATIVE ENZYMOLOGY OF NORMAL AND ABNORMAL TISSUE.....	5R01 GM20716-05	55,512
SWEELEY, CHARLES C.....	CHEMISTRY AND METABOLISM OF SPHINGOLIPIDS.....	5R01 AM12434-11	101,655
SWEELEY, CHARLES C.....	METABOLIC PRODUCTS IN DIABETES: GC-MS QUANTITATION.....	1R01 AM23012-01	176,947
SWEELEY, CHARLES C.....	ROLE OF GLYCOSPHINGOLIPIDS IN PLATELET AGGREGATION.....	5R01 HL17462-03	30,526
SWEELEY, CHARLES C.....	SUPPORT FOR MASS SPECTROMETRY FACILITY.....	2P41 RR00480-10	247,723
TIEN, H TI.....	BILAYER LIPID MEMBRANES IN AQUEOUS MEDIA.....	5R01 GM14971-13	104,885
TOLBERT, N EDWARD.....	PEROXISOMES IN DEVELOPING LIVER AND KIDNEY.....	5R01 HD06441-07	100,327
TROSKO, JAMES E.....	MUTATION AND DEREPRESSION OF GENES IN CARCINOGENESIS.....	5R01 CA21104-02	74,941
TUCKER, H ALLEN.....	PHOTOPERIODIC CONTROL OF BOVINE SERUM PROLACTIN.....	5R01 HD09883-03	47,650
UFFEN, ROBERT L.....	MEMBRANE MORPHOGENESIS AND DIFFERENTIATION IN BACTERIA.....	1R01 GM24672-01	34,386
VAN EGEREN, LAWRENCE F.....	INTERPERSONAL STRESS AND CORONARY-PRONE BEHAVIOR.....	5R01 HL21319-02	49,939
VELICER, LELAND F.....	MAREK'S DISEASE HERPES VIRUS ANTIGENS.....	1R01 CA23408-01	65,324
WEAVER, LYNNE C.....	AUTONOMIC CONTROL OF RENAL FUNCTION.....	5R01 HL21436-02	52,363
WELLS, WILLIAM W.....	ENERGY RELATIONSHIPS IN INBORN ERRORS OF METABOLISM.....	5R01 AM10209-13	89,833
WELSCH, CLIFFORD W.....	NEUROENDOCRINE CONTROL OF MURINE LEUKEMOGENESIS.....	1R01 CA18752-01A1	46,473
WELSCH, FRANK.....	DISTRIBUTION AND FUNCTIONS OF ACH IN PLACENTA.....	5R01 HD07091-05	33,273

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MICHIGAN—Continued			
WELSER, JOHN R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05623-12	36,547
WESTON, W DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05656-11	111,610
WILLIAMS, JEFFREY F.....	IMMUNOLOGY OF LARVAL TAPEWORM INFECTION.....	2R01 AI10842-07	118,717
WILSON, JOHN E.....	MITOCHONDRIAL HEXOKINASE AND BRAIN METABOLISM.....	5R01 NS09910-08	77,212
ORGANIZATION TOTAL	78 5,065,370		
ELOISE			
WAYNE COUNTY GENERAL HOSPITAL ZIP CODE 48132			
MC CANN, DAISY S.....	ACTIVE SITE CHARACTERIZATION OF PARATHYROID HORMONE.....	5R01 AM18680-03	13,280
ORGANIZATION TOTAL	1 13,280		
HOLLAND			
HOPE COLLEGE ZIP CODE 49423			
BOYER, RODNEY F.....	2-HYDROXY FATTY ACIDS: METABOLISM IN BRAIN TISSUE.....	5R01 NS13081-03	11,087
ORGANIZATION TOTAL	1 11,087		
ROCHESTER			
OAKLAND UNIVERSITY ZIP CODE 48063			
CALLEWAERT, DENIS M.....	EVOLUTION OF CERTAIN DEHYDROGENASES IN PSEUDOMONAS.....	5R01 GM22233-03	22,705
GOUDSMIT, ESTHER M.....	MOLLUSCAN REPRODUCTIVE CYCLE: NEUROHORMONAL CONTROL.....	5R01 GM23240-03	41,505
KINSEY, V EVERETT.....	INTRAOCULAR FLUID DYNAMICS.....	3R01 EY00483-09S1	30,855
OBEAR, FREDERICK W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07131-09	44,874
REDDAN, JOHN R.....	CONTROL OF CELL DIVISION IN THE OCULAR LENS.....	5R01 EY00362-12	74,852
REDDY, VENKAT N.....	INTRAOCULAR FLUID DYNAMICS.....	2R01 EY00483-10	74,876
REDDY, VENKAT N.....	STUDY OF INTRAOCULAR TRANSPORT.....	5R01 EY00484-11	117,323
REDDY, VENKAT N.....	PROTEINS OF NORMAL AND CATARACTOUS LENSES.....	5R01 EY02027-02	48,808
RILEY, MICHAEL V.....	CONTROL OF CORNEAL HYDRATION AND TRANSPARENCY.....	3R01 EY00541-08S1	1,400
RILEY, MICHAEL V.....	CONTROL OF CORNEAL HYDRATION AND TRANSPARENCY.....	2R01 EY00541-09	83,247
ROY, ARUN K.....	HORMONAL CONTROL OF ALPHA-2U GLOBULIN SYNTHESIS IN LIVER.....	5R01 AM14744-08	56,253
UNAKAR, NALIN J.....	MORPHOLOGICAL STUDIES IN EXPERIMENTAL CATARACTS.....	5R01 EY01680-03	50,454
WINKLER, BARRY S.....	PHOTORECEPTOR ELECTROGENESIS: DYNAMICS AND CONTROLS.....	3R01 EY01219-03S1	4,250
WINKLER, BARRY S.....	PHOTORECEPTOR ELECTROGENESIS: DYNAMICS AND CONTROLS.....	2R01 EY01219-04	66,231
ZEPELIN, HAROLD.....	AGING AND THE QUALITY OF HUMAN SLEEP.....	5R23 AG00723-02	45,365
ORGANIZATION TOTAL	15 762,998		
SAGINAW			
SAGINAW COOPERATIVE HOSPITALS ZIP CODE 48601			
DIMITROV, NIKOLAY V.....	PRIMARY BREAST CANCER THERAPY (NSABP).....	5R10 CA20647-02	26,813
ORGANIZATION TOTAL	1 26,813		
SOUTHFIELD			
PROVIDENCE HOSPITAL ZIP CODE 48075			
VAUGHN, CLARENCE B.....	SOUTHWEST ONCOLOGY GROUP.....	1R10 CA22416-01	40,337
ORGANIZATION TOTAL	1 40,337		
STATE TOTAL	422 36,114,523		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA			
AUSTIN			
UNIVERSITY OF MINNESOTA AT AUSTIN ZIP CODE 55912			
BAUMANN, WOLFGANG J.....	UNUSUAL LIPIDS IN CANCER TISSUES.....	5R01 CA12150-07	44,230
BROCKMAN, HOWARD L, JR.....	REGULATION OF CHOLESTERYL ESTER LEVELS IN THE AORTA.....	2R01 HL17371-04	44,567
BROCKMAN, HOWARD L, JR.....	REGULATION OF CHOLESTERYL ESTER LEVELS IN THE AORTA.....	5R01 HL17371-05	40,452
BROCKMAN, HOWARD L, JR.....	BULK-SURFACE DISTRIBUTION OF CHOLESTERYL ESTERS.....	1R01 HL23003-01	32,756
CHIPAULT, JACQUES R.....	DIET, FECAL STEROIDS AND COLON CANCER.....	5R01 CA19519-03	44,001
CHIPAULT, JACQUES R.....	LIPIDS OF CATARACTS.....	5R01 EY01424-04	64,058
CHIPAULT, JACQUES R.....	LIPIDS OF LENTICULAR MEMBRANES.....	1R01 EY02307-01	46,177
HOLMAN, RALPH T.....	REQUIREMENTS OF POLYUNSATURATED FATTY ACIDS.....	5R01 AM04524-18	87,171
HOLMAN, RALPH T.....	CHEMICAL AND BIOLOGICAL PROPERTIES OF LIPIDS.....	5P01 HL08214-15	583,314
HOLMAN, RALPH T.....	THE METABOLISM OF TRANS FATTY ACIDS.....	5R01 HL21513-02	58,802
PRIVETT, ORVILLE S.....	RELATIONSHIPS OF DIET AND AIR POLLUTANTS TO AGING.....	2R01 AG00174-04	44,607
PRIVETT, ORVILLE S.....	EFFECT OF DIETARY FAT ON GLYCERIDE STRUCTURE.....	5R01 AM04942-18	80,738
PRIVETT, ORVILLE S.....	ULTRAMICROANALYSIS OF PROSTAGLANDINS & RELATED COMPOUNDS.....	1R01 HL21764-01	94,389
SCHLENK, HERMANN.....	INTERCONVERSION OF LIPIDS IN ANIMALS.....	5R01 AM13424-18	79,459
SCHLENK, HERMANN.....	CHEMISTRY AND BIOCHEMISTRY OF A NEW TYPE OF FATTY ACIDS.....	5R01 GM22880-03	48,712
ORGANIZATION TOTAL	15	1,393,433	
DULUTH			
UNIVERSITY OF MINNESOTA AT DULUTH ZIP CODE 55812			
ANDERSON, PAUL M.....	CYANATE: REACTION WITH CYANASE AND AMIDOTRANSFERASES.....	5R01 GM22434-03	36,275
HUNTLEY, THOMAS E.....	PLATELET FATTY ACID METABOLISM IN DIABETES.....	5R01 HL20411-03	65,112
KNYCH, EDWARD T, JR.....	MECHANISM OF ANGIOTENSIN ACTION: ROLE OF RECEPTOR.....	5R01 HL18893-03	36,578
THEISEN, CHARLES T.....	ANIMAL RESOURCE IMPROVEMENT FACILITY.....	3P40 RR00943-01A2S1	10,593
ZIEGLER, RICHARD J.....	HERPES VIRUS INFECTIONS OF NERVE TISSUE IN VITRO.....	5R01 NS13326-02	35,918
ORGANIZATION TOTAL	5	184,476	
MINNEAPOLIS			
HENNEPIN COUNTY MEDICAL CENTER ZIP CODE 55415			
HODGES, MORRISON.....	MYOCARDIAL BLOOD FLOW IN ACUTE MYOCARDIAL INFARCTION.....	5R01 HL18190-03	27,601
ORGANIZATION TOTAL	1	27,601	
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS ZIP CODE 55455			
ABUL-HAJJ, YUSUF J.....	METABOLISM OF STEROIDS BY HUMAN BREAST CANCER.....	5R01 CA20530-02	21,942
ABUL-HAJJ, YUSUF J.....	EFFECT OF MAMMARY TUMORS ON STEROID METABOLISM.....	1R01 CA22467-01A1	21,855
AHMED, KHALIL.....	STUDIES OF NORMAL AND NEOPLASTIC PROSTATE.....	5R01 CA15062-05	57,670
AMPLATZ, KURT.....	RADIOGRAPHIC VENTRICULOMETRY FOR CORONARY HEART DISEASE.....	5R01 HL16484-04	40,454
ANDERS, MARION W.....	METABOLISM AND CELLULAR INTERACTIONS OF HALOFORMS.....	5R01 CA21899-02	55,997
ANDERS, MARION W.....	ENVIRONMENTAL CHEMICALS AS CO-TOXICANTS.....	2R01 ES00953-04	95,963
ANDERS, MARION W.....	METABOLISM AND TOXICITY OF HALOGENATED HYDROCARBONS.....	2R01 ES01082-04	86,158
ANDERSON, DWIGHT L.....	MORPHOGENESIS OF BACTERIOPHAGE PHI-29.....	2R01 DE03606-10	100,224
ANDERSON, ROBERT W.....	VENTRICULAR DYSFUNCTION AND CARDIAC SURGERY.....	2R01 HL22152-02	158,127
BACHE, ROBERT J.....	THE CORONARY VASCULAR RESPONSE TO ISCHEMIA.....	5R01 HL20598-03	58,952
BACHE, ROBERT J.....	MYOCARDIAL PERFUSION IN THE HYPERTROPHIED HEART.....	1R01 HL21872-01	83,339
BAKER, ABE B.....	CEREBROVASCULAR WORKSHOP.....	2R13 NS08328-08	11,000
BALFOUR, HENRY H, JR.....	THE ROLE OF VIRUSES IN RENAL TRANSPLANT PATIENTS.....	5R01 AM18883-03	69,938
BARBOSA, JOSE J.....	GENETIC AND HLA STUDIES IN DIABETES MELLITUS.....	5R01 AM20729-02	85,897
BARBOSA, JOSE J.....	STUDY OF EFFECTS OF DIABETIC CONTROL ON RENAL DISEASE.....	1R01 AM20742-01A1	76,923
BAUER, G ERIC.....	HORMONE SYNTHESIS AND SECRETION IN ANGLERFISH ISLETS.....	5R01 AM19223-02	40,500
BAUER, G ERIC.....	INSULIN SYNTHESIS AND RELEASE BY RAT-ISLET ADENOMAS.....	1R01 AM24090-01	34,130
BENSON, ELLIS S.....	HEMOGLOBIN AND RED CELL SYSTEM IN HEMOGLOBINOPATHIES.....	5P01 HL16833-04	485,936
BISHOP, JONATHAN S.....	INSULIN RESISTANCE AND PHOSPHO-PROTEIN PHOSPHATASES.....	5R01 AM13319-10	63,832
BLACKSHEAR, PERRY L, JR.....	PULSATORY WATER FLUX AND ENDOTHELIAL CELL DESQUAMATION.....	5R01 HL21188-02	88,148
BLOEDEL, JAMES R.....	THE NEOCEREBELLUM-ASPECTS OF ORGANIZATION AND FUNCTION.....	5R01 NS09447-09	75,824

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
BLOEDEL, JAMES R.....	A PSYCHOPHYSICAL AND NEUROPHYSICAL STUDY OF PAIN.....	5R01 NS13002-03	56,661
BLUMENTHAL, MALCOLM N.....	GENETIC MAPPING OF THE IR GENE TO RAGWEED ANTIGEN E.....	5R01 AI13132-03	70,847
BLUMENTHAL, MALCOLM N.....	IMMUNOGENETIC FACTORS IN ALLERGIC RESPIRATORY DISEASES.....	1R01 HL23631-01	91,805
BODLEY, JAMES W.....	GUANINE NUCLEOTIDES AND PROTEIN CHAIN GROWTH.....	2R01 GM21359-03	65,602
BODLEY, JAMES W.....	PHOTOCHEMICAL CROSS-LINKING OF THE RIBOSOME.....	5R01 GM23276-03	33,963
BORCH, RICHARD F.....	REDUCTION OF TOXICITY IN CANCER CHEMOTHERAPY.....	1R01 CA22925-01	55,149
BRAND, K GERHARD.....	FOREIGN BODY TUMORIGENESIS.....	3R01 CA10712-10S1	18,121
BRAND, K GERHARD.....	SEQUENTIAL CELL STUDIES IN FOREIGN BODY TUMORIGENESIS.....	2R01 CA10712-11	59,188
BRANDA, RICHARD F.....	CELLULAR FOLATE METABOLISM IN PRE-LEUKEMIA.....	5R01 CA20251-02	29,637
BROWN, DAVID M.....	ISLET TRANSPLANTATION AND DIABETIC VASCULAR DISEASE.....	5R01 AM17697-05	88,238
BRYANT, ROBERT G.....	SOLVENT AND SMALL SOLUTES IN TISSUES AND PROTEINS.....	2R01 GM18719-07	66,757
BRYANT, ROBERT G.....	CROSS POLARIZATION NMR OF RARE SPINS IN PROTEIN SYSTEMS.....	1R01 GM25441-01	42,414
BRYANT, ROBERT G.....	ALKALINE EARTH ION NUCLEAR MAGNETIC RESONANCE.....	1R01 GM25757-01	35,731
BUCHWALD, HENRY.....	TOTALLY IMPLANTABLE ARTIFICIAL 'BETA CELL'.....	5R01 AM19033-02	75,208
BUCHWALD, HENRY.....	METHOD OF TREATMENT AND NEPHROPATHY IN DIABETICS.....	1R01 AM23060-01	72,012
BUCHWALD, HENRY.....	EFFECTS OF METABOLIC SURGERY ON THE HYPERLIPIDEMIAS.....	5R01 HL11901-12	115,716
BUCHWALD, HENRY.....	SURGICAL CONTROL OF THE HYPERLIPIDEMIAS.....	5P01 HL15265-05	977,227
BUCHWALD, HENRY.....	SURGICAL CONTROL OF THE HYPERLIPIDEMIAS.....	2R10 HL15265-06	2,420,891
BURKHARDT, DWIGHT A.....	VISION AND INTRARETINAL POTENTIALS.....	2R01 EY00460-10	52,747
CAVERT, H MEAD.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00400-10	429,513
CHOIH, SUN-JIN.....	ORAL BACTERIA, PROTEASES AND HUMAN SALIVARY PROTEINS.....	1R23 DE05071-01	11,583
CLICK, ROBERT E.....	TOLERANCE OF BONE MARROW GRAFTS.....	1R01 CA23678-01	63,872
COHN, JAY N.....	SPLANCHNIC HEMODYNAMICS IN MAN.....	5R01 HL18020-04	45,282
COHN, JAY N.....	ROLE OF VASOCONSTRICTOR MECHANISMS IN HEART FAILURE.....	1R01 HL22977-01	129,223
COLLINS, W ANDREW.....	CHILD PSYCHOLOGY SYMPOSIUM SUPPORT.....	5R13 HD10650-02	10,610
COOK, R DENNIS.....	STATISTICAL CASE ANALYSIS.....	1R01 GM25587-01	38,256
CRADDOCK, PHILIP R.....	LEUKEMIA THERAPY AND NEUTROPHIL DYSFUNCTION.....	5R01 CA15627-05	61,172
CROW, RICHARD S.....	RISK REDUCTION AND EXERCISE FITNESS IN A POPULATION.....	1R01 HL21307-01	47,843
DALMASSO, AGUSTIN P.....	ROLE OF COMPLEMENT IN INTRAVASCULAR COAGULATION.....	5R01 HL15215-06	38,382
DELANEY, JOHN P.....	GASTRIN CELL POPULATIONS.....	5R01 AM19326-02	89,615
DELANEY, JOHN P.....	A PROSTHETIC SPHINCTER FOR INTESTINAL STOMAS.....	5R26 CA18015-04	56,315
DEMPSEY, MARY E.....	ENZYMIC CHOLESTEROL SYNTHESIS.....	5R01 HL08634-15	120,552
DOUGLAS, STEVEN D.....	MORPHODYNAMICS OF HUMAN LYMPHOCYTES AND MONOCYTES.....	5R01 AI12478-05	82,322
DREWES, LESTER R.....	METABOLISM IN THE BRAIN.....	5R01 NS13597-02	51,139
DUNHAM, EARL W.....	VASCULAR ROLE OF PROSTAGLANDIN AND CYCLIC NUCLEOTIDES.....	5R01 HL15447-06	27,730
DUVALL, ARNDT J, III.....	FLUID BARRIERS AND PATHWAYS WITHIN THE COCHLEA.....	3R01 NS04615-15S1	35,000
DUVALL, ARNDT J, III.....	FLUID BARRIERS AND PATHWAYS WITHIN THE COCHLEA.....	5R01 NS04615-16	75,062
DWORKIN, MARTIN.....	CELL INTERACTIONS DURING MYXOBACTERIAL DEVELOPMENT.....	5R01 GM19957-06	65,050
EISENBERG, M MICHAEL.....	GASTROINTESTINAL/BILIARY VAGAL-GASTRIN MECHANISMS.....	3R01 AM18379-03S1	11,501
ERLANDSEN, STANLEY L.....	LYSOZYME SECRETION AND PANETH CELL FUNCTION.....	2R01 AM18344-04	48,145
ESTENSEN, RICHARD D.....	A COCARCINOGEN AS A LYMPHOCYTE MITOGEN.....	5R01 CA22195-02	66,267
FARAS, ANTHONY J.....	RNA-DIRECTED DNA POLYMERASE AND 70S RNA OF ONCORNAVIRUS.....	5R01 CA18303-04	65,037
FARAS, ANTHONY J.....	BIOLOGICAL SAFETY FACILITY APPLICATION.....	1P30 GM25713-01	41,500
FERGUSON, RONALD M.....	UTILIZING SUPPRESSOR CELLS IN ALLOGRAFT REACTIONS.....	1R23 AI14012-01A1	32,825
FERRIERI, PATRICIA.....	HOST RESPONSES TO GROUP B STREPTOCOCCI.....	5R01 AI13926-02	68,732
FERRIS, THOMAS F.....	PHYSIOLOGY OF RENIN, ALDOSTERONE AND PROSTAGLANDIN.....	7R01 HL23602-01	78,550
FOWLKS, W L.....	BIOCHEMICAL STUDIES OF THE BLOOD-VITREOUS BODY BARRIER.....	2R01 EY01258-04	101,269
FOX, IRWIN J.....	REGIONAL MYOCARDIAL FLOW AND FUNCTION RELATIONSHIPS.....	3R01 HL18024-03S1	3,079
FROHRIB, DARRELL A.....	SYSTEM DESIGN STUDY OF FLUID ENERGY TRANSFER DEVICES.....	5R01 GM21178-05	66,160
FURCHT, LEO T.....	PATHOBIOLOGY OF THE CELL MEMBRANE IN CANCER.....	5R01 CA21463-02	74,276
GAIL-PECZALSKA, KAZIMIERA.....	IMMUNOLOGY OF HUMAN LYMPHOID TUMORS OF B-CELL ORIGIN.....	3R01 CA17034-03S1	13,283
GAIL-PECZALSKA, KAZIMIERA.....	IMMUNOLOGY OF HUMAN LYMPHOID TUMORS OF B-CELL ORIGIN.....	2R01 CA17034-04	65,980
GAULT, N L, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05385-17	200,462
GEISSER, SEYMOUR.....	PREDICTIVE SAMPLE REUSE METHODOLOGY.....	1R01 GM25271-01	38,911
GOLDBERG, NELSON D.....	KREBS CYCLE AND CYCLIC NUCLEOTIDE CONTROL.....	5R01 NS05979-13	111,736
GOODALE, ROBERT L, JR.....	CANCER DETECTION PROGRAM.....	5R26 CA20115-03	63,681
GORLIN, ROBERT J.....	ORAL PATHOLOGY SUPPORT.....	5R01 DE01770-16	98,394
GRAY, BEULAH H.....	METABOLISM OF LEUKOCYTES DURING PHAGOCYTOSIS.....	5R01 AI13614-03	35,264
GRAY, GARY R.....	ANTITUMOR ACTIVE COMPONENTS OF BCG CELL WALLS.....	5R01 CA15325-05	65,972
GUTMANN, HELMUT R.....	MECHANISM OF ACTION OF AROMATIC AMINES IN CELL CULTURE.....	5R01 CA02571-23	86,203

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
HALBERG, FRANZ.....	MEAL-TIMING, CIRCADIAN RHYTHMS AND LIFE SPAN.....	5R01 AG00158-02	68,031
HALBERG, FRANZ.....	CARCINOSTATIC TREATMENT ACCORDING TO SPECTRUM OF RHYTHMS.....	5R01 CA14445-06	108,086
HAMILTON, DAVID W.....	EFFECT OF DIABETES IN THE MALE.....	1R01 AM22182-01	77,220
HAMILTON, DAVID W.....	STRUCTURE AND FUNCTION OF EPIDIDYMS AND VAS DEFERENS.....	1R01 HD11962-01	49,866
HANNA, PATRICK E.....	CARCINOGEN ACTIVATION VIA ACYL TRANSFER.....	1R01 CA21659-01A1	58,754
HANNA, PATRICK E.....	BIOACTIVATION OF ARYLHYDROXAMIC ACIDS: SAR STUDIES.....	1R01 CA24427-01	65,625
HANSON, RUSSELL F.....	METABOLISM OF BILE ACIDS.....	5R01 AM15077-08	102,732
HARRIS, JOHN E.....	STUDIES OF THE TRIPARANOL CATARACT.....	5R01 EY01200-05	42,489
HARTUP, WILLARD W.....	RESEARCH IN DEVELOPMENTAL PSYCHOLOGY.....	5P01 HD05027-09	331,419
HEBBEL, ROBERT P.....	BLOOD CELL-MEDIATED PULMONARY AND VASCULAR DAMAGE.....	1R23 HL22621-01	43,671
HEGRE, ORION D.....	FETAL PANCREATIC TRANSPLANTATION.....	5R01 AM19899-02	71,227
HEGRE, ORION D.....	FETAL ENDOCRINOLOGY AND DIABETES.....	5R01 HD00412-21	48,911
HOGENKAMP, HENRICUS P.....	STRUCTURE AND REACTIONS OF THE COBAMIDE COENZYMES.....	2R01 GM23773-03	96,871
HOLTZMAN, JORDAN L.....	CYTOCHROME-REDUCTASE ACTIVATION IN HYDROXYLATION.....	2R01 GM21310-04	73,213
HOLTZMAN, JORDAN L.....	FREE RADICALS IN THE TOXICITY OF NITRO AND AZO DRUGS.....	5R01 GM23032-03	29,345
HOWARD, RICHARD J.....	VIRAL DIABETES: RENAL LESIONS, ANTIBODY & TRANSPLANTS.....	5R01 AM21068-02	35,679
HOYE, THOMAS R.....	SYNTHESIS OF ANTINEOPLASTIC CHEMOTHERAPEUTIC AGENTS.....	1R01 CA24056-01	56,986
HUMPHREY, EDWARD W.....	POST-TRAUMATIC PULMONARY INSUFFICIENCY.....	5R01 HL18762-03	75,522
JACOB, HARRY S.....	ABNORMAL BLOOD CELL MEMBRANES IN DISEASE.....	5R01 AM15730-10	50,458
JACOB, HARRY S.....	COMPLEMENT-INDUCED PULMONARY INJURY.....	3R01 HL19725-02S1	1,384
JACOB, HARRY S.....	COMPLEMENT-INDUCED PULMONARY INJURY.....	5R01 HL19725-03	77,861
JENKINS, JAMES J.....	CENTER FOR RESEARCH IN HUMAN LEARNING.....	5P01 HD01136-15	224,206
KAPLAN, EDWARD L.....	PROBLEMS IN PREVENTION OF RHEUMATIC HEART DISEASE.....	5R01 HL19307-03	97,685
KAUNG, HUE-LEE C.....	DEVELOPMENTAL STUDIES OF ENDOCRINE PANCREAS.....	5R01 AM19868-02	33,729
KENNEDY, BYRL J.....	CANCER & LEUKEMIA GROUP B—MEDICAL ONCOLOGY SUPPORT.....	5R10 CA16450-04	157,004
KENNEDY, BYRL J.....	CLINICAL CANCER EDUCATION PROGRAM, PARTS I AND II.....	5R25 CA19527-03	164,511
KENNEDY, WILLIAM R.....	FINE STRUCTURE OF MUSCLE SPINDLES.....	5R01 NS10969-04	42,507
KERSEY, JOHN H.....	EPIDEMIOLOGY OF CANCER IN IMMUNODEFICIENCY FAMILIES.....	5R01 CA18083-03	92,382
KNOX, CHARLES K.....	NEURAL CONTROL OF RESPIRATION.....	5R01 HL16430-05	52,007
KOFFLER, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07052-13	174,086
KRIVIT, WILLIAM.....	PEDIATRIC ONCOLOGY PROGRAM PROJECT.....	5P01 CA21737-02	319,748
KRZYZEK, RICHARD A.....	CONTROL OF AVIAN ONCORNAVIRUS GENES IN MAMMALIAN CELLS.....	1R23 CA23833-01	31,238
LEE, CHING Y.....	REGULATION OF GONADOTROPIN RECEPTOR AND ADENYL CYCLASE.....	2R01 HD10075-02	45,678
LEE, JUI S.....	VILLUS PRESSURES AND LYMPH FLOW OF INTESTINE.....	2R01 AM18085-04	39,128
LEETE, EDWARD.....	METABOLISM OF NATURAL PRODUCTS OF MEDICINAL INTEREST.....	5R01 GM13246-21	71,927
LEON, ARTHUR S.....	EXERCISE, DIABETES AND VASCULAR RISK.....	5R01 AM20311-02	87,070
LEVITT, MICHAEL D.....	PRODUCTION AND ABSORPTION OF INTESTINAL GASES.....	5R01 AM13309-10	81,637
LEVITT, SEYMOUR H.....	RADIATION ONCOLOGY RESEARCH AND CLINICAL CENTER.....	3P01 CA15548-03S1	321,164
LI, JONATHAN J.....	ESTROGEN CARCINOGENICITY AND HORMONE DEPENDENT TUMORS.....	5R01 CA22008-02	72,494
LIFSON, NATHAN.....	HETEROGENEITY OF INTESTINAL MICROCIRCULATION.....	5R01 AM19209-03	35,958
LILJEMARK, WILLIAM F.....	ADHERENCE OF ORAL STREPTOCOCCI TO HYDROXYAPATITE.....	5R01 DE04614-02	44,938
LILLEHEI, RICHARD C.....	RES STIMULATING MATERIALS IN EXPERIMENTAL SHOCK.....	5R01 HL18731-02	81,465
LIMAS, CATHERINE.....	CELL SURFACE CHANGES IN TRANSITIONAL CELL TUMORS.....	5R01 CA22753-02	26,275
LIMAS, CONSTANTINOS J.....	CALCIUM TRANSPORT IN THE HYPERTROPHIED MYOCARDIUM.....	1R01 HL21850-01A1	71,560
LIPSCOMB, JOHN D.....	OXYGENASE ENZYME MECHANISM.....	1R01 GM24689-01	41,895
MALKINSON, ALVIN M.....	GENETICS OF MURINE CYCLIC AMP EFFECTOR MOLECULES.....	5R01 GM22492-03	29,503
MANNERING, GILBERT J.....	DRUG METABOLISM AND BIOCHEMICAL PHARMACOLOGY.....	5R01 GM15477-12	270,554
MARIANI, TONI N.....	INTERRELATIONSHIP BETWEEN MALIGNANCY AND IMMUNITY.....	2R01 CA12929-07	65,200
MATAS, ARTHUR J.....	TRANSPLANTATION OF LIVER CELLS.....	5R01 AM19113-03	51,437
MC KHANN, CHARLES F.....	LYMPHOID CELL INTERACTIONS IN MALIGNANCY.....	5R01 CA19510-03	83,654
MC KHANN, CHARLES F.....	ROLE OF CIRCULATING ANTIGEN IN TUMOR IMMUNITY.....	5R01 CA21431-02	89,753
MESSER, HAROLD H.....	MINERAL NUTRITION AND ALVEOLAR BONE LOSS.....	1R01 DE04475-01A1	39,891
MEYER, MAURICE W.....	CIRCULATION STUDIES IN TEETH AND SUPPORTING STRUCTURES.....	5R01 DE02212-11	88,077
MICHAEL, ALFRED F.....	STUDY OF RENAL DISEASE IN CHILDHOOD.....	5R01 AI10704-18	117,332
MILLER, JACK W.....	OXYTOCIN AND NEUROPHYSIN STORAGE AND RELEASE.....	5R01 HD10268-03	60,029
MILLER, WILMER G.....	CHOLESTERIC BIOPOLYMER LIQUID CRYSTALS.....	2R01 GM16922-10	59,726
MIRKIN, BERNARD L.....	DEVELOPMENTAL AND CLINICAL PEDIATRIC PHARMACOLOGY.....	3R01 HD08580-03S1	61,357
MOHRMAN, DAVID E.....	DYNAMICS OF AUTOREGULATION OF MUSCLE BLOOD FLOW.....	1R23 HL22975-01	40,431
MOLDOW, CHARLES F.....	CELL SURFACE RECEPTORS FOR ONCOGENIC VIRUSES.....	5R01 CA13722-06	56,703
MONTGOMERY, MARK R.....	STUDIES ON OXIDANT-INDUCED PULMONARY LESIONS.....	5R01 ES01365-02	26,814

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
NAGASAWA, HERBERT T.....	MUTAGENESIS OF NITRAMINES VIS-A-VIS NITROSAMINES.....	1R01 CA24078-01	20,030
NAJARIAN, JOHN S.....	STUDIES OF ORGAN TRANSPLANTATION IN ANIMALS AND MAN.....	5P01 AM13083-11	762,107
NAJARIAN, JOHN S.....	IMMUNOLOGIC ADAPTATION TO HUMAN RENAL ALLOGRAFTS.....	5R01 AM16011-06	75,007
NAJARIAN, JOHN S.....	ISOLATION AND TRANSPLANTATION OF PANCREATIC ISLETS.....	5R01 AM16566-05	118,101
NELSON, ROBERT D.....	MECHANISMS OF HUMAN LEUKOCYTE CHEMOTAXIS.....	5R01 CA23707-02	66,129
NESBIT, MARK E, JR.....	COOPERATIVE STUDY OF CHEMOTHERAPY FOR CHILDREN'S CANCER.....	5R10 CA07306-15	240,045
OEGEMA, THEODORE R.....	COMPARATIVE BIOCHEMISTRY OF CARTILAGE TUMORS.....	1R01 CA22558-01	68,459
OEGEMA, THEODORE R.....	BIOCHEMISTRY OF LUNG PROTEOGLYCANS.....	5R01 HL21612-02	42,875
OKEN, MARTIN M.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	1R10 CA20365-01A1	133,202
OLIVER, RICHARD C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05322-17	53,204
OPPENHEIMER, JACK H.....	THYROIDINE-PROTEIN INTERACTIONS.....	5R01 AM19812-03	200,441
PAPARELLA, MICHAEL M.....	EXPERIMENTALLY INDUCED SEROUS OTITIS MEDIA.....	5R01 NS07623-11	43,675
PAPARELLA, MICHAEL M.....	MECHANISMS OF HEARING LOSS.....	5P50 NS12125-04	537,327
PAPARELLA, MICHAEL M.....	OTITIS MEDIA PATHOGENESIS (CLINICAL RESEARCH CENTER).....	1P50 NS14538-01	476,046
PERLMUTTER, MARION A.....	DEVELOPMENT OF MEMORY IN THE PRESCHOOL YEARS.....	1R01 H011776-01	57,265
PLAGEMANN, PETER G.....	LDH-VIRUS GROWTH AND EFFECT ON MACROPHAGE FUNCTIONS.....	9R01 AI15267-12A1	68,353
PLAGEMANN, PETER G.....	HEXOSE TRANSPORT AND PHOSPHORYLATION IN ANIMAL CELLS.....	1R01 AM23001-01	63,510
PREM, RONALD A.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA23088-01	36,659
PRINEAS, RONALD J.....	PREVENTION OF HIGH BLOOD PRESSURE IN CHILDREN.....	5R01 HL19877-02	174,081
PURPLE, RICHARD L.....	STUDIES ON INTEGRATIVE MECHANISMS OF NEURONS.....	5R01 EY00293-13	37,373
QUEBBEMANN, ALOYSIUS J.....	THE PHARMACOLOGY OF RENAL TUBULAR EXCRETORY TRANSPORT.....	5R01 AM14145-09	35,562
QUIE, PAUL G.....	HOST REACTIONS TO MICROORGANISMS IN CHRONIC DISEASE.....	2R01 AI06931-13	97,309
QUIE, PAUL G.....	STUDIES OF OPSONINS IN PHAGOCYTOSIS.....	5R01 AI08821-09	83,297
RAMSAY, ROBERT C.....	OCULAR STATUS OF DIABETIC RENAL TRANSPLANT RECIPIENTS.....	1R01 EY02204-01	32,209
RAMSAY, ROBERT C.....	INVOLUTIONAL DIABETIC RETINOPATHY STUDY.....	5R01 EY02316-02	14,308
RAMSAY, ROBERT C.....	HLA AND GENETIC STUDIES IN DIABETIC RETINOPATHY.....	1R01 EY02455-01	97,456
RATHBUN, WILLIAM B.....	GLUTATHIONE METABOLISM IN OCULAR TISSUES.....	5R01 EY01197-05	92,931
RESCH, JOSEPH A.....	CEREBRAL VASCULAR CLINICAL CENTER SUPPORT.....	3P50 NS03364-15S1	36,095
ROGERS, PALMER.....	DUAL-CONTROL OF THE EXPRESSION OF ARGININE OPERONS.....	1R01 GM25320-01	64,785
ROON, ROBERT J.....	L-ASPARAGINASE: SYNTHESIS OF AN EXTERNAL YEAST ENZYME.....	5R01 GM22374-03	49,377
ROON, ROBERT J.....	AMINO ACID TRANSPORT IN YEAST: ENERGETICS & REGULATION.....	5R01 GM23135-03	32,132
SCHACHTELE, CHARLES F.....	STUDIES ON THE MOLECULAR BASIS OF DENTAL CARIES.....	5R01 DE03654-06	55,249
SCHMIDTKE, JON R.....	MACROPHAGE REGULATION OF ANTITUMOR IMMUNOCYTOTOXICITY.....	5R01 CA21539-02	40,829
SCHWARTZ, JEFFREY S.....	CORONARY VASOMOTION.....	5R23 HL21298-02	42,719
SCHWARTZ, SAMUEL.....	PORPHYRIN, HEME, AND BILE PIGMENT METABOLISM.....	5R01 AM12466-14	101,985
SHIDEMAN, FREDERICK E.....	PHOSPHOLIPIDS AND CARBOXYLIC ACID RECEPTOR FUNCTION.....	5R01 HL20793-02	37,593
SIEGEL, BROCK M.....	BIOMIMETIC ORGANIC REDOX CHEMISTRY.....	1R01 AM21975-01	49,757
SIMMONS, RICHARD L.....	ORGAN REPLACEMENT USING GRAFTS MODIFIED IN VITRO.....	5R01 AI12754-04	109,782
SIMMONS, RICHARD L.....	PATHOGENESIS AND TREATMENT OF EXPERIMENTAL PERITONITIS.....	1R01 AI14032-01A1	83,066
SIMMONS, RICHARD L.....	IMMUNOLOGICAL REACTIVITY IN SPECIAL CIRCUMSTANCES.....	2R01 CA11605-10	159,488
SIMON, GEZA.....	PATHOPHYSIOLOGY OF VENOUS CHANGES IN HYPERTENSION.....	1R01 HL21673-01	42,652
SINGER, LEON.....	FLUORIDE METABOLISM.....	5P01 OE01850-15	172,361
SOINE, TAITO O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05634-11	15,637
SONG, CHANG W.....	VASCULARITY AND REOXYGENATION IN X-IRRADIATED TUMORS.....	5R01 CA13353-05	52,966
SONG, CHANG W.....	USE OF 5-THIO-D-GLUCOSE IN RADIOTHERAPY.....	1R01 CA21281-01A1	73,011
SORENSEN, ROBERT L.....	ISLET SOMATOSTATIN SECRETION AND ITS PARACRINE ROLE.....	1R01 AM24006-01	74,700
STAUFFER, LEE O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05448-17	27,047
SUTHERLAND, DAVID E.....	PANCREATIC ISLET TRANSPLANTATION IN DIABETIC PATIENTS.....	5R01 AM19269-03	86,176
TAYLOR, HENRY L.....	MYOCARDIAL FUNCTION, RISK FACTORS AND FUTURE CHD.....	5R01 HL16909-04	33,555
TAYLOR, HENRY L.....	PHYSICAL ACTIVITY AND INCIDENCE OF CHRONIC HEART DISEASE.....	5R01 HL20662-02	48,687
TERZUOLO, CARLO A.....	PROBLEMS OF NERVE CELL PHYSIOLOGY.....	5R01 NS02567-19	73,545
TOBIAN, LOUIS.....	KIDNEY, NA, CARBOXYLIC ACID OUTPUT, ARTERIOLES, & HYPERTENSION.....	5P01 HL17871-04	450,455
VINCE, ROBERT.....	RIBOSOMAL MAPPING WITH CARBOXYLIC PUROMYCIN ANALOGS.....	5R01 CA13592-09	92,098
WANGENSTEEN, O OUGLAS.....	BLOOD-GAS BARRIER STUDIES IN FETAL & NEONATAL LUNGS.....	2R01 HD08981-04	30,402
WANGENSTEEN, O OUGLAS.....	BLOOD-GAS BARRIER SOLUTE AND WATER TRANSPORT.....	5R01 HL21376-02	60,232
WANNAMAKER, LEWIS W.....	BIOLOGY OF STREPTOCOCCI.....	2P01 AI08724-23	260,077
WANNAMAKER, LEWIS W.....	DYNAMICS OF STREP ANTIGENS, PHAGES, AND ANTIBODIES.....	5R01 AI09527-14	99,980
WATSON, DENNIS W.....	STREPTOCOCCAL PYROGENIC EXOTOXINS: HOST INTERACTIONS.....	2R01 AI06487-14	84,000
WATTENBERG, LEE W.....	MICROSOMAL INDUCTION AND RESPONSE TO CARCINOGENS.....	2R01 CA09599-21	119,080
WATTENBERG, LEE W.....	INHIBITION OF CHEMICAL CARCINOGENESIS.....	5R01 CA14146-06	84,483

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
WATTENBERG, LEE W.....	INHIBITION OF NEOPLASIA OF THE LARGE BOWEL.....	5R26 CA15638-05	94,615
WEIR, EDWARD K.....	ACTIVE NORMOXIC PULMONARY VASODILATION.....	1R01 HL23211-01	40,520
WHITE, JAMES G.....	STRUCTURAL PHYSIOLOGY & PATHOLOGY OF BLOOD PLATELETS.....	5R01 HL11880-10	178,114
WHITE, JAMES G.....	INVESTIGATIONS OF STORED PLATELETS.....	5R01 HL20695-02	68,508
WILSON, IVAN D.....	IMMUNOLOGIC ASPECTS OF PANETH CELL FUNCTION.....	5R01 AM19710-02	83,772
WIRTSCHAFTER, JONATHAN D.....	ANTERIOR CHAMBER FLUID ACETYLCHOLINE CONCENTRATION.....	1R01 EY02602-01	55,210
WITKOP, CARL J, JR.....	ALBINISM.....	5P01 GM22167-04	119,615
WORMS, FRANK W.....	QUANTITATION OF JAW FUNCTION.....	5R01 DE03528-05	106,414
ZANJANI, ESMAIL D.....	REGULATION OF CELLULAR PROLIFERATION IN NEOPLASTIC STATE.....	5R01 CA23021-02	47,792
ZELICKSON, ALVIN S.....	PSORALEN-PHOTOTHERAPY OF NORMAL AND PSORIATIC SKIN.....	1R01 AM21681-01	32,079
ZIMMERMAN, BEN G.....	PHARMACOLOGIC AND REFLEX INFLUENCE ON VASCULAR TONE.....	2R01 HL08570-15	54,797
ORGANIZATION TOTAL	212	21,724,972	
NORTHFIELD			
ST. OLAF COLLEGE ZIP CODE 55057			
HENDRICKSON, H STEWART.....	LIPOLYTIC ENZYME ACTION ON MIXED LIPID MONOLAYERS.....	5R01 NS11777-05	22,419
ORGANIZATION TOTAL	1	22,419	
ROCHESTER			
INDIVIDUAL AWARD—SIEKERT, ROBERT G. ZIP CODE 55901			
SIEKERT, ROBERT G.....	CEREBROVASCULAR RESEARCH STATUS REPORT—5TH EDITION.....	1R01 NS14831-01	2,460
ORGANIZATION TOTAL	1	2,460	
MAYO FOUNDATION ZIP CODE 55901			
ATASSI, M ZOUHAIR.....	DETERMINATION OF THE ANTIGENIC STRUCTURE OF LYSOZYME.....	5R01 AI13181-04	47,360
ATASSI, M ZOUHAIR.....	IMMUNOCHEMICAL STUDIES OF HEMOGLOBIN AND MYOGLOBIN.....	5R01 AM18920-04	52,956
BLACK, LEO F.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00585-07	437,538
BLACK, LEO F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05530-16	200,462
BLINKS, JOHN R.....	CALCIUM TRANSIENTS IN STRIATED MUSCLE AND OTHER CELLS.....	5R01 HL12186-09	116,762
BOURNE, WILLIAM M.....	STUDIES OF THE CORNEA.....	1R01 EY02037-01A1	76,377
BOWIE, E J.....	CONTROL OF COAGULATION.....	5P01 HL17430-05	534,475
BRIMJOIN, WILLIAM S.....	AXONAL TRANSPORT IN ADRENERGIC AND CHOLINERGIC NERVES..	2R01 NS11855-07	39,640
BRUBAKER, RICHARD F.....	PATHOLOGY OF THE BLOOD-AQUEOUS BARRIER.....	5R01 EY00634-08	103,716
CHESEBRO, JAMES H.....	PLATELET INHIBITOR DRUG IN CORONARY SURGERY.....	5R01 HL21533-02	133,999
DAVID, CHELLA S.....	GENETIC AND SEROLOGY OF H-2(IR)-LINKED IA ANTIGENS.....	5R01 AI14764-02	96,962
DAVID, CHELLA S.....	GENETICS & FUNCTIONS OF (H-2 LINKED) I REGION.....	1R01 CA24473-01	101,454
DI MAGNO, EUGENE P.....	PANCREATIC CARCINOGENESIS: ROLE OF DUODENAL REFLUX.....	1R26 CA25064-01	55,652
DICKSON, EDGAR R.....	PRIMARY BILIARY CIRRHOSIS: PENICILLAMINE TRIAL.....	5R01 AM19448-03	77,044
DONALD, DAVID E.....	RESPONSE OF THE TOTALLY DENERVATED HEART TO EXERCISE.....	5R01 HL06143-18	102,447
DOUSA, THOMAS P.....	CELLULAR ACTION OF VASOPRESSIN IN THE KIDNEY.....	5R01 AM16105-07	79,454
DYCK, PETER J.....	PERIPHERAL NEUROPATHY CLINICAL RESEARCH CENTER SUPPORT.....	1P50 NS14304-01	768,222
EARLE, JOHN D.....	TOTAL BODY IRRADIATION IN ADVANCED MOUSE LYMPHOMA.....	5R01 CA21695-03	63,362
ENGEL, ANDREW G.....	ELECTRON MICROSCOPY OF MYOPATHIES.....	5R01 NS06277-13	97,670
FUSTER, VALENTIN.....	ATHEROSCLEROSIS IN BLEEDER AND DRUG TREATED SUBJECTS.....	5R01 HL19001-03	78,804
GERICH, JOHN E.....	ALPHA AND BETA CELL FUNCTION IN HUMAN DIABETES.....	5R01 AM20411-02	74,121
GERICH, JOHN E.....	PANCREATIC SOMATOSTATIN SECRETION IN VITRO.....	5R01 AM20837-02	79,283
GLEICH, GERALD J.....	THE FUNCTIONS OF EOSINOPHILS.....	2R01 AI09728-09	72,142
GLEICH, GERALD J.....	ASTHMA AND ALLERGIC DISEASE CENTER PROGRAM GRANT.....	2P50 AI11483-06	132,180
GLEICH, GERALD J.....	EOSINOPHILS IN HUMAN DISEASE.....	1R01 AI15231-01	69,537
GODT, ROBERT E.....	CALCIUM ION, LENGTH/FORCE VS. VELOCITY—STRIATED MUSCLE.....	2R01 AM17828-04	56,246
GRONERT, G A.....	GAS EXCHANGE DURING ANESTHESIA AND SURGERY.....	5R01 GM21729-19	75,687
HAHN, RICHARD G.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA13650-06	142,620
HAHN, RICHARD G.....	CHEMOTHERAPY OF METASTATIC BLADDER AND KIDNEY CANCER.....	5R26 CA20247-02	8,411
HARRISON, CARLOS E, JR.....	MYOCARDIAL DEFECTS INDUCED BY POTASSIUM DEPLETION.....	5R01 HL12997-07	85,752
HEATH, HUNTER, III.....	CONTROL OF PARATHYROID HORMONE AND CALCITONIN SECRETION.....	1R01 AM19607-01A1	54,167
HEATH, HUNTER, III.....	FRACTURE RISK AND CALCIUM METABOLISM IN DIABETES.....	5R01 AM21101-02	50,541
HYATT, ROBERT E.....	RESPIRATORY MECHANICS IN NORMAL AND ABNORMAL STATES.....	5P01 HL21584-02	657,185

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
JONES, JAMES D.....	GUANIDINES, N RESTRICTION AND RENAL FAILURE.....	5R01 AM19142-03	57,775
KAYE, MICHAEL P.....	NERVE GROWTH FACTOR AND OBSTRUCTIVE CARDIOMYOPATHY.....	5R01 HL20610-02	55,761
KAYE, MICHAEL P.....	PLATELET INHIBITORS: EFFECT ON CORONARY BYPASS GRAFTS.....	1R01 HL22445-01	117,772
KELLY, KEITH A.....	MOTILITY OF THE DIGESTIVE TRACT IN HEALTH AND DISEASE.....	2R01 AM18278-04	71,120
KELLY, PATRICK J.....	HEMODYNAMIC FACTORS IN FRACTURES AND BONE DISEASE.....	2R01 AM15980-06	78,593
KLINE, BRUCE C.....	GENETICS OF PLASMID REPLICATION AND INCOMPATIBILITY.....	1R01 GM25604-01	66,075
KNOX, FRANKLYN G.....	INTRARENAL REGULATION OF PHOSPHATE METABOLISM.....	5R01 AM19715-02	73,282
KNOX, FRANKLYN G.....	INTRARENAL REGULATION OF ELECTROLYTE REABSORPTION.....	5R01 HL14133-08	86,145
KOTTKE, BRUCE A.....	LIPOPROTEINS AND COAGULATION FACTORS IN ATHEROSCLEROSIS.....	1R01 HL21592-01	191,892
KURLAND, LEONARD T.....	NATURAL HISTORY OF HEART, CANCER & STROKE—EPIDEMIOLOGY.....	5P01 GM14231-13	494,369
KYLE, ROBERT A.....	CHEMOTHERAPY OF ACUTE LEUKEMIA AND RELATED DISORDERS.....	5R10 CA04646-19	134,076
KYLE, ROBERT A.....	STUDIES OF MONOCLONAL GAMMOPATHIES IN HUMANS.....	2P01 CA16835-03A1	136,654
LENNON, VANDA A.....	EXPERIMENTAL NEUROIMMUNOLOGY.....	7R01 NS15057-01	106,259
LYNCH, JAMES C.....	OCULOMOTOR CONTROL MECHANISMS OF THE CEREBRAL CORTEX.....	1R01 EY02640-01	68,768
MANN, KENNETH G.....	PRIMARY STRUCTURE OF PROTHROMBIN.....	5R01 HL16150-05	61,915
MC DUFFIE, FREDERIC C.....	IMMUNE COMPLEXES IN RHEUMATOID ARTHRITIS.....	5R01 AM17174-05	101,972
MC KEAN, DAVID J.....	CHARACTERIZATION OF PRECURSOR PROTEINS AND FC RECEPTOR.....	5R01 CA22491-02	68,791
MICHENFELDER, JOHN D.....	CEREBRAL METABOLISM AND BLOOD FLOW.....	2R01 NS07507-12	106,853
MILLER, R DREW.....	CHRONIC OBSTRUCTIVE PULMONARY DISEASE—FAMILIAL/GENETIC.....	5R01 HL20875-02	122,975
MOERTEL, CHARLES G.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA15083-05	656,614
MOSES, HAROLD L.....	MECHANISM OF CHEMICAL CARCINOGENESIS IN VITRO.....	2R01 CA16816-04A1	89,780
NORTHRUP, THOMAS E.....	CELLULAR ACTIONS OF INSULIN IN THE KIDNEY CORTEX.....	5R01 AM21114-02	58,268
OWEN, CHARLES A.....	COPPER METABOLISM IN ANIMALS.....	1R01 AM21738-01	56,522
PALUMBO, PASQUALE J.....	STEROL BALANCE AND CHOLESTEROL ABSORPTION IN DIABETICS.....	3R01 HL20483-02S1	1,608
PALUMBO, PASQUALE J.....	STEROL BALANCE AND CHOLESTEROL ABSORPTION IN DIABETICS.....	5R01 HL20483-03	77,420
PALUMBO, PASQUALE J.....	PERIPHERAL ARTERIAL DISEASE IN THE DIABETIC.....	5R01 HL20522-03	260,346
PEARSON, GARY R.....	BIOCHEMISTRY OF HERPES VIRUS-INDUCED MEMBRANE ANTIGENS.....	5R01 CA20679-02	81,391
PENNISTON, JOHN T.....	VACUOLE FORMATION IN HUMAN ERYTHROCYTES AND GHOSTS.....	2R01 AM19785-03A1	63,376
PENNISTON, JOHN T.....	INTRACELLULAR CA20 RECEPTORS IN ERYTHROCYTES AND TISSUE.....	1R01 AM21820-01	87,765
PHILLIPS, SIDNEY F.....	STUDY OF DIGESTIVE AND HEPATOBILIARY FUNCTION.....	3P01 AM06908-15S1	61,453
ROBB, RICHARD A.....	COMPUTER ANALYSES OF BIOSYSTEM STRUCTURES AND FUNCTIONS.....	2R24 RR00007-15	515,380
ROBERTSON, DENNIS M.....	CHORIORETINOPATHY.....	5R01 EY01709-02	39,133
ROHRBACH, MICHAEL S.....	PULMONARY ANGIOTENSIN CONVERTING ENZYME STUDIES.....	1R23 HL21894-01	40,427
ROMERO, JUAN C.....	PROSTAGLANDINS IN RENAL HYPERTENSION.....	5R01 HL16496-04	73,393
RYAN, ROBERT J.....	MODE OF ACTION OF REPRODUCTIVE HORMONES.....	5P50 HD09140-04	446,799
SCOTT, ROBERT E.....	MEMBRANE PATHOLOGY IN CARCINOGENESIS.....	1R01 CA21722-01A1	64,995
SERVICE, F JOHN.....	GASTRIC INHIBITORY POLYPEPTIDE IN HEALTH AND DIABETES.....	1R01 AM20973-01	65,745
SHEPHERD, JOHN T.....	REFLEX CONTROL OF RESISTANCE AND CAPACITANCE VESSELS.....	5R01 HL05883-18	175,244
SHORTER, ROY G.....	INFLAMMATORY BOWEL DISEASE: CYTOTOXIC MECHANISMS.....	5R01 AM18634-03	68,929
SMITH, LYNWOOD H.....	SPECIALIZED CENTER OF RESEARCH IN UROLITHIASIS.....	5P50 AM20605-02	230,723
SOUTHORN, PETER A.....	EFFECT OF ANESTHESIA ON RESPIRATORY MECHANICS IN ANIMALS.....	1R23 GM25196-01	48,150
SPELSBERG, THOMAS C.....	CARCINOGEN-CHROMATIN INTERACTION IN CULTURED CELLS.....	1R01 CA22272-01A1	76,138
STAUFFER, RICHARD N.....	BIOMECHANICAL EVALUATION OF TOTAL KNEE ARTHROPLASTY.....	5R01 AM18029-03	91,944
STEINMULLER, DAVID.....	CELLULAR AUTOIMMUNITY IN HUMAN SKIN DISEASE.....	1R01 AM21414-01	72,984
SUBBIAH, M T.....	EARLY INTERVENTION OF AGE-RELATED ARTERIAL CHANGES.....	5R01 HL18610-03	41,143
SZURSZEWski, JOSEPH H.....	GASTROINTESTINAL HORMONES AND GASTRIC SMOOTH MUSCLE.....	5R01 AM17238-05	72,334
SZURSZEWski, JOSEPH H.....	NEUROPHYSIOLOGICAL CONTROL OF GI MOTILITY.....	5R01 AM17632-05	72,871
TAYLOR, STUART R.....	EXCITATION-CONTRACTION COUPLING IN MUSCLE.....	1R01 NS14268-01	49,610
TAYLOR, WILLIAM F.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21184-02	144,837
TINKER, JOHN H.....	ORGAN PROTECTION: ROLE OF ANESTHETICS.....	1R23 GM24531-01	47,624
TOFT, DAVID O.....	INTERACTION OF PROGESTERONE RECEPTOR WITH ATP.....	1R01 AM20214-01	55,590
TOMASI, THOMAS B, JR.....	THE IGA GLOBULINS AND OTHER COMPONENTS OF SECRETIONS.....	2R01 AM17554-05	138,761
TOMASI, THOMAS B, JR.....	IMMUNOSUPPRESSION IN EXPERIMENTAL AND HUMAN TUMORS.....	5R01 CA18204-03	161,048
TOMASI, THOMAS B, JR.....	STUDIES OF MATERNAL AND NEONATAL IMMUNITY.....	5R01 HD09720-03	97,633
VAN DYKE, RUSSELL A.....	METABOLISM OF VOLATILE ANESTHETICS.....	5R01 GM17158-08	72,698
VENEZIALE, CARLO M.....	HORMONAL REGULATION OF GLUCONEOGENESIS IN HEPATOCYTES.....	5R01 AM16319-05	67,821
WEINSHILBOUM, RICHARD M.....	ADRENERGIC VASOREGULATORY INTERACTIONS IN HYPERTENSION.....	2R01 HL17487-04A1	48,149
WEINSHILBOUM, RICHARD M.....	DOPAMINE-BETA-HYDROXYLASE—NEURAL RELEASE & METABOLISM.....	5R01 NS11014-04	63,303
WHISNANT, JACK P.....	CEREBROVASCULAR CLINICAL RESEARCH CENTER.....	5P50 NS06663-13	523,657
WOOD, EARL H.....	CARDIOVASCULAR & LUNG DYNAMICS.....	5P01 HL04664-18	2,006,271

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MINNESOTA—Continued			
YAKSH, TONY L.....	IN VIVO RELEASE OF SUBSTANCE P FROM SPINAL CORD.....	1R01 NS14629-01	68,163
ORGANIZATION TOTAL	94 14,259,315		
SAINT PAUL			
RAMSEY COUNTY WELFARE DEPARTMENT—ST. PAUL-RAMSEY HOSPITAL AND MEDICAL CENTER ZIP CODE 55101			
FREY, WILLIAM H, II.....	THE ROLE OF GTPASE IN HUMAN BRAIN.....	1R01 NS14583-01	62,115
ORGANIZATION TOTAL	1 62,115		
UNITED HOSPITALS ZIP CODE 55102			
EDWARDS, JESSE E.....	FUNCTIONAL PATHOLOGY OF CARDIOVASCULAR DISEASE.....	2R01 HL05694-20	103,414
ORGANIZATION TOTAL	1 103,414		
UNIVERSITY OF MINNESOTA AT SAINT PAUL ZIP CODE 55455			
ANDERSON, JOHN S.....	ENZYMOMOLOGY OF BACTERIAL CELL MEMBRANES.....	5R01 AI08295-10	48,385
BISTNER, STEPHEN I.....	HEREDITARY CATARACT; ANATOMIC-METABOLIC CHANGES.....	1R01 EY02613-01	57,574
BLOOMFIELD, VICTOR A.....	PHYSICAL CHEMISTRY OF BACTERIAL VIRUSES.....	5R01 GM17855-08	77,393
BLUMENFELD, MARTIN S.....	SATELLITE DNA & MOLECULAR ORGANIZATION OF CHROMOSOMES.....	2R01 GM22138-04	64,017
BRAMBL, ROBERT M.....	FUNGAL SPORE GERMINATION AND MITOCHONDRIAL BIOGENESIS.....	5R01 GM19398-05	45,010
BROOKS, MARION A.....	SYMBIOTES AS MODELS OF VECTOR PARASITISM.....	5R01 AI09914-09	65,732
CRAWFORD, RONALD L.....	DEGRADATION OF AROMATIC COMPOUNDS BY BACILLUS SPECIES.....	5R01 ES01284-02	42,729
DAGLEY, STANLEY.....	ENZYMOMOLOGY OF PATHWAYS OF PHENYLALANINE CATABOLISM.....	1R01 AM21981-01	59,592
DAGLEY, STANLEY.....	THE ENZYMOLOGIC DEGRADATION OF AROMATIC COMPOUNDS.....	5R01 ES00678-12	56,987
ENFIELD, FRANKLIN D.....	INVESTIGATIONS IN QUANTITATIVE GENETICS.....	5R01 GM16074-10	57,100
FAN, DAVID P.....	ANTIGEN RECOGNITION BY CYTOTOXIC T LYMPHOCYTES.....	1R01 AI15067-01	84,554
FLETCHER, THOMAS F.....	DEVELOPMENTAL NERVOUS DISORDERS: KRABBE'S DISEASE.....	5R01 NS06756-12	73,235
FUCHS, JAMES A.....	DEOXYRIBONUCLEOTIDE METABOLISM IN ESCHERICHIA COLI.....	5R01 GM20884-05	48,465
GANDER, JOHN E.....	FUNGAL GLYCOPOLYMER BIOSYNTHESIS.....	5R01 GM19978-05	62,933
GUILFOYLE, THOMAS J.....	REGULATION OF RNA POLYMERASES DURING DEVELOPMENT.....	5R01 GM24096-02	51,810
HENDERSON, LA VELL M.....	NIACIN AND VITAMIN B6 METABOLISM IN RAT INTESTINE.....	5R01 AM19012-03	61,758
HENDERSON, LA VELL M.....	CARNITINE BIOSYNTHESIS; TRIMETHYLLYSINE FISSION.....	5R01 AM19764-02	49,510
HERMAN, ROBERT K.....	DEVELOPMENTAL GENETICS OF CAENORHABDITIS ELEGANS.....	5R01 GM22387-03	34,395
JENDRISAK, JEROME J.....	REGULATION OF EUKARYOTIC GENE TRANSCRIPTION.....	5R01 GM24294-02	38,582
KIRKWOOD, SAMUEL.....	USE OF ENZYMES IN STRUCTURAL CARBOHYDRATE CHEMISTRY.....	5R01 GM09293-16	43,971
LAKOWICZ, JOSEPH R.....	PASSIVE DIFFUSIONAL TRANSPORT IN MEMBRANES.....	5R01 ES01283-02	34,557
LIENER, IRVIN E.....	THE AVAILABILITY OF AMINO ACIDS OF LEGUMES.....	5R01 AM18324-04	34,719
LIENER, IRVIN E.....	THE ROLE OF PROTEOLYSIS IN MALIGNANT GROWTH.....	5R01 CA16231-05	26,295
LIENER, IRVIN E.....	BIOCHEMICAL STUDIES ON THE PATHOGENESIS OF EMPHYSEMA.....	2R01 HL14865-06	65,496
LIENER, IRVIN E.....	BIOCHEMICAL STUDIES ON THE PATHOGENESIS OF EMPHYSEMA.....	5R01 HL14865-07	67,848
MC KINNELL, ROBERT G.....	SERIAL CLONING TESTS UNLIMITED DIVISION POTENTIAL.....	1R01 AG00794-01	39,749
MC KINNELL, ROBERT G.....	A FROG MUTAGENESIS TEST SYSTEM.....	5R01 ES01605-02	89,377
MUNCK, ECKARD.....	STUDIES OF O ₂ ACTIVATION BY MOSSBAUER SPECTROSCOPY.....	5R01 GM22701-03	53,754
NELSESTUEN, GARY L.....	THE CARBOHYDRATE OF THE BLOOD-CLOTTING GLYCOPROTEINS.....	5R01 HL15728-06	57,132
PHILLIPS, RICHARD E.....	BRAIN ORGANIZATION OF SPECIES-TYPICAL BEHAVIOR.....	5R01 NS12686-03	43,121
ROSENBERG, MURRAY D.....	MEMBRANE CHANGES DURING OOGENESIS AND FERTILIZATION.....	5R01 HD04702-08	74,528
RUBENSTEIN, IRWIN.....	EUKARYOTIC GENE EXPRESSION THE ZEIN LOCUS IN MAIZE.....	1R01 GM24756-01	89,145
SAUERBIER, WALTER.....	TRANSCRIPTIONAL ORDER IN EUKARYOTIC CHROMOSOMES.....	1R01 GM25715-01	66,353
SHEPPARD, J R.....	PATHOBIOLOGY OF MYELIN MEMBRANE IN MULTIPLE SCLEROSIS.....	1R01 NS14436-01	59,680
SHERIDAN, JUDSON D.....	CELL JUNCTION FORMATION & ROLE IN CELL PROLIFERATION.....	5R01 CA16335-04	90,857
SHERIDAN, JUDSON D.....	JUNCTIONAL COMMUNICATION BETWEEN VASCULAR CELLS.....	1R01 HL21166-01A1	81,036
SIMMONS, MICHAEL J.....	MUTATION AND SELECTION IN DROSOPHILA POPULATIONS.....	1R01 ES01960-01	35,267
SNUSTAD, D PETER.....	GENETICS OF VIRUS-INDUCED SHUTOFF OF HOST METABOLISM.....	1R01 GM25417-01	71,143
WARNER, HUBER R.....	METABOLISM OF DNA.....	1R01 GM25615-01	50,240
WEBER, ALVIN F.....	PREPARATION OF MAMMALIAN HISTOLOGICAL NOMENCLATURE.....	5R13 LM00824-09	11,800
WOLD, FINN.....	PROTEIN STRUCTURE AND FUNCTION.....	3R01 GM15053-12S1	23,214
WOOD, JOHN M.....	CHEMICAL STUDIES WITH FREE AND BOUND VITAMIN B12.....	5R01 AM18101-05	66,144
ORGANIZATION TOTAL	42 2,355,187		
STATE TOTAL	373 40,135,392		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSISSIPPI			
HATTIESBURG			
UNIVERSITY OF SOUTHERN MISSISSIPPI ZIP CODE 39401			
TOOM, PAUL M.....	STUDY OF TOXIN FROM A JELLYFISH MODEL.....	5R01 ES00858-05	31,712
YARBROUGH, KAREN M.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09083-01	113,950
ORGANIZATION TOTAL	2 145,662		
HOLLY SPRINGS			
MISSISSIPPI INDUSTRIAL COLLEGE ZIP CODE 38635			
CHETTY, KOTHAPA N.....	COBALT-IRON INTERACTION STUDY.....	3S06 RR08133-02S1	900
CHETTY, KOTHAPA N.....	COBALT-IRON INTERACTION STUDY.....	5S06 RR08133-03	58,029
ORGANIZATION TOTAL	2 58,929		
JACKSON			
JACKSON STATE UNIVERSITY ZIP CODE 39217			
GARRITY, EVELYN M.....	BIOMEDICAL SCIENCES SUPPORT (INTERDISCIPLINARY).....	3S06 RR08047-07S1	2,956
GARRITY, EVELYN M.....	BIOMEDICAL SCIENCES SUPPORT (INTERDISCIPLINARY).....	5S06 RR08047-08	466,905
ORGANIZATION TOTAL	2 469,861		
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216			
BERNDT, WILLIAM O.....	NEPHROTOXIC EFFECTS OF ENVIRONMENTAL MYCOTOXINS.....	1R01 ES01643-01	53,812
BYERS, BENJAMIN R.....	MICROBIAL IRON TRANSPORT.....	9R01 GM23778-07A1	46,085
COWLEY, ALLEN W, JR.....	QUANTIFICATION OF ARTERIAL PRESSURE CONTROL.....	5R01 HL14306-07	53,017
GATIPON, GLENN B.....	ANALGESIC IONTOPHORESIS ON CNS PAIN PATHWAYS.....	1R01 NS14147-01	56,259
GROGAN, JAMES B.....	ANTERIOR CHAMBER IMPLANTS AND TRANSPLANTATION IMMUNOLOGY.....	5R01 AI09588-07	53,989
GUYTON, ARTHUR C.....	CARDIOVASCULAR DYNAMICS AND THEIR CONTROL.....	2P01 HL11678-11	478,446
HAYES, A WALLACE.....	THE EFFECTS OF RUBRATOXIN B ON MAMMALIAN SYSTEMS.....	5R01 ES01351-04	34,154
HO, ING-KANG.....	MECHANISMS OF NEUROTOXICITY INDUCED BY KEPONE AND MIREX.....	1R01 ES01899-01	60,052
JACKSON, JOHN F.....	SPINOCEREBELLAR ATAXIA LINKAGE TO HL-A AND OTHER LOCI.....	5R01 NS13279-02	48,483
KRUCKEBERG, WALTER C.....	BIOCHEMISTRY OF MALARIA HOST-PARASITE INTERACTIONS.....	5R01 AI13356-03	48,617
LANGFORD, HERBERT G.....	ELECTROLYTE INTAKE AND BLOOD PRESSURE IN HYPERTENSION.....	5R01 HL18891-02	44,795
LEHAN, PATRICK H.....	ASSESSMENT OF INFUSION METHODS FOR MYOCARDIAL MAPPING.....	5R01 HL19289-03	57,534
MC CAA, CONNIE S.....	MECHANISMS RELATED TO CONGESTIVE HEART FAILURE.....	3R01 HL09921-12S1	42,026
MC CAA, ROBERT E.....	MECHANISMS RELATED TO CONGESTIVE HEART FAILURE.....	2R01 HL09921-13	75,657
MEHENDALE, HARIHARA M.....	MODIFICATION OF BILIARY EXCRETION BY TOXIC CHEMICALS.....	1R01 ES01369-01A2	75,035
MEHENDALE, HARIHARA M.....	PULMONARY UPTAKE AND ACCUMULATION OF DRUGS.....	5R01 HL20622-02	53,658
MORRISON, FRANCIS S.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA16385-04	111,679
NELSON, NORMAN C.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00626-06	252,156
NELSON, NORMAN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05386-17	99,144
PULLEN, D JEANETTE.....	SOUTHWEST CANCER CHEMOTHERAPY STUDY GROUP.....	5R10 CA15989-04	4,134
RANDALL, CHARLES C.....	BIOCHEMISTRY OF FOWLPOX REPLICATION AND HYPERPLASIA.....	5R01 AI02031-20	52,917
RANDALL, CHARLES C.....	STUDY OF NUCLEIC ACIDS OF HERPES VIRUS-INFECTED CELLS.....	5R01 AI02032-21	53,172
SLOBIN, LAWRENCE I.....	CONTROL OF POLYPEPTIDE CHAIN ELONGATION IN EUCARYOTES.....	1R01 GM25434-01	61,248
THIGPEN, JAMES T.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA13633-07	82,905
WAHBA, ALBERT J.....	PROTEIN SYNTHESIS IN PROKARYOTES AND EUKARYOTES.....	1R01 GM25451-01	63,412
WATSON, ROBERT L.....	BLOOD PRESSURE-PRECURSORS AND CONSEQUENCES.....	5R01 HL19858-03	135,260
WILKINSON, J SIDNEY.....	RADIOIMMUNOASSAY OF ANGIOTENSINOGEN.....	5R01 HL18561-03	44,544
YOUNG, DAVID B.....	CONTROL, CARDIOVASCULAR & RENAL EFFECTS OF POTASSIUM.....	5R01 HL21435-02	29,018
ORGANIZATION TOTAL	28 2,271,208		
LORMAN			
ALCORN STATE UNIVERSITY ZIP CODE 39096			
PARKER, HENRY L.....	ROLE OF ANTICOAGULANTS IN IMMUNOCHEMISTRY OF CELLULASE.....	5S06 RR08095-06	21,570
PARKER, HENRY L.....	ROLE OF ANTICOAGULANTS IN IMMUNOCHEMISTRY OF CELLULASE.....	2S06 RR08095-07	289,159
ORGANIZATION TOTAL	2 310,729		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSISSIPPI—Continued			
MISSISSIPPI STATE			
MISSISSIPPI STATE UNIVERSITY ZIP CODE 39762			
BLAIR, WILLIAM D.....	STUDIES OF CERVICAL MUSCULAR ACTIVITY IN THE BABOON.....	1R01 HD12382-01	64,718
GLICK, BRUCE.....	IMMUNOGLOBULINS OF BURSECTOMIZED CHICKENS.....	5R01 AI11894-05	37,485
GLICK, BRUCE.....	LYMPHOCYTE LIFESPAN IN NORMAL AND BURSA-LESS BIRDS.....	5R01 CA20169-03	27,005
LEI, K.....	ORAL CONTRACEPTIVES: EFFECT ON VITAMIN C METABOLISM.....	1R01 HD10958-01	35,413
MILES, D HOWARD.....	ANTINEOPLASTIC AGENTS FROM AMERICAN PLANTS.....	3R01 CA13268-05S1	18,611
ORGANIZATION TOTAL	5 183,232		
TOUGALOO			
TOUGALOO COLLEGE ZIP CODE 39174			
MEHROTRA, BAM D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08110-06	14,404
MEHROTRA, BAM D.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08110-07	88,445
ORGANIZATION TOTAL	2 102,849		
UNIVERSITY			
UNIVERSITY OF MISSISSIPPI ZIP CODE 38677			
HUFFORD, CHARLES D.....	ANTITUMOR AGENTS FROM SELECTED AFRICAN PLANTS.....	5R01 CA15590-04	50,956
ORGANIZATION TOTAL	1 50,956		
STATE TOTAL	44 3,593,426		
MISSOURI			
COLUMBIA			
CANCER RESEARCH CENTER ZIP CODE 65201			
MENDEL, CHARLES E.....	SPECIALIZED MULTIDISCIPLINARY CANCER CENTER.....	5P01 CA08023-13	297,146
PAPERMASTER, BEN W.....	LYMPHOKINE MEDIATED TUMOR IMMUNOTHERAPY.....	1R01 CA25740-01	101,212
RIDENHOUR, C E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17946-03	106,739
ORGANIZATION TOTAL	3 505,097		
EYE RESEARCH FOUNDATION ZIP CODE 65201			
WALKENBACH, RONALD J.....	CONTROL OF CORNEAL PHYSIOLOGY BY CYCLIC NUCLEOTIDES.....	1R01 EY02597-01	74,654
ORGANIZATION TOTAL	1 74,654		
MISSOURI CANCER PROGRAMS, INC. ZIP CODE 65201			
POWERS, WILLIAM E.....	COMMITTEE FOR RADIATION ONCOLOGY STUDIES.....	5R01 CA24500-02	60,980
YARBRO, JOHN W.....	EXPLORATORY PLANNING FOR CANCER CENTER DEVELOPMENT.....	5P20 CA19348-03	31,110
YARBRO, JOHN W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	3P30 CA19409-01S1	51,845
YARBRO, JOHN W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	3P30 CA19409-02S1	21,755
YARBRO, JOHN W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	5P30 CA19409-03	245,100
ORGANIZATION TOTAL	5 410,790		
UNIVERSITY OF MISSOURI-COLUMBIA ZIP CODE 65201			
ANAST, CONSTANTINE S.....	CALCITONIN AND PARATHYROID HORMONE IN CHILDREN.....	5R01 HD02756-12	86,894
BARBERO, GIULIO J.....	MUCUS ABNORMALITY IN CYSTIC FIBROSIS.....	5P50 HL19160-02	134,643
BARR, RONALD E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07053-13	45,651
BURNS, THOMAS W.....	HUMAN ADIPOSE TISSUE: REGULATION OF FAT MOBILIZATION.....	5R01 AM11265-10	58,986
CAMPBELL, BENEDICT J.....	IMMUNOBIOCHEMISTRY OF LOXOSCELES RECLUSA VENOM.....	2R01 ES00598-06A1	41,869
CARNES, DAVID L, JP.....	PARATHYROID AND VITAMIN D CONTROL OF BONE AND KIDNEY.....	5R23 DE04601-02	12,201
COOPERSTOCK, MICHAEL S.....	PATHOGENESIS OF NEONATAL ENDOTOXEMIA.....	1R23 AI14552-01	40,369
DAVID, JOHN D.....	STRUCTURE AND ACTIVITY OF MYOSIN HEAVY CHAIN GENE.....	1R01 GM25162-01	48,681
DAVIS, JAMES O.....	HUMORAL FACTORS IN HYPERTENSION AND HEART FAILURE.....	2R01 HL10612-13	154,079

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
FORTE, LEONARD R.....	MOLECULAR PHARMACOLOGY OF RENAL PLASMA MEMBRANES	2R01 AM14787-09	61,464
GAYLOR, JAMES L.....	STEROL BIOSYNTHESIS.....	5R01 AM21336-02	88,404
GOLDBERG, HERBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05387-17	124,871
GRIGGS, DOUGLAS M, JR.....	REGIONAL MYOCARDIAL BLOOD FLOW AND METABOLISM.....	5R01 HL11876-11	77,234
HARRIS, PATRICK D.....	MICROCIRCULATORY CONTROL MECHANISMS AND HYPERTENSION.....	5R01 HL12614-09	74,311
HEIMBERG, MURRAY.....	REGULATORY MECHANISMS IN LIPID METABOLISM.....	5R01 AM18125-05	142,377
HENRY, PATRICK H.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	5R10 CA12046-08	191,860
HUMPHREY, LOREN J.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA19343-03	54,503
HUMPHREY, LOREN J.....	SURGERY OR TRAUMA: IMPACT UPON INFECTIOUS COMPLICATION.....	5R01 GM24458-02	66,612
JOHNSON, JOSEPH A.....	MECHANISMS IN EXPERIMENTAL HYPERTENSION.....	5R01 HL17366-05	55,194
JONES, ALLAN W.....	HYPERTENSIVE MECHANISMS AND VASCULAR ION EXCHANGE.....	5R01 HL15852-06	48,741
KNOWLES, CHARLES O.....	METABOLISM AND MODE OF ACTION OF ACARICIDE CHEMICALS.....	5R01 ES01316-02	39,491
KUNTZ, ROBERT R.....	FREE RADICAL REACTIONS IN MODEL BIOLOGICAL SYSTEMS.....	5R01 AG00200-02	33,450
LOBECK, CHARLES C, JR.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00287-12	398,130
LODWICK, GWILYM S.....	COMPUTER ANALYSIS OF TUMOR ROENTGENOGRAMS.....	5R01 CA06263-17	152,345
LOEPPKY, RICHARD N.....	NITROSAMINE FRAGMENTATION AND NITROSAMINE CARCINOGENESIS.....	5R01 CA22289-02	45,709
MARTINEZ, J RICARDO.....	METABOLIC & SECRETORY INTERACTIONS IN EXOCRINE GLANDS.....	5R01 AM18150-03	57,417
MULLEN, HELEN B.....	CELLULAR AND GENETIC REGULATION OF AUTOIMMUNE DISEASE.....	5R01 AM19409-03	47,488
MULLEN, HELEN B.....	CELLULAR MECHANISMS REGULATING ANTIBODY PRODUCTION.....	9R01 CA25054-04	55,666
O'DELL, BOYD L.....	TRACE ELEMENTS IN NUTRITION.....	3R01 HL11614-10S1	884
O'DELL, BOYD L.....	TRACE ELEMENTS IN NUTRITION.....	2R01 HL11614-11	94,563
ORTWERTH, BERYL J.....	LENS INHIBITOR PROTEINS AND CATARACTOGENESIS.....	5R01 EY02035-02	60,379
REBER, HOWARD A.....	PANCREATIC SECRETION IN PANCREATIC CANCER.....	7R26 CA25058-01	42,035
RIDDLE, DONALD L.....	DEVELOPMENTAL GENETICS OF THE C. ELEGANS DAUER LARVA.....	5R01 HD11239-02	43,787
SCHMITZ, KENNETH S.....	CONFORMATION OF CHROMATIN MULTIMERS IN SOLUTION.....	5R01 GM24346-02	49,891
SCHROEDER, FRIEDHELM.....	MEMBRANE LIPID ASYMMETRY IN A TUMORIGENIC CELL LINE.....	1R01 CA24339-01	30,489
SCHUDER, JOHN C.....	INDUCTIVE PROBE IN VIVO MEASUREMENTS OF SIGMA & EPSILON.....	2R01 GM22506-03	36,254
SCHUDER, JOHN C.....	WAVEFORM DEPENDENCY IN DEFIBRILLATING 100 KG CALVES.....	2R01 HL18040-04	48,306
SCHUDER, JOHN C.....	DEVELOPMENT OF AUTOMATIC IMPLANTED DEFIBRILLATOR.....	1R01 HL21674-01	65,833
SHARP, GORDON C.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20658-01A1	227,821
SHERMAN, LOUIS A.....	GENETICS AND PHOTOSYNTHESIS IN BLUE-GREEN ALGAE.....	2R01 GM21827-04	60,914
SILVER, DONALD.....	SURGICAL VASCULAR DISORDERS.....	5R01 HL18815-03	98,861
SMITH, GEORGE P.....	MOLECULAR GENETICS OF NEMATODE DEVELOPMENT.....	1R01 GM25626-01	39,409
SUN, GRACE Y.....	FATTY ACID METABOLISM IN BRAIN SUBCELLULAR MEMBRANES.....	5R01 NS12960-04	57,006
THAWLEY, DAVID.....	ZINC AND CADMIUM INTERFERENCE WITH LEAD EXPOSURE TESTS.....	1R01 ES01889-01	42,036
TOWNSEND, JOHN F.....	DIABETIC MICROANGIOPATHY IN MYSTROMYS ALBICAUDATUS.....	5R01 AM19008-03	35,186
TSUTAKAWA, ROBERT K.....	QUANTAL RESPONSES ANALYSIS.....	5R01 GM23548-02	22,065
VORBECK, MARIE L.....	MITOCHONDRIAL STRUCTURE AND FUNCTION IN AGING.....	5R01 AG00590-02	34,528
WAGNER, JOSEPH E.....	RESEARCH ANIMAL DIAGNOSTIC LABORATORY.....	5P40 RR00471-10	135,656
WANG, RICHARD J.....	MITOSIS AND MITOTIC ARREST IN MAMMALIAN CELLS.....	5R01 GM21305-04	57,171
WHITE, ARNOLD A.....	BIOCHEMICAL PHARMACOLOGY OF GUANYLATE CYCLASE IN LUNG.....	5R01 HL15002-07	34,584
WIEGMAN, DAVID L.....	HYPERTENSION, MICROVASCULAR CONTROL AND EXERCISE.....	1R23 HL21901-01	39,929
WILCOX, HENRY G.....	REGULATION OF HEPATIC PRODUCTION OF HDL.....	1R01 HL22812-01	81,023
WIXOM, ROBERT L.....	HISTIDINE BIOSYNTHESIS IN ANIMAL DEVELOPMENT.....	2R01 AM12708-08	46,189
WOLFE, JOHN F.....	NUCLEAR ANTIGEN IMMUNE MECHANISMS IN POLYMYOSITIS.....	5R01 AM20305-02	27,661
WOSILAIT, WALTER D.....	FACTORS AFFECTING THE ACTION OF ANTICOAGULANTS.....	5R01 HL15698-12	57,379
ZATZMAN, MARVIN L.....	CARDIOVASCULAR AND RENAL FUNCTIONS OF MARMOTS.....	5R01 HL17847-04	38,251
ZGUTA, RUSSELL.....	RUSSIAN MEDICINE: PRE-KIEVAN TIMES TO THE BLACK DEATH.....	1R01 LM03163-01	37,527
ORGANIZATION TOTAL	57 4,084,257		
CREVE COEUR			
ST. JOHN'S MERCY MEDICAL CENTER ZIP CODE 63141			
MONAFO, WILLIAM W.....	ELECTROLYTE AND WATER FLUXES IN BURN SHOCK.....	5R01 GM22364-03	47,331
MONAFO, WILLIAM W.....	THERMAL AND WORK STRESS IN POST-BURN PATIENTS.....	5R01 GM22399-03	19,728
ORGANIZATION TOTAL	2 67,059		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
KANSAS CITY			
KANSAS CITY COLLEGE OF OSTEOPATHIC MEDICINE ZIP CODE 64124			
HALL, L RAYMOND	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17933-04	75,601
ORGANIZATION TOTAL	1 75,601		
MIDWEST RESEARCH INSTITUTE ZIP CODE 64110			
GREENE, FRANK T.....	TECHNIQUES FOR LCMS OF NONVOLATILE COMPOUNDS.....	1R01 GM24338-01	77,636
ORGANIZATION TOTAL	1 77,636		
ST. LUKE'S HOSPITAL ZIP CODE 64111			
GOETZ, KENNETH L.....	ATRIAL RECEPTORS.....	2R01 HL13623-08A1	61,347
ORGANIZATION TOTAL	1 61,347		
UNIVERSITY OF MISSOURI-KANSAS CITY ZIP CODE 64110			
EL ATTAR, TAWFIK M.....	PROSTAGLANDINS, CYCLIC AMP AND STEROIDS IN GINGIVA.....	5R01 DE04276-02	61,947
SCHANKER, LEWIS S.....	ABSORPTION OF NONVOLATILE COMPOUNDS FROM THE LUNG.....	5R01 HL18028-03	74,912
ORGANIZATION TOTAL	2 136,859		
KIRKSVILLE			
KIRKSVILLE COLLEGE OF OSTEOPATHIC MEDICINE ZIP CODE 63501			
AWAD, ATIF B.....	ROLE OF FATTY ACIDS IN MEMBRANE FUNCTIONAL PROPERTIES.....	1R01 CA21857-01A1	21,757
CENEDELLA, RICHARD J.....	A NEW ANIMAL MODEL FOR CATARACTS: STUDY OF MECHANISM.....	1R01 EY02568-01	26,808
CENEDELLA, RICHARD J.....	INDUCTION OF EPILEPSY BY INHIBITORS OF CHOLESTEROL.....	1R01 NS14446-01	6,304
DENSLOW, JOHN S.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09130-01	101,855
THEOBALD, ROBERT J, JR.....	PURINERGICS AS INHIBITORS OF THE URINARY BLADDER.....	1R01 AM21465-01	17,373
TOWNS, LEX C.....	ANATOMICAL INTERCONNECTIONS OF RABBIT VISUAL SYSTEM.....	1R01 EY02285-01	31,561
WILLINGHAM, ALLAN K.....	THE MECHANISM OF ACTION OF VITAMIN K.....	5R01 HL20577-03	30,984
ORGANIZATION TOTAL	7 236,642		
NORTHEAST MISSOURI STATE UNIVERSITY ZIP CODE 63501			
CORNELL, ROBERT P.....	INSULIN AND HEPATIC MACROPHAGES.....	1R01 AM22102-01	10,871
ORGANIZATION TOTAL	1 10,871		
SAINT LOUIS			
CENTRAL INSTITUTE FOR THE DEAF ZIP CODE 63110			
HIRSH, IRA J.....	AUDITORY COMMUNICATION AND ITS DISORDERS.....	5P50 NS03856-16	712,619
ORGANIZATION TOTAL	1 712,619		
JEWISH HOSPITAL OF ST. LOUIS ZIP CODE 63110			
AVIOLI, LOUIS V.....	BONE METABOLISM IN CHRONIC DISORDERS.....	5R01 AM11674-12	118,024
AVIOLI, LOUIS V.....	RENAL FUNCTION OF BONE METABOLISM.....	5R01 AM20521-02	102,307
BERGER, NATHAN A.....	POLY(ADPR) POLYMERASE INHIBITORS IN CANCER THERAPY.....	1R01 CA24986-01	42,850
BIRGE, STANLEY J.....	REGULATION OF CALCIUM AND PHOSPHORUS TRANSPORT.....	2R01 AM14571-07	49,123
CATALONA, WILLIAM J.....	SUPPRESSOR CELL ACTIVITY IN BLADDER CANCER PATIENTS.....	1R26 CA23855-01	77,289
CATALONA, WILLIAM J.....	IMMUNOLOGIC CHARACTERIZATION/PROSTATIC ADENOCARCINOMA.....	7R26 CA25792-01	52,934
DEUEL, THOMAS F.....	ENZYME REGULATION IN NORMAL NEOPLASTIC CELLS.....	5R01 CA22409-02	72,431
DEUEL, THOMAS F.....	BIOCHEM OF PLATELET FUNCTION IN THROMBOSIS & CELL GROWTH.....	1R01 HL22119-01	87,862
GRAFF, RALPH J.....	IMMUNITY AND TOLERANCE TO TRANSPLANTATION ANTIGENS.....	3R01 AI07437-11S1	11,535
HAHN, THEODORE J.....	ANTICONVULSANT, DRUG-INDUCED MINERAL DISORDERS.....	2R01 NS10262-07	58,966
HICKMAN, SCOT G.....	SURFACE IGM OF MALIGNANT LYMPHOCYTES AND PLASMA CELLS.....	1R01 CA25044-01	63,337
KAPP-PIERCE, JUDITH A.....	MODE OF ACTION OF H-LINKED IMMUNE RESPONSE (IR) GENES.....	5R01 AI13987-02	68,316
LIEBHABER, HARVEY.....	THE BIOLOGY OF CHLAMYDIA TRACHOMATIS INFECTION.....	1R01 AI14958-01	99,724
LITTLE, J RUSSELL, 'R.....	NEOPLASTIC AND NORMAL CELL THYMUS-LEUKEMIA ANTIGENS.....	5R01 CA20168-03	91,426
PECK, WILLIAM A.....	REGULATION OF BONE CELL PROLIFERATION AND FUNCTION.....	2R01 AM19855-03	123,206
PECK, WILLIAM A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05491-16	49,713
PIERCE, CARL W.....	CELL INTERACTIONS IN IMMUNE RESPONSES IN VITRO.....	2R01 AI13915-03	117,324

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
THOMAS, DAVID W.....	T LYMPHOCYTE AND MACROPHAGE INTERACTIONS.....	5R01 AI14226-02	94,630
ORGANIZATION TOTAL	18	1,380,997	
ST. LOUIS UNIVERSITY ZIP CODE 63103			
ARENS, MAX Q.....	ENZYMOLGY OF A REPLICATION COMPLEX FROM CELLS.....	5R01 AI13540-02	41,659
BELLONE, CLIFFORD J.....	NATURE OF ANTIGEN RECOGNITION ON T-CELLS.....	5R01 AI13115-03	43,925
CHALLONER, DAVID R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05388-17	123,039
COCKRELL, RONALD S.....	METABOLIC REGULATION IN NEOPLASMS BY CATION TRANSPORT.....	2R01 CA11766-07	71,480
DUS, KARL M.....	COMPARATIVE STRUCTURAL STUDIES OF P-450 HEMEPROTEINS.....	5R01 GM21726-04	60,698
ELICEIRI, GEORGE L.....	CONTROL MECHANISMS IN HUMAN TUMOR CELLS—SMALL RNAS.....	5R01 CA20683-02	64,512
ELICEIRI, GEORGE L.....	RNA METABOLISM IN NORMAL AND MALIGNANT GROWTH.....	5R01 GM22463-03	50,686
ELLIOTT, WILLIAM H.....	ROLE OF BILE ACIDS IN ETIOLOGY OF LARGE BOWEL CANCER.....	5R26 CA16375-05	73,344
ELLIOTT, WILLIAM H.....	METABOLISM OF NEUTRAL STEROLS.....	5R01 HL07878-16	119,164
FEIR, DOROTHY J.....	PROLONGED EXPOSURE TO FOUR LEVELS OF AIR POLLUTANTS.....	5R01 ES01361-02	34,635
FITCH, COY D.....	METABOLIC ADAPTATION OF MUSCLE: THE NEED FOR CREATINE.....	5R01 AM16623-05	54,867
GERARD, GARY F.....	MAMMALIAN RNA TUMOR VIRUS REVERSE TRANSCRIPTION.....	1R01 CA20335-01A1	65,960
GOLD, ALVIN H.....	INSULIN CONTROL OF LIVER GLYCOGEN METABOLISM.....	1R01 AM21149-01A1	45,492
GOLD, ALVIN H.....	GLYCOGEN SYNTHETASE IN DEVELOPING LIVER.....	2R01 HD07788-04	52,731
GRANDGENETT, DUANE P.....	AVIAN RNA TUMOR VIRUS DNA SYNTHESIS AND ITS REGULATION.....	5R01 CA16312-05	55,419
GREEN, MAURICE.....	BIOCHEMISTRY OF ANIMAL VIRUS MULTIPLICATION.....	5R01 AI01725-21	162,931
GREEN, MAURICE.....	REPLICATION OF RNA TUMOR VIRUSES.....	5R01 CA19996-03	133,704
GREEN, MAURICE.....	TRANSFORMING PROTEINS OF THREE HUMAN ADENOVIRUS GROUPS.....	5R01 CA21824-02	83,504
GREEN, MICHAEL.....	CELL-FREE SYNTHESIS OF PLASMACYTOMA IMMUNOGLOBULINS.....	5R01 CA20821-03	44,538
HERTELENDY, FRANK.....	ROLE OF PROSTAGLANDINS IN AVIAN REPRODUCTION.....	5R01 HD09763-03	49,494
HIRSCHBERG, CARLOS B.....	GLYCOSYLATION MECHANISMS OF CELL LIPIDS AND PROTEINS.....	2R01 CA17015-04	79,377
HIRSCHBERG, CARLOS B.....	METABOLISM AND FUNCTION OF SPHINGOLIPIDS.....	5R01 NS12827-03	38,345
HUNSLEY, JAMES R.....	REGULATION OF PROTEIN SYNTHESIS IN DEVELOPMENT.....	5R01 GM21961-03	56,980
KAMINSKI, DONALD L.....	HEPATIC CHANGES IN THE OBESE WITH INTESTINAL BYPASS.....	5R01 AM19348-03	49,587
KAPLAN, ARNOLD.....	BIOCHEMISTRY OF ENZYME PINOCYTOSIS.....	1R01 AM21424-01	80,049
KIM, YEE S.....	PATHOGENESIS OF FETAL MACROSOMIA IN MATERNAL DIABETES.....	1R01 HD11614-01	42,578
KLEIN, CLAUDETTE.....	BIOGENESIS OF A CHEMOTACTIC SYSTEM IN D. DISCOIDEUM.....	1R01 GM25080-01	66,416
LAMBOWITZ, ALAN M.....	BIOGENESIS OF MITOCHONDRIA IN NEUROSPORA.....	5R01 GM23961-02	74,820
LICHTENSTEIN, JACK R.....	HERITABLE DISEASES OF COLLAGEN METABOLISM.....	5R01 AM21733-02	97,339
LONGMORE, WILLIAM J.....	REGULATION OF LIPID METABOLISM IN THE LUNG.....	5R01 HL13405-09	73,376
LOZERON, HOMER A.....	POST-TRANSCRIPTIONAL REGULATION IN BIOLOGICAL SYSTEMS.....	5R01 GM20639-06	45,354
LOZERON, HOMER A.....	RNA PROCESSING IN THE DEVELOPMENT OF BACTERIOPHAGE.....	1R01 GM25579-01	72,532
MARRS, BARRY L.....	THE REGULATION OF BACTERIAL MEMBRANE FORMATION.....	5R01 GM20173-06	50,723
MARTONOSI, ANTHONY N.....	STUDIES ON SARCOPLASMIC RETICULUM AND MYOSIN.....	5R01 AM18117-11	103,741
MUNNS, THEODORE W.....	CHARACTERIZATION OF RNA/DNA IN ONCOGENIC SYSTEMS.....	2R01 CA17715-04	66,540
MUNNS, THEODORE W.....	REGULATION OF PROTHROMBIN SYNTHESIS IN CULTURED CELLS.....	5R01 HL15619-05	69,118
NADEL, ELI M.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17949-02	134,808
OLSON, ROBERT E.....	MODE OF ACTION OF THE FAT-SOLUBLE VITAMINS.....	5R01 AM09992-14	119,948
OLSON, ROBERT E.....	BIOSYNTHESIS OF UBIQUINONE (COENZYME Q).....	2R01 AM10004-13A1	60,225
POGELL, BURTON M.....	CONTROL OF DIFFERENTIATION IN CHICK EMBRYO LIVER.....	9R01 HD12054-07A1	87,144
RUH, MARY F.....	ECDYSONE AND JUVENILE HORMONE ACTION.....	5R01 HD08186-04	45,049
RUH, THOMAS S.....	GLUCOCORTICOID AND LYMPHOCYTE FUNCTION.....	1R01 CA24034-01	43,354
SCHULZE, IRENE T.....	STRUCTURE AND SYNTHESIS OF MYXOVIRUSES.....	2R01 AI10097-07A1	64,499
SCHULZE, IRENE T.....	EFFECT OF INTERFERENCE ON VIRAL GENE EXPRESSION.....	1R01 AI14590-01	72,070
SENAY, LEO C, JR.....	DYNAMICS OF INTERSTITIAL SPACE IN WHOLE ANIMALS.....	1R01 HL21282-01A1	63,759
WEBER, MORTON M.....	MEMBRANE-ASSOCIATED FUNCTIONS IN MICROORGANISMS.....	9R01 HL22981-17	99,170
WILLMAN, VALLEE L.....	SURGICAL CARDIOLOGY.....	5P01 HL06312-17	441,442
WOLD, WILLIAM S.....	ADENOVIRUS 2 CODED EARLY GLYCOPROTEIN.....	1R23 CA24710-01	30,777
ORGANIZATION TOTAL	48	3,760,902	
WASHINGTON UNIVERSITY ZIP CODE 63130			
AGRAWAL, HARISH C.....	BIOCHEMICAL AND IMMUNOLOGICAL STUDIES OF MYELIN PLP.....	5R01 NS13464-02	61,829
ALLISON, JAMES H.....	EFFECTS OF LITHIUM ON INOSITOL AND PHOSPHOINOSITIDES.....	5R01 NS13781-02	93,480
ALPERS, DAVID H.....	INTESTINAL PROTEIN METABOLISM AND FUNCTION.....	2R01 AM14038-09	130,773
ARTHUR, R MARTIN.....	PREPROCESSOR SYSTEM FOR CARDIOGRAMS.....	3R01 HL18144-03S1	11,173
ATKINSON, JOHN P.....	EARLY ACTIVATION EVENTS IN IMMUNOLOGIC INFLAMMATION.....	1R01 AI14494-01	65,696

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
BAENZIGER, JACQUES U.....	OLIGOSACCHARIDE STRUCTURE AND RECEPTOR SPECIFICITY.....	5R01 CA21923-02	71,424
BALLINGER, WALTER F, II.....	SURGICAL TRANSPLANTATION OF ISLETS OF LANGERHANS.....	5R01 AM17188-05	87,804
BANASZAK, LEONARD J.....	STRUCTURAL STUDIES OF DEHYDROGENASES AND LIPOPROTEINS.....	5R01 GM13925-13	101,899
BARNES, WAYNE M.....	HISTIDINE OPERON: GENETIC CONTROL OF DNA SEQUENCE.....	1R01 GM24956-01	72,398
BAUER, EUGENE A.....	CONTROL OF COLLAGENASE IN HUMAN FIBROBLAST CULTURES.....	5R01 AM19537-02	51,640
BECKER, BERNARD.....	TRANSPORT PROCESSES AND THE EYE.....	5R01 EY00004-24	210,533
BECKER, BERNARD.....	GLAUCOMA CLINICAL RESEARCH CENTER.....	5P50 EY00336-12	541,622
BELL, C ELLIOTT, JR.....	ANTIGENS AND IMMUNITY IN HUMAN LUNG CANCER.....	5R01 CA15556-05	71,267
BERG, DOUGLAS E.....	MECHANISMS OF GENE TRANSPOSITION IN BACTERIA.....	5R01 AI14267-02	69,716
BIER, DENNIS M.....	STABLE ISOTOPE STUDIES OF FUEL TRANSPORT IN CHILDREN.....	2R01 HD10667-02	75,435
BLAUSTEIN, MORDECAI P.....	THE PHYSIOLOGY OF PRESYNAPTIC NERVE TERMINALS.....	2R01 NS08442-10	112,079
BOHNE, BARBARA A.....	RESPONSE OF INNER EAR TO INJURY.....	3R01 NS01791-20S1	42,496
BOIME, IRVING.....	ISOLATION OF PROINSULIN MRNA.....	5R01 AM16865-06	19,014
BRADSHAW, RALPH A.....	STRUCTURE AND FUNCTION OF DEHYDROGENASES.....	5R01 AM13362-10	109,311
BRADSHAW, RALPH A.....	STRUCTURE AND FUNCTION OF NERVE GROWTH FACTOR.....	5R01 NS10229-07	67,385
BRIDGES, SANDRA H.....	OPTIMIZATION OF MYELOMA-SPECIFIC IMMUNOTHERAPY.....	5R01 CA18592-03	64,006
BROWN, BARBARA I.....	PROGNOSIS IN GLYCOGENOSIS.....	1R01 HD12184-01	53,300
BROWN, ELMER B.....	MAMMALIAN IRON METABOLISM.....	3R01 AM16577-05S1	34,604
BROWN, ELMER B.....	MAMMALIAN IRON METABOLISM.....	2R01 AM16577-06A1	60,912
BUNGE, RICHARD P.....	CYTOLOGICAL STUDIES OF DEVELOPING AND MATURE NEURONS.....	5R01 NS09923-08	85,245
BUNGE, RICHARD P.....	FUNCTIONAL STUDIES OF SYNAPSES IN TISSUE CULTURE.....	1R01 NS14416-01	64,452
BURTON, HAROLD.....	TEMPERATURE AND PAIN IN THE CENTRAL NERVOUS SYSTEM.....	5R01 NS09809-08	50,849
BUTCHER, HARVEY R, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12030-07	40,057
CHAPLIN, HUGH, JR.....	SYMPTOMATIC HEMOLYTIC ANEMIA IN MALIGNANT DISEASES.....	2R01 CA02918-23	81,180
CHILSON, OSCAR P.....	REGULATION OF PURINE TRANSPORT: MATURING RETICULOCYTES.....	1R01 AM21449-01	69,248
CLARK, RICHARD E.....	ADVANCED CARDIAC VALVULAR AND VASCULAR PROSTHESES.....	3R01 HL13803-07S1	45,144
COHEN, ADOLPH I.....	CYTOLOGY AND PHYSIOLOGY OF THE RETINA.....	5R01 EY00258-16	123,820
COMMONER, BARRY.....	SIGNIFICANCE OF BEEF EXTRACT MUTAGENS IN CARCINOGENESIS.....	1R01 ES01954-01	71,116
CORR, PETER B.....	AUTONOMIC DETERMINANTS OF ARRHYTHMIA DUE TO ISCHEMIA.....	1R01 HL21654-01	58,502
COVEY, DOUGLAS F.....	SUICIDE SUBSTRATES: CANCER AND ENDOCRINE APPLICATIONS.....	1R01 CA23582-01	72,805
COWAN, W MAXWELL.....	QUANTITATIVE ANATOMICAL STUDIES OF VISUAL DEPRIVATION.....	5R01 EY01255-04	94,899
COWAN, W MAXWELL.....	STUDIES OF NEURONAL SPECIFICITY IN THE HIPPOCAMPUS.....	5R01 NS10943-06	93,407
COX, JEROME R, JR.....	A RESOURCE FOR BIOMEDICAL COMPUTING.....	2P41 RR00396-11	1,963,131
CROWLEY, DAVID E.....	STUDIES OF ACOUSTIC 10 MSEC VERTEX-MASTOID RESPONSES.....	1R01 NS14172-01	63,103
CULLEN, SUSAN E.....	STRUCTURAL AND SEROLOGICAL STUDIES ON IA ANTIGENS.....	5R01 CA20500-02	76,509
CURRIE, W BRUCE.....	RECEPTORS AND CALCIUM BINDING IN MYOMETRIAL MEMBRANES.....	1R01 HD11768-01	78,995
DANFORTH, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07054-13	101,129
DAUGHADAY, WILLIAM H.....	HORMONAL CONTROL OF CHONDROITIN SULFATE SYNTHESIS.....	5R01 AM01526-22	93,231
DAUGHADAY, WILLIAM H.....	THE MEASUREMENT OF PROTEIN HORMONES IN PLASMA.....	5R01 AM05105-17	162,952
DAUGHADAY, WILLIAM H.....	DIABETES RESEARCH AND TRAINING CENTER.....	5P60 AM20579-02	1,490,741
DAVIE, JOSEPH M.....	ROLE OF T CELLS IN B CELL DIFFERENTIATION.....	5R01 AI11635-05	81,942
DAW, NIGEL W.....	NEURAL MECHANISMS OF VISION.....	5R01 EY00053-09	61,189
DE WEER, PAUL J.....	MODES OF OPERATION OF THE SODIUM PUMP.....	5R01 NS11223-07	94,298
DEVIVO, DARRYL C.....	SEIZURES, KETOSIS, AND CEREBRAL METABOLISM.....	5R01 NS09808-06	80,678
DIETZLER, DAVID N.....	STUDIES OF COORDINATE ALLOSTERIC REGULATION IN VIVO.....	5R01 AM18670-03	73,425
EISEN, ARTHUR Z.....	ROLE OF COLLAGENASES IN COLLAGEN REMODELING.....	2R01 AM12129-11	215,261
EL-MOFTY, SAMIR K.....	ALVEOLAR BONE IN EXPERIMENTAL RENAL INSUFFICIENCY.....	5R23 DE04755-02	28,828
ETHEREDGE, EDWARD E.....	PRESENSITIZATION AND HUMAN TRANSPLANTATION.....	5R01 AM19110-03	69,500
FERRENDELLI, JAMES A.....	BIOCHEMISTRY AND PHARMACOLOGY OF THE RETINA.....	1R01 EY02294-01	80,297
FERRENDELLI, JAMES A.....	REGIONAL CNS CYCLIC NUCLEOTIDE BIOCHEMISTRY.....	5R01 NS09667-08	66,648
FERRENDELLI, JAMES A.....	NEUROCHEMISTRY OF METABOLIC DISORDERS OF THE CNS.....	5R01 NS13104-03	32,530
FINGER, STANLEY.....	SERIAL SURGERY AND FACTORS AFFECTING TACTILE RECOVERY.....	5R01 NS11002-04	33,042
FISHER, EDWIN B, JR.....	WEIGHT-LOSS RISK REDUCTION: BEHAVIORAL TECHNIQUES.....	1R01 AM21024-01	44,491
FISHER, EDWIN B, JR.....	SMOKING RISK-FACTOR REDUCTION: MAINTENANCE STRATEGIES.....	1R01 HL22472-01	67,436
FLEISCHMAN, JULIAN B.....	MOLECULAR GENETICS OF ANTIBODY FORMATION.....	5R01 CA20094-12	77,568
FLETCHER, ANTHONY P.....	FIBRINOGEN CATABOLISM AND INTRAVASCULAR COAGULATION.....	5R01 HL20218-02	88,150
FRAZIER, WILLIAM A, III.....	BIOCHEMISTRY OF DEVELOPMENT: A MORPHOGENETIC MODEL.....	5R01 NS13269-02	51,655
FRIEDEN, CARL.....	METABOLIC REGULATION AND INTERACTING ENZYME SYSTEMS.....	5R01 AM13332-10	125,754
GELB, LAWRENCE D.....	THE MOLECULAR BIOLOGY OF THE VARICELLA-ZOSTER VIRUS.....	5R01 AI13219-03	48,333
GELLER, DAVID M.....	MECHANISM AND CONTROL OF SERUM ALBUMIN BIOSYNTHESIS.....	5R01 AM16226-05	45,131

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
GLASER, LUIS.....	REGULATION AND MECHANISM OF CELL SURFACE SYNTHESIS.....	5R01 GM18405-07	117,684
GOLDRING, DAVID.....	EFFECT OF EXERCISE UPON THE HYPERTENSIVE ADOLESCENT.....	1R01 HL21578-01	142,665
GOLDRING, SIDNEY.....	COORDINATED BASIC AND CLINICAL BRAIN RESEARCH PROGRAM.....	2P50 NS04513-15	308,148
GOLDRING, SIDNEY.....	BIOELECTRIC STUDIES OF CEREBRAL CORTEX.....	5R01 NS06947-13	69,121
GOODENOUGH, URSULA W.....	MEMBRANE RECOGNITION AND AGGLUTINATION.....	7R01 GM26117-01	65,567
GOODENOUGH, URSULA W.....	MEMBRANE FUSION.....	1R01 GM26279-01	33,228
GOTTLIEB, CHARLENE C.....	MAMMALIAN GLYCOPROTEIN OLIGOSACCHARIDES.....	1R01 CA22857-01	77,972
GOTTLIEB, DAVID I.....	NEURONAL RECOGNITION STUDIES.....	5R01 NS12867-03	29,560
GREIDER, MARIE H.....	CELLULAR LOCALIZATION OF GASTRIN.....	3R01 AM13205-10S1	53,871
GUTSCHE, C DAVID.....	CALIXARENES AS ENZYME MODELS.....	5R01 GM23534-02	76,595
GUZE, SAMUEL B.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16217-03	494,714
HAHN, BEVRA H.....	PATHOGENESIS AND THERAPY OF SYSTEMIC LUPUS ERYTHEMATOSUS.....	2R01 AM17469-04A1	85,821
HAHN, BEVRA H.....	ARTHRITIS CENTER.....	5P60 AM20602-02	284,732
HAMBURGER, VIKTOR.....	PROBLEMS OF NEUROGENESIS AND DEVELOPMENT OF BEHAVIOR.....	5R01 NS05721-14	47,242
HART, WILLIAM M, JR.....	AUTOMATED DIGITAL PROCESSING OF THE HUMAN VISUAL FIELD.....	1R01 EY02044-01	138,728
HARTMAN, BOYD K.....	NORADRENERGIC SYSTEM IN BRAIN: ANATOMY AND FUNCTION.....	2R01 NS12311-04	60,905
HARTMAN, BOYD K.....	EVALUATION OF NEUROLOGICAL DISEASE WITH BRAIN ANTIGENS.....	5R01 NS13672-02	55,384
HARTROFT, PHYLLIS M.....	ENVIRONMENTAL QUALITY: EFFECTS ON DISEASE PROCESSES.....	3P01 ES00734-06S1	84,408
HENRY, PHILIP D.....	POTASSIUM, NOREPINEPHRINE, AND CORONARY ARTERIAL TONE.....	1R01 HL21187-01	66,877
HESTON, WARREN D.....	HORMONE AND RADIATION THERAPY OF PROSTATIC TUMORS.....	1R26 CA23665-01	121,036
HILLMAN, LAURA S.....	CLINICAL CORRELATIONS TO VITAMIN D STATUS IN INFANTS.....	5R01 HD09998-03	57,602
HILLMAN, RICHARD E.....	MEMBRANE TRANSPORT OF AMINO ACIDS.....	2R01 AM15531-08	61,084
HOCHMUTH, ROBERT M.....	MECHANICAL MEASUREMENT OF CELL MEMBRANE VISCOSITY.....	1R01 HL21802-01	43,968
HOLLOSZY, JOHN O.....	EXERCISE-INDUCED BIOCHEMICAL AND ANATOMIC ADAPTATIONS.....	2R01 AG00425-14	122,349
HOLLOSZY, JOHN O.....	CARBOHYDRATE AND FAT METABOLISM DURING EXERCISE.....	5R01 AM18986-03	60,252
HOLLOSZY, JOHN O.....	EFFECTS OF EXERCISE-TRAINING IN ISCHEMIC HEART DISEASE.....	1R01 HL22215-01	158,473
HOLMES, WILLIAM F.....	A RESOURCE FOR BIOMEDICAL MASS SPECTROMETRY.....	3P41 RR00954-03S1	125,760
HUGHES, CHARLES P.....	VISUAL FUNCTION IN VENTRAL LATERAL GENICULATE.....	1R01 EY02535-01	37,586
HUNT, CARLTON C.....	VERTEBRATE MUSCLE RECEPTORS.....	5R01 NS07907-11	108,099
HUNTER, F EDMUND, JR.....	CHARACTERIZATION AND FUNCTION OF A NEW GSH-PEROXIDASE.....	5R01 GM22587-03	44,314
HUNTER, F EDMUND, JR.....	GSH-SPECIFIC ENZYMES ON ORGANONITRATES, PROSTAGLANDINS.....	1R01 GM24561-01	62,609
JACKSON, CRAIG M.....	IN VITRO REGULATION OF PROTHROMBIN ACTIVATION.....	5R01 HL12820-09	72,536
JAKSCHIK, SISTER BARBARA A.....	SRS-A-ITS BIOSYNTHESIS AND ACTION.....	1R01 HL21874-01	42,881
JARETT, LEONARD.....	HORMONAL REGULATION OF FAT CELL METABOLISM.....	5R01 AM11892-11	126,133
JARETT, LEONARD.....	MORPHOLOGICAL STUDIES ON MECHANISM OF INSULIN ACTION.....	5R01 AM20097-02	65,962
JEFFREY, JOHN J.....	HORMONAL REGULATION OF COLLAGENASE ACTIVITY IN UTERO.....	2R01 HD05291-06A1	97,602
JENG, INGMING.....	STUDIES ON THE CATABOLISM OF PLASMA LIPOPROTEINS.....	1R01 HL22983-01	64,908
JOHNSON, EUGENE M, JR.....	SYMPATHECTOMY: CARDIOVASCULAR & MOLECULAR PHARMACOLOGY.....	5R01 HL20604-03	72,186
JOHNSON, GEORGE B.....	KINETIC STUDIES OF 'HIDDEN' ELECTROPHORETIC VARIATION.....	5R01 GM23504-02	37,145
JONES, EDWARD G.....	SYNAPTIC RELATIONS IN SENSORY SYSTEMS.....	2R01 NS10526-07	88,693
KAHN, ARNOLD J.....	DENTAL DISEASE AND OSTEOCLASTIC BONE RESORPTION.....	5R01 DE04629-02	100,534
KASS, MICHAEL A.....	PATHWAYS OF PROSTAGLANDIN SYNTHESIS AND INHIBITION.....	2R01 EY01333-04	106,101
KENNEL, DAVID E.....	MESSENGER RNA METABOLISM IN BACTERIA.....	5R01 AI13492-03	71,034
KING, M KENTON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05389-17	200,462
KIPNIS, DAVID M.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00036-18	1,632,499
KIRK, DAVID L.....	GENETIC CONTROL OF MORPHOGENESIS IN VOLVOX.....	5R01 GM24172-02	40,342
KLAHR, SAULO.....	RENAL DISEASE.....	5P01 AM09976-14	435,645
KORNFELD, STUART A.....	THE STRUCTURE AND BIOLOGIC FUNCTION OF GLYCOPROTEINS.....	5R01 CA08759-13	225,867
KRUPIN, THEODORE.....	CENTRAL NERVOUS EFFECTS ON AQUEOUS HUMOR DYNAMICS.....	5R01 EY01942-02	32,581
KUHN, CHARLES.....	ENVIRONMENTAL PATHOBIOLOGY OF THE LUNG.....	5R01 HL12650-08	47,073
LACY, PAUL E.....	TISSUE CULTURE OF THE ISLETS OF LANGERHANS.....	2R01 AM01226-22	43,840
LACY, PAUL E.....	MICROENZYMATIC STUDIES OF ISLETS OF LANGERHANS.....	5R01 AM03373-20	54,465
LACY, PAUL E.....	STUDY OF SECRETION AND BIOSYNTHESIS OF INSULIN.....	5R01 AM06181-17	134,448
LEVINE, ROBERT P.....	COMPLEMENT ACTION ON MEMBRANES USING MYCOPLASMA MUTANTS.....	1R01 AI15640-01	74,870
LIEBERMAN, MICHAEL W.....	CHEMICAL CARCINOGEN-INDUCED DNA REPAIR IN HUMAN CELLS.....	5R01 CA20513-02	81,496
LIN, HSIU-SAN.....	PROLIFERATION & DIFFERENTIATION OF ALVEOLAR MACROPHAGES.....	3R01 HL19746-02S1	13,581
LIN, HSIU-SAN.....	PROLIFERATION & DIFFERENTIATION OF ALVEOLAR MACROPHAGES.....	5R01 HL19746-03	91,383
LOEWY, ARTHUR D.....	CENT. NERVOUS SYSTEM: DEGENERATIVE/REGENERATIVE CHANGES.....	5R01 NS12751-04	47,278
LOWRY, OLIVER H.....	QUANTITATIVE HISTOCHEMISTRY OF DEVELOPING ORGANS.....	5R01 HD03891-10	95,681
LOWRY, OLIVER H.....	METABOLISM OF CELLS AND PARTS OF CELLS IN NERVOUS TISSUE.....	5R01 NS08862-09	49,333

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
LYNCH, RICHARD G.....	IMMUNOLOGIC REGULATION OF MYELOMA CELL GROWTH.....	1R01 CA23217-01	73,220
MACDERMOTT, RICHARD P, JR.....	CYTOTOXIC LYMPHOCYTE SUBCLASSES IN INTESTINAL DISEASE.....	1R01 AM21474-01	80,945
MAJERUS, PHILIP W.....	SPECIALIZED CENTER OF RESEARCH IN THROMBOSIS.....	3P50 HL14147-07S3	4,200
MAJERUS, PHILIP W.....	SPECIALIZED CENTER OF RESEARCH IN THROMBOSIS.....	5P50 HL14147-08	626,814
MAJERUS, PHILIP W.....	REGULATION OF METABOLISM IN FIBROBLASTS AND PLATELETS.....	5R01 HL16634-13	151,158
MANSKE, PAUL R.....	NUTRITION OF TENDONS & TENDON GRAFTS IN SYNOVIAL SHEATHS.....	1R01 AM21879-01	73,613
MARSHALL, GARLAND R.....	HYPERTENSION—CHEMISTRY AND BIOPHYSICS OF ANGIOTENSIN.....	5R01 HL14509-07	83,002
MARSHALL, GARLAND R.....	PHARMACOLOGY OF KININS IN CARDIOVASCULAR DISEASE.....	5R01 HL19374-03	100,982
MATHEWS, F SCOTT.....	STRUCTURAL STUDIES OF CYTOCHROME B562.....	5R01 GM20530-06	82,488
MC CARTNEY, MICHAEL L.....	ENGINEERING DEVELOPMENT OF AN ULTRASONIC VENTILOMETER.....	1R01 HL22517-01	52,508
MC DOUGAL, DAVID B, JR.....	METABOLISM AND FUNCTION IN PERIPHERAL NERVE.....	2R01 NS11941-04A1	69,742
MC KEEL, DANIEL W, JR.....	ADENOHYPHYSIAL HORMONE STORAGE AND SECRETION.....	5R01 AM18698-03	37,270
MECHAM, ROBERT P.....	CONNECTIVE TISSUE PRECURSOR MOLECULES IN THE LUNG.....	5R23 HL21225-02	6,135
MEDOFF, GERALD.....	PATHOGENIC FUNGI STUDIES.....	2R01 AI10622-07	106,128
MEDOFF, GERALD.....	AMPHOTERICIN B: CLINICAL ANTITUMOR USE, MECHANISM.....	2P01 CA15665-04	372,116
MILLER, JAMES G.....	ULTRASONIC STUDY OF MYOCARDIAL INJURY.....	2R01 HL19537-03	90,624
MILLER, ROBERT F.....	CELL COMMUNICATION IN THE VERTEBRATE RETINA.....	7R01 EY03014-01	22,491
MOLNAR, CHARLES E.....	PERIPHERAL AUDITORY MECHANISMS.....	5R01 NS07498-11	70,289
MOOG, FLORENCE.....	FUNCTIONAL DIFFERENTIATION OF THE SMALL INTESTINE.....	5R01 HD03490-25	75,131
MOORE, BLAKE W.....	FRACTIONATION OF BRAIN PROTEINS.....	5R01 NS05270-15	97,209
MOSES, ROBERT A.....	FACTORS AFFECTING INTRAOCULAR PRESSURE.....	5R01 EY00256-15	145,855
NAKEFF, ALEXANDER.....	MEGAKARYOCYTE PROLIFERATION AND ITS CONTROL.....	5R01 HL20826-02	54,629
NEEDLEMAN, PHILIP.....	HYPERTENSION: ANGIOTENSIN & PROSTAGLANDIN PHARMACOLOGY.....	5R01 HL14397-07	66,773
NEEDLEMAN, PHILIP.....	THROMBOXANES & PROSTAGLANDINS: BIOCHEMICAL PHARMACOLOGY.....	5R01 HL20787-02	60,352
NELSON, JAMES S.....	DIABETIC AUTONOMIC NEUROPATHY.....	5R01 AM19645-02	69,318
NELSON, JAMES S.....	PATHOGENESIS OF NUTRITIONAL BRAIN INJURY.....	5R01 NS11277-04	55,606
OLIVER, G CHARLES.....	PREDICTION AND PREVENTION OF SUDDEN CARDIAC DEATH.....	2R01 HL18808-04	284,350
OLNEY, JOHN W.....	CNS ULTRASTRUCTURE: DISEASE, DRUGS AND DEVELOPMENT.....	5R01 NS09156-09	77,184
OSTLUND, RICHARD E, JR.....	CONTRACTILE PROTEINS OF SECRETORY TISSUES.....	5R01 AM20421-02	75,058
PALMBERG, PAUL F.....	STUDIES IN GLAUCOMA AND RELATED DISEASES.....	5R01 EY01167-06	97,382
PARKER, CHARLES W.....	ASTHMA CLINICAL CENTER.....	5P50 AI10405-08	26,841
PARKER, CHARLES W.....	CYCLIC NUCLEOTIDES IN IMMUNITY.....	5P01 AI12450-05	131,812
PARKER, CHARLES W.....	INTERDISCIPLINARY RESEARCH CENTER—IMMUNOLOGIC DISEASES.....	1P50 AI15322-01	273,930
PEARLMAN, ALAN L.....	FUNCTIONAL ORGANIZATION OF THE VISUAL SYSTEM.....	2R01 EY00621-06A1	63,781
PEREZ, CARLOS A.....	COOPERATIVE STUDY OF RADIATION THERAPY.....	5R10 CA12261-07	137,142
PERMUTT, MARSHALL A.....	CONTROL OF INSULIN BIOSYNTHESIS.....	5R01 AM16746-06	68,359
PERRAULT, JACQUES.....	VESICULAR STOMATITIS VIRUS DI RNA, STRUCTURE & FUNCTION.....	5R01 AI14365-02	52,856
PHILPOTT, GORDON W.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA03376-22	174,775
PHILPOTT, GORDON W.....	CYTOTOXIC ANTITUMOR ANTIBODIES.....	5R01 CA12626-07	93,409
PHILPOTT, GORDON W.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17955-04	100,938
PIERCE, JOHN A.....	MECHANISMS IN THE REMODELLING OF LUNG STRUCTURE.....	2P01 HL16118-06	562,698
POLAKOSKI, KENNETH L.....	ACTIVE SITE CHARACTERIZATION OF ACROSIN.....	3R01 HD09422-03S1	10,752
PRICE, JOSEPH L.....	STUDIES ON THE OLFATORY CORTEX.....	5R01 NS09518-09	50,770
PULLON, PETER A.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17966-04	43,365
PURVES, DALE.....	LONG-TERM CHANGES IN NEURONS.....	5R01 NS11699-04	74,667
RAICHLER, MARCUS E.....	AN INTERDISCIPLINARY STROKE PROGRAM.....	5P50 NS06833-12	343,778
RAO, BANTWAL R.....	CARCINOGEN INDUCED CHANGES IN STEROID HORMONE ACTION.....	1R01 CA23579-01	60,334
RASKAS, HESCHEL J.....	GENE EXPRESSION OF ONCOGENIC VIRUSES.....	5R01 CA16007-05	61,897
REUSS, LUIS.....	ELECTROPHYSIOLOGY OF NECTURUS GALLBLADDER EPITHELIUM.....	5R01 AM19580-02	57,059
ROEDER, ROBERT G.....	REGULATION OF ADENOVIRUS GENE EXPRESSION.....	2R01 CA16640-04	116,203
ROEDER, ROBERT G.....	MOLECULAR BASIS OF DIFFERENTIATION AND NEOPLASIA.....	1R01 CA23615-01	170,484
ROGERS, JOHN C.....	CHARACTERIZATION OF LYMPHOCYTE EXCRETED DNA.....	2R01 CA17143-04	97,095
ROOS, ALBERT.....	TRANSMEMBRANE MOVEMENTS.....	5R01 HL00082-30	63,039
ROVAINEN, CARL M.....	ORGANIZATION OF PRIMITIVE SPINAL CORD.....	5R01 NS09367-09	61,498
SCHARP, DAVID W.....	ISOLATION AND PURIFICATION OF BETA CELLS OF PANCREAS.....	1R01 AM21966-01	40,748
SCHLAEPFER, WILLIAM W.....	MECHANISMS OF PERIPHERAL NERVE DYSFUNCTION.....	5R01 NS08620-08	82,909
SCHLESINGER, MILTON J.....	RNA-ENVELOPE VIRUS FORMATION IN ANIMAL CELLS.....	5R01 CA14311-06	81,621
SCHLESINGER, PAUL H.....	CONTROL OF EXTRACELLULAR LYSOSOMAL HYDROLASE LEVELS.....	5R23 HL21411-02	47,275
SCHLESINGER, SONDRRA.....	STRUCTURE AND REPLICATION OF ENVELOPED RNA VIRUSES.....	2R01 AI11377-05A1	81,912
SCHLESINGER, SONDRRA.....	REPLICATION OF ENVELOPED RNA VIRUSES IN MACROPHAGES.....	5R01 AI12242-05	80,087

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MISSOURI—Continued			
SCHLESSINGER, DAVID.....	PROCESSING AND TURNOVER OF HUMAN CELL NUCLEAR RNA.....	2R01 GM21357-04	80,445
SCHONFELD, GUSTAV.....	ASSAYS FOR THE PEPTIDES OF LIPOPROTEINS.....	5R01 HL15308-07	101,950
SCHONFELD, GUSTAV.....	SECRETION OF PLASMA LIPOPROTEINS.....	5R01 HL15427-06	63,661
SCHWARTZ, BENJAMIN D.....	MAJOR HISTOCOMPATIBILITY COMPLEX ANTIGENS CHEMICAL STUDY.....	5R01 AI13782-02	76,211
SHERMAN, WILLIAM R.....	METABOLISM OF INOSITOLS AND INOSITIDES.....	2R01 NS05159-15	124,057
SHREFFLER, DONALD C.....	ORGANIZATION AND FUNCTIONS OF THE H-2 GENE COMPLEX.....	5R01 AI12734-03	176,288
SILBERT, DAVID F.....	BIOCHEMICAL GENETIC STUDY OF MEMBRANE LIPID.....	5R01 GM16292-10	93,436
SLY, WILLIAM S.....	ENZYME THERAPY IN LYSOSOMAL STORAGE DISEASES.....	2P01 GM21096-04	455,823
SMERDON, MICHAEL J.....	CARCINOGEN DAMAGE & REPAIR OF DNA IN HUMAN CHROMATIN.....	1R23 ES01797-01	42,028
SMITH, CARL H.....	PLACENTAL MECHANISMS OF AMINO ACID TRANSFER.....	5R01 HD07562-05	113,964
SOBEL, BURTON E.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17646-04	1,210,444
SPARKS, ROBERT E.....	BIOSORBABLE THROMBORESISTANT SURFACES.....	5R01 HL18764-03	104,902
SPIELBERG, ISAIAS.....	CRYSTAL INDUCED CHEMOTACTIC FACTOR.....	5R01 AM19349-03	92,367
STAHL, PHILIP D.....	LYSOSOME BIOGENESIS: NORMAL AND TUMOR CELLS.....	5R01 CA12858-07	59,441
STEWART, CARLETON C.....	LYMPHOCYTE RESPONSES TO MITOGENS AND SPECIFIC ANTIGENS.....	1R01 AI14046-01A1	45,021
STORANDT, MARTHA A.....	A MULTI-FACETED INVESTIGATION OF AGING AND BEHAVIOR.....	5P01 AG00535-02	383,875
STRAUSS, ARNOLD W.....	SYNTHETIC CONTROL: FATTY ACID SYNTHETASE AND ALBUMIN.....	5R01 AM20407-02	74,519
STRICKLER, RONALD C.....	STUDY OF THE PROGESTERONE BINDING SITE.....	1R01 HD12025-01	44,370
SULLIVAN, TIMOTHY J.....	BIOCHEMISTRY OF MAST CELL SECRETION.....	5R01 AI13880-02	39,423
SUTERA, SALVATORE P.....	FLOW, TRANSPORT AND MEMBRANE PHENOMENA IN BLOOD.....	5R01 HL12839-09	151,238
SWANSON, LARRY W.....	CONNECTIONS OF THE LIMBIC SYSTEM AND HYPOTHALAMUS.....	5R01 NS13267-02	69,397
SWEET, FREDERICK.....	STEROID BIOSYNTHESIS, TRANSPORT & MECHANISM OF ACTION.....	3R01 AM16854-03S2	2,100
SWEET, FREDERICK.....	STEROID BIOSYNTHESIS, TRANSPORT & MECHANISM OF ACTION.....	2R01 AM16854-04	60,609
TER-POGOSSIAN, MICHEL M.....	CYCLOTRON PRODUCED ISOTOPES IN BIOLOGY AND MEDICINE.....	5P01 HL13851-16	702,395
THACH, BRADLEY T.....	CONTROL OF BREATHING IN RECOVERY FROM APNEA.....	5R01 HD10993-02	52,592
THACH, ROBERT E.....	REPLICATION OF VIRULENT AND ONCOGENIC VIRUSES.....	3R01 CA13008-06S1	15,800
THACH, ROBERT E.....	REPLICATION OF VIRULENT AND ONCOGENIC VIRUSES.....	9R01 CA13008-07A1	97,054
THACH, WILLIAM T, JR.....	TIMING AND CODING OF CEREBELLAR OUTPUT.....	5R01 NS12777-04	68,406
THALMANN, RUEDIGER R.....	BIOCHEMICAL CORRELATE OF VESTIBULAR FUNCTION.....	1R01 NS14334-01	50,102
THURSTON, JEAN H.....	CEREBRAL METABOLISM IN THE NEWBORN AND THE YOUNG.....	5R01 NS06163-13	84,938
TOLMACH, L J.....	EFFECTS OF X-RAYS ON NORMAL AND MALIGNANT CELLS.....	5R01 CA04483-19	152,856
VIETTI, TERESA J.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA05587-18	322,223
VOLPE, JOSEPH J.....	REGULATION OF FATTY ACID SYNTHESIS DURING DEVELOPMENT.....	5R01 HD07464-05	67,030
WALBOT, VIRGINIA E.....	VARIATION IN MITOCHONDRIAL GENOTYPE AND PHENOTYPE.....	5R01 GM23479-02	59,175
WALTMAN, STEPHEN R.....	RETINAL VASCULAR CHANGES IN DIABETES MELLITUS.....	1R01 EY02198-01	119,360
WARREN, JAMES C.....	BINDING, BIOSYNTHESIS, AND ACTION OF STEROIDS.....	2R01 AM15708-07	132,749
WATERSTON, ROBERT H.....	MOLECULAR GENETICS OF MUSCLE ASSEMBLY IN C. ELEGANS.....	5R01 GM23883-02	54,114
WEDNER, H JAMES.....	CYCLIC NUCLEOTIDES AND LYMPHOCYTE PROLIFERATION.....	1R01 CA24430-01	40,547
WHITESIDE, LEO A.....	STUDIES OF REGIONAL BONE BLOOD FLOW AND METABOLISM.....	1R01 AM20934-01	98,612
WIEST, WALTER G.....	HORMONAL REGULATION OF THE REPRODUCTIVE TRACT.....	5P50 HD08235-04	260,088
WILLARD, MARK B.....	AXONALLY TRANSPORTED PROTEINS IN THE VISUAL SYSTEM.....	9R01 EY02682-04	82,087
WILLIAMSON, JOSEPH R.....	CAPILLARY BASEMENT MEMBRANE IN CARDIOVASCULAR DISEASE.....	5R01 HL13694-08	78,108
WINDER, WILLIAM W.....	CONTROL OF LIVER GLYCOGENOLYSIS DURING EXERCISE.....	1R01 AM20384-01A1	30,986
WITZTUM, JOSEPH L.....	EFFECT OF BILE SEQUESTRATION ON VLDL METABOLISM.....	1R01 HL22748-01	32,264
ZARKOWSKY, HAROLD S.....	SHEAR AND AREA MODULI FOR ABNORMAL RED CELL MEMBRANES.....	5R01 HL20241-02	32,330
ORGANIZATION TOTAL	230	29,143,371	
STATE TOTAL	378	40,738,702	

MONTANA

BOZEMAN

MONTANA UNIVERSITY SYSTEM—MONTANA STATE UNIVERSITY ZIP CODE 59715

CUTLER, JIMMY E.....	INNATE DEFENSE MECHANISMS AGAINST CANDIDA ALBICANS.....	1R01 AI13512-01A2	39,540
DUBEY, JITENDER P.....	TOXOPLASMA GONDII IN OOCYST SHEEDING.....	7R01 AI15919-01	64,761
REED, NORMAN D.....	IMMUNOLOGY OF GERMFREE GENETICALLY THYMUSLESS MICE.....	9R01 CA24443-07	40,693
ORGANIZATION TOTAL	3	144,994	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
MONTANA—Continued			
GREAT FALLS			
COLUMBUS HOSPITAL ZIP CODE 59401			
STIMPFLING, JACK H.....	THE HISTOCOMPATIBILITY ANTIGENS OF THE MOUSE.....	5R01 AI06525-14	103,226
ORGANIZATION TOTAL	1 103,226		
MISSOULA			
MONTANA UNIVERSITY SYSTEM—UNIVERSITY OF MONTANA ZIP CODE 59801			
CARD, GEORGE L.....	CHARACTERIZATION OF ATPASE ASSOCIATED MEMBRANE LIPID.....	5R01 GM23960-02	33,584
GUSTAFSON, GARY L.....	CONTROL OF ENZYME ACCUMULATION DURING DIFFERENTIATION.....	2R01 GM22188-04	61,951
HILL, WALTER E.....	PHYSICAL STUDIES ON RAT LIVER RIBOSOMES.....	1R01 GM24763-01	49,423
WATSON, KENNETH F.....	MECHANISM OF VIRAL RNA-DIRECTED DNA POLYMERIZATION.....	5R01 CA19729-03	39,975
ORGANIZATION TOTAL	4 184,933		
STATE TOTAL	8 433,153		
NEBRASKA			
BOYS TOWN			
FATHER FLANAGAN'S BOYS' HOME ZIP CODE 68010			
JESTEADT, WALT.....	FREQUENCY ANALYSIS IN NORMAL AND IMPAIRED LISTENERS.....	1R01 NS14709-01	37,765
WARR, WILLIAM B.....	THE STRUCTURE AND PROJECTIONS OF THE COCHLEAR NUCLEI.....	7R01 NS14832-01	28,922
WATSON, CHARLES S.....	FACTORS IN THE DISCRIMINATION OF AUDITORY PATTERNS.....	1R01 NS14637-01	52,288
WATSON, CHARLES S.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09003-02	108,555
ORGANIZATION TOTAL	4 227,530		
LINCOLN			
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA AT LINCOLN ZIP CODE 68508			
BANERJEE, MIHIR R.....	HORMONES, CELLULAR BIOSYNTHESIS & MAMMARY CARCINOGENESIS.....	3R01 CA11058-09S1	15,194
BRUMBAUGH, JOHN A.....	MECHANISMS MEDIATING MELANOGENIC CONTROL GENE EFFECTS.....	5R01 GM18969-07	45,020
BULLERMAN, LLOYD B.....	MOLDS AND MYCOTOXINS IN REFRIGERATED AND FROZEN FOODS.....	5R01 CA14260-06	32,409
CROMWELL, NORMAN H.....	STUDIES IN HETEROCYCLIC SYNTHESIS.....	5R01 CA02931-21	56,584
GUPTA, NABA K.....	GENETIC CODE AND PROTEIN SYNTHESIS IN MAMMALIAN SYSTEMS.....	5R01 GM18796-07	57,180
GUPTA, NABA K.....	PROTEIN SYNTHESIS INITIATION IN RED BLOOD CELLS.....	2R01 GM22079-04	61,413
SCHMEHL, FRANCIS L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07055-13	38,181
SMITH, GARY L.....	GROWTH CONTROL IN NORMAL AND NEOPLASTIC CELLS.....	2R01 CA17620-04	59,937
VEOMETT, GEORGE E.....	FACTORS IN CELL AGING: DOMINANCE AND RECESSIVENESS.....	1R01 AG00818-01	43,719
VIDAVER, ANNE MARIE.....	VIRUSES OF PSEUDOMONAS SPECIES.....	5R01 AI10638-07	35,999
VIDAVER, GEORGE A.....	AMINO ACID TRANSPORT BY RED CELL MEMBRANES.....	5R01 HL13256-08	80,613
ORGANIZATION TOTAL	11 526,249		
OMAHA			
CREIGHTON UNIVERSITY ZIP CODE 68178			
ANDREWS, RICHARD V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05390-17	34,218
BAUMSTARK, JOHN S.....	ELASTASE, SERUM INHIBITORS AND THE VASCULATURE.....	5R01 HL15979-05	90,268
DOWD, FRANK J.....	PROTEIN KINASE INTERACTION WITH THE SALIVARY GLAND.....	5R23 DE04572-03	25,865
HEANEY, ROBERT P.....	SUPPORT FOR BONE RESEARCH CENTER.....	5R01 AM07912-14	99,100
LYNCH, HENRY T.....	MAINTENANCE OF CANCER FAMILY SYNDROME RESOURCE.....	3R01 CA18408-03S1	11,194
SANDERS, W EUGENE, JR.....	PREVENTION OF PYOGENIC INFECTIONS.....	2R01 AI11584-06	37,569
TOWNLEY, ROBERT G.....	ALLERGIC DISEASES CENTER GRANT—MECHANISMS IN ASTHMA.....	5P50 AI12029-05	137,735
WATT, DEAN D.....	BIOLOGICAL-IMMUNOLOGICAL ACTIONS OF TOXINS.....	2R01 NS12365-04	47,050
WELLS, IBERT C.....	LIPID-MOBILIZATION AND DIABETIC ATHEROSCLEROSIS.....	5R01 HL22115-02	44,979
ORGANIZATION TOTAL	9 527,978		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEBRASKA—Continued			
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER ZIP CODE 68105			
ANGLE, CAROL R.....	CHILDHOOD LEAD, PYRIMIDINES AND METABOLIC DEBRIS	1R01 ES01857-01	42,498
BARKER, KENNETH L.....	REGULATION OF UTERINE RIBOSOME ACTIVITY BY ESTROGENS	5R01 HD10528-02	77,392
BLAKE, CHARLES A.....	MECHANISMS OF CYCLIC LH AND FSH RELEASE.....	5R01 HD11011-02	49,617
COOK, DAVID E.....	MECHANISM OF ACTION OF DIABETES ON DRUG METABOLISM.....	5R01 AM21282-02	43,296
DONNELLY, THOMAS E, JR.....	REGULATION OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASES.....	5R01 GM22424-03	18,834
DONNELLY, THOMAS E, JR.....	PROPERTIES OF NUCLEAR CGMP-DEPENDENT PROTEIN KINASES.....	1R01 GM24287-01	52,475
GARDNER, PAUL J.....	IMMUNOCYTOCHEMICAL LOCALIZATION OF FSH IN THE TESTIS	5R01 HD09881-03	20,564
GARDNER, PAUL J.....	LOCALIZATION OF TESTOSTERONE IN THE TESTIS	1R01 HD10872-01	25,140
GILMORE, JOSEPH P.....	NEURAL CONTROL OF BLOOD VOLUME.....	5R01 HL13427-09	108,930
GILMORE, JOSEPH P.....	STUDY OF THE MAMMALIAN RENAL MICROCIRCULATION.....	5R01 HL17902-04	64,843
GRANDJEAN, CARTER J.....	METABOLISM AND MODE OF ACTION OF NITROSAMINES	5R01 CA14659-06	74,731
HEDRICK, MARGARET L.....	AGING OF IMMUNOCOMPETENT CELLS.....	9R01 AG00904-04	52,681
JOYNER, WILLIAM L.....	ROLE OF ENDOTHELIAL CELLS IN VASCULAR PERMEABILITY	5R01 HL19455-03	33,763
LANGENBACH, ROBERT J.....	IN VITRO CHEMICAL CARCINOGENESIS	5R01 CA20022-03	43,410
LEMON, HENRY M.....	CLINICAL CANCER EDUCATION.....	5R25 CA19623-03	119,103
MATSCHINER, JOHN T.....	ROLE OF PITUITARY HORMONES IN THE ACTION OF VITAMIN K.....	5R01 HL19322-03	43,765
MORIARTY, C MICHAEL.....	CELLULAR MECHANISMS OF PITUITARY HORMONE SECRETION.....	2R01 AM18328-04	27,950
PHARES, C K.....	GROWTH FACTOR FROM PLEROCERCOIDS OF S. MANSONIOIDES.....	5R01 AM17226-04	33,168
PHARES, C K.....	EFFECTS OF GROWTH FACTORS IN DIABETICS.....	5R01 AM21186-02	53,401
POUR, PARVIZ M.....	MULTIDISCIPLINARY INVESTIGATIONS ON PANCREATIC NEOPLASMS.....	5R26 CA20198-02	215,586
RAMALEY, JUDITH A.....	NEURAL CONTROL OF ADRENAL DEVELOPMENT.....	3R01 HD08703-03S1	12,828
RIGBY, PERRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05391-17	78,017
ROSENQUIST, GLENN C.....	HISTOGENESIS AND BIOCHEMISTRY OF EMBRYONIC LUNG.....	5R01 HL20132-03	62,455
SHARP, JOHN G.....	ROLE OF SUPPRESSOR T CELLS IN PANCREATIC DISEASE.....	5R01 AM21137-02	51,088
SHARP, JOHN G.....	ARTIFICIAL CAPILLARY CULTURE OF HEMOPOIETIC CELLS.....	5R01 CA18548-03	39,695
SMITH, MC CLURE L.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA23084-01	23,976
ZUCKER, IRVING H.....	REFLEX CONTROL OF THE CIRCULATION IN HEART FAILURE.....	1R01 HL22594-01	123,680
ORGANIZATION TOTAL	27 1,592,886		
STATE TOTAL	51 2,874,643		

NEVADA

RENO			
UNIVERSITY OF NEVADA SYSTEM—UNIVERSITY OF NEVADA RENO ZIP CODE 89507			
KOZEL, THOMAS R.....	CRYPTOCOCCAL POLYSACCHARIDE: INHIBITION OF PHAGOCYTOSIS.....	5R01 AI14209-02	27,278
LIGHTNER, DAVID A.....	BILIRUBIN PHOTOCHEMISTRY AND JAUNDICE PHOTOTHERAPY.....	5R01 HD09026-03	58,497
REITZ, RONALD C.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09035-02	57,195
ORGANIZATION TOTAL	3 142,970		
STATE TOTAL	3 142,970		

NEW HAMPSHIRE

DURHAM			
UNIVERSITY SYSTEM OF NEW HAMPSHIRE—UNIVERSITY OF NEW HAMPSHIRE ZIP CODE 03824			
CHESBRO, WILLIAM R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07108-07	22,598
COLLINS, WALTER M.....	GENETICS, THE LYMPHOCYTE AND TUMOR REGRESSION.....	5R01 CA17680-04	56,582
HERBST, EDWARD J.....	POLYAMINES AS METABOLIC INDICATORS OF CARCINOGENESIS.....	3R01 CA16827-03S1	7,536
SMITH, ROBERT A, JR.....	THE PHYSIOLOGY OF TUNED CHANNELS IN HUMAN VISION.....	5R01 EY01475-04	46,364
ORGANIZATION TOTAL	4 133,080		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW HAMPSHIRE—Continued			
HANOVER			
DARTMOUTH COLLEGE ZIP CODE 03755			
ADLER, ROBERT A.....	MORPHOLOGIC AND METABOLIC STUDIES OF HUMAN OBESITY	5R01 AM13321-10	75,652
ALLEN, ROBERT D.....	BIOLOGICAL MOVEMENT PROCESSES.....	5R01 GM22356-04	102,419
ALLEN, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07056-05	42,883
BARTLETT, DONALD, JR.....	ROLE OF THE UPPER AIRWAYS IN THE CONTROL OF BREATHING.....	5R01 HL19827-02	74,169
BERNIER, GEORGE M, JR.....	METABOLISM OF LOW-MOLECULAR WEIGHT PROTEINS.....	7R01 AM25398-01	43,115
BERNIER, GEORGE M, JR.....	ORIGINS AND STRUCTURE OF THE MYELOMA CELL.....	7R01 CA25696-01	52,860
BORISON, HERBERT L.....	CHEMOSENSORS OF THE NERVOUS SYSTEM.....	5R01 NS04456-17	84,797
BURGESS, DAVID R.....	ULTRASTRUCTURE AND BIOCHEMISTRY OF MICROVILLUS GROWTH.....	5R01 AM20021-02	61,669
CARPENTER, STANLEY J.....	ULTRASTRUCTURAL STUDIES ON RODENT PLACENTAL MEMBRANES.....	5R01 HD09585-03	49,263
CHAMBERS, WILBERT F.....	DEVELOPING NEOPLASMS FROM EMBRYONIC PITUITARY.....	5R01 CA18148-03	45,451
CHANG, TA-YUAN.....	ROLES OF CHOLESTEROL AND ITS METABOLIC REGULATION.....	5R01 HL21246-02	60,110
CORNWELL, GIBBONS G, III.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	5R10 CA04326-20	166,675
DAUBENSPECK, JOHN A.....	BREATHING PATTERN VARIATION AND MECHANICAL INFLUENCES.....	2R01 HL19248-03	30,440
DOUPLE, EVAN B.....	RADIOSENSITIZATION BY PLATINUM ANTICANCER COMPOUNDS.....	1R01 CA23368-01	59,395
FERM, VERGIL H.....	TERATOGENIC EFFECTS OF HEAVY METALS.....	5R01 ES00697-07	132,376
FORSTER, ROY P.....	CELLULAR ASPECTS OF ACTIVE TRANSPORT.....	5R01 HL04457-20	67,980
GALTON, VALERIE A.....	MECHANISMS OF THYROID HORMONE ACTION IN DEVELOPMENT.....	2R01 HD09020-04	61,334
GILBERT, JOHN J.....	VITAMIN E: ASSAYS, DEFICIENCY, EFFECTS, NEW COMPOUND.....	2R01 HD08210-04	67,415
GOSSELIN, ROBERT E.....	DRUG EFFECTS ON SOLUTE TRANSPORT ACROSS EPITHELIA.....	2R01 GM11598-14A1	46,170
GRIBBLE, GORDON W.....	FLUORINATED BENZANTHRACENE SYNTHESIS AND SCREENING.....	1R01 CA24422-01	56,938
HARRIS, EDWARD D, JR.....	STUDY OF CONNECTIVE TISSUE METABOLISM IN MAN.....	5R01 AM14780-08	83,512
HARRIS, EDWARD D, JR.....	MULTIPURPOSE ARTHRITIS CENTER SUPPORT.....	5P60 AM20641-02	172,596
INSELBURG, JOSEPH W.....	STABLE PLASMID-CELL ASSOCIATIONS.....	5R01 AI08937-10	76,488
JENNETTE, KAREN W.....	INTERACTION OF CARCINOGENIC METALS WITH NUCLEIC ACIDS.....	5R01 CA22270-02	43,579
LAYTON, WILLIAM M, JR.....	CONGENITAL HEART MALFORMATIONS AND SITUS INVERSUS.....	5R01 HL19430-03	46,876
LIENHARD, GUSTAV E.....	THE GLUCOSE TRANSPORT SYSTEM OF THE HUMAN ERYTHROCYTE.....	5R01 GM22996-03	45,387
LONGNECKER, DANIEL S.....	STUDIES OF DNA CHANGE INDUCED BY PANCREATIC CARCINOGENS.....	2R01 CA17843-04	68,526
LONGNECKER, DANIEL S.....	SURVEY OF HUMAN PANCREASES FOR ACINAR CELL DYSPLASIA.....	5R26 CA19410-03	30,749
LUBIN, MARTIN.....	MODIFICATION OF TUMOR CELLS AND TUMOR SYSTEMS.....	5R01 CA17293-04	170,898
MARIN-PADILLA, MIGUEL.....	NORMAL & ABNORMAL STRUCTURE, HUMAN CEREBRAL CORTEX.....	5R01 HD09274-04	71,781
MC INTYRE, O ROSS.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19379-03	85,828
MC INTYRE, O ROSS.....	CANCER CENTER SUPPORT (CORE) GRANT.....	1P30 CA23108-01A1	294,297
MORIN, LAWRENCE P.....	BEHAVIOR, BIOLOGICAL CLOCKS AND HORMONES.....	5R01 HD10740-02	30,613
MUDGE, GILBERT H.....	PHARMACOLOGY OF ANGIOGRAPHIC AND CHOLEGRAPHIC AGENTS.....	5R01 AM06818-17	86,094
MUDGE, GILBERT H.....	ANALGESIC NEPHROPATHY: MECHANISMS OF PATHOGENESIS.....	2R01 AM16960-04A1	72,525
MUNCK, ALLAN U.....	THE MODE OF ACTION OF STEROID HORMONES.....	5R01 AM03535-20	138,144
MUNCK, ALLAN U.....	GLUCOCORTICOID-RESISTANT LEUKEMIC LYMPHOCYTES.....	2R01 CA17323-04	70,692
NATTIE, EUGENE E.....	BRAIN METABOLISM, ACID-BASE BALANCE, AND RESPIRATION.....	5R01 HL18351-03	24,415
NODA, LAFAYETTE H.....	HIGH ENERGY PHOSPHATE TRANSFERRING ENZYMES.....	5R01 GM23123-21	96,319
OU, LO-CHANG.....	PATHOPHYSIOLOGICAL EFFECTS OF HYPOXIA.....	5R01 HL21159-02	71,602
PFEFFERKORN, ELMER R.....	TOXOPLASMA GONDII: CELL BIOLOGY AND GENETICS.....	1R01 AI14151-01	66,113
SCORNIK, OSCAR A.....	REGULATION OF PROTEIN METABOLISM IN MAMMALIAN LIVER.....	5R01 AM13336-10	98,714
SINCLAIR, PETER R.....	LIVER CELL CULTURE FOR STUDY OF CARCINOGEN ACTIVATION.....	7R01 CA25012-01	60,684
SMITH, LUCILE.....	RESPIRATORY CHAIN SYSTEM OF HEART MUSCLE AND BACTERIA.....	5R01 GM06270-20	82,389
SMITH, ROGER P.....	METHEMOGLOBINEMIA AND ANTIHYPERTENSIVE DRUGS.....	5R01 HL14127-16	71,103
SPIEGEL, MELVIN.....	REAGGREGATION OF DISSOCIATED EMBRYONIC AND ADULT CELLS.....	5R01 HD09320-04	59,724
ST JOHN, WALTER M.....	BRAIN STEM INTEGRATION OF CHEMORECEPTOR ACTIVITY.....	5R01 HL20574-03	30,755
STERN, PAUL.....	HUMAN DEVELOPMENTAL AND PATHOLOGICAL ASPECTS OF ADH.....	1R01 HD12123-01	58,163
STRICKLER, JAMES C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05392-17	134,833
TENNEY, STEPHEN M.....	INTERRELATIONSHIPS OF CIRCULATION AND RESPIRATION.....	5R01 HL02888-22	44,941
TRUMPOWER, BERNARD L.....	STRUCTURE AND FUNCTION OF HEART MEMBRANE PROTEINS.....	3R01 GM20379-05S1	22,000
TRUMPOWER, BERNARD L.....	STRUCTURE AND FUNCTION OF HEART MEMBRANE PROTEINS.....	5R01 GM20379-06	54,794
VALTIN, HEINZ.....	HEREDITARY DIABETES INSIPIDUS.....	5R01 AM08469-14	221,103
VALTIN, HEINZ.....	ECTOPIC HORMONES IN SMALL CELL CARCINOMA OF THE LUNG.....	5R01 CA19613-03	51,599
VELEZ, SAMUEL J.....	REGENERATION OF NEURONAL CONNECTIONS.....	5R01 NS13800-02	33,506
WIRA, CHARLES R.....	SEX HORMONE REGULATION OF IMMUNOGLOBULINS.....	5R01 AI13541-02	75,943

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW HAMPSHIRE—Continued			
YAGER, JAMES D, JR.....	DNA REPAIR DURING INITIATION OF HEPATOCARCINOGENESIS.....	5R01 CA18353-03	45,839
YAGER, JAMES D, JR.....	EFFECT OF DIETARY STRESS ON PANCREATIC CARCINOGENESIS.....	5R01 CA20948-02	108,783
YAGER, JAMES D, JR.....	ROLE OF GONADAL STEROIDS IN LIVER CARCINOGENESIS.....	1R01 CA23916-01	51,631
ORGANIZATION TOTAL	59 4,534,649		
STATE TOTAL	63 4,667,729		
NEW JERSEY			
CAMDEN			
INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 08103			
CORIELL, LEWIS L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05582-11	23,757
LASFARGUES, ETIENNE Y.....	TISSUE CULTURE STUDIES OF THE MAMMARY TUMOR VIRUS.....	3R01 CA08515-12S1	16,583
LASFARGUES, ETIENNE Y.....	TISSUE CULTURE STUDIES OF THE MAMMARY TUMOR VIRUS.....	2R01 CA08515-13A1	93,328
MC GARRITY, GERARD J.....	MASS AIR FLOW FOR ANIMAL ISOLATION/QUARANTINE.....	5R01 RR00903-04	75,315
ORGANIZATION TOTAL	4 208,983		
NEWARK			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103			
BARTELL, PASQUALE F.....	EFFECTS OF P. AERUGINOSA SLIME ON HOST DEFENSES.....	2R01 AI08504-10	58,381
CHINARD, FRANCIS P.....	PULMONARY TRANSPORT AND METABOLISM IN VIVO.....	5R01 HL12879-09	323,940
CHINARD, FRANCIS P.....	TRACER AND OSMOTIC KINETICS IN BODY ORGANS.....	3R01 HL12974-09S1	7,955
CHINARD, FRANCIS P.....	TRACER AND OSMOTIC KINETICS IN BODY ORGANS.....	5R01 HL12974-10	74,244
COOPER, STEPHEN A.....	COMPARING THE EFFICACIES OF CONSCIOUS SEDATION DRUGS.....	1R23 DE05420-01	29,867
CUNNINGHAM, EARLENE B.....	INTERACTIONS OF ENZYMES OF THE ERYTHROCYTE MEMBRANE.....	7R01 GM26577-01	45,459
DI MAYORCA, GIAMPIERO.....	MOLECULAR MECHANISM OF CHEMICAL CARCINOGENESIS.....	7R01 CA25013-01	94,555
ETTINGER, PHILIP O.....	REGIONAL CONDUCTION ABNORMALITIES AND ARRHYTHMIAS.....	5R01 HL19398-03	37,516
FARNSWORTH, PATRICIA N.....	COMPARATIVE STUDY OF AGING OF THE CRYSTALLINE LENS.....	5R01 EY01533-04	62,379
FRIEDMAN, KENNETH J.....	ROLE OF LIPIDS IN CONTROLLING MEMBRANE PHYSIOLOGY.....	5R01 GM24017-02	34,980
FU, S JOSEPH.....	PROGRESSION OF CATARACTOGENESIS AND POSSIBLE REVERSAL.....	3R01 EY01156-03S3	22,292
FU, S JOSEPH.....	PROGRESSION OF CATARACTOGENESIS AND POSSIBLE REVERSAL.....	2R01 EY01156-04A1	76,851
GERTNER, SHELDON B.....	METABOLIC & DRUG STUDIES ON EXPERIMENTAL FAT EMBOLISM.....	5R01 HL18607-03	23,591
GONA, AMOS G.....	NORMAL AND THYROID-INDUCED CEREBELLAR MATURATION.....	5R01 HD08157-05	41,171
HIRSCHBERG, ERICH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05393-17	107,100
JACOBY, JACOB H.....	DRUGS AND BRAIN SEROTONIN METABOLISM.....	5R01 NS12876-03	33,261
JANSONS, VILMA K.....	LIPOSOMES AS CARRIERS FOR ANTITUMOR AGENTS.....	2R01 CA19127-03	28,160
KAPLAN, HARRY A.....	VASCULAR ANATOMY OF THE TELEENCEPHALON.....	5R01 HL19053-03	15,942
KROPP, DONNA L.....	STRUCTURE-FUNCTION RELATIONSHIPS IN RED CELL NA-K PUMPS.....	1R01 HL20711-01A1	47,687
KUMAR, SURIENDER.....	MECHANISM OF CONTROL OF FATTY ACID SYNTHESIS.....	5R01 AM16070-05	56,219
KUMAR, SURIENDER.....	PULMONARY FATTY ACID AND PHOSPHOLIPID METABOLISM.....	5R01 HL18938-03	24,426
LAEMLE, LOIS K.....	AN EXPERIMENTAL STUDY OF THE DEVELOPING VISUAL SYSTEM.....	2R01 EY01174-04A1	15,843
LEA, MICHAEL A.....	NONHISTONE CHROMOSOMAL PROTEINS AND HEPATOMA GROWTH.....	5R01 CA16274-05	49,798
LOWNDES, HERBERT E.....	SPINAL CORD CORRELATES OF PERIPHERAL NEUROPATHIES.....	2R01 NS11948-04	58,340
MACEDO-SOBRINHO, BRAZ.....	CELL MEDIATED IMMUNITY IN GINGIVAL INFLAMMATION.....	5R01 DE04501-03	22,294
MC ARDLE, JOSEPH J.....	CONTROL OF MUSCLE DURING REINNERVATION.....	5R01 NS11055-06	16,804
MOSCHOS, CHRISTOS B.....	CORONARY THROMBOSIS: PATHOGENESIS AND DIAGNOSIS.....	5R01 HL13036-08	84,540
MOSKOWITZ, HARVEY D.....	EVALUATION OF NEW FILLERS FOR DENTAL COMPOSITE RESINS.....	5R23 DE04334-02	32,775
OPDERBECK, WILLIAM R.....	COMPARISON OF TREATMENT PROCEDURES USED IN ENDODONTICS.....	5R23 DE04335-03	13,245
OPDYKE, DAVID F.....	DEVELOPMENT OF VERTEBRATE VASCULAR CONTROL SYSTEMS.....	5R01 HL18868-03	1,161
REGAN, TIMOTHY J.....	THE MYOCARDIUM IN DIABETES MELLITUS.....	2R01 HL09914-13	169,611
RUBIN, ARNOLD D.....	PROGRAM FOR CANCER EDUCATION.....	5R25 CA19536-03	53,840
RUSH, BENJAMIN F, JR.....	PATHOPHYSIOLOGY OF POST-TRAUMATIC AND SHOCK STATES.....	5R01 HL13193-09	58,777
SALEN, GERALD.....	THE METABOLISM OF URSODEOXYCHOLIC ACID IN MAN.....	5R01 AM18707-04	63,191
SALEN, GERALD.....	METABOLISM OF CHOLESTANOL AND CHOLESTEROL IN MAN.....	2R01 HL17818-05	85,664
SHOWLIN, FRANCIS E.....	UPTAKE OF HYDROXYAPATITE PHOSPHORUS BY ORAL BACTERIA.....	5R01 DE03867-05	57,381
SIEGEL, ALLAN.....	ROLE OF THE LIMBIC SYSTEM IN HYPOTHALAMIC AGGRESSION.....	5R01 NS07941-09	39,148

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
STOUT, MARGUERITE A.....	A MODEL FOR CALCIUM HOMEOSTASIS IN EXCITABLE TISSUE.....	1R23 HL21213-01A1	36,118
STUDZINSKI, GEORGE P.....	ACTION OF AMINONUCLEOSIDE ON NORMAL AND CANCER CELLS.....	5R01 CA19750-03	58,923
STUDZINSKI, GEORGE P.....	DEOXYRIBONUCLEASES OF TUMOR NUCLEI.....	3R01 CA20043-02S1	11,233
SWAN, KENNETH G.....	VASOACTIVE AGENTS IN SPLANCHNIC VISCERA.....	5R01 HL18096-04	36,227
SWISLOCKI, NORBERT I.....	LIGAND EFFECTS ON PURIFIED MEMBRANE ADENYLATE CYCLASE.....	7R01 AM23040-01	49,957
VITALE, LEONARD F.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA12637-07	53,940
WAGNER, BETTY J.....	PROTEOLYTIC ENZYMES AND CATARACTOGENESIS.....	1R01 EY02299-01	62,181
YANG, CHUNG S.....	MONOXYGENASE: PROPERTIES AND CARCINOGEN ACTIVATION.....	3R01 CA16788-04S1	9,130
YANG, CHUNG S.....	MONOXYGENASE: PROPERTIES AND CARCINOGEN ACTIVATION.....	5R01 CA16788-05	48,781
YANG, CHUNG S.....	NUCLEAR PHOSPHOPROTEIN PHOSPHATASE.....	5R01 GM23164-03	35,815
ORGANIZATION TOTAL	47 2,470,693		
NEWARK BETH ISRAEL MEDICAL CENTER ZIP CODE 07112			
KIRSCHNER, MARVIN A.....	BIOCHEMICAL MARKERS OF MALIGNANCY.....	5R01 CA18954-03	31,103
PARSONNET, VICTOR.....	EXTENDING THE LIFE OF IMPLANTED PACEMAKERS.....	5R01 HL15247-05	30,514
ORGANIZATION TOTAL	2 61,617		
RUTGERS THE STATE UNIVERSITY NEWARK ZIP CODE 07104			
FEDER, HARVEY H.....	HORMONAL REGULATION OF BEHAVIOR.....	5R01 HD04467-07	67,990
HALL, JAMES C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07059-13	35,705
JORDAN, FRANK.....	MECHANISM OF THIAMINE PYROPHOSPHATE REQUIRING ENZYMES.....	5R01 AM17495-05	62,904
JORDAN, FRANK.....	TOTAL APPROACH TO NUCLEOSIDE CONFORMATIONAL ANALYSIS.....	5R01 GM19338-04	23,942
ORGANIZATION TOTAL	4 190,541		
NEW BRUNSWICK			
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903			
AMAREL, SAUL.....	SPECIAL RESEARCH RESOURCE: COMPUTERS IN BIOMEDICINE.....	2P41 RR00643-07	658,228
BARFIELD, RONALD J.....	ENDOCRINE AND NEURAL BASES OF BEHAVIOR.....	2R01 HD04484-07	44,859
BROWN, HARRY D.....	MICROCALORIMETRIC ANALYSIS FOR CLINICAL CHEMISTRY.....	5R01 GM22679-04	49,046
CHAMPE, SEWELL P.....	GENETIC CONTROL OF BACTERIOPHAGE DEVELOPMENT.....	5R01 GM17020-10	81,349
COLLIER, GEORGE H.....	THE DETERMINANTS OF REINFORCEMENT.....	5R01 HD10588-02	70,898
COUSINS, ROBERT J.....	ZINC AND THE SYNTHESIS OF ZINC BINDING PROTEIN.....	2R01 AM18555-04	47,783
COUSINS, ROBERT J.....	ZINC METABOLISM IN ISOLATED LIVER CELLS.....	5R01 AM20485-02	43,804
COUSINS, ROBERT J.....	PERIODONTAL DISEASE AND COPPER AND ZINC METABOLISM.....	1R01 DE04606-01	52,276
COUSINS, ROBERT J.....	METABOLISM AND BIOCHEMICAL ACTIONS OF CADMIUM.....	5R01 ES00777-07	60,416
DAVIS, FRANK F.....	NONIMMUNOGENIC ENZYMES FOR THERAPEUTIC USE.....	2R01 GM20946-04	107,227
DENNEY, DONALD B.....	REACTIONS OF ORGANOPHOSPHORUS COMPOUNDS.....	5R01 CA10737-14	54,915
ESSIEN, FRANCINE B.....	STUDY OF A LETHAL MUTATION AFFECTING LUNG DEVELOPMENT.....	5R01 HD10260-02	62,201
FALK, JOHN L.....	BEHAVIORAL SHARE IN HYPERTENSION.....	2R01 HL19612-07A2	54,378
GROB, GERALD N.....	HISTORY OF MENTAL HOSPITALS IN THE U.S. SINCE 1875.....	5R01 LM02306-09	18,948
KAPLAN, MURRAY L.....	EARLY NUTRITION AND DEVELOPMENT OF OBESITY.....	2R01 AM18557-04	55,790
KENT, HARRY A, JR.....	ACTION OF CONTRACEPTIVE TETRAPEPTIDE AND STEROID.....	5R01 HD09608-03	34,118
KNAPP, SPENCER A.....	SYNTHESIS OF ANTITUMOR AGENTS RELATED TO CORIOLIN.....	1R23 CA24747-01	34,620
LAMPEN, J OLIVER.....	CELL PERMEABILITY AND INVERTASE BIOSYNTHESIS.....	5R01 AI04572-17	107,367
MACDONALD, GORDON J.....	OVARIAN INVOLUTION IN AGING.....	5R01 AG00468-05	49,502
MACKAY, VIVIAN L.....	RECOMBINATION REPAIR AND CONJUGATION IN YEAST.....	2R01 GM22149-04	50,261
MC INTOSH, ARTHUR H.....	BACULOVIRUS IN MAMMALIAN CELLS: USES IN PARASITOLOGY.....	1R01 AI14509-01	69,005
MOSS, ROBERT A.....	MICELLAR ALKYLATING AGENTS AND ENZYME ANALOGS.....	5R01 CA14912-13	66,792
OLSON, WILMA K.....	NUCLEIC ACID CONFORMATION, PROPERTIES AND INTERACTIONS.....	5R01 GM20861-05	52,086
OTHMER, HANS G.....	DYNAMIC PATTERN IN CHEMICALLY-REACTING SYSTEMS.....	5R01 GM21558-04	23,861
PAGE, CHARLES H.....	POSTURAL REGULATION.....	2R01 NS12262-04A1	35,091
PASSMORE, HOWARD C.....	RECOMBINATION ANALYSIS OF THE MOUSE H-2 COMPLEX.....	1R01 AI14424-01	44,332
PIECZENIK, GEORGE.....	GENOTYPIC SELECTION: SYNTAX AND STRUCTURE OF SEQUENCES.....	5R01 GM23550-02	19,662
PORETZ, RONALD D.....	LYMPHOCYTE SURFACE GLYCOCONJUGATES.....	1R01 CA25134-01	53,656
PRAMER, DAVID.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07058-13	122,740
RABII, JAMSHID.....	HYPOTHALAMO-HYPOPHYSEAL-ADRENAL AXIS MATURATION.....	5R01 HD09533-03	34,767
SAN FILIPPO, JOSEPH, JR.....	A STUDY OF SUPEROXIDE REACTIVITY.....	5R01 AM18713-03	43,799
SCHAFFNER, CARL P.....	POLYENE MACROLIDES-PHARMACOLOGY AND TOXICOLOGY.....	5R01 AI12602-04	103,200

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
SCHUGAR, HARVEY J.....	BIOINORGANIC ASPECTS OF SELECTED MERCAPTIDE COMPLEXES	5R01 AM16412-05	43,274
SIMPSON, ROBERT W.....	CHARACTERIZATION OF AVIAN CORONAVIRUSES	1R01 AI14359-01A1	102,195
SINHA, NAVIN K.....	IN VITRO ANALYSIS OF A DNA REPLICATION APPARATUS.....	5R01 GM24391-02	48,080
STRAUSS, ULRICH P.....	SPECIFIC COUNTERION BINDING BY POLYELECTROLYTES.....	5R01 GM12307-13	43,637
STRUMEYER, DAVID H.....	POSSIBLE ROLE OF AMYLASE INHIBITOR IN CELIAC DISEASE.....	5R01 AM18800-03	35,804
VALENTINE, JOAN S.....	THE HISTIDYL IMIDAZOLE LIGAND IN METALLOPROTEINS.....	1R01 GM24759-01	47,964
WALKOWITZ, JUDITH R.....	PROSTITUTION, VENEREAL DISEASE, AND CONTAGIOUS DISEASES.....	5R01 LM02574-02	10,618
WITKIN, EVELYN M.....	INDUCED MUTATIONS IN BACTERIA.....	5R01 AI10778-07	62,837
ORGANIZATION TOTAL	40	2,801,386	
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—NEW JERSEY SCHOOL OF OSTEOPATHIC MEDICINE		ZIP CODE 08854	
MIDDLETON, RICHARD B.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09085-01	94,077
ORGANIZATION TOTAL	1	94,077	
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL		ZIP CODE 08854	
BRECKENRIDGE, BRUCE M.....	CYCLIC AMP AND METABOLIC CONTROL IN THE NERVOUS SYSTEM.....	5R01 NS10975-12	91,121
BRODSKY, BARBARA M.....	X-RAY DIFFRACTION OF CONNECTIVE TISSUE.....	5R01 AM19626-02	35,493
BROSTROM, CHARLES O.....	CONTROL OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASE.....	5R01 NS11340-05	62,608
BROWNING, EDWARD T.....	METABOLIC REGULATION IN GLIOMA CELLS.....	5R01 NS08436-08	31,669
CRANE, ROBERT K.....	BRUSH BORDER PHASE OF DIGESTIVE-ABSORPTIVE FUNCTION.....	5R01 AM10696-13	126,125
DUBIN, DONALD T.....	R-RNA & RIBOSOME SYNTHESIS IN BACTERIA & ANIMAL CELLS.....	5R01 GM14957-11	80,303
EDELMAN, NORMAN H.....	DETERMINANTS OF THE VENTILATORY RESPONSE TO HYPOXIA.....	5R01 HL16022-05	50,983
EDELMAN, NORMAN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05576-14	96,241
EGGER, M DAVID.....	PLASTICITY IN A CUTANEOUS SPINAL REFLEX.....	5R01 NS13456-02	35,757
EICHHOLZ, ALEXANDER.....	STUDY OF THE TRANSPORT OF CARBOHYDRATES.....	2R01 AM17874-04	64,079
FIETZEK, PETER P.....	STRUCTURE AND ORGANIZATION OF BASEMENT MEMBRANES.....	1R01 AM22051-01	88,809
GOCKE, DAVID J.....	CORRELATIVE STUDIES IN VIRAL HEPATITIS.....	5R01 AI11593-06	73,288
HOLOWCZAK, JOHN A.....	TRANSCRIPTION & TRANSLATION IN POX VIRUS INFECTED CELLS.....	5R01 CA11027-11	51,354
KHACHADURIAN, AVEDIS K.....	FAMILIAL HYPERCHOLESTEROLEMIA: STUDIES OF FIBROBLASTS.....	5R01 HL18878-03	76,704
KRAUTHAMER, GEORGE M.....	CENTRAL NERVOUS MECHANISMS OF VISCERAL AND SOMATIC PAIN.....	2R01 NS10922-02A2	61,352
LENARD, JOHN.....	CHARACTERIZATION OF VSV MUTANTS WITH MEMBRANE LESIONS.....	5R01 AI13002-03	41,523
MACDONALD, GORDON J.....	STUDY OF HORMONE LEVELS DURING PREGNANCY.....	1R01 HD10824-01A1	55,462
MC ALLISTER, WILLIAM T.....	REGULATION OF VIRAL GENE EXPRESSION.....	2R01 GM21783-04	38,471
MORRIS, N RONALD.....	GENETICS AND BIOCHEMISTRY OF MITOSIS IN ASPERGILLUS.....	5R01 GM23060-03	30,176
PROCKOP, DARWIN J.....	BIOCHEMISTRY OF NORMAL AND DISEASED CONNECTIVE TISSUE.....	3P01 AM16516-07S1	43,672
PROCKOP, DARWIN J.....	BIOCHEMISTRY OF NORMAL AND DISEASED CONNECTIVE TISSUE.....	5P01 AM16516-08	332,387
RASKA, KAREL, JR.....	LOW MOLECULAR WEIGHT RNA IN ADENOVIRUS INFECTIONS.....	5R01 CA21196-02	62,101
ROISEN, FRED J.....	STUDIES OF NERVE DEVELOPMENT.....	2R01 NS11299-04A1	62,218
SANDERS, MARILYN M.....	CHROMOSOME STRUCTURE AND REGULATION IN DROSOPHILA.....	5R01 GM23119-03	32,360
SCHIMMEL, RICHARD J.....	THE ACTION OF CALCIUM ON ADIPOSE TISSUE.....	5R01 AM21431-02	37,217
SCHLESINGER, R WALTER.....	TOGAVIRUS REPLICATION IN INSECT AND VERTEBRATE CELLS.....	5R22 AI05920-16	134,382
SHEA, STEPHEN M.....	GLOMERULAR PATHOLOGY FOLLOWING PARTIAL NEPHRECTOMY.....	5R01 AM13495-09	65,127
SHIMAMURA, TETSUO.....	PATHOLOGY OF EXPERIMENTAL ACUTE PYELONEPHRITIS.....	1R01 AM21339-01	25,105
SINHA, ARABINDA K.....	CEREBRAL REGIONAL OXYGEN CONSUMPTION DURING SLEEP.....	1R01 NS13118-01A1	80,170
STEVENSON, NANCY R.....	FEEDING-INDUCED RHYTHMICITY IN INTESTINAL FUNCTION.....	5R01 AM18953-03	67,372
STOLLAR, VICTOR.....	GENETICS OF CULTURED MOSQUITO CELLS.....	2R01 AI11290-04A1	73,660
STROHL, WILLIAM A.....	VIRAL CARCINOGENESIS AND LATENCY.....	2R01 CA08851-14A1	104,171
TAKAHASHI, MARK T.....	REGULATION OF THREONINE-SENSITIVE ASPARTOKINASE ACTIVITY.....	2R01 GM18628-08	56,914
WEISS, HARVEY R.....	REGIONAL OXYGEN CONSUMPTION OF HEART AND OTHER ORGANS.....	5R01 HL21172-02	39,578
WOLFF, DONALD J.....	FUNCTION OF A BRAIN CALCIUM-BINDING PROTEIN.....	5R01 NS11252-05	55,632
ORGANIZATION TOTAL	35	2,463,584	
PRINCETON			
EDUCATIONAL TESTING SERVICE		ZIP CODE 08540	
MESSICK, SAMUEL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05729-03	28,178
SIGEL, IRVING E.....	SPACING/BIRTH ORDER EFFECTS ON COGNITIVE DEVELOPMENT.....	2R01 HD10686-03	176,210

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
ORGANIZATION TOTAL	2	204,388	
PRINCETON UNIVERSITY ZIP CODE 08540			
APPLEBURY, MEREDITH L.....	PHOTORECEPTION AND TRANSDUCTION IN VISION.....	2R01 EY01542-04	78,162
APPLEBURY, MEREDITH L.....	BIOCHEMISTRY OF PHOTORECEPTOR CELLS.....	1R01 EY02659-01	52,581
BOTHWELL, MARK A.....	GLANDULAR AND EXTRA-GLANDULAR NERVE GROWTH FACTOR.....	1R01 NS14632-01	62,932
BRATZLER, ROBERT L.....	PROTEIN TRANSPORT THROUGH ARTERIAL TISSUE.....	5R01 HL18736-03	34,041
CAMPBELL, BYRON A.....	ANIMAL MODELS OF DECLINING MEMORY IN THE AGED.....	2R01 AG00092-04	90,528
CLINE, THOMAS W.....	MATERNAL CONTROL OF DROSOPHILA EMBRYONIC DEVELOPMENT.....	5R01 GM23468-02	51,999
COALE, ANSLEY J.....	ESTIMATION OF DEMOGRAPHIC INDICES FROM IMPERFECT DATA.....	1R01 HD11720-01	97,941
COHEN, EDWARD H.....	ORGANIZATION AND EVOLUTION OF DROSOPHILA DNA.....	2R01 GM21786-04	87,126
COWAN, NICHOLAS J.....	IMMUNOGLOBULIN BIOSYNTHESIS IN MOUSE MYELOMA CELLS.....	5R01 CA20918-02	57,509
COX, EDWARD C.....	MUTATOR GENES OF ESCHERICHIA COLI.....	5R01 AI09392-09	92,135
FRESCO, JACQUES R.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA18448-03	115,986
FRESCO, JACQUES R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07057-13	116,778
GILVARG, CHARLES.....	PEPTIDE UTILIZATION.....	5R01 AM10336-13	50,066
GOULD, JAMES L.....	GENETIC CONTROL OF BEHAVIOR.....	5R01 GM22692-03	55,882
KELLEY, DARCY B.....	NEURAL SUBSTRATES FOR REPRODUCTIVE BEHAVIOR.....	1R01 HD12126-01	47,107
KIRSCHNER, MARC W.....	BIOCHEMICAL STUDIES OF MITOSIS.....	5R01 GM19667-06	92,955
LAEMMLI, ULRICH K.....	METAPHASE CHROMOSOME STRUCTURE: NON-HISTONE PROTEINS.....	1R01 GM25111-01	129,514
LEVINE, ARNOLD J.....	DNA REPLICATION IN SV40 INFECTED CELLS.....	5R01 CA11049-10	77,459
LEVINE, ARNOLD J.....	REGULATION OF DEOXYPYRIMIDINE KINASES BY TUMOR VIRUSES.....	5R01 CA16380-04	19,079
LEVINE, ARNOLD J.....	CELL SURFACE ANTIGENS OF TRANSFORMED CELLS TERATOMAS.....	5R01 CA21788-02	71,406
NEWTON, AUSTIN.....	REGULATION OF DEVELOPMENT IN CAULOBACTER CRESCENTUS.....	2R01 GM22299-04	78,008
NEWTON, AUSTIN.....	GENETICS OF CELL CYCLE AND DEVELOPMENT IN CAULOBACTER.....	1R01 GM25644-01	83,984
NORTON, JACK R.....	A GENERAL CATALYTIC SYNTHESIS OF ANTICANCER LACTONES.....	2R01 CA18546-04	50,666
PATON, MARTHA C.....	EXPERIMENTS ON THE DEVELOPMENT OF NEURAL PATHWAYS.....	5R01 EY01872-02	53,406
QUINN, WILLIAM G, JR.....	GENETIC ANALYSIS OF LEARNING AND MEMORY IN DROSOPHILA.....	1R01 GM25578-01	112,113
SCHWARTZ, JEFFREY.....	STABILIZED PROSTACYCLINS TO TREAT VASCULAR DISEASE.....	1R01 HL22612-01	60,660
SEMMEHACK, MARTIN F.....	NATURAL PRODUCT SYNTHESSES.....	1R01 AI15916-01	82,960
SHERRICK, CARL E.....	THE ROLE OF THE HAPTIC SYSTEM IN COMMUNICATION.....	2R01 NS04755-16	151,477
SNIDER, BARRY B.....	NEW SYNTHETIC APPLICATIONS OF THE ENE REACTION.....	5R01 GM23159-03	53,347
SPIRO, THOMAS G.....	METAL CENTERS IN BIOLOGICAL SYSTEMS.....	5R01 GM13498-13	81,475
SPIRO, THOMAS G.....	RAMAN STUDIES OF FLAVINS AND FLAVOPROTEINS.....	1R01 GM25158-01	110,140
STEINBERG, MALCOLM S.....	CHEMISTRY AND MEASUREMENT OF INTERCELLULAR ADHESION.....	2R01 CA13605-07	144,778
TAYLOR, EDWARD C.....	CHEMICAL AND BIOCHEMICAL STUDIES OF PTERIDINES.....	3R01 CA12876-06S1	22,443
WEINTRAUB, HAROLD M.....	CELL TRANSFORMATION BY RSV.....	1R01 CA20317-01A1	65,927
WEINTRAUB, HAROLD M.....	THE COMPLEXITY OF CHROMOSOME STRUCTURE AND ASSEMBLY.....	5R01 GM22444-03	63,222
WESTOFF, CHARLES F.....	POPULATION RESEARCH CENTER.....	5P30 HD08008-05	125,312
WEVER, ERNEST G.....	THE NATURE OF HEARING.....	2R01 NS03798-16	92,217
WITMAN, GEORGE B, III.....	MOLECULAR MECHANISM OF FLAGELLA MOTILITY AND ASSEMBLY.....	2R01 GM21586-04	101,283
WORCEL, ABRAHAM.....	CHROMOSOME STRUCTURE IN INTERPHASE AND MITOSIS.....	3R01 GM21574-03S1	18,240
WRIGHT, HARLAN T.....	STRUCTURAL BASIS OF MACROMOLECULE ASSOCIATION.....	5R01 GM23598-02	90,888
ZIMMERBERG, HELEN Y.....	CYCLIC AMP-A CLASSIFIED BIBLIOGRAPHY OF PUBLICATIONS.....	5R01 LM02968-02	22,488
ORGANIZATION TOTAL	41	3,146,220	
TEANECK			
FAIRLEIGH OICKINSON UNIVERSITY ZIP CODE 07666			
ALFANO, MICHAEL C.....	MODIFICATION OF PERMEABILITY OF THE GINGIVAL CREVICE.....	5R01 DE04480-03	69,051
ALFANO, MICHAEL C.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09117-01	95,474
DE PAOLA, DOMINICK P.....	FOLATE DEFICIENCY AND IN VITRO PALATOGENESIS.....	1R01 DE05301-01	72,950
SINGER, ROBERT M.....	FETAL ISOENZYME EXPRESSION IN HUMAN TUMOR XENOGRAFTS.....	5R01 CA22360-02	53,151
ORGANIZATION TOTAL	4	290,626	
THOROFARE			
AMERICAN GASTROENTEROLOGICAL ASSOCIATION ZIP CODE 08086			
KERN, FRED, JR.....	RESEARCH WORKSHOPS IN GASTROENTEROLOGY.....	5R13 AM19726-03	29,400

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW JERSEY—Continued			
ORGANIZATION TOTAL	1	29,400	
STATE TOTAL	181	11,961,515	
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF ALBUQUERQUE		ZIP CODE 87140	
PANTLE, CURTIS.....	BIOMEDICAL SCIENCES SUPPORT (MINORITY STUDENTS).....	2S06 RR08108-07	230,198
PFEIFER, CHARLES H, JR.....	BIOMEDICAL SCIENCES SUPPORT (MINORITY STUDENTS).....	5S06 RR08108-06	35,366
ORGANIZATION TOTAL	2	265,564	
UNIVERSITY OF NEW MEXICO		ZIP CODE 87131	
ANDERSON, ROBERT E.....	RADIATION INJURY IN SUBPOPULATIONS OF LYMPHOCYTES.....	5R01 CA13805-06	40,212
ANDERSON, ROBERT E.....	IMMUNE SURVEILLANCE IN RADIATION CARCINOGENESIS.....	2R01 CA14270-06	44,319
ATENCIO, ALONZO C.....	BIOMEDICAL SCIENCES ADVANCEMENT PROGRAM.....	5S06 RR08139-05	463,323
AVNER, BARRY P.....	DESENSITIZATION OF TRACHEAL MUSCLE TO ISOPROTERENOL.....	5R01 HL20184-02	35,352
BERMAN, WILLIAM, JR.....	EFFECTS OF DIGOXIN THERAPY IN NEWBORN AND ADULT SHEEP.....	7R01 HL23980-01	52,502
CAMPBELL, GARY H.....	ANTIGENIC VARIATION AND IMMUNITY IN TRYPANOSOMIASIS.....	1R01 AI15131-01	72,200
DAUB, GUIDO H.....	13C-ENRICHED CHEMICAL CARCINOGENS.....	5R01 CA16871-03	79,939
EATON, R PHILIP.....	GLUCAGON REGULATION OF KETOGENESIS IN DIABETIC MAN.....	5R01 AM18681-02	71,435
EATON, R PHILIP.....	LIPOPROTEIN-CARBOHYDRATE METABOLISM.....	2R01 HL12085-10	86,216
EVAN, ANDREW P.....	RENAL P-AMINO-HIPPURATE TRANSPORT DURING DEVELOPMENT.....	5R01 HD10214-03	33,594
FEENEY, DENNIS M.....	INTERDISCIPLINARY STUDY OF BRAIN INJURY.....	1R01 NS13684-01A1	64,738
GALEY, WILLIAM R, JR.....	MECHANISMS OF PANCREATIC ELECTROLYTE AND H2O SECRETION.....	2R01 AM17843-04	56,992
GARRY, PHILIP J.....	EFFECTS OF INFANT IRON NUTRITION ON SERUM FERRITIN.....	5R01 HD10691-02	27,119
GOLDBERG, ELLEN H.....	IMMUNOBIOLOGY OF THE H-Y (MALE) ANTIGENIC SYSTEM.....	5R01 AI11560-05	44,513
GOODWIN, JAMES S.....	SUPPRESSOR CELL ACTIVITY IN HUMAN PERIPHERAL BLOOD.....	1R23 AI14838-01	44,615
GREENBERG, ROBERT E.....	PHYSIOLOGIC AND DEVELOPMENTAL MECHANISMS IN DIABETES.....	1P50 HD11327-01	464,733
KELLEY, ROBERT O.....	BIOLOGY OF THE AGING CELL SURFACE.....	2R01 AG00191-04	75,717
KLIGERMAN, MORTON M.....	PRECLINICAL STUDIES FOR PION RADIOTHERAPY.....	5P01 CA14052-06	1,132,166
KLIGERMAN, MORTON M.....	CANCER RESEARCH AND TREATMENT CENTER PROGRAM.....	5P01 CA16127-05	1,964,390
KLIGERMAN, MORTON M.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA20379-02	47,491
KLIGERMAN, MORTON M.....	CANCER CENTER SUPPORT (CORE) GRANT.....	5P30 CA21074-02	535,257
LOTFIELD, ROBERT B.....	PROTEIN BIOSYNTHESIS AS A FUNCTION OF AGE OR CANCER.....	1R01 AG00832-01	55,928
MESSNER, RONALD P.....	ANTIBODIES AND LYMPHOCYTE FUNCTION IN LUPUS FAMILIES.....	5R01 AM13789-09	104,728
MORROW, CARY J.....	GAS CHROMATOGRAPHIC RESOLUTION OF ENANTIOMERS.....	5R01 GM23204-03	34,032
NAPOLITANO, LEONARD M.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00997-03	394,846
NAPOLITANO, LEONARD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05583-14	141,337
PEAKE, GLENN T.....	SOMATOTROPE METABOLISM AND LACTOTROPE METABOLISM.....	5R01 HD05794-07	62,397
RATNER, ALBERT.....	ADRENERGIC CONTROL OF OVARIAN STEROIDGENESIS.....	5R01 HD09475-03	42,408
REYES, PHILIP.....	PYRIMIDINE SYNTHESIS IN NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA15036-06	53,251
SAIKI, JOHN H.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	2R10 CA12213-07	139,279
SCALLEN, TERENCE J.....	LIPID METABOLISM IN BIOLOGICAL SYSTEMS.....	2R01 AM10628-13	181,829
SCALLEN, TERENCE J.....	CHOLESTEROL REGULATION BY HMG-COA REDUCTASE.....	5R01 HL16796-05	104,779
SOLOMON, SIDNEY.....	POSTNATAL DEVELOPMENT OF RENAL AMMONIA EXCRETION.....	5R01 HD10792-02	49,466
SOLOMON, SIDNEY.....	BIOMEDICAL SCIENCES ADVANCEMENT PROGRAM.....	3S06 RR08139-04S1	17,370
TOKUDA, SEI.....	CROSS-REACTIONS BETWEEN FETAL, SPERM AND TUMOR CELLS.....	1R01 CA22964-01	26,100
TOKUDA, SEI.....	CELLULAR IMMUNE RESPONSES TO SYNGENEIC TUMORS.....	1R01 CA24377-01	66,594
TRUJILLO, JOHN L.....	CONTROL OF GLYCOLYSIS & GLUCONEOGENESIS: PFK-FDPASE.....	1R01 AM19496-01A1	66,510
TUNG, KENNETH S.....	SPERM-SPECIFIC ANTIBODIES ON FERTILIZATION IN VITRO.....	1R01 HD12247-01	77,397
VAN EPPS, DENNIS E.....	PHAGOCYtic CELLS: REGULATION, DYSFUNCTION AND DISEASE.....	5R01 CA20819-03	53,844
VANDER JAGT, DAVID L.....	CELLULAR FUNCTIONS OF GLUTATHIONE.....	9R01 GM25295-04	43,456
VORHERR, HELMUTH W.....	DES-INDUCED TRANSPLACENTAL CARCINOGENESIS.....	5R01 CA19563-03	43,786
WARNER, NOEL L.....	GENETICS OF MURINE PLASMACYTOMAS AND AUTOIMMUNITY.....	5R01 AM19841-02	55,434
WARNER, NOEL L.....	ALLOTYPES OF MURINE IMMUNOGLOBULINS.....	5R01 CA22105-02	78,494
WARNER, NOEL L.....	GENETIC ASPECTS OF TUMOR HOST IMMUNE RELATIONSHIP.....	5R01 CA22268-02	100,301

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW MEXICO—Continued			
WILLIAMS, RALPH C, JR.....	IMMUNOLOGICAL STUDIES.....	5P01 AI13433-03	111,158
WILLIAMS, RALPH C, JR.....	STUDIES OF AUTOANTIBODIES AND IMMUNOGLOBULINS.....	5R01 AM13690-10	91,351
WILLIAMS, RALPH C, JR.....	INTERACTIONS OF CELLULAR AND HUMORAL IMMUNITY.....	5R01 AM13824-09	107,412
WOODSIDE, WILLIAM F.....	HORMONAL REGULATION OF HEPATIC KETOGENESIS.....	5R01 AM19998-02	35,900
YUHAS, JOHN M.....	RADIOPROTECTANTS AND RADIOSENSITIZERS IN RADIOTHERAPY.....	5R01 CA19326-02	68,998
ORGANIZATION TOTAL	49 7,845,208		
LAS VEGAS			
NEW MEXICO HIGHLANDS UNIVERSITY ZIP CODE 87701			
FLIPPO, JOSEPH R.....	COORDINATED RESEARCH AND TRAINING PROGRAM.....	5S06 RR08066-08	170,685
ZENICK, HAROLD.....	COORDINATED RESEARCH AND TRAINING PROGRAM.....	3S06 RR08066-07S1	2,472
ORGANIZATION TOTAL	2 173,157		
SANTA FE			
INDIVIDUAL AWARO-FREEDMAN, ROBERT L. ZIP CODE 87501			
FREEDMAN, ROBERT L.....	HUMAN FOOD HABITS: A BIBLIOGRAPHY.....	1R01 LM03082-01	13,275
ORGANIZATION TOTAL	1 13,275		
UNIVERSITY PARK			
NEW MEXICO STATE UNIVERSITY LAS CRUCES CAMPUS ZIP CODE 88001			
BIRNBAUM, EDWARD R.....	LANTHANIDE IONS AS PROBES OF PROTEIN STRUCTURE.....	5R01 AM16582-06	66,960
CASILLAS, EDMUND R.....	CARNITINE AND CAMP IN MATURING MAMMALIAN SPERM.....	5R01 HD10664-03	56,330
DARNALL, DENNIS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07154-03	42,443
HAGEMAN, JAMES H.....	SERINE PROTEASE & PROTEOLYSIS IN BACTERIAL SPORULATION.....	5R01 GM19643-06	44,437
KUEHN, GLENN D.....	CELL DEVELOPMENT STUDIES IN PHYSARUM POLYCEPHALUM.....	5R01 GM18538-08	34,539
LWOWSKI, WALTER.....	CYCLIC AMINIMIDES AS ALKYLATING AGENTS, II.....	5R01 CA12816-10	44,807
MC CARTHY, CHARLOTTE M.....	PHYSIOLOGY OF MULTIPLE DRUG RESISTANT MYCOBACTERIA.....	1R22 AI15293-01	41,215
VILLA, VINCENTE D.....	HEALTH SCIENCE RESEARCH FOR ETHNIC MINORITY STUDENTS.....	3S06 RR08136-04S1	6,300
VILLA, VINCENTE D.....	HEALTH SCIENCE RESEARCH FOR ETHNIC MINORITY STUDENTS.....	5S06 RR08136-05	227,214
WILKINS, RALPH G.....	KINETIC STUDIES OF HEMERYTHRIN REACTIONS.....	2R01 HL17828-04	45,145
ORGANIZATION TOTAL	10 609,390		
STATE TOTAL	64 8,906,594		
NEW YORK			
ALBANY			
NEW YORK STATE DEPARTMENT OF HEALTH ZIP CODE 12237			
BERNS, DONALD S.....	PHOTOSENSITIVE MODEL MEMBRANE STUDIES.....	2R01 GM22247-04	46,582
BRADY, GEORGE W.....	X-RAY DIFFRACTION OF NORMAL AND PATHOLOGICAL MEMBRANES.....	1R01 GM23084-01A1	43,216
CHATTERJEE, NANDO K.....	PROCESSING AND TRANSLATION OF GROUP C ADENOVIRUS HNRNA.....	5R01 CA19707-03	58,182
DICKERMAN, HERBERT W.....	MECHANISMS OF ANDROGEN EFFECT ON ERYTHROID DEVELOPMENT.....	5R01 AM19253-03	32,860
DODDS, W JEAN.....	COMPARATIVE STUDY OF COAGULATION AND VASCULAR DISEASE.....	2R01 HL09902-13	128,926
ELLIOTT, ROSEMARY W.....	MAPPING MOUSE GENES USING 2-D ELECTROPHORESIS.....	1R01 GM24265-01A1	48,912
EVANS, MARY J.....	DNA POLYMERASE(S) OF THE REPLICATION SV40 CHROMOSOMES.....	1R01 CA22655-01	42,045
FASCO, MICHAEL J.....	ROLE OF WARFARIN METABOLISM IN ANTIVITAMIN K ACTIVITY.....	5R01 HL19772-02	36,338
FENTON, JOHN W, II.....	HUMAN THROMBINS.....	2R01 HL13160-08	86,073
FLAHERTY, LORRAINE.....	IMMUNOGENETICS AND DIFFERENTIATION.....	2R01 AI12603-04	46,510
FLAHERTY, LORRAINE.....	IMMUNOGENETIC MAPPING OF THE CELL SURFACE.....	5R01 CA23027-02	76,131
FRANK, JOACHIM.....	LOW DOSE ELECTRON MICROSCOPY OF CYTOCHROME OXIDASE.....	1R01 GM24412-01	69,094
GREENWALD, PETER.....	EPIDEMIOLOGIC STUDY OF OVARIAN CANCER.....	5R01 CA20502-02	157,636
GRUFT, HOWARD.....	EPIDEMIOLOGY OF INFECTION WITH ATYPICAL MYCOBACTERIA.....	5R01 AI13813-02	54,245
HOTCHIN, JOHN E.....	LATENCY OF SCRAPIE VIRUS: DELAYED DISEASE AND AGING.....	1R01 NS13550-01A1	50,850

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
JANERICH, OWIGHT T.....	CANCER IN PARENTS OF CONGENITALLY DEFECTIVE CHILDREN.....	5R01 CA19564-02	57,087
JANERICH, OWIGHT T.....	NCI STUOENT WORKSHOP ON EPIOEMIOLOGIC STUDIES.....	1R13 CA23656-01	17,081
KAMINSKY, LAURENCE S.....	POLYCHLORINATED BIPHENYLS METABOLISM/INDUCTION/TOXICITY.....	5R01 ES01544-02	54,808
KAMINSKY, LAURENCE S.....	HEPATIC MICROSOMAL ENZYME METABOLISM OF ANESTHETICS.....	5R01 GM23029-03	31,899
LAWSON, WILLIAM B.....	ENZYMES OF BLOOD COAGULATION AND FIBRINOLYSIS.....	5R01 HL15887-05	68,978
MALEY, FRANK.....	MODEL SYSTEM TO STUDY CELL OIFFERENTIATION AND AGING.....	5P01 AG00207-02	165,427
PAOLETTI, ENZO.....	VACCINIA RNA SYNTHESIS: A MODEL FOR MRNA PROCESSING.....	5R01 GM23853-02	58,074
ROSE, HARALD H.....	OPTIMUM IMAGING METHODS FOR BIOLOGICAL OBJECTS IN EM.....	5R01 GM24006-02	80,085
TRIMBLE, ROBERT B.....	BIOSYNTHESIS OF THE YEAST GLYCOPROTEIN INVERTASE.....	5R01 GM23500-02	28,017
VIANNA, NICHOLAS J.....	PRIOR TONSILLECTOMY AND MALIGNANT LYMPHOMAS.....	5R01 CA19637-02	57,331
WHALEN, ROBERT P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05649-12	90,921
WOLIN, MEYER J.....	FERMENTATION INTERACTIONS IN MICROBIAL ECOSYSTEMS.....	5R01 AI12461-05	77,148
ORGANIZATION TOTAL	27	1,764,456	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE ZIP CODE 12229			
BOONAR, RICHARD J.....	STRESS-PRODUCED ANALGESIA: A NEUROBEHAVIORAL ANALYSIS.....	1R01 NS14449-01	40,356
BROCKERHOFF, HANS.....	POLYPHOSPHOINOSITIDE METABOLISM IN MYELIN.....	1R01 NS14480-01	50,604
FAND, IRWIN.....	LYSOSOMAL PATHOLOGY IN HUNTINGTON'S DISEASE FIBROBLASTS.....	1R01 NS14185-01	22,000
JAFFE, JOSEPH.....	AUTOMATION OF A TEST FOR DYSLEXIA.....	1R01 NS14130-01	14,552
KARTEN, HARVEY J.....	RETINAL GANGLION CELLS AND ACCESSORY OPTIC NUCLEI.....	5R01 EY02146-02	90,679
LOO, YEN H.....	BIOCHEMICAL AND BEHAVIORAL CHANGES IN PKU.....	2R01 HD06843-02A2	47,506
MALIK, MAZHAR N.....	ALLOSTERIC FUNCTION OF PLATELET CONTRACTILE PROTEINS.....	5R01 HL22194-02	47,775
MARKS, NEVILLE.....	BRAIN ENZYMES AND INACTIVATION OF PEPTIDYL HORMONES.....	5R01 NS12578-03	38,855
PENN, NATHAR W.....	RETARDATION OF BRAIN DNA.....	5R01 HD10643-02	86,112
WISNIEWSKI, HENRYK M.....	IMMUNOGLOBULIN STUDIES IN CHRONIC RELAPSING EAE.....	1R01 NS14406-01	61,473
ORGANIZATION TOTAL	10	499,912	
STATE UNIVERSITY OF NEW YORK AT ALBANY ZIP CODE 12222			
BAGLIONI, CORRADO.....	STRUCTURE AND SYNTHESIS OF IMMUNOGLOBULINS.....	5R01 AI11887-05	126,080
BAGLIONI, CORRADO.....	SELECTIVE REPLICATION OF HEMOGLOBIN GENES.....	5R01 HL17710-04	84,314
DAS, TARA P.....	ELECTRONIC PROPERTIES OF PHOTOSYNTHETIC SYSTEMS.....	1R01 GM25230-01	66,306
EDWARDS, CHARLES.....	MOLECULAR PHARMACOLOGY OF ACETYLCHOLINE RECEPTORS.....	2R01 NS07681-10A2	63,768
HIRSCH, HELMUT V.....	DEVELOPMENT AND FUNCTIONS OF THE VISUAL CORTEX.....	5R01 EY01268-06	49,329
HOLMES, DAVID S.....	REGULATION OF GENE EXPRESSION IN HIGHER ORGANISMS.....	5R01 GM24295-02	52,686
KING, TSOO E.....	BIOENERGETICS OF AGING: FACTS AND MECHANISMS.....	5R01 AG00069-04	64,958
KING, TSOO E.....	RECONSTITUTION OF MITOCHONDRIAL RESPIRATORY CHAIN.....	5R01 GM16767-11	59,223
KING, TSOO E.....	BIOENERGETIC APPARATUS IN HEART MITOCHONDRIA.....	5R01 HL12576-10	96,172
LERMAN, LEONARD S.....	REGULATION AND CHARACTERIZATION OF THE HUMAN GENOME.....	2R01 GM24030-03	85,914
MC CUTCHEON, NORMAN B.....	BRAIN STIMULATION CONTROL OVER STRESS ULCERATION.....	1R01 AM19673-01A1	22,430
MILLIS, ALBERT J.....	SURFACE PROTEINS AND CELLULAR SENESCENCE.....	5R01 AG00697-02	51,492
RIKMENSPOEL, ROBERT.....	MECHANISMS IN CILIARY AND FLAGELLAR MOTION.....	5R01 HD06445-05	55,051
SARMA, RAMASWAMY H.....	MAGNETIC RESONANCE STUDIES OF BIOLOGICAL INTERACTIONS.....	5R01 CA12462-08	54,465
SATURNO, ANTONY F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07122-10	75,613
SAUNDERS, JOHN W, JR.....	EMBRYONIC CONTROLS OF LIMB OEVELOPMENT.....	5R01 HD07390-05	97,178
SCHOLES, CHARLES P.....	PROBING HEME AND HEMOPROTEINS.....	5R01 AM17884-04	38,183
SHUB, OAVID A.....	REGULATION OF DEVELOPMENT OF BACTERIOPHAGE SP01.....	5R01 AI11323-06	60,927
TEDESCHI, HENRY.....	THE MEMBRANE POTENTIAL OF MITOCHONDRIA.....	1R01 GM23789-01	37,878
WALMSLEY, SEAN A.....	IDENTIFYING AND EASING THE READING DEMANDS OF THE AGED.....	5R23 AG00682-02	42,139
ZUBIETA, JON A.....	MOLYBDENUM-SULFUR COMPOUNDS AS NITROGENASE MODELS.....	5R01 GM22566-03	34,477
ORGANIZATION TOTAL	21	1,318,583	
UNION COLLEGE AND UNIVERSITY-ALBANY MEDICAL COLLEGE ZIP CODE 12208			
APPLEBY, DAVID W.....	DNA SIZE AND GENOME ORGANIZATION IN LENS CELLS.....	1R01 EY03019-01	77,689
BALINT, JOHN A.....	METABOLISM OF PULMONARY SURFACTANT.....	5R01 HL15273-06	54,106
BATZOLD, FREDERICK H.....	PROSTATIC 5-ALPHA-OXIDOREDUCTASE.....	1R26 CA23019-01	34,994
BONDURANT, STUART.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00749-06	306,149
BONDURANT, STUART.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05394-17	140,210
BOURKE, ROBERT S.....	BRAIN AND SPINAL CORD TRAUMA.....	5P50 NS13042-03	274,174
COWGER, MARILYN L.....	BIOENERGETICS OF AGING: FACTS AND MECHANISMS.....	5R01 AG00070-04	50,322
DOYLE, JOSEPH T.....	PROGNOSTICATION BY COMPUTER-ANALYZED VECTORCARDIOGRAM.....	5R01 HL16403-05	36,370

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
FRENKEL, GERALD D.....	INHIBITION OF CELLULAR DNASES BY DNA TUMOR VIRUSES.....	1R01 CA22965-01	52,180
GERSHMAN, LEWIS C.....	CONFORMATIONAL AND FUNCTIONAL STATES OF MUSCLE ACTIN.....	1R01 AM21573-01	29,004
GLENN, JOSEPH L.....	PATHOGENESIS OF REYE'S SYNDROME.....	1R01 NS13857-01A1	40,712
GOLDFARB, ROY D.....	GENESIS OF CIRCULATORY SHOCK BY PANCREATIC PEPTIDES.....	5R01 HL19977-02	31,861
GOODMAN, A DAVID.....	ROLE OF THYROID HORMONES AND IODINE IN BREAST CANCER.....	1R01 CA22879-01	22,050
HALL, CHARLES A.....	VIT. B-12 & TRANSCOBALAMIN II ROLES IN ANTIBODY RESPONSE.....	5R01 AM17767-05	17,805
HAN, JAOK.....	EXPERIMENTAL CARDIAC ARRHYTHMIAS.....	2R01 HL18796-04	64,379
HOF, LISELOTTE B.....	A FLUORESCENT LABEL FOR CELL SURFACE SIALIC ACIDS.....	5R01 GM24409-02	35,503
HORTON, JOHN.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA06594-16	201,607
HORTON, JOHN.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17971-03A1	97,083
JOSHI, SHARAD G.....	TISSUE-SPECIFIC PROTEINS IN PRIMATE ENDOMETRIUM.....	5R01 HD09622-02	45,671
LAM, KWOK-WAI.....	BIOCHEMICAL STUDIES AND ACID PHOSPHATASE 5.....	5R01 GM22260-04	50,474
LEE, PEI-FEI.....	COLLAGEN TUBES FOR AQUEOUS-VENOUS SHUNT.....	3R01 EY01164-03S1	35,928
LUDLUM, DAVID B.....	ALKYLATING AGENTS, NITROSOUREAS—MOLECULAR PHARMACOLOGY.....	5R01 CA20129-03	74,604
LUDLUM, DAVID B.....	MUTAGENIC ALTERATIONS IN NUCLEIC ACID STRUCTURE.....	5R01 CA20292-03	56,755
MALIK, ASRAR B.....	PULMONARY VASCULAR ADJUSTMENTS IN CIRCULATORY COLLAPSE.....	2R01 HL17355-04	64,323
MC KNEALLY, MARTIN F.....	SURGERY AND REGIONAL NODE STIMULATION FOR LUNG CANCER.....	5R01 CA17346-04	18,781
MEGIRIAN, ROBERT.....	ANTITUMOR ACTIVITY OF BCG, C. PARVUM AND GLUCAN.....	5R01 CA21099-02	37,103
OBRIG, TOM G.....	POSTTRANSCRIPTIONAL-TRANSLATIONAL CONTROL MECHANISMS.....	5R01 GM24448-02	53,781
POULOS, DENNIS A.....	CENTRAL PROCESSING OF TEMPERATURE INFORMATION.....	5R01 NS11384-05	34,539
POWERS, SAMUEL R, JR.....	ON-LINE COMPUTER STUDY OF THERAPY FOR HUMAN SHOCK.....	5P50 GM15426-11	257,609
REINECKE, ROBERT D.....	STEREOPSIS AND MICROPTROPIA IN AMBLYOPIA PATHOGENESIS.....	5R01 EY00752-07	109,075
RODGERS, JOHN B, JR.....	USE OF THE GUT FOR THERAPY OF CORONARY ARTERY DISEASE.....	2R01 HL17332-04	30,508
ROSENBERG, EDWARD M.....	CYCLIC NUCLEOTIDES IN CANCER AND REGENERATING TISSUE.....	1R01 CA22690-01	89,293
SABA, THOMAS M.....	OPSONIC AND PHAGOCYtic ACTIVITY DURING TUMOR GROWTH.....	5R01 CA16011-04	36,229
SABA, THOMAS M.....	SYSTEMIC HOST DEFENSE FOLLOWING TRAUMA.....	2R01 GM21447-04	59,606
SARFEH, I JAMES.....	A COMPARATIVE STUDY OF THE MAJOR HUMAN BILE SALTS.....	5R01 AM18765-03	32,596
SCHELL, RONALD F.....	SPECIFIC IMMUNE REACTIVITY TO SYPHILITIC INFECTION.....	5R01 AI13307-03	49,942
SMITH, EDWARD J.....	CONTROL OF RESPIRATION AND BLOOD GASES.....	5R01 HL12564-09	77,123
SMITH, RICHARD S.....	ULTRASTRUCTURAL STUDY OF OCULAR VASCULAR PERMEABILITY.....	5R01 EY00538-09	70,623
THOMAS, WILBUR A.....	POPULATION DYNAMICS OF ARTERIAL CELLS IN ATHEROGENESIS.....	5P01 HL20993-02	793,066
TURINSKY, JIRI.....	THE MECHANISM OF INSULIN RESISTANCE AFTER BURNS.....	5R01 GM22825-03	28,224
WONG, PATRICK Y.....	STUDY OF KININS IN HYPERTENSION AND OTHER DISEASES.....	5R01 HL18624-03	43,979
ORGANIZATION TOTAL	41	3,716,030	

BINGHAMTON

STATE UNIVERSITY OF NEW YORK AT BINGHAMTON ZIP CODE 13901

CHRISTIAN, JOHN J.....	ANALYSIS AND TEST OF A FORMULA FOR POPULATION GROWTH.....	1R01 HD10515-01	46,763
HASSNER, ALFRED.....	SYNTHESIS AND REACTIONS OF NOVEL HETEROCYCLES.....	5R01 CA19203-04	58,299
JENSEN, ROY A.....	GENE-ENZYME RELATIONSHIPS IN PSEUDOMONAS AERUGINOSA.....	2R01 AM19447-02A1	64,945
JENSEN, ROY A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07149-05	35,553
LOEW, LESLIE M.....	CHEMISTRY OF DRUG DELIVERY BY LIPID VESICLES.....	1R23 CA23838-01	31,265
LOEW, LESLIE M.....	A CONCERTED SEARCH FOR ELECTROCHROMIC MEMBRANE PROBES.....	1R01 GM25190-01	67,188
PASTORE, RICHARD E.....	AUDITORY ATTENTION: TEMPORAL & FREQUENCY EFFECTS.....	2R01 NS10995-04	39,000
SCHRIER, EUGENE E.....	THE EFFECTS OF SALTS ON INTERACTIONS IN AQUEOUS MEDIA.....	5R01 GM11762-14	44,882
SHRIFT, ALEX.....	SELENIUM TOXICITY: SELENOCYSTEINE IN PROTEINS.....	5R01 ES00807-05	57,153
SHRIFT, ALEX.....	SELENIUM ASSIMILATION INTO HUMAN GLUTATHIONE PEROXIDASE.....	5R01 ES01465-02	54,269
WU, TSU-MING.....	BOSE-EINSTEIN CONDENSATION IN BIOLOGICAL SYSTEMS.....	1R01 GM24502-01	17,566
ORGANIZATION TOTAL	11	516,883	

BROCKPORT

STATE UNIVERSITY OF NEW YORK—COLLEGE AT BROCKPORT ZIP CODE 14420

KOWALSKI, JOHN C.....	ANTIBODY LEVELS DURING A FILARIAL NEMATODE INFECTION.....	5R01 AI12994-02	15,984
ORGANIZATION TOTAL	1	15,984	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BUFFALO			
CHILDREN'S HOSPITAL ZIP CODE 14222			
EGAN, EDMUND A	ABNORMAL ALVEOLAR PERMEABILITY AND LUNG DISEASE	5R01 HL22552-02	85,394
ELLIS, ELLIOT F.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05493-16	31,747
MACGILLIVRAY, MARGARET H.....	HORMONES, BLOOD GLUCOSE AND LIPIDS IN DIABETIC CHILDREN.....	5R01 AM17879-03	103,239
NETER, ERWIN.....	STUDY OF BACTERIAL TOXINS AND HEMAGGLUTINATION.....	2R01 AI00658-22	40,184
OGRA, PEARAY L.....	ARTHRITIS AND RUBELLA VIRUS INFECTION	5R01 AM17050-04	37,316
OGRA, PEARAY L.....	ETIOLOGIC ASPECTS OF SUDDEN INFANT DEATH SYNDROME.....	5R01 HD10088-03	88,300
OGRA, PEARAY L.....	ETIOLOGY OF OBSTRUCTIVE AIRWAY DISEASE IN CHILDREN.....	1R01 HL21829-01	163,260
PARK, BYUNG H.....	PULMONARY ALVEOLAR PROTEINOSIS PATHOGENIC MECHANISMS.....	5R01 HL19628-03	24,555
ORGANIZATION TOTAL	8 573,995		
MEDICAL FOUNDATION OF BUFFALO ZIP CODE 14203			
BELLINO, FRANCIS L.....	REGULATION OF HUMAN ESTROGEN SYNTHETASE.....	5R01 HD10921-02	46,845
CODY, VIVIAN.....	MOLECULAR STRUCTURES OF THYROACTIVE COMPOUNDS	2R01 AM15051-07	67,627
DETTITA, GEORGE T.....	DIFFRACTION STUDIES OF THE BIOTIN VITAMERS.....	5R01 AM19856-02	62,412
DETTITA, GEORGE T.....	ULTRASTRUCTURE OF THE ANTIHYPERTENSIVE PROSTAGLANDINS.....	2R01 HL15378-06	56,468
DORSET, DOUGLAS L.....	ELECTRON DIFFRACTION OF MEMBRANE PHOSPHOLIPIDS.....	5R01 GM21047-05	96,498
DUAX, WILLIAM L.....	MOLECULAR STRUCTURE OF STEROIDS.....	5R01 CA10906-11	118,880
DUAX, WILLIAM L.....	IONOPHORES, TRANSPORT AND MEMBRANE STRUCTURE.....	2R01 GM19684-06	81,406
DUAX, WILLIAM L.....	DISSEMINATION OF MOLECULAR DATA FOR BIOMEDICAL USE.....	3R01 LM02353-03S1	55,382
HAUPTMAN, HERBERT A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05716-07	46,309
OSAWA, YOSHIO.....	HUMAN DEVELOPMENT AND ESTROGEN BIOSYNTHESIS.....	5R01 HD04945-08	153,103
WEEKS, CHARLES M.....	DIFFRACTION ANALYSIS OF FRUCTOSE-1,6-DIPHOSPHATASE.....	1R01 AM25192-01	51,089
ORGANIZATION TOTAL	11 836,019		
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
AMBRUS, CLARA M.....	IMMOBILIZED ENZYMES FOR MANAGEMENT OF PHENYLKETONURIA	5R01 GM22735-03	60,885
BANKERT, RICHARD B.....	RECEPTOR DYNAMICS AND NORMAL/TUMOR CELL FUNCTION	1R01 CA22786-01	44,589
BEERMAN, TERRY A.....	MECHANISM OF ACTION - ANTITUMOR PROTEIN MACROMOMYCIN.....	1R01 CA24906-01	34,278
BERNACKI, RALPH J.....	PLASMA MEMBRANE AS A TARGET IN TUMOR CHEMOTHERAPY.....	5R01 CA15757-05	49,144
BERNACKI, RALPH J.....	METABOLIC FATE OF MAMMARY CELL SURFACE GLYCOCONJUGATES.....	5R01 CA19814-03	33,886
BERTRAM, JOHN S.....	MECHANISMS OF CARCINOGENESIS IN CELL CULTURE.....	5R01 CA18197-02	47,715
BERTRAM, JOHN S.....	CELL INTERACTIONS DURING MALIGNANT TRANSFORMATION.....	5R01 CA21359-02	29,973
BICHER, HAIM I.....	PROTECTING MICROCIRCULATORY LIVER RADIATION DAMAGE.....	5R01 CA21033-03	12,628
BLOCH, ALEXANDER.....	DEVELOPMENT OF ANTITUMOR NUCLEOSIDES AND NUCLEOTIDES	5R01 CA12585-08	147,629
BOX, HAROLD C.....	TRANSFER MECHANISMS IN IRRADIATED BIOLOGICAL SYSTEMS.....	9R01 CA25027-13	50,705
CARTER, WILLIAM A.....	CHEMOTHERAPY AND REGULATION OF ONCOGENIC VIRUSES.....	5P01 CA14801-06	566,868
CARTER, WILLIAM A.....	SEARCH FOR A 'VIROGENE' IN PROSTATIC TISSUES AND FLUIDS.....	5R26 CA15502-05	121,361
CHAPMAN, VERNE M.....	REGULATION OF X-CHROMOSOME DIFFERENTIATION IN MAMMALS.....	5R01 GM24125-02	78,539
CHENG, YUNG-CHI.....	CANCER CHEMOTHERAPY AND DEOXYNUCLEOTIDE METABOLISM.....	5R01 CA18499-03	61,024
CHHEDA, GIRISH B.....	MODIFIED NUCLEOSIDES IN CANCER AND NORMAL URINES.....	5R01 CA14185-05	59,439
CHU, TSANN M.....	ACID AND ALKALINE PHOSPHATASES IN PROSTATIC CANCER	5R26 CA15126-05	54,659
CHU, TSANN M.....	ANTIGEN(S) MARKERS IN DIAGNOSIS OF PROSTATIC CANCER	5R26 CA15437-05	70,368
CHU, TSANN M.....	ONCOFETAL ANTIGEN(S) AND PANCREATIC CANCER.....	5R26 CA18410-03	84,894
CREAVEN, PATRICK J.....	TUMOR DRUG RESPONSE PARAMETERS IN INDIVIDUAL PATIENTS	5P01 CA21071-02	423,993
DAO, THOMAS L.....	CLINICAL AND EXPERIMENTAL BREAST CANCER RESEARCH.....	5P01 CA14812-05	292,192
DOUGHERTY, THOMAS J.....	ACTIVATED DYES AS SPECIFIC CANCER DRUGS	5R01 CA16717-05	70,835
DOUGHERTY, THOMAS J.....	PORPHYRIN SPECIFICITY IN MALIGNANCY.....	1R01 CA20600-01A1	46,942
DOUGLASS, HAROLD O, JR.....	IMMUNODIAGNOSIS OF PANCREATIC CANCER.....	1R26 CA23646-01	38,134
DOYLE, DARRELL J.....	PROTEINS OF THE HEPATOMA CELL PLASMA MEMBRANE.....	2R01 CA17149-04	82,497
DOYLE, DARRELL J.....	MEMBRANE BIOGENESIS IN NORMAL AND MALIGNANT CELLS.....	1R01 GM24147-01	83,612
EVANS, MARY J.....	DNA POLYMERASES IN MURINE LYMPHOID CELLS	3R01 CA18646-03S1	4,335
FREEMAN, ARNOLD I.....	CHEMOTHERAPY OF ACUTE LEUKEMIA.....	5R10 CA07918-14	85,787
FREEMAN, ARNOLD I.....	POLYINOSINIC-POLYCYTIDYLIC ACID PHARMA./THEREAP. EFFECT.....	5R01 CA18533-03	57,346
GESSNER, TERESA.....	CONJUGATIONS AND CARCINOGEN METABOLISM.....	1R01 CA24127-01	29,019
GOLDROSEN, MARTIN H.....	MURINE COLON ADENOCARCINOMA: IMMUNOBIOLOGY.....	5R26 CA22931-02	45,538
GRINDEY, GERALD B.....	RATIONAL APPROACHES TO COMBINATION CHEMOTHERAPY.....	2R01 CA17156-04	77,603

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
GROSS, KENNETH W.....	GENES ENCODING DEVELOPMENTAL HISTONE VARIANTS.....	1R01 GM25647-01	70,931
GURTOO, HIRA L.....	LUNG CANCER, MICROSOMAL OXYGENASES AND THEIR GENETICS.....	5R01 CA17538-03	41,796
HAKALA, MAIRE T.....	CELL CULTURE STUDIES ON DRUGS AND ANTIMETABOLITES.....	2R01 CA04175-21	133,002
HASTIE, NICHOLAS D.....	EXPRESSION OF ABUNDANT MESSENGER RNAS IN MOUSE LIVER.....	1R01 GM24771-01	61,941
HELD, WILLIAM A.....	TRANSLATIONAL REGULATION OF PROTEIN SYNTHESIS.....	1R01 GM25023-01	57,449
HELMSTETTER, CHARLES E.....	PLASMIDS AND INTEGRATIVE SUPPRESSION IN E. COLI.....	5R01 AI13761-02	34,581
HENDERSON, EDWARD S.....	CANCER AND LEUKEMIA GROUP B.....	5R10 CA02599-24	127,156
HENDERSON, EDWARD S.....	CANCER CLINICAL RESEARCH CENTER.....	5P01 CA05834-17	736,575
HOLYOKE, EDWARD D.....	IMMUNE STATUS: GASTROINTESTINAL TUMOR (COLON).....	3R26 CA15263-04S1	32,534
JACOBSON, KENNETH A.....	LATERAL MOTIONS OF MEMBRANE MOLECULES AT CELL SURFACES.....	5R01 CA16743-05	84,964
JOHNSON, RICHARD J.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA14058-05	72,229
KARTHA, GOPINATH.....	STRUCTURE STUDIES OF BIOCATASTROPHIC AGENTS.....	1R01 CA23597-01	40,580
KARTHA, GOPINATH.....	CYCLIC PEPTIDES, STRUCTURE AND FUNCTION.....	3R01 GM22490-02S1	40,580
KARTHA, GOPINATH.....	CYCLIC PEPTIDES, STRUCTURE AND FUNCTION.....	5R01 GM22490-03	50,548
KHAN, SOHAIB A.....	ENZYME MARKER FOR HEMATOPOIETIC CELLS.....	1R23 CA24375-01	19,723
KIM, UNTAE.....	MECHANISMS OF METASTASIS.....	1R01 CA24215-01	50,372
KIRDANI, RASHAD.....	PROSTATIC ESTROGEN RECEPTORS.....	5R26 CA20459-03	34,927
KLEIN, EDMUND.....	RELATION OF IMMUNE REACTIONS TO CUTANEOUS NEOPLASIA.....	5R01 CA13599-08	101,807
KORYTNYK, WALTER.....	CELL SURFACE SUGAR ANALOGS FOR CANCER CHEMOTHERAPY.....	2R01 CA08793-12	95,231
KOWALSKI, DAVID.....	ROLE OF DNA RELAXING ENZYME IN SV40 DNA REPLICATION.....	1R01 CA23996-01	38,231
KRESS, LAWRENCE F.....	VENOM PROTEASES: ACTION ON PLASMA PROTEASE INHIBITORS.....	1R01 HL22996-01	34,129
LASKOWSKI, MICHAEL, SR.....	STUDY OF LIMITED ENZYMATIC CLEAVAGES OF NATIVE DNA.....	9R01 GM24950-04	39,997
LASKOWSKI, MICHAEL, SR.....	INHIBITORS OF PROTEINASES.....	5R01 HL15892-05	80,200
LEE, CHING-LI.....	IMMUNODIAGNOSIS OF PROSTATIC CANCER.....	1R23 CA23990-01	32,454
MANLY, KENNETH F.....	MOLECULAR PATHOGENESIS OF VIRUS-INDUCED LEUKEMIA.....	1R01 CA21217-01A1	54,596
MARKUS, GABOR.....	PLASMINOGEN ACTIVATORS AND RELATED PROTEASES IN TUMORS.....	5R01 CA20367-02	82,341
MASLOW, DAVID E.....	SPECIFICITY OF NORMAL AND CANCER CELL INTERACTIONS.....	5R01 CA14370-06	27,870
MATTA, KHUSHI L.....	SYNTHETIC GLYCOSIDES FOR CANCER RESEARCH.....	1R01 CA24051-01	24,314
MAYERS, GEORGE L.....	AUTO-REGULATION OF IMMUNE RESPONSE BY ANTI-IDIOTYPE.....	1R01 CA24511-01	44,878
MAYHEW, ERIC G.....	MECHANISM OF ANTITUMOR EFFECTS OF POLYNUCLEOTIDES.....	5R01 CA14405-06	30,673
MC LIMANS, WILLIAM F.....	DIRECT SUSPENSION CULTURE OF HUMAN PROSTATE CELLS.....	5R26 CA18652-04	88,184
MERRIN, CLAUDE E.....	EVALUATION AND TREATMENT OF PATIENTS WITH BLADDER CANCER.....	2R26 CA15937-05	24,230
MIHICH, ENRICO.....	EXPERIMENTAL THERAPEUTICS AND CANCER DRUG PROGRAM.....	2P01 CA13038-07	1,354,087
MIHICH, ENRICO.....	CANCER CHEMOTHERAPY AND IMMUNOLOGIC EFFECTS.....	5R01 CA15142-05	106,085
MIHICH, ENRICO.....	GRACE CANCER DRUG CENTER CORE SUPPORT GRANT.....	1P30 CA24538-01	432,490
MINOWADA, JUN.....	STUDY OF HUMAN LYMPHATIC NEOPLASIA.....	5R01 CA14413-06	88,596
MIRAND, EDWIN A.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18201-04	262,090
MITTELMAN, ARNOLD.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA12296-08	162,571
MORREAL, CHARLES E.....	BIOLOGICAL AND CHEMICAL STUDIES OF NEW DMBA COMPOUNDS.....	5R01 CA22001-02	57,940
MURPHY, GERALD P.....	NATIONAL PROSTATIC CANCER PROJECT.....	2R26 CA14716-06	442,866
MURPHY, GERALD P.....	CANCER CENTER CORE SUPPORT.....	2P30 CA16056-04	347,651
MURPHY, GERALD P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05648-12	200,462
NIR, SHLOMO S.....	MEMBRANE FUSION.....	1R01 GM23850-01	20,943
PAIGEN, BEVERLY J.....	GENETICS OF AHH IN RELATION TO CANCER ETIOLOGY.....	3R01 CA18542-02S1	17,305
PAIGEN, BEVERLY J.....	GENETICS OF AHH IN RELATION TO CANCER ETIOLOGY.....	2R01 CA18542-03	59,081
PAIGEN, BEVERLY J.....	GENETIC SUSCEPTIBILITY TO LUNG CANCER.....	1R01 CA24270-01	54,023
PAIGEN, KENNETH.....	GENETIC STUDY OF MAMMALIAN CONTROL SYSTEMS.....	5P01 GM19521-07	555,228
PAPAHADJOPOULOS, P D.....	LIPID VESICLES AS DRUG CARRIERS IN VITRO AND IN VIVO.....	3R01 CA18527-02S1	3,338
PARTHASARATHY, RENGACHARY.....	STEREOCHEMISTRY OF THIOL-DISULFIDE INTERCHANGES.....	5R01 CA23704-02	46,412
PARTHASARATHY, RENGACHARY.....	STRUCTURE AND FUNCTION OF MODIFIED BASES OF TRNA.....	9R01 GM24864-04	32,467
PIERUCCI, OLGA.....	THE CELL DIVISION CYCLE OF GRAM-POSITIVE BACILLI.....	5R01 AI13453-03	36,319
PORTER, CARL W.....	ANTICANCER DRUG ACTION ON POLYAMINES AND MITOCHONDRIA.....	5R01 CA22153-02	58,078
PORTER, CARL W.....	GLYCOSYL TRANSFERASES AND THE PLASMA MEMBRANE.....	5R01 GM23233-03	29,333
POSTE, GEORGE H.....	MODIFICATION OF CELL BEHAVIOR BY LIPID VESICLES.....	5R01 CA18260-03	51,141
PREISLER, HARVEY D.....	DRUG SENSITIVITY OF CYCLING & NONCYCLING LEUKEMIC CELLS.....	1R01 CA24162-01	66,481
PRESSMAN, DAVID.....	STRUCTURE AND CHEMICAL NATURE OF SPECIFIC ANTIBODY SITES.....	5R01 AI03962-18	146,657
PRESSMAN, DAVID.....	IMMUNOBIOLOGICAL STUDIES WITH CULTURED HUMAN LYMPHOCYTES.....	5R01 AI08899-10	186,714
PRESSMAN, DAVID.....	MEMBRANE ANTIGENS FROM NORMAL AND LEUKEMIC LYMPHOCYTES.....	2R01 CA17276-04	67,390
PRIORE, ROGER L.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21190-02	109,278
ROHOLT, OLIVER A.....	BINDING SITES OF MYELOMA PROTEINS AND ANTIBODIES.....	5R01 AI12100-05	46,103

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ROHOLT, OLIVER A.....	FUNCTIONAL SURFACE ANTIGENS OF T- AND B-CELL TUMORS.....	5R01 CA19161-03	36,160
ROSEN, FRED.....	ENDOCRINE TUMORS: STEROID RECEPTORS AND THERAPY.....	1R01 CA22761-01	67,887
RUSTUM, YUCEF M.....	CELLULAR SELECTIVITY OF ANTIMETABOLITES.....	5R01 CA18420-03	30,287
SANDBERG, AVERY A.....	PROTEIN BINDING AND BILIARY EXCRETION OF STEROIDS.....	3R01 AM01240-21S1	34,368
SANDBERG, AVERY A.....	CHROMOSOMES OF HUMAN BLADDER TUMORS.....	5R26 CA14555-06	73,562
SANDBERG, AVERY A.....	TEST SYSTEMS FOR DRUGS AGAINST PROSTATIC CANCER.....	5R26 CA15436-05	63,842
SANDBERG, AVERY A.....	INTRACELLULAR FACTORS CONTROLLING MITOTIC EVENTS.....	3R01 CA16935-03S1	4,259
SANDBERG, AVERY A.....	ESTROGEN RECEPTORS AND CANCER OF THE PANCREAS.....	3R26 CA18396-03S1	1,973
SEON, BYEONG-KUK.....	HUMAN LEUKEMIA AND LYMPHOMA ASSOCIATED ANTIGENS.....	5R01 CA19304-03	38,139
SHOWS, THOMAS B.....	HUMAN GENE LINKAGE RELATIONSHIPS IN CELL HYBRIDS.....	5R01 GM20454-06	121,868
SHOWS, THOMAS B.....	AN APPROACH TO HUMAN DEVELOPMENT WITH CELL HYBRIDS.....	5R01 HD05196-08	76,319
SRIVASTAVA, B I.....	BIOCHEMICAL MARKERS IN LEUKEMIAS.....	2R01 CA17140-04	76,392
TABER, ROBERT L, JR.....	INTERACTION OF NONENVELOPED VIRUSES WITH LIPOSOMES.....	5R01 AI14042-02	44,337
WEISS, LEONARD.....	CANCER CELL PROPERTIES AND HOST RESPONSE.....	2P30 CA17609-04	238,601
WENNER, CHARLES E.....	THE EFFECT OF COCARCINOGENS ON CELLULAR MEMBRANES.....	5R01 CA13784-06	46,570
ZUCALI, JAMES R.....	REGULATION OF ERYTHROPOIETIN BIOGENESIS.....	5R01 AM18650-03	41,670
ORGANIZATION TOTAL	107	11,472,803	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—RESEARCH INSTITUTE ON ALCOHOLISM ZIP CODE 14203			
FABER, DONALD S.....	VERTEBRATE NEURONAL INTERACTIONS AND ELECTROGENESIS.....	5R01 NS12132-05	58,926
ORGANIZATION TOTAL	1	58,926	
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
ACARA, MARGARET A.....	RENAL METABOLISM OF CHOLINE: ENHANCEMENT OF EXCRETION.....	5R01 AM17201-05	41,645
ALMON, RICHARD R.....	CELLULAR INTEGRATION OF MULTIPLE RECEPTOR INFLUENCES.....	1R01 NS12865-01A2	49,838
ANDERSON, WAYNE K.....	VINYLOGOUS CARBINOLAMINE TUMOR INHIBITORS.....	5R01 CA22935-02	41,455
ANDRES, GIUSEPPE A.....	IMMUNOPATHOLOGY OF NEPHRITIS AND RENAL TRANSPLANTS.....	5R01 AI10334-08	134,814
APICELLA, MICHAEL A.....	TAXONOMIC STUDIES OF B MENINGOCOCCI.....	5R01 AI10236-08	36,193
ARBESMAN, CARL E.....	CLINICAL AND IMMUNOLOGIC EFFECTS OF LOCAL IMMUNOTHERAPY.....	2R01 AI01303-21A1	45,713
BAHL, OM P.....	HUMAN CHGRIONIC AND OTHER GONADOTROPINS.....	2R01 HD08766-12	121,902
BAIZER, JOAN S.....	ORGANIZATION OF VISUAL FUNCTION IN PRESTRIATE CORTEX.....	1R01 EY02230-01	64,080
BARDOS, THOMAS J.....	CHEMICAL AND BIOLOGICAL STUDIES IN CANCER CHEMOTHERAPY.....	2R01 CA06695-16	80,641
BEREZNEY, RONALD.....	THE NUCLEAR MATRIX AND DNA REPLICATION.....	5R01 GM23922-02	48,476
BORDER, JOHN R.....	SEQUENCE OF ORGAN FAILURES FOLLOWING TRAUMA.....	5P01 GM15768-10	236,311
BROWNE, ALEXANDER C.....	CONTROL OF STEROIDOGENESIS IN ADRENAL CORTICAL TISSUE.....	2R01 AM18141-04	83,438
BROWNE, ALEXANDER C.....	PATHOGENESIS AND PREVENTION OF HYPERTENSION.....	5R01 HL06975-18	186,475
BRUENN, JEREMY A.....	SEQUENCING OF YEAST KILLER-FACTOR RNAS.....	5R01 GM22200-04	76,845
CADENHEAD, DAVID A.....	SURFACE STUDIES OF MEMBRANE LIPIDS AND PROTEINS.....	5R01 HL12760-09	46,118
CHANG, HSIN-KANG.....	ROLE OF MULTICOMPONENT DIFFUSION IN GAS EXCHANGE.....	3R01 HL18022-03S1	3,174
CHEN, PRISCILLA B.....	CELLULAR IMMUNE RESPONSES TO ORAL BACTERIAL ANTIGENS.....	1R23 DE04953-01	28,277
COBURN, ROBERT A.....	CONTROL OF PERIODONTAL DISEASES: DESIGN OF NEW AGENTS.....	5R01 DE04744-02	75,578
CORAH, NORMAN L.....	CONTROL OF STRESS DURING DENTAL PROCEDURES.....	3R01 DE04494-02S1	32,294
COTTER, JOHN R.....	EFFERENT PROJECTIONS FROM ACCESSORY OPTIC NUCLEI.....	1R23 EY02368-01	11,027
CUDKOWICZ, GUSTAVO.....	FACTORS CONTROLLING GRAFT-HOST INTERACTIONS.....	5R01 AM13969-10	134,430
CUDKOWICZ, GUSTAVO.....	CONTROLS OF PROLIFERATION SPECIFIC FOR LEUKEMIAS.....	5R01 CA12844-06	74,444
DICKEY, JAMES M.....	ADAPTIVE SMOOTHING MODELS FOR ESTIMATED PROBABILITIES.....	5R01 GM23043-03	34,156
DOW, BRUCE M.....	FOVEAL VISION IN THE ALERT RHESUS MONKEY.....	1R01 EY02349-01	73,275
DZIAK, ROSE M.....	BONE CELL CALCIUM REGULATION.....	5R23 DE04637-03	29,083
EDWARDS, JOHN A.....	INHERITED ABNORMALITIES OF IRON AND GLOBIN METABOLISM.....	5R01 AM19424-03	33,292
ELLIOTT, WILLARD B.....	CHARACTERIZATION OF PHOSPHOLIPASES FROM VENOM.....	1R01 NS14788-01	47,934
ELLIOTT, WILLARD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07066-13	93,275
ETTINGER, MURRAY J.....	THE MOLECULAR BASIS OF ANTIURETIC HORMONE ACTION.....	5R01 AM17911-04	55,397
ETTINGER, MURRAY J.....	CELLULAR DYNAMICS OF COPPER METABOLISM.....	5R01 AM19708-02	62,675
EVANS, RICHARD T.....	SALIVARY ANTIBODIES TO S. MUTANS: INDUCTION AND EFFECTS.....	2R01 DE04061-04	144,785
FEDOR, LEO R.....	CHEMISTRY AND BIOLOGY OF BETA-GLUCURONIDASE.....	5R01 CA21755-02	26,336
FOURTNER, CHARLES R.....	MOTOR PATTERNS IN CROSS REGENERATED NERVES.....	1R01 NS14204-01A1	30,202
FUNG, HO-LEUNG.....	LEAD PHARMACOKINETICS AND TOXICITY.....	1R01 ES01317-01A2	59,104
FUNG, HO-LEUNG.....	ORAL AND LUNG ABSORPTION OF NITROGLYCERIN.....	1R01 HL22273-01	60,100
GALE, ELLIOT N.....	TREATMENT OF TEMPOROMANDIBULAR JOINT PAIN.....	5R01 DE04358-03	38,491
GARRICK, MICHAEL D.....	HEMOGLOBIN: BIOSYNTHESIS AND GENETICS.....	5R01 AM14923-07	64,356

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
GENCO, ROBERT J.....	PERIODONTAL DISEASE RESEARCH CENTER.....	5P50 DE04898-02	397,199
GESSNER, PIOTR K.....	DISPOSITION AND METABOLISM OF PARALDEHYDE IN INFANTS.....	1R01 HD12323-01	53,163
GIBALDI, MILO.....	CLINICAL PHARMACOKINETICS AND BIOPHARMACEUTICS.....	5P50 GM20852-05	276,123
GRAHAM, SAXON.....	SOCIAL EPIDEMIOLOGY AND CONTROL OF CANCER.....	5P01 CA11535-09	500,752
GREEN, FLOYD A.....	ERYTHROCYTE MEMBRANE SULFHYDRYLS AND RH ACTIVITY.....	3R01 HD02370-11S1	5,375
GREEN, FLOYD A.....	ERYTHROCYTE MEMBRANE SULFHYDRYLS AND RH ACTIVITY.....	9R01 HL24009-12	88,114
GREENE, GEORGE W, JR.....	CLINICAL CANCER EDUCATION PROGRAM —DENTAL.....	1R25 CA19504-01A2	46,279
GRUSHKA, ELI.....	SEPARATION OF AMINO ACIDS USING LIQUID CHROMATOGRAPHY.....	2R01 GM20846-04	53,937
GUTHRIE, ROBERT.....	DETECTION AND STUDY OF INBORN ERRORS.....	5R01 HD03967-13	61,044
HARFORD, A GAYLER.....	NATURAL CORRECTION OF GENE DEFICIENCIES.....	2R01 GM21487-04	80,107
HAUSMANN, ERNEST.....	ORAL BACTERIAL PRODUCTS AND BONE RESORPTION.....	5R01 DE01932-14	95,557
HERMAN, GABOR T.....	COMPUTER TECHNOLOGY FOR TRANSAXIAL TOMOGRAPHY.....	5R01 HL18968-03	165,425
HO, JOHN T.....	PHOSPHOLIPID PHASE TRANSITIONS AND MEMBRANE FUSION.....	1R01 GM24590-01	40,445
HOGAN, PERRY M.....	MECHANISMS OF CARDIAC AUTORHYTHMICITY.....	5R01 HL16135-05	25,455
HONG, SUK K.....	SECRETION OF WEAK ORGANIC ACIDS BY THE KIDNEY TUBULE.....	5R01 AM18918-03	47,398
JACOBS, DIANE M.....	MODE OF ACTION OF A STIMULATOR OF TUMOR RESISTANCE.....	5R01 CA20078-03	83,894
JUNG, CHAN Y.....	IDENTIFICATION AND ISOLATION OF SUGAR TRANSPORT CARRIER.....	2R01 AM13376-10	54,297
JUSKO, WILLIAM J.....	AGE AND DISEASE IN DRUG DISPOSITION.....	5R01 GM24211-02	80,868
KALMAN, THOMAS I.....	SELECTED STUDIES IN NUCLEIC ACID METABOLISM.....	3R01 CA13604-06S1	11,984
KITE, JOSEPH H, JR.....	PATHOGENESIS OF PULMONARY MYCOPLASMA INFECTION.....	5R01 HL20063-03	44,576
KLOCKE, FRANCIS J.....	PATHOPHYSIOLOGY OF CARDIOPULMONARY DYSFUNCTION.....	5P01 HL15194-07	430,814
KOENIG, EDWARD.....	PROTEIN SYNTHESIZING MACHINERY IN THE AXON.....	2R01 NS04656-14A1	44,165
LEE, GEORGE C.....	SOLID AND STRUCTURAL MECHANICS OF LUNGS.....	5R01 HL14495-05	55,176
LEVINE, MICHAEL J.....	SPECIFICITY OF SALIVARY AGGREGATION BY ORAL BACTERIA.....	5R23 DE04518-03	35,412
LEVY, GERHARD.....	PHARMACOKINETICS OF SALICYLATE IN CHILDREN.....	2R01 GM19568-11	79,232
LEWITT, ROBERT M.....	IMAGE RECONSTRUCTION FROM INCOMPLETE PROJECTIONS.....	1R23 CA23818-01	34,899
MC CALL, W D, JR.....	DENTAL SIGNIFICANCE OF JAW MUSCLE SILENT PERIODS.....	1R01 DE04889-01	55,987
MC ISAAC, ROBERT J.....	INFLUENCE OF PREGANGLIONIC NERVE ON GANGLION RESPONSES.....	5R01 NS06990-12	40,945
MILGROM, FELIX.....	HUMORAL ANTIBODIES ACCOMPANYING HOMOGRAFTS.....	2R01 AM17317-14	140,950
MILLER, ROBERT F.....	CELL COMMUNICATION IN THE VERTEBRATE RETINA.....	1R01 EY02327-01	74,447
MILLER, WILLIAM A.....	DIFFERENTIATION OF ODONTOBLASTS IN PULPAL HEALING.....	2R01 DE04048-03	71,493
MOHN, JAMES F.....	BLOOD GROUP ANTIGENS AND ANTIBODIES.....	5R01 HL05351-18	55,683
MURRAY, DANIEL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05454-16	44,617
NANCOLLAS, GEORGE H.....	THE KINETICS OF FORMATION OF RENAL STONES.....	5R01 AM19048-03	62,668
NANCOLLAS, GEORGE H.....	THE KINETICS OF MINERALIZATION OF TEETH.....	5R01 DE03223-08	68,083
NATIELLA, JOSEPH R.....	STRUCTURAL-FUNCTIONAL CHANGES IN FREEZING ORAL TISSUE.....	5R01 DE03991-04	37,237
NATIELLA, JOSEPH R.....	A STUDY OF SUBPERIOSTEAL ORAL IMPLANTS.....	2R01 DE04226-03A1	145,754
NAUGHTON, JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05400-17	164,233
NEIDERS, MIRDZA E.....	INTERACTIONS OF CELLS WITH TOOTH SURFACES.....	5R01 DE03689-02	18,978
NILES, EDWARD G.....	IN VITRO TRANSCRIPTION OF TETRAHYMENA PYRIFORMIS RDNA.....	5R01 GM23259-03	33,239
NOBLE, ROBERT W.....	REACTION OF HEMOGLOBIN WITH LIGANDS AND ANTIBODIES.....	5R01 HL12524-10	41,799
OHKI, SHINPEI.....	CELL FUSION IN MODEL AND BIOLOGICAL MEMBRANE SYSTEMS.....	1R01 GM24840-01A2	54,990
PADWA, ALBERT.....	HETEROCYCLIC SMALL RING COMPOUNDS.....	5R01 CA12195-12	54,014
PADWA, ALBERT.....	SYNTHESIS OF FUSED HETEROCYCLIC COMPOUNDS.....	1R01 CA21471-01A1	46,413
PHIPPS, GRANT T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05330-17	48,755
PROVOST, THOMAS T.....	IMMUNOLOGIC STUDIES IN CUTANEOUS LUPUS.....	5R01 AM16593-05	22,576
REICHLIN, MORRIS.....	IMMUNE RESPONSE TO THYMIC ANTIGENS IN POLYMYOSITIS.....	1R01 AM21747-01	49,432
REISMAN, ROBERT E.....	CLINICAL AND IMMUNOLOGICAL STUDIES OF INSECT ALLERGY.....	1R01 AI14501-01	51,228
RENNICK, BARBARA R.....	HOMEOSTATIC REGULATION OF PLASMA CHOLINE.....	2R01 HL14092-07	61,472
RENNIE, DONALD W.....	CARDIORESPIRATORY PERFORMANCE & ENVIRONMENTAL FACTORS.....	5P01 HL14414-07	563,166
ROTH, JEROME A.....	BIOGENIC AMINE DISPOSITION IN IRON-DEFICIENT CHILDREN.....	1R01 HD12044-01	55,755
ROTH, JEROME A.....	VASOACTIVE AMINE DISPOSITION IN CULTURED ENDOTHELIUM.....	1R01 HL22077-01	55,581
ROTHSTEIN, MORTON.....	AGE-RELATED ALTERATION OF ENZYMES.....	5R01 AG00618-02	106,542
SACHS, FREDERICK.....	VOLTAGE CLAMP OF ISOLATED CARDIAC PURKINJE CELLS.....	5R01 HL21294-02	59,807
SACHS, FREDERICK.....	SYNAPTIC CHANNELS IN TISSUE CULTURED CELLS.....	5R01 NS13194-02	30,746
SCHENK, WORTHINGTON G, JR.....	HEMODYNAMICS AS APPLIED TO SURGICAL PROBLEMS.....	5R01 HL03181-21	84,838
SIEGEL, JOHN H.....	THE ROLE OF OCCULT MYOCARDIAL FAILURE IN HUMAN SHOCK.....	5R01 HL15676-06	163,431
SLAUNWHITE, W ROY, JR.....	THE STRUCTURE OF HUMAN TRANSCORTIN.....	3R01 GM21045-05S1	13,632
SPAULDING, MONICA B.....	CHEMOTHERAPY OF CANCER: ACUTE LEUKEMIA GROUP B.....	5R10 CA16451-04	120,192
SPAULDING, STEPHEN W.....	HORMONAL CONTROL OF RNA SYNTHESIS IN THE THYROID.....	5R01 AM20283-02	31,105

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
TRIGGLE, DAVID J.....	SOURCES AND ROLES OF CALCIUM IN SMOOTH MUSCLE EXCITATION.....	5R01 HL16003-08	43,391
TUFARIELLO, JOSEPH J.....	ALKALOID SYNTHESIS.....	1R01 GM25303-01	60,394
VENTER, J CRAIG.....	RECEPTOR REGULATION & CARDIAC SITES OF DRUG ACTION.....	5R01 HL21329-02	40,856
VENUTO, ROCCO C.....	PROSTAGLANDIN E., RENIN AND UTEROPLACENTAL BLOOD FLOW.....	1R01 HD09875-01A1	55,605
WANG, JUI H.....	RESPIRATORY CONTROL AND COUPLED PHOSPHORYLATION.....	5R01 GM19990-06	105,721
WANG, TUNG Y.....	MECHANISM OF ANDROGEN ACTION.....	5R01 HD09443-03	74,684
WEISER, MILTON M.....	CELL SURFACE ALTERATIONS IN MALIGNANCY.....	7R01 CA25074-01	29,816
YU, C P.....	RESPIRATORY TRACT DEPOSITION OF INHALED AEROSOLS.....	5R01 ES01239-03	49,528
ZALESKI, MAREK B.....	IMMUNE RESPONSE OF MICE TO THE THY-1 ANTIGENS.....	5R01 AI13628-03	29,971
ORGANIZATION TOTAL	106 8,617,073		
STATE UNIVERSITY OF NEW YORK—COLLEGE AT BUFFALO ZIP CODE 14222			
ISSEROFF, HADAR.....	PROLINE IN FASCIOLIASIS.....	5R01 AI09911-06	40,416
ORGANIZATION TOTAL	1 40,416		
COLD SPRING HARBOR			
COLD SPRING HARBOR LABORATORY ZIP CODE 11724			
ALBRECHT-BUEHLER, GUENTER.....	EXPRESSION OF AGE IN THE MOTILITY OF HUMAN SKIN CELLS.....	1R01 AG00945-01	36,564
BROACH, JAMES R.....	GENETIC REGULATION OF GALACTOSE METABOLISM IN YEAST.....	5R01 GM24226-02	75,206
BUKHARI, AHMAD I.....	THE LIFE CYCLE OF MUTATOR PHAGE MU.....	5R01 GM23566-02	40,702
CHOW, LOUISE T.....	INVERSION OF THE G-SEGMENT IN THE PHAGE MU CHROMOSOME.....	5R01 GM23996-02	81,289
HICKS, JAMES B.....	REGULATION AND INTERCONVERSION OF MATING TYPES.....	1R01 GM25624-01	83,286
KLAR, AMAR J.....	MOLECULAR MECHANISMS OF DIFFERENTIATION.....	1R01 GM25678-01	80,148
WATSON, JAMES D.....	SUPPORT FOR SYMPOSIA ON QUANTITATIVE BIOLOGY.....	5R13 CA02809-23	20,000
WATSON, JAMES D.....	CANCER RESEARCH CENTER—TUMOR VIRUS SECTION.....	5P01 CA13106-07	2,500,126
WATSON, JAMES D.....	SUPPORT FOR CANCER RESEARCH CENTER COURSES.....	5R13 CA16224-05	86,440
WATSON, JAMES D.....	INTERNATIONAL CONFERENCE ON TRANSFER RNA.....	1R13 GM25631-01	5,000
WATSON, JAMES D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05717-08	47,817
ZAIN, SAYEEDA B.....	SEQUENCE ANALYSIS OF SV40 INTEGRATION SITES.....	5R01 CA22698-02	20,786
ZIPSER, DAVID.....	THE POLYPEPTIDE PRODUCTS OF LAC OPERON MUTATIONS.....	5R01 GM17612-08	73,823
ORGANIZATION TOTAL	13 3,151,187		
COOPERSTOWN			
MARY IMOGENE BASSETT HOSPITAL AND CLINICS ZIP CODE 13326			
PETERS, THEODORE, JR.....	FUNCTION AND METABOLISM OF SERUM ALBUMIN.....	2R01 HL02751-21	95,999
SAUER, LEONARD A.....	CONTROL MECHANISMS IN ADRENAL STEROIDOGENESIS.....	1R01 AM18600-01A2	37,210
SAUER, LEONARD A.....	PATHWAYS OF MALATE METABOLISM IN MALIGNANCY.....	5R01 CA18262-03	34,530
ORGANIZATION TOTAL	3 167,739		
CORTLAND			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT CORTLAND ZIP CODE 13045			
SPINK, CHARLES H.....	CALORIMETRIC STUDIES OF BILE SALT BINDING REACTIONS.....	1R01 AM20946-01	15,930
ORGANIZATION TOTAL	1 15,930		
CROTON-ON-HUDSON			
HUDSON INSTITUTE ZIP CODE 10520			
LEVESON, IRVING.....	GENERATIONAL CROWDING.....	1R01 HD12277-01	94,514
ORGANIZATION TOTAL	1 94,514		
EAST MEADOW			
NASSAU COUNTY MEDICAL CENTER ZIP CODE 11554			
NEVINS, ALAN J.....	REVITALIZING PULPLESS TEETH USING COLLAGEN-CAPO4 GEL.....	5R23 DE04552-03	29,060
PINKUS, LAWRENCE M.....	GLUTAMINE AND INTESTINAL EPITHELIUM.....	1R01 AM22021-01	46,465

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ORGANIZATION TOTAL	2	75,525	
GARDEN CITY			
ADELPHI UNIVERSITY ZIP CODE 11530			
BETTELHEIM, FREDERICK A.....	THE ROLE OF PROTEOGLYCANS IN THE AGING OF TISSUES.....	5R01 AG00249-02	25,400
BETTELHEIM, FREDERICK A.....	OPTICOMECHANICAL STUDY OF GEL STRUCTURES IN THE EYE.....	3R01 EY00501-09S1	20,736
BETTELHEIM, FREDERICK A.....	STUDIES OF INDUCED CATARACTS IN FISH LENSES.....	5R01 EY02073-02	28,757
BETTELHEIM, FREDERICK A.....	LIGHT SCATTERING PARAMETERS OF CATARACTOUS LENSES.....	1R01 EY02571-01	21,985
COOPERSTEIN, DEBORRA F.....	ENERGY SOURCES FOR CORNEAL TRANSPORT PROCESSES.....	5R01 EY01485-05	15,936
DAVIS, DONALD G.....	THE CONFORMATION AND FUNCTION OF CYCLIC PEPTIDES.....	5R01 GM24267-02	17,808
ORGANIZATION TOTAL	6	130,622	
GREENVALE			
LONG ISLAND UNIVERSITY ZIP CODE 11548			
LEWIS, ROBERT F.....	INTRODUCTION TO BIOMEDICAL RESEARCH.....	1S06 RR08161-01	94,566
MATURO, JOSEPH M, III.....	CHARACTERIZATION OF AN INSULIN RECEPTOR COMPONENT.....	1R01 AM24069-01	60,803
ORGANIZATION TOTAL	2	155,369	
HASTINGS-ON-HUDSON			
INSTITUTE OF SOCIETY, ETHICS AND THE LIFE SCIENCES ZIP CODE 10706			
VEATCH, ROBERT M.....	HUMAN EXPERIMENTATION COMMITTEE NEWSLETTER.....	1R01 LM03130-01	34,488
ORGANIZATION TOTAL	1	34,488	
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
ALBRECHT, ANDREAS C.....	NEAR ULTRAVIOLET RAMAN STUDIES OF CYTOCHROME P450.....	5R01 AM20379-02	54,804
ALBRECHT, ANDREAS C.....	BASIC PHOTOELECTRIC STUDIES IN ORGANIC SOLID STATE.....	5R01 GM10865-19	90,961
ARION, WILLIAM J.....	GLUCOSE 6-PHOSPHATASE AND HEPATIC GLUCOSE PRODUCTION.....	5R01 AM19625-02	61,289
AUSTIC, RICHARD E.....	INTERACTION OF NA AND K IN HYPERURICEMIA AND GOUT.....	5R01 AM18946-02	41,233
AUSTIC, RICHARD E.....	INTERACTION OF MINERALS IN AMINO ACID METABOLISM.....	1R01 AM21615-01	61,303
BENSADOUN, ANDRE.....	LIPID TRANSPORT IN AVIAN SPECIES.....	5R01 HL14990-07	83,230
BERGMAN, EMMETT N.....	CARBOHYDRATE AND KETONE BODY METABOLISM.....	2R01 AM05976-18	135,416
BOYER, CLYDE I, JR.....	LABORATORY ANIMAL DIAGNOSTIC RESOURCE.....	3P40 RR00979-03S1	38,676
CALNEK, BRUCE W.....	AVIAN LEUKOSIS COMPLEX.....	5R01 CA06709-17	167,517
CAMHI, JEFFREY M.....	BEHAVIORAL NEUROPHYSIOLOGY OF INSECTS.....	5R01 NS09083-08	58,818
CAMPBELL, T COLIN.....	EFFECT OF NUTRITION ON CARCINOGEN AND TOXIN METABOLISM.....	3R01 CA20079-02S1	36,400
CAMPBELL, T COLIN.....	EFFECT OF NUTRITION ON CARCINOGEN AND TOXIN METABOLISM.....	5R01 CA20079-03	75,621
CAMPBELL, T COLIN.....	EFFECT OF PERINATAL IMPRINTING ON ADULT CARCINOGENESIS.....	1R01 CA23913-01	25,976
CAPRANICA, ROBERT R.....	ENCODING OF VOCAL SIGNALS IN THE AUDITORY SYSTEM.....	5R01 NS09244-08	67,745
CARMICHAEL, LELAND E.....	ANIMAL BRUCELLOSIS: DIAGNOSTIC CONTROL METHODS.....	1R01 RR01140-01	54,876
COMBS, GERALD F, JR.....	RELATIONSHIP OF XENOBIOTICS, SELENIUM AND VITAMIN E.....	1R01 ES01354-01A2	57,738
COOKE, W DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07061-13	184,324
CORRADINO, ROBERT A.....	SYNTHESIS AND FUNCTION OF CALCIUM-BINDING PROTEIN.....	5R01 AM15355-08	64,636
CYPRESS, RAYMOND H.....	THE EPIDEMIOLOGY OF VISCERAL LARVA MIGRANS.....	5R01 AI14718-02	71,035
DILLS, WILLIAM L, JR.....	FRUCTOKINASE INHIBITORS ON FRUCTOSE UTILIZATION.....	1R01 AM20882-01	55,804
DILLS, WILLIAM L, JR.....	FRUCTOSE ANALOGS AS METABOLIC INHIBITORS.....	5R01 HD10967-02	41,333
DROST, CORNELIS J.....	ACCURATE TRANSCUTANEOUS DOPPLER BLOODFLOW MONITORING.....	5R01 HL19019-03	73,955
EDELSTEIN, STUART J.....	STRUCTURE AND ASSEMBLY OF TUBULIN.....	1R01 GM24800-01	56,143
EISNER, THOMAS.....	SECRETIONS OF ARTHROPODS.....	5R01 AI02908-20	65,099
ELSON, ELLIOT L.....	DYNAMICS OF BIOPHYSICAL MEMBRANE PROCESSES.....	2R01 GM21661-04	98,630
FABRICANT, CATHERINE G.....	PATHOGENESIS OF VIRAL INDUCED ATHEROSCLEROSIS.....	2R01 HL19381-03	77,963
FEIGENSON, GERALD W.....	LIPID-PROTEIN INTERACTIONS AND CALCIUM TRANSPORT.....	2R01 HL18255-04	63,809
FINK, GERALD R.....	CHEMICAL CARCINOGENS AND FRAMESHIFT MUTATION IN YEAST.....	1R01 CA23441-01	84,164
FINK, GERALD R.....	REGULATION OF HISTIDINE BIOSYNTHESIS IN YEAST.....	5R01 GM15408-11	70,564
FITCHEN, DOUGLAS B.....	HEME PROTEIN SOLUTION STRUCTURE FROM RAMAN SPECTRA.....	5R01 AM18048-04	53,470

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
FOOTE, ROBERT H.....	MATURATION, METABOLISM AND AGING OF GAMETES.....	2R01 H003471-13A1	82,973
GANEM, BRUCE.....	THE SYNTHESIS OF TUMOR-INHIBITORY DIEPOXIDES.....	5R01 CA17670-02	36,369
GANEM, BRUCE.....	SYNTHESIS OF MACROCYCLIC ANTITUMOR AGENTS.....	2R01 CA19686-03	39,834
GANEM, BRUCE.....	SYNTHESIS AND BIOSYNTHESIS IN THE SHIKIMATE PATHWAY.....	1R01 GM24054-01	73,340
GEORGI, JAY R.....	LIFE HISTORY AND CONTROL OF FILARIOIDES HIRTHI.....	5R01 RR01058-02	33,708
GIBSON, QUENTIN H.....	KINETICS OF ENZYMES AND HEMOGLOBIN-LIGAND REACTIONS.....	5R01 GM14276-14	120,222
HAGEOORN, HENRY H.....	CHARACTERIZATION OF MOSQUITO BRAIN HORMONE.....	5R01 AI14771-02	52,252
HAINES, MICHAEL R.....	DIFFERENTIAL FERTILITY & MORTALITY.....	1R01 HD11348-01A1	62,276
HAMMES, GOROON G.....	KINETICS OF PHYSIOLOGICALLY IMPORTANT REACTIONS.....	5R01 GM13292-14	134,872
HANSEL, WILLIAM.....	CORPUS LUTEUM FUNCTION IN THE NONPREGNANT COW.....	2R01 HD06718-07	85,845
HANSEL, WILLIAM.....	MAINTENANCE OF THE CORPUS LUTEUM OF PREGNANCY.....	5R01 H009870-03	75,030
HEETOERKS, WILLIAM J.....	MULTIUNIT STUDY OF JOINT RECEPTORS.....	1R01 NS14462-01	39,570
HEPPEL, LEON A.....	MECHANISMS OF ACTIVE TRANSPORT AND MEMBRANE ENZYMES.....	5R01 AM11789-11	71,307
HESS, GEORGE P.....	RELATIONSHIPS BETWEEN PROTEIN STRUCTURE AND FUNCTION.....	2R01 GM04842-23	68,311
HESS, GEORGE P.....	CHEMICAL REACTIONS IN TRANSMISSION OF NERVE IMPULSES.....	5R01 NS08527-10	41,137
HINKLE, PETER C.....	ENERGY CONSERVATION IN HEART MITOCHONDRIA.....	5R01 HL14483-08	73,577
HOLMES, DOROTHY F.....	A MODEL FOR THE GUILLAIN-BARRE SYNDROME.....	1R01 NS14242-01	43,162
HORST, R KENNETH.....	REPLICATION MECHANISMS OF SMALL INFECTIOUS RNAs.....	5R01 AI13647-02	38,320
HOY, RONALD R.....	NEUROLOGICAL & GENETIC ANALYSIS OF ACOUSTIC BEHAVIOR.....	5R01 NS11630-06	48,261
JACOBSON, RICHARD H.....	IMMUNOLOGY OF INTESTINAL NEMATODE INFECTIONS.....	1R01 AI15075-01	58,770
JAGENOORF, ANORE T.....	MEMBRANE-ASSOCIATED PHOSPHORYLATION.....	5R01 GM14479-13	77,791
KELLER, ELIZABETH B.....	THE BIOSYNTHESIS OF RNAs: MECHANISMS AND CONTROLS.....	5R01 GM10791-16	79,276
LEWIS, AARON.....	LASER RAMAN SPECTROSCOPY OF THE VISUAL PROCESSES.....	5R01 EY01377-05	81,516
LIS, JOHN T.....	COORDINATE GENE REGULATION IN ANIMAL CELLS.....	1R01 GM25232-01	75,306
MACDONALD, RUSSELL E.....	ENERGY COUPLING TO TRANSPORT OF IONS BY CELL MEMBRANES.....	5R01 GM23225-03	46,129
MC CORMICK, DONALD B.....	INVESTIGATIONS OF FLAVIN SYSTEMS.....	5R01 AM04585-18	72,229
MC GREGOR, DOUGLAS O.....	MEDIATOR OF CELLULAR IMMUNITY.....	5R01 AI14482-02	89,233
MC GREGOR, DOUGLAS O.....	IMMUNITY TO PARASITIC INFECTION.....	1R01 AI14490-01	96,058
MC GREGOR, DOUGLAS O.....	AGING IMMUNITY AND CANCER.....	5R01 CA21159-02	145,311
MC LAFFERTY, FRED W.....	MASS SPECTROMETRY IN BIOMEDICAL RESEARCH.....	5R01 GM16609-10	101,809
MEINWALD, JERROLD.....	CHEMISTRY OF ARTHROPOD SECRETIONS.....	5R01 AI12020-06	83,041
MEINWALD, JERROLD.....	PEPERIN SYNTHESIS VIA A CHIRAL PRECURSOR.....	1R01 CA23472-01	28,498
MELBY, EDWARD C, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05462-16	78,446
MINOR, RONALD R.....	FACTORS IN LUNG DEVELOPMENT.....	5R01 HL20635-03	108,194
MOFFAT, JOHN K.....	CALCIUM BINDING PROTEINS: STRUCTURE AND FUNCTION.....	1R01 AM21453-01	29,789
MOFFAT, JOHN K.....	OXYGEN TRANSPORT: HEMOGLOBINS WITH MODIFIED HEMES.....	2R01 HL18309-04	46,336
MORRISON, GEORGE H.....	ION MICROSCOPY IN BIOLOGY AND MEDICINE.....	5R01 GM24314-02	70,332
NEMETHY, GEORGE.....	AGING: CONFORMATIONAL CHANGES OF COLLAGEN.....	5R01 AG00322-03	45,231
O'BRIEN, RICHARD O.....	MECHANISMS OF INSECTICIDE SELECTIVITY.....	5R01 ES00901-18	132,634
POLESKI, THOMAS R.....	SOLUBLE NERVE FACTORS REGULATING MUSCLE MATURATION.....	1R01 NS14679-01	60,155
QUE, LAWRENCE, JR.....	NON-HEME IRON OXYGENASES: STRUCTURE AND MECHANISM.....	1R01 GM25422-01	49,402
RACKER, EFRAIM.....	ENERGY METABOLISM IN NORMAL AND TUMOR CELLS.....	5R01 CA08964-12	307,036
RACKER, EFRAIM.....	MEMBRANES IN NORMAL AND CANCER CELLS.....	5P01 CA14454-06	261,213
ROBERTS, JEFFREY W.....	GENE CONTROL IN INFECTION & LYSOGENY BY PHAGE LAMBDA.....	2R01 GM21941-04	77,530
SALPETER, MIRIAM M.....	HIGH RESOLUTION AUTORADIOGRAPHY.....	5R01 GM10422-16	59,212
SALPETER, MIRIAM M.....	FUNCTIONAL ULTRASTRUCTURE OF THE NERVOUS SYSTEM.....	5R01 NS09315-09	92,812
SCHERAGA, HAROLD A.....	INTERACTIONS IN SYNTHETIC POLYAMINO ACIDS.....	5R01 AM08465-13	57,714
SCHERAGA, HAROLD A.....	INTERNAL BONDING IN PROTEINS.....	5R01 GM14312-24	84,805
SCHERAGA, HAROLD A.....	MOTION AND PROXIMITY RELATIONS IN POLYPEPTIDES.....	9R01 GM24893-09	45,177
SCHERAGA, HAROLD A.....	EQUILIBRIA IN THE FIBRINOGEN-FIBRIN CONVERSION.....	5R01 HL01662-25	66,458
SCHULTZ, ARTHUR G.....	SYNTHESIS OF VERNOLEPIN AND DAUNOMYCIN.....	2R01 CA16624-04	52,162
SCHULTZ, ARTHUR G.....	SYNTHESIS OF ASPIDOSPERMA AND HASUBANAN ALKALOIDS.....	5R01 GM21159-05	71,097
SCHWARTZ, RUTH.....	STABLE 26MG AND 28MG IN MEASUREMENT OF MG UTILIZATION.....	5R01 AM18569-04	93,909
SCOTT, NORMAN R.....	THERMOREGULATION THE ROLE OF VASOMOTION.....	2R01 GM19716-04A1	64,779
SEMMEHACK, MARTIN F.....	SYNTHESIS OF NATURAL ANTICANCER AGENTS AND ANALOGS.....	5R01 CA18333-03	44,471
SIEGEL, BENJAMIN M.....	BIOMOLECULAR HIGH RESOLUTION ELECTRON MICROSCOPY.....	5R01 GM12873-14	111,437
SRB, AORIAN M.....	DEVELOPMENTAL GENETIC STUDIES OF NEUROSPORA.....	5R01 GM12953-29	52,264
STEVENS, CHARLES E.....	COMPARATIVE STUDIES OF LARGE INTESTINAL FUNCTION.....	5R01 AM09280-14	59,182
TURNBULL, BRUCE W.....	STATISTICAL METHODS FOR ENVIRONMENTAL HEALTH STUDIES.....	1R23 ES01714-01	43,669
TYE, BIK-KWOON.....	DNA REPLICATION AND REPAIR IN E. COLI.....	1R01 AI14980-01	51,884

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
VAN TIENHOVEN, ARI.....	ROLE OF PROGESTERONE IN OVULATION IN THE FOWL.....	1R01 HD12101-01	58,435
VOGT, VOLKER M.....	STRUCTURE AND ASSEMBLY OF AVIAN ONCORNAVIRUSES.....	5R01 CA20081-02	56,900
WALLACE, BRUCE.....	DEVELOPMENTAL AND EVOLUTIONARY GENETICS OF DROSOPHILA.....	1R01 GM24850-01	38,480
WASSERMAN, ROBERT H.....	INTESTINAL ABSORPTION OF MINERAL IONS.....	5R01 AM04652-18	131,235
WILKINSON, CHRISTOPHER F.....	MICROSOMAL ENZYMES IN INSECTS.....	2R01 ES00400-10	96,117
WILKINSON, CHRISTOPHER F.....	MODE OF ACTION OF INSECTICIDE SYNERGISTS.....	1R01 ES01902-01	33,629
WILSON, DAVID B.....	ISOLATION AND CHARACTERIZATION OF THE S GENE PRODUCT.....	1R01 GM25030-01	37,544
WU, RAY.....	SYNTHESIS AND CLONING OF HUMAN INSULIN GENE.....	1R01 AM21801-01	69,417
WU, RAY.....	ANALYSIS OF DNA SEQUENCE IN POLYOMA AND SV40 TUMOR VIRUS.....	5R01 CA14989-05	112,407
WU, RAY.....	SYNTHETIC CONNECTORS AND ADAPTORS FOR CLONING DNA.....	1R01 GM24904-01	74,172
ZILVERSMIT, DONALD B.....	FAT METABOLISM AND EXPERIMENTAL ATHEROSCLEROSIS.....	5R01 HL10933-13	108,353
ZILVERSMIT, DONALD B.....	LIPID TRANSPORT.....	5R01 HL10940-13	112,231
ORGANIZATION TOTAL	102	7,674,115	
LAKE PLACID			
TISSUE CULTURE ASSOCIATION—W. ALTON JONES CELL SCIENCE CENTER ZIP CODE 12946			
CHAPPLE, PAUL J.....	EFFECT OF POLLUTANTS ON ORGANOTYPIC LUNG CULTURES.....	5R01 HL21008-02	46,683
CHAPPLE, PAUL J.....	BIOMEDICAL RESEARCH.....	1S07 RR05800-01	21,633
DOUGLAS, WILLIAM H.....	SURFACTANT SYNTHESIS BY TYPE II CELLS IN VITRO.....	5R01 HL19513-02	80,043
SMITH, JAMES R.....	CLONAL ANALYSIS OF AGING HUMAN DIPLOID CELL CULTURES.....	5R01 AG00338-02	60,352
SMITH, JAMES R.....	EFFECTS OF AIR POLLUTANTS ON LUNG CELLS IN CULTURE.....	5R01 HL21009-02	90,751
ORGANIZATION TOTAL	5	299,462	
NEW YORK			
AMERICAN ARBITRATION ASSOCIATION ZIP CODE 10020			
LADIMER, IRVING.....	SWINE FLU LIABILITY AND PUBLIC POLICY.....	1R01 LM03127-01	21,644
ORGANIZATION TOTAL	1	21,644	
AMERICAN ASSOCIATION FOR CANCER RESEARCH ZIP CODE 10021			
PHILIPS, FREDERICK S.....	PARTIAL SUBSIDY FOR THE JOURNAL OF CANCER RESEARCH.....	5R01 CA09247-26	251,200
ORGANIZATION TOTAL	1	251,200	
AMERICAN CANCER SOCIETY ZIP CODE 10017			
ARJE, SIDNEY L.....	ACS/NCI NATIONAL CONFERENCE ON NUTRITION IN CANCER.....	1R13 CA23651-01	50,000
ORGANIZATION TOTAL	1	50,000	
AMERICAN DIABETES ASSOCIATION ZIP CODE 10020			
WHITEHOUSE, FRED W.....	ANNUAL RESEARCH SYMPOSIUM, AMERICAN DIABETES ASSOCIATION.....	1R13 AM25602-01	10,000
ORGANIZATION TOTAL	1	10,000	
AMERICAN HEALTH FOUNDATION ZIP CODE 10017			
FIALA, EMERICH.....	MECHANISM OF ACTION OF COLON CARCINOGENESIS.....	5R26 CA15400-06	191,848
HECHT, STEPHEN S.....	METABOLISM OF THE CARCINOGEN NITROSONORNICOTINE.....	5R01 CA21393-02	80,233
REDDY, BANDARU S.....	METABOLIC EPIDEMIOLOGY OF COLON CANCER.....	2R26 CA16382-04A1	105,449
TONG, CHARLES C.....	MUTAGENICITY OF ENVIRONMENTAL CHEMICALS TO HUMAN CELLS.....	1R23 ES01724-01	43,379
WEISBURGER, JOHN H.....	CARCINOGENS AND MUTAGENS IN COLON CANCER.....	1R26 CA24217-01	68,489
WYNDER, ERNST L.....	ENVIRONMENTAL CARCINOGENESIS.....	3P01 CA12376-06S3	467,760
WYNDER, ERNST L.....	ENVIRONMENTAL CARCINOGENESIS.....	2P01 CA12376-07A1	467,716
WYNDER, ERNST L.....	CORE SUPPORT, CANCER CENTER PROGRAM.....	3P30 CA17613-03S1	94,366
WYNDER, ERNST L.....	CORE SUPPORT, CANCER CENTER PROGRAM.....	2P30 CA17613-04	942,037
WYNDER, ERNST L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05775-03	34,484
ORGANIZATION TOTAL	10	2,495,761	
AMERICAN THORACIC SOCIETY ZIP CODE 10019			
ROCHESTER, DUDLEY F.....	INTERNATIONAL SYMPOSIUM ON THE DIAPHRAGM.....	1R13 HL22525-01	18,728
ORGANIZATION TOTAL	1	18,728	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BANK STREET COLLEGE OF EDUCATION ZIP CODE 10025			
ROSEN, JACQUELINE L.....	RETIREMENT AND SELF CONCEPT IN WOMEN.....	1R01 AG01483-01	76,888
ORGANIZATION TOTAL	1 76,888		
BARNARD COLLEGE ZIP CODE 10027			
BRAINE, LILA G.....	PROCESSING OF ORIENTATION INFORMATION BY CHILDREN.....	5R01 HD09513-03	31,748
PARLEE, MARY B.....	SIGNIFICANCE OF MENSTRUATION FOR ADOLESCENT FEMALES.....	1R01 HD11290-01A1	37,630
ORGANIZATION TOTAL	2 69,378		
BROOKDALE HOSPITAL MEDICAL CENTER ZIP CODE 11212			
PORUSH, JEROME G.....	RENAL SODIUM TRANSPORT IN EXPERIMENTAL ALDOSTERONISM.....	3R01 HL10914-10S1	7,284
ORGANIZATION TOTAL	1 7,284		
CENTER FOR POLICY RESEARCH ZIP CODE 10027			
ETZIONI, AMITAI.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05739-06	42,660
ORGANIZATION TOTAL	1 42,660		
CITY UNIVERSITY OF NEW YORK—BROOKLYN COLLEGE ZIP CODE 11210			
ABRAMOV, ISRAEL.....	SPECTRAL PROPERTIES OF CELLS IN THE GOLDFISH RETINA.....	5R01 EY01697-03	55,758
COTTRELL, STEPHEN F.....	THE STUDY OF AGING IN VOLVOX—ROLE OF MITOCHONDRIA.....	5R01 AG00554-02	21,630
COTTRELL, STEPHEN F.....	MOLECULAR AND CELLULAR AGING IN VOLVOX.....	1R21 AG01173-01	92,947
HAINLINE, LOUISE D.....	VISUAL PERCEPTUAL DEVELOPMENT IN INFANCY.....	2R01 HD08706-04	56,280
HURST, DONALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07119-07	15,673
MADERSON, PAUL F.....	TISSUE INTERACTIONS IN EAR DEVELOPMENT AND HOMEOSTASIS.....	1R01 NS13924-01A1	63,443
NISHIURA, JAMES T.....	BIOCHEMICAL-GENETICS OF EUKARYOTIC RNA POLYMERASES.....	5R01 GM23456-02	29,470
OSMAN, ELI.....	DETECTION AND RECOGNITION IN AUDITION AND VISION.....	2R01 NS10843-04	60,547
ORGANIZATION TOTAL	8 395,748		
CITY UNIVERSITY OF NEW YORK—CITY COLLEGE OF NEW YDRK ZIP CODE 10031			
ALFANO, ROBERT R.....	THE FAST KINETICS OF THE PRIMARY VISUAL PROCESSES.....	1R01 EY02515-01	110,179
COSLOY, SHARON D.....	MOLECULAR MECHANISM OF RECOMBINATION IN E. COLI K12.....	5R01 GM22562-03	45,328
KRUPA, PAUL L.....	CYTOLOGY OF SNAIL-PARASITE INTERACTIONS.....	1R01 AI15117-01	46,195
SCHULZ, HORST H.....	FATTY ACID METABOLISM IN HEART AND ITS REGULATION.....	2R01 HL18089-04	71,137
SLOAN, DONALD L.....	ENZYMIC PHOSPHORIBOSYL TRANSFER REACTION IN YEAST.....	1R01 AM20183-01	47,860
ORGANIZATION TOTAL	5 320,699		
CITY UNIVERSITY OF NEW YORK—COLLEGE OF STATEN ISLAND ST. GEORGE CAMPUS ZIP CODE 10301			
NAIDER, FRED R.....	PEPTIDE TRANSPORT IN MICROORGANISMS.....	2R01 GM22086-04	44,890
ORGANIZATION TOTAL	1 44,890		
CITY UNIVERSITY OF NEW YDRK—GRADUATE SCHOOL AND UNIVERSITY CENTER ZIP CODE 10036			
GLASS, DAVID C.....	BEHAVIOR PATTERNS, STRESS, AND CATECHOLAMINES.....	1R01 HL22514-01	206,804
LEVITT, HARRY.....	ANALYSIS OF ACOUSTIC CHARACTERISTICS OF DEAF SPEECH.....	2R01 NS09252-07	82,791
PROSHANSKY, HAROLD M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07126-07	24,317
STUDEBAKER, GERALD A.....	PAIRED COMPARISON HEARING AID CHARACTERISTIC SELECTION.....	2R01 NS13514-03	157,352
ORGANIZATION TOTAL	4 471,264		
CITY UNIVERSITY OF NEW YDRK—HERBERT H. LEHMAN COLLEGE ZIP CODE 10468			
ACKERMAN, EVELYN B.....	A HISTORY OF MEDICAL CARE IN RURAL FRANCE, 1700-1915.....	5R01 LM03001-02	38,001
ORGANIZATION TOTAL	1 38,001		
CITY UNIVERSITY OF NEW YORK—HUNTER COLLEGE ZIP CODE 10021			
BEVERIDGE, DAVID L.....	SOLVENT EFFECTS ON BIOMOLECULAR STRUCTURE AND PROCESS.....	9R01 GM24914-04	69,979
CECCARINI, COSTANTE.....	SURFACE GLYCOPEPTIDES, GROWTH REGULATION IN ANIMAL CELLS.....	1R01 GM24071-01	95,456
CHAPPELL, RICHARD L.....	NEURAL INTERACTIONS OF THE RETINA.....	5R01 EY00777-07	36,990
COHEN, WILLIAM D.....	MARGINAL BAND SYSTEM OF ERYTHROCYTES.....	5R01 HL20902-02	31,108
HANDLER, EUGENE S.....	HEMATOPOIETIC COLONY FORMATION IN VIVO.....	5R01 CA19487-03	56,938
HERSKOWITZ, IRWIN H.....	BIBLIOGRAPHY ON THE GENETICS OF DROSOPHILA.....	5R01 GM20705-04	9,781
KRAKOW, JOSEPH S.....	STUDIES ON THE CYCLIC AMP RECEPTOR PROTEIN OF E. COLI.....	5R01 GM22619-03	41,803

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MAWE, RICHARD C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07109-10	47,638
OZER, HARVEY L.....	HOST FUNCTIONS RELATED TO TUMOR VIRUS INFECTION.....	5R01 CA23002-02	134,281
OZER, HARVEY L.....	REGULATION OF EXPRESSION OF VIRAL TRANSFORMATION.....	3R01 CA23003-01S1	17,849
OZER, HARVEY L.....	REGULATION OF EXPRESSION OF VIRAL TRANSFORMATION.....	2R01 CA23003-02	63,275
ORGANIZATION TOTAL	11	605,098	
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029			
ABRAMSON, RUTH G.....	MICROPUNCTURE STUDY OF URATE TRANSPORT IN RAT KIDNEY.....	2R01 AM12872-10	122,571
ACS, GEORGE.....	CHEMOTHERAPEUTIC DEOXYRIBONUCLEOSIDES.....	5R01 CA16890-05	97,603
ANDERSON, HENRY A.....	CANCER AMONG HOUSEHOLD CONTACTS OF ASBESTOS WORKERS.....	1R01 CA22792-01	83,452
BAHLER, ALAN S.....	COMPETITIVE CORONARY FLOW IN NATIVE AND GRAFT VESSELS.....	5R01 HL20163-02	90,156
BARKA, TIBOR D.....	LOCALIZATION OF POLYPEPTIDES IN SALIVARY GLAND.....	1R01 AM19753-01A1	91,672
BARKA, TIBOR D.....	ISOPROTERENOL AND CARCINOGENESIS.....	1R01 CA24005-01	39,773
BARKA, TIBOR D.....	TUMOR PROMOTERS, GROWTH AND DIFFERENTIATION.....	1R01 CA24023-01	47,333
BEATTIE, DIANA S.....	HEPATIC ALA SYNTHETASE AND ITS CONTROL IN AGING.....	5R01 AG00099-02	73,792
BEATTIE, DIANA S.....	CONTROL OF PROTEIN SYNTHESIS IN THE DIABETIC RAT.....	1R01 AM20953-01	41,506
BEATTIE, DIANA S.....	SYNTHESIS OF MITOCHONDRIAL PROTEIN.....	5R01 HD04007-09	32,745
BENTLEY, PETER J.....	PHARMACOLOGY OF LENTICULAR ION TRANSPORT.....	5R01 EY01278-05	58,098
BERL, SOLL.....	AMINO ACIDS & PROTEINS IN BRAIN STRUCTURE & FUNCTION.....	5R01 NS11824-05	98,691
BHUYAN, KAILASH C.....	MECHANISM OF CATARACTOGENESIS CAUSED BY AMINOTRIAZOL.....	7R01 EY03012-01	144,301
BODIS WOLLNER, IVAN G.....	PARALLEL PATHWAYS IN HUMAN VISION.....	5R01 EY01708-02	92,151
BRODSKY, WILLIAM A.....	RENAL ION TRANSPORT: CONTROL BY INSULIN OTHER AGENTS.....	2R01 AM16928-04A2	106,044
BROWN, W VIRGIL.....	STRUCTURE AND FUNCTION OF HEPARIN RELEASABLE LIPASES.....	1R01 HL22967-01	132,041
BURSTEIN, SHLOMO.....	POLAR CORTICOIDS IN ANIMALS AND CANCER.....	5R01 CA19102-04	160,203
CALHOUN, DAVID H.....	CONTROL OF GENE EXPRESSION BY AN ALLOSTERIC ENZYME.....	5R01 GM23182-03	45,591
CANDIA, OSCAR A.....	ELECTROLYTE AND FLUID TRANSPORT IN OCULAR MEMBRANES.....	5R01 EY00160-08	112,845
CANDIA, OSCAR A.....	INTERDISCIPLINARY RESEARCH CENTER FOR VISUAL SCIENCES.....	5P30 EY01867-02	117,564
CHALMERS, THOMAS C.....	TECHNICAL EVALUATION OF THE THERAPEUTIC LITERATURE.....	1R01 LM03116-01	118,628
CHURG, JACOB.....	RENAL, VASCULAR AND PULMONARY STRUCTURE IN DISEASE.....	2R01 AM00918-24	125,806
COHEN, BERNARD.....	VISUAL CONTROL OF THE OCULOMOTOR SYSTEM.....	1R01 EY02296-01	78,454
COHEN, BERNARD.....	THE OCULOMOTOR SYSTEM AND BODY POSTURAL MECHANISMS.....	2R01 NS00294-24	88,321
DESNICK, ROBERT J.....	THERAPY OF GENETIC DISEASES.....	1R01 GM25279-01	119,367
FRANK, ARTHUR L.....	MINERAL FIBER SIZE AND CARCINOGENICITY IN VITRO.....	1R23 CA24271-01	36,100
FRIEND, CHARLOTTE.....	FILTERABLE AGENTS AND TUMOR INDUCTION IN MICE.....	5R01 CA10000-13	173,374
FRIEND, CHARLOTTE.....	CONTROL MECHANISMS OF DIFFERENTIATION AND MALIGNANCY.....	5R01 CA13047-07	163,592
GARRO, ANTHONY J.....	DETECTING ALKYL HALIDE MUTAGENICITY WITH ISOLATED DNA.....	5R01 CA22354-02	39,178
GAULL, GERALD E.....	GENETIC VARIATION IN DEFECTS OF AMINO ACID METABOLISM.....	1R01 AM20236-01	76,970
GITLOW, STANLEY E.....	CATECHOLAMINE METABOLISM IN HYPERTENSIVE DISEASES.....	5R01 HL12648-09	115,542
GLASS, JOHN D.....	SOLID-PHASE PEPTIDE SYNTHESIS.....	5R01 GM18752-06	64,345
GREENGARD, OLGA.....	THE REGULATION OF MAMMALIAN ENZYME SYNTHESIS.....	7R01 CA25005-01	107,166
GREENGARD, OLGA.....	HUMAN LUNG NEOPLASMS: APPLICATIONS OF ENZYME-PATHOLOGY.....	1R01 CA25016-01	89,108
GREENGARD, OLGA.....	DEVELOPMENTAL BRAIN DEFECTS IN HYPERAMINOACIDEMIAS.....	1R01 HD12636-01	92,982
GURPIDE, ERLIO.....	STEROID DYNAMICS IN HUMAN ENDOMETRIAL CANCER.....	5R01 CA15648-05	129,198
GURPIDE, ERLIO.....	STEROID DYNAMICS IN ENDOCRINOLOGY.....	5R01 HD07197-07	161,060
HEIKKILA, RICHARD E.....	MODE OF ACTION OF DIABETOGENIC AGENTS.....	5R01 AM21260-02	68,174
HENLEY, WALTER L.....	COMMON HUMAN AND ANIMAL ANTIGENS IN CORNEA.....	5R01 EY01689-03	115,527
HOLLAND, JAMES F.....	CANCER AND LEUKEMIA GROUP B.....	5R10 CA04457-19	353,019
HOLLAND, JAMES F.....	CHEMOTHERAPY AND CHEMOIMMUNOTHERAPY OF CANCER.....	2P01 CA15936-04A1	1,580,822
HOLLAND, JAMES F.....	CANCER AND ACUTE LEUKEMIA GROUP B (OPERATIONS).....	5R10 CA16118-05	944,551
HUANG, PENG Y.....	CEREBRAL VEINS—ANATOMICAL & RADIOLOGICAL CORRELATIONS.....	5R01 HL09913-13	39,819
KATSOYANNIS, PANAYOTIS G.....	SYNTHETIC INSULINS AND ANALOGS.....	5R01 AM12925-09	134,058
KILBOURNE, EDWIN D.....	BIOLOGY AND BIOCHEMISTRY OF INFLUENZA VIRUSES.....	5R01 AI09304-10	218,429
KILBURN, KAYE H.....	DETERMINE IN UTERO LUNG SENSITIVITY OF CHEMICAL TOXINS.....	1R01 ES01865-01	122,030
KIRCHBERGER, MADELEINE A.....	C-AMP-DEPENDENT PROTEIN KINASE IN CARDIAC CONTRACTION.....	5R01 HL15764-05	55,533
KLEINERMAN, JEROME I.....	NO ₂ , COLLAGEN AND ELASTIN: EXPERIMENTAL EMPHYSEMA.....	1R01 ES02110-01	90,437
KLEINERMAN, JEROME I.....	EXPERIMENTAL EMPHYSEMA—DEPRESSION OF PROTEASE INHIBITOR.....	1R01 HL23595-01	80,954
KNITTLE, JEROME L.....	EFFECT OF EARLY NUTRITION ON GROWTH AND DEVELOPMENT.....	3R01 HD03326-10S1	24,927
KORITZ, SEYMOUR B.....	ADRENAL METABOLISM POSSIBLY RELATED TO ACTH ACTION.....	5R01 AM13361-10	76,708
KRAKOFF, LAWRENCE R.....	RENIN AND VASCULAR HYPER-REACTIVITY IN HYPERTENSION.....	5R01 HL13595-08	98,149
KRIEGER, DOROTHY T.....	CENTRAL NERVOUS SYSTEM-PITUITARY-ADRENAL INTERRELATIONS.....	2R01 NS02893-16	130,304

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
KUPFER, SHERMAN	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00071-15	729,157
LIEBER, CHARLES S	EFFECTS OF ETHANOL AND MALNUTRITION ON THE LIVER.....	3R01 AM12511-09A1S1	28,407
LIEBER, CHARLES S	EFFECTS OF ETHANOL AND MALNUTRITION ON THE LIVER.....	5R01 AM12511-10	94,663
MC EVOY, ROBERT C	DIFFERENTIATION/GROWTH OF PANCREAS IN VIVO/IN VITRO.....	7R01 AM25257-01	86,054
MILVY, PAUL	MUTAGENICITY OF SELECTED TEXTILE DYES AND COLORANTS.....	1R01 ES01867-01	38,790
MITTAG, THOMAS W	DRUG EFFECTS ON IRIS AND CILIARY BODY ADENYLATE CYCLASE.....	1R01 EY02619-01	84,844
MITTAG, THOMAS W	MEMBRANE-BOUND ENZYMES AND DRUG RECEPTORS IN MUSCLE.....	2R01 NS10124-07	70,640
NEMERSON, YALE R	KINETIC AND MECHANISTIC STUDIES OF BLOOD COAGULATION.....	1R01 HL22980-01	205,200
ORLOWSKI, MARIAN	ORGAN SPECIFIC DRUGS: CARDIOVASCULAR AND RENAL EFFECTS.....	5R01 HL21105-02	75,279
ORLOWSKI, MARIAN	GLUTATHIONE METABOLISM AND BRAIN AMINO ACID UPTAKE.....	5R01 NS11018-04	62,949
PALESE, PETER M	STUDIES WITH SYNTHETIC NEURAMINIDASE SUBSTRATES.....	5R01 AI11823-05	115,028
PASIK, TAUBA	MATURATION OF MONKEY VISUAL AND BASAL GANGLIA SYSTEMS.....	1R01 EY01926-01A1	83,244
PATTERSON, RANDOLPH E	ISCHEMIC MYOCARDIUM: DELIVERY OF BLOOD FLOW AND DRUGS.....	5R23 HL21151-02	54,772
PODOS, STEVEN M	IN VIVO INHIBITORS OF OCULAR PROSTAGLANDIN SYNTHESIS.....	2R01 EY01661-04	53,452
PUSZKIN, SAUL	MICROSTRUCTURAL INTEGRITY OF STORED HUMAN PLATELETS.....	5R01 HL20718-02	76,999
PUSZKIN, SAUL	NEUROTRANSMITTERS, SYNAPTOSOMES AND CONTRACTILE PROTEINS.....	2R01 NS12467-04	110,366
RAYFIELD, ELLIOT J	CARBOHYDRATE METABOLISM--INFECTION INTERRELATIONSHIPS.....	3R01 AM18522-03S1	26,109
REINACH, PETER S	COUPLING BETWEEN METABOLISM/IONIC TRANSPORT IN CORNEAS.....	5R01 EY01976-02	47,964
ROSENFELD, RICHARD E	ABO ERYTHROBLASTOSIS.....	5R01 HD03972-20	116,586
SACHAR, DAVID B	STUDIES OF THE ILEITIS GRANULOMA-TRANSMITTING AGENT.....	5R01 AM19695-02	88,831
SCHER, WILLIAM	MOLECULAR CONTROL OF FRIEND LEUKEMIA CELL MATURATION.....	1R01 CA24402-01	115,623
SCHIAVI, RAUL C	DIABETES MELLITUS AND SEXUAL DYSFUNCTION.....	5R01 AM20845-02	82,745
SCHULMAN, JEROME L	BIOLOGICAL ASSAY OF DEFINED INFLUENZA A RECOMBINANTS.....	5R01 AI14053-02	45,193
SCHUSSLER, GEORGE C	THYROID HORMONE TRANSPORT AND CELLULAR UPTAKE.....	5R01 AM19356-03	91,016
SCHWARTZ, IRVING L	MECHANISM OF ACTION OF PEPTIDE HORMONES.....	5R01 AM10080-14	153,075
SCOTT, WALTER N	CHARACTERIZATION OF STEROID-INDUCED PROTEINS.....	5R01 AM19130-03	60,309
SCOTT, WALTER N	MECHANISM OF INSULIN'S ACTION UPON TRANSPORT.....	1R01 AM22038-01	64,947
SCOTT, WALTER N	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05653-11	200,462
SELIKOFF, IRVING J	ENVIRONMENTAL HEALTH SCIENCES CENTER GRANT.....	2P30 ES00928-06	1,469,628
SMITH-WRIGHT, MOYRA	STUDIES ON I _G SYNTHESIS IN SOMATIC CELL HYBRIDS.....	1R01 AI14287-01	36,928
STEINMAN, CHARLES R	ETIOLOGY OF RHEUMATOID ARTHRITIS & LUPUS ERYTHEMATOSUS.....	5R01 AM15544-07	130,753
TIMMERS, KIM I	SERUM FACTORS AND INSULIN-SENSITIVITY IN OBESITY.....	1R01 AM22183-01	101,738
ULICK, STANLEY	DISORDERS OF STEROID HORMONE BIOSYNTHESIS.....	5R01 AM14040-10	96,674
ULICK, STANLEY	ROLE OF THE ADRENAL CORTEX IN HUMAN HYPERTENSION.....	5R01 HL18102-02	54,736
VALCIUKAS, JOSE A	BEHAVIORAL INDICATORS OF LEAD NEUROTOXICITY.....	1R01 ES01933-01	10,390
WASSERMAN, LOUIS R	COOPERATIVE STUDY OF POLYCYTHEMIA VERA.....	5R10 CA10728-11	477,522
WAXMAN, SAMUEL	FOLIC ACID BINDING PROTEIN IN FOLATE METABOLISM.....	2R01 AM16690-04A2	66,967
WERTHER, J LAWRENCE	ABSORPTION OF CARCINOGENS AND MUCOSAL BARRIER FUNCTION.....	5R01 CA15541-04	58,470
WETMUR, JAMES G	PHYSICAL MAPPING OF POINT MUTANTS OF PARAMYXOVIRUSES.....	5R01 AI14094-02	60,264
WETMUR, JAMES G	RENATURATION AND HYBRIDIZATION OF NUCLEIC ACIDS.....	2R01 GM22029-05	58,874
WHETSSELL, WILLIAM O, JR	NERVOUS SYSTEM PORPHYRINS AND LEAD AND PCB EFFECTS.....	1R01 ES01580-01A1	98,389
YAHR, MELVIN D	PARKINSON'S AND ALLIED DISEASES.....	5P50 NS11631-05	650,265
ORGANIZATION TOTAL	95	14,135,066	
CITY UNIVERSITY OF NEW YORK--QUEENS COLLEGE ZIP CODE 11367			
BITTMAN, ROBERT	PHOSPHOLIPID-CHOLESTEROL, PROTEIN INTERACTIONS.....	5R01 HL16660-06	72,703
BITTMAN, ROBERT	STRUCTURAL ORGANIZATION OF CHOLESTEROL IN SERUM LIPIDS.....	1R01 HL22052-01	33,859
BOYLAN, ELIZABETH S	FETAL EXPOSURE TO HORMONES AND MAMMARY CARCINOGENESIS.....	2R01 CA18458-03	76,011
FRUMKES, THOMAS E	ROD-CONE INTERRELATIONSHIPS IN HUMAN VISION.....	5R01 EY01802-02	55,040
KIRMAN, JACOB H	TACTILE COMMUNICATION OF SPEECH TO THE DEAF.....	5R01 NS06205-10	87,847
MICHELS, CORINNE A	YEAST--A MODEL FOR STUDYING REGULATION IN CANCER CELLS.....	5R01 CA18394-04	64,577
SWICK, KENNETH E	AGE-DEPENDENT POPULATION DYNAMICS.....	5R01 GM24326-02	20,753
SZALAY, JEANNE	REGULATION OF IRIS BLOOD VESSEL REACTIVITY IN AGING.....	5R01 EY01631-02	62,222
TROPP, BURTON E	CHEMICAL REGULATORS OF PHOSPHOLIPID METABOLISM.....	2R01 GM21400-04	76,780
WASSERMAN, MARVIN	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07064-11	34,967
ORGANIZATION TOTAL	10	584,759	
CITY UNIVERSITY OF NEW YORK--YORK COLLEGE ZIP CODE 11432			
D'ADAMO, AMEDEO F, JR	SUPPORT FOR BIOMEDICAL SCIENCES.....	3S06 RR08153-02S1	918
D'ADAMO, AMEDEO F, JR	SUPPORT FOR BIOMEDICAL SCIENCES.....	5S06 RR08153-03	68,812

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ORGANIZATION TOTAL	2	69,730	
COLUMBIA UNIVERSITY ZIP CODE 10027			
ABEL, GENE G.....	SEXUAL DISORDERS RESULTING FROM DIABETES.....	3R01 AM25630-01S1	135,059
ABRAMSON, MAXWELL.....	PATHOGENESIS AND BONE RESORPTION IN AURAL CHOLESTEATOMA.....	5R01 NS13951-02	114,592
AL-AWQATI, QAIS.....	ACTIVE H ₂ O TRANSPORT IN URINARY ACIDIFICATION.....	1R01 AM20999-01	73,000
AL-AWQATI, QAIS.....	CONTROL OF SODIUM TRANSPORT AND CELLULAR RESPIRATION.....	5R01 HL21849-02	50,674
AMBRON, RICHARD T.....	PROCESSING OF MEMBRANE GLYCOPROTEIN IN SINGLE NEURONS.....	1R01 NS14555-01	58,970
ANDERSON, ETHEL I.....	INTERMEDIARY METABOLISM OF THE CORNEA.....	5R01 EY00699-08	65,446
AXEL, RICHARD.....	MOLECULAR CONTROL OF CHROMATIN TRANSCRIPTION.....	2R01 CA16346-04	110,977
BALAZS, ENDRE A.....	HYALURONIC ACID AND ARTHRITIS.....	1R01 AM21826-01	106,837
BALAZS, ENDRE A.....	BASIC OPHTHALMIC RESEARCH PROGRAM.....	3P30 EY00396-10S1	197,046
BALAZS, ENDRE A.....	PHYSIOLOGY AND PATHOLOGY OF THE VITREOUS.....	5R01 EY01747-04	209,501
BANK, ARTHUR.....	NORMAL/ABNORMAL CELL GROWTH MULTIDISCIPLINARY STUDY.....	9R01 AM25274-13	177,730
BANK, ARTHUR.....	ACUTE LEUKEMIA GROUP B STUDIES.....	3R10 CA12011-05S3	30,309
BANK, ARTHUR.....	ISOLATION AND CHARACTERIZATION OF HUMAN GLOBIN GENES.....	5R01 GM23143-03	63,735
BARRON, BRUCE A.....	STATISTICAL STUDIES OF GYNECOLOGICAL CANCERS.....	3R01 CA19145-02S1	10,884
BARRON, BRUCE A.....	STATISTICAL STUDIES OF GYNECOLOGICAL CANCERS.....	2R01 CA19145-03	47,067
BASSETT, C ANDREW.....	BIOELECTRIC PHENOMENA CONTROLLING BONE GROWTH.....	2R01 AM07822-15	119,390
BENESCH, REINHOLD.....	OXYGEN TRANSPORT IN THE PRESENCE OF CARBON MONOXIDE.....	5R01 ES01560-02	26,286
BENESCH, RUTH E.....	STRUCTURE AND FUNCTION IN HEMOGLOBINS.....	5R01 HL05791-18	82,341
BERNE, BRUCE J.....	MOLECULAR DYNAMICS AND LIGHT SCATTERING OF FLUIDS.....	5R01 NS12714-03	49,560
BERSOHN, RICHARD.....	BIFUNCTIONAL STUDIES OF PROTEINS.....	5R01 GM19019-15	62,258
BEYCHOK, SHERMAN.....	PROTEINS OF PLASMA CELL CANCERS.....	2R01 CA13014-07	69,500
BEYCHOK, SHERMAN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07060-13	146,583
BILEZIKIAN, JOHN P.....	THE BETA ADRENERGIC CATECHOLAMINE RECEPTOR.....	5R01 HL20859-02	38,857
BITO, LASZLO Z.....	OCULAR FLUID COMPOSITION AND OCULAR TISSUE PHYSIOLOGY.....	5R01 EY00333-12	152,818
BITO, LASZLO Z.....	THE CONTROL OF TISSUE-SENSITIVITY TO AUTONOMIC AGENTS.....	5R01 EY00402-11	85,109
BRANDT, PHILIP W.....	CELL PHYSIOLOGY CORRELATED WITH ULTRASTRUCTURE.....	2R01 NS05910-12	62,184
BRASEL, JO ANNE.....	NUTRITION, PREGNANCY, LACTATION & MATERNAL FAT STORES.....	1R01 HD12109-01	63,353
BRESLOW, RONALD C.....	BIOCHEMICAL MODEL REACTIONS.....	5R01 GM18754-17	104,033
BRYANT, JOHN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05449-17	93,740
BUTLER, VINCENT P, JR.....	DIGOXIN-SPECIFIC ANTIBODIES.....	5R01 HL10608-12	80,691
CALVIN, HAROLD I.....	PROTEINS OF MAMMALIAN SPERMATOZOA.....	5R01 HD05316-07	100,719
CANFIELD, ROBERT E.....	CHEMICAL STUDIES OF HORMONES AND METABOLIC DISORDERS.....	3R01 AM09579-13S1	39,150
CANFIELD, ROBERT E.....	CHEMICAL STUDIES OF HORMONES AND METABOLIC DISORDERS.....	5R01 AM09579-14	175,609
CANNON, PAUL J.....	CIRCULATORY FUNCTION AND ELECTROLYTE METABOLISM.....	5R01 HL10182-13	91,104
CANNON, PAUL J.....	THE REGIONAL CIRCULATIONS.....	5R01 HL14148-07	236,089
CANTOR, CHARLES R.....	NEW TECHNIQUES FOR COMPLEX MACROMOLECULAR ASSEMBLIES.....	5R01 GM14825-12	98,750
CANTOR, CHARLES R.....	FLUORESCENCE AND CHEMICAL STUDIES ON RIBOSOMES.....	5R01 GM19843-06	106,106
CHANG, CHU H.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA14060-06	50,086
CHANG, HAI WON.....	FUNCTIONAL PROPERTIES OF ACETYLCHOLINE RECEPTOR.....	1R01 NS13744-01A1	36,149
CHASIN, LAWRENCE A.....	MITOTIC RECOMBINATION IN CULTURED MAMMALIAN CELLS.....	2R01 GM22629-04	71,361
CHEN, JOHN H.....	GENETICALLY LINKED CATARACT AND OTHER LENS DISORDERS.....	1R01 EY02309-01	89,750
CHESS, LEONARD.....	DIFFERENTIATION ANTIGENS ON HUMAN T CELL SUBCLASSES.....	1R01 AI14969-01	96,241
CHIEN, SHU.....	HUMAN RED CELL MEMBRANE IN HEALTH AND DISEASE.....	5P01 HL16851-04	608,245
CHIEN, SHU.....	RHEOLOGICAL FACTORS IN TRANSPORT ACROSS ARTERIAL WALL.....	5R01 HL19454-02	168,991
COLEMAN, D JACKSON.....	ULTRASONIC EVALUATION OF OCULAR TISSUES.....	5R01 EY01218-05	106,829
COLEMAN, D JACKSON.....	THERAPEUTIC ULTRASOUND IN OPHTHALMOLOGY.....	1R01 EY02297-01	67,103
COTE, LUCIEN J.....	SENESCENCE-NEUROCHEMICAL AND CYTOLOGICAL STUDIES.....	5R01 AG00276-02	108,741
CRAWSHAW, LARRY I.....	TEMPERATURE REGULATION IN VERTEBRATES.....	1R01 NS15318-01	48,751
CURNEN, MARY G.....	CANCER RISK IN PHYSICIANS AND LAWYERS.....	2R01 CA17480-03	186,177
D'ALESSANDRO, PHILIP A.....	COMPARATIVE STUDY OF TRYPANOSOMAL EXOANTIGENS.....	5R01 AI13387-03	85,460
DAILEY, BENJAMIN P.....	DEUTERIUM NMR AS A PROBE OF MOLECULAR STRUCTURE.....	2R01 GM22310-04	79,355
DANILO, PETER, JR.....	PERINATAL CARDIAC ELECTROPHYSIOLOGY.....	5R23 HL21368-02	38,049
DESPOMMIER, DICKSON D.....	FUNCTIONAL ANTIGENS OF TRICHINELLA SPIRALIS.....	5R01 AI10627-08	87,498
DILLON, JAMES P.....	INVESTIGATION OF THE EFFECT OF LIGHT ON THE HUMAN LENS.....	1R01 EY02283-01	66,391
DOBELLE, WILLIAM H.....	HIGH YIELD ISOLATION ANIMAL/HUMAN PANCREATIC ISLETS.....	1R01 AM21861-01	147,985
EAKINS, KENNETH E.....	OCULAR EFFECTS OF PROSTAGLANDINS.....	3R01 EY00457-09S1	3,077
EAKINS, KENNETH E.....	OCULAR EFFECTS OF PROSTAGLANDINS.....	5R01 EY00457-10	151,349

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
EDELMAN, ISIDORE S.....	CELL MEMBRANE DETERMINANTS OF NAC1 TRANSPORT	7R01 AM21698-01	44,037
EDELMAN, ISIDORE S.....	REGULATION OF ACTIVE NAO TRANSPORT.....	1R01 HL23115-01	257,905
EDELSON, RICHARD L.....	IMMUNOBIOLOGY OF CUTANEOUS T CELL LYMPHOMAS	5R01 CA20499-02	76,450
EGGERS, HOWARD M.....	ANIMAL MODEL OF AMBLYOPIA.....	1R23 EY02634-01	11,590
EISENBERG, MAX A.....	BIOTIN; BIOGENESIS, TRANSPORT, AND THEIR REGULATION.....	5R01 AM14450-09	78,558
EISENTHAL, KENNETH B.....	PICOSECOND LASER STUDIES OF HEME-PROTEINS.....	2R01 HL19488-03	51,138
ELLISON, ROSE R.....	CANCER AND LEUKEMIA GROUP B.....	2R10 CA12011-06A1	89,618
EMMERS, RAIMOND.....	NEUROPHYSIOLOGICAL MECHANISMS OF SENSORY MODALITIES.....	5R01 NS03266-15	48,828
ENSINGER, MARCIA J.....	TEMPERATURE-SENSITIVE MUTANTS OF VACCINIA VIRUS.....	5R01 AI13790-02	81,194
ERLANGER, BERNARD F.....	IMMUNOCHEMICAL STUDIES OF NUCLEIC ACIDS	5R01 AI06860-13	91,769
FEIGELSON, PHILIP.....	CONTROL OF GENE EXPRESSION: NORMAL AND NEOPLASTIC	5P01 CA22376-02	284,780
FERIN, MICHEL J.....	THE HYPOPHYSIS AND REPRODUCTION IN RHESUS MONKEYS.....	5R01 HD10873-02	57,037
FISCHBARG, JORGE.....	BIOELECTRICAL PROPERTIES OF CORNEAL ENDOTHELIUM.....	3R01 EY01080-05S2	10,809
FISCHBARG, JORGE.....	BIOELECTRICAL PROPERTIES OF CORNEAL ENDOTHELIUM.....	5R01 EY01080-06	124,724
FLEISS, JOSEPH L.....	STATISTICAL METHODS IN DENTAL RESEARCH	5R01 DE04068-04	53,058
FRANTZ, ANDREW G.....	PROLACTIN STUDIES.....	5R01 CA11704-08	124,173
GANGAT, YAKUB M.....	ANESTHETICS/CAMP SYSTEM—MODE OF ACTION, HEART EFFECT.....	5R23 GM24307-02	41,733
GERSHON, MICHAEL D.....	NEURAL CONTROL OF GASTROINTESTINAL ACTIVITY.....	2R01 NS12969-03	84,816
GINSBERG, HAROLD S.....	BIOCHEMICAL CHANGES—ADENO-INFECTED & TRANSFORMED CELLS.....	5R01 AI12052-06	145,613
GINSBERG, HAROLD S.....	STUDY OF THE MECHANISMS OF VIRAL ECLIPSE AND ASSEMBLY	5R01 AI12053-06	117,828
GLICKMAN, ROBERT M.....	CHYLOMICRONS—FORMATION, STRUCTURE, AND FUNCTION	5R01 AM21367-02	103,811
GODMAN, GABRIEL C.....	CYTOCHALASINS AND CELL MEMBRANE CONTRACTILE APPARATUS.....	5R01 CA20836-02	94,150
GOLDBERG, DANIEL J.....	STUDIES OF AXONAL TRANSPORT USING SINGLE NEURONS.....	1R01 NS14711-01	60,611
GOODMAN, DE WITT S.....	METABOLISM AND NUTRITION-VITAMIN D TRANSPORT.....	5R01 AM05968-18	253,296
GOODMAN, DE WITT S.....	SPECIALIZED CENTER OF RESEARCH IN ARTERIOSCLEROSIS.....	5P50 HL21006-02	753,291
GOURAS, PETER.....	NEUROPHYSIOLOGY OF PRIMATE VISION.....	1R01 EY02591-01	196,099
GREENBAUM, LOWELL M.....	ANTI-PROTEASES AS POTENTIAL ASCITES RETARDANTS.....	1R01 CA24235-01	73,045
GREER, JONATHAN.....	STRUCTURE AND FUNCTION OF BLOOD PROTEINS	5R01 HL16601-05	54,449
GUNTAKA, RAMAREDDY V.....	STRUCTURE AND FUNCTION OF AVIAN SARCOMA VIRAL DNA	5R01 CA19152-03	67,822
HALL, ERIC J.....	RADIOLOGICAL STUDIES RELATED TO HIGH LET RADIOTHERAPY.....	5R01 CA18506-03	111,335
HALL, ERIC J.....	RADIOBIOLOGICAL STUDIES AT LOW DOSE-RATE	1R01 CA24232-01	121,767
HANSON, RONALD L.....	MECHANISM OF ENERGY-DRIVEN TRANSHYDROGENASE.....	5R01 GM23092-03	51,529
HARBER, LEONARD C.....	PHOTOSENSITIVITY: ENVIRONMENTAL AND OTHER FACTORS.....	2R01 ES01041-05	174,819
HARVEY, REJANE M.....	LUNG DISEASE AND THE OXYGENATION OF BLOOD AND TISSUE.....	5P01 HL17813-04	524,246
HEMBREE, WYLIE C, III.....	TRITIATED PEPTIDES/PROTEINS IN ENDOCRINE BIOCHEMISTRY.....	2R01 AM16735-04A1	137,740
HENDERSON, ANN S.....	NUCLEIC SEQUENCE LOCATION BY HYBRIDIZATION IN SITU	2R01 GM21833-04	54,554
HILAL, SADEK K.....	GUIDED VASCULAR OBLITERATION OF CNS VASCULAR LESIONS.....	5R01 HL15781-06	58,153
HILAL, SADEK K.....	CEREBRAL BLOOD FLOW WITH STABLE XEONON CMPTR TOMOGRAPHY	5R01 HL20761-02	53,301
HOFFMAN, BRIAN F.....	CARDIAC CONDUCTIVITY AND AUTOMATICITY	5R01 HL08508-15	93,785
HOFFMAN, BRIAN F.....	PHYSIOLOGICAL PHARMACOLOGY AND ITS CLINICAL APPLICATIONS.....	5P01 HL12738-10	1,412,196
HOLTZMAN, ERIC.....	INTRANEURONAL MEMBRANE CIRCULATION AND TRANSPORT.....	5R01 NS09475-09	75,820
HOOD, DONALD C.....	CONE SATURATION AND LIGHT ADAPTATION IN HUMANS	5R01 EY02115-02	44,387
HUANG, CHENQ-CHUN.....	COLLAGENASE AND INVASION OF HEAD AND NECK TUMORS.....	1R01 CA22907-01	113,101
ISHII, DOUGLAS N.....	NEURONAL TUMORS NERVE GROWTH FACTOR & DIFFERENTIATION.....	1R01 NS14218-01	75,624
JAGIELLO, GEORGIANA M.....	ENDOCRINE CONTROL OF MAMMALIAN FEMALE MEIOSIS.....	5R01 HD05862-08	63,192
JAGIELLO, GEORGIANA M.....	CYTOGENETICS OF FEMALE MAMMALIAN MEIOSIS.....	5R01 HD10037-03	102,296
JAKOBIEC, FREDERICK A.....	OCULAR LYMPHOID TUMORS: IMMUNOLOGY AND ULTRASTRUCTURE.....	1R01 EY02641-01	108,753
JAMES, L STANLEY.....	SUPPORT FOR LUNG CENTER FOR NEWBORNS.....	5P50 HL14218-07	749,188
KABAT, ELVIN A.....	GENETICS OF HUMAN CELL SURFACE (BLOOD GROUP) ANTIGENS.....	1R01 GM23457-01A1	55,269
KANDEL, ERIC R.....	CELLULAR ANALYSES OF BEHAVIOR.....	5P01 GM23540-03	376,872
KANDEL, ERIC R.....	PLASTICITY OF THE SIMPLEST NEURONAL PATHWAYS.....	5R01 NS12744-05	173,914
KARLIN, ARTHUR.....	MOLECULAR PROPERTIES OF TWO ACETYLCHOLINE RECEPTORS.....	5R01 NS07065-12	119,907
KATZ, THOMAS J.....	SYNTHESIS OF RING SYSTEMS.....	5R01 GM19173-15	85,114
KAVEY, NEIL.....	TRAUMA AND SLEEP PHYSIOLOGY.....	5R01 GM22515-03	103,172
KIMBERG, DANIEL V.....	REGULATION OF INTESTINAL CALCIUM TRANSPORT.....	5R01 AM19945-02	173,497
KINNEY, JOHN M.....	INFLUENCE OF ACUTE ILLNESS AND INJURY ON ENERGY EXCHANGE.....	3P50 GM14546-11S2	11,654
KINNEY, JOHN M.....	INFLUENCE OF ACUTE ILLNESS AND INJURY ON ENERGY EXCHANGE.....	2P50 GM14546-12A1	583,772
KNOWLES, DANIEL M, II.....	EXTRA-NODAL LYMPHOMAS: IMMUNOLOGY AND ULTRASTRUCTURE.....	1R01 CA24679-01	42,134
KOESTER, JOHN.....	CELLULAR NEURONAL CONTROL OF BEHAVIOR	1R01 NS14385-01	26,571
KOOPMANS, HENRY S.....	THE SATIATION OF HUNGER	2R01 AM17926-04	49,091

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
KROOTH, ROBERT S.....	GENE ACTION IN CULTURED HUMAN AND OTHER MAMMALIAN CELLS.....	5R01 GM22103-03	267,259
LEVINTHAL, CYRUS.....	NEURAL DEVELOPMENT: GENETIC & ENVIRONMENTAL CONTROL.....	5R01 NS09821-08	130,741
LEVINTHAL, CYRUS.....	COMPUTER RESOURCE FOR IMAGE PROCESSING AND DISPLAYS.....	5P41 RR00442-10	409,836
LI, LU-KU.....	SUBUNIT INTERACTIONS OF LENS PROTEIN.....	3R01 EY00032-06S2	23,836
LI, LU-KU.....	SUBUNIT INTERACTIONS OF LENS PROTEIN.....	2R01 EY00032-07A1	82,377
LIEBERMAN, SEYMOUR.....	APPLICATION OF CHEMICAL METHODS TO STEROID METABOLISM.....	5R01 AM00110-27	88,348
LIEBERMAN, SEYMOUR.....	ENDOGENOUS LIPOIDAL DERIVATIVES OF ADRENAL STEROIDS.....	1R01 AM20846-01	103,993
LIEBERMAN, SEYMOUR.....	STUDIES OF REPRODUCTIVE BIOCHEMISTRY AND MEDICINE.....	3P01 HD05077-08S1	397,892
LIM, JONG J.....	STANDING-GRADIENT IN CORNEAL ENDOTHELIUM.....	5R23 EY01422-03	9,500
LINKIE, DANIEL M.....	ESTROGEN RECEPTORS & HYPOTHALAMIC-PITUITARY INTERACTION.....	5R01 HD10090-03	64,903
LIPPARD, STEPHEN J.....	METAL BINDING TO POLYNUCLEOTIDES: PROBES AND DRUGS.....	5R01 CA15826-05	79,639
LIPPARD, STEPHEN J.....	LIGAND-BRIDGED BINUCLEAR METAL COMPLEXES AND PROTEINS.....	2R01 GM16449-11	130,898
LITWAK, EUGENE.....	RETIREMENT, MIGRANTS & TASKS OF ORGANIZATIONS & FAMILY.....	5R01 AG00654-02	232,920
LOEB, JOHN N.....	HORMONAL REGULATION OF GROWTH AND DIFFERENTIATION.....	5R01 HD05506-07	97,578
LOW, BARBARA W.....	STRUCTURE OF NEUROTOXINS.....	5R01 NS07747-09	61,376
MANDEL, IRWIN D.....	HOST FACTORS IN CARIES RESISTANCE.....	2R01 DE01554-17	140,963
MANDEL, IRWIN D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05331-15	21,999
MANDL, INES.....	AGING CHANGES IN ELASTIN AND COLLAGEN COMPOSITION.....	5R01 AG00137-02	44,074
MANSKI, WLADYSLAW J.....	IMMUNOLOGICAL STUDY OF NORMAL & PATHOLOGIC OCULAR LENS.....	5R01 EY00189-23	161,131
MANSKI, WLADYSLAW J.....	EFFECTS OF ANTIOCULAR ANTIBODIES ON OCULAR TISSUES.....	5R01 EY00198-20	80,794
MARKS, PAUL A.....	SUPPORT FOR CLINICAL CANCER RESEARCH CENTER.....	5P30 CA13696-07	1,483,377
MARKS, PAUL A.....	LEUKEMIA CELL SYSTEMS: INDUCTION OF DIFFERENTIATION.....	5R01 CA18314-03	106,446
MILCAREK, CHRISTINE A.....	REGULATION AND ADENYLATION OF CYTOPLASMIC MRNA.....	5R01 GM22893-03	50,107
MILLER, ORLANDO J.....	SUPPRESSION OF MALIGNANCY IN CELL HYBRIDS.....	5R01 CA12504-08	78,690
MILLER, ORLANDO J.....	IMMUNOCYTOGENETICS OF SOMATIC CELL HYBRIDS.....	5R01 GM22966-03	60,992
MILLER, ORLANDO J.....	ANTIBODY PROBES OF CHROMOSOME STRUCTURE.....	1R01 GM25193-01	63,414
MILLER, RICHARD C.....	TRANSFORMATION IN VITRO WITH SPLIT DOSES OF RADIATION.....	1R23 CA23952-01	35,563
MORRISON, SHERIE L.....	GENETICS AND BIOCHEMISTRY OF MYELOMA I G PRODUCTION.....	5R01 CA16858-05	77,543
MORSE, JANE H.....	LIPOPROTEINS IN BIOREGULATION OF THE IMMUNE RESPONSE.....	1R01 HL22456-01	77,917
NAKANISHI, KOJI.....	INSECT AND CRUSTACEAN HORMONES AND PHEROMONES.....	5R01 AI10187-08	103,526
NAKANISHI, KOJI.....	STRUCTURAL AND BIOORGANIC STUDIES OF NATURAL PRODUCTS.....	5R01 CA11572-10	113,489
NAKANISHI, KOJI.....	STRUCTURAL AND CONFORMATIONAL STUDIES OF VISUAL PIGMENTS.....	5R01 EY01253-05	23,053
NAKANISHI, KOJI.....	PIGMENT FORMATION WITH RETINALS.....	5R01 EY01811-03	35,492
NASTUK, WILLIAM L.....	FOUR SELECTED PROBLEMS IN NEUROMUSCULAR TRANSMISSION.....	1R01 NS14300-01	71,524
NATTA, CLAYTON L.....	MECHANISMS OF THE INHIBITION OF SICKLING BY DBA.....	3R01 HL19324-02S1	479
NGAI, SHIH-HSUN.....	ANESTHESIOLOGY.....	5P50 GM09069-16	585,641
NIKIAS, MATA K.....	COMPLIANCE FACTORS IN CARIES PREVENTION.....	5R01 DE04303-02	150,335
NOSEL, HYMIE L.....	STUDY OF THROMBOSIS.....	2P01 HL15486-06	869,730
NOWYGR0D, ROMAN.....	MODULATION OF HEART GRAFT ANTIGENICITY BY PERFUSION.....	1R23 HL22448-01	40,151
NUNEZ, ELADIO A.....	STUDIES OF THE PARAFOLLICULAR CELL OF THE THYROID GLAND.....	5R01 AM19743-03	81,769
OSSERMAN, ELLIOTT F.....	DYSCRASIAS OF PLASMA CELLS AND MACROPHAGES.....	5P01 CA21112-02	211,642
PERNIS, BENVENUTO G.....	THE PHYSIOLOGY OF LYMPHOCYTE IMMUNOGLOBULIN RECEPTORS.....	5R01 AI14398-02	177,581
PFFENNINGER, KARL H.....	SURFACE EVENTS DURING PLASMALEMMA GROWTH IN NEURONS.....	5R01 NS13466-02	78,810
PIRANI, CONRAD L.....	STUDIES OF HUMAN AND EXPERIMENTAL RENAL DISEASES.....	5R01 HL16603-05	109,255
POH, MAUREEN B.....	ERYTHROPOIETIC PROTOPORPHYRIA: MECHANISM OF DISEASE.....	5R01 AM18549-03	75,141
POLLACK, ROBERT E.....	ONCOGENIC VIRUS GENE CONTROL OF CELL GROWTH AND SHAPE.....	1R01 CA25066-01	155,037
PRICE, JOHN B, JR.....	CONTROL FACTORS IN HEPATIC REGENERATION.....	3R01 AM07646-14S1	23,837
PRICE, JOHN B, JR.....	CONTROL FACTORS IN HEPATIC REGENERATION.....	2R01 AM07646-15	89,508
REEMTSMA, KEITH.....	PANCREATIC ISLET TRANSPLANTATION.....	3P01 AM19652-01S1	15,978
REEMTSMA, KEITH.....	PANCREATIC ISLET TRANSPLANTATION.....	5P01 AM19652-02	260,589
REEMTSMA, KEITH.....	CARDIAC HETEROTRANSPLANTATION: IMMUNOLOGIC MODIFICATION.....	5R01 HL14799-07	71,395
REUBEN, ROBERTA C.....	MURINE ERYTHROLEUKEMIA CELLS INDUCED TO DIFFERENTIATE.....	1R23 CA24394-01	31,846
RIVLIN, RICHARD S.....	REGULATORY MECHANISMS IN NORMAL NEOPLASTIC CELLS.....	3R01 CA12126-06S1	10,461
ROBBINS, HERBERT E.....	SEQUENTIAL CLINICAL TRIALS AND COMPETING RISKS.....	5R01 GM16895-09	55,065
ROSENBERY, TERRONE L.....	ACETYLCHOLINESTERASE IN EXCITABLE MEMBRANES.....	2R01 NS03304-16A1	27,953
ROSSI, HARALD H.....	EFFECTS OF SMALL DOSES OF IONIZING RADIATION.....	5P01 CA12536-08	418,704
ROSSI, HARALD H.....	CELL IRRADIATIONS WITH MOLECULAR IONS.....	5R01 CA15307-05	118,867
ROSSO, PEDRO P.....	POSTNATAL EFFECTS OF A MATERNAL HIGH VITAMIN C INTAKE.....	5R01 HD10167-03	32,995
ROWLAND, LEWIS P.....	CLINICAL RESEARCH CENTER FOR NEUROMUSCULAR DISEASE.....	5P50 NS11766-05	555,723
SAWYER, WILBUR H.....	NEUROHYPOPHYSIAL REGULATION OF WATER EXCRETION.....	5R01 AM01940-21	142,550

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SCHACHTER, DAVID.....	THE TRANSPORT OF CALCIUM.....	5R01 AM01483-22	123,267
SCHACHTER, DAVID.....	DIABETES MELLITUS: INSULIN CONTROL OF HEXOSE TRANSFER.....	5R01 AM21086-02	69,092
SCHACHTER, DAVID.....	INTESTINAL MICROVILLUS MEMBRANES: MOLECULAR FUNCTION.....	1R01 AM21238-01	54,482
SCHWARTZ, JAMES H.....	BIOCHEMICAL STUDIES IN IDENTIFIED NEURONS.....	5R01 NS12066-05	104,790
SILVERMAN, ANN J.....	DEVELOPMENT OF THE ENDOCRINE HYPOTHALAMUS.....	2R01 HD10665-03	58,398
SILVERSTEIN, SAUL J.....	MOLECULAR BIOLOGY OF HERPES VIRUS.....	2R01 CA17477-04	67,241
SPECTOR, ABRAHAM.....	OCULAR LENS STUDIES.....	5R01 EY00423-10	154,989
SPECTOR, ABRAHAM.....	STUDIES OF THE EFFECTS OF AGING ON THE OCULAR LENS.....	3R01 EY00759-06S3	2,545
SPECTOR, ABRAHAM.....	STUDIES OF THE EFFECTS OF AGING ON THE OCULAR LENS.....	5R01 EY00759-07	135,074
SPIEGELMAN, SOL.....	CLINICAL & LABORATORY NORMAL & ABNORMAL GROWTH STUDIES.....	3P01 CA02332-22S4	81,654
SPOTNITZ, HENRY M.....	TWO DIMENSIONAL ULTRASOUND AND CARDIAC SURGERY.....	1R01 HL22894-01	265,525
SQUIRES, CATHERINE L.....	FUSION OF THE RIBOSOMAL RNA PROMOTOR TO OTHER OPERONS.....	5R01 GM24751-02	52,430
SQUIRES, CATHERINE L.....	TOTAL DNA SEQUENCES OF RIBOSOMAL RNA CISTRONS.....	1R01 GM25178-01	74,299
SRINIVASAN, B D.....	CORNEAL REEPITHELIALIZATION.....	5R01 EY01977-02	70,590
SRINIVASAN, PARITHYCHERY R.....	REGULATION OF ERGOSTEROL AND CHOLESTEROL BIOSYNTHESIS.....	5R01 AM00546-28	77,284
STEINBERG, BETTIE M.....	REGULATION OF REVERSION IN SV40 TRANSFORMED RAT CELLS.....	1R23 CA25096-01	34,029
STERLING, KENNETH.....	THYROXINE BINDING PROTEIN AND HORMONE UTILIZATION.....	3R01 AM10739-12S1	11,237
STERLING, KENNETH.....	THYROXINE BINDING PROTEIN AND HORMONE UTILIZATION.....	5R01 AM10739-13	48,010
STILL, WILLIAM C, JR.....	SYNTHESIS OF ANTITUMOR AGENTS.....	5R01 CA23094-02	63,609
STORK, GILBERT.....	SYNTHESIS OF BIOLOGICALLY ACTIVE NATURAL PRODUCTS.....	5R01 GM05147-22	136,771
STORK, GILBERT.....	CARDIOACTIVE ALLOYOHIMBINES AND RELATED INDOLE ALKALOIDS.....	5R01 HL16471-05	90,148
SUSSER, MERVYN W.....	EPIDEMIOLOGY OF SPONTANEOUS ABORTION & FETAL DEFECT.....	5R01 HD08838-04	61,065
TALL, ALAN R.....	STRUCTURE AND FUNCTION OF HIGH DENSITY LIPOPROTEIN.....	1R01 HL22682-01	71,126
TAPLEY, DONALD F.....	GENERAL CLINICAL RESEARCH CENTER-ADULT & INFANT UNITS.....	2M01 RR00645-07	1,033,433
TAPLEY, DONALD F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05395-17	200,462
TONNDORF, JUERGEN.....	MECHANICAL PROPERTIES OF THE EAR.....	5R01 NS03654-17	42,459
TORAN-ALLERAND, C D.....	SEX HORMONES AND DEVELOPMENT OF THE GONADOTROPHIC AXIS.....	5R01 HD08364-05	90,025
TURINO, GERARD M.....	CHEMICAL-STRUCTURAL PREDISPOSITIONS TO LUNG INJURY.....	2P01 HL15832-06	624,076
TURRO, NICHOLAS J.....	LUMINESCENT PROBES OF MICELLES AND BIOMOLECULES.....	1R01 GM25523-01	50,250
TZAGOLOFF, ALEXANDER A.....	BIOSYNTHESIS OF CYTOCHROME OXIDASE.....	2R01 GM25250-02	66,336
TZAGOLOFF, ALEXANDER A.....	ASSEMBLY OF MEMBRANES IN HEART AND YEAST MITOCHONDRIA.....	7R01 HL22174-01	184,643
VANDE WIELE, RAYMOND L.....	INTERNATIONAL INSTITUTE FOR STUDY OF HUMAN REPRODUCTION.....	5P30 HD06132-05	404,929
VOGEL, HENRY J.....	STUDIES ON ENZYME REPRESSION IN BACTERIA.....	5R01 AI09297-10	67,342
WEINSTEIN, I BERNARD.....	CLINICAL CANCER EDUCATION.....	2R25 CA18180-04	103,512
WEINSTEIN, I BERNARD.....	MOLECULAR EVENTS IN CHEMICAL CARCINOGENESIS.....	5P01 CA21111-02	541,746
WINICK, MYRON.....	NUTRITION AND CELL GROWTH DURING BRAIN DEVELOPMENT.....	3R22 HD06682-06S1	29,957
WINTERS, ROBERT W.....	STUDIES OF PARENTERAL NUTRITION IN NEWBORN ANIMALS.....	5R01 HD08432-05	285,520
WINTERS, ROBERT W.....	METABOLIC STUDIES OF PARENTERAL NUTRITION IN INFANTS.....	3R01 HD08434-04S1	119,616
WINTERS, ROBERT W.....	METABOLIC STUDIES OF PARENTERAL NUTRITION IN INFANTS.....	2R01 HD08434-05A1	259,208
WOLFF, JAMES A.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA03526-21	74,344
WORGL, BASIL V.....	RADIATION CATARACTOGENESIS.....	1R01 EY02648-01	81,340
ZEGARELLI, EDWARD V.....	CLINICAL CANCER EDUCATION GRANT.....	5R25 CA19424-02	19,138
ZIMMERMAN, EARL A.....	VASOPRESSIN PATHWAYS AND THE PITUITARY-ADRENAL SYSTEM.....	5R01 AM20337-02	74,101
ZUBAY, GEOFFREY L.....	TRANSCRIPTIONAL CONTROL IN INFECTIOUS PLASMIDS.....	5R01 AI13277-02	63,169
ZUBAY, GEOFFREY L.....	CELL-FREE SYSTEMS FOR THE STUDY OF GENE REGULATION.....	2R01 GM16648-10	64,117
ORGANIZATION TOTAL	222	31,082,242	
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021			
ALONSO, DANIEL R.....	RADIONUCLIDE INFARCT SIZING AND THERAPY EVALUATION.....	5R01 HL21684-02	206,724
ANDERSEN, OLAF S.....	CHANNEL-MEDIATED ION TRANSPORT ACROSS LIPID BILAYERS.....	5R01 GM21342-05	82,851
AULD, PETER A.....	FUNCTIONAL ASPECTS OF PULMONARY IMMATUREITY.....	5R01 HD02644-11	59,894
BACHVAROVA, ROSEMARY F.....	SYNTHESIS, CHARACTERIZATION AND FATE OF MOUSE OVUM RNA.....	5R01 HD06910-06	73,091
BECKER, CARL G.....	ARTERIOSCLEROSIS, GLOMERULONEPHRITIS, RHEUMATIC FEVER.....	5R01 HL01803-23	119,596
BEDFORD, J MICHAEL.....	MATURATION AND INTERACTION OF MAMMALIAN GAMETES.....	5R01 HD07257-07	112,140
BEDFORD, J MICHAEL.....	LABORATORY ANIMAL DIAGNOSTIC FACILITY.....	1P40 RR01181-01	47,044
BLACK, IRA B.....	MATERNAL REGULATION OF INFANT DEVELOPMENT.....	1R01 HD12108-01	67,770
BLACK, IRA B.....	REGULATION OF NEURONAL GROWTH AND DEVELOPMENT.....	2R01 NS10259-07	69,577
BLOSS, JOHN P.....	NEUROTRANSMITTER METABOLISM IN VITAMIN DEFICIENCY.....	1R01 NS15125-01	64,577
BRESLOW, ESTHER M.....	INTERACTIONS OF PROTEINS.....	2R01 GM17528-22	102,076
BRISCOE, WILLIAM A.....	EMPHYSEMA: RESPIRATORY FUNCTION IN DISEASE.....	5R01 HL12530-10	93,111

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BROWN, WILLIAM T.....	A STUDY OF CO-CULTIVATED CELLS FROM PROGERIA.....	5R23 AG00632-02	51,665
CURRERI, P WILLIAM.....	METABOLISM AND NUTRITION IN BURNS AND TRAUMA.....	5R01 GM24752-02	70,734
DANES, BETTY S.....	GENETIC STUDIES OF HERITABLE COLORECTAL CANCER.....	5R26 CA15973-05	86,752
DARLINGTON, GRETCHEN J.....	ACTIVATION OF HEPATIC GENES IN CELL HYBRIDS.....	5R01 GM22372-03	93,909
DARLINGTON, GRETCHEN J.....	HUMAN ALPHA-1-ANTITRYPSIN SYNTHESIS IN VITRO.....	5R01 HL18876-03	44,689
DUFFY, THOMAS E.....	PATHOGENESIS OF HEPATIC COMA.....	2R01 AM16739-06	105,858
ENGLE, MARY A.....	IMMUNOLOGIC STUDIES IN POSTPERICARDIOTOMY SYNDROME.....	5R01 HL16246-06	106,781
FAIRCLOUGH, GORDON F, JR.....	BIOSYNTHESIS OF LUNG SURFACTANT LIPID.....	5R01 HL21628-02	50,636
GARDNER, DANIEL.....	SYNAPTIC ORGANIZATION OF AN IDENTIFIED NEURAL NETWORK.....	5R01 NS11555-05	39,961
GAY, WILLIAM A, JR.....	TISSUE PROTECTION DURING CIRCULATORY INTERRUPTION.....	5R01 HL19030-03	120,993
GAZZANIGA, MICHAEL S.....	COMPARATIVE STUDIES ON NEURAL MECHANISMS.....	1R01 NS15053-01	36,544
GIBBS, JAMES G, JR.....	PHYSIOLOGICAL MECHANISMS OF SATIETY.....	5R01 AM17240-05	81,003
GOIDL, EDMOND A.....	LYMPHOCYTE FUNCTION IN AGING HUMANS.....	5R23 AG00681-02	52,150
GOMEZ, DANIEL G.....	RADIOLOGIC ASPECTS OF CEREBROSPINAL FLUID ABSORPTION.....	1R01 NS13844-01A1	101,542
GRAFSTEIN, BERNICE.....	GROWTH OF AXONS IN DEVELOPMENT AND REGENERATION.....	3R01 NS09015-09S1	7,450
GRAFSTEIN, BERNICE.....	GROWTH OF AXONS IN DEVELOPMENT AND REGENERATION.....	5R01 NS09015-10	122,749
HASCHEMEYER, RUDY H.....	BIOPHYSICAL STUDIES ON MACROMOLECULAR INTERACTIONS.....	5R01 HL11822-10	35,221
HEINZ, ERICH.....	ASCITES TUMOR CELLS PROTON PUMPS—MECHANISM/SIGNIFICANCE.....	1R01 GM26554-01	68,554
HILGARTNER, MARGARET W.....	DEFERRIOXAMINE THERAPY IN THALASSEMIA.....	5R01 HL19898-03	97,292
HINKLE, LAWRENCE E, JR.....	PREVENTION OF ACUTE AND FATAL CARDIOVASCULAR DISEASE.....	2R01 HL18776-04	179,215
JAVITT, NORMAN B.....	CHOLESTATIC LIVER DISEASE.....	2R01 AM16201-07	152,288
JOHNSON, WARREN D.....	DIFFERENTIATION OF HUMAN MONONUCLEAR PHAGOCYTES.....	1R01 CA25040-01	85,403
JONES, THOMAS C.....	INTERACTIONS OF PNEUMOCYSTIS, OPSONINS AND PHAGOCYTES.....	5R01 AI10821-05	58,083
JONES, THOMAS C.....	EFFECTS OF IMMUNITY ON INTRACELLULAR PARASITISM.....	5R01 AI12146-05	50,253
LARAGH, JOHN H.....	HYPERTENSION CENTER SUPPORT.....	5P50 HL18323-04	1,209,724
LEE, CHIN O.....	ION ACTIVITIES AND TRANSPORT IN CARDIAC MUSCLE CELLS.....	5R01 HL21136-02	37,608
LEVI, ROBERTO.....	CARDIAC DYSFUNCTIONS CAUSED BY HISTAMINE RELEASE.....	5R01 GM20091-04	95,905
LIEBOW, CHARLES.....	ENTEROPANCREATIC CIRCULATION OF DIGESTIVE PROTEINS.....	5R01 AM20198-02	65,230
LIEBOW, CHARLES.....	PANCREATIC CONTROL BY HISTAMINE.....	1R01 AM21894-01	57,721
LITWIN, STEPHEN D.....	GENETIC CONTROL OF ALLOTYPE EXPRESSION OF HUMAN I G.....	9R01 CA24438-09A1	109,308
MAACK, THOMAS M.....	RENAL TRANSPORT AND METABOLISM OF PROTEINS.....	5R01 AM14241-08	76,920
MEIKLE, THOMAS H.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00047-18	1,212,707
MEISTER, ALTON.....	AMINO ACID AND PROTEIN METABOLISM.....	5R01 AM12034-12	209,427
MINICK, CHARLES R.....	REGRESSION OF CHRONIC ATHEROSCLEROSIS.....	3R01 HL19109-02S1	8,033
MINICK, CHARLES R.....	REGRESSION OF CHRONIC ATHEROSCLEROSIS.....	5R01 HL19109-03	83,802
NACHMAN, RALPH L.....	SPECIALIZED CENTER OF RESEARCH IN THROMBOSIS.....	5P50 HL18828-03	1,195,101
NEW, MARIA I.....	ANDROGEN METABOLISM IN CHILDHOOD.....	5R01 HD00072-15	111,714
NEW, MARIA I.....	ADRENOCORTICAL FACTORS IN HUMAN HYPERTENSION.....	3R01 HL17749-03S1	48,079
O'LEARY, WILLIAM M.....	SEPSIS IN CANCER SURGERY: BACTEROIDES PATHOGENESIS.....	5R01 CA23705-02	56,303
PAHWA, SAVITA G.....	IMMUNOLOGICAL STUDIES IN AGING.....	5P01 AG00541-02	488,438
PETERSON, RALPH E.....	MALE PSEUDOHERMAPHRODITISM.....	2R01 HD09421-04	95,128
PLUM, FRED.....	RESEARCH CENTER IN CEREBROVASCULAR DISEASE.....	5P50 NS03346-18	615,653
PLUM, FRED.....	STUDIES OF EXTRAPYRAMIDAL AND RELATED DISORDERS.....	5P50 NS12776-03	385,821
QUEN, JACQUES M.....	DR ISAAC RAY: A BIOGRAPHY.....	5R01 LM02591-02	38,192
REIS, DONALD J.....	EXPERIMENTAL NEUROGENIC HYPERTENSION PROGRAM.....	5P01 HL18974-03	677,044
RIKER, WALTER F, JR.....	GLUCOCORTICOIDS ON SYNAPTIC FUNCTION.....	2R01 NS01447-22	84,638
ROBERTS, RICHARD B.....	PROGRAM PROJECT IN VENEREAL DISEASE.....	5P01 AI12932-03	242,679
ROSS, GORDON D.....	LYMPHOCYTE RECEPTORS IN IMMUNITY, ARTHRITIS AND CANCER.....	3R01 CA16190-03S1	13,846
SAUDEK, CHRISTOPHER D.....	CHOLESTEROL METABOLISM IN DIABETIC MAN.....	5R01 HL20488-03	84,651
SAXENA, BRIJ B.....	GONADOTROPIN RECEPTORS.....	2R01 CA13908-04A3	84,444
SAXENA, BRIJ B.....	PITUITARY GONADOTROPIC AND GROWTH HORMONES.....	3R01 HD06543-06S1	33,529
SAXENA, BRIJ B.....	PITUITARY GONADOTROPIC AND GROWTH HORMONES.....	2R01 HD06543-07	100,672
SCHNECKLOTH, ROLAND E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05396-17	200,462
SEALEY, JEAN E.....	PRORENIN: PHYSIOLOGICAL AND BIOCHEMICAL ANALYSIS.....	1R01 HL21274-01A1	55,938
SHIRES, GEORGE T.....	EVALUATION OF SALINE SOLUTIONS IN THERAPY OF SHOCK.....	5R01 GM23000-03	105,928
SILAGI, SELMA.....	GENE ACTION AND CELLULAR DIFFERENTIATION IN CULTURE.....	5R01 CA10095-11	171,492
SILAGI, SELMA.....	TUMOR REJECTION ANTIGENS FROM TREATED CANCER CELLS.....	5R01 CA22211-02	74,326
SILK, SUSAN T.....	STUDIES OF ENZYMES IN HUMAN PLATELET MEMBRANES.....	5R23 HL21490-02	44,700
SILVER, RICHARD T.....	LEUKEMIA, LYMPHOMA AND MYELOMA CHEMOTHERAPY.....	3R10 CA07968-13S1	11,351
SILVER, RICHARD T.....	LEUKEMIA, LYMPHOMA AND MYELOMA CHEMOTHERAPY.....	5R10 CA07968-14	333,324

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SISKIND, GREGORY W.....	STUDIES ON ANTIBODY AFFINITY AT THE CELLULAR LEVEL.....	5R01 AI11694-04	142,986
SISKIND, GREGORY W.....	ANTIBODY AFFINITY IN IMMUNE RESPONSE & TOLERANCE.....	5R01 CA20075-10	121,656
SOFFER, RICHARD L.....	PULMONARY ANGIOTENSIN-CONVERTING ENZYME.....	5R01 HL21394-02	132,501
TATE, SURESH S.....	BIOSYNTHESIS OF HYPOTHALAMIC HORMONES: TERMINAL GROUPS.....	5R01 AM19074-03	42,908
TAYLOR, ANN G.....	MICROTUBULES AND MICROFILAMENTS IN VASOPRESSIN ACTION.....	5R01 AM19022-03	93,673
WEKSLER, MARC E.....	AGING AND IMMUNE REACTIVITY.....	5R01 AG00239-04	95,329
WEKSLER, MARC E.....	HOST DEFENSES AGAINST LYMPHOBLASTIC LEUKEMIA.....	5R01 CA13339-06	47,531
WINDHAGER, ERICH E.....	ION AND WATER TRANSPORT ACROSS RENAL TUBULES.....	2R01 AM11489-12	131,434
WINTERKORN, JACQUELINE M.....	VISUAL BEHAVIOR FOLLOWING PARALYTIC STRABISMUS.....	1R01 EY02240-01A1	71,795
WOODRUFF, JACK F.....	IMMUNOLOGIC MECHANISMS IN HEART DISEASE.....	5R01 HL17404-05	73,645
YOUNG, RONALD J.....	MALE GAMETES AND REPRODUCTIVE FAILURES.....	3R01 HD10230-02S1	1,010
ORGANIZATION TOTAL	83 12,472,482		
FOROHAM UNIVERSITY ZIP CODE 10458			
AIELLO, EDWARD L.....	PHYSIOLOGY OF MUCOCILIARY TRANSPORT.....	5R01 HL16730-03	54,780
FRANCK, RICHARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07150-04	35,759
ORGANIZATION TOTAL	2 90,539		
HEALTH INSURANCE PLAN OF GREATER NEW YORK ZIP CODE 10022			
RUBERMAN, WILLIAM.....	VENTRICULAR PREMATURE BEATS AND SUDDEN CORONARY DEATH.....	5R01 HL13974-07	126,010
RUBERMAN, WILLIAM.....	PSYCHOSOCIAL STRESS AND SUDDEN CORONARY DEATH.....	1R01 HL23078-01	102,700
ORGANIZATION TOTAL	2 228,710		
HOSPITAL FOR JOINT DISEASES AND MEDICAL CENTER ZIP CODE 10035			
HOLLANDER, VINCENT P.....	HORMONALLY SENSITIVE TUMORS.....	2R01 CA10064-16	73,363
HOLLANDER, VINCENT P.....	CANCER CENTER SUPPORT GRANT.....	2P30 CA14194-05	342,268
HOLLANDER, VINCENT P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05589-14	20,347
MONDER, CARL.....	NEW PATHWAYS OF CORTICOSTEROID METABOLISM.....	2R01 AM09006-13	94,208
MONDER, CARL.....	FETAL LIVER AND HEPATOMA IN ORGAN CULTURE.....	1R01 CA22472-01	33,329
MONDER, CARL.....	FETAL DEVELOPMENT AND TYROSINE METABOLISM.....	5R01 HD09715-03	30,840
STEVENS, JOHN J.....	MECHANISM OF CORTISOL-INDUCED LYMPHOMA REGRESSION.....	5R01 CA14987-05	55,593
ORGANIZATION TOTAL	7 649,948		
HOSPITAL FOR SPECIAL SURGERY ZIP CODE 10021			
BOSKEY, ADELE L.....	MECHANISM OF HARD TISSUE MINERALIZATION.....	2R01 DE04141-04	32,507
BURSTEIN, ALBERT H.....	MECHANICAL FACTORS AFFECTING FLUID TRANSPORT IN JOINTS.....	3R01 AM19849-02S1	4,657
BURSTEIN, ALBERT H.....	MECHANICAL FACTORS AFFECTING FLUID TRANSPORT IN JOINTS.....	5R01 AM19849-03	81,834
BURSTEIN, ALBERT H.....	MECHANICAL PROPERTIES OF NORMAL AND PATHOLOGIC BONE.....	5R01 AM20048-02	111,424
CHRISTIAN, CHARLES L.....	IMMUNOLOGICAL STUDIES OF CHRONIC ARTHRITIS.....	5R01 AM14627-09	175,878
CHRISTIAN, CHARLES L.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM22066-01	345,335
KAGEN, LAWRENCE J.....	IMMUNOLOGICAL STUDIES OF MUSCLE AND MYOGLOBIN.....	5R01 AM14650-08	91,787
LANE, JOSEPH M.....	MOLECULAR BIOLOGY OF FRACTURE, INJURY AND REPAIR.....	5R01 AM19776-02	39,060
MELLORS, ROBERT C.....	TYPE C RNA VIRUS AND IMMUNOPATHOLOGY.....	2R01 CA14928-14	146,717
MELLORS, ROBERT C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05495-16	48,714
POSNER, AARON S.....	ULTRASTRUCTURE OF BONE MINERAL.....	5R01 AM18412-03	122,924
ORGANIZATION TOTAL	11 1,200,837		
INSTITUTE FOR PIAGETIAN STUDIES ZIP CODE 11357			
MERMELSTEIN, EGON.....	LOGICAL NECESSITY AND CONSERVATION OF VOLUME.....	3R01 HD10288-01A1S1	2,460
MERMELSTEIN, EGON.....	LOGICAL NECESSITY AND CONSERVATION OF VOLUME.....	5R01 HD10288-02	14,009
ORGANIZATION TOTAL	2 16,469		
JEWISH HOSPITAL AND MEDICAL CENTER OF BROOKLYN ZIP CODE 11238			
LEE, STANLEY L.....	SUPPORT FOR COOPERATIVE CANCER AND LEUKEMIA STUDY.....	5R10 CA12886-07	199,583
ORGANIZATION TOTAL	1 199,583		
LENOX HILL HOSPITAL ZIP CODE 10021			
IOACHIM, HARRY L.....	TUMOR CELL ANTIGEN CHANGES.....	5R01 CA16997-05	47,251
ORGANIZATION TOTAL	1 47,251		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER ZIP CODE 11040			
KLAVINS, JANIS V.....	DIAGNOSTIC TEST FOR PANCREATIC CARCINOMA.....	3R26 CA20128-02S1	7,182
KLAVINS, JANIS V.....	DIAGNOSTIC TEST FOR PANCREATIC CARCINOMA.....	2R26 CA20128-03	25,716
MULVIHILL, JAMES E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05496-16	23,577
SAWITSKY, ARTHUR.....	SUPPORT FOR COOPERATIVE CANCER AND LEUKEMIA STUDY.....	5R10 CA11028-11	114,215
ORGANIZATION TOTAL	4 170,690		
LONG ISLAND UNIVERSITY BROOKLYN CENTER ZIP CODE 11201			
ROGERS, DONALD W.....	HEATS OF HYDROGENATION OF LARGE MOLECULES.....	5R01 GM18035-06	15,934
ORGANIZATION TOTAL	1 15,934		
MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE ZIP CODE 10010			
BAIRD, MALCOLM B.....	METABOLISM OF CARCINOGENS IN SENESCENT TISSUES.....	5R01 CA18486-03	20,480
ORGANIZATION TOTAL	1 20,480		
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
BEATTIE, EDWARD J, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA20449-02	216,076
BEATTIE, EDWARD J, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05753-06	93,465
BURCHENAL, JOSEPH H.....	CLINICAL CANCER RESEARCH CENTER.....	2P01 CA05826-17	1,761,761
BURCHENAL, JOSEPH H.....	IMMUNOLOGY CLINICAL CANCER RESEARCH CENTER PROGRAM.....	5P01 CA19267-03	1,402,035
FREIMAN, ALVIN H.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21169-02	112,571
LEPLEY, JAMES B.....	CLINICAL CANCER EDUCATION (DENTAL).....	5R25 CA20681-02	81,322
MELAMED, MYRON R.....	AUTOMATION OF URINARY CYTOLOGY FOR CANCER DETECTION.....	5R26 CA14134-06	127,128
MILLER, DENIS R.....	CHILDREN'S CANCER STUDY GROUP.....	7R10 CA23742-01	69,946
SCHOTTENFELD, DAVID.....	CANCER RISK AFTER IRRADIATION AND/OR CHEMOTHERAPY.....	2R01 CA17028-03A1	74,632
SCHOTTENFELD, DAVID.....	CANCER CENTERS EPIDEMIOLOGY-STATISTICS STAFF 3RD CONF.....	1R13 CA23652-01	32,180
WHITMORE, WILLET F, JR.....	CHEMOTHERAPY OF ADVANCED UROTHELIAL CANCER.....	5R26 CA20280-02	8,616
WINAWER, SIDNEY J.....	DETECTION OF EARLY COLON CANCER.....	5R26 CA15429-05	250,331
ORGANIZATION TOTAL	12 4,230,063		
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
ACKERMAN, SIGURD H.....	PSYCHOBIOLOGIC MECHANISMS OF STRESS ULCER IN THE RAT.....	5R01 AM18804-03	61,355
BANK, NORMAN.....	FACTORS GOVERNING THE RENAL EXCRETION OF ACID.....	5R01 HL14720-08	114,263
BANK, NORMAN.....	RENAL STARLING FORCES IN EXPERIMENTAL CONDITIONS.....	5R01 HL19366-03	69,853
BARZEL, URIEL S.....	SECOND INTERNATIONAL SYMPOSIUM ON OSTEOPOROSIS.....	1R13 AM21443-01	7,800
BELLHORN, ROY W.....	BLOOD-OCULAR PERMEABILITY BARRIERS OF DEVELOPING EYE.....	5R01 EY02038-02	79,056
BHAN, ASHOK K.....	BIOCHEMICAL PROPERTIES OF HUMAN CARDIAC MYOSIN.....	5R01 HL19458-02	13,774
BURNS-BELLHORN, MARGARET S.....	ION LOCALIZATION IN EYE PHYSIOLOGY: NEW TECHNIQUES.....	1R01 EY02093-01A1	61,394
CASEY, JOAN I.....	CELL MEDIATED IMMUNITY IN DIABETIC PATIENTS.....	1R01 AM21095-01	53,723
CHEKASKY, MARTIN.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00053-17	807,074
CHEKASKY, MARTIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05499-16	133,605
COHEN, MICHAEL V.....	EFFECTS OF EXERCISE ON THE CORONARY VASCULATURE.....	3R01 HL17809-03S1	42,378
COHEN, MICHAEL V.....	EFFECTS OF EXERCISE ON THE CORONARY VASCULATURE.....	2R01 HL17809-04	96,232
ESCHER, DORIS J.....	TECHNOLOGY AND PHYSIOLOGY OF ARTIFICIALLY PACED HEARTS.....	5R01 HL04666-19	72,194
HENKIND, PAUL.....	RETINAL PATHOLOGY AND CIRCULATION.....	3R01 EY00613-07S1	27,589
HENKIND, PAUL.....	YOUNG VISION SCIENTIST TRAVEL SUPPORT.....	5R13 EY02143-02	10,492
HIRANO, ASAO.....	PATHOLOGY OF NEUROPATHY IN MUTANTS.....	1R01 NS14586-01	52,974
KOSS, LEOPOLD G.....	AUTOMATION OF BLADDER CANCER CYTOLOGY BY TICAS.....	2R26 CA15803-06	126,620
LALEZARI, PARVIZ.....	NEUTROPHIL ANTIGENS; PATHOPHYSIOLOGY & CHEMISTRY.....	5R01 CA15318-04	82,104
LALEZARI, PARVIZ.....	BIOLOGY OF RED CELL ANTIGEN-ANTIBODY REACTION.....	5R01 HL10036-13	90,469
NEHLSSEN, SANDRA L.....	IMMUNOREGULATION THROUGH MODIFICATION OF AMINO GROUPS.....	5R01 AI13138-03	56,825
PUSZKIN, ELENA G.....	THE ROLE OF CONTRACTILE PROTEINS IN PLATELETS.....	2R01 HL18030-04	87,803
ROSEN, JOHN F.....	THE DYNAMICS OF LEAD METABOLISM IN BONE.....	5R01 ES01060-04	129,279
ROSENBERG, LAWRENCE C.....	STRUCTURE OF EPIPHYSEAL GROWTH PLATE CARTILAGE.....	1R01 AM21498-01	73,456
ROSENBERG, LAWRENCE C.....	ASSESSMENT OF MALIGNANCY IN HUMAN CHONDROSARCOMAS.....	1R01 CA23945-01	194,418
SCHUEER, JAMES.....	EFFECTS OF PHYSICAL TRAINING ON THE HEART.....	2R01 HL15498-06	122,061
SCHUEER, JAMES.....	CARDIAC FUNCTION AND METABOLISM IN DIABETES.....	1R01 HL21482-01A1	69,417
SPAET, THEODORE H.....	THE BLOOD VESSEL AND THROMBOGENESIS.....	5P01 HL16387-04	342,039
SURKS, MARTIN I.....	TRIIODOTHYRONINE RECEPTORS AND THYROTROPH NEOPLASIA.....	2R01 CA16463-04	95,420

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
VEITH, FRANK J.....	EXPERIMENTAL LUNG TRANSPLANTATION.....	5P01 HL17417-05	401,186
WEINSTEIN, STEPHEN W.....	SOURCES OF ENERGY FOR RENAL SODIUM TRANSPORT.....	5R01 AM16775-06	81,166
WEITZMAN, ELLIOT O.....	PSYCHONEUROENDOCRINE RHYTHMS, AGING, & SLEEP DISORDERS.....	5R01 AG00792-02	128,973
YIPINTSOI, TAOA.....	REGIONAL MYOCARDIAL BLOOD FLOW AND METABOLISM.....	2R01 HL15983-04	55,926
ORGANIZATION TOTAL	32 3,840,918		
NATIONAL BUREAU OF ECONOMIC RESEARCH ZIP CODE 10016			
ROSEN, SHERWIN.....	SOCIOECONOMIC DETERMINANTS OF MORTALITY.....	1R01 AG00913-01	107,274
ORGANIZATION TOTAL	1 107,274		
NEW SCHOOL FOR SOCIAL RESEARCH ZIP CODE 10011			
MACK, ARIEN.....	PERCEPTION DURING PURSUIT EYE MOVEMENTS.....	3R01 EY01135-03S1	3,823
MACK, ARIEN.....	PERCEPTION DURING PURSUIT EYE MOVEMENTS.....	5R01 EY01135-04	43,237
ORGANIZATION TOTAL	2 47,060		
NEW YORK ACADEMY OF MEDICINE ZIP CODE 10029			
JARCHO, SAUL.....	EARLY HISTORY OF THE CONCEPT OF HEART FAILURE.....	5R01 LM02561-12	18,675
ORGANIZATION TOTAL	1 18,675		
NEW YORK ACADEMY OF SCIENCES ZIP CODE 10021			
NICHOLSON, WILLIAM J.....	CONFERENCE ON HALOGENATED AROMATIC HYDROCARBONS.....	1R13 CA24515-01	15,000
SELIKOFF, IRVING J.....	CONFERENCE ON HEALTH EFFECTS OF ASBESTOS EXPOSURE.....	1R13 CA24516-01	20,000
SELIKOFF, IRVING J.....	THE PUBLIC HEALTH CONTROL OF ENVIRONMENTAL HAZARDS.....	1R13 ES01979-01	32,500
ORGANIZATION TOTAL	3 67,500		
NEW YORK BLOOD CENTER ZIP CODE 10021			
GERMAN, JAMES L, III.....	CYTOLOGICAL STUDIES IN HUMAN GENETICS.....	5R01 HD04134-11	115,703
KELLNER, AARON.....	RESEARCH AND RESOURCE BLOOD PROGRAM.....	5P01 HL09011-15	1,976,780
KELLNER, AARON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05688-10	53,326
REOMAN, COLVIN M.....	POLYSOME-MEMBRANE INTERACTIONS IN HEPATOMAS.....	1R01 AM20888-01	70,129
RUBINSTEIN, PABLO.....	THE HLA SYSTEM AND THE GENETICS OF JUVENILE DIABETES.....	5R01 AM19631-02	152,851
STEVENS, CLAUD E.....	POST-TRANSFUSION HEPATITIS IN NEWBORN CHILDREN.....	1R01 HL22838-01	65,616
ORGANIZATION TOTAL	6 2,434,405		
NEW YORK CITY HEALTH SERVICES ADMINISTRATION—PUBLIC HEALTH RESEARCH INSTITUTE OF CITY OF N Y ZIP CODE 10016			
COHEN, BERTRAM I.....	EFFECTS OF STEROLS AND BILE ACIDS ON COLON CANCER.....	5R26 CA18651-03	109,042
OAY, LOREN A.....	PHYSICAL CHEMISTRY OF VIRUSES AND THEIR COMPONENTS.....	2R01 AI09049-10	135,795
DUBNAU, OAVIO A.....	GENETIC RECOMBINATION IN BACILLUS SUBTILIS.....	5R01 AI10311-08	99,379
HIRST, GEORGE K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05533-16	99,188
LUSTY, CAROL J.....	STRUCTURE-FUNCTION RELATIONS OF UREA CYCLE ENZYMES.....	2R01 AM18044-04	77,795
MANOEL, BENJAMIN.....	STUDIES OF VIRUS-CELL AND VIRUS-ANTIBODY INTERACTION.....	5R01 AI10429-07	68,195
MARGOLIN, PAUL.....	MUTATION AND SUPPRESSOR STUDIES OF A BACTERIAL GENE.....	2R01 GM15255-13	111,240
MINDICH, LEONARD E.....	CELL MEMBRANE SYNTHESIS IN THE CONTROL OF GROWTH.....	5R01 AI09861-12	125,225
MOSBACH, ERWIN H.....	ROLE OF INTESTINAL BACTERIA IN STEROID METABOLISM.....	5R01 HL10894-12	151,603
NOVICK, RICHARD P.....	MOLECULAR BIOLOGY OF BACTERIAL PLASMIDS.....	5R01 GM14372-12	115,993
OISHI, MICHIO.....	THE MOLECULAR MECHANISM OF GENETIC RECOMBINATION.....	5R01 GM21073-05	109,414
OSLER, ABRAHAM G.....	FUNCTIONS OF THE ALTERNATE COMPLEMENT PATHWAY.....	5R01 AI08710-10	6,064
PENEFESKY, HARVEY S.....	MITOCHONDRIAL MEMBRANE AND OXIDATIVE PHOSPHORYLATION.....	5R01 GM21737-12	100,207
POGO, BEATRIZ G.....	ONASES DURING INFECTION BY VACCINIA AND SHOPE FIBROMA.....	2R01 AI12188-04A1	86,905
RATNER, SARAH.....	MECHANISMS OF NITROGEN TRANSFER AND UREA FORMATION.....	2R01 AM03428-19	76,569
SHEFER, SARAH.....	INBORN ERRORS IN BILE ACID SYNTHESIS.....	5R01 AM19696-02	85,669
SMITH, ISSAR.....	GENETICS OF RIBOSOMES AND ANTIBIOTIC RESISTANCE.....	5R01 AI14118-07	69,711
SMITH, ISSAR.....	REGULATORY MECHANISMS IN RIBOSOME BIOSYNTHESIS.....	5R01 GM19693-05	57,193
ORGANIZATION TOTAL	18 1,685,187		
NEW YORK MEDICAL COLLEGE ZIP CODE 10029			
COOPERMAN, JACK M.....	RIBOFLAVIN DEFICIENCY IN THE AGED.....	3R01 AG00177-01S1	28,638
GLASS, GEORGE B.....	MUCOPROTEINS, INTRINSIC FACTOR, AND VITAMIN B12.....	5R01 AM00068-26	107,089
LASKER, SIGMUND E.....	CHEMISTRY AND ACTIVITY OF HOMOLOGOUS HEPARIN FRACTIONS.....	5R01 HL18068-02	84,542
LERNER, ROBERT G.....	THE ROLE OF LEUKOCYTES IN THROMBOTIC DISEASE.....	5R01 HL14739-06	99,450

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
LEVERE, RICHARD D.....	CONTROL MECHANISMS IN HEME SYNTHESIS.....	7R01 AM21682-01	73,145
MADDEN, ROBERT E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17944-04	126,710
MOROSON, HAROLD.....	EFFECT OF RADIOTHERAPY UPON HOST IMMUNE REACTIONS.....	5R01 CA14374-06	140,430
PULLMAN, IRA.....	MINERAL-ORGANIC INTERACTIONS IN THE ORAL MILIEU.....	1R01 DE04469-01A1	120,726
ROTHBALLER, ALAN B.....	CNS CONTROL OF FLUID AND ELECTROLYTE METABOLISM.....	5R01 NS06624-13	97,955
ROTHENBERG, SHELDON P.....	KINETICS OF B12, INTRINSIC FACTOR, AND OTHER PROTEINS.....	5R01 AM06045-15	83,696
ROTHENBERG, SHELDON P.....	SPECIFIC RADIOASSAYS FOR FOLATE ANALOGUES.....	3R01 AM16220-06S1	38,446
ROTHENBERG, SHELDON P.....	FOLATE REDUCTASE: INDUCTION, SUPPRESSION, THERAPEUTICS.....	2R01 CA08976-12	105,771
ROTMAN, MARVIN.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA18358-03	89,757
RUBIN, SAMUEL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05398-17	137,302
SALL, SANFORD.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA12483-08	102,933
SHARMA, SANSAR C.....	GENESIS OF NEURAL SPECIFICITY IN THE VISUAL SYSTEM.....	3R01 EY01426-03S1	500
SHARMA, SANSAR C.....	GENESIS OF NEURAL SPECIFICITY IN THE VISUAL SYSTEM.....	2R01 EY01426-04	82,179
SLOMIANY, BRONISLAW L.....	BIOCHEMISTRY OF GLYCOLIPIDS IN GASTRIC SECRETION.....	1R01 AM21684-01	102,916
SOUTHREN, A LOUIS.....	CORTISOL METABOLISM IN GLAUCOMA AND CATARACT.....	5R01 EY01313-04	111,402
SOUTHREN, A LOUIS.....	STUDIES OF GLUCOCORTICOID INDUCED CATARACT.....	1R01 EY02652-01	94,558
SZABO, ANDREW J.....	INSULIN-SENSITIVE GLUCOREGULATOR IN THE C N S.....	5R01 AM17347-06	115,113
ORGANIZATION TOTAL	21	1,943,258	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—INSTITUTE FOR BASIC RESEARCH IN MENTAL RETAROATION		ZIP CODE 10314	
GOULD, ROBERT M.....	COMPLEX LIPID METABOLISM IN THE AXON.....	5R01 NS13980-02	37,940
ORGANIZATION TOTAL	1	37,940	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—NEW YORK STATE PSYCHIATRIC INSTITUTE		ZIP CODE 10032	
KUPFERMANN, IRVING.....	BEHAVIORAL AND NEURAL ANALYSIS OF LEARNING.....	2R01 NS12492-05	79,097
RAPPORT, MAURICE M.....	IMMUNONEUROLOGICAL MODEL OF EPILEPSY.....	5R01 NS13762-02	106,620
SACHAR, EDWARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05650-12	66,671
TAMIR, HADASSAH.....	BIOGENIC AMINE TRANSFER AND STORAGE MECHANISMS.....	5R01 NS12506-02	37,418
ORGANIZATION TOTAL	4	289,806	
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—RESEARCH INSTITUTE FOR NEUROCHEMISTRY & DRUG ADDICTN		ZIP CODE 10035	
LAJTHA, ABEL.....	PROTEIN AND PEPTIDE BREAKDOWN IN THE BRAIN.....	5R01 NS03226-18	65,536
ORGANIZATION TOTAL	1	65,536	
NEW YORK UNIVERSITY		ZIP CODE 10003	
ALBERT, ROY E.....	FOLLOW-UP STUDY OF IRRADIATED TINEA CAPITIS CASES.....	3R01 CA17188-03S1	86,446
ALTSZULER, NORMAN.....	HORMONAL REGULATION OF METABOLISM.....	5R01 AM10188-12	129,460
AULL, FELICE B.....	MEMBRANE PERMEABILITY OF THE ASCITES TUMOR CELLS.....	2R01 CA10625-09A1	66,658
BAKER, ROBERT G.....	EYE MOVEMENT: PHYSIOLOGICAL ORGANIZATION.....	5R01 EY02007-03	46,520
BALDWIN, DAVID S.....	GENESIS OF HYPERTENSION IN RENAL DISEASES.....	3R01 HL15124-05S1	5,993
BASCH, ROSS S.....	DEVELOPMENT OF THYMIC LYMPHOCYTES.....	9R01 CA24472-04A1	116,722
BASILICO, CLAUDIO.....	CELLULAR AND VIRAL CONTROL OF ONCOGENIC TRANSFORMATION.....	3R01 CA11893-08S1	10,747
BASILICO, CLAUDIO.....	CELLULAR AND VIRAL CONTROL OF ONCOGENIC TRANSFORMATION.....	2R01 CA11893-09	79,724
BASILICO, CLAUDIO.....	BIOSYNTHESIS IN NORMAL AND VIRUS-TRANSFORMED CELLS.....	2P01 CA16239-04	226,227
BATTISTA, ARTHUR F.....	NERVE FASCICLE LIGATION AND NEUROMA FORMATION.....	1R01 NS14362-01	58,563
BELMAN, SIDNEY.....	THE ROLE OF CYCLIC NUCLEOTIDES IN TUMOR PROMOTION.....	5R01 CA18536-03	69,078
BELMAN, SIDNEY.....	ROLE OF PROTEASES IN CARCINOGENESIS AND MUTAGENESIS.....	1R01 CA22890-01	48,392
BENNETT, IVAN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05399-17	200,462
BERLOWITZ, LAURENCE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07062-13	53,194
BERNHEIMER, ALAN W.....	STAPHYLOCOCCAL AND STREPTOCOCCAL PROTEINS.....	5R01 AI02874-20	135,790
BLACK, VIRGINIA H.....	CYTODIFFERENTIATION OF STEROID-SECRETING CELLS.....	3R01 HD04005-09S1	10,794
BLIZARD, DAVID A.....	HORMONES, DEVELOPMENT AND SEX DIFFERENCES IN EMOTION.....	2R01 HD08187-04	85,665
BREININ, GOODWIN M.....	FINE STRUCTURE OF NORMAL AND PATHOLOGIC OCULAR MUSCLE.....	5R01 EY00309-13	133,863
BROYDE, SUSE B.....	MOLECULAR CONFORMATIONS OF DNA AND RNA SUBUNITS.....	5R01 GM24482-02	48,091
BYSTRYN, JEAN-CLAUDE.....	ISOLATION OF TUMOR ANTIGENS OF HUMAN MELANOMA.....	2R01 CA13844-07	121,108
CARR, RONALD E.....	ERG AND PSYCHOPHYSICAL STUDIES IN RETINAL DISORDERS.....	3R01 EY00213-17S2	5,192
CARR, RONALD E.....	CLINICAL CENTER FOR HEREDITARY RETINAL DEGENERATIONS.....	1P50 EY02179-01	129,438
CARROLL, ROBERT B.....	BIOCHEMICAL AND FUNCTIONAL PROPERTIES OF SV40 T ANTIGEN.....	5R01 CA20802-02	57,714
CHAMBERS, ROBERT W.....	MUTAGENESIS AND CARCINOGENESIS.....	5R01 CA16319-04	198,827
CHIARANDINI, DANTE J.....	PHYSIOLOGY AND PHARMACOLOGY OF EXTRAOCULAR MUSCLES.....	5R01 EY01297-05	98,628

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
CONVERSE, JOHN M.....	CRANIOFACIAL ANOMALIES—ETIOLOGY AND TREATMENT.....	5P01 DE03568-04	555,648
COX, RODY P.....	INBORN ERRORS OF METABOLISM IN CELL CULTURE.....	2R01 AM14528-09	164,015
DANCIS, JOSEPH.....	PHYSIOLOGY OF THE PLACENTA.....	2R01 HD00462-22A1	63,353
DANCIS, JOSEPH.....	INBORN ERRORS OF METABOLISM.....	2R01 HD04526-09	46,567
DEFENDI, VITTORIO.....	CANCER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA16087-03	725,457
DILLER, LEONARD.....	FUNCTIONAL SKILL REMEDIATION OF BRAIN DAMAGE.....	3R01 NS10236-06S1	37,030
ELSBACH, PETER.....	MICROBICIDAL ACTIVITY OF LEUKOCYTES: MEMBRANE FACTORS.....	2R01 AM05472-17	117,038
FOX, ARTHUR C.....	RELEASE OF NUCLEOSIDES FROM THE ISCHEMIC HEART.....	5R01 HL16412-04	51,101
FRANKLIN, EDWARD C.....	IMMUNOLOGIC STUDIES OF AMYLOID ACCOMPANYING AGING.....	5R01 AG00458-05	41,315
FRANKLIN, EDWARD C.....	RHEUMATIC DISEASES STUDY GROUP.....	5P01 AM01431-22	323,661
FRANKLIN, EDWARD C.....	STRUCTURE OF IMMUNOGLOBULINS AND RELATED PROTEINS.....	2R01 AM02594-21	137,524
FREEDMAN, LEWIS S.....	NEONATAL UNDERNUTRITION, BIOGENIC AMINES AND STRESS.....	5R01 HD10309-03	54,715
FREEDMAN, MICHAEL L.....	CONTROL OF POLYRIBOSOMES IN HUMAN RETICULOCYTES.....	5R01 AM13532-09	40,271
GALDSTON, MORTON.....	PROTEASE/ANTIPROTEASE/CHRONIC OBSTRUCTIVE DISEASES.....	5R01 HL14700-05	61,812
GARDNER, ESTHER P.....	NEURAL MECHANISMS OF CUTANEOUS SPATIAL INTEGRATION.....	5R01 NS11862-04	35,611
GEACINTOV, NICHOLAS E.....	CHARACTERIZATION OF CARCINOGEN-NUCLEIC ACID COMPLEXES.....	5R01 CA20851-02	85,265
GERSHENGORN, MARVIN C.....	REGULATION OF TSH SYNTHESIS AND SECRETION IN VITRO.....	5R01 AM20249-02	47,068
GIGLI, IRMA.....	ACTIVATION OF THE COMPLEMENT SYSTEM.....	5R01 AI13809-02	106,038
GILMOUR, DOUGLAS G.....	CHICKEN LYMPHOCYTE ALLOANTIGENS AND VIRAL ONCOGENESIS.....	3R01 CA14061-05S2	2,942
GILMOUR, DOUGLAS G.....	CHICKEN LYMPHOCYTE ALLOANTIGENS AND VIRAL ONCOGENESIS.....	2R01 CA14061-06	194,970
GOLDBERG, BURTON D.....	THE BIOSYNTHESIS AND METABOLISM OF PROCOLLAGEN.....	3R01 HL17551-03S1	306
GOLDBERG, BURTON D.....	THE BIOSYNTHESIS AND METABOLISM OF PROCOLLAGEN.....	5R01 HL17551-04	106,682
GOLDFEDER, ANNA.....	CELL KINETICS OF IRRADIATED TUMORS.....	2R01 CA12076-07	116,273
GOLDSTEIN, BERNARD D.....	RED CELL MEMBRANE EFFECTS DUE TO OXIDIZING AGENTS.....	2R01 HL18163-04	71,378
GOLDSTEIN, IRA M.....	COMPLEMENT MEDIATED IMMUNOPATHOLOGY.....	2R01 AM18531-04	41,144
GOLDSTEIN, MENEK.....	BIOGENIC AMINES AND EXTRAPYRAMIDAL DISORDERS.....	5R01 NS06801-12	115,458
GORDON, ALBERT S.....	EXTRARENAL ERYTHROPOIETIN AND ITS PRODUCTION.....	2R01 HL03357-21A1	114,053
GREENFIELD, WILLIAM.....	CLINICAL CANCER EDUCATION.....	5R25 CA21275-02	53,781
GROVER-JOHNSON, NICOLA M.....	DIABETIC NEUROPATHY AND PERIPHERAL VASCULAR DISEASE.....	2R01 HL20400-03	53,557
GUNNISON, ALBERT F.....	DISTRIBUTION AND FATE OF INHALED SULFUR DIOXIDE.....	5R01 ES00613-07	96,179
GUTTENPLAN, JOSEPH B.....	MECHANISM OF MUTAGENESIS AND CARCINOGENESIS.....	5R01 CA19023-03	49,901
HARLEY, NAOMI H.....	THE DISTRIBUTION OF POLONIUM-210 IN THE HUMAN LUNG.....	5R01 ES01550-02	29,708
HILLMAN, DEAN E.....	CIRCUITRY MODIFICATIONS AND MATERNAL PROTEIN RESTRICTION.....	5R01 HD10934-02	62,835
HIRSCHHORN, ROCHELLE.....	ACTIVATION OF IMMUNOCOMPETENT LYMPHOCYTES.....	5R01 AI10343-07	105,988
HOLLANDER, CHARLES S.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00096-18	1,227,720
IMPARATO, ANTHONY M.....	INTIMAL HYPERPLASIA IN ARTERIAL RECONSTRUCTIONS.....	2R01 HL16290-03A1	151,726
IMPARATO, ANTHONY M.....	HEMODYNAMIC INDUCTION OF INTIMAL FIBROMUSCULAR LESION.....	1R01 HL22783-01	131,818
IMPARATO, ANTHONY M.....	DUCTUS ARTERIOSUS CLOSURE: AN ARTERIAL LESION MODEL.....	1R01 HL22784-01	45,869
JAVID, JAMSHID.....	AN IMMUNOLOGIC STUDY OF HEMOGLOBIN VARIATION IN MAN.....	5R01 HL19646-03	51,260
JOHNSON, ALAN J.....	COAGULATION, FIBRINOLYSIS, HEMOSTASIS AND HEPATITIS.....	5P01 HL15596-05	673,033
KARPATKIN, SIMON.....	BIOCHEMISTRY, PHYSIOLOGY, IMMUNOLOGY OF HUMAN PLATELETS.....	5R01 HL13336-09	113,454
KAYDEN, HERBERT J.....	SUPPORT FOR LIPID METABOLISM STUDIES.....	5R01 HL06481-15	85,445
KENNEDY, MICHAEL C.....	NEURAL BASES OF AUDITORY COMMUNICATION.....	1R01 NS14156-01A1	52,943
KLEIN, RICHARD J.....	EXPERIMENTAL RECURRENT ORAL-FACIAL HERPES IN ANIMALS.....	1R01 DE04958-01	84,738
KLEINBERG, DAVID L.....	THE ROLE OF PROLACTIN IN HUMAN BREAST CANCER.....	2R01 CA16149-04A1	40,598
KOZAK, MARILYN S.....	ANALYSIS OF REOVIRUS MRNA RIBOSOME BINDING SITES.....	1R01 AI15242-01	88,453
KREIBICH, GERT.....	ORGANIZATION AND BIOSYNTHESIS OF ER MEMBRANE PROTEINS.....	2R01 GM21971-04	65,481
KROHN, DAVID L.....	OCULAR CANCER DETECTION BY HEMATOPORPHYRIN FLUORESCENCE.....	3R01 CA18705-03S1	8,538
KROHN, DAVID L.....	TRANSCORNEAL FLUX ENHANCEMENT OF PILOCARPINE.....	1R01 EY02428-01	98,715
KROHN, DAVID L.....	CORNEAL PENETRATION OF PILOCARPINE VIA LIPOSOMES.....	1R01 EY02872-01	34,099
LAMM, MICHAEL E.....	INDUCTION OF SECRETORY IMMUNITY.....	1R01 AI15071-01	100,213
LAMM, MICHAEL E.....	ANTIGENIC CHANGES IN MOUSE LEUKEMOGENESIS.....	5R01 CA08627-12	53,909
LAMM, MICHAEL E.....	SECRETORY IMMUNOGLOBULIN.....	9R01 CA23885-07	106,622
LAVERS, GENE C.....	LENS CATARACTS AND RNA MODIFICATION.....	1R01 EY02352-01	45,662
LAWRENCE, H SHERWOOD.....	CELLULAR IMMUNE RESPONSES—NATURE OF TRANSFER FACTOR.....	5R01 AI01254-23	58,697
LAWRENCE, H SHERWOOD.....	IMMUNOLOGIC RESISTANCE TO CANCER.....	5P01 CA16247-05	757,799
LE GEROS, RACQUEL Z.....	ENAMEL APATITES RELATING TO CARIES SUSCEPTIBILITY.....	2R01 DE04123-04	113,675
LEE HUANG, SYLVIA.....	PURIFICATION OF ERYTHROPOIETIN.....	5R01 HL21683-02	52,261
LEVITZ, MORTIMER.....	ESTROGEN METABOLISM AND ACTION IN PREGNANCY AND CANCER.....	2R01 CA02071-25	132,744
LIPKIN, GEORGE.....	RESTORATION OF CONTACT INHIBITION IN MELANOMAS.....	3R01 CA16013-03S1	8,543

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
LIPKIN, GEORGE	SUPPRESSION OF GROWTH OF COLON CARCINOMA	3R26 CA18034-03S1	17,196
LIPPMANN, MORTON	REGIONAL DEPOSITION OF INHALED PARTICLES IN MAN	5R01 ES00881-06	78,196
LLINAS, RODOLFO R.	NEUROBIOLOGY OF THE CEREBELLAR-BRAIN STEM SYSTEM	5P01 NS13742-03	366,793
LLINAS, RODOLFO R.	ROLE OF CALCIUM IN SYNAPTIC TRANSMITTER RELEASE	5R01 NS14014-02	12,460
LO BUE, JOSEPH	PATHOPHYSIOLOGY OF A VIRALLY-INDUCED MURINE LEUKEMIA	3R01 CA12815-05S1	2,825
LO BUE, JOSEPH	PATHOPHYSIOLOGY OF A VIRALLY-INDUCED MURINE LEUKEMIA	2R01 CA12815-06	62,821
MAAS, WERNER K.	REGULATION OF ENZYME SYNTHESIS IN BACTERIA	5R01 GM06048-20	99,669
MARGOLIS, RICHARD U.	COMPLEX CARBOHYDRATES OF NERVOUS TISSUE	1R01 NS13876-01	86,462
MAYER, ALLEN J.	ENDOGENOUS VIRUS EXPRESSION AND LEUKEMOGENESIS	1R01 CA23834-01	93,325
MC FALL, ELIZABETH	STUDIES ON CONTROL MECHANISMS IN ENZYME BIOSYNTHESIS	5R01 GM11899-15	68,723
MEISS, HARRIET K.	ISOLATION AND ANALYSIS OF DNA MUTANTS OF BHK CELLS	2R01 CA16631-04	75,094
MERUELO, DANIEL	GENETIC CONTROL OF VIRUS-INDUCED LEUKEMIA	5R01 CA22247-02	47,781
MOOR-JANKOWSKI, JAN	BLOOD GROUPS IN PRIMATES	3P40 RR01082-01S1	9,772
MOOR-JANKOWSKI, JAN	BLOOD GROUPS IN PRIMATES	5P40 RR01082-02	200,624
MOVSHON, J ANTHONY	QUANTITATIVE STUDIES OF THE CENTRAL VISUAL SYSTEM	5R01 EY02017-02	51,941
MUMMA, RICHARD D, JR.	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05332-17	17,455
NELSON, NORTON	RESEARCH IN ENVIRONMENTAL CANCER	5P30 CA13343-06	302,492
NELSON, NORTON	RESEARCH IN THE ENVIRONMENTAL HEALTH SCIENCES	5P30 ES00260-16	1,820,587
NELSON, NORTON	RESEARCH AND MANPOWER PLANNING FOR THE NIEHS	1R13 ES01987-01	60,817
NEWALL, JOSEPH	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA15938-05	66,088
NUSSENZWEIG, RUTH S.	VACCINATION WITH IRRADIATED SPOOROZOITES OF PLASMODIA	5R01 AI08952-10	93,904
NUSSENZWEIG, RUTH S.	SURFACE PROPERTIES OF SPOOROZOITES OF PLASMODIA	5R01 AI13366-03	56,856
NUSSENZWEIG, VICTOR	CELL COOPERATION IN THE IMMUNE RESPONSE	5R01 AI08499-11	77,834
NUSSENZWEIG, VICTOR	C3, C3 RECEPTORS AND THE H-2 REGION	5R01 AI13224-03	106,758
OPPENHEIM, JOEL D.	THE I BLOOD GROUP ANTIGEN OF HUMAN ERYTHROCYTE MEMBRANE	5R23 HL21328-02	34,014
OVARY, ZOLTAN	IMMUNOLOGICAL MECHANISM OF ANAPHYLAXIS	5R01 AI03075-19	129,744
PEARLSTEIN, EDWARD	CELL ADHESION FACTOR: BIOLOGY AND CHEMISTRY	5R01 CA22085-02	29,452
PEARSON, JOHN	AUTONOMIC DEVELOPMENT IN SIDS AND DYSAUTONOMIA	1R01 HD12260-01	40,420
PESKIN, CHARLES S.	COMPUTATIONAL METHODS IN CARDIAC FLUID DYNAMICS	2R01 HL17859-04	74,460
PHILLIPS-QUAGLIATA, JULIA	ANTIBODY MEDIATED CELL-CELL INTERACTIONS	5R01 CA20045-09	73,727
PIOMELLI, SERGIO	THE MECHANISM OF RED CELLS AGING—HEMOLYTIC ANEMIAS	3R01 AM09274-13S1	13,517
PIOMELLI, SERGIO	THE MECHANISM OF RED CELLS AGING—HEMOLYTIC ANEMIAS	5R01 AM09274-14	113,777
PIOMELLI, SERGIO	METABOLIC EFFECTS OF LEAD POISONING IN CHILDHOOD	2R01 ES00976-04	109,345
PIOMELLI, SERGIO	REDUCTION OF FE OVERLOAD IN THALASSEMIA	5R01 HL19946-03	55,068
POST, JOSEPH	TUMOR CELL PROLIFERATION	5R01 CA14432-06	139,933
QUARTERMAIN, DAVID	MEMORY STORAGE & RETRIEVAL: THE ROLE OF CATECHOLAMINES	5R01 NS12633-03	64,065
RABINOVITCH, MICHEL P.	MACROPHAGE SPREADING AND PARTICLE RECOGNITION	5R01 AI10969-08	51,710
RABINOVITCH, MICHEL P.	CONTROL OF CELL SHAPE IN NORMAL AND TRANSFORMED CELLS	5R01 GM23093-03	33,959
RANSOHOFF, JOSEPH	HEAD INJURY CLINICAL CENTER RESEARCH PROGRAM	5P50 NS07366-10	351,682
RANSOHOFF, JOSEPH	CLINICAL RESEARCH CENTER FOR ACUTE SPINAL CORD INJURIES	5P50 NS10164-06	558,028
REEM, GABRIELLE H.	PURINE METABOLISM IN GENETIC DISEASE AND LEUKEMIA	5R01 AM15262-08	68,786
RIFKIN, DANIEL B.	MEMBRANE PROTEINS OF NORMAL AND MALIGNANT CELLS	7R01 CA23753-01	87,587
RIFKIN, DANIEL B.	PRODUCTION OF PROTEASES BY LUNG CELLS IN CULTURE	7R01 HL22266-01	95,001
RIPPS, HARRIS	VISUAL ADAPTATION IN THE VERTEBRATE RETINA	5R01 EY00285-14	174,546
RIPPS, HARRIS	VISUAL SCIENCES RESEARCH CENTER (CORE FACILITY)	5P30 EY01842-02	116,144
ROSENBLUTH, JACK	COMPARATIVE CYTOLOGY OF MUSCLE AND NERVE TISSUES	3R01 NS07495-09S1	6,954
ROSENBLUTH, JACK	COMPARATIVE CYTOLOGY OF NERVE AND MUSCLE TISSUES	2R01 NS07495-10	64,651
ROSSMAN, TOBY G.	CANCER AND ERROR-PRONE DNA REPAIR IN ANIMAL CELLS	5R01 CA19421-03	58,751
RUBINSON, KALMAN	RETINAL DEVELOPMENT AND TRANSFORMATION OF THE LAMPREY	1R01 EY02288-01	48,204
SABATINI, DAVID D.	ATTACHMENT OF RIBOSOMES TO MICROSOMAL MEMBRANES	5R01 GM20277-06	155,183
SAGER, NAOMI	FACT PROCESSING IN MEDICAL RECORDS AND LITERATURE	2R01 LM02616-04	94,827
SAMUELS, HERBERT H.	METABOLIC EFFECTS OF THYROID HORMONES IN CELL CULTURE	5R01 AM16636-06	79,313
SAMUELS, HERBERT H.	REGULATION OF GROWTH HORMONE SYNTHESIS	1R01 AM21566-01	41,177
SCHREIBER, SIDNEY S.	CARDIAC PROTEIN SYNTHESIS; OVERLOAD, ALCOHOL & ANOXIA	5R01 HL09562-14	75,703
SELIGMAN, MYRON L.	CORTICOSTEROIDS IN FREE RADICAL DAMAGED MEMBRANES	5R01 NS13726-02	53,631
SHAPIRO, ROBERT	DAMAGE TO NUCLEIC ACIDS BY BISULFITE (SULFUR DIOXIDE)	5R01 ES01033-07	79,888
SHAPIRO, ROBERT	DAMAGED DNA: THE STRUCTURE OF DNA CROSS-LINKS	2R01 GM20176-06	73,373
SHEAR, HANNAH L.	MACROPHAGE ACTIVATION IN EXPERIMENTAL MALARIA	1R01 AI15235-01	46,451
SHELANSKI, MICHAEL L.	PATHOLOGY AND BIOLOGY OF THE NEURONAL FIBROUS PROTEINS	7R01 NS15076-01	145,247
SHENKMAN, LOUIS	IMMUNE RESPONSES TO YERSINIA IN THYROID DISEASE	5R01 AM19668-02	45,115

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SIEGEL, IRWIN M.....	ELECTRICAL ANALYSIS OF RECEPTOR IN RETINAL DYSTROPHY	1R01 EY02333-01	133,635
SILBER, ROBERT.....	STUDIES OF LEUKOCYTE METABOLISM.....	5R01 CA11655-11	85,782
SILBER, ROBERT.....	EASTERN COOPERATIVE ONCOLOGY GROUP STUDIES.....	5R10 CA16395-03	32,616
STERN, ARNOLD.....	OXYGEN TOXICITY IN THE RED CELL.....	1R01 HL19532-01A2	37,337
SZER, WLODZIMIERZ.....	REGULATORY MECHANISMS IN PROTEIN BIOSYNTHESIS.....	5R01 GM23705-06	71,150
TEEBOR, GEORGE W.....	REPAIR MUTANTS ENZYMES & CHEMICAL CARCINOGENESIS.....	3R01 CA16669-03S1	14,950
TEEBOR, GEORGE W.....	REPARABILITY OF CHEMICAL CARCINOGENIC DAMAGE TO DNA.....	2R01 CA16669-04A1	79,771
THORBECKE, GEERTRUIDA J.....	LYMPHOID CELLS—PRODUCTION OF ANTIBODIES AND COMPLEMENT.....	2R01 AI03076-19	107,733
THORBECKE, GEERTRUIDA J.....	SUPPRESSION, TOLERANCE, AND AGAMMAGLOBULINEMIA.....	1R01 AI14829-01	95,486
THORBECKE, GEERTRUIDA J.....	PROPERTIES OF LYMPHOID TUMOR CELLS IN VIVO AND IN VITRO.....	5R01 CA14462-06	80,199
TROLL, WALTER.....	THE CONTROL OF BLADDER CANCER.....	5R26 CA15315-05	77,091
TROLL, WALTER.....	INHIBITION OF TUMOR PROMOTION BY PROTEASE INHIBITORS.....	5R01 CA16060-07	106,326
TROLL, WALTER.....	FAT LEVEL AND SATURATION IN CARCINOGENESIS.....	5R01 CA20999-02	90,880
TSAI, JIR-SHIONG.....	EFFECT OF THYROID HORMONE ON CULTURED CARDIAC CELLS.....	5R01 HL18176-02	33,564
VALENTINE, FRED T.....	CELL-MEDIATED IMMUNITY IN HUMANS: MECHANISMS AND USES.....	5R01 CA19529-03	72,484
VAN DUUREN, BENJAMIN L.....	CARCINOGENIC ACYLATING AGENTS AND MODE OF ACTION.....	1R01 CA24124-01	68,075
VAN DUUREN, BENJAMIN L.....	CARCINOGENIC INTERMEDIATES OF VINYL CHLORIDE & ANALOGS.....	2R01 ES01150-04	67,884
VANDERBERG, JEROME P.....	STUDIES ON THE SPOOROZITE OF PLASMODIUM.....	5R01 AI09560-08	60,717
VILCEK, JAN T.....	INTERFERON AND RESISTANCE TO VIRUS INFECTION.....	5R01 AI07057-13	74,924
VILCEK, JAN T.....	CHARACTERIZATION OF HUMAN INTERFERONS.....	5R01 AI12948-03	62,961
WEISSMANN, GERALD.....	MECHANISMS OF ARTHRITIS.....	5R01 AM11949-12	163,737
WEISSMANN, GERALD.....	EXPERIMENTAL THERAPY OF GENETIC STORAGE DISEASES.....	5R01 GM23211-03	40,636
WEISSMANN, GERALD.....	MODIFICATION OF TISSUE INJURY IN MYOCARDIAL INFARCTION.....	5R01 HL19072-03	42,687
WEISSMANN, GERALD.....	LUNG INFLAMMATION: LYSOSOMAL PROTEASES AND LIPOSOMES.....	5R01 HL19721-03	96,382
WESSLER, STANFORD.....	ANTITHROMBOTIC ACTION OF HEPARIN.....	5R01 HL18333-05	136,532
WHEATLEY, VICTOR R.....	SEBOCYTE DIFFERENTIATION IN NORMAL AND TUMOR TISSUE.....	5R01 AM18792-03	65,121
WOLMAN, SANDRA R.....	DIFFERENTIATION OF CULTURED LEUKEMIC CELLS.....	1R01 CA22942-01	120,882
YEATES, DONOVAN B.....	REGIONAL MUCOCILIARY TRANSPORT IN THE HUMAN LUNG.....	5R01 HL19431-03	42,161
ZADUNAISKY, JOSE A.....	CORNEAL ELECTROPHYSIOLOGY AND OCULAR BARRIERS.....	2R01 EY01340-05	169,914
ZADUNAISKY, JOSE A.....	CHLORIDE TRANSPORT AND OSMOREGULATION.....	1R01 GM25002-01	92,930
ZOLLA-PAZNER, SUSAN B.....	A SOLUBLE MEDIATOR OF TUMOR-INDUCED IMMUNOSUPPRESSION.....	2R01 CA15585-04A1	41,399
ZUCKER-FRANKLIN, DOROTHEA.....	ULTRASTRUCTURE OF LEUKOCYTES AND PLATELETS.....	2R01 AM12274-11	116,748
ORGANIZATION TOTAL	177	20,458,555	
NEW YORK ZOOLOGICAL SOCIETY ZIP CODE 10460			
KALLMAN, KLAUS D.....	THE GENETIC CONTROL OF SEXUAL MATURITY IN FISH.....	2R01 GM19934-16	51,009
ORGANIZATION TOTAL	1	51,009	
POLYTECHNIC INSTITUTE OF NEW YORK ZIP CODE 11201			
JOHNSON, SHARON L.....	NUCLEOPHILIC REACTIONS OF DPN AND ITS ANALOGUES.....	7R01 GM25730-01	57,293
MORAWETZ, HERBERT.....	SYNTHETIC POLYMER STUDIES RELATED TO BIOLOGY.....	2R01 GM05811-18	64,618
TOONEY, NANCY M.....	STUDIES OF MICROCRYSTALLINE & CRYSTALLINE FIBRINOGEN.....	5R01 HL18533-03	39,025
WILSON, G EDWIN, JR.....	BINDING SITE STUDIES OF PROTEIN ELONGATION FACTORS.....	1R01 GM25668-01	58,823
ORGANIZATION TOTAL	4	219,759	
POPULATION COUNCIL ZIP CODE 10017			
BARDIN, CLYDE W.....	ANDORGENS IN REPRODUCTION: PRODUCTION AND ACTION.....	7R01 HD12974-01	89,062
MUSTO, NEAL A.....	SECRETORY PROTEINS OF TESTIS: STRUCTURE AND FUNCTION.....	1R01 HD12976-01	43,751
ORGANIZATION TOTAL	2	132,813	
RIVERSIDE RESEARCH INSTITUTE ZIP CODE 10023			
LIZZI, FREDERIC L.....	ULTRASONIC EVALUATION OF OCULAR TISSUES.....	5R01 EY01212-05	169,780
LIZZI, FREDERIC L.....	STUDY OF ULTRASONICALLY INDUCED OCULAR DAMAGE.....	2R01 EY01480-04	175,917
ORGANIZATION TOTAL	2	345,697	
ROCKEFELLER UNIVERSITY ZIP CODE 10021			
AGOSTA, WILLIAM C.....	ISOLATION AND IDENTIFICATION OF MAMMALIAN PHEROMONES.....	5R01 HD11164-02	33,137
AHRENS, EDWARD H, JR.....	CLINICAL AND LABORATORY STUDIES IN LIPID METABOLISM.....	5R01 HL06222-18	401,592
ALLFREY, VINCENT G.....	NUCLEAR PROTEINS IN CARCINOGENESIS OF THE COLON.....	5R26 CA14908-05	133,514
ALLFREY, VINCENT G.....	CHEMISTRY AND METABOLISM OF DNA-ASSOCIATED PROTEINS.....	5R01 GM17383-08	87,444

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
ASANUMA, HIROSHI.....	CEREBRAL CORTICAL CONTROL OF MOVEMENT.....	2R01 NS10705-07	104,759
BEERS, WILLIAM H.....	THE ROLE OF PLASMINOGEN ACTIVATOR IN OVULATION.....	5R01 HD09401-03	39,885
BLOBEL, GUNTER K.....	FREE AND MEMBRANE-BOUND POLYSOMES IN PROTEIN SYNTHESIS.....	5R01 CA12413-07	127,422
BOFFA, LIDIA C.....	SELECTIVE INHIBITION OF COLON TUMOR PROTEIN SYNTHESIS.....	1R26 CA22419-01A1	57,420
CERAMI, ANTHONY.....	THE IDENTIFICATION OF NEW IRON-CHELATING DRUGS.....	5R01 AM18894-03	59,074
CERAMI, ANTHONY.....	BIOCHEMICAL BASIS OF THE COMPLICATIONS OF DIABETES.....	5R01 AM19655-02	86,516
CERAMI, ANTHONY.....	CLINICAL MANAGEMENT OF THALASSEMIA: CHELATOR DEVELOPMENT.....	5R01 HL20016-03	111,507
CERAMI, ANTHONY.....	PROTEIN MODIFICATION: THE KEY TO DIABETIC SEQUELAE.....	5R01 HL20520-03	65,647
CHASE, MERRILL W.....	MECHANISMS OF DELAYED-TYPE HYPERSENSITIVITY.....	5R01 AI01258-22	133,587
CHOPPIN, PURNELL W.....	MYXOVIRUS STRUCTURE, REPLICATION, MEMBRANE INTERACTION.....	5R01 AI05600-16	176,735
CHUA, NAM-HAI.....	STRUCTURE AND BIOGENESIS OF THYALKALOID MEMBRANES.....	5R01 GM21060-05	63,822
CHUA, NAM-HAI.....	TRANSFER OF PROTEINS INTO ORGANELLES.....	1R01 GM25114-01	83,348
COHN, ZANVIL A.....	THE PHYSIOLOGY OF MACROPHAGES.....	5R01 AI07012-13	150,250
COHN, ZANVIL A.....	THE NATURE AND ROLE OF MACROPHAGE SECRETION.....	5R01 AI12975-03	69,742
COWBURN, DAVID A.....	DYNAMIC CONFORMATIONS OF PEPTIDES.....	5R01 AM20357-02	94,148
CRANFIELD, PAUL F.....	MECHANISM AND PREVENTION OF CARDIAC ARRHYTHMIAS.....	5R01 HL14899-07	98,836
CUNNINGHAM, BRUCE A.....	GROWTH REGULATION IN LYMPHOID AND NEOPLASTIC CELLS.....	5R01 CA19040-03	47,777
DARNELL, JAMES E, JR.....	RNA AND GROWTH CONTROL IN ANIMAL CELLS.....	5R01 CA16006-05	186,596
DARNELL, JAMES E, JR.....	CORRELATED PROGRAM IN VIRAL ONCOLOGY.....	5P01 CA18213-03	273,205
DE DUVE, CHRISTIAN R.....	SUBCELLULAR EVENTS IN ATHEROSCLEROSIS.....	5R01 HL18157-04	164,018
EDELMAN, GERALD M.....	STRUCTURE AND ACTIVITY OF ANTIBODY-RELATED PROTEINS.....	5R01 AI09273-10	148,890
EDELMAN, GERALD M.....	CELL BIOLOGY & CHEMISTRY OF LYMPHOCYTES & THEIR PRODUCTS.....	2P01 AI11378-06	433,623
EDELMAN, GERALD M.....	INTERACTION AND ENERGY TRANSFER IN BIOLOGICAL SYSTEMS.....	5R01 AM04256-19	92,049
ERICKSON, BRUCE W.....	SYNTHESIS OF ANTIBODY PEPTIDES THAT SIGNAL SECRETION.....	1R01 AI15301-01	91,564
ERICKSON, BRUCE W.....	SYNTHESIS OF ANTIBODY PEPTIDES THAT FIX COMPLEMENT.....	1R01 CA24435-01	84,122
ERICKSON, BRUCE W.....	SYNTHESIS OF ANAPHYLATOXIC AND LEUCOTACTIC PEPTIDES.....	5R01 HL19795-03	74,066
FIELD, FRANK H.....	A MASS SPECTROMETRIC BIOTECHNOLOGY RESOURCE.....	5P41 RR00862-05	110,661
FISCHETTI, VINCENT A.....	PROPERTIES OF STREPTOCOCCAL M-PROTEIN.....	5R01 AI11822-05	40,335
FISHMAN, JACK.....	SPECIALIZED CENTER FOR CANCER ENDOCRINOLOGY.....	1P01 CA22795-01	819,113
FU, SHU MAN.....	IN VITRO STUDIES OF NORMAL AND NEOPLASTIC LYMPHOCYTES.....	1R01 CA24338-01	81,021
GERSHEY, EDWARD L.....	NUCLEAR CONTROL MECHANISMS: THE ROLE OF POLYAMINES.....	5R01 GM21943-03	52,424
GHEZ, CLAUDE P.....	INPUT-OUTPUT RELATIONS IN VOLUNTARY MOVEMENT.....	5R01 NS12730-02	65,449
GILULA, NORTON B.....	CELL COMMUNICATION—MECHANISM AND ROLE.....	1R01 GM24753-01	41,036
GILULA, NORTON B.....	HEART CELL INTERACTIONS AND CELL JUNCTION BIOGENESIS.....	5R01 HL16507-04	72,381
GISIN, BALTHASAR F.....	STRUCTURE AND FUNCTION OF PEPTIDE INCLUSION COMPLEXES.....	5R01 GM24047-02	66,637
GOLDBERG, ALLAN R.....	RSV FUNCTIONS INVOLVED IN TRANSFORMATION.....	5R01 CA13362-07	55,892
GOTSCHLICH, EMIL C.....	IMMUNOCHEMICAL STUDIES ON GONOCOCCAL SURFACE ANTIGENS.....	5R01 AI10615-08	92,247
GOTSCHLICH, EMIL C.....	IMMUNOCHEMISTRY OF GRP. B STREPTOCOCCAL TYPE ANTIGENS.....	1R01 AI15220-01	64,213
GREGORY, JOHN D.....	BIOSYNTHESIS AND TURNOVER OF PROTEOGLYCANS IN CORNEA.....	1R01 EY02600-01	48,720
HANAFUSA, HIDESABURO.....	CELLULAR ALTERATION INDUCED BY ROUS SARCOMA VIRUS.....	5R01 CA14935-06	193,275
HAYWARD, WILLIAM S.....	RNA TUMOR VIRUS GENE EXPRESSION.....	5R01 CA16668-05	66,338
HIRSCH, JULES.....	METABOLIC REGULATIONS IN HUMAN OBESITY.....	5R01 AM18325-14	189,234
HIRSCH, JULES.....	REGULATION OF ADIPOSE TISSUE GROWTH AND DEVELOPMENT.....	5R01 AM20508-02	137,695
HOTCHKISS, ROLLIN D.....	DEOXYRIBONUCLEATES GOVERNING DRUG RESISTANCE.....	5R01 AI03170-19	70,881
HSU, MING-TA.....	BASIC MECHANISM OF VIRAL ONCOGENESIS.....	5R01 CA19073-03	44,625
HUH, MARTIN M.....	REGULATION OF BIOGENIC AMINE METHYLTRANSFERASES.....	5R01 GM24844-02	50,353
KAPPAS, ATTALLAH.....	ENVIRONMENTAL PHARMACOLOGY.....	5R01 ES01055-05	210,601
KAPPAS, ATTALLAH.....	HEME AND CHLOROPHYLL BIOSYNTHESIS.....	5R01 GM04922-22	63,216
KILEJIAN, ARAXIE.....	HOST-PARASITE INTERACTIONS IN MALARIA.....	5R01 AI13728-02	95,966
KING, TE PIAO.....	IMMUNOCHEMICAL STUDIES OF RAGWEED ANTIGEN E.....	1R01 AI14422-01	72,072
KNIGHT, BRUCE W, JR.....	MATHEMATICAL ANALYSES OF NEURAL NETWORKS.....	5R01 EY01428-05	80,795
KREY, LEWIS C.....	CELLULAR MECHANISMS AND GONADOTROPIN SECRETION.....	5R01 HD10168-02	40,318
KUNKEL, HENRY G.....	MYELOMA PROTEINS AND ANTIBODIES.....	2R01 AI10811-13	100,443
KUNKEL, HENRY G.....	IMMUNOLOGICAL MECHANISMS IN RHEUMATOID ARTHRITIS.....	2R01 AM04761-18	99,479
LANDSBERGER, FRANK R.....	VIRUS-CELL PLASMA MEMBRANE INTERACTIONS.....	1R01 AI14040-01A1	42,733
LAZAROW, PAUL B.....	BIOGENESIS OF RAT LIVER PEROXISOMES.....	5R01 AM19394-03	56,706
LAZAROW, PAUL B.....	CLOFIBRATE-ENHANCED LIPID OXIDATION BY PEROXISOMES.....	5R01 HL20909-02	51,950
LINDMARK, DONALD G.....	BIOCHEMICAL CYTOLOGY OF GIARDIA AND ENTAMOEBAS.....	1R01 AI14315-01A1	59,118
LIPMANN, FRITZ.....	GLUCOSE TRANSPORT: POLYPEPTIDE SYNTHESIS.....	5R01 GM13972-13	184,570
LIZARDI, PAUL M.....	BIOGENESIS OF SILK FIBROIN MESSENGER RNA.....	5R01 GM22865-03	37,281

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
LUCK, DAVID J.....	BIOCHEMICAL GENETICS OF MICROTUBULES.....	5R01 GM17132-10	114,866
LUCK, DAVID J.....	BIOGENESIS OF MITOCHONDRIA.....	5R01 GM21059-05	70,021
LUINE, VICTORIA N.....	MAO AND REGULATION BY HORMONES OF SEXUAL BEHAVIOR.....	1R01 HD12011-01	54,113
MANNING, JAMES M.....	CHEMICAL STUDIES OF SICKLE CELL HEMOGLOBIN.....	2R01 HL18819-07	85,620
MAUZERALL, DAVID.....	CHARGE TRANSFER ACROSS INTERFACES OF BIOLOGICALS.....	1R01 GM25693-01	56,804
MC CARTY, MACLYN.....	CELL SURFACE OF STREPTOCOCCI.....	5R01 HL03919-20	88,322
MC CARTY, MACLYN.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00102-15	1,078,714
MC CARTY, MACLYN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07065-13	200,462
MC EWEN, BRUCE S.....	GENE EXPRESSION IN NERVOUS TISSUE.....	5R01 NS07080-13	101,175
MERRIFIELD, ROBERT B.....	SOLID PHASE SYNTHESIS OF PEPTIDES AND PROTEINS.....	5R01 AM01260-23	142,795
MERRIFIELD, ROBERT B.....	SYNTHETIC ANALOGS OF GLUCAGON FOR STUDIES ON DIABETES.....	1R01 AM24039-01	68,123
MILLER, NEAL E.....	CARDIOVASCULAR HOMEOSTASIS AND LEARNING.....	5R01 HL21532-02	144,058
MOORE, STANFORD.....	BIOCHEMISTRY OF NUCLEASES.....	1R01 GM25323-01	46,979
MULLER, MIKLOS.....	BIOCHEMICAL CYTOLOGY OF TRICHOMONAS VAGINALIS.....	2R01 AI11942-05	81,523
NATHAN, CARL F.....	MONONUCLEAR LEUKOCYTES IN TUMOR IMMUNITY.....	5R01 CA22090-02	91,916
NORGREN, RALPH E.....	NEURAL SYSTEMS OF INGESTIVE BEHAVIOR.....	5R01 NS10150-07	53,072
PETERSON, BARRY W.....	PROPERTIES OF PREMOTOR NEURONS IN GAZE CONTROL SYSTEM.....	1R01 EY02249-01	64,323
PFAFF, DONALD W.....	BRAIN MECHANISMS OF REPRODUCTIVE BEHAVIOR.....	2R01 HD05751-07	87,201
PFAFF, DONALD W.....	CHARACTERIZATION OF HORMONE-CONCENTRATING NEURONS.....	5R01 HD10655-02	64,446
POOLE, BRIAN H.....	PROTEIN DEGRADATION, LYSOSOME FUNCTION AND SENESCENCE.....	5R01 AG00609-02	102,592
RATLIFF, FLOYD.....	ELECTRICAL ACTIVITY, SINGLE RECEPTORS, NEURONS OF EYE.....	5R01 EY00188-23	113,042
RATLIFF, FLOYD.....	VISUAL STIMULATOR/DATA ANALYZER FOR CLINICAL RESEARCH.....	1R01 EY02439-01	82,036
REEKE, GEORGE N, JR.....	COMPUTING METHODS FOR MACROMOLECULAR CRYSTALLOGRAPHY.....	2R01 GM22663-04	49,572
REICH, EDWARD.....	CHEMOTHERAPEUTIC DEOXYNUCLEOSIDES AND OTHER AGENTS.....	5R01 CA08290-13	317,378
RIFKIN, MARY R.....	MECHANISM OF TRYPANOCIDAL ACTION OF HUMAN SERUM.....	5R01 AI14045-02	73,797
RUTISHAUSER, URS S.....	CELL-CELL ADHESION AMONG EMBRYONIC CELLS.....	2R01 HD09635-04	105,060
SAMUEL, PAUL.....	VALIDATION OF A CHOLESTEROL ABSORPTION METHOD IN MAN.....	1R01 HL22567-01	89,356
SCHEELE, GEORGE A.....	MOLECULAR BASIS OF SECRETION IN THE EXOCRINE PANCREAS.....	2R01 AM18532-04	90,953
SCHEELE, GEORGE A.....	EXOCRINE PANCREATIC PROTEIN IN CANCER OF THE PANCREAS.....	5R26 CA22582-02	52,886
SCHOENFELD, ROBERT L.....	A MICROPROCESSOR BIOTECHNOLOGY RESOURCE.....	3P41 RR01089-01S1	10,769
SCHOENFELD, ROBERT L.....	A MICROPROCESSOR BIOTECHNOLOGY RESOURCE.....	5P41 RR01089-02	118,307
SCOTT, WILLIAM A, III.....	BIOCHEMICAL GENETICS OF MICROORGANISMS.....	5R01 GM16224-20	84,972
SHAPLEY, ROBERT M.....	SPATIAL SUMMATION AND DYNAMICS OF VISUAL NEURONS.....	5R01 EY01472-05	75,942
SIEKEVITZ, PHILIP.....	CELL BIOLOGY OF THE SYNAPSE.....	5R01 NS12726-03	74,339
SILVERSTEIN, SAMUEL C.....	ROLE OF MONONUCLEAR LEUCOCYTES IN VIRAL IMMUNITY.....	5R01 AI08697-10	71,221
SILVERSTEIN, SAMUEL C.....	PLASMINOGEN ACTIVATORS OF MALIGNANCY.....	5R01 CA18945-03	65,751
STACEY, DENNIS W.....	MICROINJECTION ANALYSIS OF AVIAN ONCORNAVIRAL RNAS.....	1R23 CA24619-01	36,350
STARK, DENNIS M.....	DIAGNOSTIC CLINICAL LABORATORY PROGRAM.....	1P40 RR01180-01	63,980
STEIN, WILLIAM H.....	CHEMICAL STRUCTURE AND ENZYME ACTIVITY OF PROTEINS.....	5R01 GM07256-19	138,597
STEINMAN, RALPH M.....	CHARACTERIZATION OF LYMPHOID DENDRITIC CELLS.....	5R01 AI13013-03	51,189
STRICKLAND, SIDNEY.....	STUDIES OF PROSTATE AND EMBRYO PLASMINOGEN ACTIVATOR.....	1R01 HD11608-01	42,485
TAMM, IGOR.....	VIRUS-INDUCED ALTERATIONS IN ANIMAL CELLS.....	5R01 CA18608-19	128,536
TOMASZ, ALEXANDER.....	TEICHOIC ACIDS: FUNCTIONS AND MODE OF REPLICATION.....	5R01 AI09423-09	62,584
TRAGER, WILLIAM.....	MEMBRANE PHYSIOLOGY IN INTRACELLULAR PARASITISM.....	5R01 AI08989-09	76,418
TRAGER, WILLIAM.....	HOST-PARASITE MEMBRANE INTERACTIONS IN LEISHMANIASIS.....	5R01 AI11916-04	67,012
UNKELESS, JAY C.....	THE FC RECEPTOR: GENETIC AND BIOCHEMICAL ANALYSIS.....	1R01 AI14603-01	81,843
WEISS, JAY M.....	PSYCHOLOGIC/BEHAVIORAL INFLUENCES ON HEART PATHOLOGY.....	5R01 HL19974-02	89,398
WILSON, VICTOR J.....	MOTOR CONTROL STUDIES.....	5R01 NS02619-19	96,560
WINCHESTER, ROBERT J.....	STUDIES OF B LYMPHOCYTE ALLOANTIGENS.....	5R01 CA20107-03	65,498
WOOD, HENRY N.....	TRANSFORMATION AND RECOVERY OF CROWN GALL TUMOR CELLS.....	5R01 CA13808-06	103,571
YOUNG, MICHAEL W.....	GENE ORGANIZATION AND FUNCTION IN D. MELANOGASTER.....	1R01 GM25103-01	87,623
ZABRISKIE, JOHN B.....	IMMUNOLOGICAL STUDIES IN STREPTOCOCCAL SEQUELAE.....	5R01 AI14361-02	106,951
ZIFF, EDWARD B.....	STRUCTURAL STUDIES OF ADENOVIRUS-2 MRNA SYNTHESIS.....	2R01 GM21779-04	65,114
ORGANIZATION TOTAL	117	12,968,288	
ROOSEVELT HOSPITAL ZIP CODE 10019			
CHARGAFF, ERWIN.....	CELLULAR CONTROL MECHANISMS.....	5R01 CA19289-03	100,047
CHRISTY, NICHOLAS P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05663-11	34,775
FEIGELSON, MURIEL H.....	PERINATAL DEVELOPMENT IN OFFSPRING OF DIABETIC MOTHERS.....	1R01 AM21166-01	82,347
FEIGELSON, MURIEL H.....	MECHANISMS OF POSTNATAL ENZYME DEVELOPMENT.....	5R01 HD08712-05	112,609

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
HOCHBERG, RICHARD B	STEROID HORMONES IN BREAST CANCER.....	7R01 CA24512-01	63,944
PHILLIPS, GERALD B	ETIOLOGY OF MYOCARDIAL INFARCTION.....	1R01 HL20645-01A1	79,128
ROSNER, WILLIAM.....	ESTROGEN BINDING IN HUMAN SERUM.....	5R01 AM11852-12	118,320
WEISS, HARVEY J.....	PRIMARY DISORDERS OF PLATELET FUNCTION.....	5R01 HL14595-07	131,795
ORGANIZATION TOTAL	8 722,965		
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021			
ABBOTT, JOAN.....	ONTOGENY OF B-LYMPHOCYTES IN VITRO.....	5R01 AI13759-02	85,347
ANDERSON, LUCY M.....	CHEMICAL CARCINOGENESIS IN THE ATHYMIC MOUSE.....	1R01 CA22498-01A1	37,481
ANDERSON, LUCY M.....	CHEMICAL FACTORS IN FETAL ONCOGENESIS.....	1R01 CA22509-01	17,622
ANDREWS, PETER W.....	THE IMMUNOGENETICS OF SELF IDENTIFICATION.....	1R01 CA23676-01	102,390
ARTZT, KAREN.....	TERATOCARCINOMA AND EMBRYONAL TUMORS: SURFACE ANTIGENS.....	5R01 CA21651-03	76,102
AUGENLICHT, LEONARD H.....	PROCESSING OF NUCLEAR RNA IN COLON CARCINOGENESIS.....	1R26 CA22367-01A1	59,341
BALIS, M EARL.....	ENZYMES OF NORMAL AND MALIGNANT INTESTINAL MUCOSA.....	5R26 CA14906-06	222,023
BANCROFT, F CARTER.....	REGULATION OF GROWTH HORMONE MESSENGER RNA.....	1R01 GM24442-01	59,317
BENNETT, DOROTHEA.....	IMMUNOGENETICS OF SPERMATOZOA, EGGS, AND EMBRYOS.....	5R01 HD10668-03	48,612
BIEDLER, JUNE L.....	CYTOGENETICS OF AKR MOUSE LEUKEMIA.....	5R01 CA18926-03	45,602
BIGLER, RODNEY E.....	VASCULAR CHANGES IN LUNG EXPOSED TO RADIATION.....	1R01 HL22371-01	52,004
BORENFREUND, ELLEN.....	IN VITRO CHEMICAL CARCINOGENESIS (DCCP-3).....	5R01 CA20019-03	59,174
BOYSE, EDWARD A.....	THE CELL SURFACE PROGRAM PROJECT.....	3P01 CA16889-03S1	175,561
BOYSE, EDWARD A.....	IMMUNOGENETICS OF THE TLA REGION OF CHROMOSOME 17.....	5R01 CA20473-02	56,705
BOYSE, EDWARD A.....	IMMUNOGENETICS OF LY SYSTEMS.....	5R01 CA22131-02	217,768
BOYSE, EDWARD A.....	NATIONAL CONGENIC MOUSE SUPPLY-MULTICATEGORY RESEARCH.....	5P40 RR01001-03	223,727
BROWN, GEORGE B.....	MOLECULAR BIOLOGY-CANCER PROGRAM PROJECT.....	3P01 CA17085-03S1	154,740
BROXMEYER, HAL E.....	INHIBITORY INTERACTIONS REGULATING HEMATOPOIESIS.....	1R01 CA23528-01	86,609
CAVALIERI, LIEBE F.....	A STUDY OF MUTAGENESIS BY CHEMICAL CARCINOGENS.....	1R01 ES01936-01	78,797
CHOI, YONG S.....	IMMUNOBIOLOGY, IMMUNODEFICIENCY, AND CANCER.....	2P01 CA17404-04	468,533
CLARKSON, BAYARD D.....	CELL PROLIFERATION KINETICS IN HEMATOPOIETIC TUMORS.....	5R01 CA19117-03	167,647
CLARKSON, BAYARD D.....	HUMAN HEMATOPOIETIC TUMORS PROGRAM PROJECT.....	5P01 CA20194-03	344,909
DARZYNKIEWICZ, ZBIGNIEW.....	EFFECTS OF NEW ANTICANCER DRUGS ON THE CELL CYCLE.....	1R01 CA23296-01	138,855
DAY, NOORBIBI K.....	COMPLEMENT AND IMMUNE COMPLEXES IN CANCER.....	5R01 CA18488-03	136,298
DE HARVEN, ETIENNE.....	SCANNING EM FOR LYMPHOCYTES WITH MARKERS FOR SURFACE IG.....	5R01 CA22212-02	29,664
DJORDJEVIC, BOZIDAR.....	MODIFICATION OF RADIATION DAMAGE IN HYPOXIC CELLS.....	3R01 CA20470-02S2	9,290
DONNER, DAVID B.....	ALLOSTERIC HORMONE BINDING RELATED TO BIOLOGIC EFFECT.....	5R01 AM19846-02	61,589
DONNER, DAVID B.....	TARGET CELL DESENSITIZATION IN PEPTIDE HORMONE ACTION.....	1R01 AM22121-01	47,933
DUPONT, BO.....	IMMUNOGENETICS OF THE MAJOR HISTOCOMPATIBILITY COMPLEX.....	1P01 CA22507-01	461,118
DUPONT, BO.....	SPONTANEOUS REGRESSION IN RETINOBLASTOMA.....	5R01 EY01616-03	87,628
EVENSON, DONALD P.....	CHROMATIN ORGANIZATION IN HUMAN SPERMATOZOA.....	1R01 HD12196-01	71,075
FLEISSNER, ERWIN J.....	VIRAL AND MOUSE GENES IN LEUKEMIA VIRUS INFECTION.....	5R01 CA15297-05	125,898
FLEISSNER, ERWIN J.....	ONCOGENIC VIRUSES PROGRAM PROJECT.....	5P01 CA16599-04	707,175
FOX, JACK J.....	SYNTHETIC MASKED NUCLEOSIDES FOR ANTICANCER STUDIES.....	5R01 CA18601-03	206,964
FRIED, JERROLD.....	GROWTH KINETICS AND DRUG RESPONSE OF CELL POPULATIONS.....	2R01 CA16757-04	131,168
GOMATOS, PETER J.....	REOVIRUS: ASSEMBLY OF PARTICLES SYNTHESIZING RNA.....	1R01 AI14466-01	65,115
GOOD, ROBERT A.....	NONSPECIFIC RESISTANCE TO INFECTION AND INTOXICATION.....	5R01 AI11843-06	110,358
GOOD, ROBERT A.....	SUPPORT FOR CANCER RESEARCH PROGRAM.....	5P30 CA08748-13	7,302,258
GOOD, ROBERT A.....	MARROW TRANSPLANTATION IN APLASTIC ANEMIA & LEUKEMIA.....	1P01 CA23766-01	856,824
GOOD, ROBERT A.....	PATHOGENESIS OF CNS AND AUTOIMMUNE DISORDERS.....	5R01 NS11457-06	134,305
GOOD, ROBERT A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05534-06	200,462
GREEN, SAUL.....	TUMOR NECROSIS FACTOR: PURIFICATION AND MODE OF ACTION.....	1R01 CA23906-01	85,958
GUPTA, SOHAN L.....	IMMUNOCHEMICAL STUDIES ON THYMUS-LEUKEMIA ANTIGENS.....	5R01 CA20490-02	68,882
HADDEN, JOHN W.....	MACROPHAGE PROLIFERATION AND ACTIVATION.....	1R01 CA20178-01A3	88,691
HAHN, ERIC W.....	HEAT & RADIATION ON NEOPLASMS-OPTIMAL FRACTIONATION.....	5R01 CA17410-04	107,623
HAMMERLING, ULRICH G.....	ONTOGENIC DEVELOPMENT OF B LYMPHOCYTES.....	1R01 AI14831-01	109,163
HAMMERLING, ULRICH G.....	ONTOGENETIC RELATIONSHIP OF CRO AND CR- B LYMPHOCYTES.....	1R01 CA25508-01	50,247
HARDY, WILLIAM D, JR.....	TUMOR THERAPY: EMPHASIS ON IMMUNOTHERAPY.....	5R01 CA19072-03	109,970
HAWRYLKO, EUGENIA A.....	BCG POTENTIATED ANTITUMOR RESPONSE-ESCAPE MECHANISMS.....	5R01 CA18351-03	151,163
HIRSHAUT, YASHAR.....	SEROLOGIC SCREENING FOR CONTAGION OF HUMAN SARCOMAS.....	1R01 CA23404-01	77,130
HOFFMANN, MICHAEL K.....	REGULATION OF IMMUNITY BY ANTIBODY AND B-CELLS.....	2R01 CA17673-04	89,349
INCEFY, GENEVIEVE S.....	T-LYMPHOCYTE DIFFERENTIATION.....	1R01 CA24476-01	62,071
KENYON, ALAN J.....	MASTOCYTOMAS AND LYMPHOPROLIFERATIVE DISEASES.....	5R01 CA15604-05	123,910

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
KINCADE, PAUL W.....	EARLY EVENTS IN MAMMALIAN B-CELL DIFFERENTIATION.....	2R01 AI12741-04	83,831
KOO, GLORIA C.....	DIFFERENTIATIVE IMMUNOGENETICS: THE T/T LOCUS.....	5R01 CA22462-02	67,210
KOPELOVICH, LEVY.....	SV40 TRANSFORMATION OF GARDNER'S SYNDROME FIBROBLASTS.....	5R26 CA19259-03	77,992
KOURIDES, IONE A.....	REGULATION OF ALPHA AND BETA SUBUNITS OF HUMAN TSH.....	5R01 CA23185-02	88,933
KREIS, WILLI.....	TUMOR THERAPY BY L-METHIONINE DEPRIVATION.....	5R01 CA19050-03	64,134
KRUG, ROBERT M.....	REPLICATION OF INFLUENZA VIRUS.....	3R01 AI11772-04S1	38,531
KRUG, ROBERT M.....	REPLICATION OF INFLUENZA VIRUS.....	5R01 AI11772-05	144,450
LAUGHLIN, JOHN S.....	CANCER STUDIES WITH NEW RADIOACTIVE SCANNING COMPOUNDS.....	5R01 CA18153-03	201,146
LEVINE, PHILIP.....	MUTANT A, P1 ANTIGENS IN MALIGNANCY, CYTOTOXICITY.....	5R01 CA20660-02	39,823
LITMAN, GARY W.....	BIOPHYSICAL STUDIES OF MONOCLONAL CRYOIMMUNOGLOBULINS.....	5R01 AI13528-03	50,192
LITMAN, GARY W.....	LOWER VERTEBRATE IMMUNOGLOBULIN AND B2-MICROGLOBULIN.....	1R01 AI14454-01	50,677
LLOYD, KENNETH O.....	ANTIGENS OF HUMAN MALIGNANT MELANOMA.....	5R01 CA21445-02	43,705
LOPEZ, CARLOS.....	GENETICS OF RESISTANCE TO HSV-1 IN THE MOUSE.....	1R01 AI14832-01	61,918
MARCUS, STUART L.....	RLV DNA POLYMERASE ENZYMOLOGY AND RADIOIMMUNOASSAY.....	3R01 CA18369-03S1	14,603
MARQUARDT, HANS W.....	HYDROCARBON-INDUCED MALIGNANT TRANSFORMATION IN VITRO.....	5R01 CA15205-05	37,027
MAYLIE-PFENNINGER, MARIE F.....	SURFACE CHEMISTRY OF TERATOCARCINOMA AND EMBRYOS.....	5R01 CA21363-02	66,894
MEHTA, BIPIN M.....	PHARMACOKINETICS OF CANCER CHEMOTHERAPEUTIC AGENTS.....	1R01 CA23512-01	49,980
MELERA, PETER W.....	GROWTH AND DIFFERENTIATION PHASE BIOCHEMISTRY OF TRNA.....	5R01 GM21863-03	65,133
MIKE, VALERIE.....	STATISTICAL CENTER FOR NAT'L BLADDER CANCER CONFERENCE.....	1R26 CA24567-01	82,461
MODAK, MUKUND J.....	IN VIVO AND IN VITRO STUDIES OF DNA SYNTHESIS.....	5R01 CA21404-02	61,988
MOORE, MALCOLM A.....	MARROW CULTURE STUDIES IN HUMAN MYELOID LEUKEMIA.....	2R01 CA17353-04	106,663
MOORE, MALCOLM A.....	DEVELOPMENT AND FUNCTION OF ACTIVATED MACROPHAGES.....	5R01 CA19052-03	67,793
MURPHY, MARTIN J, JR.....	IDENTITY AND CHARACTERISTICS OF ERYTHROID STEM CELLS.....	5R01 AM19741-02	57,933
OLD, LLOYD J.....	HUMAN CANCER SEROLOGY.....	5P01 CA19765-03	405,546
PARHAM, JAMES C.....	TRANSITION STATE ANALOGS OF PURINES FOR CHEMOTHERAPY.....	5R01 CA18965-03	53,928
PARHAM, JAMES C.....	N-AMINOHETEROCYCLES AS CANCER CHEMOTHERAPEUTIC AGENTS.....	1R01 CA23622-01	45,690
PRICE, RICHARD W.....	HERPES SIMPLEX VIRUS INFECTION OF AUTONOMIC GANGLIA.....	5R01 NS12396-03	56,355
RALPH, PETER.....	FUNCTIONAL ANALYSIS AND REGULATION OF LEUKEMIC CELLS.....	1R01 CA24300-01	99,144
ROBERTS, JOSEPH.....	A PROGRAM FOR DEVELOPMENT OF NEW ANTITUMOR ENZYMES.....	5R01 CA15860-05	73,385
ROBERTS, JOSEPH.....	THERAPY BY ENZYMIC DEPLETION OF ESSENTIAL AMINO ACIDS.....	5R01 CA18844-03	81,124
RUSS, GERALD A.....	SELECTIVE IRRADIATION OF OSSEOUS TUMORS WITH 33P-HEDP.....	5R01 CA18873-03	55,071
SALSER, JOSEPHINE S.....	METABOLIC CONTROLS OF THYMIDYLATE IN MALIGNANT GROWTH.....	5R01 CA19608-03	50,990
SARKAR, NURUL H.....	COMPONENTS OF THE MOUSE MAMMARY TUMOR VIRUS.....	2R01 CA17129-04	98,527
SCHEID, MARGRIT P.....	LYMPHOCYTE SUBSETS IN IMMUNE-DEFICIENCY STATES.....	5R01 CA22241-02	80,904
SCHEID, MARGRIT P.....	T CELL DIFFERENTIATION: MOLECULAR MECHANISMS.....	9R01 CA25738-03	42,927
SCHEID, MARGRIT P.....	INDUCTION OF T-LYMPHOCYTE DIFFERENTIATION.....	5R01 HD08415-05	85,989
SCHENDEL, DOLORES J.....	CYTOTOXIC CELL TYPING: IDENTIFYING NEW ALLOANTIGENS.....	1R01 AI15227-01	58,971
SHERMAN, MERRY R.....	RENAL CORTICOSTEROID RECEPTOR STRUCTURE, PURIFICATION.....	1R01 AM20505-01	90,338
SILVERSTONE, ALLEN E.....	PROGRAMS OF NORMAL AND MALIGNANT LYMPHOCYTES.....	1R01 CA22599-01	49,632
SIROTNAK, FRANCIS M.....	SELECTIVE ANTITUMOR ACTION ANTIFOLATES.....	1R01 CA22764-01	85,107
SIROTNAK, FRANCIS M.....	APPROACH TO DRUG TRANSPORT/RESPONSE IN HUMAN CANCER.....	1R01 CA24153-01	42,756
SKIPSKI, VLADIMIR P.....	BLOOD SERUM GLYCOSPHINGOLIPIDS AND MALIGNANCY.....	5R01 CA15169-05	61,101
SKIPSKI, VLADIMIR P.....	ROLE OF GLYCOCONJUGATES IN FORMATION OF METASTASIS.....	1R01 CA24419-01	65,759
SNYDER, HARRY W, JR.....	CHEMICAL NATURE OF LEUKEMIA ANTIGENS.....	1R23 CA24357-01	32,250
SONENBERG, MARTIN.....	CELL SURFACE ALTERATIONS BY GROWTH HORMONES.....	5R01 AM18759-03	70,305
SONENBERG, MARTIN.....	HORMONE-MEMBRANE INTERACTION IN NEOPLASIA.....	5R01 CA15773-04	88,883
SPIEGELMAN, MARTHA.....	CELL SURFACE ARCHITECTURE OF EMBRYOS AND SPERM.....	2R01 HD10669-03	102,181
STACKPOLE, CHRISTOPHER W.....	PLASMA-MEDIATED LEUKEMIA CELL LYSIS AND MODULATION.....	5R01 CA16168-04	69,942
STAVNEZER, EDWARD.....	SYNTHESIS AND PROCESSING OF AVIAN RETROVIRUS RNAS.....	1R01 CA24163-01	91,695
STAVNEZER, JANET M.....	STRUCTURE AND DIFFERENTIATION OF IMMUNOGLOBULIN GENES.....	1R01 AI14617-01	110,223
STEWART, WILLIAM E, II.....	CHARACTERIZATION OF INTERFERONS AND THEIR ACTIONS.....	5R01 CA20863-03	60,775
STOCK, C CHESTER.....	AN EXPERIMENTAL CANCER CHEMOTHERAPY PROGRAM.....	5P01 CA18856-03	932,658
STOHRER, GERHARD.....	PURINE N-OXIDES AND OTHER ONCOGENS.....	5R01 CA19667-03	44,771
STOHRER, GERHARD.....	PURINE DERIVATIVES AND OTHER CHEMICAL CARCINOGENS.....	1R01 CA22609-01	70,118
STUTMAN, OSIAS.....	IMMUNE SURVEILLANCE AND CANCER.....	2R01 CA15988-05	99,236
STUTMAN, OSIAS.....	TUMOR IMMUNITY AND TUMOR-HOST INTERACTIONS.....	5R01 CA17818-03	89,488
TELLER, MORRIS N.....	IMMUNITY TO TUMOR FOLLOWING DRUG-INDUCED REMISSION.....	5R01 CA18253-03	68,862
TROTTA, PAUL P.....	ADENOSINE DEAMINASE REGULATION AND ITS ROLE IN CANCER.....	3R01 CA18428-03S1	10,370
WACHTEL, STEPHEN S.....	SEROLOGICAL ANALYSIS OF EPIDERMAL CELL ANTIGENS.....	5R01 AI11982-05	63,042
WACHTEL, STEPHEN S.....	H-Y ANTIGEN IN HUMANS WITH SEX-CHROMOSOMAL ANOMALIES.....	5R01 HD10065-03	48,886

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
WEISS, HERBERT.....	DENSELY IONIZING RADIATION AND OXYGEN TENSION IN CELLS.....	5R01 CA18179-03	64,417
WITKIN, STEVEN S.....	DNA SYNTHESIZING COMPLEXES IN SEMEN.....	5R01 HD10826-02	42,250
ZEDECK, MORRIS S.....	A MODEL SYSTEM FOR STUDIES OF COLON CARCINOGENESIS.....	5R26 CA15637-05	67,111
ORGANIZATION TOTAL	116 20,381,869		
SOCIAL SCIENCE RESEARCH COUNCIL ZIP CODE 10016			
SHELDON, ELEANOR B.....	LIFE-COURSE PERSPECTIVES ON MIDDLE AND OLD AGE.....	1R01 AG01144-01	135,022
SHELDON, ELEANOR B.....	BIOSOCIAL BASES OF PARENTING AND OFFSPRING DEVELOPMENT.....	1R13 HD11777-01	18,070
ORGANIZATION TOTAL	2 153,092		
ST. JOHN'S UNIVERSITY ZIP CODE 11439			
CARTER, TIMOTHY H.....	THE REGULATION OF ADENOVIRUS GENE EXPRESSION.....	1R01 CA25757-01	29,763
ORGANIZATION TOTAL	1 29,763		
ST. LUKE'S HOSPITAL CENTER ZIP CODE 10025			
BERNSTEIN, ROBERT S.....	REGULATION OF ADIPOCYTE INSULIN SENSITIVITY.....	5R01 AM17200-05	99,796
BERTLES, JOHN F.....	GENETIC CONTROL OF HEMOGLOBIN SYNTHESIS.....	5R01 AM08154-14	108,098
BERTLES, JOHN F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05501-16	72,253
BOKKENHEUSER, VICTOR D.....	BACTERIA AND STEROID METABOLISM.....	9R01 CA25763-04A1	78,772
FAIRCHILD, BEATRICE M.....	SICKLE CELL HEMOGLOBIN: INTERACTIONS AND AGGREGATION.....	2R01 HL15293-07	95,565
HASHIM, SAMI A.....	MEDIUM CHAIN FATS: PHYSIOLOGY & CLINICAL IMPLICATIONS.....	2R01 AM17191-05	146,925
PIERCE, JAMES C.....	HUMORAL ANTIBODY AND RENAL ALLOGRAFT REJECTION.....	5R01 AM19470-03	64,453
VAN ITALLIE, THEODORE B.....	BODY NUTRIENT RESERVES AND FEEDING BEHAVIOR.....	5R01 AM17259-05	67,740
VAN ITALLIE, THEODORE B.....	OBESITY RESEARCH CENTER.....	5P50 AM17624-04	632,936
ORGANIZATION TOTAL	9 1,366,538		
ST. LUKE'S INSTITUTE FOR HEALTH SCIENCES ZIP CODE 10025			
CASE, ROBERT B.....	CONTROL OF CORONARY FLOW BY PCO2.....	3R01 HL23982-01S1	73,515
PIERSON, RICHARD N, JR.....	QUANTITATIVE RADIOCARDIOGRAPHY: A CRITICAL EVALUATION.....	3R01 HL23983-01S1	18,051
RYAN, STEPHEN F.....	EXPERIMENTAL ACUTE ALVEOLAR INJURY.....	3R01 HL23981-01S1	114,269
ORGANIZATION TOTAL	3 205,835		
ST. VINCENT'S HOSPITAL AND MEDICAL CENTER OF NEW YORK ZIP CODE 10011			
BARTFELD, HARRY.....	CAUSE AND MECHANISMS OF AMYOTROPHIC LATERAL SCLEROSIS.....	3P50 NS11605-03S1	4,109
BARTFELD, HARRY.....	CAUSE AND MECHANISMS OF AMYOTROPHIC LATERAL SCLEROSIS.....	2P50 NS11605-04	241,770
MORENO, AUGUSTO H.....	ARTERIAL CHARACTERISTIC INPUT IMPEDANCE IN CIRRHOSIS.....	5R01 AM19508-02	50,549
SCHWARZ, GEORGE.....	X-RAY DOSE RATE EFFECTS ON CELL KINETICS.....	5R01 CA17582-04	49,485
SCHWARZ, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05502-14	30,534
ORGANIZATION TOTAL	5 376,447		
STATE UNIVERSITY OF NEW YORK--DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
ALTURA, BURTON M.....	PHARMACOLOGIC STUDIES ON VASCULAR SMOOTH MUSCLE.....	5R01 HL18015-03	69,329
BIANCO, CELSO.....	REGULATION OF MACROPHAGE MOTILITY BY COMPLEMENT.....	1R01 AI15221-01	58,787
BIANCO, CELSO.....	TUMOR RECOGNITION BY NORMAL AND ACTIVATED MACROPHAGES.....	5R01 CA23056-02	35,034
CARP, RICHARD I.....	MULTIPLE SCLEROSIS ASSOCIATED AGENT CHARACTERIZATION.....	1R01 NS13923-01	35,493
CRACCO, ROGER Q.....	EVOKED SPINAL RESPONSE.....	5R01 NS12039-03	42,678
DEBONS, ALBERT F.....	HYPOTHALAMIC REGULATION OF FOOD INTAKE.....	5R01 AM12479-11	47,647
DETWILER, THOMAS C.....	REACTIONS OF THROMBIN AND COLLAGEN WITH PLATELETS.....	5R01 HL16355-05	63,973
DETWILER, THOMAS C.....	STIMULUS-RESPONSE COUPLING IN PLATELETS.....	2R01 HL17729-04	47,433
DREIZEN, PAUL.....	PHYSICAL CHEMISTRY OF CONTRACTILE PROTEINS.....	5R01 AM06165-14	62,928
EISENSTEIN, ALBERT B.....	DIETARY EFFECTS ON CARBOHYDRATE METABOLISM.....	5R01 AM19825-03	47,641
ERLIJ, DAVID J.....	ACTIVATION OF MEMBRANE PROCESSES BY INSULIN.....	1R01 AM24064-01	51,858
ETLINGER, JOSEPH D.....	MYOFIBRILLAR ASSEMBLY AND BREAKDOWN IN CARDIAC MUSCLE.....	1R01 HL21970-01	48,172
FEINMAN, RICHARD D.....	MECHANISM OF THROMBIN ACTION.....	2R01 HL14992-07	56,376
FURCHGOTT, ROBERT F.....	FACTORS INFLUENCING RESPONSES TO ADRENERGIC DRUGS.....	9R01 HL21860-18A1	81,097
GAETJENS, ERIC.....	STEROID BINDING IN BREAST CANCER BY IMMUNOFLOURESCENCE.....	1R01 CA23623-01	49,704
GARDNER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12033-07	39,137
GIDARI, ANTHONY S.....	REGULATORY ASPECTS OF ERYTHROID PROLIFERATION.....	1R01 AM21602-01	38,946
GOOTMAN, PHYLLIS M.....	POSTNATAL MATURATION OF CARDIOVASCULAR REGULATORY SYSTEM.....	1R01 HL20864-01A1	60,417
HALPERN, MIMI N.....	FUNCTIONAL STUDIES OF THE VOMERONASAL SYSTEM.....	5R01 NS11713-05	40,557

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
HERBERT, VICTOR D.....	VITAMIN B12 AND FOLIC ACID METABOLISM.....	5R01 AM20526-02	141,578
HOWE, MICHAEL L.....	SENSITIZATION OF LYMPHOCYTES TO VIRUS TRANSFORMED CELLS.....	5R01 CA20163-02	62,379
IQBAL, KHALID.....	MOLECULAR PATHOLOGY OF NEUROFILAMENTS AND NEUROTUBULES.....	5R01 NS14495-02	66,728
JONES, CYRIL J.....	SUPPORT FOR CENTER FOR SICKLE CELL ANEMIA.....	3P60 HL15170-05S2	268,888
KAO, CHIEN-YUAN.....	BIOELECTRIC PROPERTIES OF UTERINE MUSCLE.....	5R01 HD00378-19	55,226
KAO, CHIEN-YUAN.....	CELLULAR ACTIONS OF TETRODOTOXIN ANALOGUES.....	1R01 NS14551-01	59,144
KAPLAN, DAVID.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM20625-01A1	496,564
KAUFFMAN, SHIRLEY L.....	LUNG PRENEOPLASTIC HYPERPLASIA AND CHEMICAL CARCINOGENS.....	2R01 CA17569-04	58,642
KAUFFMAN, SHIRLEY L.....	PULMONARY GROWTH IN MICE EXPOSED TO DEXAMETHASONE.....	1R01 HD12008-01	33,676
KAVALER, FREDERIC.....	IONIC COUPLING IN ACTIVATION OF CARDIAC MUSCLE.....	2R01 HL12774-08A1	56,495
KIRPEKAR, S M.....	FACTORS INFLUENCING TRANSMISSION AT ADRENERGIC SYNAPSES.....	1R01 HL22170-01	69,376
KOIZUMI, KIYOMI.....	MECHANISM OF FUNCTION OF INTEGRATIVE CENTERS.....	2R01 NS00847-23	59,704
LANKS, KARL W.....	SPONTANEOUS REACTIVATION OF ACETYLCHOLINESTERASE.....	5R01 ES01530-02	30,823
LANKS, KARL W.....	MECHANISMS OF NORMAL AND NEOPLASTIC CELL ATTACHMENT.....	1R01 GM24592-01	50,730
LEE, STANLEY L.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00318-12	465,192
LERNER, LEON M.....	ANALOGS OF DECOYININE AS POTENTIAL ANTITUMOR AGENTS.....	5R01 CA13802-06	48,997
LYONS, HAROLD A.....	EVALUATION OF STEROID THERAPY IN SARCOIDOSIS.....	5R01 HL16651-05	61,319
MARGOLIS, RENE K.....	GLYCOPROTEINS IN BRAIN.....	5R01 NS09348-08	59,860
MARSH, WALTON H.....	PANCREAS DIFFERENTIATION IN ORGAN CULTURE.....	1R01 AM21769-01	27,957
MC GOWAN, ELEANOR B.....	PLATELET CALCIUM-BINDING PROTEIN STRUCTURE & FUNCTION.....	5R23 HL21413-02	40,981
MORSE, STEPHEN I.....	BIOLOGICAL ACTIVITIES OF B. PERTUSSIS.....	5R01 AI09683-09	113,007
MOSESSON, MICHAEL W.....	MECHANISMS OF HEMOSTASIS—FIBRINOGEN ANALYSIS.....	3P01 HL17419-03S1	60,082
MOSESSON, MICHAEL W.....	MECHANISMS OF HEMOSTASIS—FIBRINOGEN ANALYSIS.....	5P01 HL17419-04	369,591
OJAKIAN, GEORGE K.....	FREEZE-ETCH STUDIES OF DEVELOPING TIGHT JUNCTIONS.....	1R01 GM25125-01	47,525
PARSA, ISMAIL.....	AN IN VITRO MODEL OF HUMAN PANCREAS CARCINOGENESIS.....	1R26 CA22682-01	40,316
PEMRICK, SUZANNE M.....	REGULATION OF TENSION AND ACTIVE STATE IN THE HEART.....	1R01 HL22401-01	88,660
PLIMPTON, CALVIN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05401-17	137,932
PORTEOUS, DONALD D.....	TUMOR CELL KILLING BY X-RAYS AND IMMUNITY.....	5R01 CA14117-06	41,317
QUIGLEY, JAMES P.....	EFFECT OF PROTEOLYSIS ON TRANSFORMED CELL MEMBRANES.....	3R01 CA16740-03S1	5,254
QUIGLEY, JAMES P.....	PROTEASES IN GROWTH CONTROL AND MALIGNANT TRANSFORMATION.....	2R01 CA16740-04	74,265
RANCK, JAMES B, JR.....	ELECTROPHYSIOLOGY OF LIMBIC NEURONS.....	1R01 NS14497-01	20,974
RIEDER, RONALD F.....	PROTEIN SYNTHESIS IN ERYTHROID PRECURSORS.....	5R01 AM12401-12	97,256
ROSENTHAL, CONSTANTIN J.....	SERUM AMYLOID A PROTEIN IN NEOPLASTIC DISEASES.....	5R01 AM20080-02	52,545
SAKAI, AKIYOSHI.....	IN VITRO MIXED ORGAN CELL LYMPHOCYTE REACTIONS IN RATS.....	5R01 AI12824-03	60,853
SCALIA, FRANK.....	ANATOMICAL CORRELATES OF SUBCORTICAL VISUAL FUNCTION.....	3R01 EY00909-06S1	5,939
SILVERSTEIN, EMANUEL.....	ENZYME MECHANISM AND CONTROL.....	5R01 GM18453-05	69,890
SILVERSTEIN, EMANUEL.....	BIOCHEMISTRY AND MOLECULAR BIOLOGY OF SARCOIDOSIS.....	1R01 HL19077-01A3	72,928
STRACHER, ALFRED.....	CELL BIOLOGY OF PLATELET PRESERVATION.....	5R01 HL20666-02	61,446
VASSALLE, MARIO.....	DIGITALIS EFFECTS ON CARDIAC AUTOMATICITY MECHANISMS.....	5R01 HL17451-05	62,139
VROMAN, LEO.....	FLOW AND FLEXING AT BLOOD/BIOMATERIAL INTERFACES.....	1R01 HL23899-01	48,230
WAKADE, ARUN R.....	REGULATION OF NEUROTRANSMITTER RELEASE BY ADENOSINE.....	1R01 HL18601-01A2	55,717
WOODRUFF, JUDITH J.....	IMMUNOLOGY AND PHYSIOLOGY OF RECIRCULATING LYMPHOCYTES.....	2R01 AI10080-09	150,749
ORGANIZATION TOTAL	61	4,928,081	
TEACHERS COLLEGE ZIP CODE 10027			
BLACKMAN, LEONARD S.....	COGNITIVE STRATEGIES IN THE MENTALLY RETARDED.....	5P01 HD07329-06	308,677
ORGANIZATION TOTAL	1	308,677	
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—PHS HOSPITAL ZIP CODE 10304			
KACHADORIAN, WILLIAM A.....	MEMBRANE STRUCTURE IN TOAD BLADDER AND RAT KIDNEY.....	2R01 AM18710-03	27,997
ORGANIZATION TOTAL	1	27,997	
YESHIVA UNIVERSITY ZIP CODE 10033			
ADAMANY, ANTHONY M.....	SMOOTH MUSCLE CELL MEMBRANE GLYCOPROTEIN BIOSYNTHESIS.....	5R01 HL19011-03	76,562
AISEN, PHILIP.....	IRON-BINDING PROTEINS AND CONTROL OF IRON METABOLISM.....	5R01 AM15056-08	137,669
ARIAS, IRWIN M.....	THE MECHANISM OF BILE PIGMENT EXCRETION.....	5R01 AM02019-21	218,214
ARIAS, IRWIN M.....	UREMIA: PATHOGENESIS, EFFECTS, AND POSSIBLE PREVENTION.....	5P01 AM16281-07	219,937
ARIAS, IRWIN M.....	HEPATITIS CIRRHOSIS CENTER.....	5P50 AM17702-05	575,629
ARONSON, RONALD S.....	THE ELECTROPHYSIOLOGY OF CARDIAC HYPERTROPHY.....	5R23 HL21167-02	50,298
ATKINSON, PAUL H.....	SURFACE MEMBRANES IN NORMAL AND CANCER CELLS.....	5R01 CA13402-06	78,568

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
BAEZ, SILVIO.....	BIOGENIC-MECHANICAL FACTORS IN MICROCIRCULATION.....	5R01 HL06736-18	95,250
BARNETT, HENRY L.....	PEDIATRIC NEPHROLOGY: DRUG TRIALS AND CLINICAL SURVEYS.....	2R10 AM18234-04	331,085
BASES, ROBERT E.....	MUTAGEN INDUCED ANTINUCLEOSIDE IMMUNOREACTIVITY.....	5R01 CA20879-03	145,174
BAUM, GILBERT.....	ULTRASOUND MAMMOGRAPHY.....	5R01 CA19019-02	248,008
BAUM, GILBERT.....	OCULAR TUMOR DIAGNOSIS.....	5R01 EY01804-02	98,696
BAUM, STEPHEN G.....	INTERACTION OF ONCOGENIC AND NONONCOGENIC VIRUSES.....	3R01 CA10945-09S1	4,760
BENNETT, MICHAEL V.....	FUNCTION OF ELECTRICAL COUPLING IN EMBRYONIC TISSUES.....	2R01 HD04248-10	79,181
BENNETT, MICHAEL V.....	SYNAPTIC TRANSMISSION IN THE CNS.....	5R01 NS12627-03	47,963
BIENKOWSKI, ROBERT S.....	INTRACELLULAR DEGRADATION OF NEWLY SYNTHESIZED COLLAGEN.....	1R01 HL22729-01	77,354
BIRSSTEIN, BARBARA K.....	CELLULAR AND STRUCTURAL STUDIES OF MYELOMA MUTANTS.....	5R01 AI13509-03	54,471
BLOODGOOD, ROBERT A.....	MEMBRANE-ASSOCIATED MOTILITY.....	1R01 GM25040-01	74,062
BLOOM, BARRY R.....	THE BIOCHEMICAL BASIS OF DELAYED HYPERSENSITIVITY.....	5R01 AI07118-13	83,579
BLOOM, BARRY R.....	THE CELLULAR BASIS OF DELAYED-TYPE HYPERSENSITIVITY.....	3R01 AI09807-08S1	4,269
BLOOM, BARRY R.....	THE CELLULAR BASIS OF DELAYED-TYPE HYPERSENSITIVITY.....	2R01 AI09807-09	107,542
BOOKCHIN, ROBERT M.....	STUDIES OF SICKLING MECHANISMS & HEMOGLOBIN INTERACTIONS.....	5R01 AM12597-11	135,081
BORNSTEIN, MURRAY B.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11920-04	710,730
BREWER, CURTIS F.....	NMR STUDIES OF SACCHARIDE BINDING TO CONCAVALIN A.....	5R01 CA16054-04	69,403
BREWER, CURTIS F.....	SPECIAL RESOURCE FOR NMR STUDIES OF BIOMOLECULES.....	2P41 RR00636-06	95,794
BRIEHL, ROBIN W.....	STRUCTURE AND OXYGEN-COMBINING FUNCTION OF HEMOGLOBIN.....	5R01 HL07451-16	153,862
BUCKLEY, NANCY M.....	NEONATAL DEVELOPMENT OF ADRENERGIC RECEPTOR MECHANISMS.....	3R01 HL15444-05S1	9,197
BUCKLEY, NANCY M.....	NEONATAL DEVELOPMENT OF ADRENERGIC RECEPTOR MECHANISMS.....	2R01 HL15444-06	48,881
CHASE, JOHN W.....	BIOCHEMICAL STUDIES OF E. COLI EXONUCLEASE VII.....	1R01 GM23451-01	50,950
COHEN, MORTON I.....	NEURAL BASIS OF RESPIRATORY AND SYMPATHETIC ACTIVITY.....	5R01 HL20800-17	168,416
COLOMBINI, MARCO.....	ANALYSIS OF MEMBRANE SYSTEMS IN PLANAR LIPID BILAYERS.....	5R01 GM23578-02	51,398
CONDEELIS, JOHN S.....	STUDY OF CYTOPLASMIC MOTILITY USING MODEL SYSTEMS.....	1R01 GM25290-01A1	82,980
COSTANTINO-CECCARINI, E.....	ROLE OF CEREBROSIDE SYNTHESIS IN DEVELOPING BRAIN.....	5R01 NS12807-02	51,029
CRAIN, STANLEY M.....	DEVELOPMENT OF SPECIFIC SYNAPTIC NETWORKS IN VITRO.....	5R01 NS12405-03	79,295
DAS, KIRON M.....	PATHOGENESIS OF INFLAMMATORY BOWEL DISEASE.....	1R01 AM21832-01	117,113
DINA, DINO.....	REGULATION OF MURINE RNA TUMOR VIRUS GENE EXPRESSION.....	1R01 CA24223-01	78,244
DURAN-REYNALS, MARIA L.....	POSSIBLE NEOPLASTIC EFFECTS OF NON-NEOPLASTIC VIRUSES.....	2R01 CA07160-14	113,767
EAGLE, HARRY.....	CANCER RESEARCH PROGRAM.....	3P30 CA13330-06S2	211,034
EAGLE, HARRY.....	CORE SUPPORT FOR CANCER RESEARCH CENTER.....	5P30 CA13330-07	2,944,985
EDELMANN, CHESTER M, JR.....	ACIDOSIS IN NEONATAL AND DEVELOPING ANIMALS.....	1R01 HD12170-01	66,599
EDER, HOWARD A.....	METABOLISM OF PLASMA LIPOPROTEINS.....	5R01 HL02965-22	229,337
EISENSTADT, MAURICE.....	STUDY OF MEMBRANE PERMEABILITY BY NMR RELAXATION.....	3R01 HL17571-03S1	9,111
ENGLARD, SASHA.....	HYDROXYLATION REACTIONS IN BIOSYNTHESIS OF CARNITINE.....	1R01 AM21197-01	98,409
FINKELSTEIN, ALAN.....	INTERACTION OF MODEL SYNAPTIC VESICLE WITH LIPID BILAYER.....	1R01 NS14246-01	121,727
FLEISCHER, NORMAN S.....	PITUITARY HORMONE AND INSULIN SECRETION AND PRODUCTION.....	5R01 AM17326-06	125,451
FLEISCHER, NORMAN S.....	DIABETES RESEARCH AND TRAINING CENTER.....	5P60 AM20541-02	840,006
FRIEDMAN, EPHRAIM.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05397-17	200,462
FROSOLONO, MICHAEL F.....	METABOLISM AND CELL BIOLOGY OF LUNG SURFACTANT SYSTEM.....	5R01 HL19010-03	39,225
GARTNER, LAWRENCE M.....	PATHOGENESIS OF NEONATAL JAUNDICE AND KERNICTERUS.....	5R01 HD03783-10	177,544
GASKIN, FELICIA A.....	BIOPHYSICAL STUDIES ON NEUROFIBROUS PROTEINS IN AGING.....	2R01 NS12418-04	48,179
GOSSEIN, NEMATALLAH A.....	COLORRECTAL CANCER TREATMENT—POSTOPERATIVE RADIOTHERAPY.....	2R01 CA17251-04	79,199
GLUECKSOHN-WAELSCH, SALOME.....	GENETIC CONTROL OF GROWTH AND DIFFERENTIATION.....	5R01 HD00193-23	110,977
GOLDFISCHER, SIDNEY L.....	VASCULAR DISEASE—CYTOCHEMISTRY AND ULTRASTRUCTURE.....	9R01 HL21756-11A1	132,239
GOLDSMITH, DAVID I.....	NEONATAL & MATURATIONAL PATTERN OF NAO HOMEOSTASIS.....	5R01 HD10559-02	101,254
HAYS, RICHARD M.....	CONTROL OF WATER AND SOLUTE MOVEMENT ACROSS THE CELL.....	5R01 AM03858-18	127,804
HENRY, SUSAN A.....	GENETICS AND DEVELOPMENT OF YEAST MEMBRANE MUTANTS.....	2R01 GM19629-07	77,817
HIGHSTEIN, STEPHEN M.....	SYNAPTIC LINKAGE OF THE RETICULO-OCULOMOTOR CIRCUITS.....	3R01 EY01670-03S1	3,000
HIGHSTEIN, STEPHEN M.....	MORPHOPHYSIOLOGY OF PRE-NUCLEAR OCULOMOTOR NEURONS.....	2R01 EY01670-04	72,024
HORWITZ, MARSHALL S.....	ADENOVIRUS DNA SYNTHESIS AND POLYPEPTIDE ASSEMBLY.....	5R01 CA11512-09	87,511
HORWITZ, SUSAN B.....	BIOCHEMICAL PHARMACOLOGY OF ANTITUMOR DRUGS.....	2R01 CA15714-05	136,248
HORWITZ, SUSAN B.....	NEW ANTITUMOR AGENTS: MECHANISM OF ACTION.....	1R01 CA23187-01	91,059
HURWITZ, JERARD.....	CARCINOGENS ON PRO- AND EUKARYOTIC DNA REPLICATION.....	5R01 CA21622-02	58,647
HURWITZ, JERARD.....	STUDIES OF MACROMOLECULAR ALTERATION AND SYNTHESIS.....	5R01 GM13344-13	188,388
JAFFE, ERNST R.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00050-17	540,258
KALIMI, MOHAMMED Y.....	GLUCOCORTICOID ACTION IN DEVELOPING RAT LIVER.....	1R01 AM24059-01	67,983
KAPLAN, BARRY H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA14958-03	31,972
KAPLAN, BARRY H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14958-04	78,949

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
KATZMAN, ROBERT.....	SPECIAL INITIATIVES RELATED TO DEMENTIA	1R21 AG01184-01	99,162
KATZMAN, ROBERT.....	NEUROLOGICAL CENTER: METABOLIC/DEGENERATIVE DISORDERS	5P50 NS03356-18	897,581
KATZMAN, ROBERT.....	BIOGENIC AMINES AND NEUROLOGICAL DISORDERS	3P50 NS09649-07S1	99,412
KERN, HAROLD L.....	TRANSPORT PROCESSES IN OCULAR TISSUES.....	3R01 EY00268-13S4	18,182
KERN, HAROLD L.....	CHARACTERIZATION OF TRANSPORT-PROTEINS IN THE LENS.....	2R01 EY00268-14A1	120,115
KIRK, EDWARD S.....	CORONARY COLLATERAL CIRCULATION IN MYOCARDIAL ISCHEMIA.....	1R01 HL23171-01	184,324
KLINGER, HAROLD P.....	GENE REGULATION & INTERACTION—NORMAL & MALIGNANT CELLS.....	5R01 CA16720-05	139,271
KLINGER, HAROLD P.....	CONTRACEPTIVES AND THE CONCEPTUS	1R01 HD10509-01A1	49,540
KRUEGER, JOHN W.....	SARCOMERE KINEMATICS IN CARDIAC CONTRACTION.....	5R23 HL21325-02	43,371
LEDEEN, ROBERT W.....	BRAIN GLYCOLIPIDS IN MS & SLOW VIRUS DISEASES.....	5R01 NS10931-04	43,231
LEVENSON, STANLEY M.....	BURN DEBRIDEMENT: CHEMICAL, ENZYMATIC.....	5R01 GM19328-07	124,943
LEVINE, WALTER G.....	ROLE OF METABOLISM IN THE BILIARY EXCRETION OF DRUGS.....	2R01 CA14231-07	91,236
LEVINE, WALTER G.....	PANCREATIC DISPOSITION OF CHEMICAL CARCINOGENS.....	5R26 CA19155-03	95,978
LILLY, FRANK.....	GENETIC CONTROL OF RESISTANCE TO FRIEND VIRUS DISEASE.....	5R01 CA19873-02	106,566
LILLY, FRANK.....	MECHANISM OF THE H-2 EFFECT ON VIRAL LEUKEMOGENESIS.....	5R01 CA19931-02	98,669
LISTOWSKY, IRVING.....	CONFORMATION OF FERRITIN AND ITS ROLE IN IRON METABOLISM.....	2R01 HL11511-10	96,699
LOWY, BERTRAM A.....	ROLE OF LIVER IN ERYTHROCYTE NUCLEOTIDE SYNTHESIS.....	5R01 AM17622-05	119,959
MAIO, JOSEPH J.....	DNA TRANSCRIPTION CONTROL IN NORMAL AND CANCER CELLS.....	2R01 CA16790-04	135,190
MATRA, UMADAS.....	ENZYMATIC SYNTHESIS—BIOLOGICALLY ACTIVE MACROMOLECULES.....	3R01 GM15399-09S1	8,726
MATRA, UMADAS.....	ENZYMATIC SYNTHESIS—BIOLOGICALLY ACTIVE MACROMOLECULES.....	5R01 GM15399-10	86,201
MARCUS, DONALD M.....	ANTIBODY INTERACTIONS WITH HAPTENS AND GLYCOLIPIDS.....	2R01 AI05336-15	142,311
MARMUR, JULIUS.....	THE ROLE OF YEAST MITOCHONDRIA AND CANCER.....	5R01 CA12410-08	174,892
MC CONN, RITA.....	BLOOD STORAGE: THE PRODUCTION OF CARDIOTOXIC MATERIAL.....	3R01 HL17479-03S1	25,310
MC CONN, RITA.....	BLOOD STORAGE: THE PRODUCTION OF CARDIOTOXIC MATERIAL.....	2R01 HL17479-04	69,471
MIDELFORT, CHRISTIAN F.....	OXYGEN LABELING STUDIES OF COUPLED ATP DEPENDENT ENZYMES.....	1R01 GM24667-01	70,758
MODEL, PATRICIA G.....	MAUTHNER NEURON DEVELOPMENT AND SYNAPTIC TRANSMISSION.....	1R01 NS13587-01A1	28,050
MORRILL, GENE A.....	ROLE OF STEROID AND CALCIUM IN MEIOTIC MATURATION.....	5R01 HD10463-02	84,670
NAGEL, RONALD L.....	SICKLE CELL ANEMIA AND OTHER HEMOGLOBINOPATHIES.....	5P01 HL21016-02	568,668
NAGLER, ARNOLD L.....	STUDY OF ROLE OF CARDIOTOXIN IN SHOCK.....	5R01 GM17423-08	103,705
NATHENSON, STANLEY G.....	BIOCHEMICAL STUDIES ON HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI07289-13	166,972
NITOWSKY, HAROLD M.....	SUPPORT FOR GENETICS RESEARCH CENTER.....	2P50 GM19100-06	691,556
NORTON, WILLIAM T.....	THE CHEMISTRY OF CELLS AND CELL PORTIONS FROM THE CNS.....	5R01 NS02476-19	208,928
NOVIKOFF, ALEX B.....	BIOCHEMICAL CYTOLOGY OF NORMAL AND MALIGNANT TISSUES.....	5R01 CA06576-16	345,202
PALDINO, ALBERT M.....	GOLGI STUDY OF NEURONS IN IMMATURE CORTEX.....	1R01 NS13832-01A1	47,370
PEISACH, JACK.....	HEME PROTEIN STRUCTURE AND FUNCTION.....	2R01 HL13399-16	238,031
PETERSON, EDITH R.....	NEUROMUSCULAR RELATIONS IN ORGANOTYPIC CULTURES.....	2R01 NS08770-07A1	71,997
PICCIANO, PAUL T.....	ISOLATION, GROWTH AND METABOLISM OF TYPE 1 PNEUMOCYTES.....	5R23 HL21356-02	49,796
PURPURA, DOMINICK P.....	SUPPORT FOR MENTAL RETARDATION RESEARCH CENTER.....	5P30 HD01799-14	899,377
PURPURA, DOMINICK P.....	NEURONAL DEVELOPMENT, INTERACTION AND ORGANIZATION.....	3P01 NS07512-10S1	154,079
PURPURA, DOMINICK P.....	NEURONAL DEVELOPMENT, INTERACTION AND ORGANIZATION.....	5P01 NS07512-11	432,894
RAINE, CEDRIC S.....	EM CYTOPATHOLOGY OF ORGANIZED CNS & PNS CULTURES.....	5R01 NS08952-10	153,732
RICHARDSON, STEPHEN A.....	GROWING UP AS A MENTALLY SUBNORMAL YOUNG PERSON.....	5R01 HD07907-04	104,789
RITTER, WALTER P.....	ELECTROPHYSIOLOGICAL CORRELATES OF COGNITIVE PROCESSES.....	5R01 HD10804-02	74,651
ROSEN, ORA M.....	PROTEINS INVOLVED IN THE ACTION OF CYCLIC AMP.....	5R01 AM09038-14	112,156
ROSEN, ORA M.....	HORMONAL REGULATION OF ADIPOCYTE DEVELOPMENT IN VITRO.....	3R01 AM21248-01S1	26,887
ROSEN, ORA M.....	HORMONAL REGULATION OF ADIPOCYTE DEVELOPMENT IN VITRO.....	5R01 AM21248-02	76,011
ROSENBAUM, ROBERT M.....	LUNG EPITHELIAL CELL INTERACTIONS IN VITRO.....	1R01 HL22883-01	89,672
RUBEN, ROBERT J.....	EMBRYOLOGY OF THE INNER EAR.....	5R01 NS08365-11	110,690
RUBIN, CHARLES S.....	CYCLIC AMP AND PROTEIN KINASES IN CELL REGULATION.....	5R01 GM22792-03	27,581
RUBIN, MERYL S.....	REGULATION OF MEMBRANE PERMEABILITY: MOLECULAR BASIS.....	2R01 AM18128-04	68,712
RUBINSTEIN, ARYE.....	MUCOSAL CHANGES INDUCED BY VIRUSES.....	1R01 HL23589-01	75,192
RUFF, HOLLY A.....	THE DEVELOPMENT OF OBJECT PERCEPTION IN HUMAN INFANTS.....	1R01 HD11916-01	36,532
SATIR, BIRGIT H.....	MEMBRANES PRIOR TO AND DURING FUSION.....	5R01 GM24724-02	106,483
SATIR, PETER.....	STRUCTURE AND MOTION OF CILIA.....	5R01 HL22560-02	125,372
SCHARFF, MATTHEW D.....	SYNTHESIS AND ASSEMBLY OF IMMUNOGLOBULINS.....	2R01 AI05231-15	100,710
SCHARFF, MATTHEW D.....	CELL BIOLOGY OF LYMPHOID CELLS.....	5P01 AI10702-07	559,594
SCHARRER, BERTA V.....	BIBLIOGRAPHIA NEUROENDOCRINOLOGICA.....	9R01 NS15064-04	16,249
SCHILDKRAUT, CARL L.....	DNA OF NORMAL AND MALIGNANT CELLS.....	5R01 GM22332-04	121,277
SCHLONDORFF, DETLEF O.....	PATHOPHYSIOLOGY OF CYCLIC NUCLEOTIDES IN THE KIDNEY.....	1R01 AM22036-01	76,334
SCHULMAN, LA DONNE H.....	PROTEIN-NUCLEIC ACID INTERACTIONS.....	5R01 GM16995-10	108,953

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
SEIFTER, SAM.....	BIOCHEMICAL ASPECTS OF AGING IN VITRO AND IN VIVO.....	5P01 AG00374-07	533,781
SHAFRITZ, DAVID A.....	PROTEIN SYNTHESIS IN NORMAL AND REGENERATING LIVER.....	5R01 AM17609-05	92,733
SHAPIRO, LUCILLE.....	GENETIC CONTROL OF CELL GROWTH AND DEVELOPMENT.....	5P01 GM11301-16	457,803
SHIELDS, DENNIS.....	IN VITRO BIOSYNTHESIS OF INSULIN AND GLUCAGON.....	1R01 AM21860-01	86,682
SHIN, SEUNG-IL.....	GENETIC ANALYSIS OF MALIGNANT TRANSFORMATION.....	2R01 CA21054-03A1	71,985
SHULMAN, KENNETH M.....	BIOMECHANICS OF ICP IN VASOGENIC EDEMA.....	5R01 NS07871-10	77,202
SKOULTCHI, ARTHUR I.....	CONTROL OF DIFFERENTIATION OF ERYTHROLEUKEMIC CELLS.....	5R01 CA16368-05	66,369
SOEIRO, RUY.....	PROCESSING OF RNA IN HUMAN CANCER HELA CELLS.....	5R01 CA10993-10	86,018
SONNENBLICK, EDMUND H.....	MECHANISMS OF HEART FAILURE IN THE MYOPATHIC HAMSTER.....	3R01 HL18824-03S1	44,601
SONNENBLICK, EDMUND H.....	MYOCARDIAL FUNCTION IN DIABETES MELLITUS.....	5R01 HL20426-03	149,353
SONNENBLICK, EDMUND H.....	HYPERTENSIVE HYPERTROPHY: EFFECTS OF CARDIAC MECHANICS.....	1R01 HL21993-01	126,717
SPENCER, PETER S.....	CONTROL OF MYELINATION IN PATHOLOGIC STATES.....	5R01 NS13106-03	49,936
SPENCER, PETER S.....	SYMPOSIUM ON ENVIRONMENTAL NEUROTOXICOLOGY.....	1R13 NS14781-01	10,900
SPITZER, ADRIAN.....	MICROPUNCTURE STUDY OF THE NEONATAL KIDNEY.....	3R01 AM12904-09S1	23,616
SPITZER, ADRIAN.....	THE DEVELOPING KIDNEY IN HEALTH AND DISEASE.....	1R01 AM25291-01	106,633
STANLEY, EVAN R.....	HORMONE-DEPENDENCE AND AUTONOMY IN TUMOR GROWTH.....	5R01 CA21605-02	63,321
STEINMAN, HOWARD M.....	STRUCTURE AND FUNCTION OF SUPEROXIDE DISMUTASES.....	5R01 GM24527-02	64,946
SUZUKI, KINUKO.....	EXPERIMENTAL PATHOLOGY OF DEVELOPING NERVOUS SYSTEM.....	2R01 NS10803-07	77,209
SUZUKI, KUNIHICO.....	CHEMICAL PATHOLOGY OF NEUROLOGICAL DISORDERS.....	5R01 NS10885-07	179,455
SUZUKI, KUNIHICO.....	CHOLESTEROL ESTER METABOLISM IN THE BRAIN.....	5R01 NS13578-02	69,420
TERRY, ROBERT D.....	THE AGING NERVOUS SYSTEM: STRUCTURE AND FUNCTION.....	2R01 NS02255-20	210,808
VAUGHAN, HERBERT G, JR.....	CEREBRAL DYSFUNCTION IN LOW-BIRTH-WEIGHT INFANTS.....	1R01 HD11562-01A1	112,863
VOLK, HERBERT.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12040-07	65,783
WARNER, JONATHAN R.....	RIBOSOMAL PROTEIN GENES OF SACCHAROMYCES SEREVISIAE.....	1R01 GM25532-01	95,094
WITTENBERG, BEATRICE A.....	MYOGLOBIN AND OXYGEN SUPPLY TO HEART AND MUSCLE CELLS.....	5R01 HL19299-03	70,588
WITTNER, MURRAY.....	TRYPANOSOMA CRUZI: MECHANISMS OF IMMUNE RESISTANCE.....	2R01 AI12770-03A1	124,716
WOLINSKY, HARVEY.....	STRUCTURE-FUNCTION RELATIONS OF BLOOD VESSELS.....	5R01 HL12766-09	156,940
WU, CHENG-WEN.....	MECHANISM AND REGULATION OF GENE TRANSCRIPTION.....	5R01 GM19062-07	112,255
YELLIN, EDWARD L.....	DYNAMIC DETERMINANTS OF LEFT VENTRICULAR FILLING.....	5R01 HL19391-03	60,963
YEN, SHU-HUI C.....	THE AGING BRAIN: IMMUNOHISTOLOGY AND BIOCHEMISTRY.....	1R01 AG01136-01	76,037
ORGANIZATION TOTAL	157	24,850,506	
ORANGEBURG			
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—ROCKLAND PSYCHIATRIC CENTER		ZIP CODE 1962	
KLINE, NATHAN S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05651-12	34,524
ORGANIZATION TOTAL	1	34,524	
PLATTSBURGH			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT PLATTSBURGH		ZIP CODE 12901	
HEINTZ, ROGER L.....	MECHANISM OF RIBOSOMAL GTP HYDROLYSIS.....	9R01 AM21666-02A1	38,119
MOORE, RICHARD D.....	MECHANISM OF INSULIN ACTION UPON SODIUM PUMP.....	2R01 AM17531-04	43,433
MOORE, RICHARD D.....	ROLE OF SODIUM PUMP IN CELLULAR ACTION OF INSULIN.....	5R01 AM21059-02	57,147
ORGANIZATION TOTAL	3	138,699	
POTSDAM			
CLARKSON COLLEGE OF TECHNOLOGY		ZIP CODE 13676	
KRATOCHVIL, JOSIP.....	STUDIES OF AGGREGATION OF BILE SALTS.....	1R01 AM21495-01	19,688
PATEL, RAMESH C.....	THERMODYNAMIC KINETIC STUDIES ON LAC OPERATOR SEQUENCES.....	1R01 GM24523-01	68,219
PETHICA, BRIAN A.....	THE EFFECTS OF APPLIED ELECTRIC FIELDS ON SURFACE FILMS.....	5R01 GM24068-02	40,977
SIIMAN, OLAVI.....	LIFE-SUSTAINING SUBSTANCES: COPPER AND ZINC PROTEINS.....	5R01 GM23072-03	27,630
ORGANIZATION TOTAL	4	156,514	
POUGHKEEPSIE			
VASSAR COLLEGE		ZIP CODE 12601	
GREENWOOD, MARY R.....	NUTRITION AND ADIPOCYTE GROWTH AND DEVELOPMENT.....	7R01 HD12637-01	73,920

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
JOHNSON, PATRICIA R.....	GROWTH OF ZUCKER RAT PREADIPOCYTES AND FETAL HEPATOCYTES.....	5R01 AM19382-03	38,763
ORGANIZATION TOTAL	2 112,683		
PURCHASE			
STATE UNIVERSITY OF NEW YORK—COLLEGE AT PURCHASE ZIP CODE 10577			
WOLF, GEORGE.....	NEURAL MECHANISMS OF A MODEL DRIVE SYSTEM.....	5R01 NS12514-03	35,461
ORGANIZATION TOTAL	1 35,461		
RHINEBECK			
ASTOR HOME FOR CHILDREN ZIP CODE 12572			
MORA, GEORGE.....	TRANSLATION OF WEYER'S 'DE PRAESTIGIIS DAEMONUM'.....	5R01 LM02726-02	23,825
ORGANIZATION TOTAL	1 23,825		
ROCHESTER			
EASTMAN DENTAL CENTER ZIP CODE 14620			
CURZON, MARTIN E.....	STRONTIUM AND DENTAL CARIES.....	2R01 DE04330-04	84,248
LITTLE, MARGUERITE F.....	TRACE ELEMENT INFLUENCE ON CARIES IN VITRO.....	5R01 DE04431-03	52,901
MC HUGH, WILLIAM D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05548-16	31,341
ORGANIZATION TOTAL	3 168,490		
ROCHESTER INSTITUTE OF TECHNOLOGY ZIP CODE 14623			
LIPPERT, JOSEPH L.....	RAMAN SPECTRAL STUDIES OF LIPID-PROTEIN INTERACTIONS.....	5R01 GM24408-02	29,119
ORGANIZATION TOTAL	1 29,119		
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
ADER, ROBERT.....	BEHAVIORALLY CONDITIONED IMMUNOSUPPRESSION.....	3R01 HD09977-02S1	7,113
ADER, ROBERT.....	BEHAVIORALLY CONDITIONED IMMUNOSUPPRESSION.....	9R01 NS15071-03	76,274
AMATRUDA, JOHN M.....	INSULIN ACTION IN LIVER AND ADIPOSE TISSUE.....	1R01 AM20948-01A1	47,755
ANDERSON, CLARK L.....	FC RECEPTOR STRUCTURE AND FUNCTION.....	1R01 CA24067-01	67,777
ANGERER, ROBERT C.....	INDIVIDUAL EMBRYO MRNAS: TIME AND SITE OF EXPRESSION.....	1R01 GM25553-01	117,724
BAKEMEIER, RICHARD F.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17988-04	193,810
BALDUZZI, PIERO C.....	GENETIC STUDIES OF RNA TUMOR VIRUSES.....	5R01 CA15716-05	68,543
BALLARD, DANA H.....	ANATOMICAL MODELS IN COMPUTER-AIDED IMAGE ANALYSIS.....	1R23 HL21253-01	41,899
BANERJEE, SHAILESH P.....	CARDIAC GLYCOSIDES AND DIURETICS: ROLE OF NAO PUMP.....	2R01 HL18185-04	104,939
BEGENSICH, TED B.....	IONIC PERMEABILITY MECHANISMS IN NERVE.....	1R01 NS14138-01	37,464
BENNETT, JOHN M.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA11083-11	446,867
BERNHARD, WILLIAM A.....	EFFECTS OF IONIZING RADIATION ON NUCLEIC ACIDS.....	2R01 GM20688-04	30,127
BLAIR, MARTHA L.....	NEURAL CONTROL OF RENIN SECRETION.....	1R23 HL22728-01	41,851
BOSMANN, H BRUCE.....	GLYCOPROTEIN SHEDDING AND METASTASIS.....	5R01 CA19757-02	64,720
BOWEN, DONNELL.....	POLYGLUTAMATE AND ANTIFOLATE TOXICITY.....	1R23 CA24192-01	36,040
BOYD, ELEANOR H.....	CORTICAL UNIT RESPONSES DURING M-WAVE AND CNV.....	1R01 NS12999-01A1	46,644
BRODOWS, R G.....	CONTROL OF BASAL INSULIN SECRETION IN MAN.....	5R01 AM21664-02	47,046
BROWN, JOHN L.....	VISUAL SCIENCE RESEARCH CENTER SUPPORT.....	5P30 EY01319-05	172,514
CAMPBELL, ROBERT G.....	STUDIES OF HUMAN FEEDING BEHAVIOR.....	5R01 AM20494-02	115,782
CARSTENSEN, EDWIN L.....	INTERACTION OF ULTRASOUND WITH BIOLOGICAL MATERIAL.....	5R01 GM09933-16	92,747
CHAPMAN, ROBERT M.....	VISUAL MECHANISMS FOR WAVE LENGTH DISCRIMINATION.....	3R01 EY01593-03S1	20,646
CHOI, BEN H.....	EFFECTS OF METHYLMERCURY ON FETAL BRAIN.....	1R01 ES01722-01	111,925
CLARKSON, THOMAS W.....	TRACE CONTAMINANTS: ENVIRONMENTAL HEALTH HAZARDS TO MAN.....	5P30 ES01247-04	899,742
CLARKSON, THOMAS W.....	HEAVY METALS AS ENVIRONMENTAL HAZARDS TO MAN.....	5P01 ES01248-03	482,609
CLARKSON, THOMAS W.....	ANTIDOTES TO HEAVY METAL POISONING.....	1R01 GM25329-01	101,400
COHEN, JULIUS J.....	RENAL SUBSTRATE UTILIZATION IN RELATION TO FUNCTION.....	2R01 AM03602-20	95,555
COHEN, NICHOLAS.....	COMPARATIVE AND DEVELOPMENTAL IMMUNOBIOLOGY.....	2R01 HD07901-11	109,154
COLEMAN, PAUL D.....	COMPUTER AIDED STUDY OF DENDRITES IN AGING HUMAN BRAIN.....	1R01 AG01121-01	43,839
CONNETT, RICHARD J.....	ENDOCRINE AND SUBSTRATE CONTROLS ON CARBON FLOW.....	1R01 AM22124-01	41,794
COOPER, ROBERT A, JR.....	CORE SUPPORT GRANT FOR CANCER CENTER.....	2P30 CA11198-10	1,503,065
CORWIN, THOMAS R.....	SURROUND FIELDS AND TEMPORAL BRIGHTNESS ENHANCEMENT.....	3R01 EY01986-02S1	9,933

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
CORWIN, THOMAS R.....	PSYCHOPHYSICAL DIAGNOSIS OF RETINITIS PIGMENTOSA.....	1R01 EY02366-01	50,571
DAHNEKE, BARTON E.....	SIZE/CHEMICAL MEASUREMENTS OF ATMOSPHERIC PARTICLES.....	2R01 ES01107-04	104,593
DAVIDSON, PHILIP W.....	REHABILITATION OF HAPTIC PERCEPTION IN THE BLIND.....	5R01 EY01790-03	37,758
DEL CERRO, MANUEL.....	PATHOGENESIS OF RETINAL IMMUNOPATHOLOGIES.....	1R01 EY02632-01	54,818
DOLAN, THOMAS E.....	GYNECOLOGIC ONCOLOGY GROUP.....	5R10 CA12482-07	18,656
DOLAN, THOMAS E.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA12482-08	37,001
DOTY, ROBERT W.....	LEARNING, PERCEPTION, AND NEURAL INTEGRATION.....	5R01 NS03606-17	129,083
DRLICA, KARL A.....	STRUCTURE OF THE BACTERIAL CHROMOSOME.....	5R01 GM24320-02	74,505
DRUCKER, WILLIAM R.....	METABOLIC BASIS FOR HOMEOSTASIS IN SHOCK.....	5R01 GM25043-02	102,847
EMERSON, ROBERT C.....	IMAGE MOVEMENT: NEURAL PROCESSING MECHANISMS.....	3R01 EY01440-04S1	3,188
EMERSON, ROBERT C.....	IMAGE MOVEMENT: NEURAL PROCESSING MECHANISMS.....	5R01 EY01440-05	12,600
EMERSON, ROBERT C.....	RESEARCH SYMPOSIUM: VISUAL DEPRIVATION.....	1R13 EY02615-01	7,200
FEIBEL, JOHN H.....	CARDIAC ABNORMALITIES AFTER BRAIN DAMAGE IN HUMANS.....	1R01 NS14178-01	30,383
FORBES, GILBERT B.....	LEAN BODY MASS IN PREGNANT WOMEN.....	1R01 HD11502-01	72,599
FRANCE, ROBERT R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07069-13	107,631
GATES, ALLEN H.....	OOCYTE AND MATERNAL AGING AND CHROMOSOMAL DEFECTS.....	1R01 HD11238-01A1	74,756
GOH, KONG-OO.....	CELL-MEDIATED IMMUNOLOGICAL DEFECTS AFTER IRRADIATION.....	5R01 CA14876-06	95,571
GOROVSKY, MARTIN A.....	REPEATED GENES: AMPLIFICATION, EVOLUTION AND FUNCTION.....	5R01 GM21793-04	99,083
GRAMIAK, RAYMOND.....	NEW CONCEPTS IN CARDIAC ULTRASOUND TECHNOLOGY.....	2R01 HL15016-07	124,814
GRAMIAK, RAYMOND.....	DEVELOPMENT OF CLINICAL ULTRASOUND CINECARDIOGRAPHY.....	5R01 HL16260-04	103,866
GROSS, PAUL R.....	HISTONE MRNA AND HISTONE SYNTHESIS IN DEVELOPMENT.....	5R01 HD08652-05	84,711
HATTMAN, STANLEY M.....	DNA MODIFICATION/RESTRICTION IN PRO- AND EUKARYOTES.....	5R01 AI10864-07	84,526
HEMPELMANN, LOUIS H.....	SCREENING FOR NEOPLASMS IN IRRADIATED POPULATIONS.....	5R01 CA21452-02	51,391
HENSHAW, EDGAR C.....	INTERMEDIARY METABOLISM IN ANIMALS AND IN MAN.....	2R01 CA21663-03	155,928
HILF, RUSSELL.....	MECHANISMS OF ACTION OF INSULIN ON MAMMARY TUMORS.....	3R01 CA16660-03S1	18,995
HILF, RUSSELL.....	ROLE OF INSULIN IN HORMONAL CONTROL OF BREAST CANCER.....	2R01 CA16660-04A1	60,852
HINKLE, PATRICIA M.....	MODULATION OF RECEPTOR NUMBER IN CULTURED CELLS.....	5R01 AM19974-02	61,234
HOFFMAN, GLORIA E.....	IMMUNOCYTOCHEMISTRY OF LH-RH AND OTHER NEUROPEPTIDES.....	5R01 NS13725-02	27,111
HONIG, CARL R.....	CONTROLS OF O ₂ TRANSPORT IN HEART AND SKELETAL MUSCLE.....	2R01 HL03290-22	159,221
HOROWICZ, PAUL.....	PROPERTIES OF THE INWARD RECTIFIER OF SKELETAL MUSCLE.....	1R01 NS14128-01	106,164
HYDE, RICHARD W.....	LUNG TISSUE AND WATER VOLUME.....	5R01 HL16784-03	94,516
IZZO, JOSEPH L.....	EXPERIMENTAL STUDIES—INSULIN, GLUCAGON, PROINSULIN.....	5R01 AM03556-18	77,487
JACOBS, LAURENCE S.....	STORAGE AND SECRETION OF PEPTIDE HORMONES.....	1R01 AM21783-01	89,627
JOSEPH, SHIRLEY A.....	HUMAN FETAL NEUROENDOCRINOLOGY.....	2R01 HD07926-04A1	59,256
KAPPLER, JOHN W.....	REGULATORY MECHANISMS IN THE IMMUNE RESPONSE.....	5R01 AI11558-05	58,486
KASS, ROBERT S.....	TRANSIENT CURRENTS INDUCED BY STROPHANTHIDIN IN HEART.....	1R01 HL21922-01	32,539
KENDE, ANDREW S.....	ANTHRACYCLINE AND CHROMOMYCIN ANTITUMOR AGENTS.....	5R01 CA11326-10	85,630
KENDE, ANDREW S.....	TWISTED BIARYL ANTITUMOR AGENTS.....	5R01 CA18846-03	91,043
KIMMICH, GEORGE A.....	MECHANISM OF SODIUM-DEPENDENT METABOLITE TRANSPORT.....	2R01 AM15365-07A1	78,196
KIRKPATRICK, FRANCIS H, JR.....	SPECTRIN, ACTIN, LIPID AND RED CELL MEMBRANE STRUCTURE.....	5R01 HL18551-03	19,776
KLEMPERER, MARTIN R.....	COOPERATIVE STUDY OF CHILDREN'S CANCER.....	5R10 CA11174-09	67,740
KNIGGE, KARL M.....	FORMATION AND DELIVERY OF NEUROHORMONES.....	1R01 AM22029-01	49,090
KRAUS, ALAN L.....	STUDIES OF LABORATORY ANIMAL DISEASES.....	5P40 RR00658-07	65,072
KREILICK, ROBERT W.....	LOCAL STRUCTURE OF BIOLOGICAL METAL COMPLEXES.....	2R01 GM22793-03	87,193
KRUGH, THOMAS R.....	MOLECULAR BASIS OF THE ACTINOMYCIN-DNA INTERACTION.....	5R01 CA14103-06	76,386
KRUGH, THOMAS R.....	PHYSICO-CHEMICAL STUDIES OF INTERCALATING DRUGS.....	2R01 CA17865-04	94,483
LA CELLE, PAUL L.....	DETERMINANTS OF RBC DEFORMABILITY AND CAPILLARY FLOW.....	5R01 HL16421-08	45,857
LA CELLE, PAUL L.....	CENTER FOR THE STUDY OF BLOOD CELL RHEOLOGY.....	5P01 HL18208-04	291,966
LAWRENCE, CHRISTOPHER W.....	RADIATION MUTAGENESIS AND REPAIR IN SACCHAROMYCES.....	2R01 GM21858-04	108,260
LAWRENCE, CHRISTOPHER W.....	CONFERENCE ON YEAST GENETICS & MOLECULAR BIOLOGY.....	1R13 GM25239-01	11,000
LEDDY, JOHN P.....	INTERDISCIPLINARY RESEARCH CENTER IN IMMUNOLOGIC DISEASE.....	1P50 AI15372-01	299,413
LICHTMAN, MARSHALL A.....	SUBSTRATE AND CATION TRANSPORT IN HUMAN LEUKOCYTES.....	5R01 CA12790-07	111,286
LIN, SHU-REN.....	CEREBRAL BLOOD FLOW AFTER CARDIAC ARREST.....	5R01 HL18590-03	47,138
LINDAHL, LASSE A.....	COORDINATION OF E. COLI RIBOSOMAL PROTEIN SYNTHESIS.....	1R01 AI15286-01	73,130
LIVINGSTON, JAMES N.....	INSULIN BINDING SITES AND INSULIN ACTION.....	1R01 AM25116-01	68,123
LOCKWOOD, DEAN H.....	INSULIN ACTION IN NORMAL AND RESISTANT STATES.....	5R01 AM20129-03	165,576
MANILOFF, JACK.....	CELLULAR AND MOLECULAR BIOLOGY OF MYCOPLASMAS.....	2R01 AI07939-11	73,530
MANILOFF, JACK.....	BIOLOGY OF MYCOPLASMA VIRUSES.....	2R01 AI10605-07	95,351
MARDER, VICTOR J.....	STRUCTURE OF FACTOR VIII-VON WILLEBRAND PROTEIN.....	1R01 HL21379-01A1	113,200
MARIN, MATTHEW G.....	RESPIRATORY TRACT SECRETION OF IONS, WATER AND MUCUS.....	5R01 HL21314-02	73,503

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
MARINETTI, GUIDO V.....	BIOCHEMISTRY AND FUNCTION OF LIPIDS AND CELL MEMBRANES.....	5R01 HL02063-23	80,854
MC LENDON, GEORGE L.....	HEME GROUP PROTEIN INTERACTIONS IN HEMOPROTEINS.....	1R01 HL21461-01	45,672
MENGUY, RENE.....	INFLUENCE OF SHOCK ON ENERGY METABOLISM.....	5R01 GM24514-05	75,202
MERIN, ROBERT G.....	EFFECT OF INHALATION ANESTHESIA ON MYOCARDIAL METABOLISM.....	5R01 HL13257-09	108,693
MILLER, LEON L.....	NET SYNTHESIS OF PLASMA PROTEINS BY PERFUSED LIVER.....	5R01 AM11029-13	60,832
MILLER, LEON L.....	DIABETES MELLITUS AND PLASMA GLYCOPROTEIN SYNTHESIS.....	5R01 AM21225-02	39,764
MILLER, MORTON W.....	BIOLOGICAL RESPONSES TO BIOMEDICAL ULTRASOUND.....	2R01 GM22680-04	90,748
MILLER, RICHARD K.....	TRANSPLACENTAL CARCINOGENESIS.....	1R01 CA22335-01	78,176
MORRIS, THOMAS W.....	VENOUS STRUCTURE AND FUNCTION.....	5R01 HL19677-03	40,631
MOSS, ARTHUR J.....	FOLLOW-UP STUDY OF ACUTE CORONARY HEART ATTACKS.....	3R01 HL15790-05S1	12,565
MOSS, ARTHUR J.....	FOLLOW-UP STUDY OF ACUTE CORONARY HEART ATTACKS.....	2R01 HL15790-06	82,645
MOSS, ARTHUR J.....	MULTICENTER POSTCORONARY RISK STRATIFICATION PROGRAM.....	1R01 HL22982-01	278,641
MOXLEY, RICHARD T, III.....	ALTERED INSULIN SENSITIVITY IN MYOTONIC DYSTROPHY.....	1R01 AM22048-01	68,433
NEUMAN, WILLIAM F.....	THE ROLE OF BONE MEMBRANES IN CALCIUM REGULATION.....	5R01 AM17074-04	87,354
NOTIDES, ANGELO C.....	THE UTERINE ESTROGEN-BINDING PROTEINS.....	5R01 HD06707-07	111,400
ORBISON, J LOWELL.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00044-18	651,317
ORBISON, J LOWELL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05403-17	200,462
PACKMAN, CHARLES H.....	RED CELL MEMBRANE-COMPLEMENT INTERACTIONS.....	1R23 HL22742-01	44,944
PASTERNAK, TATIANA.....	DEVELOPMENT OF VISION IN STROBOSCOPIC ILLUMINATION.....	3R01 EY01875-01S1	3,270
PASTERNAK, TATIANA.....	DEVELOPMENT OF VISION IN STROBOSCOPIC ILLUMINATION.....	5R01 EY01875-02	33,506
PENNEY, DAVID P.....	EFFECTS OF CHRONIC L-DOPA THERAPY ON GUT AND ADRENALS.....	5R01 NS10897-04	46,536
PERACCHIA, CAMILLO.....	STRUCTURE & FUNCTION IN LOW RESISTANCE JUNCTIONS.....	2R01 GM20113-05	152,860
PRAKASH, LOUISE.....	REPAIR OF DAMAGED DNA AND MUTAGENESIS IN YEAST.....	2R01 AM19261-07	52,046
RICHTER, GOETZ W.....	IRON IN CELL PATHOLOGY.....	2R01 AM12381-11	117,623
RIFKIN, BARRY R.....	PATHOGENESIS OF BONE LOSS IN PERIODONTAL DISEASE.....	5R23 DE04443-03	35,856
ROWLEY, PETER T.....	CONTROL OF FETAL HEMOGLOBIN SYNTHESIS.....	5R01 AM16847-06	65,757
ROWLEY, PETER T.....	BETA-THALASSEMIA SCREENING AND GENETIC COUNSELING.....	3R01 HL17465-03S2	16,425
ROWLEY, PETER T.....	BETA-THALASSEMIA SCREENING AND GENETIC COUNSELING.....	2R01 HL17465-04A1	27,750
RUBIN, PHILIP.....	CLINICAL RADIATION RESEARCH CENTER.....	5P01 CA11051-10	494,643
RUBIN, PHILIP.....	COOPERATIVE STUDY OF RADIATION THERAPY.....	5R10 CA12262-07	100,965
RUBIN, PHILIP.....	E.C.O.G. RADIATION THERAPY COORDINATING OFFICE.....	5R10 CA16449-03	44,165
SCHLESSINGER, RICHARD H.....	AN EXPEDITIOUS SYNTHESIS OF PENTALLENOLACTONE.....	5R01 CA21469-02	53,102
SCHLESSINGER, RICHARD H.....	THE SYNTHESIS OF CYTOTOXIC LACTONE SYSTEMS.....	1R01 CA23257-01	84,768
SCHLESSINGER, RICHARD H.....	A PRACTICAL TOTAL SYNTHESIS OF THE PROSTAGLANDINS.....	2R01 HL17341-03	65,594
SCHNEIDER, MARTIN F.....	EXCITATION-CONTRACTION COUPLING IN CUT MUSCLE FIBERS.....	1R01 NS13842-01	83,304
SCHWARTZ, SEYMOUR I.....	PULMONARY PLATELETS IN SHOCK, TRAUMA AND EMBOLIZATION.....	5R01 HL13466-08	41,093
SCOTT, DAVID A.....	EYE DEVELOPMENT: GROWTH CONE STRUCTURE IN DROSOPHILA.....	1R01 EY02475-01	25,871
SEGEL, GEORGE B.....	CATION FLUX AND ENERGY METABOLISM IN LYMPHOCYTES.....	5R01 CA14576-06	53,294
SELANDER, ROBERT K.....	BIOCHEMICAL GENETICS OF NATURAL POPULATIONS.....	2R01 GM22126-03	126,720
SENIOR, ALAN E.....	TIGHTLY-BOUND NUCLEOTIDES AND MG IN THE PROTON-ATPASE.....	1R01 GM25349-01	107,164
SHAIKH, ZAHIR A.....	METALLOTHIONEIN IN METABOLISM AND TOXICITY OF CADMIUM.....	5R01 ES01448-02	40,906
SHAMOO, ADIL E.....	PHYSICAL BIOCHEMISTRY OF CALCIUM TRANSPORT IN MUSCLE.....	5R01 AM18892-03	58,809
SHERMAN, FRED.....	THE GENETIC CONTROL OF CYTOCHROME C.....	2R01 GM21702-14	257,009
SHRAGER, PETER G.....	BIOCHEMICAL PROBES OF EXCITABLE MEMBRANES.....	5R01 NS10500-06	28,375
SLADEK, CELIA D.....	NEUROLOGICAL MECHANISMS IN VASOPRESSIN SECRETION.....	5R01 AM19761-02	31,781
SMITH, DAVID H.....	PATHOGENIC ROLE OF H. INFLUENZAE SURFACE PROTEINS.....	5R01 AI14411-02	90,096
SNIDER, RAY S.....	CEREBELLO-CEREBRO-CEREBELLAR CIRCUITS.....	5R01 NS11929-03	57,715
SOBELL, HENRY M.....	PURINE-PYRIMIDINE CRYSTALLINE COMPLEXES.....	3R01 GM13939-12S1	46,667
SOBELL, HENRY M.....	PURINE-PYRIMIDINE CRYSTALLINE COMPLEXES.....	2R01 GM13939-13	101,949
SPATARO, ANN C.....	THE DRUG SENSITIVITY OF AGING CELLS.....	3R23 AG00709-01S1	4,883
SUTHERLAND, ROBERT M.....	COMBINED RADIOTHERAPY-CHEMOTHERAPY STUDIES.....	5R01 CA20329-03	198,844
TANG, LORETTA K.....	STEROID REGULATION OF GONADOTROPINS IN CELL CULTURES.....	1R01 HD10837-01A1	54,737
TURNER, DOUGLAS H.....	KINETIC AND SPECTROSCOPIC STUDIES OF NUCLEIC ACIDS.....	5R01 GM22939-03	70,213
TUTTLE, JOHN R.....	QUANTITATIVE ANALYSIS OF NECTURUS RETINAL NETWORK.....	1R01 EY02598-01	45,091
WATERHOUSE, CHRISTINE.....	HEPATIC SYNTHESIS AND RELEASE OF TRIGLYCERIDE.....	5R01 CA07123-14	40,761
WEISS, BERNARD.....	ENVIRONMENTAL TOXICITY EXPRESSED IN VISUAL DYSFUNCTION.....	1R01 ES01885-01	98,941
WEISS, BERNARD.....	CONFERENCE: THE VISUAL SYSTEM AS AN INDEX OF TOXICITY.....	1R13 ES01973-01	11,569
WHEELER, KENNETH T, JR.....	BRAIN TUMOR THERAPY: RADIATION, DRUGS & DNA REPAIR.....	5R01 CA21662-02	43,528
WHEELER, LEON L, JR.....	PROGRAM FOR CELL ANALYSIS AND SORTING IN BIOMEDICINE.....	1P01 GM23088-01A1	533,136
WILHELM, JAMES M.....	PROTEIN SYNTHESIS ERRORS IN EUKARYOTIC CELLS.....	1R01 GM25168-01	42,707

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
YOUNG, DONALD A.....	MECHANISM OF ACTION OF STEROID HORMONES	3R01 AM16177-06S1	11,865
YOUNG, DONALD A.....	MECHANISMS OF ACTION OF STEROID HORMONES	2R01 AM16177-07	111,466
YOUNG, FRANK E.....	BIOLOGY OF GONORRHEA.....	5R01 AI11709-05	74,984
ZIGMAN, SEYMOUR.....	NEAR ULTRAVIOLET LIGHT EFFECTS ON OCULAR TISSUES.....	5R01 EY00459-09	106,475
ORGANIZATION TOTAL	155 16,285,959		
SARANAC LAKE			
TRUDEAU INSTITUTE ZIP CODE 12983			
CARTER, PHILIP B.....	HOST RESPONSE TO INTESTINAL FLORA	2R01 AM18530-04	51,006
COLLINS, FRANK M.....	A MOUSE INFECTION MODEL OF LEPROMATOUS LEPROSY.....	5R22 AI14065-02	97,143
COLLINS, FRANK M.....	PATHOGENESIS OF CHRONIC LUNG DISEASE.....	5R01 HL19774-03	111,872
LEFFORD, MAURICE J.....	CELLULAR DEFENSE MECHANISMS.....	5R01 AI07015-13	216,855
LEFFORD, MAURICE J.....	CELLULAR DEFENSES OF THE LUNG.....	2R01 AI12404-04	102,250
NORTH, ROBERT J.....	PRODUCTION & DEPLOYMENT OF MEDIATORS OF CELL IMMUNITY.....	2R01 AI10351-07A1	134,750
NORTH, ROBERT J.....	IMMUNOLOGICAL BASIS OF TUMOR REGRESSION.....	2R01 CA16642-04	94,507
NORTH, ROBERT J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05705-09	41,995
PHILLIPS, PHILIP G.....	BIOCHEMICAL PROBES OF MALIGNANT CELL SURFACES.....	2R01 CA20073-03	41,898
POULTER, LEONARD W.....	MECHANISMS OF IMMUNITY TO LEISHMANIASIS.....	5R01 AI14383-02	107,830
SPITALNY, GEORGE L.....	SUBVERSION OF IMMUNE MECHANISMS IN MALIGNANT TUMORS.....	1R01 CA21360-01A1	102,983
ORGANIZATION TOTAL	11 1,103,089		
STONY BROOK			
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794			
BACHVAROFF, RADOSLAV J.....	LYMPHOCYTE DIFFERENTIATION AND IMMUNE RESPONSIVENESS.....	5R01 AI14455-02	80,920
BAUER, WILLIAM R.....	VIRAL AND PLASMID DNA STRUCTURE, PROTEIN INTERACTIONS.....	5R01 GM21176-05	68,125
BENJAMIN, WILLIAM B.....	RELATION OF PROTEIN PHOSPHORYLATION TO INSULIN ACTION.....	2R01 AM18905-04	74,887
BERGOFKY, EDWARD H.....	MECHANISM OF HYPOXIC REGULATION OF LUNG CIRCULATION.....	5R01 HL17711-05	110,135
BERGOFKY, EDWARD H.....	BIOLOGY OF NORMAL & HYPERTROPHIED PULMONARY VESSELS.....	1R01 HL23210-01	108,083
BROWN, JOEL E.....	VISUAL RECEPTOR POTENTIALS.....	5R01 EY01914-03	24,778
BROWN, JOEL E.....	ANATOMY AND PHYSIOLOGY OF VISION.....	2R01 EY01915-03	115,560
CARTER, CAROL A.....	THE STRUCTURAL BASIS OF REGULATION.....	1R01 AI12977-01	14,084
COHEN, IRA S.....	CARDIAC ELECTROPHYSIOLOGY: EFFECTS OF IONS AND DRUGS.....	5R01 HL20558-02	20,508
COLBY, CLARENCE, JR.....	INTERFERON SYSTEM: A GENETIC AND BIOCHEMICAL ANALYSIS.....	7R01 AI15668-01	63,866
COLLER, BARRY S.....	RISTOCETIN INDUCED PLATELET AGGREGATION.....	5R01 HL19278-03	31,557
DELIHAS, NICHOLAS.....	RIBOSOME STRUCTURE, FUNCTION AND ANTIBIOTIC INTERACTIONS.....	5R01 GM20052-06	47,179
DEWEY, MAYNARD M.....	THE EFFECT OF FILAMENT LENGTH ON STRIATED MUSCLE TENSION.....	5R01 AM18750-03	78,198
DUDOCK, BERNARD S.....	SEQUENCE ANALYSIS OF BIOLOGICALLY ALTERED TRNA.....	9R01 GM25254-09A1	57,438
EISENBERG, MOISES.....	INCORPORATION OF RHODOPSIN INTO ARTIFICIAL MEMBRANES.....	5R01 EY01530-03	24,232
ENGBRETSON, GUSTAV A.....	VISUAL INFORMATION PROCESSING BY THE PARIETAL EYE.....	1R01 EY02587-01	65,700
FINCH, STEPHEN J.....	LONGITUDINAL STUDY OF AIR POLLUTION ON MORTALITY.....	1R23 ES01686-01	39,599
FLEAGLE, JOHN G.....	GROWTH AND DEVELOPMENT IN EXPERIMENTAL MALNUTRITION.....	5R01 HD10626-02	19,170
FREUNDLICH, MARTIN.....	MOLECULAR MECHANISMS IN MULTIVALENT REPRESSION.....	5R01 GM17152-10	79,030
FRIEDMAN, HAROLD L.....	ANTIBIOTIC-ION INTERACTIONS.....	5R01 HL16474-05	69,470
GARANT, PHILIAS R.....	ULTRASTRUCTURE OF EXPERIMENTAL PERIODONTITIS.....	5R01 DE03745-07	96,490
GOLUB, LORNE M.....	GINGIVAL COLLAGEN METABOLISM IN HEALTH AND DISEASE.....	2R01 DE03987-04	94,874
GORDON, JOEL S.....	CHANGES IN CELL-SPECIFIC NONHISTONES DURING MYOGENESIS.....	5R01 AM18859-03	43,232
GROLLMAN, ARTHUR P.....	MOLECULAR PHARMACOLOGY OF TUMOR AND VIRUS INHIBITORS.....	5R01 CA17395-04	188,540
HABICHT, GAIL S.....	IMMUNOLOGICAL TOLERANCE AND AGING.....	1R01 AG00801-01A1	72,589
HANSON, DAVID M.....	SPECTROSCOPIC INVESTIGATION OF CONFORMATIONAL CHANGES.....	5R01 GM20803-05	33,786
HELQUIST, PAUL M.....	SYNTHESIS OF THE ANTI-TUMOR AGENT SPARSOMYCIN.....	5R01 CA20701-02	25,971
INOUE, MASAYORI.....	CELL DIVISION AND MEMBRANE PROTEINS.....	5R01 GM19043-07	82,344
JACOBSON, ANN B.....	STRUCTURAL STUDIES ON RNA-CONTAINING VIRAL GENOMES.....	1R01 AI15273-01	32,239
JANOFF, AARON.....	HUMAN LEUKOCYTE PROTEASES AND THEIR LUNG TARGETS.....	5R01 HL14262-07	76,744
JESTY, JULYON.....	CONTROL MECHANISMS IN COAGULATION.....	1R01 HL21113-01A1	39,696
JOHNSON, FRANCIS.....	SYNTHESIS AND CHEMISTRY OF THE ANTIBIOTIC, THERMORUBIN.....	5R01 AI13988-02	40,803
JOHNSON, FRANCIS.....	TOTAL SYNTHESIS OF THE ANTITUMOR ANTHRACYCLINE AGLYCONES.....	5R01 CA20197-02	48,974
JONES, RAYMOND F.....	ENZYME TURNOVER DURING GROWTH AND DEVELOPMENT.....	5R01 HD07986-05	36,748

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
JONES, RAYMOND F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07067-13	106,402
KARTEN, HARVEY J.....	ANATOMICAL ORGANIZATION OF THE BRAIN.....	5R01 NS12078-05	43,323
KATES, JOSEPH R.....	MOLECULAR BIOLOGY OF VACCINIA VIRUS REPLICATION.....	5R01 AI11839-05	101,894
KATZ, EUGENE R.....	DEVELOPMENTAL GENETIC STUDIES ON CELLULAR SLIME MOLDS.....	5R01 GM18476-06	79,465
KAYE, HERBERT.....	BEHAVIORAL CHARACTERISTICS OF THE NEWBORN INFANT.....	5R01 HD09867-03	31,191
KLEINBERG, ISRAEL.....	EFFECT OF SALIVA ON THE METABOLISM OF DENTAL PLAQUE.....	2R01 DE03993-04	139,668
KOEHN, RICHARD K.....	BIOCHEMICAL GENETICS OF CORRELATED ALLOZYME VARIATION.....	5R01 GM21133-04	60,512
KRANTZ, ALLEN.....	MODES OF REACTIVITY OF FLAVINS AND FLAVOPROTEINS.....	1R01 NS13220-01A1	48,036
KUSCHNER, MARVIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05736-06	113,788
LAUTERBUR, PAUL C.....	APPLICATION OF NMR ZEUGMATOGRAPHY IN CANCER RESEARCH.....	5R01 CA15300-05	159,675
LAUTERBUR, PAUL C.....	FACILITY FOR BIOMEDICAL NMR ON RADIOACTIVE SAMPLES.....	5P41 RR01039-02	73,090
LENT, CHARLES M.....	MONOAMINE NEURONS.....	1R01 NS14482-01	7,350
LUCAS, JOSEPH J.....	ANALYSIS OF GENE REGULATION BY NUCLEAR TRANSPLANTATION.....	5R01 CA22302-02	56,756
MC LAUGHLIN, STUART G.....	DIVALENT CATIONS AND MEMBRANES.....	1R01 GM24971-01	75,151
MILLER, FREDERICK.....	CYTOSKELETAL STRUCTURE OF NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA21930-02	50,577
OHTSUBO, EIICHI.....	MOLECULAR BIOLOGY ON GENETIC FUSION IN THE E. COLI.....	2R01 GM22007-04	58,278
OWEN, WILLIAM G.....	SIGNAL TRANSFER BETWEEN RECEPTORS AND BIPOLAR CELLS.....	1R01 EY02493-01	86,998
POLLOCK, JERRY J.....	LYSOZYME-CELL SURFACE INTERACTIONS AND ORAL DEFENSE.....	2R01 DE04296-04	132,783
RAMIREZ, FAUSTO.....	SUPERPHOSPHORYLATING AGENTS.....	5R01 CM20672-18	104,693
RAPAPORT, FELIX T.....	INDUCTION OF UNRESPONSIVENESS TO ALLOGRAFTS.....	2R01 AI14453-02	175,285
RAPAPORT, FELIX T.....	MECHANISMS OF CELL DAMAGE IN SEVERE BURNS.....	5R01 GM24481-02	110,811
RILEY, MONICA.....	EVOLUTION OF THE TRYPTOPHANASE GENE IN E. COLI.....	5R01 GM21316-05	78,218
SACHS, JOHN R.....	PHYSIOLOGICAL ASPECTS OF MEMBRANE CATION TRANSPORT.....	5R01 AM19185-04	70,747
SADOGLU, PERIHAN.....	EYE DEVELOPMENT AND CATARACT FORMATION.....	5R01 EY01892-02	82,228
SARMA, RAGHUPATHY.....	X-RAY CRYSTAL STRUCTURE AND FUNCTION OF PROTEINS.....	9R01 CA25048-06A1	50,859
SCANDELLA, CARL J.....	CONTROL OF MEMBRANE FLUIDITY IN ANIMAL CELLS.....	5R01 GM23218-03	55,371
SILVERBERG, SIDONIE A.....	KINETICS OF PROTHROMBIN ACTIVATION.....	1R01 HL22955-01	48,495
SIMPSON, MELVIN V.....	MITOCHONDRIA: NUCLEIC ACID SYNTHESIS AND ROLE OF DNA.....	5R01 GM22333-12	56,039
SOKOLOFF, LEON.....	IN VITRO CULTURE OF ARTICULAR CHONDROCYTES.....	5R01 AM17258-04	105,601
SREEBNY, LEO M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05778-03	38,298
STRICHARTZ, GARY R.....	MOLECULAR ASPECTS OF SAXITOXIN BINDING TO NERVE.....	5R01 NS12828-03	28,870
TAICHMAN, LORNE B.....	STABILITY OF DIFFERENTIATION: CRANIOFACIAL STUDY.....	5R23 DE04511-03	15,068
TEGMEYER, PETER J.....	MECHANISMS OF VIRAL ONCOGENESIS: SV40 GENE FUNCTION.....	5R01 CA18808-04	84,467
TSENG, LINDA.....	ESTRADIOL DEHYDROGENASE INDUCTION IN HUMAN ENDOMETRIUM.....	5R01 HD10933-02	35,172
TWAROG, BETTY M.....	PHARMACOLOGY OF RELAXATION IN SMOOTH MUSCLE.....	9R01 HL23614-02A2	61,115
UYEMURA, DENNIS G.....	ROLE OF ACTIN METHYLATION IN DICTYOSTELIUM DISCOIDEUM.....	1R01 GM25447-01	51,692
VAN DER KLOOT, WILLIAM G.....	TRANSMITTER RELEASE BY NERVE TERMINALS.....	5R01 NS10320-07	29,527
WILLIAMS, DAVID L.....	HORMONAL REGULATION OF VITELLOGENIN SYNTHESIS.....	2R01 AM18171-04	67,657
WIMMER, ECKARO A.....	VIRAL ONCOLOGY: RETROVIRUSES AND POLIOVIRUS.....	9R01 AI15122-05	135,967
WITKOVSKY, PAUL.....	THE ORIGIN AND IONIC BASIS OF THE ELECTRORETINOGRAM.....	5R01 EY01762-03	97,793
YAZULLA, STEPHEN.....	SPATIO-CHROMATIC CODING IN RETINAL NEURONS.....	5R01 EY01682-03	31,533
ORGANIZATION TOTAL	75	5,145,992	
SYRACUSE			
STATE UNIVERSITY OF NEW YORK—COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY		ZIP CODE 13210	
LALONDE, ROBERT T.....	NATURALLY OCCURRING MOSQUITO LARVICIDES.....	5R01 ES01278-03	37,283
NAKATSUGAWA, TSUTOMU.....	ORGANOPHOSPHATE-BIOMACROMOLECULE INTERACTIONS.....	5R01 ES01019-04	53,998
SCHUERCH, CONRAD.....	SYNTHETIC CARBOHYDRATE ANTIGENS AND HAPTENS.....	2R01 AI12509-04	89,016
SCHUERCH, CONRAD.....	STEREOSPECIFIC SYNTHESIS OF POLYSACCHARIDES.....	2R01 GM06168-19A1	72,253
TANENBAUM, STUART W.....	BIOCHEMISTRY OF CYTOTOXIC FUNGAL METABOLITES.....	5R01 AI11902-05	56,176
TANENBAUM, STUART W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07174-02	17,342
ORGANIZATION TOTAL	6	326,068	
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER		ZIP CODE 13210	
ANDERSON, GUNNAR H, JR.....	ROLE OF ANGIOTENSIN SENSITIVITY IN RENIN RELEASE.....	3R01 HL19428-02S1	2,723
ANDERSON, GUNNAR H, JR.....	ROLE OF ANGIOTENSIN SENSITIVITY IN RENIN RELEASE.....	2R01 HL19428-03	71,520
ARGYRIS, BERTIE F.....	CELL INTERACTIONS IN TUMOR IMMUNITY.....	2R01 CA15462-04A1	74,848
ARGYRIS, THOMAS S.....	RIBOSOMAL RNA SYNTHESIS IN EPIDERMAL REGENERATION.....	2R01 AM18219-04	58,311

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
AUST, JOHN C	INTERDISCIPLINARY CANCER EDUCATION PROGRAM	1R25 CA19434-01A2	104,353
BEACH, DAVID H	LIPIDS IN A PSEUDOPHYLLIDEAN LIFE-CYCLE	5R01 AI13479-02	41,335
BLUMENTHAL, STANLEY A	REGULATION OF HEPATIC PRODUCTION AND UPTAKE OF GLUCOSE	1R01 AM21246-01	37,910
BORTOFF, ALEXANDER	COORDINATION OF VISCERAL SMOOTH MUSCLE ACTIVITY	5R01 AM06958-14	31,922
CROSS, RICHARD L	MECHANISM OF ATP SYNTHESIS BY THE RESPIRATORY CHAIN	5R01 GM23152-03	52,312
DEAVER, THOMAS F	NUCLEAR DIAGNOSTIC METHODS FOR RENAL DISEASES	5R01 GM18248-08	88,496
FLASHNER, MARCIA S	BIOCHEMICAL STUDIES OF THE NA, K-ATPASE ENZYME	1R01 GM25033-01	49,735
FROMM, DAVID G	GASTRIC MUSCOSAL PERMEABILITY AND ION TRANSPORT	5R01 AM25227-02	43,375
GACEK, RICHARD R	THE VESTIBULAR NUCLEI AND THEIR CONNECTIONS	5R01 NS14285-02	37,848
GOODMAN, DONALD C	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05402-17	116,648
GOTTLIEB, ARLAN J	PARTICIPATION IN CANCER AND LEUKEMIA GROUP B	5R10 CA21060-02	83,046
GROSSMAN, ZACHARY D	LABELING GRANULOCYTES FOR DIAGNOSTIC APPLICATIONS	5R01 GM23033-03	105,898
HAMERNIK, ROGER P	AUDITORY EFFECT OF COMBINED IMPULSE & CONTINUOUS NOISE	5R01 ES00969-05	51,875
HODGE, CHARLES J	SUPRASEGMENTAL CONTROL OF SENSORY EVENTS	5R01 NS12761-02	39,349
HOLZ, GEORGE G, JR	LIPIDS OF LEISHMANIAS AND TRYPAOSOMES	5R01 AI05802-15	61,903
HSU, ROBERT Y	MECHANISM OF FATTY ACID SYNTHESIS IN ANIMALS	5R01 AM13390-11	51,784
JONES, DAVID B	FINE STRUCTURE OF DISEASED GLOMERULI	5R01 HL04300-20	46,952
KEATING, E GREGORY	RECOVERY FROM CORTICAL BLINDNESS	1R01 EY02941-01	64,811
KRIEBEL, MAHLON E	TRANSMITTER RELEASE AT THE NEUROMUSCULAR JUNCTION	2R01 NS11996-04A1	74,880
LEVINE, ROBERT A	CYCLIC NUCLEOTIDES AND MAMMALIAN GASTRIC SECRETION	3R01 AM17912-03S1	9,600
LINSCHER, WILLEM G	A NEW APPROACH TO DISSOLUTION OF CHOLESTEROL GALLSTONES	5R01 AM18496-03	40,668
LUCAS, JOHN J	MEMBRANE GLYCOPROTEIN CHANGES DURING DIFFERENTIATION	2R01 HD09046-04	54,185
MARINO, ANDREW A	BIOLOGICAL EFFECTS OF 60 HERTZ ELECTRIC FIELDS	5R01 ES01621-02	28,575
MOZELL, MAXWELL M	THE ELECTROPHYSIOLOGY OF OLFACATORY DISCRIMINATION	2R01 NS03904-15	82,538
MUELLER, JUSTUS F	STUDIES ON SPARGANOSIS AND CESTODE BIOLOGY	2R01 AI01876-21	21,873
MURRAY, DAVID G	BIOMECHANICAL EVALUATION OF KNEE JOINT ENDOPROSTHESES	5R01 AM14964-06	58,721
NORD, SAMUEL G	BRAIN STEM MECHANISMS OF TRIGEMINAL NOCICEPTION	5R01 NS10814-05	68,553
PRESTON, JAMES B	SUPRASEGMENTAL INFLUENCES ON SPINAL MOTONEURONS	5R01 NS02957-18	36,923
RAY, TUSHAR K	BIOCHEMICAL ASPECTS OF H ₂ O TRANSPORT FROM STOMACH	7R01 AM25544-01	48,392
ROBINSON, JOSEPH D	CHANGES IN BRAIN MICROSOMAL STRUCTURE AND COMPOSITION	5R01 NS05430-13	50,070
ROBINSON, JOSEPH D	CALCIUM TRANSPORT IN THE NERVOUS SYSTEM	2R01 NS12193-04	42,274
ROSS, CHARLES R	RENAL TRANSPORT CARRIER FOR ORGANIC COMPOUNDS	5R01 HL02835-21	63,456
SCHWARTZ, SHELDON E	EFFECT OF SULFASALAZINE ON SODIUM FLUX IN THE COLON	1R01 AM21088-01	48,061
SMITH, PHILLIP H	NEURAL CONTROL OF ISLET MASS IN OBESE/DIABETIC RATS	7R01 AM25325-01	32,698
SPITZER, ROGER E	THE ROLE OF PROPERDIN IN THE BIOLOGY OF COMPLEMENT	5R01 AI12721-04	81,847
STACH, ROBERT W	INVESTIGATIONS ON THE NERVE GROWTH FACTOR	2R01 NS12325-04	61,174
STELZNER, DENNIS J	FACTORS IN CNS REGENERATION	1R01 NS14096-01	55,405
STOCKMAN, JAMES A, III	THE ANEMIA OF PREMATURITY, ADAPTIVE MECHANISMS	1R01 HD12019-01	74,633
STONER, LARRY C	TRANSPORT ACROSS SINGLE PROXIMAL TUBULE CELLS	5R01 AM19521-02	63,485
STREETEN, BARBARA W	THE FIBER-GEL STRUCTURE OF THE OCULAR ZONULE	2R01 EY01602-04	58,183
STREETEN, DAVID H	ROLE OF ANGIOTENSIN II IN VASOPRESSIN RELEASE	1R01 HL22051-01	85,497
TEPPERMAN, JAY	ADAPTATION OF MEMBRANE-ASSOCIATED FUNCTIONS	5R01 AM05410-17	97,253
TERJUNG, RONALD L	SKELETAL MUSCLE ADAPTATIONS INDUCED BY TRAINING	5R01 AM21617-02	74,676
WEINER, IRWIN M	BIOCHEMICAL ASPECTS OF RENAL ELECTROLYTE TRANSPORT	5R01 AM20533-14	98,519
WILLIAMS, WILLIAM J	GENERAL CLINICAL RESEARCH CENTER	2M01 RR00229-13	389,092
YNTEMA, CHESTER L	DEVELOPMENT STUDIES OF THE TURTLE	5R01 HD03484-11	40,367
ORGANIZATION TOTAL	50	3,258,552	
SYRACUSE RESEARCH CORPORATION ZIP CODE 13210			
BANERJEE, SUJIT	STEREOCHEMISTRY OF OXIDATION BY CYTOCHROME P-450	1R01 GM25519-01	24,508
ORGANIZATION TOTAL	1	24,508	
SYRACUSE UNIVERSITY ZIP CODE 13210			
BARLOW, ROBERT B, JR	FUNCTIONAL ORGANIZATION OF THE VISUAL SYSTEM	2R01 EY00667-06A1	175,188
CHAN, SAMUEL H	ADENINE NUCLEOTIDE TRANSLOCATION IN TUMOR MITOCHONDRIA	5R01 CA20454-02	60,220
CONTURE, EDWARD G	LARYNGEAL BEHAVIOR DURING STUTTERING	1R01 NS14351-01	48,677
DITTMER, DONALD C	HETEROCYCLIC ORGANOSULFUR CHEMISTRY	5R01 CA08250-14	42,430
DOSA, MARTA L	DEVELOPMENT/EVALUATION OF HEALTH INFORMATION SHARING	5R01 LM02800-02	106,937
DUNHAM, PHILIP B	IMMUNOSTIMULATION OF MEMBRANE TRANSPORT IN TUMOR CELLS	5R01 CA19064-03	106,955
FALK, DARREL R	TISSUE DYNAMICS OF PYRIMIDINE SYNTHESIS IN DROSOPHILA	2R01 GM24049-02	60,013

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
FLORINI, JAMES R.....	EFFECT OF AGING ON LEVELS AND ACTION OF SOMATOMEDINS.....	5R01 AG00629-02	77,904
FLORINI, JAMES R.....	RNA AND PROTEIN SYNTHESIS IN REPAIR OF HEART INJURY.....	5R01 HL11551-11	75,383
FONDY, THOMAS P.....	ANALOG ALTERATION OF MEMBRANES IN CANCER CHEMOTHERAPY.....	5R01 CA10250-11	64,462
FONDY, THOMAS P.....	GLYCEROL-P SHUTTLE ISOENZYMES IN CANCER CHEMOTHERAPY.....	5R01 CA21640-02	17,056
GARDNER, ERIC F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07068-13	89,248
GARVEY, JUSTINE S.....	ANTIGEN METABOLISM IN MATURING AND SENESCENT ANIMALS.....	5R01 AG001111-02	73,908
HARTH, ERICH.....	DETERMINATION OF RECEPTIVE FIELDS IN VISUAL PATHWAYS.....	5R01 EY01215-05	74,723
LEVY, H RICHARD.....	MECHANISMS OF CONTROL OF ENZYMIC ACTIVITY.....	2R01 AM07720-13A1	84,699
LIPSON, EDWARD D.....	SYSTEM ANALYSIS OF PHYCOMYCES PHOTOMUTANTS.....	5R01 GM24367-02	58,799
NAFIE, LAURENCE A.....	VIBRATIONAL OPTICAL ACTIVITY.....	1R01 GM23567-01A1	66,787
ROTHENBERG, MARTIN.....	VOICE QUALITY AND LARYNGEAL FREQUENCY.....	5R01 NS08919-08	40,134
STURR, JOSEPH F.....	MECHANISMS OF VISUAL SENSITIVITY.....	3R01 EY01571-03S1	15,374
STURR, JOSEPH F.....	MECHANISMS OF VISUAL SENSITIVITY.....	2R01 EY01571-04	42,984
SULLIVAN, DAVID T.....	A DEVELOPMENTAL AND GENETIC STUDY OF A TRANSPORT SYSTEM.....	5R01 GM22366-03	44,570
VERRILLO, RONALD T.....	CUTANEOUS MECHANORECEPTOR SYSTEMS.....	5R01 NS09943-07	84,958
VOURNAKIS, JOHN N.....	SECONDARY STRUCTURE OF EUKARYOTIC MESSENGER RNA.....	2R01 GM22280-04	74,686
WANG, CHIU-SEN.....	DEPOSITION OF HYGROSCOPIC AEROSOLS.....	5R01 HL19700-03	52,823
WARNER, FRED D.....	MACROMOLECULAR BASIS FOR CILIARY MOTION.....	5R01 GM20690-05	63,541
WAYNER, MATTHEW J.....	A STUDY OF CHEMOSENSITIVE HYPOTHALAMIC NEURONS.....	1R01 NS13543-01A1	51,429
ZWISLOCKI, JOZEF J.....	SENSORY PROCESSES.....	5R01 NS03950-17	218,038
ORGANIZATION TOTAL	27	1,971,926	
TROY			
RENSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181			
ARCHER, SYDNEY.....	THIOXANTHENONES AND ANTHRAQUINONES AS ANTITUMOR DRUGS.....	3R01 CA19674-01S1	4,302
ARCHER, SYDNEY.....	THIOXANTHENONES AND ANTHRAQUINONES AS ANTITUMOR DRUGS.....	5R01 CA19674-02	58,636
DIWAN, JOYCE J.....	MITOCHONDRIAL SOLUTE TRANSPORT MECHANISMS.....	5R01 GM20726-04	45,460
FERRIS, JAMES P.....	PHOTOSYNTHESIS OF ANTIVIRAL AND ANTITUMOR DRUGS.....	3R01 CA14511-05S1	5,019
FERRIS, JAMES P.....	PHOTOSYNTHESIS OF ANTIVIRAL AND ANTITUMOR DRUGS.....	5R01 CA14511-06	62,929
FERRIS, JAMES P.....	A FUNGAL MONOOXYGENASE SIMILAR TO HEPATIC P-450.....	5R01 GM22720-03	31,510
KORETZ, JANE F.....	A COMPUTER MODEL FOR LENS ACCOMMODATION.....	1R01 EY02195-01	16,604
KORETZ, JANE F.....	STUDIES OF NATURAL AND SYNTHETIC MYOSIN FILAMENTS.....	1R01 NS14377-01	50,421
MOW, VAN C.....	BIOMECHANICS OF AGING AND OSTEOARTHRITIC CARTILAGE.....	5R01 AM19094-03	96,938
NEWELL, JONATHAN C.....	PULMONARY HEMODYNAMICS IN ATELECTASIS AND HYPOXIA.....	5R01 HL18630-03	40,557
OSTRANDER, LEE E.....	TISSUE ANALYSIS BY MASS SPECTROMETER.....	5R01 HL20607-02	37,663
POTTS, KEVIN T.....	FUSED HETEROCYCLES AS POTENTIAL ANTICANCER AGENTS.....	3R01 CA08495-12S1	3,319
POTTS, KEVIN T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07104-12	41,701
SCHULTZ, ARTHUR G.....	SYNTHESIS OF VERNOLEPIN AND DAUNOMYCIN.....	7R01 CA25787-01	66,093
SCHULTZ, ARTHUR G.....	SYNTHESIS OF ASPIDOSPERMA AND HASUBANAN ALKALOIDS.....	7R01 GM26568-01	87,672
WEDLER, FREDERICK C.....	CATALYTIC AND REGULATORY MECHANISMS OF KEY ENZYMES.....	1R01 GM24830-01	51,837
WILSON, DWIGHT E, JR.....	STUDIES ON CELL TRANSFORMATION HERPES VIRUS.....	3R01 CA16550-03S1	2,785
ORGANIZATION TOTAL	17	703,446	
UPTON			
ASSOCIATED UNIVERSITIES—BROOKHAVEN NATIONAL LABORATORY ZIP CODE 11973			
ATKINS, HAROLD L.....	DIAGNOSIS OF MYOCARDIAL INFARCTION BY RADIOISOTOPES.....	2R01 HL16553-04	32,992
ATKINS, HAROLD L.....	DIAGNOSIS OF MYOCARDIAL INFARCTION BY RADIOISOTOPES.....	5R01 HL16553-05	68,090
BIELSKI, BENON H.....	STUDIES ON BIOLOGICAL SUPEROXIDE RADICAL MECHANISMS.....	5R01 GM23656-02	69,095
BURR, BENJAMIN.....	STORAGE PROTEIN SYNTHESIS IN MAIZE ENDOSPERM.....	5R01 GM24057-02	47,757
COHN, STANTON H.....	GERONTOLOGICAL CHANGES IN SKELETAL MASS.....	1R01 AG00918-01	167,118
CRONKITE, EUGENE P.....	NEUTROPHILIC GRANULOCYTOPOIESIS IN NORMALS & LEUKEMICS.....	5R01 CA14742-05	75,540
CRONKITE, EUGENE P.....	HEMOPOIETIC REGULATORS FORMED IN CELL CULTURE.....	5R01 HL15685-05	121,548
CRONKITE, EUGENE P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05731-07	70,809
ELZINGA, MARSHALL.....	STRUCTURE-FUNCTION STUDIES ON ACTIN AND MYOSIN.....	5R01 HL21471-02	116,968
FAIRCHILD, RALPH G.....	BORON EPITHERMAL NEUTRON CAPTURE THERAPY.....	1R01 CA22749-01	37,946
HOUGH, PAUL V.....	FLUORESCENCE ELECTRON MICROSCOPY.....	1R01 GM24799-01	49,849
IWAI, JUNICHI.....	ENVIRONMENTAL-GENETIC INTERACTIONS IN HYPERTENSION.....	3R01 HL13408-05S1	5,735

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NEW YORK—Continued			
IWAI, JUNICHI.....	HYPERTENSION: GENETIC INFLUENCE OF KIDNEY.....	3R01 HL14913-05S1	74,600
IWAI, JUNICHI.....	HYPERTENSION: GENETIC INFLUENCE OF KIDNEY.....	5R01 HL14913-06	161,102
LACKS, SANFORD A.....	DNA MISMATCH REPAIR IN TRANSFORMATION AND MUTAGENESIS.....	1R01 AI14885-01	56,434
MILLER, MARILYN E.....	REGULATORY MECHANISMS OF ERYTHROPOIETIN PRODUCTION.....	1R01 HL22650-01	95,509
STUDIER, F WILLIAM.....	REPLICATION OF T7 DNA.....	2R01 GM21872-04	61,452
SUTHERLAND, BETSY M.....	DNA REPAIR - HUMAN E. COLI PHOTOREACTIVATING ENZYMES.....	5R01 CA23096-02	91,671
WALL, JOSEPH S.....	SUPPORT FOR ELECTRON MICROSCOPE FACILITY.....	5P41 RR00715-06	204,413
WOLF, ALFRED P.....	A PROGRAM IN SUPPORT OF NUCLEAR MEDICINE.....	3P41 RR00657-03S1	187,904
ORGANIZATION TOTAL	20	1,796,532	
UTICA			
MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE		ZIP CODE 13501	
MOE, GORDON K.....	CARDIAC ACTIONS OF DIGITALIS.....	5R01 HL19487-03	114,661
WULFF, VERNER J.....	A STUDY OF VISUAL COUPLING REACTIONS.....	2R01 EY00236-16A1	28,001
ORGANIZATION TOTAL	2	142,662	
VALHALLA			
AMERICAN HEALTH FOUNDATION		ZIP CODE 10595	
HECHT, STEPHEN S.....	ENVIRONMENTAL NITROSAMINES—METABOLISM & CARCINOGENESIS.....	1R01 CA23901-01	39,008
ORGANIZATION TOTAL	1	39,008	
NEW YORK MEDICAL COLLEGE		ZIP CODE 10595	
DANISHEFSKY, ISIDORE.....	HEPARIN, BLOOD COAGULATION AND LIPID METABOLISM.....	5R01 HL16955-05	84,080
ELSEVIERS, DIRK.....	ACCURACY IN GENE EXPRESSION.....	1R01 GM24576-01	59,790
GUTSTEIN, WILLIAM H.....	NEURAL FACTORS IN ATHEROGENESIS.....	5R01 HL18085-03	110,733
HOCHSTADT, JOY.....	TRANSPORT BY MEMBRANE VESICLES OF CULTURED TUMOR CELLS.....	3R01 CA23083-01S1	35,645
HOCHSTADT, JOY.....	CARCINOGENESIS/MEMBRANE ENZYME & PERMEABILITY MUTANTS.....	1R01 CA23095-01	101,061
HOROWITZ, MARTIN I.....	BIOCHEMISTRY OF GASTRIC SULFATED GLYCOPROTEINS.....	5R01 AM15475-08	105,895
HOROWITZ, MARTIN I.....	BIOCHEMISTRY OF LIPIDS IN NORMAL AND ULCERATED STOMACHS.....	5R01 AM15565-07	112,005
KIKKAWA, YUTAKA.....	ALVEOLAR TYPE II EPITHELIAL CELLS IN HEALTH & DISEASE.....	5R01 HD10366-03	157,499
LOUD, ALDEN V.....	HYPOTHERMIA AND THE HEART.....	3R01 HL14713-06S1	6,731
MC BRIDE, RAYMOND A.....	ANTITUMOR IMMUNITY IN AGAMMAGLOBULINEMIC INBRED FOWL.....	3R01 CA16164-10S1	12,120
MOHOS, STEVEN C.....	PATHOGENESIS OF GLOMERULAR MICROANGIOPATHY.....	5R01 AM20766-02	85,131
PIGMAN, W WARD.....	GLYCOPROTEINS OF NORMAL AND CANCEROUS COLONIC TISSUE.....	3R26 CA17168-03S1	19,168
SMITH, FRED.....	METABOLISM OF NEUTRAL LIPIDS IN THE PULMONARY ALVEOLUS.....	1R23 HL21251-01	42,000
TABACHNICK, MILTON.....	TRANSPORT OF THYROID HORMONES.....	5R01 AM05344-17	82,887
THEIS, GAIL A.....	RESPONSES OF LYMPHOCYTES TO AN ONCOGENIC HERPES VIRUS.....	5R01 CA18904-03	67,121
WALLACE, SUSAN S.....	MODIFICATION OF X-RAY INDUCED DAMAGES IN PHAGE T4.....	2R01 CA21342-03	88,937
ORGANIZATION TOTAL	16	1,170,803	
WILLIAMSVILLE			
ERIE COMMUNITY COLLEGE		ZIP CODE 14221	
NINAN-ADANGAPURAM, THAMBY.....	HOST-MEDIATED ASSAY OF CARCINOGENIC & MUTAGENIC AGENTS.....	5R01 CA18478-02	24,674
ORGANIZATION TOTAL	1	24,674	
STATE TOTAL	2,142	242,122,041	
NORTH CAROLINA			
CHAPEL HILL			
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL		ZIP CODE 27514	
BACHENHEIMER, STEVEN L.....	TRANSCRIPTION OF THE HERPES SIMPLEX VIRUS GENOME.....	1R01 AI14377-01A1	67,073
BASEMAN, JOEL B.....	GROWTH AND METABOLISM OF VIRULENT TREPONEMA PALLIDUM.....	5R01 AI11283-06	51,006

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
BEAR, RICHARD S.....	MOLECULAR STRUCTURE OF CONNECTIVE TISSUE FIBERS	5R01 AM14120-09	33,012
BOUCHER, RICHARD C.....	THE AIRWAY MUCOSAL BARRIER	1R01 HL22924-01	47,821
BREESE, GEORGE R.....	NEUROPSYCHOPHARMACOLOGY OF DEVELOPMENTAL DISORDERS.....	5P01 HD10570-02	457,849
BRIGGAMAN, ROBERT A.....	UTILIZATION OF EPIDERMAL CELL MODEL FROM HUMAN SKIN.....	5R01 AM10546-13	65,586
BRINKHOUS, KENNETH M.....	BLOOD COAGULATION AND HEMOPHILIA.....	5R01 HL01648-31	86,647
BROOKS, FREDERICK P, JR.....	REGIONAL GRAPHICS RESOURCE FOR MOLECULAR STUDIES.....	5P41 RR00898-05	83,036
CAIRNS, ROBERT B.....	THE DEVELOPMENT OF AGGRESSIVE BEHAVIORS.....	5R01 HD08464-05	17,956
CAPLOW, MICHAEL.....	BIOCHEMICAL MECHANISMS RELEVANT TO DENTISTRY.....	5R01 DE03246-09	65,022
CARDENAS, JANET M.....	INBORN ERRORS AND PYRUVATE KINASE ISOZYMES.....	7R01 AM25247-01	41,099
CARTER, CHARLES W, JR.....	STRUCTURAL STUDIES OF PROTEIN-TO-NUCLEIC ACID BINDING.....	2R01 GM21991-03A1	56,810
CHAE, CHI-BOM.....	ROLE OF CHROMOSOMAL PROTEASE IN AGING.....	2R01 AG00103-04	34,438
CHAE, CHI-BOM.....	ROLE OF CHROMOSOMAL PROTEASE IN NUCLEAR FUNCTIONS.....	2R01 GM21846-03A1	42,146
CLYDE, WALLACE A, JR.....	PULMONARY SCOR: LUNG INJURY BY CHILDHOOD INFECTIONS.....	5P50 HL19171-02	507,483
COOPER, CARY W.....	CALCIUM, CALCEMIC HORMONES AND GASTRIN.....	5R01 AM17743-04	71,247
DOMBROSE, FREDERICK A.....	THROMBOGENIC PHOSPHOLIPID SURFACES.....	1R01 HL22771-01	72,390
DUDLEY, KENNETH H.....	STUDIES RELEVANT TO RATIONAL ANTIEPILEPTIC THERAPY.....	1R01 NS12791-01A2	80,741
DYKSTRA, LINDA A.....	SIGNAL DETECTION ANALYSIS OF NARCOTIC ANALGESICS.....	2R01 GM22683-04	52,673
EARP, HENRY S, III.....	THE REGULATION AND SIGNIFICANCE OF HEPATIC CYCLIC GMP.....	5R01 AM19796-02	45,842
EARP, JO ANNE.....	HYPERTENSION: FAMILY STRATEGIES FOR PATIENT ADHERENCE.....	3R25 HL18414-03S1	6,303
EASTERLING, WILLIAM E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05406-17	200,462
ELDRIDGE, FREDERIC L.....	NEUROPHYSIOLOGICAL STUDIES OF RESPIRATORY CONTROL.....	5R01 HL17689-06	60,837
FAUST, ROBERT G.....	INTESTINAL AND RENAL MEMBRANE TRANSPORT SYSTEMS.....	1R01 AM21063-01	93,506
FINN, ARTHUR L.....	TRANSPORT AND ELECTROPHYSIOLOGY IN ISOLATED EPITHELIA.....	5R01 AM17854-05	96,699
FONSECA, RAYMOND J.....	OSSEOUS HEALING IN RIDGE AUGMENTATION PROCEDURES.....	1R01 DE04918-01	51,147
FORDHAM, CHRISTOPHER, III.....	CHILD DEVELOPMENT AND MENTAL RETARDATION.....	5P30 HD03110-12	567,208
FORDHAM, CHRISTOPHER, III.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00046-18	777,970
FOWLER, WESLEY C, JR.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA23073-01	33,660
FRENCH, FRANK S.....	DEVELOPMENT OF MALE REPRODUCTIVE FUNCTION.....	5R01 HD04466-08	103,876
FRIEDMAN, MITCHELL.....	HYPOXEMIC RESPIRATORY FAILURE: PHYSIOLOGIC EVALUATION.....	1R23 HL21168-01A1	39,566
GATZY, JOHN T, JR.....	AIRBORNE METALS AND LUNG PERMEABILITY.....	2R01 HL16674-05	43,140
GERATZ, J DIETER.....	SPECIFIC INHIBITORS OF COAGULATION AND FIBRINOLYSIS.....	5R01 HL21540-02	62,852
GETTES, LEONARD S.....	EFFECT OF DRUGS ON ISCHEMIC CARDIAC CELLS.....	7R01 HL23624-01	91,947
GOTTSCHALK, CARL W.....	MICROPUNCTURE STUDY OF KIDNEY FUNCTION.....	5R01 HL02334-23	259,540
GOZ, BARRY.....	IDURD AND ALKALINE PHOSPHATASE IN HUMAN CANCER CELLS.....	5R01 CA16460-04	49,938
GRAHAM, JOHN B.....	HEMOSTASIS RESEARCH PROGRAM.....	5P01 HL06350-17	532,264
GRAY, TIMOTHY K.....	HORMONAL CONTROL OF CALCIUM AND PHOSPHATE ABSORPTION.....	5R01 AM17835-05	34,017
GREENBERG, B G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05450-17	41,958
GRISHAM, JOE W.....	TOXICITY IN DNA REPAIR DEFICIENT AND PROFICIENT CELLS.....	1R01 CA24144-01	82,819
GUYMON, LAWRENCE F.....	POLYSACCHARIDE ANTIGENS OF NEISSERIA GONORRHOEAE.....	5R01 AI13966-02	32,450
GWYNNE, JOHN T.....	SERUM LIPOPROTEINS AND CELL CHOLESTEROL METABOLISM.....	5R01 HL20061-02	53,187
HANKER, JACOB S.....	SALIVARY GLANDS AND THEIR INNERVATION IN DIABETES.....	1R01 DE04730-01	54,334
HARDEN, T KENDALL.....	NEUROTRANSMITTER RECEPTORS OF CULTURED HEART CELLS.....	1R23 HL22490-01	42,373
HARPER, CURTIS.....	ENVIRONMENTAL ORGANOHALOGENS LUNG TOXICITY.....	1R01 CA21705-01A1	86,953
HARRIS, ALBERT K.....	ADHESION AND TRACTION IN TISSUE CELL LOCOMOTION.....	5R01 GM24251-02	35,082
HARRISON, JOHN H.....	STRUCTURAL PROPERTIES OF MALATE DEHYDROGENASE.....	5R01 HL12585-10	54,009
HAYWARD, JAMES N.....	CENTRAL NEURAL REGULATION OF BODY FLUIDS.....	5R01 NS13411-03	71,310
HEIZER, WILLIAM D.....	INTESTINAL PEPTIDASES: PROPERTIES AND FUNCTIONS.....	5R01 AM15119-08	97,868
HENSON, O'DELL W, JR.....	MECHANISMS OF ACOUSTIC PERCEPTION AND ORIENTATION.....	2R01 NS12445-04	60,535
HERMANS, JAN.....	ASSEMBLY, STRUCTURE AND INTERACTIONS OF FIBRIN.....	5R01 HL20319-02	79,168
HIRSCH, PHILIP F.....	REGIONAL DENTAL RESEARCH CENTER.....	5P50 DE02668-12	1,750,000
HISKEY, RICHARD G.....	SYNTHESIS OF INSULIN ANALOGS.....	5R01 AM03416-19	71,092
HISKEY, RICHARD G.....	GAMMA-CARBOXYGLUTAMIC ACID ROLE IN BLOOD COAGULATION.....	5R01 HL20161-02	101,534
HOLCOMB, GEORGE R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07072-13	98,367
HUANG, ENG-SHANG.....	ANALYSIS OF HUMAN CYTOMEGALOVIRUSES.....	2R01 AI12717-04	90,434
HUTCHISON, CLYDE A, III.....	GENETICS AND DNA CHEMISTRY OF PHAGE PHI X-174.....	5R01 AI08998-10	83,987
HUTCHISON, CLYDE A, III.....	EUKARYOTIC GENE ORGANIZATION.....	5R01 GM21313-04	110,063
HUTT, LINDSEY M.....	FUNCTIONS OF ATYPICAL LYMPHOCYTES.....	5R01 CA22093-02	51,785
IBRAHIM, MICHEL A.....	ASSESSMENT OF PAST DIET IN CANCER EPIDEMIOLOGY.....	2R01 CA21514-02	39,360
IRVIN, J LOGAN.....	CHANGES IN NUCLEAR PROTEINS IN SPERMATOGENESIS.....	5R01 HD05277-07	56,257
ISHAQ, KHALID S.....	POTENTIAL INHIBITORS OF CHROMATIN BOUND PROTEASE.....	5R01 CA20047-03	29,123

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
JOHNSON, GEORGE, JR.....	EFFECTS OF ERYTHROCYTE DEFORMABILITY ON TISSUE PERFUSION.....	5R01 HL20177-02	53,967
JONES, MARY E.....	CARBAMYL ENZYMES AND DIFFERENTIATION.....	7R01 HD12787-01	100,443
KAFER, ENID R.....	NEURAL AND VENTILATORY RESPONSES TO MECHANICAL LOADS.....	3R01 HL17314-03S2	10,927
KAFER, ENID R.....	EFFECTS OF ANESTHESIA AND LOADING ON RESPIRATION.....	2R01 HL17314-04	24,485
KAUFMAN, DAVID G.....	CHEMICAL CARCINOGENESIS AND CELL PROLIFERATION.....	5R01 CA20658-02	64,706
KIERSZENBAUM, ABRAHAM L.....	HORMONE-CYCLIC NUCLEOTIDES IN SERTOLI CELL CULTURES.....	1R01 HD11884-01	99,858
KINGDOM, HENRY S.....	CHEMISTRY AND BIOLOGY OF FACTOR IX ACTIVATOR.....	5R01 HL16633-04	63,214
KIRKMAN, HENRY N, JR.....	HEXOSE MONOPHOSPHATE SHUNT IN GENETIC DISEASE.....	5R01 AM16721-05	34,505
KLAPPER, DAVID G.....	RAGWEED POLLEN ALLERGEN ANTIGEN E.....	1R23 AI14908-01	37,572
KOCH, WILLIAM E.....	IN VITRO ANALYSIS OF DEVELOPING ORAL-FACIAL TISSUES.....	5R01 DE04580-02	79,963
KOEPPE, JOHN K.....	MOLECULAR AND ENVIRONMENTAL EFFECTS OF ALTOSID (TM).....	5R01 ES01563-02	36,236
KRIGMAN, MARTIN R.....	NEUROBIOLOGY OF ENVIRONMENTAL POLLUTANTS.....	5P01 ES01104-04	578,688
KUNO, MOTOY.....	INDUCTIVE INTERACTIONS OF MOTONEURON AND MUSCLE.....	2R01 NS10319-08	109,615
KUSY, ROBERT P.....	SELF-ACTIVATING DEVICES FOR CLEFT-PALATE CHILDREN.....	5R23 DE04707-02	13,113
LEE, KUO-HSIUNG.....	PLANT ANTITUMOR AGENTS.....	2R01 CA17625-04	63,738
LEE, KUO-HSIUNG.....	ANTILEUKEMIC BRUCEANTIN ANALOGS.....	1R01 CA22929-01A1	59,376
LEINFELDER, KARL F.....	CORROSION OF PRECIOUS METAL ALLOYS.....	5R01 DE04101-04	69,925
LOCKWOOD, ARTHUR H.....	MICROTUBULE ASSEMBLY IN NORMAL AND TRANSFORMED CELLS.....	1R01 GM25558-01	64,370
LUCCHESI, JOHN C.....	GENETIC REGULATION IN DROSOPHILA: DOSAGE COMPENSATION.....	5R01 GM15691-11	66,665
MATTHYSSE, ANN G.....	THE MECHANISM OF TUMORIGENESIS BY A. TUMEFACIENS.....	5R01 CA18604-03	27,234
MC DONAGH, JAN M.....	MOLECULAR BIOLOGY OF FACTOR XIII.....	5R01 HL21139-02	63,395
MC DONAGH, RICHARD P, JR.....	MOLECULAR PATHOLOGY OF FIBRINOGEN AND FACTOR XIII.....	1R01 HL22505-01	41,866
MC ILWAIN, DAVID L.....	BULK ISOLATION OF LARGE SPINAL NEURONS.....	2R01 NS12103-04	49,548
MEISSNER, GERHARD W.....	SARCOPLASMIC RETICULUM FUNCTION AND REASSEMBLY.....	5R01 AM18687-03	43,392
MINKOFF, ROBERT.....	ANALYSIS OF PRIMARY PALATE FORMATION.....	5R01 DE04731-02	75,916
MORELL, PIERRE.....	ASSEMBLY AND MAINTENANCE OF BRAIN MEMBRANES.....	2R01 NS11615-06	115,268
MUNSON, PAUL L.....	PEPTIDE HORMONES AFFECTING CALCIUM METABOLISM.....	5R01 AM10558-13	63,013
NEWSOME, JAMES F.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17973-04	200,149
O'TUAMA, LORCAN A.....	REGULATION OF NEURAL DISTRIBUTION OF HEAVY METALS.....	2R01 ES01151-04	85,799
OBRIEN, PAUL A.....	BLOOD PRESSURE CONTROL: RELATION TO BEHAVIORAL STRESS.....	5R01 HL18976-03	104,718
ONTJES, DAVID A.....	HORMONE RECEPTORS AND ADENYLATE CYCLASE IN THE ADRENAL.....	5R01 AM19288-03	69,768
ORNSTEIN, PETER A.....	THE DEVELOPMENT OF CHILDREN'S MNEMONIC SKILLS.....	2R01 HD08459-04A1	42,853
PAGANO, JOSEPH S.....	CANCER CENTER SUPPORT GRANT.....	3P30 CA16086-03S1	29,887
PAGANO, JOSEPH S.....	CANCER CENTER SUPPORT GRANT.....	2P30 CA16086-04	597,049
PAGANO, JOSEPH S.....	DNA VIRUS GENOMES, ONCOGENESIS AND LATENCY.....	5P01 CA19014-03	233,783
PARKER, JOHN C.....	ION TRANSFER AND METABOLISM IN MAMMALIAN RED BLOOD CELLS.....	5R01 AM11356-12	80,825
PARR, ROBERT G.....	THE QUANTUM THEORY OF MOLECULAR ISOELECTRONIC CHANGES.....	5R01 GM22028-05	58,829
PARTAIN, C LEON.....	CSF KINETICS: CONTRAST ENHANCED SERIAL CT IMAGING.....	1R01 NS14665-01	26,672
PEARLMAN, WILLIAM H.....	ADRENOCORTICAL HORMONE METABOLISM BY LACTATING BREAST.....	1R01 HD11950-01	37,251
PENG, TAI-CHAN.....	C-CELLS AND CALCITONIN IN GOITER AND AGING.....	5R01 AG00686-02	51,028
PENNIALL, RALPH.....	MITOCHONDRIAL CHANGES IN DEVELOPMENT AND AGING.....	5R01 AG00256-02	60,786
PERKINS, JOHN P.....	CHARACTERISTICS OF PGE-SENSITIVE ADENYLATE CYCLASES.....	1R01 GM25163-01	66,732
PERL, EDWARD R.....	SPINAL AND PROJECTION MECHANISMS RELATED TO PAIN.....	5R01 NS10321-08	112,547
PERL, EDWARD R.....	NEURAL BASIS OF EFFECTS PRODUCED BY SPINAL CORD DAMAGE.....	5P01 NS11132-05	266,314
PERL, EDWARD R.....	RECOVERY AND REGENERATION AFTER SPINAL NEURON INJURY.....	1P01 NS14899-01	515,125
PETRUSZ, PETER.....	FSH-TESTIS INTERACTIONS.....	5R01 HD10306-03	27,753
PIMMEL, RUSSELL L.....	MEASUREMENT OF AIRWAYS MECHANICS.....	2R01 HL19118-03	65,502
PLEDGER, WARREN J.....	REGULATION OF MAMMALIAN CELL CYCLE.....	1R01 CA24193-01	130,569
POWELL, DON W.....	MECHANISMS OF INTESTINAL SECRETION.....	5R01 AM15350-07	39,998
POWELL, DON W.....	WATER AND ELECTROLYTE TRANSPORT IN THE ESOPHAGUS.....	3R01 AM18576-03S1	14,053
RAMEY, CRAIG T.....	LONGITUDINAL INTERVENTION FOR HIGH-RISK CHILDREN.....	2P01 HD09130-04	467,314
REILLEY, CHARLES N.....	PARAMAGNETIC SHIFTS, T1, T2: BIORELATED STEREOCHEMISTRY.....	5R01 GM12598-12	44,424
ROBERTS, HAROLD R.....	STUDIES ON NORMAL AND ABNORMAL FACTOR IX.....	1R01 HL21975-01	128,664
ROSS, GORDON D.....	MEMBRANE COMPONENTS OF NORMAL AND LEUKEMIC LEUKOCYTES.....	1R01 CA25613-01	117,301
RUSSELL, STEPHEN W.....	CELL MEDIATED INJURY CAUSING TUMOR REGRESSION.....	7R01 CA23686-01	64,422
RUSTIONI, ALDO.....	NONPRIMARY AFFERENTS TO THE DORSAL COLUMN NUCLEI.....	2R01 NS12440-04	50,216
SALMON, EDWARD D.....	MECHANISMS OF MITOTIC SPINDLE ASSEMBLY AND FUNCTION.....	1R01 GM24364-01	55,520
SAMS, W MITCHELL, JR.....	THE EPIDERMAL PROTEIN OF PHOTO-CONTACT ALLERGY.....	5R01 AM20031-03	49,865
SCARBOROUGH, GENE A.....	ENERGY TRANSDUCTION IN NEUROSPORA PLASMA MEMBRANES.....	5R01 GM24784-02	61,590
SCHWAB, JOHN H.....	BACTERIAL CELL WALLS IN RELAPSING EROSIIVE SYNOVITIS.....	5P01 AI13464-03	231,310

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
SHACHTMAN, RICHARD H.....	INDUCED ABORTION AS ANTECEDENT AND CONSEQUENCE.....	1R01 HD10367-01	57,446
SOBSEY, MARK D.....	VIRUS DETECTION IN SHELLFISH AND THEIR GROWING WATERS.....	5R01 ES01349-03	44,094
SPARLING, PHILIP F.....	NORTH CAROLINA PROGRAM ON SEXUALLY TRANSMITTED DISEASE.....	1P01 AI15036-01	450,763
SPITZNAGEL, JOHN K.....	METABOLIC ASPECTS OF BACTERIAL ECOLOGY IN HOST TISSUE.....	5R01 AI02430-20	77,721
SPREMULLI, LINDA L.....	MECHANISM OF PROTEIN BIOSYNTHESIS IN CHLOROPLASTS.....	1R01 GM24963-01	66,001
STEINER, ALTON L.....	PHYSIOLOGIC ROLES OF CYCLIC GMP AND CYCLIC AMP.....	3R01 AM17438-05S1	78,424
STEINER, ALTON L.....	PHYSIOLOGIC ROLES OF CYCLIC GMP AND CYCLIC AMP.....	5R01 AM17438-06	133,081
STUMPF, WALTER E.....	HEART RECEPTOR SITES FOR DIGITALIS AND STEROID HORMONES.....	1R01 HL22079-01	45,780
STUMPF, WALTER E.....	HORMONE RECEPTORS IN THE BRAIN.....	5R01 NS09914-07	85,921
SWIFT, MICHAEL R.....	NEOPLASIA-PREDISPOSING GENES OF MAN.....	5R01 CA14235-07	116,726
SWIFT, MICHAEL R.....	NEOPLASIA-PREDISPOSING GENES IN CELL CULTURE.....	5R01 CA15207-05	65,628
TALMAGE, ROY V.....	CALCITONIN AND PHOSPHATE.....	3R01 AM14717-08S1	22,762
TAYLOR, DUANE F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05333-17	50,339
THOMAS, COLIN G, JR.....	BIOLOGIC CHARACTERISTICS OF THYROID CANCER.....	5R01 CA01915-25	36,064
THURMAN, RONALD G.....	PHARMACOLOGY OF CARCINOGEN ACTIVATION IN INTACT CELLS.....	5R01 CA23080-02	51,083
UDRY, J RICHARD.....	SUPPORT FOR POPULATION CENTER.....	5P30 HD05798-05	193,270
UDRY, J RICHARD.....	A BIOSOCIAL MODEL OF ADOLESCENT SEXUAL BEHAVIOR.....	1R01 HD11166-01	125,254
UNDERWOOD, LOUIS E.....	THE HORMONAL CONTROL OF FETAL GROWTH.....	5R01 HD08299-05	41,935
VAN WYK, JUDSON J.....	ROLE OF ENDOCRINE SECRETIONS IN GROWTH AND DEVELOPMENT.....	5R01 AM01022-23	112,305
WARREN, DONALD W.....	CLEFT PALATE, MALOCCLUSION AND LINGUAL ARTICULATION.....	5R01 DE04267-03	78,262
WERTZ, GAIL T.....	STUDIES OF VIRAL RIBONUCLEIC ACID REPLICATION.....	2R01 AI12464-03A1	65,661
WERTZ, GAIL T.....	PROTEINS INVOLVED IN REGULATION OF VIRAL RNA SYNTHESIS.....	1R01 AI15134-01	20,949
WHITE, JAMES R.....	STREPTONIGRIN: MECHANISMS OF ACTION.....	1R01 AI14962-01	52,648
WHITTEN, DAVID G.....	PHOTOCHEMICAL STUDIES OF MOLECULAR COMPLEXES.....	5R01 GM15238-11	63,886
WINFIELD, JOHN B.....	ANTI-LYMPHOCYTE ANTIBODIES IN LUPUS ERYTHEMATOSUS.....	7R01 AM25319-01	45,204
WOLFENDEN, RICHARD V.....	CHEMICAL MECHANISMS OF BIOSYNTHESIS.....	5R01 GM18325-08	61,903
YONCE, LLOYD R.....	PULSATILE PRESSURE-FLOW DYNAMICS.....	3R01 HL17628-03S1	544
ORGANIZATION TOTAL	149	16,902,125	
CHARLOTTE			
JOHNSON C. SMITH UNIVERSITY ZIP CODE 28216			
SNYDER, RUTH M.....	RESEARCH METHODS FOR PRE- AND PARA-MEDICAL STUDENTS.....	5S06 RR08022-07	80,052
ORGANIZATION TOTAL	1	80,052	
CULLOWHEE			
UNIVERSITY OF NORTH CAROLINA SYSTEM—WESTERN CAROLINA UNIVERSITY ZIP CODE 28723			
LUMB, ROGER H.....	PHOSPHOLIPID EXCHANGE PROTEINS IN LUNG TISSUE.....	3R01 HL21176-01S1	3,000
LUMB, ROGER H.....	PHOSPHOLIPID EXCHANGE PROTEINS IN LUNG TISSUE.....	5R01 HL21176-02	55,134
ORGANIZATION TOTAL	2	58,134	
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
ABOU-DONIA, MOHAMED B.....	DELAYED NEUROTOXICITY OF ORGANOPHOSPHORUS PESTICIDES.....	5R01 ES01186-02	55,990
ADAMS, DOLPH O.....	TUMORICIDAL EFFECTS OF MACROPHAGES: PATHOLOGIC STUDY.....	2R01 CA16784-04	45,645
ADELMAN, MARK R.....	STUDIES OF MOTILITY IN PHYSARUM POLYCEPHALUM.....	5R01 GM20141-06	84,364
AMOS, D BERNARD.....	IMMUNOLOGIC STUDY OF HUMAN HL-A AND MOUSE H-2 ANTIGENS.....	5R01 AI08897-10	269,253
AMOS, D BERNARD.....	CELL-MEDIATED IMMUNITY TO ASCITES TUMORS.....	5R01 CA14049-07	218,924
AMOS, D BERNARD.....	STUDIES OF THE IMMUNOGENETICS OF MAN.....	5R01 GM10356-15	275,409
ANDERSON, NELS C, JR.....	ELECTROPHYSIOLOGY OF PARATHYROID AND CALCITONIN CELLS.....	1R01 AM21779-01	39,081
ANDERSON, PAGE A.....	DEVELOPING HEART: BIOPHYSICAL ASPECTS.....	1R01 HL20749-01A1	89,137
ANLYAN, WILLIAM G.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00030-17	707,103
ANLYAN, WILLIAM G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05405-17	200,462
ASHLEY, TERRY F.....	INVESTIGATION OF CHROMOSOMAL ORGANIZATION IN NUCLEI.....	5R01 GM23712-03	49,921
BELL, ROBERT M.....	REGULATION OF TRIACYLGLYCEROL SYNTHESIS IN ADIPOCYTES.....	5R01 AM20205-02	57,488
BELL, ROBERT M.....	REGULATION OF MEMBRANE PHOSPHOLIPID SYNTHESIS.....	5R01 GM20015-05	55,177
BENNETT, PETER B.....	ENVIRONMENTAL BIOMEDICAL RESEARCH PROGRAM.....	5P01 HL07896-15	854,315

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
BIGNER, DARELL D	BRAIN TUMORS: VIROLOGICAL AND IMMUNOLOGICAL STUDIES	5R01 CA11898-08	120,480
BIGNER, DARELL D	CELL SURFACE ANTIGENS GLIAL BRAIN TUMOR CELLS	1R01 CA22790-01	41,753
BLUM, JACOB J	CONTROL OF METABOLISM IN TETRAHYMENA	5R01 HD01269-16	115,236
BOLOGNESI, DANI P	CHARACTERIZATION OF HUMAN BREAST CANCER GLYCOPROTEINS	5R01 CA19905-02	59,758
BONAR, ROBERT A	RNA IN NORMAL AND NEOPLASTIC UROTHELIAL CELLS	2R26 CA14930-06	56,901
BONAVENTURA, JOSEPH	DUKE UNIVERSITY MARINE BIOMEDICAL CENTER (NIEHS)	1P30 ES01908-01	87,601
BONAVENTURA, JOSEPH	MOLECULAR ADAPTATION: HEMOGLOBIN SYSTEMS OF FISH	5R01 HL15460-06	70,942
BOSSEN, EDWARD H	COMPARATIVE STEREOLOGY OF THE MYOCARDIUM	5R01 HL15888-05	56,988
BOYNTON, JOHN E	HEREDITARY CONTROL OF ORGANELLE STRUCTURE AND FUNCTION	5R01 GM19427-07	141,773
BRIGHT, DONALD S	TISSUE INJURY, REVASCULARIZATION, AND TRANSPLANTATION	1R01 GM25666-01	130,291
BUCKLEY, REBECCA H	STUDIES OF CELL-MEDIATED RESPONSES IN ATOPIC DISEASES	5P50 AI12026-05	74,253
BUCKLEY, REBECCA H	HUMAN LYMPHOCYTE RESPONSES TO POLLEN ALLERGENS	5R01 AI14314-02	60,861
BURNS, RICHARD O	MOLECULAR MECHANISMS OF BIOLOGICAL CONTROL	5R01 GM12551-14	67,297
CANT, NELL	NEUROANATOMY OF THE AUDITORY SYSTEM	1R01 NS14655-01	75,070
CASSEDAY, JOHN H	NEURAL MECHANISMS RELATED TO BINAURAL HEARING	2R01 NS12322-04	104,785
COBB, FREDERICK R	REGIONAL BLOOD FLOW AFTER ACUTE MYOCARDIAL INJURY	5R01 HL18537-04	60,475
COHEN, HARVEY J	SOUTHEASTERN CANCER STUDY GROUP	5R10 CA05634-18	104,554
COOPER, RALPH L	HORMONAL AND BEHAVIORAL CONSEQUENCES OF AGING	5R01 AG00566-02	50,436
CORLESS, JOSEPH M	RETINAL ROD PHOTORECEPTOR MEMBRANE STRUCTURE/FUNCTION	5R01 EY01659-03	48,272
COX, EDWIN B	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL	5R10 CA21192-02	94,297
CREASMAN, WILLIAM T	GYNECOLOGIC ONCOLOGY GROUP	2R10 CA12534-08	74,629
CRESSWELL, PETER	MOLECULAR STUDIES OF THE MIXED LYMPHOCYTE RESPONSE	5R01 AI14016-02	65,706
DAVIS, JAMES N	THE ROLE OF OXYGEN IN BRAIN MONAMINE SYNTHESIS	5R01 NS13101-03	32,722
DAY, EUGENE D	AUTOIMMUNE PHENOMENA INDUCED BY SALIVARY MUCINS IN THE RAT	5R01 AM20201-02	33,823
DAY, EUGENE D	STUDIES OF GLIAL CELL MEMBRANES AND MYELIN	2R01 NS10237-07	94,393
ENDOW, SHARYN A	ISOLATION AND CHARACTERIZATION OF DROSOPHILA ACTIN GENE	1R01 GM25583-01	82,853
ERICKSON, CARL J	ENDOCRINE FACTORS IN THE SOCIAL BEHAVIOR OF ANIMALS	5R01 HD04482-09	54,050
EVANS, EVAN A	RBC AND ENDOTHELIAL MEMBRANE MATERIAL CHARACTERISTICS	5R01 HL16711-05	54,869
FALLETTA, JOHN M	SOUTHWEST ONCOLOGY GROUP	2R10 CA15525-05	38,881
FRIDOVICH, IRWIN	THE BIOLOGICAL FUNCTIONS OF SUPEROXIDE DISMUTASES	5R01 GM10287-16	107,594
FUCHS, JAMES C	ARTERIAL BYPASS SURGERY: STRUCTURE AND METABOLISM	5R01 HL17369-04	81,798
GALLAGHER, JOHN J	PHYSIOLOGICAL BASIS OF ARRHYTHMIAS AND THEIR THERAPY	5R01 HL15190-07	95,546
GILBERT, DAVID B	ATHEROSCLEROSIS, AND DIABETES MELLITUS	5R01 HL20471-03	75,210
GOLDSMITH, LOWELL A	STRUCTURAL PROTEINS IN GENETIC DEFECTS OF EPIDERMIS	5R01 AM17253-06	64,940
GOLDSMITH, LOWELL A	FETAL-MATERNAL NUTRITION DETERMINED BY HAIR ANALYSIS	5R01 AM17977-05	51,119
GREENE, RONALD C	BIOCHEMISTRY OF SULFONIUM COMPOUNDS	5R01 GM10317-16	61,359
GREENFIELD, JOSEPH C, JR	THE DISTRIBUTION OF FLOW IN THE MYOCARDIUM	5R01 HL18468-03	60,365
GRUFFERMAN, SEYMOUR	THE EPIDEMIOLOGY OF CHILDHOOD RHABDOMYOSARCOMA	5R01 CA21244-02	18,774
GRUFFERMAN, SEYMOUR	THE EPIDEMIOLOGY OF MULTIPLE MYELOMA	5R01 CA22104-02	48,056
GUILD, WALTER R	PNEUMOCOCCAL PHAGE AS GENETIC TOOLS	5R01 GM21887-03	38,493
HACKEL, DONALD B	HEART PATHOLOGIC, METABOLIC AND PHYSIOLOGIC STUDIES	5R01 HL05875-18	73,730
HAGEN, PER-OTTO F	SURGICAL AND METABOLIC ASPECTS OF VENOUS GRAFTS	5R01 HL15448-06	130,834
HALL, WILLIAM C	STRUCTURE AND FUNCTION OF NEOCORTEX	2R01 NS09623-07A2	55,691
HANDWERGER, STUART	THE CHEMISTRY AND PHYSIOLOGY OF PLACENTAL LACTOGEN	2R01 HD07447-04A1	108,549
HEMPEL, FRANKLIN G	CYTOCHROME REDOX STATES IN FUNCTIONING RETINA	5R01 EY01953-02	40,479
HERSHFIELD, MICHAEL S	A LYMPHOBLAST MODEL FOR DISEASES OF PURINE METABOLISM	1R01 AM20902-01	50,864
HEYMAN, ALBERT	CASE-CONTROL STUDY OF PRESENILE AND SENILE DEMENTIA	1R21 AG01186-01	83,945
HEYMAN, ALBERT	SUPPORT FOR CEREBROVASCULAR RESEARCH CENTER	5P50 NS06233-13	298,381
HEYMAN, ALBERT	DETECTION OF TIA IN AN ELDERLY COMMUNITY	3R01 NS13643-01S1	7,863
HEYMAN, ALBERT	DETECTION OF TIA IN AN ELDERLY COMMUNITY	2R01 NS13643-02	105,752
HILL, ROBERT L	STRUCTURE AND FUNCTION OF PROTEINS	9R01 GM25766-18	195,361
HOCHMUTH, ROBERT M	MECHANICAL MEASUREMENT OF CELL MEMBRANE VISCOSITY	7R01 HL23900-01	44,559
HOLMES, EDWARD W, JR	PURINE METABOLISM IN GOUT	5R01 AM12413-11	113,735
HSIA, SHYUAN	THE ROLE OF HUMAN MHC IN VIRAL IMMUNE REACTIONS	1R01 AI15167-01	82,589
JENNINGS, ROBERT B	MYOCARDIAL ISCHEMIA	1R01 HL23138-01	184,108
JOHNSON, CHARLES E	RESPIRATORY HEAT AND WATER LOSS IN NEONATES	3R01 HL19352-02S1	6,450
JOHNSON, CHARLES E	RESPIRATORY HEAT AND WATER LOSS IN NEONATES	5R01 HL19352-03	76,671
JOHNSON, EDWARD A	FUNCTIONS AND MECHANISM OF CELL MEMBRANE ION TRANSPORT	2P01 HL12157-11	642,943
JOKLIK, WOLFGANG K	MACROMOLECULAR SYNTHESIS IN VIRUS-INFECTED CELLS	5R01 AI08909-11	245,470
JONES, RAYFORD S	CONTROL OF DUCTULAR AND CANALICULAR BILE PRODUCTION	5R01 AM16421-05	33,009

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
JONES, ROBERT H.....	RADIONUCLIDE STUDIES IN CONGENITAL HEART DISEASE.....	5R01 HL20677-02	97,714
KAMIN, HENRY.....	BIOLOGICAL OXIDATIONS IN MITOCHONDRIA AND MICROSOMES.....	5R01 GM21226-17	116,886
KILLENBERG, PAUL G.....	ENZYMOLGY OF BILE ACID CONJUGATION.....	5R01 AM17786-05	96,351
KIM, SUNG-HOU.....	CRYSTALLINE COMPLEXES OF RNA WITH SMALL MOLECULES.....	5R01 CA15802-05	94,617
KIRSHNER, NORMAN.....	BIOCHEMISTRY OF THE ADRENAL MEDULLA.....	5R01 AM05427-17	73,425
KIRSHNER, NORMAN.....	BIOGENESIS OF CHROMAFFIN VESICLES.....	5R01 AM16811-05	57,299
KLINTWORTH, GORDON K.....	EXPERIMENTAL APPROACH TO DISEASES OF THE CORNEA.....	2R01 EY00146-07	148,147
KREDICH, NICHOLAS M.....	REGULATION OF SULFUR METABOLISM.....	5R01 AM12828-11	99,005
LACK, LEON.....	PHARMACOLOGY OF INTESTINAL BILE SALT TRANSPORT.....	3R01 AM09582-14S1	17,340
LACK, LEON.....	PHARMACOLOGY OF INTESTINAL BILE SALT TRANSPORT.....	2R01 AM09582-15	83,842
LANG, DAVID J.....	LEUKEMIA AND CYTOMEGALOVIRUSES: RECIPROCAL EFFECTS.....	5R01 CA21772-02	95,140
LASZLO, JOHN.....	MECHANISMS OF DRUG INHIBITION OF HUMAN LEUKEMIC CELLS.....	5R01 CA08800-12	105,020
LASZLO, JOHN.....	GENERAL CLINICAL CANCER RESEARCH CENTER.....	5P01 CA11265-09	564,504
LAZARUS, GERALD S.....	MECHANISMS OF PROTEOLYSIS IN HUMAN SKIN.....	5R01 AM19067-04	90,526
LAZARUS, GERALD S.....	ANTI-CELL SURFACE PEMPHIGUS ANTIBODY.....	1R01 AM21848-01	94,010
LEBOVITZ, HAROLD E.....	HORMONES AND INTERMEDIARY METABOLISM.....	2R01 AM01324-22	99,347
LEFKOWITZ, ROBERT J.....	MOLECULAR PROPERTIES OF CARDIAC ADRENERGIC RECEPTORS.....	5R01 HL16037-06	135,392
LEFKOWITZ, ROBERT J.....	VASCULAR ALPHA-ADRENERGIC RECEPTOR MOLECULAR PROPERTIES.....	5R01 HL20339-02	42,823
LEVY, NELSON L.....	IMMUNITY TO HUMAN CANCER—FUNCTIONAL COMPONENTS.....	2R01 CA13070-07	108,529
LEVY, NELSON L.....	NUCLEOTIDE-RICH 'ANTIGEN' UNIQUE TO MS SPINAL FLUID.....	5R01 NS13745-02	39,012
LIMBIRD, LEE E.....	ADRENERGIC RECEPTORS & THE ADENYLATE CYCLASE SYSTEM.....	5R23 HL21051-02	40,041
LYNN, WILLIAM S.....	MOLECULAR CONTROL OF ADIPOCYTE METABOLISM BY INSULIN.....	5R01 AM16385-05	49,072
LYNN, WILLIAM S.....	SILICATE, PULMONARY SECRETIONS AND LUNG DISEASE.....	1P01 ES01581-01	214,186
LYNN, WILLIAM S.....	CHEMOTACTIC CONTROL OF AIRWAY PHAGOCYTES.....	5R01 HL19806-03	89,077
LYNN, WILLIAM S.....	STRUCTURE, SOURCE AND FUNCTIONS OF ALVEOLAR GLYCOPROTEIN.....	1R01 HL21480-01	70,426
MACHEMER, ROBERT.....	VITRECTOMY THROUGH THE PARS PLANA.....	7R01 EY02903-01	122,603
MADDOX, GEORGE L.....	AN INTEGRATED INVESTIGATION OF AGING AND THE AGED.....	5P01 AG00364-20	265,547
MADDOX, GEORGE L.....	RESEARCH SUPPORT SERVICES FOR GERONTOLOGY CENTER.....	2P30 AG00371-06	317,662
MANDEL, LAZARO J.....	MECHANISMS OF ACTIVE AND PASSIVE SOLUTE TRANSPORT.....	5R01 AM16024-07	52,607
MANTON, KENNETH G.....	A DEMOGRAPHIC STUDY OF MULTIPLE CAUSES OF DEATH.....	9R01 AG01159-02	109,327
MC CLAY, DAVID R, JR.....	CELL SURFACE MOLECULES IN EMBRYONIC CELL ADHESION.....	5R01 GM22477-03	35,165
MC ELHANEY, JAMES H.....	BIOMECHANICAL STUDIES OF THE LOWER SPINE.....	5R01 NS13229-03	84,926
MC KEE, PATRICK A.....	STRUCTURE-FUNCTION RELATION OF BLOOD CLOTTING PROTEIN.....	2R01 HL15615-06	148,926
MC KINNEY, JOHN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07070-13	98,584
MENDELL, LORNE M.....	MECHANISMS OF PLASTICITY IN NEURONAL CONNECTIONS.....	5R01 NS08411-10	97,603
METZGAR, RICHARD S.....	IMMUNOLOGICAL STUDIES OF PRIMATE MEMBRANE ANTIGENS.....	5R01 AM08054-15	94,502
METZGAR, RICHARD S.....	HUMAN LEUKEMIA ASSOCIATED ANTIGENS.....	5R01 CA08975-12	115,045
MICHALOPOULOS, GEORGE.....	IN VITRO STUDIES IN CHEMICAL HEPATOCARCINOGENESIS.....	1R01 CA23398-01	40,087
MICKEY, DON D.....	DETECTION AND ISOLATION OF HUMAN BLADDER ANTIGENS.....	2R26 CA15292-05A1	92,637
MICKEY, DON D.....	DETECTION OF RNA TUMOR VIRAL ANTIGENS IN HUMAN PROSTATE.....	5R26 CA19840-03	78,370
MILLER, JOHN N.....	EARLY INTERSTITIAL LUNG WATER CHANGES IN ACUTE TRAUMA.....	1R01 GM25688-01	97,593
MITCHELL, THOMAS G.....	PATHOGENICITY OF CRYPTOCOCCOSIS.....	5R01 AI13088-03	53,380
MODRICH, PAUL L.....	ENZYMATIC BASIS OF TYPE II RESTRICTION AND MODIFICATION.....	5R01 GM23719-03	57,494
MOORE, JOHN W.....	PHYSIOLOGY OF EXCITABLE MEMBRANES.....	2R01 NS03437-18	92,145
MOORE, JOHN W.....	COMPUTER METHODS FOR PHYSIOLOGICAL PROBLEMS.....	2R01 NS11613-04	69,870
MOSES, MONTROSE J.....	CHROMOSOME ANALYSIS IN LEMURIFORM PRIMATES.....	2R01 GM23047-03	66,881
MOSES, MONTROSE J.....	CYTOGENETIC ANALYSIS WITH THE SYNAPTONEMAL COMPLEX.....	1R01 HD12225-01	51,850
MYERS, GEORGE C.....	CERTIFICATION OF CANCER RELATED DEATHS.....	1R01 CA23399-01	184,294
NICKLAS, R BRUCE.....	ANALYSIS AND CONTROL OF CHROMOSOME MOVEMENT.....	5R01 GM13745-13	52,264
NORTON, THOMAS T.....	NEURAL MECHANISMS OF EXTRASTRIATE AND STRIATE VISION.....	1R01 EY02206-01	15,560
ODOM, GUY L.....	CENTRAL NERVOUS SYSTEM—TRAUMA RESEARCH STATUS REPORT.....	5R13 NS14256-02	20,000
OWNBY, DENNIS R.....	BIOCHEMICAL CORRELATES OF HUMAN LYMPHOCYTE FUNCTION.....	1R23 AI14323-01A1	47,670
PADILLA, GEORGE M.....	IDENTIFICATION AND PHARMACOLOGY OF MARINE ALGAL TOXINS.....	5R01 ES01823-13	90,669
PALMER, RICHARD A.....	PHOTOACOUSTIC SPECTROSCOPY OF THE AGING LENS.....	1R01 EY02577-01	54,000
PARMENTIER, JAMES L.....	MODE OF ACTION OF VOLATILE ANESTHETICS.....	1R01 GM24936-01	51,287
PAULSON, DAVID F.....	BIOCHEMISTRY OF NORMAL AND ABNORMAL RENAL GROWTH.....	5R01 AM15756-06	64,225
PAULSON, DAVID F.....	VIRUSES AND VIRUS-LIKE PARTICLES IN PROSTATIC TUMORS.....	5R26 CA15417-05	50,381
PAULSON, DAVID F.....	TISSUE CULTURE OF MAMMALIAN UROTHELIUM.....	5R26 CA15972-05	107,658
PINNELL, SHELDON R.....	COLLAGEN BIOSYNTHESIS IN CONNECTIVE TISSUE DISEASE.....	2R01 AM17128-06	127,877
PINNELL, SHELDON R.....	CHARACTERIZATION OF HEART VALVE COLLAGEN.....	5R01 HL18593-03	57,523

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
PORTER, NED A.....	PEROXY RADICALS TO PROSTAGLANDINS IN VESSELS & LUNG.....	2R01 HL17921-04	112,756
PORTER, NED A.....	PROSTACYCLIN & PEROXIDES IN BLOOD & MEMBRANE DISEASE.....	1R01 HL22219-01	60,850
PRITCHETT, EDWARD L.....	ACCESSORY PATHWAYS AND SUPRAVENTRICULAR TACHYCARDIA.....	5R23 HL21347-02	46,483
RAJAGOPALAN, K V.....	STRUCTURE AND FUNCTION OF ENZYMES—ROLE OF METALS.....	5R01 GM00091-33	142,633
RAMON, FIDEL.....	A MODEL SYSTEM FOR CARDIAC ACTION POTENTIALS.....	1R01 HL22767-01	36,192
REEDY, MICHAEL K.....	MYOFIBRILLAR FINE STRUCTURE IN STRIATED MUSCLE.....	2R01 AM14317-09	100,393
REISNER, EMILY G.....	ANALYZING HUMAN ALLOANTISERA BY ISOELECTRIC FOCUSING.....	5R01 A113723-02	42,079
RICHARDSON, DAVID C.....	CRYSTALLOGRAPHIC ANALYSIS OF PROTEIN STRUCTURES.....	5R01 GM15000-09	109,826
ROBERTSON, J DAVID.....	BIOPHYSICAL AND BIOCHEMICAL STUDIES OF CELLULAR MEMBRANE.....	5P01 GM23911-07	530,968
ROBINSON, ROSCOE R.....	THE KIDNEY IN HEALTH AND DISEASE.....	5P01 AM17195-05	225,339
ROSATI, ROBERT A.....	STUDY OF ISCHEMIC HEART DISEASE.....	5P50 HL17670-04	1,302,318
ROSEN, GERALD M.....	HEPATIC METABOLIC DYSFUNCTION ASSOCIATE WITH TRAUMA.....	1R01 GM25188-01	71,079
ROSES, ALLEN D.....	BIOCHEMICAL STUDIES OF MEMBRANE PROTEINS IN DUCHENNE MD.....	5R01 NS13455-02	76,343
ROSSE, WENDELL F.....	IMMUNOLOGICAL LYSIS IN NEOPLASTIC DISEASE.....	2R01 CA10267-12	90,023
SABISTON, DAVID C, JR.....	CORONARY INSUFFICIENCY AND MYOCARDIAL REVASCLARIZATION.....	5R01 HL09315-15	109,124
SCHIFFMAN, SUSAN S.....	GUSTATORY AND OLFACTORY QUALITY CHANGES WITH AGE.....	2R01 AG00443-06	71,904
SCHMIDT-NIELSEN, KNUD.....	RESPIRATION, CIRCULATION, & HEAT REGULATION IN EXERCISE.....	5R01 HL02228-24	158,636
SCHOMBERG, DAVID W.....	GONADOTROPIN RECEPTOR REGULATION IN VITRO AND IN VIVO.....	1R01 HD11827-01	110,181
SCOTT, DAVID W.....	MECHANISM OF IMMUNOLOGIC TOLERANCE IN VIVO AND IN VITRO.....	5R01 A110716-07	80,757
SCOTT, DAVID W.....	IMMUNE RESPONSE TO MODIFIED SELF AND TUMOR ANTIGENS.....	1R01 CA22845-01	96,313
SEALY, WILL C.....	EXPANDING THE ROLE OF SURGERY OF ATRIAL DYSRHYTHMIAS.....	2R01 HL13920-07	88,832
SEIGLER, HILLIARD F.....	IMMUNODIAGNOSIS OF MELANOMA.....	5R01 CA20364-02	112,138
SHAND, DAVID G.....	TREATMENT OF VENTRICULAR ARRHYTHMIAS WITH PROPRANOLOL.....	7R01 HL23726-01	114,478
SHAW, BARBARA R.....	STRUCTURE AND HETEROGENEITY OF CHROMATIN CORE PARTICLES.....	5R01 GM23681-02	45,314
SHINGLETON, WILLIAM W.....	COMPREHENSIVE CANCER CENTER SUPPORT GRANT.....	5P30 CA14236-06	1,447,506
SHINGLETON, WILLIAM W.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17987-04	139,209
SHRIVASTAV, BRIJ B.....	EFFECTS OF NEURO-ACTIVE AGENTS ON NERVE CONDUCTION.....	2R01 GM21724-04A1	69,795
SIEGEL, LEWIS M.....	STUDIES ON SELECTED METALLOFLAVOPROTEINS.....	5R01 AM13460-08	39,068
SILBERMAN, HAROLD R.....	COOPERATIVE STUDIES IN CANCER THERAPY.....	5R10 CA03177-22	180,500
SLOTKIN, THEODORE A.....	DRUGS AND DEVELOPMENT OF ADRENERGIC NERVOUS SYSTEM.....	5R01 HD09713-03	50,750
SMITH, RALPH E.....	BIOCHEMISTRY OF RNA TUMOR VIRUS REPLICATION.....	2R01 CA12323-07A1	74,459
SNYDERMAN, RALPH.....	HUMORAL AND CELLULAR MEDIATORS OF INFLAMMATION.....	5R01 DE03738-06	97,800
SOMJEN, GEORGE G.....	CELLULAR SEIZURE MECHANISMS.....	2R01 NS11933-05	59,668
SOMMER, JOACHIM R.....	STRUCTURE-FUNCTION CORRELATION IN THE ATRIUM.....	2R01 HL12486-10	166,824
SPACH, MADISON S.....	BIOPHYSICAL STUDIES IN PEDIATRIC CARDIOLOGY.....	5P01 HL11307-12	604,836
STEEGE, DEBORAH A.....	LAC REPRESSOR MRNA TRANSLATION INITIATION CONTROLS.....	1R01 A114882-01	57,507
STRAUSS, HAROLD C.....	CHARACTERIZATION OF CARDIAC PACEMAKER ACTIVITY.....	5R01 HL19216-03	61,037
SURWIT, RICHARD S.....	BEHAVIORAL TREATMENT OF RAYNAUD'S DISEASE.....	1R01 HL22547-01	99,218
SWITZER, MARY E.....	STRUCTURE-FUNCTION RELATIONSHIPS OF HUMAN FACTOR VIII.....	5R23 HL21208-02	45,166
SYLVIA, AVIS L.....	BRAIN FUNCTION AND OXIDATIVE METABOLISM DURING AGING.....	5R01 AG00517-03	51,817
TANFORD, CHARLES.....	PROTEIN INTERACTIONS AND BIOLOGICAL FUNCTION.....	5R01 AM04576-19	167,060
THURSTONE, FREDRICK L.....	DYNAMIC CARDIOVASCULAR MEASUREMENT USING ULTRASOUND.....	2R01 HL12715-10	246,377
TISHER, C CRAIG.....	WATER AND ELECTROLYTE MOVEMENT IN RENAL TUBULES.....	5R01 AM13845-09	135,249
TURNER, STEPHEN R.....	FACTORS AFFECTING PHAGOCYTE RESPONSES TO LIPIDS.....	1R01 CA23681-01	82,287
VANAMAN, THOMAS C.....	STRUCTURE AND FUNCTION OF ONCORNAVIRUS POLYPEPTIDES.....	5R01 CA18721-03	74,102
VANAMAN, THOMAS C.....	THE ROLE OF BRAIN SPECIFIC PROTEIN IN NERVE FUNCTION.....	2R01 NS10123-07A1	83,552
VOGEL, F STEPHEN.....	ANTITUMOR ACTIONS OF QUINONES THAT INDUCE CRYPTOBIOSIS.....	5R01 CA19013-03	77,369
WEBB, KAREN S.....	SERODETECTION OF NEOANTIGENS IN UROGENITAL MALIGNANCIES.....	1R01 CA22902-01	35,948
WEBSTER, ROBERT E.....	SYNTHESIS AND INTERACTION OF SPECIFIC MEMBRANE PROTEINS.....	2R01 GM18305-07	87,749
WECHSLER, ANDREW S.....	CARDIAC BYPASS AND CORONARY COLLATERAL PHYSIOLOGY.....	5R01 HL20226-02	73,207
WILLIAMS, REDFORD B, JR.....	PSYCHOSOCIAL FACTORS AND OUTCOME IN CORONARY DISEASE.....	5R01 HL18589-03	58,774
WILLIAMS, REDFORD B, JR.....	BEHAVIOR AND CARDIOVASCULAR DISEASE: BASIC MECHANISMS.....	1R01 HL22740-01	89,630
YOUNG, STEPHEN L.....	LUNG METABOLISM AND ALVEOLOCAPILLARY PERMEABILITY.....	1R23 HL21853-01	44,959
ZWEERINK, HENDRIK J.....	REPLICATION AND ENCAPSIDATION OF REOVIRUS RNA.....	2R01 A110132-07A1	51,671
ORGANIZATION TOTAL	188	22,816,451	
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA CENTRAL UNIVERSITY ZIP CODE 27707			
PATILLO, WALTER H, JR.....	MINORITY SCHOOLS BIOMEDICAL SUPPORT PROGRAM.....	3S06 RR08049-07S1	1,350
PATILLO, WALTER H, JR.....	MINORITY SCHOOLS BIOMEDICAL SUPPORT PROGRAM.....	5S06 RR08049-08	140,898
ORGANIZATION TOTAL	2	142,248	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 27705			
PAULSON, DAVID F.....	COOPERATIVE STUDY, RADIOTHERAPY OF PROSTATIC CANCER	5R10 CA14940-05	448,401
ORGANIZATION TOTAL	1 448,401		
ELIZABETH CITY			
UNIVERSITY OF NORTH CAROLINA SYSTEM—ELIZABETH CITY STATE UNIVERSITY ZIP CODE 27909			
KHAN, SEKENDER A.....	RESEARCH IMPROVEMENT AND DEVELOPMENT	3S06 RR08087-04S1	4,950
KHAN, SEKENDER A.....	RESEARCH IMPROVEMENT AND DEVELOPMENT	5S06 RR08087-05	5,216
ORGANIZATION TOTAL	2 10,166		
GREENSBORO			
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY ZIP CODE 27411			
BENNETT, RICHARD, JR.....	SUPPORT FOR BIOMEDICAL SCIENCES DEVELOPMENT	3S06 RR08019-07S1	1,074
BENNETT, RICHARD, JR.....	SUPPORT FOR BIOMEDICAL SCIENCES DEVELOPMENT	5S06 RR08019-08	117,204
ORGANIZATION TOTAL	2 118,278		
GREENVILLE			
UNIVERSITY OF NORTH CAROLINA SYSTEM—EAST CAROLINA UNIVERSITY ZIP CODE 27834			
DOHM, GERALD L.....	CONTROL OF MUSCLE PROTEIN METABOLISM DURING EXERCISE.....	5R01 AM19116-03	47,611
VOLKMAN, ALVIN.....	POLYARTHROPATHY IN SALMONELLA-INFECTED RATS.....	5R01 AM21360-02	73,245
ORGANIZATION TOTAL	2 120,856		
MORGANTON			
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—WESTERN CAROLINA CENTER ZIP CODE 28655			
FAVELL, JAMES E.....	DEVELOPMENTAL ENVIRONMENT FOR THE PROFOUNDLY RETARDED.....	5R01 HD10853-02	77,975
ORGANIZATION TOTAL	1 77,975		
RALEIGH			
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES ZIP CODE 27611			
GOTTLIEB, GILBERT.....	SENSORY AND PERCEPTUAL DETERMINANTS OF IMPRINTING	5R01 HD00878-17	36,192
ORGANIZATION TOTAL	1 36,192		
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—DOROTHEA OIX HOSPITAL ZIP CODE 27611			
GLASCOCK, HAROLD W, JR.....	ANALYSIS OF MODERN CARE FOR ELDERLY DISABLED PATIENTS.....	2R18 AG00570-02	121,908
ORGANIZATION TOTAL	1 121,908		
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH ZIP CODE 27607			
BEWLEY, GLENN C.....	GENETIC REGULATION OF ENZYME EXPRESSION IN DROSOPHILA.....	5R01 GM23617-02	45,790
COCKERHAM, C CLARK.....	QUANTITATIVE GENETICS RESEARCH PROGRAM	5P01 GM11546-15	458,463
DONALDSON, WILLIAM E.....	NUTRITIONAL REGULATION OF FATTY ACID SYNTHESIS	5R01 AM20199-02	18,729
DROESSLER, EARL G.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07071-13	76,039
HODGSON, ERNEST.....	MECHANISMS OF PESTICIDE TOXICITY	5P01 ES00044-14	361,311
JOHNSTON, ROBERT E.....	EARLY EVENTS IN THE REPLICATION OF SINDBIS VIRUS.....	1R23 AI15196-01	37,813
KNIGHT, KENNETH L.....	COMPLETION OF MOSQUITO TAXONOMIC GLOSSARY	2R01 LM02787-03	37,633
LONGMUIR, IAN S.....	GRADIENT AND TRANSPORT OF OXYGEN IN TISSUE AND ORGANS.....	3R01 HL16828-03S1	4,182
LONGMUIR, IAN S.....	GRADIENT AND TRANSPORT OF OXYGEN IN TISSUE AND ORGANS.....	2R01 HL16828-04	105,832
MILLER, WILLIAM L.....	PITUITARY CELL CULTURE: ESTROGEN CONTROL OF FSH.....	1R01 HD10773-01A1	56,736
SCANDALIOS, JOHN G.....	A SYSTEM FOR ANALYSIS OF DIFFERENTIAL GENE EXPRESSION.....	5R01 GM22733-03	54,062
SEDEROFF, RONALD R.....	GENETIC ANALYSIS OF SIMPLE SEQUENCE DNA.....	7R01 GM26267-01	75,502
SHIH, JASON C.....	BIOSYNTHESIS OF LIPOIC ACID AND ATHEROSCLEROSIS.....	1R01 HL21912-01	34,998
THEIL, ELIZABETH C.....	DEVELOPMENTAL REGULATION OF RED CELL FERRITIN CONTENT.....	5R01 AM20251-02	35,335
TOVE, SAMUEL B.....	METABOLISM OF UNSATURATED FATTY ACIDS.....	5R01 AM02483-21	83,861
ORGANIZATION TOTAL	15 1,486,286		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
RESEARCH TRIANGLE PARK			
RESEARCH TRIANGLE INSTITUTE	ZIP CODE 27709		
CHASALOW, FRED I.....	ANDROGEN AND 16-ANDROSTENE BIOCHEMISTRY IN TESTIS.....	5R01 HD11678-02	77,423
COOK, CLARENCE E.....	STEREOSELECTIVE RIA FOR ANALYSIS IN PHARMACOLOGY.....	5R01 GM23197-03	83,655
KEPLER, JOHN A.....	IRREVERSIBLE INHIBITORS OF THE PROGESTERONE RECEPTOR.....	5R01 HD10629-02	19,402
PELLIZZARI, EDO D.....	GAS CHROMATOGRAPHIC TECHNIQUES FOR PHARMACOLOGY.....	5R01 GM23262-03	45,095
WALL, MONROE E.....	SYNTHESIS OF PLANT ANTITUMOR AGENTS AND ANALOGS.....	5R01 CA20050-03	39,285
WALL, MONROE E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05791-02	21,765
ORGANIZATION TOTAL	6	286,625	
WINSTON-SALEM			
UNIVERSITY OF NORTH CAROLINA SYSTEM—WINSTON-SALEM STATE UNIVERSITY	ZIP CODE 27102		
ATKINSON, WILVERIA B.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08040-07S1	954
ATKINSON, WILVERIA B.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08040-08	95,701
ORGANIZATION TOTAL	2	96,655	
WAKE FOREST UNIVERSITY	ZIP CODE 27109		
BUCKALEW, VARDAMAN M, JR.....	STUDIES OF A HUMORAL INHIBITOR OF SODIUM TRANSPORT.....	5R01 AM17341-05	45,752
CLARKSON, THOMAS B.....	ARTERIOSCLEROSIS RESEARCH CENTER.....	5P50 HL14164-07	920,967
CLARKSON, THOMAS B.....	A RESOURCE FOR THE STUDY OF NONHUMAN PRIMATES.....	5P40 RR00919-04	83,442
DE CHATELET, LAWRENCE R.....	PATHOPHYSIOLOGY AND METABOLISM OF THE LEUKOCYTE.....	5R01 AI10732-07	52,448
DODGE, WILLIAM H.....	NORMAL AND LEUKEMIC GRANULOPOIESIS.....	2R01 CA19275-03	58,249
DOELLGAST, GEORGE J.....	TUMOR IMMUNOLOGY; PHOSPHATASE ISOENZYMES.....	1R01 CA23533-01	61,852
DOELLGAST, GEORGE J.....	PLACENTAL PHOSPHATASE; GENETICS AND BIOCHEMISTRY.....	1R01 HD11569-01	37,884
EVANS, DONALD L.....	IMMUNOBIOLOGICAL PROPERTIES OF EMBRYONIC ANTIGENS.....	5R01 CA19358-03	41,603
GREEN, HAROLD D.....	VASOMOTOR TONE AND VENOUS RETURN.....	5R01 HL00487-29	40,258
HEISE, EUGENE R.....	REGULATION OF THE ANTIBODY RESPONSE.....	5R01 AI12415-04	56,840
HERNDON, C NASH.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05404-17	127,198
HOMESLEY, HOWARD D.....	GYNECOLOGIC ONCOLOGY GROUP.....	1R10 CA21946-01A1	109,425
KREGER, ARNOLD S.....	PATHOGENESIS OF BACTERIAL INFECTIONS OF THE CORNEA.....	5R01 EY01104-06	41,515
KREMKAU, FREDERICK W.....	ABSORPTION OF ULTRASOUND IN PROTEIN SOLUTIONS.....	1R01 GM24677-01	55,690
KUHN, RAYMOND E.....	IMMUNOCYTOTOXIC RESPONSES IN CHAGAS' DISEASE.....	5R01 AI13128-03	34,706
KUHN, RAYMOND E.....	IMMUNE REJECTION OF TRYPANOSOMA CRUZI.....	1R01 AI14841-01	81,736
LEVITT, MELVIN.....	SOMATOSENSORY SYSTEMS: CENTRAL PAIN.....	5R01 NS11921-05	31,095
LIU, MAW-SHUNG.....	METABOLISM OF DIABETIC DOG HEART MYOCYTES IN SHOCK.....	7R01 AM25270-01	29,866
LIU, MAW-SHUNG.....	METABOLISM OF DIABETIC DOG HEART MYOCYTES IN SHOCK.....	5R01 AM25270-02	56,017
LIU, MAW-SHUNG.....	SUBSTRATE METABOLISM IN ISOLATED MYOCYTES IN SHOCK.....	7R01 HL23618-01	52,410
MC CORMICK, JAMES G.....	DEAFNESS AND ATHEROSCLEROSIS.....	2R01 NS12013-04	75,650
MORRIS, MARIANA.....	NEUROENDOCRINE INVOLVEMENT IN HYPERTENSION.....	1R01 HL22411-01	43,654
MYRVIK, QUENTIN N.....	PATHOBIOLOGIC AND HOST DEFENSE REACTIONS IN THE LUNG.....	5P01 HL16769-05	313,655
O'STEEN, WENDALL K.....	REPRODUCTIVE HORMONES AND RETINAL DEGENERATION.....	2R01 EY02359-02	46,111
RESNICK, MARTIN I.....	URINARY MACROMOLECULES AND RENAL LITHIASIS.....	5R01 AM20066-02	42,686
RESNICK, MARTIN I.....	ULTRASONOGRAPHY IN THE EVALUATION OF PROSTATIC CANCER.....	5R26 CA20118-03	36,602
ROSE, JAMES C.....	PRENATAL AND NEONATAL PITUITARY ADRENAL FUNCTION.....	1R01 HD11210-01A1	65,772
RUDEL, LAWRENCE L.....	RISK FACTOR RELATIONSHIPS OF PRIMATE ATHEROSCLEROSIS.....	5R01 HL21260-02	54,048
SIMPSON, WAYNE C.....	CEREBRAL BLOOD FLOW, HUMORAL, DRUG, NERVOUS CONTROL.....	5R01 NS11953-05	46,471
SMITH, PETER B.....	SARCOLEMAL MEMBRANE ALTERATIONS IN DIABETES.....	1R01 AM21264-01	39,950
SPURR, CHARLES L.....	CANCER AND LEUKEMIA GROUP B.....	5R10 CA03927-21	129,667
SPURR, CHARLES L.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA12197-07	688,348
SPURR, CHARLES L.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19439-03	156,607
SUNDBERG, DAVID K.....	HYPOTHALAMIC LHRH BIOSYNTHESIS AND SECRETION.....	1R01 HD10900-01A2	54,060
TOOLE, JAMES F.....	CEREBROVASCULAR RESEARCH CENTER.....	5P50 NS06655-13	588,741
TOOLE, JAMES F.....	MONITORING THE ACUTELY BRAIN INJURED PATIENT.....	1R13 NS14548-01	40,000
TURNER, JAMES E.....	CENTRAL NERVOUS SYSTEM REGENERATION—NERVE GROWTH FACTOR.....	2R01 NS12070-04	41,575
WAITE, B MOSELEY.....	METABOLISM AND FUNCTION OF MEMBRANE PHOSPHOLIPIDS.....	5R01 AM11799-11	71,362
WAITE, B MOSELEY.....	CHANGES IN CELL MEMBRANES BY ONCOGENIC HERPES SIMPLEX.....	5R01 CA21146-02	53,800
WITCOFSKI, RICHARD L.....	ULTRASONIC ENHANCEMENT OF CANCER RADIOTHERAPY.....	3R01 CA17581-03S1	9,241

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
NORTH CAROLINA—Continued			
ORGANIZATION TOTAL	40	4,616,953	
STATE TOTAL	415	47,419,305	
NORTH DAKOTA			
FARGO			
NORTH DAKOTA STATE UNIVERSITY	ZIP CODE 58103		
KLEPAC, ROBERT K.....	PAIN TOLERANCE IN THE TREATMENT OF DENTAL FEAR.....	1R01 DE04976-01	72,536
ORGANIZATION TOTAL	1	72,536	
GRAND FORKS			
UNIVERSITY OF NORTH DAKOTA	ZIP CODE 58201		
JOHNSON, TOM M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05407-17	17,838
LOW, FRANK N.....	FINE STRUCTURAL LINING OF THE SUBARACHNOID SPACE.....	2R01 NS09363-07A1	65,650
LOW, FRANK N.....	MICROAPPENDAGES OF THE PLASMALEMMA.....	2R01 NS12106-04	39,318
MYRON, DUANE R.....	BIOLOGICAL FUNCTION OF VANADIUM.....	5R01 HL19530-03	6,916
NORDLIE, ROBERT C.....	LIVER PYROPHOSPHATE-PHOSPHOTRANSFERASE ACTIVITIES.....	5R01 AM07141-16	74,264
OLSON, MARK D.....	THE FINE STRUCTURAL DEVELOPMENT OF BRUCH'S MEMBRANE.....	3R01 EY02361-01S1	5,513
RAY, PAUL D.....	HORMONE AND DIET CONTROL OF GLUCONEOGENESIS.....	3R01 AM12705-09S1	11,485
STEWART, JAMES A.....	IONIC STRENGTH AND DIELECTRIC EFFECTS ON CHYMOTRYPSIN.....	5R01 GM16167-09	20,336
ORGANIZATION TOTAL	8	241,320	
STATE TOTAL	9	313,856	
OHIO			
AKRON			
CHILDREN'S HOSPITAL MEDICAL CENTER OF AKRON	ZIP CODE 44308		
AGAMANOLIS, DIMITRIS P.....	VITAMIN B12 DEFICIENCY IN RHESUS MONKEYS.....	7R01 EY02899-01	27,597
ORGANIZATION TOTAL	1	27,597	
ATHENS			
OHIO UNIVERSITY	ZIP CODE 45701		
GRIFFITHS, PETER R.....	FT-IR CIRCULAR DICHROISM SPECTROMETRY.....	1R01 GM25691-01	68,901
HOWELL, JOHN N.....	SIALIC ACIDS IN MUSCLE MEMBRANE FUNCTION.....	7R01 AM22052-01	28,855
JOHNSON, PETER.....	PULMONARY ARTERY INTERMEDIATE FILAMENT STRUCTURE.....	1R01 HL23233-01	41,669
PATTERSON, MICHAEL M.....	STUDIES OF SPINAL RESPONSE PLASTICITY.....	1R01 NS14545-01	24,443
WAGNER, THOMAS E.....	MATURE SPERM CHROMOSOMES: STRUCTURE AND RELEASE MODE.....	2R01 HD09042-04	41,524
ORGANIZATION TOTAL	5	205,392	
BOWLING GREEN			
BOWLING GREEN STATE UNIVERSITY	ZIP CODE 43404		
HOEMANN, HARRY W.....	COMMUNICATION SKILLS IN DEAF AND HEARING CHILDREN.....	5R01 NS09590-06	55,400
MC KEEVER, WALTER F.....	LATERAL DOMINANCE AND LATERAL WORD RECOGNITION.....	5R01 NS10214-07	22,284
PANKSEPP, JAAK.....	MEDIAL HYPOTHALAMIC REGULATION OF BODY ENERGY BALANCE.....	5R01 AM17157-05	49,363
VAN DUYN, H JOHN.....	RATE OF WORD PRESENTATION AND EAR-ASYMMETRY IN CHILDREN.....	7R01 NS15173-01	3,674
ORGANIZATION TOTAL	4	130,721	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
CINCINNATI			
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 45229			
AKESON, RICHARD A.....	NERVE AND MUSCLE SURFACE MACROMOLECULE INTERACTION.....	5R01 NS13241-02	18,961
CLARK, LELAND C, JR.....	NEW OXYGEN CARRYING RADIOPAQUE FLUOROCARBONS.....	5R01 GM21475-04	50,424
CLARK, LELAND C, JR.....	RAPID SPECIFIC MICRO MEASUREMENT OF BLOOD CHOLESTEROL.....	5R01 HL19083-02	23,092
DIGNAN, PETER.....	CORE PROGRAM FOR MENTAL RETARDATION RESEARCH.....	5P30 HD05221-09	566,019
DONALDSON, VIRGINIA H.....	HYDROLYTIC ENZYMES OF BLOOD IN HEALTH AND DISEASE.....	2R01 HL15690-07	99,113
GANSCHOW, ROGER E.....	GENETIC CONTROL OF MAMMALIAN ENZYME EXPRESSION.....	5R01 AM14770-09	101,570
JAMES, FREDERICK W.....	MAXIMAL EXERCISE TESTING IN HYPERLIPIDEMIC CHILDREN.....	5R01 HL18454-03	55,523
LAMPKIN, BEATRICE C.....	DRUG EFFECT IN ACUTE LEUKEMIA.....	5R01 CA21435-02	98,586
LAMPKIN, BEATRICE C.....	SUPPORT FOR COMPREHENSIVE SICKLE CELL CENTER.....	2P60 HL15996-06	759,683
PRATT, EDWARD L.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00123-15	500,032
PRATT, EDWARD L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05535-16	60,684
SOUKUP, SHIRLEY W.....	EARLY CHANGES IN POTENTIAL BRAIN TUMOR TISSUE.....	2R01 CA18588-03	26,454
SPERLING, MARK A.....	STUDIES WITH LIPOSOME-ENTRAPPED INSULIN.....	7R01 AM25251-01	44,240
SPERLING, MARK A.....	GLUCAGON PHYSIOLOGY IN THE FETUS, NEWBORN AND CHILD.....	7R01 HD12613-01	39,509
WILSON, JAMES G.....	BASES OF CELLULAR SENSITIVITY TO TERATOGENIC AGENTS.....	5R01 HD09951-03	103,930
ZIMMERMAN, ERNEST F.....	TERATOGENS ON CLEFT PALATE FORMATION.....	2R01 DE03469-07	129,584
ORGANIZATION TOTAL	16	2,677,404	
CHRIST HOSPITAL ZIP CODE 45219			
KRUEGER, ROBERT G.....	VARIABLE REGIONS OF BICLONAL IMMUNOGLOBULINS.....	1R01 CA20818-01A2	60,135
PONS, MARCEL W.....	STUDIES ON RESPIRATORY SYNCYTIAL VIRUS.....	1R01 AI14133-01A2	55,522
PONS, MARCEL W.....	BIOCHEMICAL STUDIES ON INFLUENZA VIRUS INFECTED CELLS.....	5R01 AI14225-02	79,323
SCHIFF, GILBERT M.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09127-01	29,070
ORGANIZATION TOTAL	4	224,050	
JEWISH HOSPITAL OF CINCINNATI ZIP CODE 45229			
WEXLER, BERNARD C.....	HYPERADRENOCORTICISM AND ACCELERATED AGING.....	5R01 AG00585-02	41,756
WEXLER, BERNARD C.....	EXPERIMENTAL MYOCARDIAL INFARCTION.....	5R01 HL21418-02	43,078
ORGANIZATION TOTAL	2	84,834	
UNIVERSITY OF CINCINNATI ZIP CODE 45221			
ALEXANDER, J WESLEY.....	IMMUNITY FACTORS: PATHOGENESIS IN SURGICAL INFECTIONS.....	5R01 AI12936-02	209,541
ARMENTROUT, RICHARD W.....	EVENTS OF PARVOVIRUS AND ANIMAL CELL DNA SYNTHESIS.....	2R01 CA16517-04	51,450
ARMENTROUT, RICHARD W.....	REGULATION OF DNA SYNTHESIS IN HUMAN TUMOR CELLS.....	5R01 CA21508-02	51,012
BALDWIN, DAVID M.....	EFFECTS OF GLUCOCORTICOIDS ON GONADOTROPIN RELEASE.....	1R01 HD11160-01	28,789
BELL, MARY.....	CYTOPATHOLOGIC EFFECTS OF POLYCHLORINATED BIPHENYLS.....	1R01 ES01890-01	47,113
BERNSTEIN, I LEONARD.....	MITES AND ALGAE IN CLINICAL HOUSE DUST ALLERGY.....	5R01 AI13702-02	81,350
BJORNSON, ANN B.....	HUMORAL FACTORS OF HOST DEFENSE AGAINST B. FRAGILIS.....	5R01 AI13688-02	49,538
BJORNSON, ANN B.....	HOST DEFENSE AGAINST S PNEUMONIAE IN SICKLE CELL DISEASE.....	5R01 HL20314-02	46,411
BLAHA, GORDON C.....	FUNCTIONAL AGE CHANGES IN FEMALE REPRODUCTIVE ORGANS.....	5R01 AG00597-05	33,801
BLUMENTHAL, KENNETH M.....	STRUCTURE AND ACTION OF POLYPEPTIDE AXONAL TOXINS.....	1R01 NS14368-01	50,445
BOBST, ALBERT M.....	SPIN ASSAY FOR NUCLEIC ACID BINDING PROTEINS.....	5R01 CA15717-03	51,067
BONVENTRE, PETER F.....	NEOPLASM AND RESISTANCE TO INFECTIONS.....	1R01 CA22957-01	97,740
BROOKS, STUART M.....	MECHANISMS RESPONSIBLE FOR DISEASE SEVERITY IN ASTHMA.....	1R01 HL22415-01	77,288
BROWN, RONALD D.....	CONTROL OF GENE EXPRESSION DURING EARLY DEVELOPMENT.....	5R01 GM22766-03	32,586
BRYANT, SHIRLEY H.....	ELECTROPHYSIOLOGY AND PHARMACOLOGY OF MYOTONIC MUSCLE.....	5R01 NS03178-16	54,154
COATS, EUGENE A.....	RESPIRATORY INHIBITORS AS ANTINEOPLASTIC AGENTS.....	5R01 CA16253-05	50,122
COLLINS, JOHN H.....	SEQUENCE STUDIES ON CALCIUM BINDING PROTEINS.....	5R01 AM20875-02	106,308
COOPER, GARY P.....	CADMIUM: NEUROBEHAVIORAL AND TRACE METAL STUDIES.....	5R01 ES01494-02	84,856
DANIELS, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05408-17	137,040
DAY, RICHARD A.....	A NOVEL APPROACH TO PEPTIDE SEQUENCING.....	5R01 GM23154-03	45,175
DEUTSCH, EDWARD A.....	DEVELOPMENT OF 99-MTC MYOCARDIAL IMAGING AGENTS.....	5R01 HL21276-02	49,241
DI SALVO, JOSEPH.....	REGULATION OF CORONARY ARTERIAL SMOOTH MUSCLE.....	5R01 HL20196-02	30,756
FISCHER, JOSEF E.....	NEUROTRANSMITTERS AND HEPATIC COMA.....	7R01 AM25638-01	105,985
FOULKES, ERNEST C.....	TOXICOLOGICAL SIGNIFICANCE OF CADMIUM-METALLOTHIONEIN.....	5R01 ES01462-03	68,861
FREISHEIM, JAMES H.....	STRUCTURE-FUNCTION STUDIES OF DIHYDROFOLATE REDUCTASE.....	5R01 CA11666-09	90,581

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
GRUENSTEIN, ERIC I.....	MEMBRANE EFFECTS IN FAMILIAL HYPERCHOLESTEROLEMIA.....	5R01 HL18553-03	31,998
HERMAN, JEROME H.....	IMMUNOPATHOLOGY OF CARTILAGE PROTEOGLYCANS.....	5R01 AM16894-06	79,119
HESS, EVELYN V.....	TRAVEL FUNDS U.S. PARTICIPANTS PAN-AMERICAN CONGRESS.....	1R13 AM22059-01	6,000
JACOBSON, EUGENE D.....	INTESTINAL ISCHEMIA.....	5R01 AM20540-02	55,939
JOHNSON, CARL L.....	HISTAMINE AND CARBOXYLIC ACID AMYL CYCLASE.....	5R01 HL22136-02	104,719
JOHNSON, ROBERT L.....	ROLES OF LYMPHOKINES AND MONOCYTES IN LUNG FIBROSIS.....	5R01 HL20095-03	53,621
KASHYAP, MOTI L.....	ROLE OF APOLIPOPROTEINS IN HYPERTRIGLYCERIDEMIA.....	1R01 HL22618-01	57,600
KLINE, DANIEL L.....	BIOCHEMISTRY AND PHYSIOLOGY OF PLASMINOGEN ACTIVATORS.....	5R01 HL11172-12	51,042
KNOWLES, HARVEY C, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00068-16	559,440
KRUEGER, ROBERT C.....	STRUCTURE AND TEMPLATE ACTIVITY OF CHROMATIN.....	5R01 GM23030-03	36,722
LAMPERTI, ALBERT A.....	NEUROENDOCRINE ASPECTS OF ARCUATE NUCLEUS LESIONS.....	1R01 H011591-01	37,158
LINGREL, JERRY B.....	MECHANISM OF THE SWITCH FROM FETAL TO ADULT HEMOGLOBIN.....	5R01 AM20119-02	77,327
LINGREL, JERRY B.....	MAMMALIAN MESSENGER RNA AND ITS SYNTHESIS.....	5R01 GM10999-14	58,636
LIPICKY, RAYMONO J.....	DRUG EFFECTS ON ELECTRICALLY EXCITABLE MEMBRANES.....	1R01 NS12635-01A1	66,947
LOWENHAUPT, ROSALIN W.....	BIOCHEMISTRY OF HUMAN PLATELET CHEMOTAXIS.....	1R01 HL21988-01	46,050
MANSON, JEANNE M.....	TERATOGENICITY OF CHLORINATED HYDROCARBON SOLVENTS.....	5R01 ES01601-02	78,590
MANSON, JEANNE M.....	IN VITRO TERATOLOGIC ASSAY SYSTEM WITH P-450 METABOLISM.....	5R01 H010868-02	47,671
MARTIN, ANNE F.....	CONTROL OF PROTEIN METABOLISM IN HEART MUSCLE.....	1R01 HL22651-01	41,771
MEYER, RALPH R.....	REGULATION OF DNA SYNTHESIS IN THE NOVIKOFF HEPATOMA.....	2R01 CA17723-04	80,974
MICHAEL, JACOB G.....	REAGINIC ANTIBODY FORMATION TO BACTERIAL ANTIGENS.....	1R01 AI13877-01A2	56,989
MOSKOWITZ, MYRON.....	COMPUTER EVALUATION OF MAMMOGRAPHIC CALCIFICATIONS.....	1R01 CA22803-01	48,414
MOULTON, BRUCE C.....	ENDOMETRIAL MECHANISMS OF OVARIAN HORMONE SYNERGISM.....	5R01 H007255-06	37,574
MOULTON, BRUCE C.....	LYSOSOMAL MECHANISMS OF OVUM IMPLANTATION.....	5R01 HD10721-02	33,556
NIEWENHUIS, ROBERT J.....	ULTRASTRUCTURAL EFFECTS OF CADMIUM ON THE TESTIS.....	5R01 H011250-02	28,905
NOYES, FRANK R.....	BIOMECHANICAL FUNCTION OF KNEE LIGAMENTS.....	1R01 AM21172-01	93,422
O'FLAHERTY, ELLEN J.....	BLOOD LEAD, BODY LEAD COMPARTMENTS AND LEAD EXPOSURE.....	1R01 ES01872-01	52,460
PAUL, RICHARD J.....	PULMONARY VASCULAR MUSCLE METABOLISM & CONTRACTILITY.....	1R01 HL23240-01	33,109
PESCE, AMAEO J.....	SPECIFIC ANTIBODIES TO BLADDER CARCINOMA TUMOR ANTIGEN.....	5R26 CA16939-05	92,586
POLLAK, VICTOR E.....	CLINICOPATHOLOGIC AND OTHER STUDIES OF RENAL DISEASE.....	5R01 AM17196-06	134,165
ROE, RYONG-JOON.....	IN VIVO DEGRADATION OF POLYETHYLENE IMPLANTS.....	5R01 AM20269-02	56,821
RUONEY, HARRY.....	REGULATION OF ENZYMES IN MEVALONATE SYNTHESIS.....	2R01 AM12402-11A1	82,820
RUONEY, HARRY.....	STUDIES ON THE BIOSYNTHESIS OF UBIQUINONE.....	5R01 GM20311-10	62,661
SAELINGER, CATHARINE B.....	PATHOGENESIS OF PSEUDOMONAS IN BURN INJURY.....	5R01 GM24028-02	49,121
SCHWARTZ, ARNOLO.....	ION TRANSPORT IN CARDIAC MUSCLE.....	5R01 HL22039-02	60,075
SCHWARTZ, ARNOLO.....	CELLULAR MECHANISMS OF HEART FAILURE.....	1P01 HL22619-01	396,865
SCOTT, RALPH C.....	THE JUVENILE DIABETIC HEART.....	5R01 HL20428-03	125,100
SMITH, ROGER D.....	VIROLOGIC EVALUATION OF CHRONIC RENAL DISEASE.....	5R01 AM19426-03	63,047
SOLARO, R JOHN.....	MODULATION OF CALCIUM CONTROL OF CARDIAC MYOFIBRILS.....	5R01 HL22231-02	34,163
SUSKIND, RAYMONO R.....	SUPPORT FOR CENTER FOR STUDY OF THE HUMAN ENVIRONMENT.....	3P30 ES00159-12S2	79,197
SUSKIND, RAYMONO R.....	ENVIRONMENTAL HEALTH SCIENCES CENTER GRANT.....	2P30 ES00159-13	1,308,736
TORNHEIM, PATRICIA A.....	DIABETIC CEREBRAL VASCULAR STRUCTURE AND FUNCTION.....	5R01 HL22106-02	73,740
TSANG, REGINALD C.....	DIABETES IN PREGNANCY.....	1P01 H011725-01	434,995
WARSHAWSKY, DAVID.....	PULMONARY METABOLISM OF THE N-HETEROCYCLIC AROMATICS.....	1R01 CA23515-01	70,428
WILLEKE, KLAUS.....	HEALTH EFFECT OF ENVIRONMENTAL ASBESTOS FIBER LENGTH.....	1R01 ES01870-01	57,492
YOUNKIN, STEVEN G.....	LONG-TERM CONTROL OF MUSCLE MEMBRANE & NERVE TERMINAL.....	5R01 NS13027-03	6,979
ZIMMER, HANS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07075-04	30,524
ORGANIZATION TOTAL	71	6,906,478	
CLEVELAND			
CANCER CENTER, INC. ZIP CODE 44106			
FLYNN, ARTHUR.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	3P30 CA17056-03S1	183,730
ORGANIZATION TOTAL	1	183,730	
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
ADAM, PETER A.....	CONTROL OF FETAL AND NEONATAL GLUCOSE METABOLISM.....	2R01 HD05740-07	90,730
AOAM, PETER A.....	DISORDERED FETAL METABOLISM: ANTENATAL INTERVENTION.....	5P50 HD11089-02	617,299
AIKAWA, MASAMICHI.....	ELECTRON MICROSCOPY OF PLASMODIUM - HOST INTERACTIONS.....	2R01 AI10645-07	155,354
ALLEY, KEITH E.....	ONTOGENESIS OF BRAIN STEM VISUOMOTOR SYSTEMS.....	5R01 NS12781-02	37,163

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ANDERSON, JAMES M.....	PROSTHETIC VALVE ENDOCARDITIS: ETIOLOGY AND THERAPY.....	1R01 HL22888-01	112,305
BADGER, SHIRLEY J.....	SEROLOGY OF ORAL GRAM NEGATIVE ANAEROBES.....	5R01 DE04422-03	24,654
BENSUSAN, HOWARD B.....	COLLAGEN-PLATELET INTERACTION.....	5R01 HL22081-20	60,557
BERNIER, GEORGE M, JR.....	METABOLISM OF LOW-MOLECULAR WEIGHT PROTEINS.....	5R01 AM14700-08	14,363
BETTICE, JOHN A.....	THE CARDIAC RESPONSE TO CHRONIC METABOLIC ACIDOSIS.....	1R23 HL19601-01A1	44,623
BIAGLOW, JOHN E.....	MODIFICATION OF X-RAY RESPONSE OF ANOXIC-HYPOXIC CELLS.....	2R01 CA13747-07	150,879
BICKERS, DAVID R.....	SKIN METABOLISM OF DRUGS AND CARCINOGENS.....	7R01 ES01900-01	63,271
BLACKWELL, JOHN.....	STRUCTURE AND INTERACTIONS OF LUNG PROTEOGLYCANS.....	5R01 HL21622-02	82,562
BOAT, THOMAS F.....	HUMAN TRACHEOBRONCHIAL MUCOUS GLYCOPROTEINS.....	3R01 HL14844-06S1	17,652
BODANSZKY, MIKLOS.....	SYNTHETIC PEPTIDE HORMONES.....	5R01 AM12473-10	73,074
BREWER, EUGENE N.....	THE MECHANISM OF RADIATION-INDUCED MITOTIC DELAY.....	1R01 CA22727-01	87,500
BROWN, RICHARD H.....	IN VIVO LOADING ON TOTAL KNEE JOINTS.....	1R01 AM21559-01	38,505
BROWN, RICHARD H.....	THREE-DIMENSIONAL ANALYSIS OF KNEE MOTION.....	1R01 AM21929-01	70,230
CAPLAN, ARNOLD I.....	CELLULAR AND DEVELOPMENTAL CONTROL OF CALCIFICATION.....	2R01 DE04008-04	76,914
CARTER, JAMES R, JR.....	MECHANISM OF ACTION OF INSULIN.....	5R01 AM18382-05	115,624
CARTER, JAMES R, JR.....	BIOSYNTHESIS OF RED CELL MEMBRANE PROTEINS.....	2R01 AM18389-04A1	63,060
CHENG, PI-WAN.....	BIOSYNTHESIS OF HUMAN RESPIRATORY MUCOUS GLYCOPROTEIN.....	1R23 HL22818-01	20,584
CHERNIACK, NEIL S.....	RESPIRATORY NEUROCHEMICAL CONTROL.....	5R01 HL20847-02	43,105
CHEUNG, PETER W.....	NONINVASIVE REFLECTION OXIMETRY IN PERIPHERAL TISSUE.....	5R01 HL18710-02	35,631
CHEUNG, PETER W.....	LIGHT-SCATTERING STUDIES OF THE SICKLING PROCESS.....	5R01 HL18725-03	37,035
CULP, LLOYD A.....	PROTEOGLYCANS AND ADHESION (PROJECT I).....	1R01 AM25646-01	64,475
DANIEL, THOMAS M.....	SPECIFIC MYCOBACTERIAL ANTIGENS.....	1R22 AI15102-01	73,202
DE MARCO, THOMAS J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05335-17	15,511
DE PALMA, RALPH G.....	ATHEROSCLEROTIC PLAQUE DYNAMICS IN NONHUMAN PRIMATES.....	2R01 HL16206-04	164,061
DOUGLAS, JANICE G.....	ANGIOTENSIN II RECEPTORS: MECHANISMS OF REGULATION.....	1R01 HL22990-01	57,045
DUNN, MICHAEL J.....	PROSTAGLANDINS, THE KIDNEY AND HYPERTENSION.....	5R01 HL22563-02	102,967
DYBBS, ALEXANDER.....	IMPROVEMENT OF CORNEAL CONTACT LENS DESIGN.....	3R01 EY01528-02S1	12,032
ELLNER, JERROLD J.....	ADHERENT CELL REGULATION OF MICROBIAL IMMUNITY IN MAN.....	1R23 AI15109-01	42,600
ENLOW, DONALD H.....	CRANIOFACIAL GROWTH AND REMODELING.....	2R01 DE05078-02	78,506
EVANS, HELEN H.....	RADIATION INDUCED MUTAGENESIS AND CARCINOGENESIS.....	1R01 CA23427-01	103,909
EVANS, HELEN H.....	CONTROL OF DNA REPLICATION IN A EUKARYOTE.....	5R01 GM19484-06	78,528
FANGER, MICHAEL W.....	HUMAN AND RABBIT LYMPHOCYTE SUBPOPULATIONS.....	2R01 AI10148-07A1	69,363
FANTZ, ROBERT L.....	PERCEPTION IN TERM, PRETERM, AND EXCEPTIONAL INFANTS.....	5R01 HD04212-09	77,540
GAMBETTI, PIERLUIGI.....	STUDIES ON SYNAPTOSOMES AND AXONS.....	2R01 NS14509-02	128,820
GERSHMAN, HOWARD.....	CONTROL OF CELLULAR MOBILITY.....	5R01 CA20323-02	52,674
GOFFMAN, WILLIAM.....	PROBLEM ORIENTED BILIOMETRY.....	5R01 LM03028-02	44,067
GOLDBERG, ALAN D.....	CARDIOVASCULAR EVENTS IN HYPERTENSIVES.....	1R01 HL22032-01	45,800
GOLDTHWAIT, DAVID A.....	NUCLEIC ACID FUNCTION IN RELATION TO CANCER.....	5R01 CA11322-10	72,456
GOLDTHWAIT, DAVID A.....	REPAIR OF X-IRRADIATED DNA IN NORMAL AND CANCER CELLS.....	5R01 CA18747-03	49,161
GOODRIDGE, ALAN G.....	REGULATION OF THE SYNTHESIS OF LIPOGENIC ENZYMES.....	5R01 AM21594-02	128,004
GRAVENSTEIN, JOACHIM S.....	SURVEILLANCE & PREDICTIVE DIAGNOSIS IN SURGICAL PATIENTS.....	5P01 GM19599-06	279,558
GREGG, EARLE C.....	MUTANTS AND ALTERED RADIORESPONSE OF CELLS AND TUMORS.....	5R01 CA15901-05	184,787
GREGG, EARLE C.....	CORE SUPPORT FOR RADIATION ONCOLOGY RESEARCH.....	5P30 CA19283-03	252,500
GROSS, SAMUEL.....	CHILDREN'S CANCER STUDY GROUP - A.....	1R10 CA20320-01A1	107,920
HALL, PHILIP W, III.....	RENAL METABOLISM OF BETA-2 MICROGLOBULIN.....	5R01 AM19556-02	22,912
HANSON, RICHARD W.....	REGULATION OF GLUCONEOGENESIS IN MAMMALIAN LIVER.....	7R01 AM25537-01	74,012
HANSON, RICHARD W.....	HORMONAL REGULATION OF ENZYME LEVELS IN MAMMALIAN TISSUE.....	7R01 AM25541-01	12,362
HARRIS, JOHN W.....	STUDIES OF ERYTHROCYTE PRODUCTION AND DESTRUCTION.....	5R01 AM00745-24	106,889
HEIPLE, KINGSBURY G.....	IN VIVO LOADING ON TOTAL HIP JOINT REPLACEMENTS.....	2R01 AM16600-04	139,566
HOGG, ROBERT W.....	CHARACTERIZATION OF L-ARABINOSE BINDING PROTEIN.....	5R01 AM13791-08	107,618
HOPPEL, CHARLES L.....	PATHWAYS AND CONTROL OF FATTY ACID OXIDATION.....	5R01 AM15804-07	75,261
ILAN, JUDITH.....	HUMAN PLACENTAL CHORIONIC GONADOTROPIN BIOSYNTHESIS.....	1R01 HD11596-01	81,523
JACOBS-LORENA, MARCELO.....	BIOCHEMICAL STUDIES OF DROSOPHILA OOGENESIS.....	1R01 GM25327-01	59,697
JONES, JANICE L.....	ELECTRICALLY INDUCED CARDIAC EM-HISTOCHEMICAL CHANGES.....	3R01 HL21038-01S1	2,697
KAISERMAN-ABRAMOF, ITA R.....	STRUCTURE AND DEVELOPMENT OF THE VISUAL SYSTEM.....	3R01 EY01018-05S2	1,391
KAISERMAN-ABRAMOF, ITA R.....	STRUCTURE AND DEVELOPMENT OF THE VISUAL SYSTEM.....	5R01 EY01018-06	73,823
KATONA, PETER G.....	NONINVASIVE ASSESSMENT OF AUTONOMIC CARDIAC CONTROL.....	1R01 HL20328-01A1	44,187
KEAN, EDWARD L.....	GLYCOLIPID AND GLYCOPROTEIN METABOLISM IN EYE TISSUE.....	2R01 EY00393-11	147,422
KIRBY, ALBERT C.....	LEFT VENTRICULAR CA00 CONTENT AND CONTRACTILITY.....	1R01 HL22008-01	42,364
KLEIN, LEROY.....	QUANTITATIVE DYNAMICS OF BONE REMODELLING WITH AGE.....	2R01 AG00258-10	183,184

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
KLEIN, LEROY.....	AN INTERDISCIPLINARY PROGRAM OF RESEARCH IN AGING.....	2P01 AG00361-19A1	432,980
KO, WEN H.....	MICROELECTRONICS LABORATORY FOR BIOMEDICAL SCIENCES.....	2P01 GM14267-12A1	433,920
KO, WEN H.....	BIOMEDICAL ELECTRONICS RESOURCE.....	2P41 RR00857-04	695,021
KOLETSKY, SIMON.....	PATHOGENESIS OF ATHEROSCLEROSIS IN RATS.....	1R01 HL22341-01	48,864
KOWAL, JEROME.....	ENZYMATIC CONTROL OF STEROID BIOSYNTHESIS.....	5R01 AM15236-08	54,805
KOWAL, JEROME.....	HORMONAL CONTROL OF NORMAL AND NEOPLASTIC BREAST CELLS.....	5R01 CA16650-03	49,814
KUMAR, MARY L.....	CMV INFECTION IN PREGNANCY: A GUINEA PIG MODEL.....	1R01 HD10602-01A1	33,179
KURCZYNSKI, THADDEUS W.....	BETA GALACTOSIDASES IN GLOBOID CELL LEUKODYSTROPHY.....	1R01 GM24860-01	64,288
KUSHNER, IRVING.....	REGULATION OF C-REACTIVE PROTEIN SYNTHESIS.....	5R01 AI12886-04	41,945
LANCASTER, WAYNE D.....	BOVINE PAPILLOMA VIRUS DNA AND NEOPLASIA.....	1R23 CA24505-01	37,000
LANDAU, BERNARD R.....	CARBOHYDRATE AND LIPID METABOLIC PATHWAYS.....	3R01 AM14507-08S1	14,884
LANDAU, BERNARD R.....	CARBOHYDRATE AND LIPID METABOLIC PATHWAYS.....	2R01 AM14507-09	105,270
LANDAU, BERNARD R.....	HYDROXYBUTYRATE FORMATION IN DIABETIC KETOSIS.....	1R01 AM22092-01	28,458
LASEK, RAYMOND J.....	AGING CHANGES IN NEURONAL STRUCTURE AND FUNCTION.....	1P01 AG00795-01	309,128
LASEK, RAYMOND J.....	MOLECULAR STUDIES OF AXONAL GROWTH.....	5R01 NS13658-02	55,929
LEE, EDGAR, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05410-17	200,462
LINDLEY, BARRY D.....	CONTRACTILE ACTIVATION BY RAPID TEMPERATURE JUMPS.....	5R01 HL19848-02	54,108
LINDLEY, BARRY D.....	EXCITATION-CONTRACTION COUPLING IN DENERVATED MUSCLE.....	2R01 NS10196-05A1	76,215
LITTLE, A BRIAN.....	HORMONE METABOLISM IN REPRODUCTION.....	5R01 HD02378-13	83,848
LITTLE, A BRIAN.....	PROGRAM PROJECT IN REPRODUCTIVE BIOLOGY.....	5P50 HD07640-05	287,026
MAHAJAN, DAMODAR K.....	STEROIDS AND FOLLICULAR DEVELOPMENT.....	1R01 HD10302-01A1	45,185
MAHMOUD, ADEL A.....	IMMUNOPATHOGENESIS OF SCHISTOSOMIASIS.....	5R22 AI08163-11	133,321
MAHMOUD, ADEL A.....	MULTIDISCIPLINARY PROGRAM IN PARASITIC INFECTIONS.....	1P01 AI15351-01	293,254
MANSOUR, EDWARD G.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA14548-03	36,985
MANSOUR, EDWARD G.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14548-04	108,477
MARSHALL, JAMES S.....	THYROXINE-BINDING GLOBULIN AND SERUM GLYCOPROTEINS.....	2R01 AM15308-07A1	59,403
MATTHEWS, LEROY W.....	STUDIES IN CYSTIC FIBROSIS.....	5P01 AM08305-15	153,362
MATTHEWS, LEROY W.....	CYSTIC FIBROSIS AND PULMONARY DISEASE.....	5R01 HL13885-08	197,986
MEISNER, HERMAN M.....	OCHRATOXIN A—EFFECT ON CELLS, SUBCELLULAR SYSTEMS.....	5R01 ES01170-02	50,717
MEISNER, HERMAN M.....	HYPOLIPIDEMIC DRUGS—EFFECT ON FFA-ALBUMIN ASSOCIATION.....	5R01 HL18887-03	67,335
MILLER, CHARLES G.....	GENETICS AND BIOCHEMISTRY OF INTRACELLULAR PROTEOLYSIS.....	2R01 AI10333-07A1	83,159
MILLER, GENEVIEVE.....	JENNER, KOCH AND OTHER LETTERS AT JOHNS HOPKINS.....	1R01 LM03112-01	38,909
MILLER, RICHARD E.....	GLUTAMINE SYNTHETASE IN CULTURED 3T3-L1 ADIPOCYTES.....	1R01 AM21145-01A1	46,843
MOORE, ALLEN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07113-11	132,591
NASH, CLYDE L, JR.....	EFFECTS OF SCOLIOSIS ON SPINAL DISC GEOMETRY.....	5R01 AM20272-02	49,308
NEET, KENNETH E.....	INTERACTION OF SUBUNITS IN ENZYMES AND PROTEINS.....	5R01 AM12881-10	71,977
OCCHINO, JOSEPH C.....	CHARACTERIZATION OF ORAL MUCOSA AND SKIN BASAL LAMINA.....	5R01 DE04338-03	39,156
OLEINICK, NANCY L.....	RADIATION-INDUCED MODIFICATIONS IN PROTEIN SYNTHESIS.....	5R01 CA15378-05	91,828
ORENSTEIN, DAVID M.....	EXERCISE CONDITIONING IN PATIENTS WITH CYSTIC FIBROSIS.....	1R23 HL21954-01	47,538
PATEL, MULCHAND S.....	BIOCHEMICAL CHANGES IN AGING BRAIN.....	7R01 AG01345-01	60,052
PATEL, MULCHAND S.....	EFFECT OF MATERNAL DIABETES ON METABOLISM IN NEWBORNS.....	7R01 HD12643-01	51,433
PEARSON, OLOF H.....	ENDOCRINE FACTORS INFLUENCING TUMOR GROWTH IN MAN.....	2R01 CA05197-19	91,849
PLONSEY, ROBERT.....	MULTIPOLE SYSTEMS IN ELECTROCARDIOGRAPHY.....	5R01 HL10417-12	45,488
PLONSEY, ROBERT.....	NORMALIZED BODY SURFACE POTENTIAL MAPS.....	2R01 HL17931-04	143,840
POST, ROBERT S.....	PROTEIN FILTRATION AND REABSORPTION.....	5R01 AM16302-06	57,895
PRZYBYLSKI, RONALD J.....	REGULATION OF INSULIN EFFECTS ON MUSCLE.....	1R01 AM25202-01	66,838
PURNELL, EDWARD W.....	STUDY OF EYE PHYSIOLOGY AND DISEASE BY ULTRASOUND.....	3R01 EY00224-15S2	32,684
PURNELL, EDWARD W.....	STUDY OF EYE PHYSIOLOGY AND DISEASE BY ULTRASOUND.....	2R01 EY00224-16	122,924
RATNOFF, OSCAR D.....	STUDIES ON HEMOSTATIC MECHANISMS.....	5R01 HL01661-27	149,570
RECKNAGEL, RICHARD O.....	TOXIGENIC LIPID PEROXIDATION AND HEPATIC COMA.....	5R01 ES01821-22	127,161
REES, ALAN M.....	DIRECTORY OF U S O CANADIAN HEALTH SCIENCE LIBRARIES.....	1R01 LM03135-01	83,746
ROBBINS, FREDERICK C.....	GENERAL CLINICAL RESEARCH CENTER (MATERNAL-CHILD).....	2M01 RR00210-14	598,283
ROBERTSON, ABEL L.....	ATHEROSCLEROSIS AND ARTERIAL CELL FUNCTIONS.....	5R01 HL20924-02	136,375
RODMAN, HARVEY M.....	DIABETES AND CELL-MEDIATED IMMUNITY.....	1R01 AM21259-01A1	69,314
ROOS, BERNARD A.....	REGULATION OF CALCITONIN BIOSYNTHESIS AND SECRETION.....	1R01 AM21567-01	49,066
RUDOLPH, STEPHEN A.....	PROTEIN PHOSPHORYLATION AND ADRENERGIC EFFECTS.....	1R01 HL21995-01	71,951
SABLE, HENRY Z.....	STUDIES OF POLYHYDROXYCYCLOALKANES.....	2R01 AM07719-15	56,204
SABLE, HENRY Z.....	MECHANISM OF ACTION OF THIAMIN PYROPHOSPHATE.....	5R01 AM18888-03	39,629
SALOMON, ROBERT G.....	PREPROSTAGLANDIN EXDOPEROXIDES.....	2R01 GM21249-03A1	68,562
SAYERS, GEORGE.....	ISOLATED ADENOHYPHYSIAL CELLS.....	5R01 AM13820-09	97,037

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
SCHILTZ, JOHN R.....	PATHOPHYSIOLOGY OF CERTAIN HUMAN BULLOUS DERMATOSES.....	5R01 AM19115-03	94,243
SENA, ELISSA P.....	STUDIES ON MITOCHONDRIAL DNA INHERITANCE.....	1R01 GM23643-01A1	70,339
SIMMELINK, JAMES W.....	THE STRUCTURE AND PROPERTIES OF HUMAN DENTAL ENAMEL.....	5R01 DE02525-13	78,382
SINGER, MARCUS.....	NERVOUS CONTROL OF REGENERATION: AXON-SHEATH RELATIONS.....	2R01 NS07403-18	178,460
SKEGGS, LEONARD T.....	CAUSE OF CHRONIC EXPERIMENTAL RENAL HYPERTENSION.....	5R01 HL17243-05	57,874
SORENSEN, RICARDO U.....	IN VITRO HUMAN CELLULAR RESPONSES TO KILLED BACTERIA.....	1R23 AI14682-01	44,304
SPECK, WILLIAM T.....	CARCINOGENIC POTENTIAL OF PHOTOTHERAPY.....	5R01 CA23692-02	80,268
STAMBROOK, PETER J.....	STUDY OF MAMMALIAN GENES AND THEIR REPLICATION.....	2R01 GM22248-04	83,520
STAMBROOK, PETER J.....	REPLICATION OF AMPHIBIAN NONAMPLIFIED RIBOSOMAL DNA.....	5R01 GM23728-02	44,749
STEINBERG, ARTHUR G.....	NATURE & DISTRIBUTION OF HUMAN GAMMA-GLOBULIN FACTORS.....	5R01 GM07214-18	109,917
STUEHR, JOHN E.....	KINETIC INVESTIGATION OF BIOCHEMICAL REACTIONS.....	5R01 GM13116-13	77,024
TISCHFIELD, JAY A.....	GENETICS OF RESISTANCE TO ADENINE ANALOGS IN VITRO.....	5R01 GM21551-04	63,837
URBACH, FRED L.....	BINUCLEAR REDOX CENTERS IN COPPER PROTEINS.....	5R01 GM23213-03	53,624
UTTER, MERTON F.....	STRUCTURE OF BIOTIN ENZYMES.....	2R01 AM12245-11	165,100
UTTER, MERTON F.....	INBORN ERRORS OF PYRUVATE METABOLISM.....	1R01 AM20478-01	90,729
UTTER, MERTON F.....	STRUCTURE AND FUNCTION OF PEP CARBOXYKINASE ISOZYMES.....	1R01 AM21859-01	68,478
UTTER, MERTON F.....	ELECTRON MICROSCOPY OF ENZYMES.....	5R01 GM22920-03	32,640
WALTON, ALAN G.....	PROGRAM PROJECT IN CONNECTIVE TISSUE.....	3P01 AM17110-11S1	64,342
WALTON, ALAN G.....	PROGRAM PROJECT IN BIOLOGICAL MATERIALS.....	5P01 HL15195-04	514,168
WOOD, HARLAND G.....	SUBUNIT-SUBUNIT INTERACTIONS OF TRANSCARBOXYLASE.....	5R01 GM22579-04	109,049
WOOD, HARLAND G.....	UTILIZATION OF CO2 AND THE TOTAL SYNTHESIS OF ACETATE.....	1R01 GM24913-01	70,416
WOOD, ROBERT E.....	PULMONARY MUCUS TRANSPORT IN OBSTRUCTIVE LUNG DISEASES.....	5R01 HL17776-04	69,275
YOUNKIN, STEVEN G.....	LONG-TERM CONTROL OF MUSCLE MEMBRANE AND NERVE TERMINAL.....	7R01 NS15219-01	38,486
ZULL, JAMES E.....	INTERACTION OF PARATHYROID HORMONE WITH THE KIDNEY.....	5R01 AM18784-03	110,328
ORGANIZATION TOTAL	148 15,036,999		
CLEVELAND CLINIC HOSPITAL ZIP CODE 44106			
ANTUNEZ, ANTONIO R.....	NEUTRON BEAM RADIOTHERAPY.....	5P01 CA19720-02	250,900
BATTISTO, JACK R.....	NATURALLY OCCURRING DELAYED-TYPE ISO-HYPERSENSITIVITY.....	2R01 AI12468-04	119,073
BUMPUS, F MERLIN.....	CARDIOVASCULAR DISEASE.....	5P01 HL06835-17	885,548
BUMPUS, F MERLIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05674-10	80,788
DEL VILLANO, BERT C.....	BIOLOGICAL STUDIES OF EPIDIDYMAL GLYCOPROTEIN, GP70.....	1R01 CA25789-01	76,095
EHRHART, ALLEN.....	COLLAGEN BIOSYNTHESIS IN ATHEROSCLEROSIS.....	5R01 HL16588-05	93,902
FINKE, JAMES H.....	KILLER ASSISTING FACTOR IN CELL MEDIATED LYMPHOLYSIS.....	1R01 CA24474-01	41,337
GERRITY, ROSS G.....	THE STRUCTURE AND PERMEABILITY OF ARTERIAL ENDOTHELIUM.....	5R01 HL21438-02	99,422
GREENWALD, A SETH.....	THE MECHANICS AND FUNCTION OF HUMAN SYNOVIAL JOINTS.....	2R01 AM17479-03A2	45,340
HEWLETT, JAMES S.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA04919-19	169,650
HOLZBACH, R THOMAS.....	BILIARY CHOLESTEROL SOLUBILITY.....	5R01 AM17562-05	152,531
NOSE, YUKIHIKO.....	HUMAN ANATOMY FOR CARDIAC PROSTHESES.....	5R01 HL18639-03	74,416
PROFFITT, MAX R.....	AUTOIMMUNITY AND VIRUS-INDUCED LEUKEMIA.....	5R01 CA20242-03	91,416
SEN, SUBHA.....	ISOLATION OF A HYPERTENSIVE COMPOUND FROM HUMAN URINE.....	2R01 HL16433-03A2	52,460
SHAINOFF, JOHN R.....	FIBRIN COMPLEXES IN INTERMEDIARY COAGULATION.....	5R01 HL16361-03	54,932
SHAINOFF, JOHN R.....	PATHOCHEMISTRY OF FIBRINOGEN.....	1R01 HL19767-01A2	40,867
TARAZI, ROBERT C.....	RENIN AND CARDIAC HYPERTROPHY IN HYPERTENSION.....	5R01 HL15837-06	94,656
ORGANIZATION TOTAL	17 2,423,333		
MOUNT SINAI HOSPITAL OF CLEVELAND ZIP CODE 44106			
GENUTH, SAUL M.....	ROLE OF CARNITINE AND RELATED METABOLITES IN KETOSIS.....	5R01 AM21009-02	86,803
HAAS, ERWIN.....	EXPERIMENTAL RENAL AND NEUROGENIC HYPERTENSION.....	2R01 HL17947-04	175,264
LEVY, MATTHEW N.....	NEURAL CONTROL OF THE HEART.....	5R01 HL10951-11	124,533
LEVY, MATTHEW N.....	CATECHOLAMINE RELEASE IN THE HEART.....	2R01 HL15758-06	87,520
LEVY, MATTHEW N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05658-11	25,811
MARTIN, PAUL J.....	NEURAL CONTROL OF CARDIAC CONDUCTION AND EXCITATION.....	1R01 HL22484-01	86,045
ORGANIZATION TOTAL	6 585,976		
ST. LUKE'S HOSPITAL OF THE UNITED METHODIST CHURCH ZIP CODE 44104			
COWAN, DALE H.....	STUDIES OF THE PLATELET INTERACTION WITH COLLAGEN.....	1R01 HL23986-01	67,681
ORGANIZATION TOTAL	1 67,681		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ST. VINCENT CHARITY HOSPITAL ZIP 000E 44115			
NAIR, PANKAJAM	MECHANISM OF CHEMORECEPTOR DISCHARGE.....	5R01 HL13134-07	47,484
WHALEN, WILLIAM J.....	COMPARATIVE STUDY OF HEART FUNCTION.....	2R01 HL11906-11	78,124
WHALEN, WILLIAM J.....	VASCULAR CONTROL MECHANISMS IN SKELETAL MUSCLE.....	5R01 HL12703-09	55,781
ORGANIZATION TOTAL	3 181,389		
UNIVERSITY HOSPITALS OF CLEVELAND ZIP 000E 44106			
KELLERMEYER, ROBERT W.....	THE RED CELL - SECOND REVISED EDITION.....	1R01 LM03067-01	70,525
ROBBINS, FREDERICK C.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00080-16	584,737
ORGANIZATION TOTAL	2 655,262		
COLUMBUS			
BATTELLE MEMORIAL INSTITUTE ZIP 000E 43201			
CLARKE, WILLIAM J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05723-07	43,570
DAVIS, ROBERT C.....	LASER CIRCULAR DICHROISM.....	1R01 GM24384-01A1	70,417
OE VORE, DALE P.....	INVESTIGATIONS OF ELECTRICALLY INDUCED OSTEOGENESIS.....	1R01 AM21867-01	67,544
HASSLER, CRAIG R.....	ELECTRICAL AUGMENTATION OF BONE FORMATION & INGROWTH.....	5R01 AM19280-03	77,216
ORGANIZATION TOTAL	4 258,747		
CHILDREN'S HOSPITAL ZIP 000E 43205			
NEWTON, WILLIAM A, JR.....	CHILDREN'S CANCER STUDY GROUP.....	5R10 CA03750-21	193,450
ORGANIZATION TOTAL	1 193,450		
OHIO STATE UNIVERSITY ZIP 000E 43210			
ACKERMAN, G ADOLPH.....	SURFACE DIFFERENTIATION OF DEVELOPING HEMIC CELLS.....	1R01 AM21512-01	48,660
ALLEN, JAMES N.....	RADIATION ENHANCEMENT IN NERVOUS SYSTEM TUMOR MODELS.....	5R01 CA20348-03	92,180
ALLRED, JOHN B.....	SHORT-TERM DIETARY CONTROL OF RAT LIVER LIPOGENESIS.....	5R01 AM19555-02	28,125
BALCERZAK, STANLEY P.....	LEUKEMIA-LYMPHOMA PROGRAM.....	3P01 CA15147-03S1	13,208
BALCERZAK, STANLEY P.....	LEUKEMIA-LYMPHOMA PROGRAM.....	2P01 CA15147-04	447,783
BEAL, JACK L.....	PHYTOCHEMISTRY OF THE GENUS THALICTRUM.....	5R01 HL07502-13	41,881
BEHRMAN, EDWARD J.....	BIOCHEMICAL APPLICATIONS OF OSMIUM CHEMISTRY.....	5R01 GM20375-05	34,681
BIERSDORF, WILLIAM R.....	ELECTROPHYSIOLOGICAL STUDIES OF VISUAL ADAPTATION.....	5R01 EY00454-09	46,472
BIRKY, C WILLIAM, JR.....	MECHANISMS OF MITOCHONDRIAL TRANSMISSION GENETICS.....	5R01 GM19607-06	68,286
BOULANT, JACK A.....	THE NEURAL CONTROL OF TEMPERATURE REGULATION.....	1R01 NS14644-01	47,121
BOZLER, EMIL.....	MECHANICAL CONTROL AND ENERGETICS OF MUSCLE CONTRACTION.....	5R01 AM20049-02	20,688
BRESNAHAN, JACQUELINE C.....	PAIN MECHANISMS AFTER SPINAL CORD LESIONS.....	1R01 NS14457-01	69,957
BRIERLEY, GERALD P.....	ION TRANSPORT BY HEART MITOCHONDRIA.....	5R01 HL09364-14	51,083
BRIERLEY, GERALD P.....	PATHOLOGY OF MITOCHONDRIA IN ISCHEMIC MYOCARDIUM.....	1R01 HL23166-01	73,404
BUSCH, DARYLE H.....	BIOMIMETIC METAL COMPLEXES OF MACROCYCLIC LIGANDS.....	2R01 GM10040-16	97,386
CERILLI, G JAMES.....	ANTIVASCULAR ENDOTHELIAL ANTIBODY.....	5R01 AM16804-05	70,597
CERILLI, G JAMES.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18016-03	99,153
CLARKE, STEVEN D.....	REGULATION OF LIPOGENESIS BY POLYUNSATURATED FATS.....	1R01 HL23159-01	51,767
CORNWELL, DAVID G.....	PATHOGENESIS OF EXPERIMENTAL ATHEROSCLEROSIS.....	5R01 HL11897-11	61,782
CORSON, SAMUEL A.....	CARDIO-RESPIRATORY-RENAL STRESS REACTIONS.....	1R01 HL20861-01A1	56,003
CRAMBLETT, HENRY G.....	SUPPORT FOR GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00034-18	592,976
CRAMBLETT, HENRY G.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05409-17	122,113
DEAN, DONALD H.....	ISOLATION AND GENETIC ANALYSIS OF SPORULATION GENES.....	1R01 GM26172-01	44,037
FERTEL, RICHARD H.....	PHARMACOLOGIC CONTROL OF MAST CELL PHOSPHODIESTERASE.....	5R01 HL19062-03	37,366
FREY, PERRY A.....	ENZYME CATALYSIS OF ELECTRON AND GROUP TRANSFER.....	2R01 AM13502-10	88,217
FREY, PERRY A.....	NUCLEOTIDYL AND PHOSPHOTRANSFERASE STEREOCHEMISTRY.....	1R01 GM24390-01	40,572
GAGINELLA, TIMOTHY S.....	INTESTINAL SECRETION NEUROCHEMICAL RECEPTOR MECHANISMS.....	1R01 AM21932-01	34,571
GLASER, RONALD.....	EXPRESSION OF EPSTEIN-BARR VIRUS IN HYBRID CELLS.....	1R01 CA23807-01	73,841
GROSSIE, JAMES A.....	PROPERTIES OF SKELETAL MUSCLE IN ALLOXAN DIABETES.....	1R01 AM23019-01	24,005
HANSON, KENNETH M.....	PITUITARY-ADRENERGIC-OVARIAN VASOMOTOR INTERACTION.....	5R01 HL20685-02	20,073
HILL, RICHARD M.....	THE CORNEAL ENVIRONMENT.....	1R01 EY02383-01	20,222
HINE, JACK.....	POLYFUNCTIONAL CATALYSIS.....	5R01 GM18593-14	52,222
HOLLANDER, PHILIP B.....	INTRACELLULAR PH AND MYOCARDIAL ELECTROPHARMACOLOGY.....	5R01 HL20153-02	36,272
HOOVER, EDWARD A.....	PATHOGENESIS OF ANIMAL LEUKEMIA.....	5R01 CA22527-02	39,804

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
HORROCKS, LLOYD A.....	MYELIN BIOSYNTHESIS AND TURNOVER.....	5R01 NS08291-06	68,690
HORROCKS, LLOYD A.....	PLASMALOGENASE AND WHITE MATTER INJURY.....	1R01 NS14381-01	42,513
HORTON, DEREK.....	SYNTHESIS OF BIOLOGICALLY IMPORTANT CARBOHYDRATES.....	2R01 GM11976-13	100,978
HORTON, DEREK.....	LIPOPOLYSACCHARIDE ANTIGENS OF PSEUDOMONAS AERUGINOSA.....	5R01 GM20181-03	42,374
HUNT, WILLIAM E.....	SPINAL CORD INJURY RESEARCH CENTER.....	2P50 NS10165-07	480,372
JONES, RONALD.....	CLINICAL IMPLICATIONS OF VERGENCE-ANOMALY.....	1R01 EY02532-01	44,540
JORNS, MARILYN S.....	FLAVOENZYME MECHANISMS: REDOX AND NONREDOX REACTIONS.....	5R01 GM22662-03	32,554
KAPRAL, FRANK A.....	STUDIES ON IN VIVO GROWTH OF STAPHYLOCOCCI.....	5R01 AI07826-10	46,734
KELLER, MARTIN D.....	A CANCER CENTER EPIDEMIOLOGY BIostatistic UNIT.....	5R10 CA21751-02	74,626
KING, JAMES S.....	THE DEVELOPMENT OF PRECEREBELLAR NUCLEI.....	2R01 NS08798-07A1	48,801
KOESTNER, ADALBERT.....	NEUROONCOGENESIS BY RESORPTIVE CARCINOGENS.....	5R01 CA11224-10	93,187
KOESTNER, ADALBERT.....	A MODEL OF PARAINFECTIONOUS DEMYELINATING ENCEPHALITIS.....	9R01 NS14821-10	110,391
KRUGER, FRED A.....	ALPHA-ADRENERGIC EFFECTS ON HEART METABOLISM.....	1R01 HL22354-01	56,581
KUWANA, THEODORE.....	SPECTROELECTROCHEMISTRY OF BIO-ELECTRON TRANSFERS.....	2R01 GM19181-07	51,725
LA PIDUS, JULES B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07074-13	86,503
LIM, DAVID J.....	SEROUS OTITIS MEDIA: IMMUNOCHEMICAL AND EM STUDY.....	5R01 NS08854-09	82,881
MAGNUS, PHILIP D.....	SYNTHESIS OF MOLECULES OF BIOLOGICAL INTEREST.....	1R01 GM25231-01	47,889
MARTIN, GEORGE F.....	THE DEVELOPMENT OF 'EXTRAPYRAMIDAL SYSTEMS'.....	5R01 NS07410-11	55,629
MARZLUF, GEORGE A.....	REGULATION OF GENE EXPRESSION IN NEUROSPORA.....	5R01 GM23367-02	42,863
MILLER, DUANE D.....	ALPHA-ADRENERGIC AND DOPAMINERGIC STEREOCHEMICAL STUDIES.....	1R01 NS14774-01	42,908
MINTON, JOHN P.....	HORMONES AND BREAST CANCER PROstaglandin BIOSYNTHESIS.....	1R01 CA22892-01	14,422
NEREM, ROBERT M.....	DETAILED CHARACTERISTICS OF CORONARY BLOOD FLOW.....	2R01 HL16236-04A1	53,043
NEWMAN, MELVIN S.....	SYNTHESIS OF CARCINOGENIC COMPOUNDS.....	5R01 CA07394-14	63,791
O'DORISIO, M S.....	CONTROL OF MACROPHAGE FUNCTION BY CAMP/CGMP IN NEOPLASIA.....	5R01 CA19705-03	78,368
OLSON, CARTER L.....	DEVELOPMENT OF NEW METHODS TO ASSAY ENZYME REACTIONS.....	5R01 GM15821-10	47,641
PAQUETTE, LEO A.....	POLYCONDENSED ALICYCLICS AND THEIR ANTIVIRAL ROLE.....	2R01 AI11490-05	84,375
PAQUETTE, LEO A.....	UNSATURATED POLYOLEFINS AND HYDROCARBON CARCINOGENESIS.....	5R01 CA12115-08	101,826
PATIL, POPAT N.....	IRIS PIGMENTATION, MELANINS AND OCULAR DRUG EFFECTS.....	2R01 EY01308-04	41,870
PERLMAN, PHILIP S.....	DELETIONS AND MITOCHONDRIAL GENETIC RECOMBINATION.....	5R01 GM21896-03	54,851
PIEPER, HEINZ P.....	ENERGY OUTPUT AND EFFICIENCY OF LEFT VENTRICLE.....	5R01 HL18933-03	30,387
PIEPER, HEINZ P.....	FUNCTIONAL CHARACTERISTICS OF PULMONARY VASCULAR SMOOTH.....	1R01 HL23239-01	50,511
RAHWAN, RALF G.....	ANTIARRHYTHMIC STUDIES ON 2-SUBSTITUTED AMINOINDENES.....	1R01 HL21670-01	29,366
RALL, JACK A.....	ENERGETICS OF CALCIUM CYCLING DURING MUSCLE CONTRACTION.....	1R01 AM20792-01	26,924
RICE, DAVID A.....	SOUND TRANSMISSION IN LUNG.....	5R23 HL21199-02	39,356
RICHARDSON, KEITH E.....	OXALIC ACID METABOLISM AND PRIMARY HYPEROXALURIA.....	2R01 AM12960-09	65,877
RIESKE, JOHN S.....	FT-INFRARED SPECTROSCOPY OF HEART MUSCLE ENERGETICS.....	3R01 HL18304-03S1	3,880
SAGONE, ARTHUR L.....	THE ROLE OF OXYGEN RADICALS ON EFFECTOR/TUMOR CELLS.....	1R01 CA24289-01	79,922
SMITH, C ROGER.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05463-16	32,473
SOLOWAY, ALBERT H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05607-12	34,297
SPRECHER, HOWARD W.....	EFFECTS OF DIETARY CHANGE ON PHOSPHOLIPID METABOLISM.....	5R01 AM18844-03	33,279
SPRECHER, HOWARD W.....	FACTORS MODIFYING BLOOD PLATELET FUNCTION IN DIABETICS.....	5R01 AM20387-02	77,289
ST PIERRE, RONALD L.....	MECHANISMS OF LYMPHOID CELL DIFFERENTIATION.....	5R01 CA19346-03	51,415
STOCKWELL, CHARLES W.....	VESTIBULAR CONTROL OF POSTURE.....	5R01 NS13903-02	25,615
STONER, CLINTON D.....	STRUCTURE AND FUNCTION OF HEART MITOCHONDRIA.....	3R01 HL18038-03S1	2,603
SWENTON, JOHN S.....	SYNTHESIS OF ANTHRACYCLINE ANTITUMOR AGENTS.....	1R01 CA17712-01A2	38,523
TASSAVA, ROY A.....	CELLULAR REACTIONS TO AMPUTATION IN ANIMALS.....	5R01 HD10417-02	21,091
URETSKY, NORMAN J.....	AMPHETAMINE, MONOAMINES, AND BEHAVIOR.....	1R01 NS13888-01A1	60,461
WEBB, THOMAS E.....	POST-TRANSCRIPTIONAL CONTROL IN EUKARYOTIC CELLS.....	2R01 CA12411-06A1	54,504
WEBB, THOMAS E.....	ABERRANT GENE EXPRESSION DURING CHEMOTHERAPY.....	5R01 CA13718-06	39,050
WHISLER, RONALD L.....	IN VITRO IMMUNOGLOBULIN PRODUCTION IN HEPATITIS.....	1R23 AI14918-01	36,195
WILLIAMS, THOMAS E, JR.....	A NEW METHOD FOR ANALYSIS OF CORONARY ARTERY BEHAVIOR.....	1R01 HL22801-01	38,202
WILSON, HENRY E.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA04920-19	156,056
WITIAK, DONALD T.....	CARCINOGENIC, MUTAGENIC AND CYTOTOXIC MECHANISM (DMBA).....	5R01 CA21371-02	91,529
WITIAK, DONALD T.....	HYPOCHOLESTEROLEMIC AGENTS: STEREOCHEMICAL STUDIES.....	2R01 HL12740-10	78,580
WOLFE, DOUGLAS A.....	NONPARAMETRIC PARTIALLY SEQUENTIAL PROCEDURES.....	5R01 GM23053-03	31,749
WONG, LAN K.....	A COMPARATIVE METABOLISM STUDY OF PAH ANALOGUES.....	1R23 CA24075-01	34,798
WYMAN, MILTON.....	CONGENITAL GLAUCOMA: A DEVELOPMENTAL STUDY.....	3R01 EY01184-04S1	27,804
YEARY, ROGER A.....	COMPARATIVE STUDIES IN PERINATAL TOXICOLOGY.....	5R01 HD03867-09	78,635
YOHAN, DAVID S.....	CANCER CENTER SUPPORT GRANT.....	5P30 CA16058-05	1,370,265
ZWILLING, BRUCE S.....	IMMUNOPROPHYLAXIS AND IMMUNOTHERAPY OF LUNG CANCER.....	2R01 CA16342-04A1	51,944

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ORGANIZATION TOTAL	94	7,732,014	
DAYTON			
UNIVERSITY OF DAYTON ZIP CODE 45469			
SCHWELTZ, FAYE D.....	CYCLIC NUCLEOTIDES, ESPECIALLY CAMP, IN EUGLENA.....	5R01 GM22611-03	23,892
SINGER, SANFORD S.....	STEROID SULFOTRANSFERASES AND GLUCOCORTICOID ACTION.....	5R01 AM19669-02	41,144
TURGEON, ROBERT.....	CROWN GALL TUMOR DISEASE: SUPPRESSION AND RECOVERY.....	5R01 CA23261-02	44,024
ORGANIZATION TOTAL	3	109,060	
WRIGHT STATE UNIVERSITY ZIP CODE 45431			
ARMSTRONG, MARVIN D.....	UNIDENTIFIED AMINO ACIDS IN HUMAN BLOOD PLASMA.....	5R01 GM25751-02	36,372
BATTINO, RUBIN.....	THE SOLUBILITY OF GASES IN LIQUIDS.....	2R01 GM14710-11	62,250
BELJAN, JOHN R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05794-02	64,996
CUMMINGS, SUE C.....	THERMODYNAMIC STUDIES ON MODEL OXYGEN CARRIERS.....	5R01 HL15640-06	42,474
FLICK, PARKE K.....	REGULATION OF RAT LIVER FATTY ACID SYNTHETASE.....	1R01 AM21957-01	89,465
GOTSHALL, ROBERT W.....	EFFECT OF PRESSURE ON RENAL BLOOD FLOW AND FUNCTION.....	5R23 HL21382-02	35,192
HUTCHINGS, BRIAN L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07155-03	14,896
KANTOR, GEORGE J.....	EFFECTS OF RADIATION ON HUMAN CELLS CULTURED IN VITRO.....	2R01 CA16477-04	38,214
KORDENAT, R KARL.....	INTERMITTENT RETROPERFUSION OF ISCHEMIC MYOCARDIUM.....	1R01 HL22005-01	104,950
ORGANISCIAK, DANIEL T.....	ENVIRONMENTAL LIGHT AND RETINAL MEMBRANE DEVELOPMENT.....	5R01 EY01959-02	42,873
PENDERGRASS, PAULA B.....	CONTRACTILE MECHANISMS OF OVULATION.....	7R01 HD12988-01	12,926
ROCHE, ALEXANDER F.....	PATTERNS OF DENTOCRANIOFACIAL GROWTH AND MATURATION.....	5R01 DE05160-02	80,363
ROCHE, ALEXANDER F.....	ASSESSMENT OF SKELETAL MATURITY.....	5R01 HD12251-02	111,192
ROCHE, ALEXANDER F.....	SUBCUTANEOUS FAT, BLOOD LIPIDS AND HEALTH.....	5R01 HD12252-02	466,954
SIERVOGEL, ROGER M.....	GENETICS OF HYPERTENSION AND ASSOCIATED VARIABLES.....	5R01 HL23194-02	81,410
STUHLMAN, ROBERT A.....	LABORATORY ANIMAL RESOURCES FACILITY IMPROVEMENT.....	5P40 RR01034-03	15,476
VARANDANI, PARTAB T.....	REGULATION AND FUNCTION OF INSULIN DEGRADATION.....	3R01 AM24057-02S1	8,665
VARANDANI, PARTAB T.....	REGULATION AND FUNCTION OF INSULIN DEGRADATION.....	5R01 AM24057-03	119,847
ORGANIZATION TOTAL	18	1,428,515	
DELAWARE			
OHIO WESLEYAN UNIVERSITY ZIP CODE 43015			
BAHRICK, HARRY P.....	RECOGNITION AND RECALL DURING ACQUISITION AND RETENTION.....	5R01 HD00926-17	35,530
ORGANIZATION TOTAL	1	35,530	
KENT			
KENT STATE UNIVERSITY ZIP CODE 44242			
HIRSCHMAN, RICHARD.....	EFFECTS OF PHYSIOLOGICAL FEEDBACK ON DENTAL FEAR.....	1R01 DE04769-01	33,455
KILLIAN, GARY J.....	ANALYSIS OF EPIDIDYMAL EPITHELIAL CELLS.....	1R01 HD10827-01A1	30,858
MADEY, RICHARD.....	NEUTRONS IN NEGATIVE PION RADIOTHERAPY.....	5R01 CA14375-02	38,726
ROE, BRUCE A.....	THE ROLE OF MODIFIED NUCLEOTIDES IN MAMMALIAN TRNA.....	2R01 GM21405-03A1	71,799
TSAI, CHUN-CHE.....	BINDING OF DRUGS TO NUCLEIC ACIDS.....	1R01 GM24259-01	30,354
ORGANIZATION TOTAL	5	205,192	
NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE ZIP CODE 44240			
CRUCE, JUDITH A.....	HYPOTHALAMIC STRUCTURE AND FUNCTION.....	1R01 NS14344-01	54,008
CRUCE, WILLIAM L.....	STRUCTURE AND FUNCTION OF SUPRASPINAL PATHWAYS.....	5R01 NS14346-02	46,589
DEPEW, RICHARD E.....	BACTERIAL W PROTEINS: BIOCHEMISTRY AND GENETICS.....	1R01 GM25500-01	47,700
KOO, PETER H.....	TUMOR SUPPRESSION BY ALPHA-MACROGLOBULINS OF MICE.....	1R01 CA24337-01	50,300
LIEBELT, ROBERT A.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09026-02	90,050
ORGANIZATION TOTAL	5	288,647	
TOLEDO			
MEICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614			
ASKARI, AMIR.....	EFFECTS OF MERCURIAL POISONS ON NAO,KO-ATPASE.....	5R01 ES01599-02	49,203

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
ASKARI, AMIR	CARDIAC GLYCOSIDES: MECHANISMS OF CELLULAR ACTIONS.....	2R01 HL19129-04	84,805
BRAND, PAUL H	LACTATE TRANSPORT IN ISOLATED PERFUSED RENAL TUBULE.....	5R01 AM19350-03	68,812
BUDD, GEOFFREY C	ASSESSMENT OF INTRAPORTAL HEPATOCYTE TRANSPLANTATION.....	1R01 AM21380-01	50,557
CHAKRABORTY, JYOTSNA	NUCLEOTIDE CYCLASE ACTIVITY IN HUMAN AND MOUSE TESTES.....	5R01 HD10107-02	44,217
CLIFFORD, DONALD H	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05700-09	91,592
FABER, LEE E	PROGESTERONE RECEPTORS.....	3R01 HD09367-03S2	13,455
FREIMER, EARL H	STREPTOCOCCI AND HEART: CELL-MEDIATED CROSS-REACTIONS.....	5R01 HL19234-03	73,420
GARLID, KEITH D	THE STATE OF WATER AND SOLUTES IN MITOCHONDRIA.....	1R01 GM24297-01	57,025
HOWARD, JOHN M	STUDIES OF PANCREATIC DIABETES.....	5R01 AM21116-02	43,368
LEVIN, JEROME A	INACTIVATION OF NOREPINEPHRINE IN VASCULAR TISSUE.....	5R01 HL12647-08	52,157
LONG, CALVIN L	METABOLIC RESPONSE TO TRAUMA.....	5P01 GM23065-03	312,326
MANNING, MAURICE.....	DESIGN AND SYNTHESIS OF NEUROHYPOPHYSIAL PEPTIDES.....	9R01 GM25280-07	99,428
MC CORQUODALE, D JAMES	REGULATORY MECHANISMS OF VIRAL INFECTIONS.....	5R01 AI13166-04	80,453
MC GRADY, ANGELE V	ELECTROPHYSIOLOGY OF SPERMATOZOAN DIFFERENTIATION.....	5R01 HD09710-03	45,231
MULROW, PATRICK J	PROSTAGLANDINS AND HYPERTENSION.....	2R01 HL19229-02	97,425
MULROW, PATRICK J	ETIOLOGICAL FACTORS IN HYPERTENSION.....	5R01 HL19644-03	134,022
PINHEIRO, MARILYN L.....	EEG AND BEHAVIORAL STUDIES OF AUDITORY PERCEPTION.....	5R01 NS12234-03	37,668
RAPP, JOHN P	BIOCHEMISTRY AND GENETICS OF SALT HYPERTENSION.....	3R01 HL20176-02S1	19,081
REIMANN, ERWIN M	BIOCHEMICAL ROLE OF CYCLIC AMP IN THE GASTRIC MUCOSA.....	2R01 AM15611-07	64,260
REIMANN, ERWIN M	REGULATION OF GLYCOGEN SYNTHASE BY PROTEIN KINASES.....	5R01 AM19231-03	57,020
RHEE, HEE M	DIGITALIS INDUCED ARRHYTHMIA AND NAO,KO-ATPASE ACTIVITY.....	5R23 HL21196-02	45,098
SAWICKI, DOROTHEA L.....	REGULATION OF ALPHAVIRUS TRANSCRIPTION.....	1R01 AI15123-01	46,731
SCHLENDER, KEITH K.....	REGULATION OF THE RENAL GLYCOGEN SYNTHASE SYSTEM.....	5R01 AM14723-08	50,195
SOLOFF, MELVYN S	MECHANISMS OF OXYTOCIN ACTION.....	2R01 HD08406-04	85,889
TAN, SIANG Y	RENIN-MINERALOCORTICOID AXIS IN HYPERTENSIVE DIABETICS.....	5R23 HL21291-02	47,410
TIDRICK, ROBERT T.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA17989-04	106,283
ORGANIZATION TOTAL	27	1,957,131	
UNIVERSITY HEIGHTS			
JOHN CARROLL UNIVERSITY ZIP CODE 44118			
KECK, MAX J	INTEROCULAR TRANSFER OF AFTEREFFECTS IN STRABISMUS.....	1R01 EY02087-01A1	26,502
ORGANIZATION TOTAL	1	26,502	
WILBERFORCE			
CENTRAL STATE UNIVERSITY ZIP CODE 45384			
JOHNSON, MELVIN A, JR	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08052-07S1	600
JOHNSON, MELVIN A, JR	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08052-08	29,338
ORGANIZATION TOTAL	2	29,938	
WOOSTER			
COLLEGE OF WOOSTER ZIP CODE 44691			
HINTON, CLAUDE W.....	CHROMOSOME BEHAVIOR IN DROSOPHILA.....	5R01 GM16536-10	20,448
ORGANIZATION TOTAL	1	20,448	
XENIA			
GREENE MEMORIAL HOSPITAL ZIP CODE 45385			
COLBERT, CHARLES.....	RADIOLOGICAL BONE DENSITY CHANGES IN LEAD POISONING.....	5R01 ES01825-02	57,468
ORGANIZATION TOTAL	1	57,468	
YELLOW SPRINGS			
CHARLES F. KETTERING FOUNDATION—RESEARCH LABORATORY ZIP CODE 45387			
FLEISCHMAN, DARRELL E.....	CYCLIC NUCLEOTIDE FUNCTION IN PHOTORECEPTORS.....	5R01 EY00847-06	35,638
ORGANIZATION TOTAL	1	35,638	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OHIO—Continued			
STATE TOTAL	445	41,769,126	
OKLAHOMA			
DURANT			
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY ZIP CODE 74701			
ROBINSON, JACK L.....	SUPPORT FOR BIOMEDICAL SCIENCES (MINORITIES).....	3S06 RR08003-07S1	1,050
ROBINSON, JACK L.....	SUPPORT FOR BIOMEDICAL SCIENCES (MINORITIES).....	5S06 RR08003-08	69,806
ORGANIZATION TOTAL	2	70,856	
NORMAN			
UNIVERSITY OF OKLAHOMA ZIP CODE 73069			
BASTIAN, JOSEPH A, JR.....	SENSORY PROCESSING IN THE CEREBELLUM.....	5R01 NS12337-04	20,777
BURR, JOHN G.....	BIOLOGICAL FUNCTION OF CHEMICALLY MODIFIED PYRIMIDINES.....	5R01 GM19362-09	45,036
DRYHURST, GLENN.....	ELECTROCHEMISTRY AND INTERFACIAL BEHAVIOR OF PURINES.....	5R01 GM21034-05	49,795
FUNG, BING-MAN.....	WATER AND IONS IN MUSCLE AND COLLAGEN IN AGING.....	5R01 AG00199-02	32,400
HUTCHISON, VICTOR H.....	ERYTHROCYTE PHOSPHATES AND VERTEBRATE GAS TRANSPORT.....	5R01 HL18082-03	43,188
LARSH, HOWARD W.....	ISOLATION OF A SKIN TEST ANTIGEN FOR BLASTOMYCOSIS.....	5R01 AI11610-05	32,206
LARSH, HOWARD W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07078-05	31,862
LEHR, ROLAND E.....	DIOL EPOXIDES: STRUCTURE-ACTIVITY RELATIONSHIP.....	5R01 CA22985-02	39,318
SCHMITZ, FRANCIS J.....	ANTITUMOR AGENTS FROM MARINE ORGANISMS.....	2R01 CA17256-04	58,036
THOMPSON, JAMES N, JR.....	FREQUENCIES OF MUTATOR FACTORS IN NATURAL POPULATIONS.....	5R01 ES01439-03	57,195
VAN DER HELM, DICK.....	STRUCTURE OF ANTICANCER AGENTS BY X-RAY DIFFRACTION.....	2R01 CA17562-04	58,885
VAN DER HELM, DICK.....	STRUCTURE AND CONFORMATION OF SIDEROCHROMES AND PEPTIDES.....	2R01 GM21822-04	73,456
ORGANIZATION TOTAL	12	542,154	
OKLAHOMA CITY			
OKLAHOMA MEDICAL RESEARCH FOUNDATION ZIP CODE 73104			
ALAUPOVIC, PETAR.....	COMPOSITION AND STRUCTURE OF PLASMA LIPOPROTEINS.....	3R01 HL06221-16S1	6,872
ALAUPOVIC, PETAR.....	COMPOSITION AND STRUCTURE OF PLASMA LIPOPROTEINS.....	2R01 HL06221-17	95,478
BOTTOMLEY, RICHARD H.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA16957-04	147,453
BRADFORD, REAGAN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05538-16	59,252
CARPENTER, MARY P.....	METABOLISM OF THE TESTIS IN VITAMIN E DEFICIENCY.....	2R01 HD05641-17	59,512
FLOYD, ROBERT A.....	CARCINOGEN FREE RADICALS IN ARYLAMINE METABOLISM.....	2R01 CA18591-04	37,844
FOX, OWEN F.....	SIALOGLYCOCONJUGATES IN CANCER UNDER DIETARY STRESS.....	5R01 CA20969-02	38,335
GRIFFIN, MARTIN J.....	ROLE OF EPOXIDE HYDRASE IN CHEMICAL CARCINOGENESIS.....	1R01 CA24459-01	59,326
JOHNSON, B CONNOR.....	VITAMIN A METABOLISM AND FUNCTION.....	1R01 AM22053-01	53,074
JOHNSON, B CONNOR.....	NUTRITIONAL REGULATION OF ENZYME ACTIVITY.....	5R01 HL12138-08	57,000
KING, M MARGARET.....	MAMMARY CARCINOGENESIS: DIETARY FATS AND ANTIOXIDANTS.....	1R23 ES01789-01	37,838
MACK, DONALD O.....	DIETARY INDUCTION OF ATP-CITRATE LYASE.....	5R01 AM19072-03	36,735
MC CAY, PAUL B.....	LIPID PEROXIDATION: DIET ANTIOXIDANTS AND CARCINOGENS.....	5R01 AM06978-16	59,141
MC CAY, PAUL B.....	OXIDASE-GENERATED FREE RADICALS IN VIT. E DEFICIENCY.....	5R01 AM08397-18	57,042
MC CAY, PAUL B.....	DIETARY FATS AND ANTIOXIDANTS IN CARCINOGENESIS.....	5R01 CA21019-02	115,611
MC CAY, PAUL B.....	CHEMICAL CARCINOGENESIS IN SPECIFIC DIETARY STATES.....	5R01 CA21419-02	14,398
ONTKO, JOSEPH A.....	UPTAKE AND METABOLISM OF LIPIDS BY THE LIVER.....	5R01 HL13302-09	76,010
RADCLIFFE, ROBERT D.....	PURIFICATION OF BOVINE PLASMINOGEN PROACTIVATOR.....	5R01 HL20846-02	27,283
SCHMIDT, PAUL G.....	ACID PROTEASE STRUCTURE, DYNAMICS AND MECHANISM.....	1R01 GM25703-01	69,612
TANG, JORDAN J.....	STUDIES OF THE COMPONENTS OF HUMAN GASTRIC JUICE.....	3R01 AM01107-22S1	18,394
TANG, JORDAN J.....	STUDIES OF THE COMPONENTS OF HUMAN GASTRIC JUICE.....	2R01 AM01107-23	123,342
ORGANIZATION TOTAL	21	1,249,552	
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
BOGARDUS, CARL R, JR.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12250-07	56,414
BROYLES, ROBERT H.....	DIFFERENTIATION OF RED BLOOD CELLS IN VITRO.....	5R01 AM21386-03	21,183

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OKLAHOMA—Continued			
BULMER, GLENN S.....	PATHOGENESIS OF CRYPTOCOCCOSIS.....	5R01 AI05022-15	32,695
DELANEY, ROBERT.....	STRUCTURE OF RHIZOPUS CHINENSIS ACID PROTEASE.....	5R01 GM22902-03	24,322
DORMER, KENNETH J.....	CARDIODYNAMICS AND HYPERTENSION UNDER CEREBELLAR CONTROL.....	1R23 HL22747-01	34,581
DOWELL, RUSSELL T.....	ADAPTIVE HEART GROWTH IN NEONATES AND ADULTS.....	1R01 HL23025-01	46,009
EICHNER, EDWARD R.....	EFFECT OF ETHANOL AND OTHER DRUGS ON FOLATE METABOLISM.....	5R01 AM21347-02	43,260
FARBER, JAY P.....	EARLY HYPOXIA AND DEVELOPMENT OF RESPIRATORY CONTROL.....	7R01 HL23601-01	34,678
FOREMAN, ROBERT D.....	CENTRAL ORGANIZATION OF CARDIAC AFFERENT NERVES.....	7R01 HL22732-01	28,983
GRAVES, DONALD C.....	STUDIES ON THE BOVINE LEUKEMIA VIRUS.....	1R23 CA23980-01	32,800
GRAY, PETER N.....	AN ENZYME DEFECT IN HUNTINGTON'S DISEASE.....	1R01 NS14642-01	37,857
HOLMES, DONALD D.....	ANIMAL RESOURCE DIAGNOSTIC LABORATORY.....	5P40 RR01098-02	75,867
HORN BROOK, KENT R.....	DRUG AND HORMONE EFFECTS ON CARBOHYDRATE METABOLISM.....	5R01 AM16551-06	34,473
HOWES, ROBERT I, JR.....	ROOT FORMATION IN LOWER VERTEBRATE TOOTH TRANSPLANTS.....	2R01 DE03709-05	18,525
HUMPHREY, G BENNETT.....	COOPERATIVE STUDY OF CANCER CHEMOTHERAPY.....	2R10 CA11233-10	156,225
HUMPHREY, G BENNETT.....	SUPPORT FOR CANCER RESEARCH CENTER.....	5P30 CA19437-03	193,194
KEM, DAVID C.....	INTRACELLULAR ACTION OF ALDOSTERONE IN HYPERTENSION.....	5R01 HL19279-03	87,841
KOSS, MICHAEL C.....	ADRENERGIC CONTROL OF A CENTRAL AUTONOMIC SYSTEM.....	5R01 NS14039-02	28,835
LERNER, MICHAEL P.....	PURIFICATION OF HUMAN BREAST TUMOR PROTEINS.....	1R01 CA22541-01	70,950
LYNN, THOMAS N.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00062-16	544,964
LYNN, THOMAS N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05411-17	105,552
METCOFF, JACK.....	REGULATION OF CELL METABOLISM IN UREMIA.....	5R01 AM19503-02	173,844
METCOFF, JACK.....	MATERNAL MALNUTRITION AND FETAL DEVELOPMENT.....	5R01 HD06915-06	266,846
POLLAY, MICHAEL.....	TRANSCAPILLARY EXCHANGE IN EXPERIMENTAL BRAIN TUMORS.....	5R01 CA21427-03	68,639
STONE, HUBERT L.....	CARDIAC ADAPTATION TO PHYSICAL TRAINING.....	1R01 HL22154-01	50,774
STONE, HUBERT L.....	REPETITIVE EXERCISE AND CARDIAC ENLARGEMENT.....	7R01 HL23206-01	71,799
TAYLOR, FLETCHER B, JR.....	THROMBOSIS AND PLASMA PROTEINS.....	5P01 HL17812-04	384,397
WEST, KELLY M.....	CAUSES OF DIABETES AND OBESITY IN OKLAHOMA INDIANS.....	1R01 AM21462-01	86,360
WEST, KELLY M.....	VASCULAR LESIONS OF DIABETES IN OKLAHOMA INDIANS.....	5R01 HL21039-02	97,307
ZEINER, ARTHUR R.....	BEHAVIORAL CONTROL OF ESSENTIAL HYPERTENSION.....	5R01 HL19844-02	36,350
ORGANIZATION TOTAL	30	2,945,524	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 73104			
SCHERLAG, BENJAMIN J.....	MECHANISMS OF ISCHEMIC RHYTHM DISORDERS.....	7R01 HL23599-01	90,267
ORGANIZATION TOTAL	1	90,267	
STILLWATER			
OKLAHOMA STATE UNIVERSITY AT STILLWATER ZIP CODE 74074			
BERLIN, KENNETH D.....	PHOSPHORUS ANALOGS OF POTENTIAL CARCINOSTATS.....	1R01 CA22770-01	40,131
BLANKEMEYER, JAMES T.....	PHYSIOLOGY OF INTERCELLULAR COUPLING IN MIDGUT.....	1R01 AM21890-01	35,140
CARRAWAY, KERMIT L.....	GLYCOPROTEIN SHEDDING AND MAMMARY TUMOR METASTASIS.....	5R01 CA19985-03	76,097
GHOLSON, ROBERT K.....	THE ORIGIN OF MITOCHONDRIAL PYRIDINE NUCLEOTIDES.....	1R01 GM25356-01	31,408
HURST, JERRY G.....	CALCIUM HOMEOSTASIS: ENDOCRINE ASPECTS.....	5R01 AM16983-06	68,523
LIAO, TA-HSIU T.....	STRUCTURE-FUNCTION RELATIONSHIPS OF DEOXYRIBONUCLEASE.....	5R01 GM22415-03	37,225
MONLUX, ANDREW W.....	SUPPORT FOR REGISTRY OF ANIMAL NEOPLASMS.....	3R01 CA13184-06S1	29,715
MORGAN, PATRICK M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05567-14	21,524
NELSON, ELDON C.....	METABOLISM OF THE VITAMINS A.....	2R01 AM09191-12	54,318
SAUER, JOHN R.....	SALIVARY SECRETION IN A BLOOD-SUCKING ARTHROPOD.....	1R01 AI13535-01A1	48,706
ORGANIZATION TOTAL	10	442,787	
TAHLEQUAH			
NORTHEASTERN OKLAHOMA STATE UNIVERSITY ZIP CODE 74464			
VAN DENBOS, GARY.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	3S06 RR08123-04S1	1,800
VAN DENBOS, GARY.....	BIOMEDICAL SCIENCES SUPPORT (MINORITIES).....	5S06 RR08123-05	78,015
ORGANIZATION TOTAL	2	79,815	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OKLAHOMA—Continued			
TULSA			
OKLAHOMA COLLEGE OF OSTEOPATHIC MEDICINE AND SURGERY ZIP CODE 74119			
CONRAD, ROBERT S.....	METABOLIC EFFECTS OF BRANCHED-CHAIN KETO ACIDS	5R01 AM19927-02	13,652
ORGANIZATION TOTAL	1 13,652		
ORAL ROBERTS UNIVERSITY ZIP CODE 74102			
ARMSTRONG, ROBERT B.....	LOCOMOTION: IDLING METABOLISM AND GAIT DYNAMICS.....	1R01 AM25472-01	75,059
HARDER, HAROLD C.....	TEMPLATE INACTIVATION BY PLATINUM COMPOUNDS	7R01 CA25736-01	66,522
ORGANIZATION TOTAL	2 141,581		
STATE TOTAL	81 5,576,188		
OREGON			
BEAVERTON			
OREGON GRADUATE CENTER FOR STUDY AND RESEARCH ZIP CODE 97005			
BAROFSKY, DOUGLAS F.....	CHEMICAL DYNAMICS OF FDMs OF HYPOTHALAMIC PEPTIDES	1R01 AM20937-01	76,700
DAVES, G DOYLE, JR.....	STRUCTURE ELUCIDATION OF HUMAN TRANSFER FACTOR	1R01 AI14699-01	72,520
HAUSER, FRANK M.....	POLYNUCLEAR ANTITUMOR ANTIBIOTICS: A NEW SYNTHESIS.....	5R01 CA18141-03	45,325
HURST, JAMES K.....	MECHANISMS OF BIOLOGICAL REDOX REACTIONS OF COPPER.....	2R01 GM20943-04	42,659
LOEHR, THOMAS M.....	LASER RAMAN SPECTROSCOPY OF METALLOPROTEINS	2R01 GM18865-07	70,130
SWANSON, LYNWOOD W.....	A SCANNING FIELD ION MICROSCOPE.....	5R01 GM22972-03	58,244
ORGANIZATION TOTAL	6 365,578		
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM--OREGON STATE UNIVERSITY ZIP CODE 97331			
BAYNE, CHRISTOPHER J.....	SCHISTOSOMIASIS: CELL BIOLOGY OF THE INTERMEDIATE HOST.....	5R22 AI13295-03	84,757
BROWN, LYLE R.....	RNA POLYMERASE GENES: STRUCTURE, FUNCTION, AND CONTROL	5R01 GM19617-06	52,506
BUHLER, DONALD R.....	METABOLISM AND TOXICITY OF PYRROLIZIDINE ALKALOIDS.....	3R01 CA22524-01S1	17,253
BUHLER, DONALD R.....	METABOLISM AND TOXICITY OF PYRROLIZIDINE ALKALOIDS.....	5R01 CA22524-02	80,705
DANIELS, MALCOLM.....	GEV HEAVY-ION AND 200 KV X-RAY EXCITATION OF Dna.....	1R01 CA20218-01A1	60,149
FERRO, ADOLPH J.....	REGULATION OF CELL GROWTH BY 5'-METHYLTHIOADENOSINE.....	1R01 CA25756-01	23,555
FERRO, ADOLPH J.....	THE ROLES OF SAM IN THE REGULATION OF MITOSIS	7R01 GM26194-01	41,673
FREED, VIRGIL H.....	TOXICOLOGY OF ENVIRONMENTAL CHEMICALS.....	5P01 ES00040-14	473,454
FREED, VIRGIL H.....	ENVIRONMENTAL HEALTH SCIENCES CENTER.....	5P30 ES00210-11	941,925
FULLERTON, DWIGHT S.....	C(17)-SIDE GROUP GEOMETRY AND CARDENOLIDE ACTIVITY.....	1R01 HL21457-01	59,878
GODWIN, ROBERT K.....	REGIONAL & LONGITUDINAL ANALYSES OF POPULATION POLICY	2R01 HD10660-02	29,135
ISENBERG, IRVIN.....	INTERACTIONS OF CHROMOSOMAL PROTEINS.....	5R01 CA10872-11	107,133
JOHNSON, WALTER C, JR.....	THE CONFORMATION AND FUNCTION OF NUCLEIC ACIDS.....	2R01 GM21479-04	60,708
MATHEWS, CHRISTOPHER K.....	ENZYMOLGY OF NORMAL AND VIRUS-INFECTED BACTERIA	7R01 AI15145-01	64,936
MATHEWS, CHRISTOPHER K.....	DNA PRECURSOR DYNAMICS IN ANIMAL CELLS.....	7R01 CA24323-01	47,419
MILLER, TERRY L.....	PREDIOXINS IN PCP--BIOCHEMICAL EFFECTS AND TOXICITY	1R01 ES01968-01	100,342
NEWBURGH, ROBERT W.....	BIOCHEMISTRY OF NEURAL DEVELOPMENT	5R01 NS09161-22	53,246
NEWBURGH, ROBERT W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07079-13	102,661
PARKS, LEO W.....	ANALYSIS OF THE STEROL COMPONENTS OF YEAST.....	5R01 AM05190-17	43,819
PAWLOWSKI, NORMAN E.....	MECHANISMS FOR BIOLOGICAL ACTIVITY OF CYCLOPROPENES	1R01 CA25766-01	37,324
PEARSON, GEORGE D.....	REPLICATION MAP OF AN ONCOGENIC VIRUS.....	2R01 CA17699-04	169,480
REED, DONALD J.....	CHEMICAL TOXICITY AND GLUTATHIONE REGULATION.....	1R01 ES01978-01	80,321
SCANLAN, RICHARD A.....	N-NITROSAMINES IN FOODS.....	9R01 CA25002-08	87,968
SCHAUP, HENRY W.....	RIBOSOME BIOGENESIS AND FUNCTION.....	1R01 GM25701-01	47,239
SCHMITZ, JOHN A.....	MAMMARY TUMORS--DIETARY FATTY ACIDS/SELENIUM EFFECTS	5R01 CA20998-02	64,696
SELIVONCHICK, DANIEL P.....	MEMBRANE INTEGRITY AND CYCLOPROPENOID FATTY ACIDS.....	1R23 ES01702-01	42,251
SINNHUBER, RUSSELL O.....	PROTEIN EFFECTS OF AFLATOXIN CARCINOGENESIS IN TROUT.....	1R01 CA20990-01A1	64,960
SINNHUBER, RUSSELL O.....	METABOLISM AND CARCINOGENICITY OF AFLATOXINS.....	2R01 ES00541-08	66,340

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
SMALL, ENOCH W.....	STRUCTURAL TRANSITIONS OF NUCLEOSOMES.....	1R01 GM25663-01	48,084
SPIKER, STEVEN L.....	THE ROLE OF PROTEINS IN CHROMATIN STRUCTURE.....	1R01 GM25699-01	46,192
TERRIERE, LEON C.....	DETOXICATION MECHANISMS IN INSECTS.....	5R01 ES00362-20	62,911
THIES, RICHARD W.....	RING EXPANSION ROUTES TO 8,9,13,14-DISECOSTEROIDS.....	2R01 HD08550-05	38,223
TINSLEY, IAN J.....	TOXICOLOGY OF BROMINATED FATTY ACIDS.....	5R01 ES01377-02	52,007
VAN HOLDE, KENSAL E.....	SUBUNIT STRUCTURE OF CHROMATINS.....	5R01 GM22916-03	47,931
WEBER, LAVERN J.....	NIH'S MARINE/FRESHWATER BIOMEDICAL CENTER GRANT.....	1P30 ES01926-01	129,535
WEDMAN, E EDWARD.....	BIOLOGICAL RESEARCH DEVELOPMENT GRANT.....	1S08 RR09120-01	99,592
WHANGER, PHILIP D.....	EFFECTS OF DIETARY FACTORS ON METALLOTHIONEIN LEVELS.....	5R01 AM19285-03	79,424
WHANGER, PHILIP D.....	PRIMATES--SELENIUM DEFICIENCY AND AVAILABILITY.....	1R01 AM21037-01	55,072
WHANGER, PHILIP D.....	FLUORIDE-CADMIUM INTERACTION IN DENTAL CARIES.....	1R01 DE04615-01	19,449
WHANGER, PHILIP D.....	METABOLIC RELATIONSHIPS OF SELENIUM IN MYOPATHIES.....	2R01 NS07413-10A1	68,079
WHITE, JAMES D.....	SYNTHESIS OF MACROLIDE ANTIBIOTICS.....	5R01 AI10964-05	49,401
ORGANIZATION TOTAL	41	3,901,733	

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BAJER, ANDREW S.....	STUDIES ON THE FUNCTION OF THE MITOTIC SPINDLE.....	5R01 GM21741-04	84,322
BERNHARD, SIDNEY A.....	KINETIC ANALYSIS OF ENZYME CATALYSIS.....	5R01 GM10451-14	51,521
BERNHARD, SIDNEY A.....	MOLECULAR INTERACTIONS IN SYNAPTIC TRANSMISSION.....	2R01 NS12240-04	72,196
CAPALDI, RODERICK A.....	ORGANIZATION OF SUCCINIC OXIDASE IN HEART.....	1R01 HL22050-01	80,022
COHEN, SHELDON A.....	PROLONGED NOISE EXPOSURE: A LONGITUDINAL STUDY.....	1R01 ES01764-01	30,546
DAHLQUIST, FREDERICK W.....	ASYMMETRIC BIFUNCTIONAL REAGENTS FOR MACROMOLECULES.....	1R01 GM24415-01	30,188
DAHLQUIST, FREDERICK W.....	ENERGETICS AND DYNAMICS OF LIPID PROTEIN INTERACTIONS.....	1R01 GM24792-01	83,078
FERNALD, RUSSELL.....	NEURAL BASIS OF VISUAL PATTERN RECOGNITION IN FISH.....	1R01 EY02284-01	86,418
GORDON-LICKEY, BARBARA.....	SUPERIOR COLLICULUS AND THE CONTROL OF EYE MOVEMENTS.....	3R01 EY00125-08S1	8,174
GORDON-LICKEY, BARBARA.....	DEVELOPMENTAL ABNORMALITIES OF SUPERIOR COLLICULUS.....	2R01 EY00125-09	76,742
GRIFFITH, O HAYES.....	PHOTOELECTRON MICROSCOPY OF MAMMALIAN MEMBRANES.....	5R01 CA11695-09	116,091
GRIFFITH, O HAYES.....	SPIN LABELING AND MEMBRANE STRUCTURE.....	9R01 GM25698-12	133,175
HERBERT, EDWARD.....	REGULATION OF PRODUCTION OF ACTH IN CELL CULTURE SYSTEMS.....	5R01 AM16879-05	126,200
HERSKOWITZ, IRA.....	PHAGE-HOST INTERACTIONS AND CONTROL OF PHAGE GROWTH.....	5R01 AI11344-06	66,287
HERSKOWITZ, IRA.....	GENETIC CONTROL OF MATING IN YEAST.....	5R01 AI13462-03	55,881
HUDSON, BRUCE S.....	ELECTRONIC AND RAMAN SPECTRAL STUDIES OF MEMBRANES.....	7R01 GM26536-01	41,455
KEANA, JOHN F.....	NEW SPIN LABELS FOR STUDYING BIOLOGICAL MEMBRANES.....	9R01 GM24951-04	85,144
MATTHEWS, BRIAN W.....	X-RAY STRUCTURAL STUDIES OF PROTEINS.....	5R01 GM20066-06	50,768
MATTHEWS, BRIAN W.....	STRUCTURE, FUNCTION AND STABILITY OF T4 PHAGE LYSOZYME.....	2R01 GM21967-04	89,651
NOVICK, AARON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07080-13	120,377
NOVITSKI, EDWARD.....	THE NATURE OF RADIATION INDUCED GENETIC DAMAGE.....	5R01 ES01536-02	64,554
NOVITSKI, EDWARD.....	THE SYNTHESIS AND ANALYSIS OF CHROMOSOMES.....	5R01 GM18678-08	71,930
PETICOLAS, WARNER L.....	LASER RAMAN SCATTERING FROM BIOLOGICAL MACROMOLECULES.....	2R01 GM15547-12	118,045
POSTLETHWAIT, JOHN H.....	GENE AND HORMONE CONTROL OF DROSOPHILA EGG PROTEINS.....	5R01 GM21548-04	53,569
POSTLETHWAIT, JOHN H.....	DETERMINATION AND PATTERN FORMATION IN DROSOPHILA.....	5R01 GM24182-02	70,787
SHELLMAN, JOHN A.....	INTERACTIONS OF NUCLEOTIDES AND PROTEINS.....	2R01 GM20195-21	93,938
SMITH, GERALD R.....	MOLECULAR BIOLOGY OF PHAGE A OPERATOR AND TRANSCRIPTS.....	5R01 AI13079-02	70,335
SPRAGUE, KAREN U.....	MOLECULAR BIOLOGY OF B. MORI FIBROIN AND TRNA GENES.....	1R01 GM25388-01	68,896
STAHL, FRANKLIN W.....	RECOMBINATIONAL INTERMEDIATES IN PHAGE LAMBDA.....	2R01 GM20373-05	71,599
STREISINGER, GEORGE.....	MOLECULAR MECHANISMS OF MUTATION.....	5R01 GM19795-06	69,290
STREISINGER, GEORGE.....	GENETIC STUDIES WITH ZEBRA FISH (BRACHYDANIO RERIO).....	5R01 GM22731-03	142,873
VON HIPPEL, PETER H.....	STRUCTURE AND RELATIONS OF PROTEINS AND NUCLEIC ACIDS.....	2R01 GM15792-12	141,763
WESTON, JAMES A.....	EXTRACELLULAR MATRIX AND MORPHOGENESIS IN MUTANT MICE.....	5R01 DE04316-03	44,444
WOLFE, RAYMOND G, JR.....	CATALYTIC MECHANISM STUDIES--MALIC DEHYDROGENASE.....	5R01 GM21460-20	50,340
ORGANIZATION TOTAL	34	2,620,599	

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BARMACK, NEAL H.....	CENTRAL AND PERIPHERAL CONTROL OF EYE POSITION.....	2R01 EY00848-07	82,609
GROVE, DAVID N.....	THE CHRONICALLY ILL CHILD AND HIS IMPACT ON THE FAMILY.....	1R01 HD11133-01	96,608

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
KAPLAN, MICHAEL W.....	OPTICAL STUDIES OF PHOTORECEPTOR FUNCTION.....	5R01 EY01779-03	49,219
NASHNER, LEWIS M.....	CONTROL OF HUMAN POSTURE STUDIES.....	5R01 NS12661-03	33,247
ROBERTS, WILLIAM J.....	SYMPATHETIC EFFERENT MODULATION OF PAIN.....	1R01 NS13447-01A1	39,491
RUSHMER, DONALD S.....	STUDIES IN CEREBELLAR PHYSIOLOGY.....	2R01 NS02289-17A2	122,274
RUSHMER, DONALD S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05593-11	14,989
ORGANIZATION TOTAL	7	438,437	
MEDICAL RESEARCH FOUNDATION OF OREGON ZIP CODE 97225			
BEATTY, CLARISSA H.....	EFFECTS OF PROSTAGLANDINS ON MYOMETRIAL METABOLISM.....	5R01 HD06069-07	39,142
FAHRENBACH, WOLF H.....	ORGANIZATION OF VISUAL CENTERS IN THE LIMULUS BRAIN.....	5R01 EY00392-11	25,411
FRIKKE, MAUREEN J.....	REGULATION OF MATERNAL REACTIONS TO FETAL ALLOGRAFTS.....	1R01 HD12049-01	68,401
HOWARD, CHARLES F, JR.....	ISLET AMYLOID AND DIABETES IN AGING MONKEYS AND MAN.....	1R01 AM21982-01	46,826
HU, FUNAN.....	STROMAL PIGMENT CELLS OF THE UVEA IN CULTURE.....	5R01 EY02086-02	54,537
KITTINGER, GEORGE W.....	ENDOCRINE CONTROL OF DEVELOPMENT IN THE RHESUS FETUS.....	5R01 HD09820-03	65,180
LASTER, LEONARD.....	SUPPORT FOR REGIONAL PRIMATE RESEARCH CENTER.....	2P40 RR00163-19	2,863,285
MALINOW, MANUEL R.....	RETINAL & CHOROIDAL ATHEROSCLEROSIS IN MONKEYS.....	5R01 EY02040-02	34,669
MALINOW, MANUEL R.....	CHOLESTEROL BINDING SAPONINS AND ATHEROSCLEROSIS.....	5R01 HL16587-04	226,734
MALLEY, ARTHUR.....	ANTIGEN FRAGMENT SUPPRESSION OF THE IGE RESPONSE.....	1R01 AI13875-01A1	53,836
MC NULTY, WILBUR P.....	PCB AND TCDD OROFACIAL TERATOGENESIS IN M. MULATTA.....	5R01 DE04333-02	90,723
MC NULTY, WILBUR P.....	TOXICITY OF PURE PCBs FOR RHESUS MONKEYS.....	1R01 ES01522-01A1	150,080
MONTAGNA, WILLIAM.....	THE BIOLOGY OF SKIN OF MAN AND OTHER PRIMATES.....	3P01 AM08445-14S1	37,946
MONTAGNA, WILLIAM.....	ANNUAL SYMPOSIA ON BIOLOGY OF THE SKIN.....	5R13 AM09431-13	9,000
MONTAGNA, WILLIAM.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05694-09	112,184
NOVY, MILES J.....	ENDOCRINE AND VASCULAR RELATIONSHIPS IN PARTURITION.....	5R01 HD06159-06	137,526
PORTMAN, OSCAR W.....	EXPERIMENTAL VASCULAR SCLEROSIS.....	5R01 HL09744-14	129,418
RESKO, JOHN A.....	STEROID HORMONES AND FETAL DEVELOPMENT.....	2R01 HD07658-04	53,535
SPIES, HAROLD G.....	EVENTS THAT CONTROL FERTILIZATION.....	5P01 HD05969-08	503,776
SPIES, HAROLD G.....	NEURAL INFLUENCE ON HYPOPHYSEAL-GONADAL FUNCTION.....	3R01 HD07602-05S1	18,768
SPIES, HAROLD G.....	NEURAL INFLUENCE ON PROLACTIN SECRETION.....	2R01 HD07602-06	53,426
ORGANIZATION TOTAL	21	4,774,403	
OREGON STATE HIGHER EDUCATION SYSTEM--PORTLAND STATE UNIVERSITY ZIP CODE 97207			
SMEITEK, PAVEL.....	PESTICIDES AND TRANSPORT ACROSS BILAYER LIPID MEMBRANES.....	5R01 ES00937-05	45,886
ORGANIZATION TOTAL	1	45,886	
OREGON STATE HIGHER EDUCATION SYSTEM--UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201			
BAGBY, SUSAN P.....	RENIN-VOLUME INTERACTIONS IN COARCTATION HYPERTENSION.....	5R01 HL19825-02	52,488
BENNETT, WILLIAM M.....	GENTAMICIN: NEPHROTOXICITY AND PHARMACOLOGY.....	5R01 GM22928-03	38,694
BISSONNETTE, JOHN M.....	CONTROL OF FETAL BREATHING MOVEMENTS.....	5R01 HD11251-02	49,471
BISSONNETTE, JOHN M.....	PLACENTAL GLUCOSE TRANSPORT.....	1R01 HD12033-01	83,698
BRUMMETT, ROBERT E.....	KANAMYCIN-ETHACRYNIC ACID INDUCED COCHLEAR DAMAGE.....	5R01 NS12808-03	55,884
BULLOCK, WESLEY W.....	REGULATION OF CUTANEOUS BASOPHIL HYPERSENSITIVITY.....	7R01 DE05365-01	41,387
BURNS, ROBERT P.....	BIOCHEMICAL CYTOLOGY OF DISEASED AND HEALING CORNEA.....	5R01 EY00753-06	78,860
BURNS, ROBERT P.....	HEREDITARY CATARACT IN PEROMYSCUS.....	5R01 EY01726-03	69,388
CAMPBELL, ROBERT A.....	POLYAMINE RADIOIMMUNOASSAY STUDIES IN CANCER (REVISED).....	2R01 CA16328-03A2	189,292
CONNOR, WILLIAM E.....	THE METABOLISM OF STEROLS FROM SHELLFISH AND ALGAE.....	1R01 AM21478-01	60,739
CONNOR, WILLIAM E.....	THE ALTERNATIVE DIET FOR CORONARY DISEASE PREVENTION.....	5R01 HL20910-02	377,397
CRITCHLOW, B VAUGHN.....	NEURAL REGULATION OF ANTERIOR PITUITARY.....	5R01 AM16794-07	70,757
CUCHENS, MARVIN A.....	THE IMMUNOREGULATORY ROLE OF IGD.....	1R23 CA24031-01	35,176
FABER, JAN J.....	PATHOPHYSIOLOGY OF HYDROPS FETALIS.....	1R01 HD12017-01	62,666
FAUST, CHARLES H, JR.....	GENE EXPRESSION IN NORMAL AND MALIGNANT ANIMAL CELLS.....	5R01 CA17401-03	52,574
FEENEY, LYNETTE.....	SYNTHESIS AND PHAGOCYTOSIS IN OCULAR NEUROEPITHELIA.....	5R01 EY00715-07	105,128
FELLMAN, J H.....	AROMATIC AMINO ACID METABOLISM AND AROMATIC AMINES.....	3R01 NS01572-20S1	7,400
FELLMAN, J H.....	TAURINE METABOLISM IN HEART AND BRAIN.....	2R01 NS01572-21	98,037
FLETCHER, WILLIAM S.....	SOUTHWEST ONCOLOGY GROUP (OREGON).....	1R10 CA21116-01A1	50,160
GIPSON, ILENE K.....	CELL MOTILITY AND ADHESION IN CORNEAL WOUND HEALING.....	5R01 EY02118-02	32,972
GREER, MONTE A.....	NEUROENDOCRINE AND THYROID PHYSIOLOGY.....	5R01 AM01447-23	169,932
GROVER, M ROBERT.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00334-12	622,046
HAMMERSTAD, JOHN P.....	PATHOPHYSIOLOGY AND TREATMENT OF TARDIVE DYSKINESIA.....	1R01 NS14689-01	69,154
HECHT, FREDERICK.....	CYTOGENETICS OF CLONAL NEOPLASIAS.....	5R01 CA16747-04	33,019

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
IGLEWSKI, BARBARA H.....	THE ROLE OF PSEUDOMONAS AERUGINOSA EXOTOXINS.....	1R01 AI14671-01A1	60,946
JONES, RICHARD T.....	HEMOGLOBIN: STRUCTURE, FUNCTION AND GENETIC CONTROL.....	5R01 AM17850-05	95,149
JONES, RICHARD T.....	FUNCTIONAL STUDIES OF ABNORMAL HUMAN HEMOGLOBINS.....	5R01 HL20142-02	21,621
KABAT, DAVID.....	CONTROL OF GENE EXPRESSION IN DIFFERENTIATING CELLS.....	5R01 CA23032-10	74,773
KENNAWAY, NANCY G.....	UREA CYCLE: STUDY OF NORMAL AND MUTANT GENE PRODUCTS.....	5R01 AM17906-03	54,051
KLOSTER, FRANK E.....	RANDOMIZED STUDY OF CORONARY BYPASS SURGERY.....	5R01 HL21293-02	72,218
KOLER, ROBERT D.....	GENETIC ALTERATIONS IN HUMAN RED CELLS.....	5R01 AM18006-05	41,368
KOLER, ROBERT D.....	GAS TRANSPORT IN THE FETAL AND POSTNATAL CIRCULATION.....	5R01 HD10595-02	58,587
KOLER, ROBERT D.....	POSTSYNTHETIC MODIFICATIONS OF HEMOGLOBIN IN DIABETICS.....	3R01 HL20393-02S1	665
KOLER, ROBERT D.....	POSTSYNTHETIC MODIFICATIONS OF HEMOGLOBIN IN DIABETICS.....	5R01 HL20393-03	36,772
KRIPPAEBNE, WILLIAM W.....	EFFECT OF FUNCTION ON GRAFTS AND IMPLANTS OF COLLAGEN.....	5R01 HL14126-17	81,989
LAYMAN, DON L.....	COLLAGEN SYNTHESIS BY CULTURED HUMAN VASCULAR CELLS.....	5R01 HL21303-02	83,978
LEES, MARTIN H.....	CARDIOPULMONARY FUNCTION OF METHADONE EXPOSED INFANTS.....	1R01 HD11702-01	93,887
LINMAN, JAMES W.....	PRELEUKEMIC SYNDROME(S): STUDY GROUP PLANNING.....	5P20 CA20728-02	22,172
LITT, MICHAEL.....	CONTROL OF TRANSFER RNA LEVELS IN MAMMALIAN CELLS.....	3R01 CA16557-03S1	2,009
LOVRIEN, EVERETT W.....	GENETIC LINKAGE ANALYSIS IN SELECTED FAMILIES.....	5R01 HD08237-05	84,926
MAGENIS, R ELLEN.....	HUMAN CHROMOSOME MAPPING AND MISBEHAVIOR.....	2R01 HD07997-04A1	51,800
MAHLER, DAVID B.....	CLINICAL BEHAVIOR OF DENTAL RESTORATIVE MATERIALS.....	5R01 DE02320-13	63,054
MAHLER, DAVID B.....	MARGINAL FRACTURE OF DENTAL AMALGAM.....	5R01 DE02936-10	46,351
MASON, HOWARD S.....	MECHANISMS OF OXYGEN METABOLISM.....	5R01 AM07180-16	119,900
METCALFE, JAMES.....	RESPIRATION DURING DEVELOPMENT.....	5P01 HD10034-03	450,711
MEYER, ERNEST A.....	COMPARATIVE CHARACTERISTICS OF GIARDIA TROPHOZOITES.....	5R01 AI13300-03	21,053
MORSE, STEPHEN A.....	INTERACTION OF STEROIDS WITH NEISSERIA GONORRHOEAE.....	5R01 AI12928-03	47,714
MORSE, STEPHEN A.....	PHYSIOLOGY AND METABOLISM OF NEISSERIA GONORRHOEAE.....	5R01 AI13571-03	64,948
PEARSON, ANTHONY A.....	THE DEVELOPMENT OF THE EYE AND ITS ADNEXA.....	1R01 EY02275-01	16,008
RAHIMTOOLA, SHAHBUDIN H.....	PROSPECTIVE STUDY OF BUNDLE BRANCH BLOCK.....	1R01 HL21527-01A1	92,534
RAMPONE, ALFRED J.....	INTESTINAL ABSORPTION OF LIPIDS.....	1R01 AM21056-01	39,044
REYNOLDS, PATRICK J.....	PHYSIOLOGICAL BASIS OF DENTAL ELECTRICAL PAIN THERAPY.....	5R01 DE04281-03	53,780
RICHARDS, THOMAS C.....	CHANGES IN MOUSE COLON DURING CHEMICAL CARCINOGENESIS.....	1R26 CA21480-01A1	38,028
RIKER, WILLIAM K.....	ANTICONVULSANT NEUROPHARMACOLOGY: SITE OF DRUG ACTION.....	5R01 NS12813-02	44,012
RITTENBERG, MARVIN B.....	FUNCTIONAL DIFFERENTIATION IN B LYMPHOCYTES.....	1R01 AI14985-01	93,390
SAVARA, BHIM S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05336-17	24,569
SEAMAN, GEOFFREY V.....	AGING ERYTHROCYTES: BIORECOGNITION AND ELIMINATION.....	2R01 HL18284-04	68,076
SHEARER, THOMAS R.....	SELENIUM METABOLIC EFFECTS AND DENTAL CARIES.....	5R01 DE03536-06	31,484
SHEARER, THOMAS R.....	FLUORIDE-SELENIUM INTERACTION IN DENTAL CARIES.....	5R01 DE03856-05	33,004
SHEARER, THOMAS R.....	FLUORIDE-CADMIUM INTERACTION IN DENTAL CARIES.....	1R01 DE04616-01	39,812
SIEGEL, BENJAMIN V.....	AUTOIMMUNITY AND NEOPLASIA IN NEW ZEALAND BLACK MICE.....	5R01 CA18149-03	60,453
SMITH, CATHERINE A.....	STRUCTURE AND FUNCTION OF THE INNER EAR.....	5R01 NS08813-10	101,137
STARR, ALBERT.....	LATE RESULTS OF VALVE REPLACEMENT: COMPUTER ANALYSIS.....	5R01 HL16461-05	197,824
STONE, ROBERT S.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05412-17	158,829
VERNON, JACK A.....	INVESTIGATION OF AGENTS WHICH DAMAGE THE EAR.....	5P01 NS09889-07	192,657
WALLOCH, RICHARD A.....	BEHAVIORAL EVALUATION OF COCHLEAR IMPLANTS.....	5R01 NS12864-03	54,047
WEIMAR, VIRGINIA L.....	REACTION OF CORNEAL CELLS TO INJURY.....	3R01 EY00238-16S1	75,228
WEITLAUF, HARRY M.....	METABOLIC CHANGES IN PREIMPLANTATION EMBRYOS OF MICE.....	5R01 HD08496-05	57,718
WELEBER, RICHARD G.....	GYRATE ATROPHY OF THE CHOROID AND RETINA.....	1R01 EY02527-01	74,993
WOODWARD, WILLIAM R.....	MAMMALIAN VISUAL SYSTEM: NEUROTRANSMITTER, SCREENING.....	1R01 EY02456-01	90,585
WUEPPER, KIRK D.....	EPIDERMAL TRANSGLUTAMINASE: ROLE IN KERATINIZATION.....	5R01 AM17687-04	27,800
WUEPPER, KIRK D.....	PURIFICATION AND FUNCTION OF HUMAN HMW KININOGEN.....	5R01 HL18618-04	41,422
ORGANIZATION TOTAL	72	5,963,395	
PROVIDENCE MEDICAL CENTER ZIP CODE 97213			
SEAMAN, GEOFFREY V.....	EVALUATION OF DIAGNOSTIC CLINICAL HEMORRHEOLOGY.....	5R01 HL19255-03	47,813
ORGANIZATION TOTAL	1	47,813	
REED COLLEGE ZIP CODE 97202			
ARCH, STEPHEN W.....	REGULATORY PHYSIOLOGY AND BIOCHEMISTRY IN NERVE CELLS.....	2R01 NS11149-04A1	41,446
RUBEN, LAURENS N.....	THE EVOLUTION AND DEVELOPMENT OF IMMUNE RESPONSES.....	5R01 AI12846-04	44,749
RUSSELL, PETER J.....	A RIBOSOME BIOSYNTHESIS MUTANT OF NEUROSPORA.....	2R01 GM22488-03	36,151
ORGANIZATION TOTAL	3	122,346	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
OREGON—Continued			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 97207			
CASEY, DANIEL E.....	PHARMACOLOGICAL PROFILE OF TARDIVE DYSKINESIA	1R01 NS14081-01	43,240
ORGANIZATION TOTAL	1 43,240		
SALEM			
WILLAMETTE UNIVERSITY ZIP CODE 97301			
MASER, STEVEN M.....	A DEMOGRAPHIC STUDY OF CHANGE IN POLITICAL STRUCTURES	1R01 HD12606-01	30,049
ORGANIZATION TOTAL	1 30,049		
STATE TOTAL	188 18,353,479		
PENNSYLVANIA			
BETHLEHEM			
LEHIGH UNIVERSITY ZIP CODE 18015			
CHENG, THOMAS C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07173-02	18,518
SCHAFFER, STEPHEN W.....	TAURINE METABOLISM IN MAMMALIAN HEART.....	5R01 HL18554-03	36,106
SCHRAY, KEITH J.....	ANOMERIC SPECIFICITY AND 1-EPIMERASE ACTIVITIES.....	5R01 GM22378-03	40,618
SCHRAY, KEITH J.....	ENZYME-IMMUNOASSAY CONJUGATE SYNTHESIS.....	1R01 GM25355-01	64,086
YOUNG, THOMAS E.....	ELECTROCHEMICAL STUDIES OF MELANIN PRECURSORS.....	5R01 NS12608-03	35,091
ORGANIZATION TOTAL	5 194,419		
BRYN MAWR			
BRYN MAWR COLLEGE ZIP CODE 19010			
HOFFMAN, HOWARD S.....	PSYCHOPHYSICS OF THE STARTLE REACTION.....	5R01 HD10511-05	84,221
OLDS-CLARKE, PATRICIA J.....	STUDIES OF MAMMALIAN FERTILIZATION	3R01 HD09156-03S1	14,776
OLDS-CLARKE, PATRICIA J.....	STUDIES OF SPERM FUNCTION IN MAMMALIAN FERTILIZATION.....	2R01 HD09156-04	12,216
ORKWISZEWSKI, KATHRYN G.....	GENETIC REGULATION OF MAMMALIAN GALACTOSE METABOLISM	1R01 AM21112-01	13,246
POWERS, ALICE S.....	VISUAL SYSTEM STRUCTURE AND FUNCTION.....	5R01 EY01657-03	17,520
ORGANIZATION TOTAL	5 141,979		
DARBY			
MERCY CATHOLIC MEDICAL CENTER ZIP CODE 19023			
DJERASSI, ISAAC.....	LEUKEMIA CENTER (PLATELET) PROGRAM.....	3R01 CA11630-08S1	62,600
MEYER, EDWARD C.....	CLEARANCE OF PLASMA PROTEINS FROM ALVEOLI.....	2R01 HL13596-07	89,293
ORGANIZATION TOTAL	2 151,893		
EASTON			
LAFAYETTE COLLEGE ZIP CODE 18042			
MAJUMDAR, SHYAMAL K.....	GENETIC EFFECTS OF 5-THIO-D-GLUCOSE IN MICE.....	1R01 HD11306-01	12,340
ORGANIZATION TOTAL	1 12,340		
HAVERFORD			
HAVERFORD COLLEGE ZIP CODE 19041			
GOFF, CHRISTOPHER G.....	MECHANISMS REGULATING GENE EXPRESSION IN YEAST	5R01 GM22756-03	37,236
KESSLER, DIETRICH.....	ACTOMYOSIN AND CONTROL OF CELL MOVEMENTS IN MITOSIS	5R01 GM22924-03	39,123
LERMAN, CHARLES L.....	ACTIVE SITE OF DELTA-AMINOLEVULINIC ACID DEHYDRATASE.....	5R01 ES01572-02	35,007
LOEWY, ARIEL G.....	DISTRIBUTION OF THE ISOPEPTIDE BOND IN CELLULAR PROTEINS.....	2R01 HL04385-17A1	76,933
SANTER, MELVIN.....	COMPARATIVE SEQUENCE STUDIES ON RIBOSOMAL RNA.....	2R01 GM11738-12	79,956
ORGANIZATION TOTAL	5 268,255		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033			
BAIRD, IRWIN L.....	ANATOMICAL STUDIES OF THE INTERNAL EAR.....	2R01 NS07860-12	58,795
BARDIN, C WAYNE.....	ANDROGENS IN REPRODUCTION: PRODUCTION AND ACTIONS.....	2R01 HD05276-08	33,660
BHAVANANDAN, VEERASINGHAM.....	COMPLEX SACCHARIDES OF NORMAL AND CANCER CELL NUCLEI.....	5R01 CA17686-03	53,201
BULLOCK, LESLIE P.....	MECHANISM OF HORMONE ACTION IN ERYTHROPOIETIC CELL.....	5R01 AM19056-03	34,931
CAMPBELL SMITH, PETER J.....	BIOMEDICAL COMPUTING RESOURCE.....	5P41 RR00576-07	37,162
COMBS, JOHN W.....	CELL POPULATION KINETICS OF TUMORS AND HOST TISSUES.....	5R01 CA20002-03	35,294
DAVIDSON, EUGENE A.....	BIOCHEMISTRY OF MUCOPOLYSACCHARIDES.....	2R01 CA15483-11	173,510
DEMERS, LAURENCE M.....	NUTRITION AND HORMONAL INFLUENCES ON LUNG MATURATION.....	5R01 HD06201-07	44,084
FRIEDMAN, ZVI.....	ESSENTIAL FATTY ACIDS, VIT E & PROSTAGLANDINS—NEWBORNS.....	1R01 HD11255-01	59,446
HAMMOND, JAMES M.....	PROLACTIN AND PROLACTIN RECEPTORS IN OVARIAN FUNCTION.....	5R01 HD10122-03	61,961
HARRISON, TIMOTHY S.....	CARDIOVASCULAR DETERMINANTS OF CATECHOLAMINE RELEASE.....	5R01 HL18995-04	98,038
HASS, LOUIS F.....	STUDIES ON THE CONTROL OF SICKLE CELL CRISIS.....	5R01 HL16647-05	84,554
HILL, CHARLES W.....	GENETICS AND BIOCHEMISTRY OF MISSENSE SUPPRESSION.....	5R01 GM16329-11	96,716
HYMAN, RICHARD W.....	MALIGNANCY AND DNA HOMOLGY AMONG THE HERPES VIRUSES.....	2R01 CA16498-04	50,890
ISOM, HARRIET C.....	REGULATION OF DIFFERENTIATION IN HEPATOCYTES IN VITRO.....	1R01 CA23931-01	47,888
JACOB, SAMSON T.....	POLY(A) POLYMERASES FROM LIVER AND HEPATOMAS.....	1R01 CA25078-01	82,800
JEFFERSON, LEONARD S, JR.....	REGULATION OF LIVER GROWTH AND FUNCTION.....	5R01 AM13499-10	77,387
JEFFERSON, LEONARD S, JR.....	REGULATION OF SKELETAL MUSCLE METABOLISM.....	5R01 AM15658-08	66,095
KREIDER, JOHN W.....	CELL DIFFERENTIATION AND NEOPLASIA.....	5R01 CA11097-09	83,586
KREIDER, JOHN W.....	SIGNIFICANCE OF TUMOR LEUCOCYTIC INFILTRATES.....	1R01 CA22869-01	90,298
LANG, C MAX.....	LABORATORY ANIMAL DIAGNOSTIC RESOURCE.....	5P40 RR00469-10	107,517
LEAMAN, DAVID M.....	NARCOTICS AND THE CIRCULATION.....	3R01 HL17954-03S1	2,315
LEHMAN, RALPH A.....	LATERALIZATION OF HANDEDNESS, ATTENTION AND LEARNING.....	7R01 NS15315-01	36,344
LEURE-DU PREE, ALPHONSE E.....	RETINAL ZINC: CELLULAR LOCATION AND VISUAL FUNCTION.....	3R01 EY01438-03S1	8,158
LIETKE, A JAMES.....	ALTERATIONS OF METABOLISM IN ISCHEMIC MYOCARDIUM.....	5R01 HL21209-02	65,419
LIPTON, ALLAN.....	CONTROL OF GROWTH OF MALIGNANT CELLS BY SERUM FACTORS.....	5R01 CA15858-05	82,752
LIU, DAI K.....	CHEMICAL CARCINOGEN AND NUCLEAR RNASES OF RAT LIVER.....	5R01 CA18200-03	59,113
LLOYD, THOMAS A.....	TYROSINE HYDROXYLASE: MECHANISM OF ACTIVATION.....	5R01 GM23134-03	59,114
LOBUE, JOSEPH.....	BIOLOGICAL FUNCTIONS OF PLASMA MEMBRANE SIALIDASE.....	5R01 CA14319-05	72,953
MC CALLISTER, LAWRENCE P.....	ULTRASTRUCTURAL CORRELATES OF MYOCARDIAL ISCHEMIA.....	5R01 HL18631-03	30,465
MC PHERSON, ALEXANDER.....	DIFFACTION ANALYSIS OF FRUCTOSE-1,6-DIPHOSPHATASE.....	1R01 AM25250-01	2,052
MC PHERSON, ALEXANDER.....	X-RAY CRYSTALLOGRAPHIC ANALYSES OF PROTEIN STRUCTURE.....	5R01 GM21398-04	46,837
MC PHERSON, ALEXANDER.....	X-RAY DIFFACTION ANALYSIS OF DNA BINDING PROTEINS.....	1R01 GM24723-01	95,917
MORGAN, HOWARD E.....	METABOLIC REGULATION OF SUGAR TRANSPORT.....	5R01 HL13029-09	47,686
MORGAN, HOWARD E.....	REGULATION OF PROTEIN DEGRADATION IN HEART.....	5R01 HL18258-04	68,537
MORGAN, HOWARD E.....	REGULATION OF PROTEIN TURNOVER IN DIABETIC HEART.....	5R01 HL20388-03	81,995
MORTEL, RODRIGUE.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA16386-03	43,607
MORTIMORE, GLENN E.....	MECHANISM AND REGULATION OF PROTEIN TURNOVER IN LIVER.....	1R01 AM21624-01	118,693
MUNGER, BRYCE L.....	LARYNGEAL SENSORY RECEPTOR MECHANISMS AND SIDS.....	1R01 HD11216-01	71,078
NEELY, JAMES R.....	REGULATION OF MYOCARDIAL FATTY ACID METABOLISM.....	2R01 HL13028-09	63,640
NEELY, JAMES R.....	REGULATION OF METABOLISM IN OXYGEN DEFICIENT HEARTS.....	5R01 HL18206-04	69,373
NEELY, JAMES R.....	EFFECTS OF DIABETES ON CARDIAC FUNCTION AND METABOLISM.....	5R01 HL20484-03	48,195
NELLIS, STEPHEN H.....	MICROVASCULAR PRESSURES IN THE INTACT BEATING HEART.....	1R01 HL22917-C	66,705
NELSON, NICHOLAS M.....	PULMONARY SCOR: PATHOPHYSIOLOGY, MANAGEMENT OF IRDS.....	5P50 HL19190-02	473,238
PEGG, ANTHONY E.....	PERSISTENCE OF ALKYLATED DNA IN CARCINOGENESIS.....	5R01 CA18137-03	40,673
PEGG, ANTHONY E.....	MAMMALIAN POLYAMINE METABOLISM.....	5R01 CA18138-03	53,740
PIERCE, WILLIAM S.....	LEFT VENTRICULAR BYPASS FOR MYOCARDIAL INFARCTION.....	2R01 HL13426-09	218,774
PIERCE, WILLIAM S.....	DEVELOPMENT AND EVALUATION OF AN ARTIFICIAL HEART.....	5R01 HL20356-02	220,007
PRYSTOWSKY, HARRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05680-10	175,161
PUBOLS, BENJAMIN H, JR.....	NEURAL PATHWAYS INVOLVED IN TACTILE DISCRIMINATION.....	1R01 NS13418-01A1	82,213
RANNELS, D EUGENE, JR.....	REGULATION OF PROTEIN TURNOVER IN LUNG TISSUE.....	5R01 HL20344-02	16,815
RAPP, FRED.....	THE CHARACTERIZATION OF MEASLES VIRUS LATENCY.....	2R01 AI22203-04A1	66,929
RAPP, FRED.....	ETIOLOGY OF PROSTATE TUMORS.....	5R26 CA16365-05	116,008
RAPP, FRED.....	SUPPORT FOR SPECIALIZED CANCER RESEARCH CENTER.....	5P30 CA18450-03	131,874
ROSE, RICHARD C.....	INTESTINAL TRANSPORT OF WATER-SOLUBLE VITAMINS.....	5R01 AM19119-03	50,524
ROSENBERG, ABRAHAM G.....	COMPLEX GLYCOLIPIDS OF BRAIN AND RELATED SYSTEMS.....	5R01 NS08258-10	119,841

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SCHOOLWERTH, ANTON C.....	MITOCHONDRIAL TRANSPORT AND RENAL AMMONIAGENESIS.....	5R01 AM19714-02	46,199
SEVERS, WALTER B.....	ANGIOTENSIN NEUROPHARMACOLOGY: RELATIONSHIP TO SODIUM.....	5R01 HL19320-03	50,441
SHIMAN, ROSS.....	REGULATION OF TYROSINE SYNTHESIS IN HEPATOMA CELLS.....	5R01 CA14881-06	70,634
ST JEOR, STEPHEN C.....	HERPES VIRUS-INDUCED MALIGNANCY.....	5R01 CA21799-02	73,497
TAYLOR, JOHN M.....	METABOLISM OF LIVER MRNA IN DIABETES.....	1R01 AM22013-01	40,929
TAYLOR, JOHN M.....	CONTROL OF ALBUMIN SYNTHESIS IN LIVER AND HEPATOMAS.....	5R01 CA16746-05	75,157
TENSER, RICHARD B.....	LATENT VIRUS INFECTIONS OF THE NERVOUS SYSTEM.....	1R01 NS14568-01	55,658
TEVETHIA, MARY J.....	MUTAGENESIS OF SPECIFIC REGIONS OF THE SV40 GENOME.....	1R01 CA24694-01	59,857
TEVETHIA, SATVIR S.....	BIOLOGY OF SV40 SPECIFIC TRANSPLANTATION ANTIGEN.....	1R01 CA25000-01	130,739
VAN BUSKIRK, E MICHAEL.....	THE VERTEBRATE EYE: STUDIES OF AQUEOUS OUTFLOW.....	2R01 EY01563-04	36,154
VANNUCCI, ROBERT C.....	OXIDATIVE METABOLISM IN BRAINS OF PERINATAL ANIMALS.....	2R01 HD09109-04	68,729
WEISZ, JUDITH.....	ANDROGENS, BRAIN DIFFERENTIATION AND FUNCTION.....	2R01 HD09542-06	96,705
WEISZ, JUDITH.....	CATECHOL-ESTROGENS, CNS FUNCTION & REPRODUCTION.....	2R01 HD09734-04	89,780
WENGER, JANE I.....	REGULATION OF MYOCARDIAL ACYLCARNITINE TRANSPORT.....	5R01 HL20308-02	40,601
WHITFIELD, CAROL F.....	CONTROL OF SUGAR ENTRY IN NORMAL AND DIABETIC HEART.....	1R23 HL21842-01	36,964
WHITMAN, VICTOR.....	CARDIAC ADAPTATION TO AGING AND STRESS.....	1R23 HL21393-01	43,823
ZAGON, IAN S.....	STUDIES IN NEURO-ONCOGENESIS AND NEUROGENESIS.....	1R01 CA22815-01	50,268
ZELIS, ROBERT F.....	PERIPHERAL CIRCULATION IN HEART FAILURE.....	3R01 HL17853-03S1	1,980
ZOLLER, LAWRENCE C.....	STRUCTURE AND FUNCTION OF SPECIALIZED GRANULOSA CELLS.....	1R01 HD11609-01	21,639
ORGANIZATION TOTAL	75	5,574,312	
LANCASTER			
LANCASTER CLEFT PALATE CLINIC		ZIP CODE 17602	
OKA, SEISHI W.....	A GENETIC STUDY OF HUMAN OROFACIAL CLEFTS.....	5R23 DE04537-03	31,179
STARR, PHILIP.....	BEHAVIORAL STAGES FOR CLEFT PALATE PATIENTS.....	1R01 DE04779-01	49,994
ORGANIZATION TOTAL	2	81,173	
ST. JOSEPH HOSPITAL		ZIP CODE 17604	
EISENBERG, RITA B.....	INFANT PERCEPTION OF SPEECH AND NONSPEECH SOUNDS.....	3R01 HD00732-12S1	13,250
ORGANIZATION TOTAL	1	13,250	
LINCOLN UNIVERSITY			
LINCOLN UNIVERSITY		ZIP CODE 19352	
JOHNSON, WILLIAM T.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08002-07	20,117
JOHNSON, WILLIAM T.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08002-08	138,137
ORGANIZATION TOTAL	2	158,254	
PHILADELPHIA			
ACADEMY OF NATURAL SCIENCES		ZIP CODE 19103	
DAVIS, GEORGE M.....	ANALYSIS OF MOLLUSCAN FAUNAS AND ASIAN SCHISTOSOMIASIS.....	5R22 AI11373-05	35,688
ORGANIZATION TOTAL	1	35,688	
ALBERT EINSTEIN MEDICAL CENTER		ZIP CODE 19141	
BUTLER, ROBERT C.....	ROLE OF MEDIATORS IN LEUKEMIC CELL IMMUNE RESPONSES.....	1R23 CA24717-01	30,966
KIMBEL, PHILIP.....	DYNAMICS OF NEUTROPHIL ELASTASE IN THE LUNG.....	5P01 HL20994-02	904,056
KIMBEL, PHILIP.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05505-15	41,250
SPECTER, STEVEN C.....	IMMUNITY IN ORAL HERPES VIRUS INFECTION.....	5R23 DE04419-02	14,143
ORGANIZATION TOTAL	4	990,415	
CHILDREN'S HOSPITAL OF PHILADELPHIA		ZIP CODE 19104	
ASAKURA, TOSHIO.....	MECHANISM OF OXYGEN SUPPLY TO TISSUE.....	3R01 HL18226-03S1	39,740
ASAKURA, TOSHIO.....	MECHANISM OF OXYGEN SUPPLY TO TISSUE.....	2R01 HL18226-04	39,934
ASAKURA, TOSHIO.....	STUDIES IN SICKLE CELL DISEASE.....	1R01 HL20750-01A1	82,934
BAKER, LESTER.....	HYPOGLYCEMIA IN SMALL FOR GESTATIONAL AGE NEWBORNS.....	2R01 AM13518-16	103,244
BONGIOVANNI, ALFRED M.....	HORMONAL FUNCTION IN GROWTH AND DEVELOPMENT IN CHILDHOOD.....	5R01 HD00371-25	104,475
CORTNER, JEAN A.....	GENETIC HETEROGENEITY OF ACID LIPASE-ATHEROSCLEROSIS.....	5R01 HL18723-03	72,495

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
CORTNER, JEAN A.....	GENERAL CLINICAL RESEARCH CENTER FOR CHILDREN.....	5M01 RR00240-14	572,353
CREASEY, WILLIAM A.....	MECHANISM OF ACTION OF NEW ANTICANCER AGENTS.....	1R01 CA23147-01	77,681
D'ANGIO, GIULIO J.....	PEDIATRIC CANCER RESEARCH CENTER.....	5P01 CA14489-06	710,608
D'ANGIO, GIULIO J.....	RADIATION ONCOGENESIS & ACTINOMYCID-D.....	3R01 CA23111-01S1	11,810
EVANS, AUDREY E.....	CHILDREN'S CANCER STUDY GROUP A.....	5R10 CA11796-09	248,451
EVANS, AUDREY E.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19372-03	139,478
GLICK, MARY C.....	MEMBRANE STRUCTURE RELATED TO ONCOGENESIS & CELL DIV.....	3R01 CA14037-04S1	7,274
GOLDMAN, ALLEN S.....	CRANIOFACIAL ANOMALIES AND PROTEIN RECEPTORS.....	5R01 DE04622-02	110,339
HARRIS, T N.....	AGING AND IMMUNE RESPONSES TO TRANSPLANTS AND TUMORS.....	5R01 AG00453-04	36,520
HENLE, WERNER.....	RELATION OF EPSTEIN-BARR VIRUS TO HUMAN MALIGNANCIES.....	5R01 CA04568-20	175,990
HUMMELER, KLAUS.....	THE BIOLOGY OF HUMAN NEUROBLASTOMA.....	5R01 CA13451-06	101,506
HUMMELER, KLAUS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05506-16	133,878
KATZ, SOLOMON H.....	ENVIRONMENTAL LEAD AND NEUROPSYCHOLOGICAL DEVELOPMENT.....	5R01 ES01335-03	97,049
KATZ, SOLOMON H.....	ANTECEDENTS OF ADOLESCENT HYPERTENSION.....	5R01 HL19869-03	219,917
KOLDOVSKY, OTAKAR.....	METABOLISM OF THE DEVELOPING SMALL INTESTINE.....	2R01 AM14531-08	112,795
PLOTKIN, STANLEY A.....	PREVENTION OF CMV INFECTIONS IN TRANSPLANT RECIPIENTS.....	1R01 AI14927-01	73,050
RASHKIND, WILLIAM J.....	NONSURGICAL TREATMENT OF CONGENITAL HEART DISEASE.....	5R01 HL12307-08	96,662
SCHWARTZ, ELIAS.....	HEME AND GLOBIN SYNTHESIS IN INFANTS AND CHILDREN.....	5R01 AM16691-07	102,254
SEGAL, STANTON.....	GENETIC METABOLIC DISEASES OF INFANCY AND CHILDHOOD.....	5R01 AM10894-13	220,001
SEGAL, STANTON.....	CELLULAR MECHANISMS IN MENTAL RETARDATION.....	5P01 HD08536-04	619,980
STATES, BEATRICE M.....	METABOLIC BASIS OF CYSTINE STORAGE DISEASE.....	5R01 AM13900-09	81,257
YAFFE, SUMNER J.....	REGULATION OF DRUG METABOLISM DURING DEVELOPMENT.....	2R01 HD10063-03	71,695
ORGANIZATION TOTAL	28 4,463,370		
DREXEL UNIVERSITY ZIP CODE 19104			
BEARD, RICHARD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07129-09	27,745
GRIFFITH, BELVER C.....	INFORMATION AND KNOWLEDGE IN BIOMEDICAL RESEARCH.....	2R01 LM00911-06	70,152
MODE, CHARLES J.....	COMPUTER MACROSIMULATION IN FAMILY PLANNING EVALUATION.....	2R01 HD09571-04	59,531
NES, WILLIAM R.....	INFLUENCE OF STRUCTURE ON ISOPENTENOID METABOLISM.....	5R01 AM12172-11	114,680
ORGANIZATION TOTAL	4 272,108		
FOX CHASE CANCER CENTER ZIP CODE 19111			
BROWN, DARRELL Q.....	LUCANTHONE AS AN ADJUVANT IN RADIOTHERAPY.....	5R01 CA20614-03	52,574
ENGSTROM, PAUL F.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA23229-02	80,675
HAMPTON, ALEXANDER.....	CHEMISTRY AND ENZYMOLOGY OF ANTICANCER PURINE ANALOGS.....	5R01 CA11196-10	128,172
LOEB, LAWRENCE A.....	THE FIDELITY OF DNA REPLICATION IN HUMAN LYMPHOCYTES.....	5R01 CA11524-08	33,137
ZWEIDLER, ALFRED.....	HISTONES IN CELL DIFFERENTIATION AND CARCINOGENESIS.....	5R01 CA15135-05	65,311
ORGANIZATION TOTAL	5 359,869		
HANNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
ALTEVEER, ROBERT J.....	METABOLISM OF SPLANCHNIC TISSUES DURING ENDOTOXIC SHOCK.....	5R01 GM22849-03	81,074
BRADY, LUTHER W.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12252-07	150,871
BRADY, LUTHER W.....	GYNECOLOGIC ONCOLOGY GROUP.....	2R10 CA12478-08	146,930
BRADY, LUTHER W.....	RADIATION THERAPY CLINICAL AND RESEARCH CENTER.....	2P01 CA14043-04	328,641
BRODSKY, ISADORE.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA13611-06	118,335
BRODSKY, ISADORE.....	PROGRAM PROJECT-MEDICAL ONCOLOGY.....	3P01 CA17053-03S1	54,659
CROWELL, RICHARD L.....	VIRAL INTERFERENCE IN CARRIER CULTURES.....	5R01 AI03771-18	86,424
DAMJANOV, IVAN.....	EMBRYO DERIVED TERATOCARCINOMA.....	5R01 CA23097-02	62,956
DE TERRA, NOEL.....	CONTROL OF NUCLEAR POSITIONING IN THE CILIATE STENTOR.....	1R01 GM24567-01	66,966
DI PALMA, JOSEPH R.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA18225-02	77,427
DI PALMA, JOSEPH R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05413-17	108,910
ESFAHANI, MOJTABA.....	STRUCTURE AND FUNCTION OF LIPIDS IN MEMBRANES.....	7R01 GM26452-01	55,504
FLEISCHMAJER, RAUL.....	CHEMICAL ANALYSIS OF COLLAGEN TYPES IN SCLERODERMA.....	1R01 AM20968-01	106,234
HEINDEL, NED D.....	MELANOMA DELINEATING RADIOPHARMACEUTICALS.....	1R01 CA22578-01	83,139
KAHN, SIGMUND B.....	ONCOLOGY EDUCATION EVALUATION AND DEVELOPMENT.....	2R25 CA17963-04	83,992
KALIA, MADHU.....	PULMONARY REFLEXES-CENTRAL PATHWAYS.....	2R01 HL17800-04	38,260
KOFFLER, DAVID.....	TISSUE INJURY IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	7R01 AM21715-01	31,626
KOFFLER, DAVID.....	TISSUE INJURY MECHANISMS IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	5R01 AM21715-02	104,812
KOFFLER, DAVID.....	IMMUNOPATHOGENESIS OF CNS DISEASE IN SLE.....	1R01 AM21789-01	82,688
LAVINE, ROBERT L.....	DIABETOGENIC EFFECT OF L-ASPARAGINASE.....	1R01 AM21202-01	78,700

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
LONG, CAROLE A.....	H-2 COMPLEX AND SUSCEPTIBILITY TO MAMMARY TUMOR VIRUS.....	5R01 CA22720-02	98,738
MAGUIRE, HENRY C, JR.....	REGULATION OF THE IMMUNE RESPONSE TO CONTACT ALLERGENS.....	5R01 AI13337-02	75,613
MARTINEZ-HERNANDEZ, ANTONIO.....	THE BASEMENT MEMBRANE IN DIABETES.....	7R01 AM25641-01	33,844
MISANTONE, LOUIS J.....	MECHANISMS OF RECOVERY OF BEHAVIORAL FUNCTION.....	1R01 NS14684-01	55,920
MOORE, DAN H.....	ETIOLOGICAL STUDIES OF MAMMARY CARCINOMA.....	5R01 CA22413-02	278,492
OHNISHI, TSUYOSHI.....	ISOLATION OF CA-BINDING PROTEINS FROM ERYTHROCYTES.....	1R01 HL23200-01	41,116
PRICE, HENRY L.....	AUTONOMIC AND CIRCULATORY ACTIONS OF ANESTHETICS.....	5R01 HL15392-06	42,191
PRICE, HENRY L.....	EFFECT OF ANESTHETICS ON MYOCARDIAL FUNCTION.....	2R01 HL15799-04	80,973
ROSE, LESLIE L.....	METABOLIC STUDIES OF HUMAN UTERINE NEOPLASMS.....	2R01 CA18737-04	77,068
ORGANIZATION TOTAL	29	2,732,103	
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
BAYER, MANFRED E.....	MULTIFUNCTIONAL ZONES ON THE BACTERIAL SURFACE.....	5R01 AI10414-05	59,864
BERMAN, HELEN.....	MODEL COMPOUNDS FOR NUCLEIC ACID INTERACTIONS.....	2R01 GM21589-04	58,724
BLUMBERG, BARUCH S.....	CANCER CLINICAL RESEARCH AT THE FOX CHASE CENTER.....	2P01 CA06551-15	797,245
BOSMA, MELVIN J.....	REGULATION OF IMMUNOGLOBULIN PRODUCTION.....	5R01 AI13323-03	103,838
BOSMA, MELVIN J.....	HIDDEN IMMUNOGLOBULIN ALLOTYPES IN MICE.....	5R01 CA04946-18	45,160
COHEN, LEONARD H.....	DEVELOPMENTAL CHANGES IN CHROMOSOMAL PROTEINS.....	5R01 GM24019-02	65,346
CREECH, RICHARD H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA18281-04	259,925
GLUSKER, JENNY P.....	APPLICATION OF CRYSTALLOGRAPHIC TECHNIQUES.....	5R01 CA10925-29	164,666
GUPTA, RAJ K.....	SPECTRAL STUDIES OF HEME- AND METAL PROTEINS.....	5R01 AM19454-03	35,225
KNUDSON, ALFRED G, JR.....	CONSTRUCTION AND EQUIPPING OF A P3 CONTAINMENT FACILITY.....	1P30 AI15309-01	45,785
KNUDSON, ALFRED G, JR.....	COMPREHENSIVE CANCER CENTER PROGRAM AT FOX CHASE.....	5P30 CA06927-16	3,486,971
KNUDSON, ALFRED G, JR.....	BIOMATHEMATICAL APPROACHES TO CANCER.....	1R01 CA22780-01	268,400
KNUDSON, ALFRED G, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05539-16	133,871
MARCUS, ABRAHAM.....	INITIATION AND PEPTIDE SYNTHESIS IN VITRO.....	5R01 GM15122-11	92,054
MARCUS, ABRAHAM.....	MOLECULAR REGULATION OF CELL GROWTH IN CULTURE.....	5R01 GM20664-05	54,400
MASTRANGELO, MICHAEL J.....	CLINICAL & LABORATORY MALIGNANT MELANOMA INTEGRATED PROG.....	3R01 CA13456-05S1	77,286
MASTRANGELO, MICHAEL J.....	CLINICAL & LABORATORY MALIGNANT MELANOMA INTEGRATED PROG.....	2R01 CA13456-06	50,050
MILDVAN, ALBERT S.....	NMR STUDIES OF ENZYME-METAL-SUBSTRATE INTERACTIONS.....	5R01 AM13351-11	95,830
MINTZ, BEATRICE.....	GENE CONTROL OF MAMMALIAN DEVELOPMENT AND DISEASE.....	5R01 HD01646-19	231,687
NEMER, MARTIN J.....	GENE EXPRESSION IN EMBRYOGENESIS.....	2R01 HD04367-17	107,020
RIBLET, ROY.....	GENETIC ANALYSIS OF THE IMMUNE RESPONSE.....	5R01 AI13797-02	42,040
ROSE, IRWIN A.....	REGULATION OF CARBOHYDRATE METABOLISM.....	5R01 AM17320-15	61,802
ROSE, IRWIN A.....	CONTROL OF HEXOKINASE LOSS IN DIABETES.....	1R01 AM21811-01	47,414
ROSE, IRWIN A.....	ENZYME MECHANISMS OF C-H BOND ACTIVATION.....	5R01 GM20940-15	64,817
ROSE, ZELDA B.....	ENZYMES OF 2,3-DIPHOSPHOGLYCERATE METABOLISM.....	5R01 GM19875-07	61,463
ROSS, MORRIS H.....	REGULATION OF TUMOR SUSCEPTIBILITY.....	5R01 CA16442-04	89,744
SOROF, SAM.....	MACROMOLECULES IN LIVER CARCINOGENESIS.....	5R01 CA05945-15	82,730
SOROF, SAM.....	MAMMARY CARCINOGENESIS AND PROTEINS IN ORGAN CULTURE.....	5R01 CA21522-02	81,365
SUMMERS, JESSE W.....	GENOME STRUCTURE AND REPLICATION OF HEPATITIS B VIRUS.....	1R01 AI15166-01	66,640
TARTOF, KENNETH D.....	STRUCTURE AND FUNCTION OF GENES.....	5R01 GM19194-07	85,841
TAYLOR, JOHN M.....	THE IN VIVO TRANSCRIPTION OF RNA TUMOR VIRUS GENOMES.....	1R01 CA22651-01	19,390
WEIGERT, MARTIN G.....	GENETIC CONTROL OF ANTIBODY STRUCTURE.....	5R01 GM20964-05	137,943
ORGANIZATION TOTAL	32	7,074,536	
LANKENAU HOSPITAL ZIP CODE 19151			
CEVALLOS, WILLIAM H.....	UNSATURATED FATS—MODE OF HYPOCHOLESTEROLEMIC ACTION.....	3R01 HL17564-03S1	3,715
CHAO, TESSA L.....	THE ANTISICKLING EFFECTS OF IMIDOESTERS.....	5R23 HL21129-02	36,060
GABUZDA, THOMAS G.....	REGULATION IN DEVELOPING ERYTHROID CELLS.....	5R01 HL16654-06	61,816
HOLMES, WILLIAM L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05585-12	26,183
HOLROYDE, CHRISTOPHER P.....	METABOLIC STUDY OF ADULT AND PEDIATRIC CANCER PATIENTS.....	5R01 CA20960-02	62,373
REICHARD, GEORGE A, JR.....	METABOLIC SUBSTRATE UTILIZATION IN MAN.....	2R01 AM13527-08	133,535
ORGANIZATION TOTAL	6	323,682	
MARRIAGE COUNCIL OF PHILADELPHIA ZIP CODE 19104			
MILLER, WILLIAM R.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09069-02	100,281
ORGANIZATION TOTAL	1	100,281	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129			
BASKIN, STEVEN I.....	REGULATION OF LEUKEMIC PROLIFERATION BY TAURINE.....	5R01 CA22170-02	30,393
BERMAN, NANCY E.....	EXPERIMENTAL ANALYSIS OF STRABISMUS.....	1R01 EY02088-01A1	100,661
BOZZOLA, JOHN J.....	A RIBOSOMAL VACCINE AGAINST DENTAL CARIES.....	1R23 DE05039-01	28,928
DI BERARDINO, MARIE A.....	NORMAL DIFFERENTIATION AND CARCINOGENESIS.....	1R01 GM23635-01A1	92,755
GREENE, ROLAND F.....	ANALYSIS OF M-RNA IN-HEPATOMAS.....	5R01 CA20595-02	53,747
MARSH, JULIAN B.....	STUDIES OF THE BIOSYNTHESIS OF PLASMA LIPOPROTEIN.....	5R01 HL19168-03	63,397
MARSH, JULIAN B.....	CELLULAR AND MOLECULAR BIOLOGY OF LIPOPROTEIN METABOLISM.....	1P01 HL22633-01	628,565
MURASKO, DONNA M.....	STIMULATORY EFFECT OF IMMUNIZATION ON TUMORIGENESIS.....	1R01 CA23353-01	52,320
MURPHY, E HAZEL.....	DEVELOPMENT AND FUNCTION OF THE VISUAL SYSTEM.....	1R01 EY02488-01	148,720
PAUCKER, KURT.....	SEROLOGY OF ACTIVE SITES ON HUMAN INTERFERONS.....	5R01 AI13649-02	44,888
ROBERTS, JAY.....	ROLE OF BIOLOGICAL MEMBRANES IN AGING PROCESSES.....	5P01 AG00003-07	178,859
ROBERTS, JAY.....	PHARMACOLOGIC STUDIES ON GENESIS OF CARDIAC RHYTHMICITY.....	5R01 HL13666-06	60,843
ROSS, LEONARD L.....	DEVELOPMENT AND REGENERATION OF THE NERVOUS SYSTEM.....	5P01 NS13768-02	501,810
RUBIN, WALTER.....	A FINE STRUCTURAL STUDY OF HUMAN GASTRIC EPITHELIA.....	3R01 AM14348-08S1	20,268
SCHICK, PAUL K.....	THE STRUCTURE AND FUNCTION OF PLATELET MEMBRANES.....	2R01 HL18249-04	77,805
SUTNICK, ALTON I.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05418-17	88,639
TESSLER, ALAN R.....	AXONAL SPROUTING & FUNCTIONAL RECOVERY IN SPINAL CORD.....	1R01 NS14477-01	42,332
ORGANIZATION TOTAL	17 2,214,930		
PENNSYLVANIA HOSPITAL ZIP CODE 19107			
BOGGS, THOMAS R, JR.....	PREMATURITY, VITAMIN E & RETROLENTAL FIBROPLASIA.....	3R01 EY01723-01S2	511,761
BOGGS, THOMAS R, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05590-14	42,885
LERNER, HARVEY J.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA13613-06	73,594
LERNER, HARVEY J.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20187-02	51,195
LING, GILBERT N.....	NMR STUDY OF WATER IN CANCER AND IN NORMAL TISSUES.....	5R01 CA16301-04	66,351
LING, GILBERT N.....	CELL WATER, IONS AND CONTROL MECHANISMS.....	5R01 GM11422-14	118,953
WALLACH, EDWARD E.....	INVESTIGATIONS OF THE MECHANICAL ASPECTS OF OVULATION.....	2R01 HD05948-05	75,384
ORGANIZATION TOTAL	7 940,123		
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC WELFARE—EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE ZIP CODE 19129			
BUKOVSKY, JOSEF.....	ANALYSIS OF EIM AND RECONSTITUTION OF EXCITABLE MEMBRANE.....	1R01 GM25100-01	38,020
ORGANIZATION TOTAL	1 38,020		
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE ZIP CODE 19104			
JOSHI, HEYNER S.....	ANTIGENIC STATUS OF THE MURINE PREIMPLANTATION EMBRYO.....	1R01 HD11566-01	54,956
ORGANIZATION TOTAL	1 54,956		
PHILADELPHIA GERIATRIC CENTER ZIP CODE 19141			
ALTSCHULER, HENRY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05611-10	39,354
GRANICK, SAMUEL.....	ORGANIC BRAIN SYNDROME IN ELDERLY COMMUNITY RESIDENTS.....	5R01 AG00768-02	95,648
LAWTON, M POWELL.....	ACTIVITY, MORALE AND LIVING ARRANGEMENTS OF THE AGED.....	5R01 AG00575-02	89,982
LAWTON, M POWELL.....	ASSESSMENT AND THE MENTAL HEALTH OF THE ELDERLY.....	5R01 AG00895-02	128,330
ORGANIZATION TOTAL	4 353,314		
PRESBYTERIAN-UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER ZIP CODE 19104			
BLOUGH, HERBERT A.....	TUMOR VIRUS LIPIDS: STRUCTURE AND BIOSYNTHESIS.....	5R01 CA15370-05	109,125
BURGESS, BENJAMIN F, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05610-12	21,091
LATIES, ALAN M.....	AUTONOMIC INNERVATION OF THE EYE.....	5R01 EY01194-06	120,886
ORGANIZATION TOTAL	3 251,102		
ST. CHRISTOPHER'S HOSPITAL FOR CHILDREN ZIP CODE 19133			
SMITH, DAVID S.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00075-15	248,131
ORGANIZATION TOTAL	1 248,131		
TEMPLE UNIVERSITY ZIP CODE 19122			
ADELMAN, RICHARD C.....	BIOCHEMICAL REGULATION OF AGING PROCESSES.....	3P01 AG00368-07S1	6,209
ADELMAN, RICHARD C.....	BIOCHEMICAL REGULATION OF AGING PROCESSES.....	5P01 AG00368-08	301,314
ALEO, JOSEPH J.....	GENETIC AND EPIDEMIOLOGICAL STUDY OF SALIVARY PROTEINS.....	5R01 DE04279-02	17,410

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
ALEO, JOSEPH J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05339-11	15,950
ALTER, MILTON.....	CREUTZFELDT JAKOB DISEASE: A TRANSMISSIBLE DEMENTIA.....	5R01 NS13766-02	4,514
BASERGA, RENATO L.....	STUDY OF FACTORS CONTROLLING CELLULAR PROLIFERATION.....	2R01 CA08373-14	109,845
BASERGA, RENATO L.....	A CORRELATED STUDY ON THE BIOLOGY OF NEOPLASIA.....	5P01 CA12923-07	342,122
BASERGA, RENATO L.....	SYNCHRONIZATION OF CELLS IN VIVO.....	5R26 CA14907-05	85,591
BASERGA, RENATO L.....	CHROMOSOMAL PROTEINS IN CELL PROLIFERATION.....	5R01 GM22359-03	74,239
BLAINE, EDWARD H.....	ANGIOTENSIN, HYPERTENSION AND CENTRAL NERVOUS SYSTEM.....	7R01 HL22617-01	29,686
BODEN, GUENTHER.....	SECRETIN: IN HEALTH, DISEASE, & MOLECULAR HETEROGENEITY.....	5R01 AM19397-02	60,283
BOVE, ALFRED A.....	CARDIAC FUNCTION IN HYPERTROPHY.....	5R01 HL19425-03	53,275
BUCKLEY, HELEN R.....	CANDIDA ALBICANS ANTIGENS AND ANTIBODIES.....	5R01 AI14695-02	48,140
CHANG, FONG N.....	BACTERIAL RIBOSOME BIOSYNTHESIS AND RNA MINOR BASES.....	2R01 GM19302-07	49,960
CONGER, ALAN D.....	RADIOBIOLOGY RESEARCH PROGRAM.....	3R01 CA08231-13S1	7,232
COULSON, LORNE R.....	MYOCARDIAL ENERGETICS IN HYPERTROPHY AND HEART FAILURE.....	5R01 HL19461-03	87,014
DANCIS, BARRY M.....	SEQUENCE ORGANIZATION IN HELA DNA.....	5R01 GM21671-03	40,099
DANIEL, JAMES L.....	ATP UTILIZATION IN PLATELET CONTRACTILE MECHANISMS.....	5R23 HL21128-02	44,449
DUKER, NAHUM J.....	PATHOLOGY OF REPAIR OF CARCINOGENIC DNA DAMAGE.....	1R01 CA24103-01	40,061
ERNST, STEPHEN A.....	LOCALIZATION OF SODIUM TRANSPORT SITES.....	5R01 GM23659-02	34,261
FARBER, JOHN L.....	PATHOGENESIS OF LIVER CELL NECROSIS.....	5R01 AM19154-03	53,532
FARBER, JOHN L.....	CHROMATIN IN NORMAL AND PATHOLOGICAL LIVER CELLS.....	5R01 CA12073-07	71,346
HANSON, RICHARD W.....	REGULATION OF GLUCONEOGENESIS IN MAMMALIAN LIVER.....	5R01 AM16009-07	28,308
HANSON, RICHARD W.....	HORMONE REGULATION OF ENZYME LEVELS IN MAMMALIAN TISSUE.....	5R01 AM18034-04	44,953
HARD, GORDON C.....	EXPERIMENTAL PATHOLOGY OF RENAL CARCINOGENESIS.....	1R01 CA24216-01	65,475
HARRINGTON, GEORGE W.....	ELECTROANALYTICAL STUDIES OF N-NITROSAMINES.....	5R01 CA18618-04	57,971
HARVEY, WILLIAM R.....	PHYSIOLOGY OF INSECT DIAPAUSE AND DEVELOPMENT.....	5R01 AI09503-09	55,524
HAVAS, HELGA F.....	MECHANISM OF IMMUNOSUPPRESSION BY PLASMACYTOMAS.....	5R01 CA14300-03	61,589
HENDERSON, EARL E.....	CHARACTERIZATION OF UNIQUE LYMPHOBLASTOID CELL LINES.....	1R01 CA23999-01	50,988
HENNING, SUSAN J.....	REGULATION OF INTESTINAL DEVELOPMENT.....	5R01 HD10042-03	44,332
HIGGINS, MICHAEL L.....	CELL DIVISION AND SURFACE GROWTH IN A 'MODEL' SYSTEM.....	2R01 AI10971-07	52,255
HILFER, S ROBERT.....	EMBRYONIC DEVELOPMENT OF THE EYE CUP.....	5R01 EY01934-02	34,813
HILLMAN, NINA W.....	THE EFFECT OF RNA AND DNA ON CEPHALIC TERATA.....	2R01 HD00827-15	114,357
HILLMAN, NINA W.....	STUDIES OF MOUSE SPERMATOGENESIS AND FERTILIZATION.....	5R01 HD09753-03	68,927
HOOPER, JOHN K.....	CONTROL OF PILATION IN BACTERIA.....	1R01 AI15106-01	37,721
JOHNSON, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07115-11	51,717
KARNAKY, KARL J, JR.....	A NEW MODEL SYSTEM TO STUDY CHLORIDE TRANSPORT.....	1R01 GM24766-01	41,647
KIM, SANGDUK.....	ENZYMATIC MODIFICATION OF CARBOXYL RESIDUES IN PROTEIN.....	5R01 GM20594-06	65,526
KIRBY, EDWARD P.....	STRUCTURE AND FUNCTION OF BOVINE FACTOR VIII.....	5R01 HL15474-06	35,875
KUNDEL, HAROLD L.....	VISUAL SEARCH AND FILM READER ERROR IN RADIOLOGY.....	2R01 GM21474-04	83,300
LITWACK, GERALD.....	REACTION BETWEEN HORMONES AND TYROSINE OXIDASE SYSTEM.....	5R01 AM08350-15	35,696
LITWACK, GERALD.....	METABOLISM OF CORTISOL IN LIVER.....	2R01 AM13531-09	92,402
LOTLIKAR, PRABHAKAR D.....	MECHANISM OF CHEMICAL CARCINOGENESIS.....	5R01 CA10604-11	75,336
MAGEE, PETER N.....	FORMATION AND METABOLISM OF N-NITROSO COMPOUNDS.....	1R01 CA23451-01	110,660
MEIER, GEORGE D.....	RIGHT VENTRICULAR CONTRACTION AND RELAXATION.....	5R23 HL21197-02	44,268
MILLER, ARTHUR S.....	CLINICAL CANCER-DENTAL.....	5R25 CA19456-03	35,626
MONSTER, ARIE W.....	MOTOR UNIT BEHAVIOR IN VOLUNTARY MUSCLE CONTRACTION.....	5R01 NS11574-03	51,535
MOTE, MICHAEL I.....	CELLULAR BASIS OF VISUAL INTEGRATION.....	5R01 EY00784-08	72,449
NICOLINI, CLAUDIO A.....	CORRELATIONS OF NEW AND OLD CELL KINETIC PARAMETERS.....	5R01 CA20034-02	82,243
NIEWIAROWSKI, STEFAN.....	INTERACTION OF CELLS WITH POLYMERIZING FIBRIN.....	2R01 HL15226-06	38,217
ORDAHL, CHARLES P.....	TRANSCRIPTION OF MUSCLE-SPECIFIC GENES IN MYOGENESIS.....	1R01 GM25400-01	52,730
PAAVOLA, LAURIE G.....	THE CELL BIOLOGY OF LUTEAL CELLS.....	1R01 HD09993-01A1	33,875
PAIK, WOON K.....	BIOLOGICAL METHYLATION OF CYTOCHROME C IN NEUROSPORA.....	2R01 AM09602-09A2	71,390
PAIK, WOON K.....	PROTEIN METHYLATION IN NEOPLASTIC TISSUES.....	5R01 CA12226-08	50,937
PATEL, MULCHAND S.....	EFFECT OF MATERNAL DIABETES ON METABOLISM IN NEWBORNS.....	1R01 HD11621-01	45,566
PHILLIPS, STEVEN J.....	MORPHOMETRIC ANALYSIS OF THE SINUATRIAL NODE.....	5R01 HL19009-03	48,372
PIERINGER, RONALD A.....	BACTERIAL LIPID METABOLISM.....	5R01 AI05730-14	58,029
PIERINGER, RONALD A.....	BIOCHEMICAL ASPECTS OF MYELINATION.....	2R01 NS10221-03A2	49,792
PLAUT, GERHARD W.....	REGULATION OF PATHWAYS OF INTERMEDIARY METABOLISM.....	5R01 AM15404-08	89,008
REICHLER, FREDERICK A.....	PRE- AND POST-SHUNT HUMAN HEPATIC HEMODYNAMICS.....	5R01 AM18194-04	91,355
REICHLER, FREDERICK A.....	CHOLESTEROL-LOWERING MECHANISM DUE TO ILEAL BYPASS.....	1R01 AM20704-01	80,826
REVESZ, GEORGE.....	CARDIAC FAILURE DETECTION BY RADIOGRAPHY AND OPTICS.....	1R01 HL21846-01	73,544
SCHWARTZ, ARTHUR G.....	ACTIONS OF CHEMICAL CARCINOGENS ON CULTURED CELLS.....	5R01 CA14661-06	45,345

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SCHWARTZ, ARTHUR G	ACTIVATION OF CHEMICAL CARCINOGENS BY DIFFERENT SPECIES	5R01 CA19445-03	47,675
SEVY, ROGER W.....	GENERAL CLINICAL RESEARCH CENTER	5M01 RR00349-12	628,991
SEVY, ROGER W.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05417-17	199,018
SHAFFER, THOMAS H.....	PULMONARY PHYSIOLOGY IN LIQUID VENTILATION	7R01 HL22843-01	48,535
SHANK, RICHARD P.....	RECEPTOR ACTIVATION-INACTIVATION AT A MODEL SYNAPSE.....	1R01 NS13979-01A1	20,186
SHEFFIELD, JOEL B.....	RETINAL HISTOGENESIS STUDIES.....	1R01 EY02625-01	60,040
SHERRY, SOL.....	SPECIALIZED CENTER FOR THROMBOSIS RESEARCH.....	5P50 HL14217-08	1,278,656
SHOCKMAN, GERALD D.....	BIOSYNTHESIS OF BACTERIAL CELL WALLS AND MEMBRANES.....	2R01 AI05044-15	61,268
SHOCKMAN, GERALD D.....	INHIBITION OF HUMAN CARIOGENIC STREPTOCOCCI.....	5R01 DE03487-07	59,065
SIROVER, MICHAEL A.....	METAL CARCINOGENESIS—DNA MODIFICATION/HUMAN LYMPHOCYTES.....	1R23 ES01735-01	43,550
SMALLEY, RICHARD V.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA07961-14	182,076
SMALLEY, RICHARD V.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA21859-02	164,796
SMITH, COLLEEN M.....	REGULATION OF TOTAL COA LEVELS IN HEART AND LIVER.....	5R01 AM18045-05	70,816
SODICOFF, MARVIN.....	CHEMICAL RADIO-PROTECTION BY WR-2721 OF PAROTID GLANDS.....	5R01 DE03666-05	53,535
SPANN, JAMES F, JR.....	EXPERIMENTAL CONGESTIVE HEART FAILURE AND HYPERTROPHY.....	2R01 HL17631-04	101,214
SPANN, JAMES F, JR.....	EXPERIMENTAL CONGESTIVE HEART FAILURE AND HYPERTROPHY.....	5R01 HL17631-05	124,714
SUHADOLNIK, ROBERT J.....	NUCLEOSIDE ANALOGS: BIOSYNTHESIS & ROLE IN THE CELL.....	5R01 AI12066-05	83,096
TILGHMAN, SHIRLEY M.....	REGULATION OF ALPHA-FETOPROTEIN GENE EXPRESSION.....	1R01 CA23572-01	56,600
URBACH, FREDERICK.....	THE BIOLOGIC EFFECTS OF ENVIRONMENTAL RADIATION.....	2P01 ES00269-12	316,233
VAN SCOTT, EUGENE J.....	CELL CONTROL IN INTEGUMENTAL CANCER	2P01 CA11536-09	472,108
WEINHOUSE, SIDNEY.....	METABOLISM OF NORMAL AND NEOPLASTIC TISSUES.....	5R01 CA10916-17	129,801
WEINHOUSE, SIDNEY.....	CORE PROGRAM IN CARCINOGENESIS.....	5P30 CA12227-08	1,130,573
WIEDEMAN, MARY P.....	RESTORING MICROCIRCULATION AFTER PLATELET AGGREGATION.....	5R01 HL20563-02	35,241
WOODRUFF, DIANA S.....	AGING, BEHAVIOR, AND EEG RELATIONSHIPS.....	1R23 AG01069-01	44,110
YAMAMOTO, NOBUTO.....	GENETIC EVOLUTION OF BACTERIOPHAGE	5R01 AI06429-13	76,624
ZISKIN, MARVIN C.....	EARLY RADIOLOGIC DIAGNOSIS OF CARDIAC FAILURE	5R01 HL18873-02	58,287
ORGANIZATION TOTAL	89	9,547,819	
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107			
BESARAB, ANATOLE.....	REGULATION OF PARATHYROID HORMONE ACTION IN KIDNEY.....	1R01 AM19559-01	91,676
BRENT, ROBERT L.....	PROBLEMS IN EXPERIMENTAL EMBRYOLOGY.....	3R01 HD00630-14S1	83,436
BRENT, ROBERT L.....	PROBLEMS IN RADIATION EMBRYOLOGY.....	5R01 HD11038-02	107,841
BRODOVSKY, HARVEY S.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA14215-06	98,357
BURKA, EDWARD R.....	MECHANISMS IN HEMOGLOBIN SYNTHESIS AND DESTRUCTION.....	5R01 AM13431-12	99,183
DE HORATIUS, RAPHAEL J.....	LYMPHOCYTOTOXIC ANTIBODY AND IMMUNE REGULATION IN SLE.....	1R23 AI14574-01A1	49,320
DUCKETT, SERGE W.....	PATHOGENESIS OF TE-UNDED NEUROPATHY.....	1R01 NS12902-01A3	39,456
EPPLE, AUGUST W.....	HORMONES AND THE PROGRAMMED DEATH IN PETROMYZON MARINUS.....	1R01 AG01148-01	79,619
ERSLEV, ALLAN J.....	FEEDBACK BETWEEN RED CELL PRODUCTION & OXYGEN TRANSPORT.....	5R01 HL04612-20	231,307
FRASCA, PETER.....	GROUND SUBSTANCE STUDIES IN HUMAN CORTICAL BONE.....	1R01 AM20020-01	49,797
GEE, MARLYS H.....	MECHANISM OF CLEARANCE OF LUNG EDEMA FLUID.....	1R01 HL22911-01	47,513
HAURANI, FARID I.....	ACUTE LEUKEMIA COOPERATIVE-STUDY GROUP B.....	5R10 CA05462-18	175,796
KAJI, HIDEKO.....	REGULATION OF MACROMOLECULAR SYNTHESIS IN CELLULAR AGING.....	5R01 AG00691-02	72,245
KELLOW, WILLIAM F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05414-17	168,807
KOCSIS, JAMES J.....	ROLE OF TAURINE IN THE HEART.....	5R01 HL20211-02	48,123
KOSZALKA, THOMAS R.....	EMBRYOLOGIC ASPECTS OF CREATINE METABOLISM.....	5R01 HD06360-06	63,729
KRAMER, SIMON.....	RESEARCH AND CLINICAL RADIATION THERAPY CENTER.....	2P01 CA11602-09	847,654
KRAMER, SIMON.....	NEUTRON THERAPY PROJECT.....	2P01 CA19451-03	187,732
KRAMER, SIMON.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA20235-03	108,533
LEWIS, GEORGE C, JR.....	GYNECOLOGIC ONCOLOGY GROUP HEADQUARTERS.....	2R10 CA19189-04	978,623
LIBERTI, PAUL A.....	PHYSICOCHEMICAL STUDIES OF C1Q AND ITS INTERACTION.....	3R01 AI12365-03S1	49,320
LIBERTI, PAUL A.....	STUDIES OF COMPLEMENT PROTEIN AND ITS INTERACTIONS.....	2R01 AI12365-04	50,997
MARTINEZ, JOSE.....	STRUCTURAL AND BIOLOGICAL PROPERTIES OF FIBRINOGEN.....	5R01 HL20092-02	59,654
MAURER, PAUL H.....	IMMUNOLOGICAL STUDIES WITH SYNTHETIC POLYPEPTIDES.....	2R01 AI07825-12	163,003
MC GEADY, STEPHEN J.....	THE SUPPRESSOR OF T CELL IN HUMAN ALLERGY.....	1R23 AI14204-01A1	49,320
MOSKOWITZ, NORMAN.....	CONNECTIONS OF AUDITORY CORTEX.....	5R01 NS10806-05	69,436
MULHOLLAND, STANFORD G.....	ANTIBACTERIAL DEFENSE OF THE URINARY BLADDER.....	7R01 AM22078-01	55,088
MURPHY, SCOTT.....	PLATELET STORAGE AT 22 DEGREES C.....	5R01 HL20818-02	129,255
OSTERHOLM, JEWELL L.....	CATECHOLAMINES IN SPINAL CORD INJURY.....	5R01 NS12287-03	90,502
PANOS, CHARLES.....	L-FORMS OF GROUP A, BETA HEMOLYTIC STREPTOCOCCI.....	2R01 AI11161-07	85,871
ROVETTO, MICHAEL J.....	MYOCARDIAL FUNCTION AND METABOLISM FOLLOWING ISCHEMIA.....	2R01 HL17895-04	50,943

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SCHNEIDERMAN, MARTIN H.....	CELL SURVIVAL INTERACTION OF COMBINED MODALITIES.....	1R01 CA20337-01A1	109,256
SHABER, GARY S.....	LOW DOSE BREAST ELECTRON RADIOGRAPHY (IONOGRAPHY).....	5R01 CA19787-03	117,310
SIEGMAN, MARION J.....	CONTRACTION OF PULMONARY VASCULAR SMOOTH MUSCLE.....	1R01 HL23205-01	52,053
SILVER, MELVIN J.....	PLATELET PROSTAGLANDINS.....	5R01 HL14890-07	188,873
SMITH, J BRYAN.....	ISOLATION AND MECHANISM OF ACTION OF THROMBOXANE A2.....	5R01 HL21239-02	48,113
SNYDER, ROBERT.....	BENZENE TOXICITY AND METABOLISM.....	5R01 ES00322-12	79,800
SPATH, JAMES A, JR.....	MAINTENANCE OF CELLULAR INTEGRITY IN ISCHEMIC HEARTS.....	5R01 HL20283-02	65,162
SPATH, JAMES A, JR.....	PULMONARY CAPILLARY FILTRATION IN MYOCARDIAL ISCHEMIA.....	5R01 HL21452-02	45,126
TRAVIS, SUSAN F.....	RED CELL METABOLIC ALTERATIONS IN POSTNATAL LIFE.....	1R01 HD10213-01A1	60,849
WHEELOCK, E FREDERICK.....	SUPPRESSION OF ESTABLISHED LEUKEMIA VIRUS INFECTIONS.....	2R01 CA12461-06A1	137,604
WHEELOCK, E FREDERICK.....	STUDIES OF TUMOR DORMANCY AND EMERGENCE.....	5R01 CA18995-03	99,144
WHEELOCK, E FREDERICK.....	ROLE OF ENDOGENOUS VIRUSES IN TUMOR DORMANT STATES.....	1R01 CA24115-01	73,517
WIENER, LESLIE.....	REGIONAL MYOCARDIAL FUNCTION AFTER REVASCLARIZATION.....	1R01 HL22815-01	70,692
ZEIGER, ALLEN R.....	PEPTIDOGLYCAN-LIKE MODEL SUBSTRATES AND IMMUNOGENS.....	1R01 AI13525-01A2	59,184
ORGANIZATION TOTAL	45 5,688,819		
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104			
KEFALIDES, NICHOLAS A.....	CHEMISTRY AND METABOLISM OF CONNECTIVE TISSUES.....	2P01 AM20553-02	792,773
ORGANIZATION TOTAL	1 792,773		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174			
ADDONIZIO, V PAUL.....	HEMATOLOGICAL INJURY AND PULMONARY DYSFUNCTION.....	1R23 HL22346-01	42,663
AGUIRRE, GUSTAVO D.....	CONE DEGENERATION—STRUCTURAL AND FUNCTIONAL STUDIES.....	5R01 EY01244-06	93,008
AGUS, ZALMAN S.....	MECHANISMS OF HYPERCALCIURIA AND HYPERPHOSPHATURIA.....	5R01 AM19478-02	47,000
ARMSTRONG, CLAY M.....	PERMEABILITY MECHANISMS IN EXCITABLE MEMBRANES.....	5R01 NS12547-03	92,213
ASBURY, ARTHUR K.....	STUDIES OF NEUROMUSCULAR DISEASES.....	3P50 NS08075-09S1	117,657
AVADHANI, NARAYAN G.....	MOLECULAR MECHANISMS OF CHEMICAL CARCINOGENESIS.....	1R01 CA22762-01	83,892
AVADHANI, NARAYAN G.....	PURIFICATION & CHARACTERIZATION OF MITOCHONDRIAL MRNA.....	1R01 GM25073-01	70,197
BAHN, ANITA K.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21183-02	124,855
BAILE, CLIFTON A.....	CHOLECYSTOKININ AND FEEDING IN ZUCKER OBESE RATS.....	1R01 AM21413-01	41,196
BARCHI, ROBERT L.....	ANION CONDUCTANCE AND MEMBRANE STRUCTURE IN MYOTONIA.....	1R01 NS14514-01	84,286
BELLO, LEONARD J.....	CONTROL OF CELL DIVISION IN NORMAL VS MALIGNANT CELLS.....	1R01 CA17650-01A2	89,535
BLACK, JONATHAN.....	THE MECHANICAL PROPERTIES OF ISOLATED, VIABLE OSTEOONS.....	5R01 AM19933-02	96,748
BLASIE, J KENT.....	STRUCTURE & FUNCTION OF MEMBRANES INVOLVED IN VISION.....	5R01 EY00673-07	71,941
BOETTIGER, DAVID E.....	GENETIC ANALYSIS OF RNA TUMOR VIRUSES.....	2R01 CA16502-04	78,509
BORA, F WILLIAM, JR.....	INHIBITION OF SCARS IN TENDON AND NERVE INJURY.....	5R01 AM16186-06	188,692
BOSK, CHARLES L.....	THE SOCIAL PSYCHOLOGY OF GENETIC COUNSELING.....	1R01 HD12243-01	35,520
BRACKETT, BENJAMIN G.....	MOLECULAR CONTROL OF SPERM MATURATION.....	1R01 HD11229-01	76,571
BRIGHT, HAROLD J.....	MECHANISM OF ENZYME ACTION.....	2R01 GM11040-14	123,532
BRIGHTON, CARL T.....	STIMULATION OF EXTREMITY GROWTH BY ELECTRICAL FIELDS.....	5R01 AM13812-09	132,840
BRIGHTON, CARL T.....	ARTICULAR CARTILAGE PRESERVATION AND TRANSPLANTATION.....	5R01 AM15091-08	139,615
BRIGHTON, CARL T.....	ACCELERATION OF FRACTURE HEALING BY ELECTRICAL FIELDS.....	3R01 AM18033-04S1	33,488
BROOKS, FRANK P.....	NEUROGENIC CONTROL OF GASTRODUODENAL FUNCTION.....	2R01 AM14563-07A1	82,855
BROWNELL, KELLY D.....	BEHAVIORAL CARDIOVASCULAR COMPLIANCE STRATEGIES.....	5R23 HL22345-02	44,801
BUCHANAN, JAMES W.....	PATENT DUCTUS ARTERIOSUS AND PULMONARY HYPERTENSION.....	3R01 HL17581-03S1	3,635
CAGAN, ROBERT H.....	MECHANISMS OF TASTE FUNCTION.....	2R01 NS08775-09	56,724
CASSILETH, PETER A.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18106-04	151,203
CAVA, MICHAEL P.....	TUMOR-INHIBITORY ALKALOID STUDIES.....	5R01 CA22337-02	69,163
CAVA, MICHAEL P.....	STRUCTURALLY MODIFIED ANTICANCER ANTHRACYCLINES.....	1R01 CA24199-01	35,575
CHACKO, SAMUEL K.....	REGULATION OF CONTRACTION IN VASCULAR SMOOTH MUSCLE.....	1R01 HL22264-01	72,965
CHANCE, BRITTON.....	REDOX STATES OF NORMAL/PATHOLOGICAL CORNEAL CONDITIONS.....	1R01 EY02421-01	57,851
CHANCE, BRITTON.....	OXYGEN DELIVERY TO TISSUE.....	5R01 HL17826-04	36,315
CHANCE, BRITTON.....	OXYGEN, ENERGY AND CONTRACTILITY IN CARDIAC TISSUE.....	5P01 HL18708-03	496,769
CHARALAMPOUS, FRIXOS C.....	PLASMA MEMBRANES OF NORMAL AND TUMOR CELLS.....	5R01 CA02228-24	68,944
CIVAN, MORTIMER M.....	MICROELECTRODE STUDY OF TRANSPORT ROLES OF CELL NA,K.....	1R01 AM20632-01	108,132
CLARK, JAMES M.....	MODIFICATION OF SUSCEPTIBILITY TO OXYGEN POISONING.....	1R01 HL22259-01	68,127
CLARK, WALLACE H, JR.....	BIOLOGY OF HUMAN CUTANEOUS MALIGNANT MELANOMA.....	7R01 CA25298-01	126,153
COHEN, D WALTER.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05337-17	77,734
COHEN, SIDNEY.....	COLONIC MYOELECTRIC ACTIVITY.....	5R01 AM19379-02	121,790
COHN, MILDRED.....	NMR AND EPR STUDIES OF MUSCLE-ENZYME COMPLEXES.....	5R01 GM12446-15	95,115

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
COLMAN, ROBERT W.....	BIOCHEMISTRY AND PATHOPHYSIOLOGY OF PLASMA KALLIKREIN.....	5R01 HL16642-05	127,313
COLMAN, ROBERT W.....	PLATELET VESSEL WALL INTERACTIONS IN THROMBOGENESIS.....	5P01 HL18827-02	479,293
COOPER, DAVID Y.....	AEROBIC HYDROXYLASES IN STEROID AND DRUG METABOLISM.....	3R01 AM04484-18S1	21,613
COOPER, RICHARD A.....	DISORDERS OF THE RED CELL MEMBRANE IN DISEASES OF MAN.....	5R01 AM15441-07	89,167
COOPER, RICHARD A.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA15488-05	72,513
COOPER, RICHARD A.....	CANCER CENTER SUPPORT GRANT.....	3P30 CA16520-03S1	272,282
COOPERMAN, BARRY S.....	TETRACYCLINES: MECHANISMS OF ACTION AND RESISTANCE.....	1R01 AI14717-01	144,487
COOPERMAN, BARRY S.....	PYROPHOSPHATASE MECHANISM-ADENYLATE AFFINITY LABELS.....	5R01 AM13212-10	67,345
COX, ROBERT H.....	ARTERIAL BARORECEPTORS IN CARDIOVASCULAR CONTROL.....	5R01 HL19256-03	61,591
DAUBER, JAMES H.....	IMMUNE FUNCTION AND FIBROGENESIS IN SILICOSIS.....	5R23 HL21134-02	46,513
DAVIDOVITCH, ZEEV.....	BIOCHEMICAL ASPECTS OF TOOTH ERUPTION AND RESORPTION.....	2R01 DE03619-06	119,005
DEWEILER, DAVID K.....	SUSTAINED INCREASE IN CARDIAC OUTPUT.....	5R01 HL19091-02	77,809
DONOGHUE, SUSAN.....	VITAMIN A METABOLISM IN PREGNANT AND PERINATAL LIFE.....	5R01 HD11273-02	35,647
EARLEY, LAURENCE.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00040-18	691,465
EASTERLIN, RICHARD A.....	SOCIOECONOMIC STUDIES OF FERTILITY.....	2R01 HD05427-07	144,387
EDMONDS, L HENRY, JR.....	PLATELET FUNCTION DURING EXTRACORPOREAL PERFUSION.....	5R01 HL19055-03	195,449
ENGLANDER, S WALTER.....	PHYSICAL STUDIES OF BIOLOGICAL MACROMOLECULES.....	5R01 AM11295-13	124,744
ENGLANDER, S WALTER.....	ELASTIN STRUCTURE; DNA BREATHING; HBS GELATION.....	1R01 HL21757-01A1	29,975
EPSTEIN, ALAN N.....	THE NEUROLOGICAL BASES OF FEEDING AND DRINKING.....	5R01 NS03469-18	74,849
ERULKAR, SOLOMON D.....	PHARMACOLOGICAL STUDIES ON CENTRAL SYNAPTIC TRANSMISSION.....	2R01 NS12211-04	85,563
EWENS, WARREN J.....	STOCHASTIC PROCESSES IN GENETIC POPULATIONS.....	5R01 GM21135-05	32,616
FARRELL, JAY P.....	IMMUNOLOGICAL ASPECTS OF VISCERAL LEISHMANIASIS.....	2R01 AI12663-04	75,685
FERGUSON, JAMES J, JR.....	RECOMBINANT DNA RESEARCH BIOLOGICAL SAFETY FACILITIES.....	1P30 GM25711-01	58,465
FERGUSON, JAMES J, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05415-17	200,462
FERRER, JORGE F.....	COMPARATIVE LEUKEMIA STUDIES UNIT.....	2P01 CA14193-06	561,425
FISCHER, GRACE M.....	EFFECT OF SEX HORMONES ON VASCULAR CONNECTIVE TISSUE.....	2R01 HL17721-04	71,335
FISCHER, GRACE M.....	VASCULAR CONNECTIVE TISSUE: ROLE IN ATHEROSCLEROSIS.....	5R01 HL19252-02	71,415
FISHER, ARON B.....	LUNG OXIDATIVE METABOLISM AND ENERGY PRODUCTION.....	5R01 HL15013-07	55,243
FISHMAN, ALFRED P.....	REGULATION OF VENTILATION AND PULMONARY CIRCULATION.....	5P01 HL08805-15	959,685
FISHMAN, ALFRED P.....	IMMUNOLOGY AND INTERSTITIAL FIBROSIS OF THE LUNG.....	5P50 HL15061-07	509,221
FLAKS, JOEL G.....	MECHANISMS OF ANTIBIOTIC ACTION AND RIBOSOME FUNCTION.....	5R01 AI03899-18	91,222
FLICKINGER, GEORGE L.....	THE ROLE OF LYSOSOMES IN CORPUS LUTEUM FUNCTION.....	5R01 HD10451-02	105,671
FORSTER, ROBERT E.....	CELLULAR AND MOLECULAR ASPECTS OF RESPIRATORY PHYSIOLOGY.....	5P01 HL19737-02	807,298
FRANKEL, FRED R.....	MAMMARY CANCER AND THE NUCLEAR ESTRADIOL RECEPTOR.....	2R01 CA17301-04	105,690
FURTH, JOHN J.....	RNA METABOLISM IN MAMMALIAN CELLS.....	2R01 GM10390-15A1	91,317
GARCIA, CELSO-RAMON.....	BEHAVIOR AND PHYSIOLOGY FACTORS IN INFERTILITY THERAPY.....	1R01 HD11456-01	93,922
GARFINKEL, DAVID.....	COMPUTER MODELING OF METABOLIC SYSTEMS.....	5R01 GM16501-10	82,961
GARFINKEL, DAVID.....	COMPUTER SIMULATION IN CARDIOLOGY.....	3R01 HL15622-04S1	12,254
GARFINKEL, DAVID.....	COMPUTER SIMULATION IN CARDIOLOGY.....	2R01 HL15622-05	148,882
GASSER, DAVID L.....	GENETIC CONTROL OF THE IMMUNE RESPONSE.....	2R01 CA15146-06	131,181
GERSTEIN, GEORGE L.....	STUDIES OF INTERACTION BETWEEN NEURONS.....	2R01 NS05606-13A1	90,566
GIL, JOAN.....	PINOCYTOTIC VESICLES & PULMONARY EDEMA.....	5R01 HL22463-02	26,928
GINSBERG, MYRON D.....	BRAIN BLOOD FLOW AND METABOLISM IN HYPOXIA-ISCHEMIA.....	2R01 NS12294-04	89,316
GLICK, JOHN H.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	2R10 CA15488-06	219,131
GOLDBERG, MARTIN.....	ELECTROLYTE DISTURBANCES IN CARDIORENAL DISEASE.....	3R01 HL00340-29S1	92,057
GOLDFINE, HOWARD.....	STRUCTURE AND FUNCTION OF BACTERIAL LIPIDS.....	5R01 AI08903-11	80,199
GONATAS, NICHOLAS K.....	CELLULAR ASPECTS OF NEUROLOGIC DISORDERS.....	5R01 NS05572-14	185,142
GOODGAL, SOL H.....	GENETIC TRANSFER IN MAMMALIAN SOMATIC CELLS.....	1R01 GM24263-01	56,371
GOODGAL, SOL H.....	TRANSFORMATION IN HAEMOPHILUS AND MAMMALIAN CELLS.....	5R01 GM24915-17	88,144
GOODMAN, ROBERT L.....	RADIATION THERAPY ONCOLOGY GROUP.....	2R10 CA13457-06	92,225
GOTS, JOSEPH S.....	BIOSYNTHESIS AND INTERCONVERSION OF PURINES.....	5R01 CA02790-23	72,541
GRILL, HARVEY J.....	NEURAL HIERARCHY IN THE MODULATION OF INGESTIVE BEHAVIOR.....	5R01 AM21397-02	51,423
HAND, PETER J.....	CORTICAL-THALAMIC RELATIONSHIPS.....	5R01 NS06716-12	45,847
HARKEN, ALDEN H.....	INTRAOPERATIVE CARDIAC OXYGEN SUPPLY-DEMAND.....	1R01 HL22315-01	101,836
HARRIS, HARRY.....	INHERITED HUMAN ENZYME DIVERSITY.....	5R01 CA20296-02	122,651
HAUGAARD, ELLA S.....	DIABETES, INSULIN AND URACIL NUCLEOTIDE METABOLISM.....	1R01 AM21423-01A1	74,484
HAUGAARD, NIELS.....	REGULATION OF METABOLISM BY DRUGS AND HORMONES.....	5R01 HL01813-25	77,613
HAYES, WILSON C.....	MECHANICS OF NORMAL, ARTHRITIC AND PROSTHETIC KNEES.....	3R01 AM20135-02S1	34,094
HESS, MARILYN E.....	ROLE OF CALCIUM AND THYROXINE IN HEART FUNCTION.....	5R01 HL16436-04	24,106
HIRSHFELD, JOHN W, JR.....	LEFT VENTRICULAR FUNCTION IN AORTIC REGURGITATION.....	3R01 HL18683-02S1	2,963

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
HIRSHFELD, JOHN W, JR	LEFT VENTRICULAR FUNCTION IN AORTIC REGURGITATION	5R01 HL18683-03	68,760
HOCHSTRASSER, ROBIN M	PHOTOPROCESSES IN THE ORGANIC SOLID STATE	5R01 GM12592-14	78,173
HOEK, JOANNES B	CELLULAR HETEROGENEITY AND HORMONAL REGULATION IN LIVER	1R01 AM22141-01	55,713
HOGUE-ANGELETTI, RUTH A	STUDIES ON PROTEINS OF CATECHOLAMINE STORAGE VESICLES	5R01 NS13201-03	42,770
HOLTZER, HOWARD	CONVERSION OF EMBRYONIC CELLS INTO TRANSFORMED CELLS	5R01 CA18194-04	120,953
HOROWITZ, LEONARD N	HUMAN VENTRICULAR ACTIVATION: PATTERNS AND MECHANISMS	1R23 HL21292-01	43,681
HORWITZ, ALAN F	DETERMINANTS OF MEMBRANE PHENOMENA IN MYOGENIC CELLS	5R01 GM23244-03	55,681
HURTIG, HOWARD	HEMOSTATIC RISK FACTORS—STROKE/TRANS CEREBRAL ISCHEMIA	1R01 NS14359-01	69,329
HURVICH, D JAMESON	MECHANISMS OF COLOR-CONTINGENT AFTEREFFECTS	5R01 EY01770-02	23,562
INOUE, SHINYA	STUDIES OF SUBMICROSCOPIC STRUCTURE OF LIVING CELLS	5R01 GM23475-13	182,655
IYENGAR, MELKOTE R	MYOSIN AS A MULTIENZYME COMPLEX	1R01 HL22538-01	85,578
JIMENEZ, SERGIO A	BIOCHEMICAL AND VASCULAR ALTERATIONS IN SCLERODERMA	1R01 AM19616-01A2	91,111
JOHNSTON, FRANCIS E	ENVIRONMENTAL NOISE AND PHYSICAL GROWTH OF CHILDREN	1R01 HD11542-01	38,715
KAJI, AKIRA	STUDIES ON THE REPLICATION OF RNA TUMOR VIRUSES	5R01 CA19497-03	71,640
KAJI, AKIRA	BIOCHEMICAL CONTROL OF MACROMOLECULE SYNTHESSES	2R01 GM12053-14	79,254
KALLEN, ROLAND G	MECHANISMS OF BIOCHEMICAL CATALYSIS (C-C & C-N BONDS)	5R01 GM13777-11	75,497
KALLENBACH, NEVILLE R	SPECIFICITY IN FRAMESHIFT MUTAGENESIS	1R01 CA24101-01	141,296
KARUSH, FRED	INTERACTIONS OF IMMUNOGLOBULINS	5R01 AI09492-18	154,101
KAUFFMAN, STUART A	ANALYSIS OF DETERMINATION DECISIONS IN DROSOPHILA	5R01 GM22341-03	47,680
KENNETT, ROGER H	GENETICS AND BIOCHEMISTRY OF HUMAN LEUKEMIA ANTIGENS	5R01 CA18930-03	65,656
KENNETT, ROGER H	HYBRIDOMAS: PRODUCTION AND GENETIC APPLICATIONS	1R01 CA24263-01	40,315
KLEINZELLER, ARNOST	ACTIVE SUGAR TRANSPORT IN RENAL CELLS	2R01 AM12619-10A1	112,880
KLINMAN, NORMAN R	CLONAL ANALYSIS OF THE IMMUNE MECHANISM	5R01 AI08778-10	159,608
KOELLE, GEORGE B	NEUROHUMORAL TRANSMITTERS AND RELATED DRUGS	2R01 NS00282-26	101,833
KOZINSKI, ANDRZEJ W	INTERACTION OF VIRUSES WITH HOST CHROMOSOMES	5R01 CA10055-12	69,887
KRITCHEVSKY, DAVID	ACID AND ALKALINE LIPASES IN AORTAS OF VARIOUS SPECIES	5R01 HL13722-08	24,295
LABOWS, JOHN N, JR	INVESTIGATION OF HUMAN AXILLARY AND SCALP ODORS	1R01 AM22023-01	48,089
LAMBERTSEN, CHRISTIAN J	TOLERANCE TO RESPIRATORY GASES IN HEALTH AND DISEASE	5P01 HL08899-14	703,000
LANGENBERG, DONALD N	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07083-13	140,651
LANGFITT, THOMAS W	HEAD INJURY CLINICAL RESEARCH CENTER	5P50 NS08803-09	705,618
LASH, JAMES W	ANALYSIS OF CHONDROGENESIS	5R01 HD00380-21	145,227
LEBOY, PHOEBE S	TRNA METHYLATION IN MAMMALIAN CELLS	1R01 CA23363-01	65,496
LEHR, HERNDON B	MICROWAVE THAWING OF FROZEN TISSUE	5R01 AM17865-03	71,695
LEIGH, JOHN S, JR	IRON-SULFUR PROTEINS IN ORIENTED MULTILAYERS	1R01 GM25052-01	81,844
LEVENSON, GORDON E	IN VITRO MODEL FOR STUDY OF FLUORIDE ON TOOTH GERMS	1R01 DE04686-01	49,120
LIEBMAN, PAUL A	MICROPHOTOMETRIC STUDIES ON RETINAL RODS AND CONES	5R01 EY00012-16	119,177
LIEBMAN, PAUL A	VISION RESEARCH CENTER	5P30 EY01583-04	126,591
LIEF, FLORENCE S	HUMAN WART VIRUS AS AN ONCOGENIC AGENT	5R01 CA13007-05	71,911
LISAK, ROBERT P	IMMUNOLOGIC STUDIES OF GUILLAIN-BARRE SYNDROME	1R01 NS14327-01	93,296
LISTGARTEN, MAX A	STUDIES OF THE PERIODONTAL FLORA	1R01 DE04759-01	169,049
LITT, MITCHELL	PHYSICOCHEMICAL PROPERTIES OF TRACHEAL MUCUS	5R01 HL14271-07	74,783
LITT, MITCHELL	RHEOLOGY AND KINETICS OF HEMOGLOBIN S GELATION	1R01 HL23267-01	47,808
LU, PONZY	NMR STUDY OF A REGULATORY PROTEIN	3R01 GM22623-02S1	6,040
LU, PONZY	NMR STUDY OF A REGULATORY PROTEIN	5R01 GM22623-03	37,326
MACK, ROBERT W	CANCER MORTALITY WITHIN THE CHEMICAL INDUSTRY	5R01 CA20230-02	107,544
MAGNO, MICHAEL	SYSTEMATIC STUDY OF THE BRONCHIAL CIRCULATION	1R01 HL22928-01	51,683
MARSHAK, ROBERT R	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05464-16	95,879
MARSHALL, BRYAN E	CAUSES AND EFFECTS OF LUNG WATER ACCUMULATION	3R01 HL16916-03S2	20,891
MARSHALL, BRYAN E	THE ROLE OF ALBUMIN IN LUNG WATER ACCUMULATION	2R01 HL16916-04	106,117
MASTROIANNI, LUIGI, JR	A COORDINATED PROGRAM IN REPRODUCTIVE BIOLOGY	5P01 HD06274-07	427,552
MATSCHINSKY, FRANZ M	THE BIOCHEMISTRY OF EXTRAPANCREATIC GLUCORECEPTOR CELLS	5R01 AM22119-02	72,300
MATSCHINSKY, FRANZ M	METABOLISM OF ISLETS OF LANGERHANS AND HORMONE RELEASE	7R01 AM22122-01	87,517
MATSCHINSKY, FRANZ M	BIOCHEMISTRY OF PROMINENT AUDITORY STRUCTURES	7R01 NS14843-01	72,929
MAULITZ, RUSSELL C	PROBLEMS AND PROGRAMS IN FRENCH PATHOLOGY, 1802-26	5R01 LM03002-02	31,751
MC DEVITT, DAVID S	CRYSTALLINS IN NORMAL AND REGENERATED NEWT EYE LENSES	1R01 EY02534-01	49,297
MC DONALD, GEORGE G	MIDDLE ATLANTIC REGIONAL NMR FACILITY	5P41 RR00542-08	126,045
MELA, LEENA M	INTRACELLULAR CHANGES INDUCED BY SHOCK AND TRAUMA	5R01 GM19867-07	148,730
MELBIN, JULIUS	THE CARDIOPULMONARY JUNCTION	1R01 HL22223-01	81,169
MELLMAN, WILLIAM J	HUMAN GENETICS CENTER SUPPORT	5P50 GM20138-05	645,320
MELLMAN, WILLIAM J	BIOCHEMICAL GENETICS OF CULTURED HUMAN CELLS	5R01 HD00588-16	95,378

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
MELLMAN, WILLIAM J.....	THE GENETICS OF GALACTOSE ENZYME DETERMINANTS IN MAN.....	2R01 HD04861-09	145,084
MOORE, E NEIL.....	ELECTROPHYSIOLOGY OF FIBRILLATION AND DEFIBRILLATION.....	2R01 HL16076-06	129,713
MOORE, E NEIL.....	ELECTROPHYSIOLOGY OF LETHAL ARRHYTHMIAS.....	1R01 HL23071-01	119,658
MORAD, MARTIN.....	ELECTROPHYSIOLOGY OF PRENATAL TO ADULT MAMMAL HEARTS.....	2R01 HL16152-06	138,191
MORAD, MARTIN.....	ELECTRO-OPTICAL DYES AS PROBES OF HEART EXCITABILITY.....	2R01 HL17702-04	116,379
MORRISON, ADRIAN R, JR.....	BRAINSTEM REGULATION OF BEHAVIOR DURING SLEEP.....	1R01 NS13110-01A1	47,082
MOULTON, DAVID G.....	STUDIES IN OLFATORY PHYSIOLOGY.....	2R01 NS10617-02A2	43,062
MUELLER, PAUL.....	RECONSTITUTION AND ANALYSIS OF MEMBRANE TRANSPORT.....	5R01 GM25256-02	105,326
MURRAY, THOMAS.....	EPIDEMIOLOGICAL STUDY OF ANALGESIC USE AND RENAL DISEASE.....	1R01 AM20920-01	83,360
MYERS, HOWARD M.....	CENTER FOR ORAL HEALTH RESEARCH.....	3P50 DE02623-11S1	1,146,671
NACHMIAS, VIVIANNE T.....	CYTOPLASMIC STREAMING AND CONTRACTILE PROTEINS.....	5R01 AM17492-06	49,231
NASS, MARGIT M.....	MITOCHONDRIAL GENETIC SYSTEM IN NORMAL & CANCER CELLS.....	5R01 CA13814-06	87,774
NILSSON, ULF R.....	POTENTIAL ROLE OF COMPLEMENT IN GINGIVAL INFLAMMATION.....	1R01 DE04809-01	104,334
NOORDERGRAAF, ABRAHAM.....	PHYSIOLOGICAL MECHANICS OF THE HEART AND ARTERIES.....	5R01 HL10330-11	51,551
NOWELL, PETER C.....	LEUKOCYTE REGULATORY MECHANISMS.....	5R01 CA12779-07	64,625
NOWOTNY, ALOIS H.....	ROLE OF BACTERIAL PRODUCTS IN PERIODONTAL DISEASES.....	5R01 DE04777-02	77,490
OPELLA, STANLEY J.....	NMR STUDIES OF BIOLOGICAL SUPRAMOLECULAR STRUCTURES.....	3R01 GM24266-01S2	3,322
OPELLA, STANLEY J.....	NMR STUDIES OF BIOLOGICAL SUPRAMOLECULAR STRUCTURES.....	5R01 GM24266-02	71,054
ORKAND, RICHARD K.....	LONG-TERM INTERACTIONS OF NEURONS AND GLIA.....	2R01 NS12253-05	59,817
OWEN, CHARLES S.....	BIOPHYSICAL PROBES OF THE LYMPHOCYTE MEMBRANE.....	5R01 GM23700-02	30,722
PATTERSON, DONALD F.....	ETIOLOGY AND DEVELOPMENT OF CONGENITAL HEART DISEASE.....	5R01 HL18848-03	198,028
PREMACK, DAVID.....	THE NATURE OF INTELLECTUAL DEFICITS IN RETARDATION.....	1P01 HD10965-01	155,537
PRING, MARTIN.....	MEDICAL SCHOOL COMPUTER FACILITY.....	5P41 RR00015-16	34,932
PUGH, EDWARD N, JR.....	ANALYSIS OF THE MECHANISMS OF PHOTORECEPTOR KINETICS.....	1R01 EY02660-01	54,746
QUINN, JOHN A.....	TRANSPORT OF ARTERIAL BLOOD GASES THROUGH SKIN.....	1R01 HL22327-01	79,680
REED, GEORGE H.....	NMR OF DIGESTIVE AND METABOLIC ENZYME COMPLEXES.....	5R01 AM17517-05	78,867
REIVICH, MARTIN.....	CEREBRAL BLOOD FLOW AND METABOLISM IN STROKE AND SHOCK.....	2P50 NS10939-06	737,270
REIVICH, MARTIN.....	CEREBRAL BLOOD FLOW AND METABOLISM IN STROKE AND SHOCK.....	2P50 NS10939-07	438,893
ROSAN, BURTON.....	MICROBIOLOGIC STUDIES OF THE HUMAN ORAL STREPTOCOCCI.....	5R01 DE03180-08	87,987
ROSENBLUM, JOEL.....	BIOCHEMICAL STEPS AND CONTROL OF COLLAGEN SYNTHESIS.....	2R01 AM20863-02	91,826
ROSENQUIST, ALAN C.....	EXTRAGENICULATE VISUAL PATHWAYS IN ANIMALS.....	1R01 EY02654-01	85,442
ROSENWAIKE, IRA.....	USE OF DEATH STATISTICS TO MEASURE MORTALITY OF AGED.....	1R01 AG01115-01	46,225
RUBNER, BURTON S.....	RISE TIME AND PERCEPTION OF TRANSIENT SOUNDS.....	1R01 NS13545-01A1	53,572
RUBINSTEIN, NEAL A.....	CONTROL OF MYOSIN TYPES IN INDIVIDUAL MUSCLE FIBERS.....	1R01 NS14332-01	64,494
RUTMAN, ROBERT J.....	MECHANISM OF ACTION OF ALKYLATING AGENTS.....	3R01 CA05295-17S1	34,929
SANGER, JOSEPH W.....	ANALYSIS OF CELL DIVISION AND CELL MOTILITY.....	1R01 GM25653-01	83,719
SCHAD, GERHARD A.....	ARRESTED DEVELOPMENT OF LARVAL HOOKWORMS IN THE HOST.....	5R01 AI11852-05	53,980
SCHERER, PETER W.....	DEPOSITION OF HYGROSCOPIC AEROSOLS IN BRONCHI.....	5R01 HL20105-02	60,396
SCHOTLAND, DONALD L.....	ULTRASTRUCTURAL STUDIES OF HUMAN MUSCLE DISEASE.....	1R01 NS14471-01	90,666
SCHREIBER, ALAN D.....	MACROPHAGE RECOGNITION AND TUMOR CELL INTERACTIONS.....	5R01 CA15236-05	88,839
SELZER, MICHAEL E.....	EPILEPSY RELEVANT DRUGS AND CENTRAL SYNAPSES.....	3R01 NS14257-01S1	2,383
SELZER, MICHAEL E.....	EPILEPSY RELEVANT DRUGS AND CENTRAL SYNAPSES.....	2R01 NS14257-02	103,049
SENSEMAN, DAVID M.....	SENSORY CONTROL OF OCCLUSION: MODEL SYSTEMS APPROACH.....	1R23 DE04424-01	22,969
SHPORER, MORDECHAI.....	NUCLEAR QUADRUPOLE RESONANCE OF INTRACELLULAR IONS.....	1R01 GM23389-01A1	100,529
SILBERBERG, DONALD H.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	3P50 NS11037-05S1	102,186
SILBERBERG, DONALD H.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11037-06	429,076
SILVERS, WILLYS K.....	BEHAVIOR OF WEAK TRANSPLANTATION ANTIGENS.....	2R01 CA18640-09	98,762
SINGER, IRWIN.....	RENAL WATER AND ION TRANSPORT: ROLE OF PROTEINS.....	1R01 AM21454-01	58,161
SMITH, AMOS B, III.....	METHYLENOMYCINS A AND B: POTENTIAL ANTITUMOR AGENTS.....	5R01 CA19033-03	44,968
SMITH, AMOS B, III.....	SYNTHESIS OF JATROPHONE AND RELATED ANTITUMOR AGENTS.....	1R01 CA22807-01	64,264
SMITH, THEODORE C.....	PHYSIOLOGIC RESPONSES OF THE AGED TO ANESTHESIA.....	5R01 AG00275-02	93,487
SNYDER, PETER J.....	CONTROL OF FSH AND LH SECRETION IN MAN.....	3R01 HD08555-03S1	7,408
SOLOWAY, ROGER D.....	PIGMENT GALLSTONES: COMPOSITION AND FORMATION.....	2R01 AM16549-04A2	97,857
SOMLYO, ANDREW P.....	STUDY OF MUSCLES RELATED TO HEART DISEASE.....	2P01 HL15835-06	1,520,141
SPEAR, JOSEPH F.....	ELECTROPHYSIOLOGY OF CARDIAC AUTOMATICITY.....	5R01 HL19045-03	53,212
SPRAGUE, JAMES M.....	BRAIN MECHANISMS OF VISUAL LEARNING AND TRANSFER.....	5R01 EY00577-13	103,561
STAMBAUGH, RICHARD L.....	THE ROLE OF ACROSIN AND MICROTUBULES IN FERTILIZATION.....	1R01 HD11600-01	68,509
STEIN, THOMAS P.....	NITROGEN POOLS AND TURNOVER IN SURGICAL PATIENTS.....	5R01 AM16658-05	83,175
STEIN, THOMAS P.....	SURGERY AND ADJUVANT CANCER THERAPY.....	5R01 CA18575-03	86,687
STERLING, PETER.....	MICROCIRCUITRY OF THE VISUAL SYSTEM.....	5R01 EY00828-07	132,901

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
STEVENS, JOHN K.....	RETINAL-RETINAL AND RETINAL-LGN NEURAL INTERACTIONS.....	5R01 EY01832-02	32,914
STROMBERG, BERT E, JR.....	HELMINTH IMMUNITY: IN VITRO AND IN VIVO CORRELATES.....	5R01 AI06262-14	88,298
TAICHMAN, NORTON S.....	LEUKOCYTES IN THE PATHOGENESIS OF PERIODONTAL DISEASE.....	2R01 DE03995-04	191,379
THORNTON, EDWARD R.....	GLYCOSPHINGOLIPID CHEMISTRY AND MEMBRANE STRUCTURE.....	5R01 GM22647-03	59,367
TROTMAN, BRUCE W.....	MODEL OF HUMAN PIGMENT GALLSTONES.....	5R01 AM20361-02	30,163
TSOU, KWAN C.....	NEW FLUORESCENT MARKERS FOR CANCER DIAGNOSIS.....	5R01 CA19552-02	35,235
UTIGER, ROBERT D.....	THYROID STIMULATING HORMONES IN PLASMA.....	5R01 AM14039-10	73,192
VAN DE WALLE, ETIENNE.....	POPULATION STUDIES CENTER.....	5P30 HD10379-02	60,250
VANDERKOOI, JANE M.....	METAL INTOXICATION AND METALLOCYTOCHROME SYNTHESIS.....	5R01 ES01628-02	20,654
VOET, DONALD H.....	STRUCTURAL STUDIES OF BIOMOLECULES.....	5R01 GM23766-02	50,325
WEBER, ANNEMARIE A.....	FORCE AND SPEED IN SKELETAL AND CARDIAC MUSCLE.....	5R01 HL15692-07	100,519
WEBER, KARL T.....	VENTRICULAR MECHANICS IN THE OVERLOADED HEART.....	5R01 HL18749-03	43,361
WEBER, WILFRIED T.....	LYMPHOCYTE FUNCTIONAL CAPACITIES.....	5R01 AM11693-11	57,818
WEINER, DAVID J.....	IMMUNITY OF ANIMALS TO LITOMOSOIDES CARINII.....	1R22 AI13767-01A1	43,936
WEISS, LEON P.....	ELECTRON MICROSCOPY OF THE RETICULOENDOTHELIAL SYSTEM.....	5R01 AM19920-03	129,979
WHITAKER, LINTON A.....	EXPERIMENTAL BASES FOR CRANIOFACIAL DYSJUNCTION.....	5R01 DE04110-03	73,877
WILLIAMSON, JOHN R.....	CONTROL OF METABOLISM IN NORMAL AND DISEASED STATES.....	5R01 AM15120-08	110,192
WILLIAMSON, JOHN R.....	CARDIAC METABOLISM IN HEART FAILURE.....	5R01 HL14461-08	147,326
WILSON, DARCY B.....	LYMPHOCYTES & HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI10961-07	163,556
WILSON, DARCY B.....	IMMUNOBIOLOGY OF NORMAL AND NEOPLASTIC LYMPHOCYTES.....	5P01 CA15822-05	1,122,633
WILSON, DAVID F.....	OXIDATIVE PHOSPHORYLATION IN BIOLOGICAL MEMBRANES.....	5P01 GM12202-15	433,370
WILSON, DAVID F.....	OXYGEN DEPENDENCE OF MITOCHONDRIAL FUNCTION.....	5R01 GM21524-04	82,000
WILSON, DAVID F.....	BRAIN ENERGY AND NEUROTRANSMITTER METABOLISM.....	1R01 NS14505-01	82,567
WINEGRAD, ALBERT I.....	STUDIES RELATED TO THE COMPLICATIONS OF DIABETES.....	5R01 AM04722-18	219,690
WINEGRAD, ALBERT I.....	SUPPORT FOR DIABETES CENTER.....	5P30 AM19525-02	507,323
WINEGRAD, SAUL.....	CELLULAR BASIS OF CARDIAC CONTRACTILITY.....	5R01 HL16010-16	87,314
WINEGRAD, SAUL.....	INTERCELLULAR FACTORS IN FUNCTION OF CARDIAC CELLS.....	5R01 HL18900-03	57,194
WOLLMAN, HARRY.....	CENTER FOR RESEARCH IN ANESTHESIA.....	5P50 GM15430-11	840,034
YONETANI, TAKASHI.....	STRUCTURE AND FUNCTION OF RESPIRATORY HEMOPROTEINS.....	5R01 HL14508-10	148,330
ZWEIMAN, BURTON.....	CELLULAR INFLAMMATORY RESPONSES IN ALLERGIC REACTIONS.....	5R01 AI14332-02	136,705
ORGANIZATION TOTAL	249	33,367,112	
WILLS EYE HOSPITAL ZIP CODE 19130			
BARBER, G WINSTON.....	LENS METABOLISM AND EXPERIMENTAL CATARACT.....	5R01 EY00225-17	104,718
FEDERMAN, JAY L.....	TUMOR-ASSOCIATED ANTIBODIES AGAINST OCULAR MELANOMAS.....	3R01 EY01467-03S1	2,556
NAGY, ROSE M.....	HETEROGENEITY OF LYMPHOCYTES IN HERPES OCULAR DISEASE.....	1R01 EY02594-01	62,588
SAVINO, PETER J.....	HOST IMMUNOLOGIC RESPONSE IN GRAVES' OPTHALMOPATHY.....	1R01 EY02631-01	34,833
SERY, THEODORE W.....	RESPONSE OF CORNEAL STROMA TO INJECTIONS OF PROTEINS.....	5R01 EY00195-21	90,992
SERY, THEODORE W.....	EXPERIMENTAL HERPES VIRUS CORNEAL INFECTIONS.....	5R01 EY01454-04	85,258
SERY, THEODORE W.....	IN VITRO AND IN VIVO STUDIES OF RETINOBLASTOMA.....	1R01 EY02131-01A1	64,997
SERY, THEODORE W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05510-15	22,317
ORGANIZATION TOTAL	8	468,259	
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
ABRAMCZUK, JAN.....	HEAVY METALS IN EARLY MAMMALIAN EMBRYOGENESIS.....	1R01 ES01866-01	79,505
BAIRD, WILLIAM M.....	MODIFIERS OF CHEMICAL CARCINOGENESIS IN CELL CULTURE.....	2R01 CA19948-03	90,205
BECHTOL, KATHLEEN B.....	IMMUNOCHEMICAL APPROACH TO SPERMATOGENESIS.....	1R01 GM23892-01	55,568
BORUN, THADDEUS W.....	REGULATION OF HISTONE BIOSYNTHESIS IN HETEROPLOID CELLS.....	5R01 CA17856-03	181,792
BRINTON, MARGO.....	GENETICALLY DETERMINED RESISTANCE TO VIRUS INFECTIONS.....	5R01 AI14238-02	83,406
BUCK, CLAYTON A.....	MEMBRANE CHANGES CAUSED BY TUMOR VIRUS TRANSFORMATION.....	5R01 CA19144-04	68,682
CRISTOFALO, VINCENT J.....	CELLULAR SENESCENCE AND CONTROL OF CELL PROLIFERATION.....	5P01 AG00378-07	551,383
CROCE, CARLO M.....	MAPPING OF TUMOR VIRUS GENOMES IN TRANSFORMED CELLS.....	2R01 CA16685-04	223,551
CROCE, CARLO M.....	BIOLOGY OF HUMAN FIBROSARCOMA.....	5R01 CA20741-02	97,463
CROCE, CARLO M.....	IMMUNORESPONSE TO HUMAN SURFACE ANTIGENS.....	1R01 CA23568-01	68,465
CROCE, CARLO M.....	ENZYME MARKERS IN THE MAPPING OF HUMAN GENES.....	2R01 GM20700-04	92,513
DAMSKY, CAROLINE.....	ACTIN RELEVANCE TO MALIGNANCY AND VIRUS MORPHOGENESIS.....	5R01 CA21319-02	90,754
DIAMOND, LEILA.....	THE EFFECT OF CHEMICAL CARCINOGENS ON CELLS IN VITRO.....	5R01 CA08936-11	140,698
DIAMOND, LEILA.....	ENVIRONMENTAL FACTORS IN THE INDUCTION OF CANCER.....	1P01 CA21778-01	364,353
DIAMOND, LEILA.....	TUMOR PROMOTOR AND CELL DIFFERENTIATION.....	1R01 CA23413-01	44,448
DOHERTY, PETER C.....	CELL-MEDIATED IMMUNITY IN INFLUENZA.....	5R01 AI14162-02	110,234

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
DOHERTY, PETER C.....	CELL-MEDIATED CYTOTOXICITY IN HUMANS.....	5R01 CA20833-02	71,458
GERHARD, WALTER.....	ANTIGENICITY OF INFLUENZA VIRUS HEMAGGLUTININ.....	5R01 AI13989-02	65,795
GOTZE, DIETRICH.....	CELLULAR ANTIGENS OF NORMAL AND MALIGNANT RAT TISSUES.....	5R01 CA10097-11	154,078
KNOWLES, BARBARA B.....	ANTIGENICITY AND TUMORIGENICITY OF SOMATIC CELL HYBRIDS.....	5R01 CA18470-03	133,017
KOPROWSKI, HILARY.....	STUDY OF RABIES AND RABIES VIRUS ANTIGENS.....	5R22 AI09706-08	324,422
KOPROWSKI, HILARY.....	CONSOLIDATED BASIC CANCER RESEARCH PROGRAM.....	2P30 CA10815-11	1,794,631
KOPROWSKI, HILARY.....	GENETICS AND VIROLOGY OF CANCER.....	5P01 CA21124-02	656,805
KOPROWSKI, HILARY.....	ETIOLOGY AND PATHOGENESIS OF MULTIPLE SCLEROSIS.....	5P50 NS11036-06	888,599
KOPROWSKI, HILARY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RRD5540-16	170,960
KRITCHEVSKY, DAVID.....	LIPID METABOLISM IN AGING.....	5R01 AG00076-02	55,599
KRITCHEVSKY, DAVID.....	DIETARY EFFECTS ON CHOLESTEROL METABOLISM.....	5R01 HL03299-21	93,193
KRITCHEVSKY, DAVID.....	LIPID METABOLISM.....	5R01 HL05209-18	109,081
LEVINE, ELLIOT M.....	CELLULAR GROWTH AND SENESCENCE IN ENDOTHELIAL CELLS.....	1R01 AG00839-01	98,769
MANSON, LIONEL A.....	ROLE OF TRANSPLANTATION ANTIGENS IN MALIGNANT CELLS.....	5R01 CA07973-13	77,572
MAUL, GERD G.....	QUANTITATIVE STUDY OF NUCLEAR & ANNULATE LAMELLAE PORES.....	5R01 GM21615-04	31,278
O'BRIEN, THOMAS G.....	POLYAMINES AND CHEMICAL CARCINOGENESIS IN VITRO.....	1R23 ES01664-01	55,305
ROVERA, GIOVANNI.....	EXPRESSION OF GLOBIN GENES-ERYTHROLEUKEMIA CELLS.....	1R01 CA24273-01	105,985
TSUCHIDA, NOBUO.....	HOST/VIRUS INTERACTION IN KI-MSV GENOME EXPRESSION.....	1R01 CA22701-01	43,260
WARREN, LEONARD.....	CELL BIOLOGY AND IMMUNOLOGY OF THE CANCER CELL.....	5P01 CA21069-02	582,871
WEINMANN, ROBERTO.....	FUNCTION, REGULATION OF ADENOVIRUS CODED SMALL RNAS.....	5RD1 AI13231-03	55,821
WHITTAKER, J RICHARD.....	MELANOGENESIS-RELATED DRUG INCORPORATION BY MELANOMAS.....	5RG1 CA17591-03	87,883
WHITTAKER, J RICHARD.....	MELANOTIC EXPRESSION IN CARCINOGEN-INDUCED MELANOMAS.....	1R01 CA23394-01	73,936
WHITTAKER, J RICHARD.....	EGG CYTOPLASMIC INFORMATION IN CELL DIFFERENTIATION.....	2RD1 HD09201-04	124,498
ORGANIZATION TOTAL	39	8,197,836	
ZOOLOGICAL SOCIETY OF PHILADELPHIA ZIP CODE 19104			
SNYDER, ROBERT L.....	ARTERIOSCLEROSIS IN ZOO ANIMALS ON CONTROLLED DIETS.....	5R01 HL01979-22	54,413
ORGANIZATION TOTAL	1	54,413	
PITTSBURGH			
ALLEGHENY HEALTH, EDUCATION AND RESEARCH CORPORATION-ALLEGHENY-SINGER RESEARCH CORPORATION			ZIP CODE 15212
CONCANNON, JOSEPH P.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA25007-02	54,476
CONCANNON, JOSEPH P.....	CLINICAL RADIATION THERAPY RESEARCH CENTER.....	5P01 CA25011-02	582,503
LESHER, SAMUEL W.....	COLORECTAL CANCER: CELL KINETICS AND TREATMENT.....	5R26 CA25004-02	61,038
MEREDITH, RUBY F.....	VIRAL LEUKEMIA THERAPY BY RESISTANT TISSUE TRANSPLANT.....	1R01 CA22512-01	50,077
SCHENKER, LARRY L.....	COMBINED MODE (ECMRC) STUDIES IN VIVO: TUMOR/NORMAL.....	5R01 CA25008-03	187,453
SCHIFFER, LEWIS M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RRD5801-02	48,200
YAMAMURA, YASUHIRO.....	ROLES OF ARMED MONOCYTES IN CONTROL OF METASTASIS.....	1RD1 CA22839-01	53,870
ORGANIZATION TOTAL	7	1,037,617	
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
BAHILL, A TERRY.....	CLINICAL RECORDING OF SACCADDES.....	1R23 EYD2382-01	10,759
BOTHNER-BY, AKSEL A.....	NUCLEAR OVERHAUSER EFFECT IN BIOMOLECULAR COMPLEXES.....	5R01 AM16532-06	76,275
CUSSLER, EDWARD L, JR.....	RATE PROCESSES INVOLVING BILE.....	5RD1 AM16143-06	121,538
FRIFDMAN, MARK B.....	SELECTIVE USE OF SPECIALIZED RETINAL REGIONS.....	5R01 EYD1824-02	5,772
FRIEDMAN, MARK B.....	DEVELOPMENT OF CONTROL OF WALKING IN CHILDREN.....	1R01 HD11869-01	81,452
GOLDMAN, ROBERT D.....	CELL AGING: CONTRACTILE PROTEIN STRUCTURE AND FUNCTION.....	1R01 AG00890-D1	104,158
GOLDMAN, ROBERT D.....	NORMAL AND TUMOR-VIRUS TRANSFORMED CELL BEHAVIOR.....	2R01 CA17210-04	89,892
HARTSHORNE, DAVID J.....	BIOCHEMISTRY OF CONTRACTILE PROTEINS.....	3RD1 HLD9544-12S1	34,345
HITCHCOCK, SARAH E.....	MOLECULAR BIOLOGY OF REGULATION OF CONTRACTION.....	5RD1 AM19660-D2	58,755
JONES, ELIZABETH W.....	GENETIC REGULATION OF PROTEASES IN YEAST.....	5R01 AM18090-05	95,705
KELLY, WILLIAM S.....	GENETIC AND STRUCTURAL STUDIES OF DNA POLYMERASE I.....	1RD1 GM24688-D1	69,458
LONGINI, RICHARD L.....	AN OPTIMAL FETAL HEART MONITOR.....	5RD1 HL20632-D2	64,122
MC CURRY, PATRICK M, JR.....	SYNTHESIS OF THE ANTI-CANCER AGENT 593A & HOMOLOGUES.....	1RD1 CA24057-D1	59,680
NAGLE, JOHN F.....	BIOMEMBRANE TRANSITIONS: DENSITY MEASUREMENTS.....	5R01 GM21128-04	34,014

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
RICE, ROBERT V.....	BIOPHYSICAL STUDIES ON FIBROUS PROTEINS.....	5R01 AM02809-20	112,841
SCHATZ, EDWARD R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07081-13	92,440
SIEGLER, ROBERT S.....	THE DEVELOPMENT OF SCIENTIFIC THINKING.....	1R01 HD12055-01	56,060
SLESINSKI, RONALD S.....	MUTATION AND HYBRIDIZATION OF HUMAN LYMPHOBLAST CELLS.....	5R01 CA21030-03	45,099
WADDELL, WALTER H.....	PROTEIN-CHROMOPHORE INTERACTIONS IN VISUAL PIGMENTS.....	5R01 EY01777-02	36,262
WADDELL, WALTER H.....	PHOTOCHEMISTRY OF RHODOPSIN AND 11-CIS RETINAL.....	5R01 EY01930-02	9,720
WILLIAMS, JAMES F.....	GENETIC ANALYSIS OF ADENOVIRUSES.....	5R01 CA21375-02	84,286
WORTHINGTON, C R.....	MOLECULAR STRUCTURE OF SARCOPLASMIC RETICULUM MEMBRANES.....	2R01 GM20804-04	23,269
WORTHINGTON, C R.....	MOLECULAR STRUCTURE OF NERVE AND PHOTORECEPTORS.....	5R01 NS09329-09	89,613
ORGANIZATION TOTAL	23	1,455,515	
CHILDREN'S HOSPITAL OF PITTSBURGH ZIP CODE 15213			
ALBO, VINCENT C.....	CHILDREN'S CANCER STUDY GROUP.....	5R10 CA07439-15	126,744
BLUESTONE, CHARLES D.....	EUSTACHIAN TUBE OBSTRUCTION AND MIDDLE EAR EFFUSIONS.....	5R01 NS13735-02	49,645
ORASH, ALLAN L.....	JUVENILE DIABETES MELLITUS: EPIDEMIOLOGY & ETIOLOGY.....	1R01 AM24021-01	342,102
OLIVER, THOMAS K, JR.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00084-16	413,263
OLIVER, THOMAS K, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05507-16	19,439
PARADISE, JACK L.....	INDICATIONS FOR TONSILLECTOMY AND ADENOIDECTOMY.....	3R01 HD07403-04S2	72,259
PARADISE, JACK L.....	INDICATIONS FOR TONSILLECTOMY AND ADENOIDECTOMY.....	2R01 HD07403-05A1	240,820
ORGANIZATION TOTAL	7	1,264,272	
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213			
BLACK, F OWEN.....	CONTROL OF HUMAN POSTURAL SWAY TRAJECTORIES.....	5R01 NS13286-02	62,577
BROWN, STUART I.....	PRECORNEAL TEAR FILM.....	5R01 EY01489-04	54,329
BROWN, STUART I.....	COLLAGENOLYTIC SYSTEMS IN NORMAL AND DISEASED CORNEAS.....	3R01 EY01490-04S1	30,600
BROWN, STUART I.....	STRUCTURAL MACROMOLECULES: NORMAL AND DISEASED CORNEA.....	5R01 EY01817-02	100,609
BROWN, STUART I.....	STUDY AND TREATMENT OF IMMUNE OCULAR DISEASES.....	5P50 EY01991-02	111,010
BROWN, STUART I.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05779-03	37,635
CHURCH, ROBERT L.....	SOMATIC CELL GENETICS OF CONNECTIVE TISSUE PROTEINS.....	2R01 HD09727-04	124,304
HOPKINSON, NORMA T.....	OTOADMITTANCE SCREENING OF PRESCHOOL CHILDREN.....	3R01 NS12210-03S1	874
MONDINO, BARTLY J.....	THE ROLE OF COMPLEMENT IN EXTERNAL DISEASES OF THE EYE.....	1R01 EY02304-01	40,988
O'LEARY, DENNIS P.....	STUDY OF VESTIBULAR RECEPTOR AFFERENT RESPONSES.....	2R01 NS12494-03A1	76,132
SANDO, ISAMU.....	HISTOPATHOLOGY OF TEMPORAL BONES.....	5R01 NS13787-02	78,425
ORGANIZATION TOTAL	11	717,483	
MAGEE-WOMEN'S HOSPITAL ZIP CODE 15213			
ZELEZNIK, ANTHONY J.....	CONTROL OF FOLLICULOGENESIS IN THE RHESUS MONKEY.....	1R01 HD12014-01	34,138
ORGANIZATION TOTAL	1	34,138	
MONTEFIORE HOSPITAL ZIP CODE 15213			
ADIBI, SIAMAK A.....	BRANCHED AMINO ACID METABOLISM IN ALTERED NUTRITION.....	5R01 AM15855-06	66,574
ADIBI, SIAMAK A.....	INTESTINAL TRANSPORT AND METABOLISM OF PEPTIDES.....	2R01 AM15861-07	105,963
FROMM, HANS.....	BILE ACID METABOLISM IN GALLSTONE DISEASE.....	5R01 AM19689-02	50,513
MENDELLOW, HARVEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05592-08	29,425
NORDEN, CARL W.....	HEMOPHILUS INFLUENZAE TYPE B INFECTIONS.....	2R01 AI11932-04	38,772
SHADDUCK, RICHARD K.....	REGULATION OF GRANULOPOIESIS.....	2R01 CA15237-04	71,353
TROEN, PHILIP.....	STUDIES OF HUMAN MALE INFERTILITY.....	1R01 HD11468-01	94,552
WINKELSTEIN, ALAN.....	IMMUNOSUPPRESSANTS AND LYMPHOCYTE FUNCTION.....	9R01 CA24429-04	95,882
ORGANIZATION TOTAL	8	553,034	
MPC CORPORATION ZIP CODE 15213			
BOTHNER-BY, AKSEL A.....	NMR FACILITY FOR BIOMEDICAL STUDIES.....	5P41 RR00292-13	98,208
ORGANIZATION TOTAL	1	98,208	
UNIVERSITY OF PITTSBURGH ZIP CODE 15260			
ABOLA, JAIME E.....	X-RAY STRUCTURAL ANALYSIS OF TRANSFERRIN.....	5R01 GM23195-03	64,035
ALVIN, JOHN D.....	DISPOSITION OF PRIMIDONE DURING CHRONIC THERAPY.....	1R01 NS13437-01A1	47,943
ANDERSON, GARTH R.....	SPECIFIC CELLULAR SEQUENCES IN SARCOMA VIRUS GENOMES.....	3R01 CA19488-02S1	16,551
ANDERSON, GARTH R.....	SPECIFIC CELLULAR SEQUENCES IN SARCOMA VIRUS GENOMES.....	5R01 CA19488-03	58,055
ARMSTRONG, JOHN A.....	HERPES REACTIVATIONS AFTER CRANIAL NERVE SURGERY.....	1R01 AI15299-01	56,875

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
ARNETT, EDWARD M.....	AN ABSOLUTE METHOD FOR THE STUDY OF INTERMOLECULAR FORCE.....	5R01 GM23086-03	51,371
ATTARDI, BARBARA J.....	MECHANISM OF OVARIAN STEROID CONTROL OF LH SECRETION.....	1R01 HD12099-01	67,777
BATES, MARGARET W.....	CONTROL OF FATTY ACID METABOLISM IN THE INTACT ANIMAL.....	5R01 AM13988-08	39,450
BENTLEY, RONALD.....	BIOSYNTHESIS OF VITAMIN K.....	5R01 GM20053-14	83,758
BOGGS, DANE R.....	KINETICS AND CONTROL OF NEUTROPHILIC GRANULOCYTES.....	2R01 AM14352-10	149,696
BOGGS, DANE R.....	HEMATOPOIETIC CHIMERISM.....	5R01 HL19333-03	100,539
BUCKINGHAM, ROBERT B.....	COLLAGEN SYNTHESIS BY THE DEREGULATED PSS FIBROBLAST.....	1R01 AM19662-01A1	88,643
BYRNE, JOHN H.....	ANALYSIS OF THE NEURAL CONTROL OF BEHAVIOR.....	5R01 NS13511-03	22,659
CAUNA, NIKOLAJS.....	FINE STRUCTURE AND CHEMISTRY OF NERVE ENDINGS.....	2R01 NS04147-15A1	40,833
CHERVENICK, PAUL A.....	GROWTH AND MATURATION OF HEMATOPOIETIC STEM CELLS.....	5R01 CA14278-05	64,409
CHIU, TEH-HSING.....	LIPOTEICHOIC ACIDS—METABOLISM AND ROLE IN DENTISTRY.....	5R01 DE04225-04	28,596
CHIU, TEH-HSING.....	CELL ENVELOPE SYNTHESIS AND CONTROL OF ORAL MICROBES.....	1R01 DE05018-01	28,508
CHUNG, ALBERT E.....	STUDIES OF MOUSE TERATOMA AND DERIVED CELLS.....	1R01 CA21246-01A1	84,022
CHUNG, ALBERT E.....	ISOCITRATE DEHYDROGENASE: CONTROL, STRUCTURE, ACTIVITY.....	5R01 GM19948-08	43,914
COFFEE, CAROLE J.....	STRUCTURE AND FUNCTION OF MUSCLE REGULATORY PROTEINS.....	5R01 AM16728-06	56,860
COHEN, THEODORE.....	SYNTHETIC METHODS USING NEW COPPER-SULFUR TECHNOLOGY.....	5R01 GM22760-03	66,996
COOPER, TERRANCE G.....	SYNTHESIS AND ASSEMBLY OF ENZYMES IN EUKARYOTES.....	5R01 GM19386-07	29,885
COOPER, TERRANCE G.....	GENETICS AND ISOLATION OF A EUKARYOTIC CONTROL PROTEIN.....	2R01 GM20693-04	36,700
CORDER, CLINTON N.....	KIDNEY ATPASE: ACTIVITY CONVERSION.....	5R01 AM18857-03	20,711
CRAMER, DONALD V.....	MAJOR HISTOCOMPATIBILITY COMPLEX IN THE WILD RAT.....	1R01 CA25038-01	115,935
CRAVEN, BRYAN M.....	CRYSTAL STRUCTURAL STUDIES OF HUMAN SERUM ALBUMIN.....	5R01 GM21164-05	62,067
CRAVEN, BRYAN M.....	MOLECULES OF BARBITURATES IN CRYSTAL STRUCTURE.....	5R01 GM22548-17	56,524
CRAVEN, BRYAN M.....	CRYSTAL STRUCTURES OF LIPIDS: CHOLESTEROL.....	5R01 HL20350-02	36,070
CURTHOYS, NORMAN P.....	CHARACTERIZATION OF RAT KIDNEY GLUTAMINASE ISOENZYMES.....	5R01 AM16651-06	55,876
DANISHEFSKY, SAMUEL J.....	THE SYNTHESIS OF POTENTIAL ANTIBIOTICS.....	5R01 AI13939-02	57,092
DANISHEFSKY, SAMUEL J.....	THE SYNTHESIS OF ANTITUMOR NATURAL PRODUCTS.....	5R01 CA12107-15	152,174
DE GROAT, WILLIAM C.....	NERVOUS CONTROL OF URINARY BLADDER AND LARGE BOWEL.....	5R01 NS07923-11	64,728
DIXIT, BALWANT N.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05455-15	20,574
EDMONDS, MARY P.....	BIOGENESIS OF MESSENGER RNA IN ANIMAL CELLS.....	5R01 CA18065-03	110,762
ENTERLINE, PHILIP E.....	CANCER IN ARSENIC EXPOSED POPULATIONS.....	5R01 CA20540-02	98,030
ERTEL, ROBERT J.....	MYOCARDIAL CELLS: AUTONOMIC AND RHYTHMIC MECHANISMS.....	5R01 HL14832-06	34,748
FEINGOLD, DAVID S.....	STUDIES OF UDP GLUCOSE DEHYDROGENASE.....	2R01 AM15332-06A1	69,907
FEINGOLD, DAVID S.....	5-EPIMERIZATION IN MUCOPOLYSACCHARIDE SYNTHESIS.....	5R01 AM18160-04	66,323
FIELD, JAMES B.....	EFFECT OF TSH ON THYROID CARBOHYDRATE METABOLISM.....	2R01 AM06865-16	179,092
FIELD, JAMES B.....	FACTORS INVOLVED IN INSULIN HOMEOSTASIS.....	5R01 AM12974-09	51,959
FISHER, BERNARD.....	BIOLOGICAL EFFECTS OF AUXILIARY LIVER TRANSPLANTS.....	5R01 AM13228-10	68,685
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12027-07	319,073
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12028-07	94,309
FISHER, BERNARD.....	SURGICAL MANAGEMENT OF THE REGIONAL LYMPH NODE.....	5R01 CA12102-08	60,425
FISHER, BERNARD.....	STUDY OF EFFECT OF REMOVAL OF PRIMARY TUMORS.....	5R01 CA14972-05	72,999
FISHER, BERNARD.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA18653-03	56,005
FLETCHER, RONALD D.....	NORMAL & ABNORMAL CELL ADHESION TO INANIMATE MATERIALS.....	5R01 DE03983-04	37,274
FORREST, EDWARD J.....	INTERDISCIPLINARY STUDIES: CLEFTS AND OTHER ANOMALIES.....	2P01 DE01697-16	286,607
FORREST, EDWARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05338-17	19,382
FRIED, VICTOR A.....	BIOGENESIS AND ASSEMBLY OF THE LAC PERMEASE OF E. COLI.....	5R01 GM23288-03	30,186
FRIZZELL, RAYMOND A.....	ACTIVE CHLORIDE SECRETION BY MAMMALIAN COLON.....	2R01 AM18199-04	31,048
FUCHS, FRANKLIN.....	ANALYSIS OF CELLULAR CALCIUM COMPARTMENTS IN MUSCLE.....	2R01 AM10551-13	42,953
GAY, VERNON L.....	NEGATIVE FEEDBACK OF STEROIDS ON LH AND FSH IN RATS.....	1R01 HD11102-01	74,462
GAY, VERNON L.....	NEUROENDOCRINE REGULATION OF LH SECRETION.....	1R01 HD12240-01	38,964
GILL, THOMAS J, III.....	CHEMICAL GENETIC AND CELLULAR ASPECTS OF IMMUNOGENICITY.....	3R01 CA18659-07S1	9,467
GILL, THOMAS J, III.....	CHEMICAL GENETIC AND CELLULAR ASPECTS OF IMMUNOGENICITY.....	2R01 CA18659-08	103,376
GILL, THOMAS J, III.....	MATERNAL-FETAL INTERACTIONS AND THE IMMUNE RESPONSE.....	5R01 HD08662-05	103,293
GILL, THOMAS J, III.....	IMMUNOLOGICAL ASPECTS OF PREGNANCY IN HUMANS.....	5R01 HD09880-03	151,593
GLEW, ROBERT H.....	GAUCHER'S DISEASE—ENZYMOLGY AND APPROACH TO THERAPY.....	5R01 AM17465-05	59,277
GLEW, ROBERT H.....	MITOCHONDRIAL GLYCOPROTEINS—BIOSYNTHESIS AND STRUCTURE.....	5R01 GM19197-08	46,492
GLEW, ROBERT H.....	GLYCOPROTEINS IN PULMONARY ALVEOLAR PROTEINOSIS.....	5R01 HL20547-02	41,081
GODFREY, SUSAN.....	ONTOGENY AND FUNCTION OF D. DISCOIDEUM ORGANELLES.....	5R01 GM23285-02	59,876
GOLDSTEIN, E BRUCF.....	VELOCITY PREFERENCE OF NEURONS IN LGN & RETINA.....	5R01 EY01642-03	24,876
GRIECO, PAUL A.....	TUMOR INHIBITORS: VERNOLEPIN, ERIOLANGIN, CORIOLIN.....	2R01 CA13689-07	99,388
GRIECO, PAUL A.....	FLUOROPROSTAGLANDINS.....	5R01 HD10725-02	46,488

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
GRIFFIN, HERSCHEL E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05451-17	53,350
GRINDLEY, NIGEL D.....	MECHANISM OF INSERTION SEQUENCE TRANSLOCATION.....	1R01 GM25227-01	71,537
HALL, RICHARD W, JR.....	IMPLEMENTATIONS OF VISUAL INFORMATION PROCESSING.....	1R23 EY02457-01	13,647
HENDRIX, ROGER W.....	ASSEMBLY AND STRUCTURE OF BACTERIOPHAGE LAMBDA HEADS.....	2R01 AI12227-04	64,258
HO, CHIEN.....	NMR STUDIES OF BIOLOGICAL MEMBRANES.....	5R01 GM18698-07	103,435
HO, CHIEN.....	PHYSICAL-CHEMICAL STUDY OF HEMOGLOBIN AND ERYTHROCYTE.....	5R01 HL10383-12	201,179
HO, MONTO.....	CELL IMMUNITY: NATURAL INHIBITORS OF VIRAL ACTIVITY.....	5R01 AI02953-18	75,756
HO, MONTO.....	LATENCY AND REACTIVATION OF CYTOMEGALOVIRUS INFECTION.....	5R01 AI11798-06	90,557
HOFFEE, PATRICIA A.....	DR-5-P ALDOLASE: REGULATION AND MECHANISM OF ACTION.....	5R01 AM12152-11	59,710
HOFFEE, PATRICIA A.....	REGULATION OF PENTOSE METABOLISM IN LIVER CELLS.....	1R01 AM21758-01	80,795
HOFMANN, KLAUS H.....	HORMONAL CONTROL OF THE ADRENOCORTICAL CELL.....	5R01 AM01128-23	201,734
HOFMANN, KLAUS H.....	A NOVEL APPROACH TO INSULIN-RECEPTOR AFFINITY COLUMNS.....	1R01 AM21292-01	33,012
HUNG, TIN-KAN.....	BIOMECHANICS OF EXPERIMENTAL SPINAL CORD INJURY.....	5R01 NS13238-02	87,993
JACOBSON, LEWIS A.....	REGULATION OF PROTEIN SYNTHESIS IN GROWTH TRANSITIONS.....	5R01 GM20114-05	68,435
JEFFREY, GEORGE A.....	STRUCTURAL STUDIES OF CARBOHYDRATES.....	1R01 GM24526-01	124,705
KAPLAN, SANDRA S.....	PLATELET LEUKOCYTE INTERACTIONS IN HOST DEFENSE.....	1R01 AI14218-01A1	67,599
KAROL, MERYL H.....	RESPIRATORY ANAPHYLAXIS TO INDUSTRIAL CHEMICALS.....	5R01 ES01532-02	42,861
KNÖBIL, ERNST.....	REPRODUCTIVE PHYSIOLOGY IN THE MACAQUE.....	5R01 HD03968-18	140,598
KNÖBIL, ERNST.....	CENTER FOR RESEARCH IN PRIMATE REPRODUCTION.....	5P30 HD08610-04	323,162
KOZIKOWSKI, ALAN P.....	SYNTHESIS OF MODIFIED C-NUCLEOSIDES.....	1R01 CA22612-01A1	45,567
KOZIKOWSKI, ALAN P.....	SYNTHESIS OF THERAPEUTICALLY IMPORTANT ALKALOIDS.....	5R01 HL20579-02	33,475
KULLER, LEWIS H.....	RELATIONSHIP BETWEEN CHOLECYSTECTOMY AND ASCENDING COLON.....	1R01 CA24739-01	19,884
KULLER, LEWIS H.....	BLOOD PRESSURE OF CHILDREN AND YOUNG ADULTS.....	5R01 HL19864-03	139,658
KULLER, LEWIS H.....	EPIDEMIOLOGY OF SUDDEN CARDIAC DEATH AMONG WOMEN.....	5R01 HL20179-02	53,060
LAUFFER, MAX A.....	INTERACTIONS OF TOBACCO MOSAIC VIRUS AND ITS COMPONENTS.....	5R01 GM21619-04	83,967
LEONARD, JAMES J.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00056-17	577,382
LESTER, ROGER.....	METABOLISM OF PORPHYRIN, HEME AND BILE PIGMENT.....	5R01 AM17847-05	52,093
LESTER, ROGER.....	NEONATAL NUTRITION: DEVELOPMENT OF FAT ABSORPTION.....	2R01 HD08954-04	102,864
LEWIS, JESSICA H.....	BLOOD COAGULATION AND HEMORRHAGIC DISEASE.....	5R01 HL02254-23	84,190
LIEBERMAN, IRVING.....	MECHANISMS OF CONTROL OF MAMMALIAN CELL MULTIPLICATION.....	5R01 CA06663-17	100,305
LINEBERRY, CHARLES G.....	SIGNAL DETECTION ANALYSIS OF PAIN PERCEPTION.....	3R01 GM22339-03S1	15,894
LIU, CHUNG-CHIUN.....	AN IMMOBILIZED ENZYMIC-FUEL CELL GLUCOSE SENSOR.....	3R01 AM19331-02S1	8,679
LOMBARDI, BENITO.....	ACUTE HEMORRHAGIC PANCREATITIS WITH FAT NECROSIS.....	5R01 AM18664-03	61,737
LOMBARDI, BENITO.....	PROTEINASE INHIBITORS AND PATHOGENESIS OF PANCREATITIS.....	1R01 AM20706-01	44,110
LOMBARDI, BENITO.....	CHOLINE DEFICIENCY, OVAL CELLS AND HEPATOCARCINOGENESIS.....	1R01 CA23449-01	81,568
MEARS, DANA C.....	WEAR PARTICLE ANALYSIS IN HUMAN ARTIFICIAL JOINTS.....	1R01 AM20697-01	55,888
MERLIE, JOHN P.....	THE MOLECULAR AND CELL BIOLOGY OF THE ACH-RECEPTOR.....	1R01 NS14640-01	53,121
NAKADA, DAISUKE.....	CONTROL OF VIRUS GENE EXPRESSION.....	5R01 GM21504-04	60,016
NORTH, A FREDERICK.....	PLANNING A MULTICENTER STUDY OF ADENOTONSILLECTOMY.....	3P20 NS13166-01A1S1	7,500
ONTELL, MARCIA B.....	MUSCLE SATELLITE CELL REACTION TO DISEASE AND TRAUMA.....	2R01 NS13688-03	57,815
OVE, PETER.....	CONTROL OF DNA REPLICATION IN NORMAL AND TUMOR CELLS.....	5R01 CA11637-08	66,546
OVE, PETER.....	SERUM FACTOR AND GROWTH OF TUMOR AND NORMAL CELLS.....	3R01 CA17607-03S1	10,824
PECKHAM, WILLIAM D.....	LH-LIKE MATERIAL IN THE RHESUS MONKEY.....	1R01 HD09985-01A1	50,078
PHILLIPS, BRUCE A.....	ROLE OF VIRAL-MODIFIED MEMBRANES IN VIRUS MATURATION.....	5R01 AI08368-11	43,951
PHILLIPS, STEPHEN L.....	MESSENGER RNA METABOLISM IN YEAST MITOCHONDRIA.....	5R01 GM23120-03	31,157
POLVERINI, PETER J.....	MECHANISMS INVOLVED IN TUMOR NEOVASCULARIZATION.....	1R23 CA24104-01	16,600
POPLE, HARRY E.....	CLINICAL DECISION SYSTEMS RESEARCH RESOURCE.....	5R24 RR01101-02	165,562
RABIN, BRUCE S.....	IMMUNOLOGIC STUDY OF EXPERIMENTAL ULCERATIVE COLITIS.....	2R01 AM18321-04	53,237
REDGATE, EDWARD S.....	NEURAL CONTROL OF ACTH RELEASE.....	5R01 NS04095-13	34,387
ROBINSON, ALAN G.....	THE PHYSIOLOGY OF NEUROPHYSIN SECRETION.....	5R01 AM16166-05	68,170
ROSENBERG, JEROME L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07084-13	130,510
ROSENBERG, JOHN M.....	STRUCTURE AND FUNCTION OF ECORI ENDONUCLEASE.....	1R01 GM25671-01	68,189
RUSSELL, RICHARD L.....	GENETIC, BIOCHEMICAL AND DIETARY PROBES OF AGING.....	1R01 AG01154-01	57,553
RUSSELL, RICHARD L.....	GENETIC VARIANTS OF SYNAPTIC PROTEINS.....	2R01 NS13749-02A1	73,168
SAFAR, PETER.....	TREATMENT OF POST-ISCHEMIC-ANOXIC ENCEPHALOPATHY.....	3R01 NS10974-03S2	53,888
SASSOUNI, VIKEN.....	AUTOMATED PHYSIOPRINTING OF FACIAL PATTERN.....	5R01 DE04584-02	58,957
SASSOUNI, VIKEN.....	INFLUENCE OF ALLERGIC RHINITIS ON FACIAL TYPE.....	1R01 DE04948-01	37,646
SAX, MARTIN.....	CRYSTAL STRUCTURE OF M-COMPONENTS.....	5R01 AM18827-03	50,931
SAX, MARTIN.....	THE STEREOCHEMICAL AND VALENCE STRUCTURE OF THIAMINE.....	5R01 GM23609-02	41,082
SCHULTZ, STANLEY G.....	MECHANISMS OF ION TRANSPORT BY EPITHELIAL TISSUES.....	5R01 AM16275-07	110,520

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
SEMBRAT, ROGER F.....	IMPROVEMENT OF LABORATORY ANIMAL RESOURCES.....	5P40 RR00594-03	14,309
SHAPIRO, ALVIN P.....	BEHAVIORAL CONSEQUENCES OF HYPERTENSION.....	1R01 HL20724-01A1	86,644
SHINOZUKA, HISASHI.....	EXPERIMENTAL PANCREATIC CARCINOGENESIS CELLULAR ANALYSIS.....	5R26 CA20116-03	46,964
SIEGEL, ALEXANDER W.....	THE DEVELOPMENT OF SPATIAL REPRESENTATIONS.....	5R01 HD09694-03	39,341
SIUDA, JEROME F.....	ENZYME MEDIATED GENERATION OF HALOGENATED POLLUTANTS.....	1R01 ES01644-01	41,103
STEVENS, CHARLES L.....	THE INITIAL STAGES OF PROTEIN POLYMERIZATION.....	5R01 GM22558-03	42,445
STOUT, CHARLES D.....	CRYSTAL STRUCTURES OF AZOTOBACTER PROTEINS.....	1R01 GM25672-01	45,786
SUSSMAN, RAQUEL.....	REPRESSORS CONTROLLING RADIATION-INDUCIBLE SYSTEMS.....	1R01 AI13415-01A1	60,359
TONG, WINTON.....	METABOLISM AND ENDOCRINE FUNCTION OF THE THYROID.....	5R01 AM06439-15	70,592
VAUGHAN, MAURICE H, JR.....	METABOLISM OF ANIMAL CELL RIBOSOMES.....	5R01 CA10922-09	66,875
VERBIN, ROBERT S.....	CLINICAL CANCER EDUCATION GRANT.....	1R25 CA22547-01	31,380
WALSH, CHARLES J.....	GENE REGULATION DURING DIFFERENTIATION OF NAEGLERIA.....	5R01 GM23516-02	49,544
WERNER, GERHARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05416-17	174,721
WIDNELL, CHRISTOPHER C.....	MEMBRANE FUNCTION IN AGING AND DEVELOPMENT.....	5R01 AG00439-07	78,355
WIDNELL, CHRISTOPHER C.....	PLASMA MEMBRANE STRUCTURE, FUNCTION AND BIOGENESIS.....	5R01 GM17724-08	85,128
YOUNGNER, JULIUS S.....	STUDIES OF CELLULAR RESISTANCE TO VIRUS INFECTIONS.....	5R01 AI06264-15	135,266
ORGANIZATION TOTAL	141	10,493,090	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 15240			
DE RUBERTIS, FREDERICK R.....	CONTROL AND ACTIONS OF RENAL CYCLIC GMP.....	1R01 AM20187-01	25,063
DE RUBERTIS, FREDERICK R.....	CYCLIC NUCLEOTIDES IN COLONIC CARCINOGENESIS.....	2R26 CA16908-04	43,765
ORGANIZATION TOTAL	2	68,828	
UNIVERSITY PARK			
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802			
ALCOCK, HARRY R.....	POLYDIAMINOPHOSPHAZENES.....	5R01 HL11418-09	45,582
ARNETT, DAVID W.....	INTERACTIONS BETWEEN MAMMALIAN RETINAL GANGLION CELLS.....	5R23 EY01652-03	10,529
ARONSON, NATHAN N, JR.....	NORMAL AND PATHOLOGICAL LYSOSOMAL METABOLISM.....	5R01 AM15465-07	65,110
BALTES, PAUL B.....	COGNITIVE DEVELOPMENT AND MODIFIABILITY IN ADULTHOOD.....	5R01 AG00403-03	137,190
BARRON, GEORGE P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07082-13	129,661
BENKOVIC, STEPHEN J.....	PHOSPHATE ACTIVATION MECHANISMS.....	5R01 GM13306-13	96,276
BENKOVIC, STEPHEN J.....	THE TRANSFORMYLASE ENZYMES.....	5R01 GM24129-02	84,806
BUSKIRK, ELSWORTH R.....	OBESITY AND PHYSIOLOGICAL RESPONSE TO ENVIRONMENT.....	2R01 AM08311-14	136,681
BUSS, EDWARD G.....	INFLUENCE OF MUTANT GENE ON RIBOFLAVIN METABOLISM.....	5R01 GM07830-18	60,036
CORNWELL, PAUL R.....	NEONATAL BRAIN DAMAGE AND VISION.....	2R01 NS10819-02A1	38,244
DEERING, REGINALD A.....	DNA REPAIR IN SLIME MOLD.....	5R01 GM16620-09	93,207
FAHNESTOCK, STEPHEN R.....	RIBOSOME STRUCTURE AND FUNCTION.....	5R01 GM21080-05	72,770
GAY, CAROL V.....	ULTRASTRUCTURAL STUDIES OF BIOLOGICAL MINERALIZATION.....	5R01 AM20374-02	38,652
GESELOWITZ, DAVID B.....	SIMULATION STUDIES OF THE ECG IN ACUTE ISCHEMIA.....	5R01 HL21283-02	44,313
GUTHRIE, HELEN A.....	IRON DEFICIENCY HYPERLIPIDEMIA IN DEVELOPMENT.....	5R01 HL18712-03	20,316
HAMILTON, GORDON A.....	A MECHANISTIC STUDY OF SOME O2 OXIDOREDUCTASES.....	5R01 AM13448-10	92,166
HARTZELL, CHARLES R.....	STRUCTURAL ELUCIDATION OF HEART CYTOCHROME C OXIDASE.....	3R01 HL17559-03S1	2,459
HIBBARD, EMERSON.....	VISUAL RESTORATION.....	5R01 EY01071-06	51,182
HOLLIS, THEODORE M.....	SHEAR TO AORTIC HISTAMINE SYNTHESIS AND PERMEABILITY.....	5R01 HL19830-02	46,050
HOLLIS, THEODORE M.....	AORTIC HISTAMINE SYNTHESIS IN DIABETES.....	5R01 HL20460-03	38,130
HORROCKS, WILLIAM D, JR.....	NEW LANTHANIDE PROBES OF PROTEIN STRUCTURE.....	5R01 GM23599-02	59,318
HYMER, WESLEY C.....	PROLACTIN CELL FUNCTION IN BREAST CANCER.....	1R01 CA23248-01	89,228
LANG, L GEORGE.....	MOSSBAUER STUDIES OF RESPIRATORY HEMOPROTEINS.....	5R01 HL16860-05	100,115
MARTIN, ROY J.....	GESTATIONAL DIABETES.....	1R01 AM21303-01	34,605
MASTRO, ANDREA M.....	EFFECTS OF PHORBOL ESTERS ON LYMPHOCYTE STIMULATION.....	1R01 CA24385-01	54,994
MASTRO, ANDREA M.....	PHOSPHORYLATION OF CELL SURFACES.....	2R01 GM22953-03	68,073
MATTHEWS, CHARLES R.....	REVERSIBLE UNFOLDING OF NATIVE AND MUTANT PROTEINS.....	5R01 GM23303-03	38,708
MATTHEWS, CHARLES R.....	CHEMICAL TRAPPING OF INTERMEDIATES IN PROTEIN FOLDING.....	1R01 GM24570-01	48,176
MC CARL, RICHARD L.....	EFFECT OF AGING ON BEATING HEART CELLS IN CULTURE.....	5R01 HL10018-11	63,538
MC DONEL, JAMES L.....	MECHANISM OF ACTION OF C. PERFRINGENS ENTEROTOXIN.....	5R01 AI14161-02	38,033
MILLER, NORMAN B.....	MULTIDIMENSIONAL ECHO IMAGING OF THE ISCHEMIC HEART.....	5R01 HL20872-02	110,819
MUELLER, WERNER J.....	MECHANISMS OF BONE RESORPTION AND ACCRETION IN VIVO.....	5R01 AM04362-17	72,592
PERSON, STANLEY.....	THE MECHANISM OF VIRUS INDUCED CELL FUSION.....	5R01 AI11513-05	58,965

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PENNSYLVANIA—Continued			
PHILLIPS, ALLEN T.....	COVALENT MODIFICATIONS REGULATING ENZYME FUNCTION.....	2R01 AM13198-10	81,759
RHEUBEN, MARY B.....	SYNAPSE FUNCTION DURING GROWTH AND DEGENERATION.....	5R01 NS13700-02	27,246
SCHLEGEL, ROBERT A.....	CONTROL OF PROLIFERATION IN HUMAN DIPLOID FIBROBLASTS.....	1R01 GM25650-01	45,011
SCHRAER, HARALD.....	HORMONES, BONE CELL INTERACTIONS AND BONE MINERALIZATION.....	5R01 DE01764-16	78,508
SCHRAER, HARALD.....	CELLULAR AND MOLECULAR ASPECTS OF MINERALIZATION.....	5R01 DE04345-03	70,902
SHAMMA, MAURICE.....	ISOLATION AND SYNTHESIS OF ANTICANCER DRUGS.....	5R01 CA11450-08	62,052
SHAMMA, MAURICE.....	REACTIONS OF ALKALOIDS AND THEIR ANALOGS.....	5R01 HL12971-15	74,839
SHARMA, M G.....	ANALYSIS OF STRESS IN PULSATILE DYNAMICS.....	5R01 HL11289-12	44,942
STEVENS, STANLEY E, JR.....	CONTROL OF NITROGEN ASSIMILATION IN BLUE-GREEN ALGAE.....	5R01 GM23524-02	48,994
TAYLOR, WILLIAM D.....	REACTION OF CARCINOGENS AND CELL EXTRACTS WITH RF-DNA.....	2R01 CA18970-03	79,672
TERSHAK, DANIEL R.....	DELETION MUTANTS OF POLIOVIRUS.....	5R01 AI13420-02	53,403
TODD, PAUL W.....	ELECTROPHORETIC SEPARATION OF GAMMA-IRRADIATED CELLS.....	1R01 CA24090-01	78,352
TURPEN, JAMES B.....	DEVELOPMENTAL ANALYSIS OF LYMPHOPOIESIS.....	5R01 HD11179-02	39,054
ULTMAN, JAMES S.....	BOLUS-RESPONSE MEASUREMENT OF LUNG FUNCTION.....	5R01 HL20347-02	40,284
VILLAFRANCA, JOSEPH J.....	REGULATION OF CARBAMYL PHOSPHATE BIOSYNTHESIS.....	1R01 AM21785-01	43,475
VILLAFRANCA, JOSEPH J.....	STRUCTURE AND CONTROL OF GLUTAMINE SYNTHETASES.....	5R01 GM23529-02	43,654
WANGSNESS, P J.....	IMPORTANCE OF SERUM ANABOLIC FACTORS IN GROWTH.....	1R01 HD11121-01	58,819
WARME, PAUL K.....	ACTIVITY OF CYTOCHROME ANALOGS IN HEART MITOCHONDRIA.....	2R01 GM20742-04	86,253
WEDLER, FREDERICK C.....	CATALYTIC AND REGULATORY MECHANISMS OF KEY ENZYMES.....	7R01 GM26582-01	53,790
WEINREB, STEVEN M.....	CHEMICAL STUDIES OF POTENTIAL ANTITUMOR AGENTS.....	7R01 CA25145-01	47,112
WEINREB, STEVEN M.....	SYNTHESIS OF THE CYTOCHALASINS.....	1R01 GM26138-01	51,716
ORGANIZATION TOTAL	54	3,350,361	

VILLANOVA

VILLANOVA UNIVERSITY ZIP CODE 19085			
WARD, INGEBORG L.....	EFFECTS OF PREPUBERTAL STRESS ON ADULT SEXUAL BEHAVIOR.....	2R01 HD04688-08	63,633
ORGANIZATION TOTAL	1	63,633	
STATE TOTAL	930	104,301,713	

RHODE ISLAND

KINGSTON

GORDON RESEARCH CONFERENCES ZIP CODE 02881			
FIDLER, ISAIAH J.....	GORDON RESEARCH CONFERENCE ON CANCER, 1978.....	1R13 CA24520-01	9,300
FOLKERS, KARL.....	CHEMOTHERAPY OF EXPERIMENTAL AND CLINICAL CANCER.....	1R13 CA24521-01	9,877
GERGELY, JOHN.....	GORDON RESEARCH CONFERENCE—CARDIAC AND SKELETAL MUSCLE.....	1R13 HL23072-01	18,200
GILBERT, WALTER.....	GORDON CONFERENCE ON BIOLOGICAL REGULATORY MECHANISMS.....	1R13 GM25625-01	3,000
KRANE, STEPHEN M.....	GORDON CONFERENCE ON STRUCTURAL MACROMOLECULES.....	1R13 AM25237-01	2,500
MASSARO, DONALD J.....	CONFERENCE ON NONVENTILATORY FUNCTIONS OF THE LUNGS.....	1R13 HL22159-01	7,500
SPIRO, THOMAS G.....	GORDON CONFERENCE ON 'METALS IN BIOLOGY'.....	1R13 CA24421-01	5,000
SPIRO, THOMAS G.....	GORDON CONFERENCE ON 'METALS IN BIOLOGY'.....	1R13 GM24857-01	5,000
TOUSTER, OSCAR.....	GORDON CONFERENCE ON LYSOSOMES.....	1R13 GM25246-01	3,000
ORGANIZATION TOTAL	9	63,377	

UNIVERSITY OF RHODE ISLAND ZIP CODE 02881			
BELL, ROBERT G.....	ANTICOAGULANTS AND METABOLISM OF VITAMIN K.....	3R01 HL14847-06S1	5,565
BELL, ROBERT G.....	MECHANISM OF ACTION OF VITAMIN K AND ANTICOAGULANTS.....	2R01 HL14847-07	35,441
BROWN, PHYLLIS R.....	HPLC STUDY OF BLOOD NUCLEOTIDES AND NUCLEOSIDES.....	2R01 CA17603-04	59,985
DAIN, JOEL A.....	THE ENZYMIC SYNTHESIS OF GANGLIOSIDE DURING DEVELOPMENT.....	3R01 NS05104-12S1	7,750
DAIN, JOEL A.....	THE ENZYMIC METABOLISM OF GANGLIOSIDE DURING DEVELOPMENT.....	2R01 NS05104-13	32,505
FULLER, GEORGE C.....	REGULATION OF SMOOTH MUSCLE CELLS IN ARTERIOSCLEROSIS.....	5R01 HL16904-03	28,054
GOODMAN, LEON.....	DISACCHARIDE ANALOGS AS ENZYME INDUCERS.....	1R01 AM20219-01	46,942
SHIMIZU, YUZURU.....	MARINE BIOPOLYMERS WITH CELL SPECIFICITY.....	5R01 CA22338-02	31,150
TURCOTTE, JOSEPH G.....	SYNTHESIS OF ANTITUMOR LIPINUCLEOTIDES.....	2R01 CA15898-04	56,456
ORGANIZATION TOTAL	9	303,848	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
RHODE ISLAND—Continued			
PAWTUCKET			
MEMORIAL HOSPITAL	ZIP CODE 02860		
STEINER, MANFRED.....	STUDIES OF PLATELET MICROTUBULE PROTEIN.....	5R01 HL19323-03	37,399
STEINER, MANFRED.....	STUDIES OF THE EFFECT OF VITAMIN E ON PLATELETS.....	1R01 HL22951-01	43,153
ORGANIZATION TOTAL	2	80,552	
PROVIDENCE			
BROWN UNIVERSITY	ZIP CODE 02912		
BRAY, PHILIP J.....	NUCLEAR RESONANCE STUDIES OF MOLECULAR SYSTEMS.....	5R01 GM19018-14	80,512
CANE, DAVID E.....	BIOSYNTHESIS OF ISOPRENOID METABOLITES.....	5R01 GM22172-04	68,343
CHAPMAN, KENT M.....	SENSORY TRANSDUCTION IN CARDIAC MECHANORECEPTORS.....	5R01 HL19995-02	41,891
CHU, SHIH-HSI.....	BIOLOGICAL EFFECTS OF CYCLIC NUCLEOTIDE ANALOGS.....	5R01 CA20460-02	42,516
CHURCH, RUSSELL M.....	CONTROL PROCESSES IN TIMING.....	5R01 GM23247-03	39,154
CSERR, HELEN F.....	THE FUNCTIONAL SIGNIFICANCE OF CEREBROSPINAL FLUID.....	5R01 NS11050-06	53,374
CZECH, MICHAEL P.....	INSULIN ACTION ON THE FAT CELL SURFACE MEMBRANE.....	5R01 AM17893-05	133,165
DAHLBERG, ALBERT E.....	POLYSOMES & SUBUNITS: STRUCTURE-FUNCTION RELATIONSHIPS.....	5R01 GM19756-07	66,760
DANIELS, JERRY D.....	BINOCULAR VISION: INTERACTIONS ON AREA 18 NEURONS.....	1R01 EY02244-01	61,097
EBNER, FORD F.....	STRUCTURE-FUNCTION ANALYSIS OF SINGLE CORTICAL NEURONS.....	5R01 NS13031-03	72,523
EDWARDS, JOHN O.....	METHYL VIOLOGEN AND THE PHOTOSYNTHETIC PROCESS.....	5R01 GM23082-03	47,959
EIMAS, PETER D.....	DEVELOPMENTAL STUDIES OF SPEECH PERCEPTION.....	5R01 HD05331-09	60,850
FAIN, JOHN N.....	HORMONAL CONTROL OF LIPID METABOLISM.....	5R01 AM10149-13	110,045
FAIN, JOHN N.....	INSULIN AND CATECHOLAMINE IN CARBOHYDRATE METABOLISM.....	1R01 AM21470-01	59,859
FAUSTO, NELSON.....	GENE EXPRESSION IN REGENERATING AND NEOPLASTIC LIVERS.....	5R01 CA23226-08	99,149
GALLETTI, PIERRE M.....	DIABETES PREGNANCY: EFFECTS ON MOTHER & HER OFFSPRING.....	1P50 HD11343-01	607,348
GALLETTI, PIERRE M.....	SYNTHESIS OF ARTIFICIAL LUNG AND KIDNEY SYSTEMS.....	5R01 HL11945-10	154,522
GALLETTI, PIERRE M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05664-11	71,413
GERBI, SUSAN A.....	FINE STRUCTURE OF RIBOSOMAL RNA.....	5R01 GM20261-05	72,998
GIBBS, JULIAN H.....	STATISTICAL MECHANICS OF BIOLOGICAL MACROMOLECULES.....	5R01 GM10906-18	47,921
GOLDSTEIN, LEON.....	RENAL AMMONIA METABOLISM.....	2R01 AM12443-10	53,495
GOSS, RICHARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07085-13	70,556
LANDY, ARTHUR.....	MECHANISMS OF SITE-SPECIFIC RECOMBINATION.....	5R01 AI13544-02	51,231
LANDY, ARTHUR.....	CONTROL OF SYNTHESIS AND FUNCTION OF NUCLEIC ACID.....	5R01 CA11208-10	74,757
LEITH, JOHN T.....	HEAT AND RADIATION EFFECTS ON NORMAL AND TUMOR CELLS.....	1R01 CA25687-01	38,196
LIEBERMAN, PHILIP.....	DEVELOPMENTAL STUDIES OF SPEECH PRODUCTION.....	2R01 HD09197-04	115,460
LUSK, JOAN E.....	MEMBRANE PERMEABILITY OF COLICIN-TREATED CELLS.....	5R01 GM20171-06	42,229
MARSHALL, JEAN M.....	PROPERTIES OF SMOOTH MUSCLE.....	2R01 HD06963-13	82,637
MASSOVER, WILLIAM H.....	FORM AND FUNCTION OF NORMAL AND NEOPLASTIC FERRITINS.....	5R01 CA18530-03	48,678
MC ILWAIN, JAMES T.....	CORTICAL CONTROL OF SUPERIOR COLICULUS.....	9R01 EY02505-06	38,081
MORTON, THOMAS H.....	INACTIVATION OF SCHIFF BASE-FORMING PROTEINS.....	1R01 NS14773-01	33,937
PALATT, PAUL J.....	PREVENTION OF THROMBOSIS BY APPLIED ELECTRIC FIELDS.....	5R01 HL19350-02	17,972
PARKER, KATHLYN A.....	SYNTHESIS OF HIGHLY OXYGENATED COMPOUNDS.....	5R01 CA16524-05	49,669
PARKS, ROBERT E, JR.....	COENZYMES CONTAINING PURINE AND PYRIMIDINE ANALOGS.....	5R01 CA07340-15	129,612
POTTER, ROBERT G.....	BIOMETRIC STUDIES OF HUMAN FERTILITY.....	1R01 HD12100-01	45,578
RICHARDSON, PETER D.....	PLATELET ADHESION AND AGGREGATION IN A FLOW CHAMBER.....	1R01 HL22338-01	61,764
RIEGER, PHILIP H.....	AQUEOUS SOLUTION STUDIES OF ARSENATES AND VANADATES.....	5R01 ES00894-05	46,680
RIGGS, LORRIN A.....	HUMAN VISUAL RESPONSES IN RETINA AND CORTEX.....	5R01 EY00744-07	36,669
RIGGS, LORRIN A.....	THE ACCURACY OF RETINAL IMAGE STABILIZATION.....	5R01 EY01871-03	43,689
ROTMAN, M BORIS.....	BIOCHEMICAL COMPONENTS OF A TRANSPORT SYSTEM.....	5R01 AM11194-11	62,226
ROTMAN, M BORIS.....	RECESSIVE GENES CONTROLLING IMMUNOCOMPETENCE.....	9R01 CA24440-04	81,153
SCHRIER, ALLAN M.....	SUPPORT FOR PRIMATE LABORATORY NEWSLETTER.....	5R01 RR00419-11	22,717
STEIM, JOSEPH M.....	BIOPHYSICAL STUDIES OF MEMBRANES AND RELATED SYSTEMS.....	5R01 GM20545-06	65,702
STRAUSS, ELLIOTT W.....	LIPID-DROPLET FORMATION DURING FAT ABSORPTION BY GUT.....	5R01 AM20392-02	59,286
WOOTEN, BILLY R.....	RETINAL MOSAICISM IN FEMALES CARRYING COLOR BLINDNESS.....	2R01 EY01512-04	34,325
ORGANIZATION TOTAL	45	3,397,698	
MIRIAM HOSPITAL	ZIP CODE 02906		
HOPKINS, ROBERT W.....	STUDIES OF CLINICAL AND EXPERIMENTAL SHOCK.....	2R01 GM19930-06	62,721

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
RHODE ISLAND—Continued			
MORRIS, DAVID J.....	THE METABOLISM AND ENDOCRINE ACTION OF ALDOSTERONE	5R01 AM19179-03	38,190
ZACKS, SUMNER I.....	EFFECT OF AGING ON REGENERATION OF SKELETAL MUSCLE	1R01 AG00961-01	47,931
ORGANIZATION TOTAL	3 148,842		
RHODE ISLAND COLLEGE ZIP CODE 02908			
GONSALVES, NEIL I.....	EYE AND LENS DEVELOPMENT IN THE ANOPHTHALMIC MOUSE	1R01 EY02336-01	43,855
ORGANIZATION TOTAL	1 43,855		
RHODE ISLAND HOSPITAL ZIP CODE 02902			
GLICKSMAN, ARVIN S.....	CANCER AND LEUKEMIA GROUP B RADIOTHERAPY COMMITTEE	3R10 CA21058-01S1	10,500
GLICKSMAN, ARVIN S.....	CANCER AND LEUKEMIA GROUP B RADIOTHERAPY COMMITTEE	5R10 CA21058-02	153,208
HOLOGGITAS, JOANNE.....	IMPAIRMENT OF STEROID SYNTHESIS BY SPIRONOLACTONE.....	5R01 AM18365-03	31,565
LEONE, LOUIS A.....	CANCER AND ACUTE LEUKEMIA GROUP B.....	5R10 CA08025-14	235,890
PUESCHEL, SIEGFRIED M.....	STUDY OF 'MATERNAL PHENYLKETONURIA'.....	1R01 HD10420-01A1	68,797
SCHWARTZ, ROBERT.....	CARBOHYDRATE METABOLISM IN THE NEWBORN.....	5R01 HD08977-05	62,716
ORGANIZATION TOTAL	6 562,676		
ROGER WILLIAMS GENERAL HOSPITAL ZIP CODE 02908			
CALABRESI, PAUL.....	SUPPORT FOR CLINICAL CANCER RESEARCH CENTER	5P30 CA13943-06	534,146
CALABRESI, PAUL.....	CLINICAL & PHARMACOLOGICAL ANTINEOPLASMS STUDY.....	5P01 CA20892-03	352,244
CALABRESI, PAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05765-04	41,351
DEXTER, DANIEL L.....	DIFFERENTIATION-INDUCTION IN HUMAN COLON CANCER CELLS.....	1R26 CA23225-01	57,157
HEPPNER, GLORIA H.....	IMMUNE REACTIVITY AND MAMMARY NEOPLASIA.....	3R01 CA17074-03S1	35,015
HEPPNER, GLORIA H.....	IMMUNOPHARMACOLOGIC CONSEQUENCES OF TUMOR HETEROGENEITY.....	1R01 CA23390-01	73,077
TURNER, MICHAEL D.....	PANCREATIC TUMOR-ASSOCIATED ANTIGENS.....	7R26 CA24485-01	64,266
ORGANIZATION TOTAL	7 1,157,256		
STATE TOTAL	82 5,758,104		
SOUTH CAROLINA			
CHARLESTON			
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401			
AINSWORTH, STERLING K.....	STRUCTURAL BASIS OF NEPHRON FILTRATION	5R01 HL16490-04	61,610
BAGGETT, BILLY.....	ANDROGEN ACTION IN CULTURED CHICK COMB FIBROBLASTS.....	1R01 HD12181-01	41,362
BANK, HARVEY L.....	CRYOBIOLOGY OF ISOLATED ISLETS OF LANGERHANS.....	2R01 AM18115-04	74,021
BROSTOFF, STEVEN W.....	THE ROLE OF MYELIN PROTEINS IN EXPERIMENTAL NEURITIS.....	5R01 NS11867-05	96,546
BUSE, MARIA G.....	FACTORS THAT MODIFY INSULIN ACTION.....	2R01 AM02001-21	95,080
CANTEY, JOSEPH R.....	STUDY OF A POSSIBLE NEW MECHANISM OF E. COLI DIARRHEA.....	5R22 AI13738-02	4,543
COLWELL, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05420-17	132,990
CROUCH, ROSALIE K.....	RETINAL DISEASE AND ARTIFICIAL VISUAL PIGMENTS.....	5R01 EY01612-03	24,751
FISH, WAYNE W.....	MECHANISM OF IRON STORAGE AND MOBILIZATION BY FERRITIN.....	2R01 HL19491-03	38,493
FUDENBERG, H HUGH.....	GENETIC MECHANISMS IN IMMUNOLOGIC DEFICIENCY STATES.....	5R01 AI13484-03	76,611
FUDENBERG, H HUGH.....	GENETIC CHILDHOOD DISEASES AND AGING.....	5P01 HD09938-04	318,196
GAFFNEY, THOMAS E.....	INTERDISCIPLINARY PROGRAM IN PHARMACOLOGY/TOXICOLOGY.....	2P50 GM20387-06	633,916
GAFFNEY, THOMAS E.....	GENERAL CLINICAL RESEARCH CENTER	5M01 RR01070-02	420,534
GRAVES, JAMES S.....	REGULATION OF NA/K TRANSPORT IN CULTURED SOMATIC CELLS.....	1R01 GM24708-01	40,333
HASKILL, JOHN S.....	ANALYSIS OF THE HOST RESPONSE WITHIN SOLID TUMORS.....	3R01 CA17694-03S1	19,075
HEMPLING, HAROLD G.....	PERMEABILITY OF THE LEUCOCYTE AND THE NEOPLASTIC CELL.....	5R01 CA12956-07	28,930
HOGAN, EDWARD L.....	MOLECULAR PATHOLOGY OF LEUCODYSTROPHY.....	5R01 NS12044-04	73,460
HORN, ARNO R.....	HYPERTENSIVE PROGENY: PHYSICAL/HUMORAL PRECURSOR SEARCH.....	5R01 HL19870-03	138,134
HYNES, JOHN B.....	SYNTHESIS OF NEW ANALOGS TARGETED FOR COLON CANCER.....	1R26 CA25014-01	30,783
JOHNSON, ROBERT C.....	RADIOSENSITIZATION BY SPECIFIC DNA REPAIR CONTROL.....	5R01 CA18205-03	26,626
LE ROY, E CARWILE.....	A STUDY OF SCLERODERMA (SYSTEMIC SCLEROSIS).....	2R01 AM18904-03	67,392
LE ROY, E CARWILE.....	EARLY DETECTION AND OUTCOME OF RHEUMATIC DISEASE.....	5P60 AM20571-02	230,531
LEDFORD, BARRY E.....	SERUM PROTEIN SYNTHESIS BY MOUSE HEPATOMA CELLS.....	5R01 CA17037-05	45,847
LEVINE, JON H.....	POLYAMINE METABOLISM IN DIABETES.....	1R01 AM21224-01	47,010

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
SOUTH CAROLINA—Continued			
LINDENMAYER, GEORGE E.....	MEMBRANE RELATIONSHIPS OF THE SODIUM-POTASSIUM PUMP.....	5R01 AM18747-03	26,187
MARCO, LUIS A.....	PHARMACOLOGICAL PROPERTIES OF INTRINSIC CAUDATE NEURONS.....	1R01 NS14712-01	41,010
MARGOLIUS, HARRY S.....	KALLIKREIN-KININ SYSTEM IN HYPERTENSION.....	2R01 HL17705-04	109,932
MC DONALD, J KEN.....	LYSOSOMAL PROTEASES OF ORAL CONNECTIVE TISSUES.....	1R01 DE04772-01	57,059
METCALF, JOHN F.....	EFFECT OF CARBON DIOXIDE ON LOCAL GAS EXCHANGE.....	1R23 HL22932-01	40,223
MILLS, JOHN H.....	AUDITORY EFFECTS OF LONG EXPOSURE TO LOW LEVELS OF NOISE.....	2R01 ES01301-04	94,563
NEWMAN, WALTER H.....	MECHANICS OF COMPENSATORY VENTRICULAR HYPERTROPHY.....	5R01 HL14545-06	54,499
OGAWA, MAKIO.....	CELL CULTURE STUDIES OF HEMOGLOBINOPATHIES.....	5R01 HL20913-02	49,716
ONDO, JEROME G.....	AMINO ACID NEUROTRANSMITTERS AND REPRODUCTION.....	2R01 HD10132-03	44,879
PADDOCK, GARY V.....	GLOBIN MRNA: DETERMINATION OF REGULATING SEQUENCES.....	1R01 GM24783-01	76,329
PEROT, PHANOR L, JR.....	FUNDAMENTAL STUDIES IN SPINAL CORD INJURY.....	5P50 NS11066-05	358,794
PRIEST, DAVID G.....	5-FLUOROURACIL TARGET IN EUKARYOTIC CELLS.....	5R01 CA22754-02	36,197
SCHWABE, CHRISTIAN.....	THE STRUCTURE AND FUNCTION OF RELAXIN.....	5R01 HD10540-02	50,493
SPECTOR, MYRON.....	POROUS HIGH DENSITY POLYETHYLENE TOOTH ROOTS.....	5R23 DE04414-03	30,825
SPICER, SAMUEL S.....	MORPHOCHEMICAL STUDIES, LIGHT & ELECTRON MICROSCOPY.....	5R01 AM11028-12	46,556
SWANSON, ARNOLD A.....	PROTEOLYSIS IN NORMAL AND SENILE CATARACT LENS.....	5R01 EY00429-10	51,570
TIMPL, RUPERT.....	STRUCTURE AND IMMUNOLOGY OF BASEMENT MEMBRANE.....	1R01 AM21554-01	119,685
WHEELER, DARRELL D.....	AGING AND MEMBRANE TRANSPORT IN THE NERVOUS SYSTEM.....	2R01 NS12292-03A1	39,546
WISE, WILLIAM C.....	AMINO ACID TRANSPORT IN NORMAL AND NEOPLASTIC CELLS.....	5R01 CA13529-06	37,101
YOUNG, FRANKLIN A, JR.....	ARTIFICIAL TOOTH ROOTS.....	2R01 DE03497-06	82,775
YOUNG, FRANKLIN A, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05767-04	30,277
ORGANIZATION TOTAL	45	4,244,990	
CLEMSON			
CLEMSON UNIVERSITY ZIP CODE 29631			
COOKE, FRANCIS W.....	PMMA STRENGTH, SURGICAL TECHNIQUE & IMPLANT FRACTURE.....	5R01 AM20483-02	36,159
HENNINGSON, ROBERT W.....	BIOMEDICAL RESEARCH.....	1S07 RR07180-01	21,147
HILDERMAN, RICHARD H.....	STUDIES ON THE AMINOACYL-TRNA SYNTHETASE COMPLEX.....	5R01 GM22718-03	46,234
LARCOM, LYNDON L.....	BIOLOGICAL EFFECTS OF DNA-PROTEIN CROSS-LINKS.....	5R01 CA21479-02	26,479
PARK, JOON B.....	PIEZOELECTRIC IMPLANTS FOR BONE FIXATION.....	5R01 AM19740-02	33,659
PARK, JOON B.....	IMPLANT FIXATION IN BONE BY ELECTRICAL STIMULATION.....	5R01 AM19828-02	19,936
PARK, JOON B.....	DENTAL IMPLANT FIXATION BY ELECTRICALLY MEDIATED PROCESS.....	5R23 DE04712-02	20,264
POWELL, GARY L.....	ACYL COA INTERACTION WITH HEART CITRATE SYNTHASE.....	5R01 GM22788-03	39,136
ORGANIZATION TOTAL	8	243,014	
COLUMBIA			
BENEDICT COLLEGE ZIP CODE 29204			
FINLAY, MARY F.....	POLLUTION ANALYSIS WITH STUDENT PARTICIPATION.....	3S06 RR08117-04S1	5,950
FINLAY, MARY F.....	POLLUTION ANALYSIS WITH STUDENT PARTICIPATION.....	5S06 RR08117-05	86,904
ORGANIZATION TOTAL	2	92,854	
UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29208			
ALLEN, DONALD O.....	PERFUSED FAT CELL SYSTEM.....	5R01 AM19914-02	45,953
AMMA, ELMER L.....	NATURE OF THE ACTIVE SITE OF THYMIDYLATE SYNTHETASE.....	5R01 CA17260-02	27,268
BAYNES, JOHN W.....	CLEARANCE OF GLYCOPROTEINS FROM THE CIRCULATION.....	5R01 AM19971-02	63,880
BECK, RONALD R.....	EXPERIMENTAL DIABETES IN PREGNANCY.....	1R01 HD12253-01	19,940
BRYSON, THOMAS A.....	SYNTHESIS, ACTIVITY AND REACTIVITY OF 9-BORASTEROIDS.....	5R01 AM18802-03	31,580
BRYSON, THOMAS A.....	SESQUITERPENE AND ALKALOID ANTICANCER DRUG SYNTHESIS.....	3R01 CA18349-03S1	5,866
DUNLAP, R BRUCE.....	THE MECHANISM OF ACTION OF THYMIDYLATE SYNTHETASE.....	2R01 CA12842-07	47,277
ENGLER, RANDALL W.....	RESEARCH ON THE AUDITORY SENSORY MEMORY IN CHILDREN.....	5R01 HD11114-02	31,869
FELDER, MICHAEL R.....	REGULATION OF ENZYME LEVELS IN MOUSE HEPATOMA.....	2R01 CA16184-04	52,020
FISHER, RONALD R.....	MITOCHONDRIAL PYRIDINE DINUCLEOTIDE TRANSHYDROGENASE.....	2R01 GM22070-04	59,058
GROSS, STEPHEN R.....	BIOCHEMISTRY OF INHERITED VARIATIONS IN DRUG RESPONSE.....	7R01 GM26153-01	66,445
INGEBRETSEN, WILLIAM R, JR.....	GLYCOGEN METABOLISM IN ANOXIC DIABETIC MYOCARDIUM.....	5R01 HL22064-02	45,436
KISTLER, W STEPHEN.....	ROLE OF SPECIFIC PROTEINS IN MAMMALIAN SPERMATOGENESIS.....	5R01 HD10793-02	42,424
MACON, A R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07160-03	40,257
THOMPSON, E AUBREY, JR.....	HORMONAL CONTROL OF CELL PROLIFERATION.....	1R01 CA22394-01A1	49,329

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
SOUTH CAROLINA—Continued			
THOMPSON, JAMES E.....	THERMOGRAPHIC-ENHANCED BY MICROWAVE AND ACOUSTIC ENERGY.....	1R01 CA23142-01	36,765
VODKIN, MICHAEL H.....	ENDOGENOUS VIRAL-RELATED GENES IN FUNGAL GENOMES.....	2R01 GM21438-03	36,967
WUTHIER, ROY E.....	ROLE OF MATRIX VESICLES IN CALCIFICATION.....	5R01 AM18983-03	83,749
ORGANIZATION TOTAL	18	786,083	
DENMARK			
VDDRHEES COLLEGE ZIP CODE 29042			
GILL, TARLOK S.....	TERATOGENECITY OF PSYCHOTROPIC DRUGS.....	1S06 RR08141-01A1	104,551
ORGANIZATION TOTAL	1	104,551	
ORANGEBURG			
SOUTH CAROLINA STATE COLLEGE ZIP CODE 29115			
DATTA-GUPTA, NIRMALENDU.....	SYNTHETIC PORPHYRINS BIOCHEMICAL & BIOLOGICAL STUDIES.....	3S06 RR08060-07S1	800
DATTA-GUPTA, NIRMALENDU.....	SYNTHETIC PORPHYRINS BIOCHEMICAL & BIOLOGICAL STUDIES.....	5S06 RR08060-08	89,192
ORGANIZATION TOTAL	2	89,992	
SPARTANBURG			
INDIVIDUAL AWARD--HUDSDN, MONIE S. ZIP CODE 29302			
HUDSON, MONIE S.....	TREE SAP EXTRACTS FOR CANCER CHEMOTHERAPY SCREENING.....	2R01 CA12359-07	39,900
ORGANIZATION TOTAL	1	39,900	
STATE TOTAL	77	5,601,384	
SOUTH DAKOTA			
VERMILLION			
UNIVERSITY OF SOUTH DAKOTA ZIP CODE 57069			
FENTON, LAWRENCE J.....	GROUP B STREPTOCOCCAL INFECTIONS IN THE NEWBORN.....	7R01 HD12607-01	66,334
NEUHAUS, OTTO W.....	CONTROL OF HEPATIC BIOSYNTHESIS OF PLASMA PROTEINS.....	5R01 AM11146-11	65,101
SMALL, GARY D.....	DNA METABOLISM IN EUKARYOTES.....	5R01 GM21095-04	27,048
WEGNER, KARL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05421-16	14,541
WELTY, JOSEPH D, JR.....	AMINO ACIDS OF CONTRACTILE PROTEINS OF FAILING HEARTS.....	5R01 HL09234-13	17,987
ORGANIZATION TOTAL	5	191,011	
STATE TOTAL	5	191,011	
TENNESSEE			
JOHNSON CITY			
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE--EAST TENNESSEE STATE UNIVERSITY ZIP CODE 37601			
KOSTRZEWA, RICHARD M.....	GROWTH AND DEVELOPMENT OF MONOAMINERGIC NEURONS.....	3R01 NS14797-01S1	8,417
KOSTRZEWA, RICHARD M.....	GROWTH AND DEVELOPMENT OF MONOAMINERGIC NEURONS.....	2R01 NS14797-02	44,981
ORGANIZATION TOTAL	2	53,398	
KNOXVILLE			
KNOXVILLE COLLEGE ZIP CODE 37921			
JAMES, JESSE.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08055-06S1	1,800
JAMES, JESSE.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08055-07	76,012
ORGANIZATION TOTAL	2	77,812	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916			
BAGBY, ROLAND M.....	SMOOTH MUSCLE CELL ORGANIZATION.....	5R01 HL18077-04	30,472
BECKER, JEFFREY M.....	A NOVEL APPROACH FOR DRUGS TO CANDIDA ALBICANS.....	5R01 AI14387-02	60,981
BECKER, JEFFREY M.....	PEPTIDE TRANSPORT IN MICRO-ORGANISMS.....	2R01 GM22087-04	51,293
BRIAN, DAVID A.....	CORONAVIRUS STRUCTURE AND REPLICATION.....	5R23 AI14367-02	42,807
BROWN, ARTHUR.....	TOGAVIRUSES: CROSS PROTECTION STUDIES.....	1R01 AI14362-01A1	63,506
BRYANT, ROBERT E.....	RNA POLYMERASE MUTATIONS IN MAMMALIAN CELLS.....	5R01 GM24271-02	47,348
BUYUKMIHCI, NED.....	EFFECTS OF SCRAPIE ON HAMSTER RETINA AND OPTIC NERVE.....	1R01 EY02042-01A1	36,015
CHURCHICH, JORGE E.....	FLUORESCENCE STUDIES OF PROTEIN-PROTEIN INTERACTIONS.....	5R01 EY01979-02	45,222
CLARK, JEFFREY N.....	TRACHEAL MUCIN SYNTHESIS IN EXPERIMENTAL BRONCHITIS.....	5R23 HL21369-02	41,094
COURTNEY, RICHARD J.....	STUDIES OF PURIFIED HERPES SIMPLEX VIRUS GLYCOPROTEINS.....	3R01 CA24564-01S1	25,025
FARKAS, WALTER R.....	ACCUMULATION OF GUANINE DUE TO HEAVY METALS.....	5R01 ES01323-02	56,216
FUHR, JOSEPH E.....	SICKLE CELL ANEMIA AND HEMOGLOBIN SYNTHESIS.....	9R01 HL23736-04A2	50,120
HANDEL, STEPHEN J.....	PERCEIVING AUDITORY RHYTHMS.....	1R01 NS14842-01	23,725
HUANG, LEAF.....	MEMBRANE TRANSPLANTATION: ENGINEERING OF CELL SURFACE.....	5R01 GM23473-02	74,743
JONES, JIMMY B.....	HEMATOPOIETIC STUDIES OF CYCLIC HEMATOPOIESIS.....	5R01 HL15647-06	62,943
JUNGREIS, ARTHUR M.....	PHYSIOLOGY OF MOLTING FLUID ELABORATION IN INSECTS.....	1R01 AI12779-01A3	57,841
KITCHEN, HYRAM.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09012-02	111,140
KRAUSS, STEPHEN.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA13237-07	180,911
LANGE, ROBERT D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05541-13	45,330
LAWLER, JAMES E.....	CARDIAC CORRELATES OF BEHAVIORAL STRESS IN ANIMALS.....	1R01 HL19680-01A1	52,951
LOZZIO, BISMARCK B.....	HEREDITARILY ATHYMIC-ASPLENIC MICE: TUMOR GROWTH.....	5R01 CA18185-03	63,161
MACCABE, JEFFREY A.....	MECHANISMS IN EMBRYONIC LIMB MORPHOGENESIS.....	5R01 HD07282-05	30,438
MC DONALD, TED P.....	THROMBOPOIETIN: IMMUNOASSAY AND CHARACTERIZATION.....	2R01 HL14637-05	60,878
NABELEK, ANNA K.....	BINAURAL HEARING AIDS IN NOISE AND REVERBERATION.....	5R01 NS12035-04	67,099
NABELEK, IGOR V.....	HEARING AID DISTORTION BY AMPLITUDE COMPRESSION.....	1R01 NS12946-01A2	58,302
OLINS, DONALD E.....	PHYSICAL PROPERTIES OF ISOLATED NUCLEI AND CHROMOSOMES.....	5R01 GM19334-07	83,481
POPP, RAYMOND A.....	NON-ALPHA-CHAIN SYNTHESIS CONTROL IN THALASSEMIC MICE.....	5R01 HL20912-02	60,148
ROTH, L EVANS.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07088-11	67,770
ROUSE, BARRY T.....	IMMUNITY MECHANISMS IN HERPES VIRUSES INFECTIONS.....	1R01 AI14981-01	94,192
SAYLER, GARY S.....	BACTERIAL DEGRADATION OF PCB—CONSEQUENCES & EFFECTS.....	5R01 ES01521-02	50,885
SCHELL, FRED M.....	ALPHA-ALKYLATION OF AMINES: SYNTHETIC APPLICATIONS.....	5R01 GM23381-02	30,642
SLAGA, THOMAS J.....	METABOLISM OF POLYCYCLIC HYDROCARBONS IN SKIN.....	3R01 CA20076-02S1	13,139
SLAGA, THOMAS J.....	POLYCYCLIC HYDROCARBON METABOLISM AND BINDING IN SKIN.....	2R01 CA20076-03	73,534
SOLOMON, ALAN.....	PROTEINS IN MULTIPLE AND RELATED BLOOD DISEASES.....	5R01 CA10056-13	116,430
VAN HOOK, WILLIAM A.....	AQUEOUS SOLVENT ISOTOPE EFFECTS: HYDROPHOBIC BONDING.....	5R01 GM19991-06	47,324
ORGANIZATION TOTAL	35 2,077,106		
MEMPHIS			
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
ADLER, FRANK L.....	INDUCTION OF TOLERANCE AND SUPPRESSOR CELLS IN VITRO.....	5R01 CA23709-02	70,781
ADLER, LOUISE T.....	IMMUNOGLOBULIN ALLOTYPES: SUPPRESSION AND RELEASE.....	2R01 AI13159-04	60,124
BEAN, WILLIAM J, JR.....	STUDY OF THE EVOLUTION OF INFLUENZA A VIRUSES.....	5R23 AI14293-02	40,424
BRENT, THOMAS P.....	ENZYMES AND REACTIONS FOR REPAIR OF DNA IN HUMAN CELLS.....	5R01 CA14799-04	56,801
CHEUNG, WAI Y.....	REGULATORY ASPECTS OF CYCLIC AMP METABOLISM IN CNS.....	5R01 NS08059-10	68,861
FISHMAN, MARVIN.....	THE ROLE OF MACROPHAGE SUBCLASSES IN TUMOR IMMUNITY.....	5R01 CA18672-03	40,778
FRIDLAND, ARNOLD.....	DNA REPLICATION IN DRUG TREATED HUMAN LYMPHOBLASTS.....	5R01 CA18446-03	37,294
GANGULY, PANKAJ.....	PLATELET AGGREGATION.....	5R01 HL16720-02	24,592
GOORHA, RAKESH M.....	DNA-BINDING PROTEINS AND LUCKE TUMOR ASSOCIATED VIRUS.....	5R01 GM23638-02	55,066
GRANOFF, ALLAN.....	STUDIES OF LUCKE TUMOR ASSOCIATED VIRUSES.....	5R01 CA07055-16	212,297
GUNASEKARAN, MUTHUKUMARAN.....	GAS CHROMATOGRAPHY FOR DETECTION OF FUNGAL INFECTION.....	5R01 CA20917-03	43,467
JACKSON, CARL W.....	EFFECTS OF ERYTHROPOIESIS ON PLATELETS AND HEMOSTASIS.....	5R01 HL19270-03	51,060
KINGSBURY, DAVID W.....	MULTIPLICATION OF PARAMYXOVIRUSES.....	5R01 AI05343-15	118,680
MAUER, ALVIN M.....	A STUDY OF LEUKOKINETICS IN ACUTE LEUKEMIA.....	5R01 CA15956-05	98,139
MAUER, ALVIN M.....	LEUKEMIA PROGRAM PROJECT.....	5P01 CA20180-02	1,360,657
MAUER, ALVIN M.....	CANCER CENTER SUPPORT (CORE) GRANT.....	5P30 CA21765-02	833,651
MAUER, ALVIN M.....	STUDIES OF CHILDHOOD SOLID TUMORS.....	1P01 CA23099-01	520,045
MAUER, ALVIN M.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA23944-01	103,179

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
MAUER, ALVIN M.....	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR05584-14	109,253
MORRISON, MARTIN	STRUCTURE AND FUNCTION OF RED CELL MEMBRANES.....	5R01 AM18106-03	67,435
PHILLIPS, DAVID R.....	PLATELET MEMBRANE PROTEINS IN AGGREGATION.....	2R01 HL15616-04	43,946
PHILLIPS, DAVID R.....	MOLECULAR CHARACTERIZATION OF GLANZMANN'S THROMBASTHENIA	1R01 HL21487-01	39,929
PORTNER, ALLEN.....	BIOSYNTHESIS OF PARAMYXOVIRUSES.....	2R01 AI11949-04A1	78,629
THOMAS, EDWIN L.....	PEROXIDASE IN SALIVA AND PREVENTION OF ORAL DISEASE	5R01 DE04235-03	33,032
WALKER, WILLIAM S.....	MACROPHAGE FUNCTIONS IN TUMORIGENESIS.....	2R01 CA16652-04	65,550
WEBSTER, ROBERT G.....	STUDIES ON THE ORIGIN OF PANDEMIC INFLUENZA VIRUSES.....	5R01 AI08831-10	89,875
WELCH, ARNOLD D.....	CHEMOTHERAPY IN MICE OF HUMAN CARCINOMAS OF THE COLON.....	5R26 CA21677-02	147,260
YEH, YU-YAN.....	REGULATION OF KETONE METABOLISM IN NEWBORN RATS	2R01 HD08568-04	53,475
ORGANIZATION TOTAL	28 4,524,280		
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE—MEMPHIS STATE UNIVERSITY ZIP CODE 38152			
GARTNER, THEODORE K.....	CONTROL AND MECHANISM OF PLATELET AGGREGATION.....	1R01 HL23010-01	49,958
ORGANIZATION TOTAL	1 49,958		
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163			
ABEL, GENE G.....	BEHAVIORAL TACTICS FOR CLINICAL CARDIAC CONTROL.....	5R01 HL18814-03	77,986
ANDERSEN, RICHARD N.....	MECHANISM(S) OF ACTH ACTION ON TESTOSTERONE DYNAMICS	1R01 AM19423-01A1	47,398
ARNESON, RICHARD M.....	MEMBRANE LIPIDS IN NEUROBLASTOMA DIFFERENTIATION.....	2R01 CA16927-04	51,468
BEACHEY, EDWIN H.....	MUCOSAL CELL-BINDING OF PYOGENIC BACTERIA	5R01 AI13550-03	48,427
BLATTEIS, CLARK M.....	HYPERPYREXIA THERAPY WITH HELIUM-OXYGEN.....	5R01 AI13244-02	38,413
CALDWELL, ROBERT W.....	THE IMPORTANCE OF AMINOSUGARS IN DIGITALIS ACTIVITY.....	5R01 HL17796-04	58,966
CHESNEY, CAROLYN M.....	PLATELET COLLAGEN INTERACTION.....	5R01 HL18650-03	34,232
COX, CLAIR E.....	CHEMOTHERAPY FOR ADVANCED PROSTATIC CANCER.....	5R26 CA20618-03	102,774
COX, RAY.....	DNA REPAIR AND CARCINOGENESIS.....	5R01 CA15189-06	21,867
DIXIT, SARYU N.....	CHEMISTRY OF GLOMERULAR BASEMENT MEMBRANE COLLAGENS.....	5R01 AM20385-02	41,554
DORSETT, PRESTON H.....	MECHANISMS OF PERSISTENT RUBELLA VIRUS INFECTION.....	5R01 AI11255-05	42,824
DUCIBELLA, THOMAS.....	PREIMPLANTATION EMBRYO CELL SURFACE ORGANIZATION	1R01 HD11505-01	51,875
FISHER, JOSEPH N, JR.....	DIABETIC KETOACIDOSIS: ALTERATIONS IN MINERAL METABOLISM.....	1R01 AM21099-01A1	52,350
GROSVENOR, CLARK E.....	NEURAL AND HORMONAL REGULATION OF LACTATION.....	5R01 HD04358-19	53,217
HUNT, JAMES C.....	GENERAL CLINICAL RESEARCH CENTER	5M01 RR00211-14	422,842
IRVING, CHARLES C.....	CHEMICAL CARCINOGENESIS STUDIES.....	5R01 CA05490-17	37,464
IRVING, CHARLES C.....	BIOCHEMICAL MECHANISMS IN EXPERIMENTAL BLADDER CANCER.....	5R26 CA16765-05	98,782
KANE, JAMES F.....	A COMMON AMIDOTRANSFERASE SUBUNIT IN METABOLISM.....	5R01 AM19443-02	35,544
KANG, ANDREW H.....	CHEMISTRY AND BIOLOGY OF NORMAL AND ABNORMAL COLLAGENS	3R01 AM16506-05S1	3,243
KANG, ANDREW H.....	CHEMISTRY AND BIOLOGY OF NORMAL AND ABNORMAL COLLAGENS	2R01 AM16506-06	60,220
KANG, ANDREW H.....	COLLAGEN IN INTERSTITIAL FIBROSIS OF LUNG	5R01 HL19731-03	60,972
KANG, ANDREW H.....	COLLAGEN-PLATELET INTERACTION AND HUMAN AORTA COLLAGEN.....	5R01 HL20114-02	48,660
KANG, ELLEN S.....	REYE'S SYNDROME: STUDIES OF MEMBRANE FUNCTION.....	3R01 HD11657-01S1	17,714
KANG, ELLEN S.....	REYE'S SYNDROME: STUDIES OF MEMBRANE FUNCTION.....	2R01 HD11657-02	72,340
KATZE, JON R.....	TRNA Q-BASE: ITS RELATION TO DIFFERENTIATION.....	5R01 CA20919-03	47,800
KITABCHI, ABBAS E.....	VITAMIN E DEFICIENCY AND FUNCTIONAL STATES OF MEMBRANES	1R01 AM19717-01A1	73,766
KRAUS, ALFRED P.....	SUPPORT FOR CENTER FOR SICKLE CELL DISEASE.....	3P60 HL15169-05S2	206,817
MALIK, KAFAIT U.....	ANGIOTENSIN, PROSTAGLANDINS, ADRENERGIC INTERACTIONS	5R01 HL19134-04	73,891
MALIK, KAFAIT U.....	CARBOHYDRATES-NUCLEOTIDES AND ADRENERGIC INTERACTIONS.....	5R01 HL20206-02	33,538
MASHBURN, THOMPSON A, JR.....	STRUCTURAL STUDIES OF LUNG PROTEOGLYCANS.....	5R01 HL21641-02	43,907
MC CARTY, GIRD A, JR.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA19532-03	53,133
MC GIFF, JOHN C.....	REGULATION OF RENAL CIRCULATION AND SALT EXCRETION	5R01 HL18845-04	127,066
MC LAUGHLIN, BARBARA J.....	PHOTORECEPTOR SYNTOGENESIS IN THE RETINA.....	1R01 EY02708-01	47,588
MIRVIS, DAVID M.....	ELECTROPHYSIOLOGIC CORRELATES OF MYOCARDIAL ISCHEMIA.....	5R01 HL20597-02	144,845
MUIRHEAD, ERNEST E.....	THE ANTIHYPERTENSIVE FUNCTION OF THE RENAL MEDULLA.....	5R01 HL19287-03	102,559
NASJLETTI, ALBERTO.....	VASOACTIVE HORMONES AND BLOOD PRESSURE REGULATION.....	5R01 HL18579-03	48,248
NEELY, CHARLES L, JR.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA17027-04	159,792
NICHOALDS, GEORGE E.....	INTRAVENOUS REQUIREMENTS FOR MICRONUTRIENTS.....	7R01 AM25620-01	106,299
NICKSON, JAMES J.....	COMMUNITY CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	3P30 CA16518-03S1	39,364
NICKSON, JAMES J.....	COMMUNITY CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	2P30 CA16518-04	194,452
NISHIMURA, HIROKO.....	COMPARATIVE STUDIES OF RENAL HANDLING OF ELECTROLYTES.....	2R01 AM17824-04	49,608
PALMIERI, GENARO M.....	HYDROXYPROLINE IN BONE METASTASIS FROM BREAST CANCER.....	5R01 CA20939-02	22,283
PREWITT, RUSSELL L, JR.....	HEMODYNAMIC INTERACTIONS OF VASOACTIVE CHEMICALS.....	5R01 HL18489-03	29,030

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
RABKIN, RALPH.....	THE KIDNEY INSULIN, PROINSULIN AND C-PEPTIDE.....	5R01 AM19774-02	26,170
ROBERTSON, JAMES T.....	SUPPORT FOR CEREBROVASCULAR RESEARCH CENTER.....	5P50 NS06826-10	248,858
SABESIN, SEYMOUR M.....	PATHOLOGIC EFFECTS ON CELLS OF MODIFIED LIPOPROTEINS.....	3R01 AM17398-05S1	11,286
SABESIN, SEYMOUR M.....	DYSLIPOPROTEINEMIA IN DIABETES AND VASCULAR DISEASE.....	5R01 HL22121-02	73,055
SABESIN, SEYMOUR M.....	PATHOLOGIC EFFECTS ON CELLS OF MODIFIED LIPOPROTEINS.....	9R01 HL23945-06	119,373
SCHNEIDER, EDWARD G.....	INTRARENAL REGULATION OF SODIUM REABSORPTION.....	2R01 HL16658-05A1	66,908
SHARE, LEONARD.....	CONTROL OF ADH SECRETION AND METABOLISM.....	2R01 HL12990-09	73,051
SHARE, LEONARD.....	ROLE OF ADH IN EXPERIMENTAL RENAL HYPERTENSION.....	5R01 HL19209-03	70,537
SHARMA, RAMESHWAR K.....	BIOCHEMICAL CONTROL IN ADRENOCORTICAL CARCINOMA CELLS.....	2R01 CA16091-04	93,675
SHIVELY, JOHN A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05423-17	154,997
SOLOMON, SOLOMON S.....	DYNAMIC ASPECTS OF ADIPOSE TISSUE METABOLISM.....	3R01 AM18022-03S1	3,292
SOLOWAY, MARK S.....	EVALUATION & MANAGEMENT OF PATIENTS WITH BLADDER CANCER.....	2R26 CA15934-05	42,650
SOLOWAY, MARK S.....	EXPERIMENTAL CHEMOTHERAPY OF MURINE BLADDER CANCER.....	2R26 CA18643-04	102,260
STILES, ROBERT N.....	NEUROMUSCULAR-LOAD OSCILLATIONS.....	1R01 NS14730-01	30,131
STOLLERMAN, GENE H.....	STREPTOCOCCAL IMMUNITY, RHEUMATIC FEVER AND NEPHRITIS.....	5R01 AI10085-15	165,746
STRUVE, WILLIAM G.....	ACETYLCHOLINESTERASE, ORIENTATION ON PLASMA MEMBRANES.....	2R01 NS09564-07	37,250
SULLIVAN, JAY M.....	HEMODYNAMIC EFFECTS OF DIETARY SODIUM IN MAN.....	1R01 HL21523-01A1	60,894
TERRAGNO, NORBERTO A.....	HORMONAL REGULATION OF BLOOD PRESSURE AND BLOOD FLOW.....	1R01 HL22225-01	120,749
WONG, PATRICK Y.....	PROSTAGLANDINS AND THROMBOXANE IN PERIODONTAL DISEASES.....	1R23 DE04591-01A1	23,500
WONG, PATRICK Y.....	METABOLISM OF ARACHIDONIC ACID IN BLOOD VESSELS.....	1R23 HL22075-01	38,875
WOOD, JOHN G.....	LOCATION AND FUNCTION OF CARBOHYDRATES IN THE BRAIN.....	5R01 NS12590-03	39,701
ORGANIZATION TOTAL	64	4,788,076	
NASHVILLE			
FIISK UNIVERSITY ZIP CODE 37203			
HULL, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	3S06 RR08062-07S1	1,323
HULL, GEORGE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S06 RR08062-08	138,412
ORGANIZATION TOTAL	2	139,735	
GEORGE PEABOY COLLEGE FOR TEACHERS ZIP CODE 37203			
BAUMEISTER, ALFRED A.....	STIMULUS FACTORS IN VERBAL LEARNING OF RETARDATES.....	5R01 HD10662-03	88,437
HAYWOOD, H CARL.....	RETARDED INTELLECT DEV.-DEPENDENT/INDEPENDENT RESPONSE.....	5P01 HD00973-15	551,531
HAYWOOD, H CARL.....	RESEARCH CENTER—HUMAN DEVELOPMENT & MENTAL RETARDATION.....	5P30 HD04510-10	281,340
HAYWOOD, H CARL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07087-13	42,855
ORGANIZATION TOTAL	4	964,163	
MEHARRY MEDICAL COLLEGE ZIP CODE 37208			
ARINZE, IFEANYI J.....	DEVELOPMENT OF CARBOHYDRATE & LIPID METABOLISM IN LIVER.....	2R01 HD08792-04	57,486
BROWNE, EDWARD W, JR.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19425-03	85,150
JACKSON, JULIUS H.....	CONTROL OF RELATED DISPERSED GENES AND GENE PRODUCTS.....	1R01 GM25605-01	58,530
JOHNSON, CHARLES W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07167-03	41,649
LOWE, JAMES U.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05422-17	26,765
NAVALKAR, RAMCHANDRA G.....	IMMUNOLOGIC STUDIES ON LEPROSY.....	2R22 AI08647-11	56,869
RICHARDSON, ELISHA R.....	GROWTH AND DEVELOPMENT OF THE HUMAN HEAD.....	5R01 DE02862-13	152,985
TOWNSEL, JAMES G.....	DEVELOPMENT AND EXPANSION OF BIOMEDICAL SCIENCES.....	5S06 RR08037-08	557,047
ORGANIZATION TOTAL	8	1,036,481	
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE—TENNESSEE STATE UNIVERSITY ZIP CODE 37203			
HOGG, RICHARD A.....	A BIOMEDICAL RESEARCH PROGRAM WITH STUDENT PARTICIPATION.....	3S06 RR08092-04S1	2,857
HOGG, RICHARD A.....	A BIOMEDICAL RESEARCH PROGRAM WITH STUDENT PARTICIPATION.....	5S06 RR08092-05	43,140
ORGANIZATION TOTAL	2	45,997	
VANDERBILT UNIVERSITY ZIP CODE 37240			
ANDREWS, JOHN S.....	LENS CELL MEMBRANE SYNTHESIS AND CATARACTOGENESIS.....	5R01 EY01852-02	60,912
BIRD, ROBERT E.....	CONTROL OF PLASMID DNA REPLICATION IN E COLI.....	1R01 GM25526-01	67,250
BOUCEK, ROBERT J, JR.....	THE REGULATION OF CARDIAC HYPERTROPHY.....	5R23 HL21234-02	44,214
BRIGHAM, KENNETH L.....	SCOR: PULMONARY EDEMA—ETIOLOGY, PATHOGENESIS.....	5P50 HL19153-02	356,720
BROQUIST, HARRY P.....	DIETARY LYSINE AND CARNITINE FORMATION.....	5R01 AM16019-07	117,806

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
BUSH, MILTON T.....	METABOLIC INTERACTION OF DRUGS.....	2R01 NS03534-17	59,994
CAMPBELL, ERNEST Q.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07089-13	76,599
CARPENTER, GRAHAM F.....	RECEPTORS FOR EPIDERMAL GROWTH FACTOR IN TUMOR CELLS.....	1R23 CA24071-01	38,000
CARTER, CLINT E.....	ISOLATION AND PURIFICATION OF S. MANSONI EGGS.....	5R22 AI12996-03	33,397
CASAGRANDE, VIVIEN A.....	EFFECTS OF VISUAL DEPRIVATION IN PRIMATES.....	5R01 EY01778-03	44,987
CHAN, TIMOTHY M.....	GLUCOCORTICOID PERMISSIVE ACTION ON LIVER METABOLISM.....	5R01 AM20306-02	48,522
CHAN, TIMOTHY M.....	SKELETAL MUSCLE METABOLISM IN OBESE-DIABETIC MICE.....	5R01 AM21130-02	48,495
CHERRINGTON, ALAN D.....	GLUCONEOGENESIS AND GLYCOGENOLYSIS: ROLE AND REGULATION.....	2R01 AM18243-04	78,573
CHIU, JEN-FU.....	MOLECULAR MECHANISMS IN LARGE BOWEL CARCINOGENESIS.....	5R26 CA18668-02	39,259
CHIU, JEN-FU.....	REGULATION OF A-FETOPROTEIN IN FETAL AND CANCER LIVER.....	1R01 CA21759-01	24,101
CHYTIL, FRANK.....	NUTRITIONAL ASPECTS OF PURINE METABOLISM.....	2R01 HD05384-07	64,642
CHYTIL, FRANK.....	VITAMIN A IN GROWTH AND DEVELOPMENT.....	2R01 HD09195-04	105,658
CHYTIL, FRANK.....	LUNG HORMONAL AND CHROMOSOMAL REGULATION.....	5R01 HL15341-06	49,198
COHEN, STANLEY.....	EPIDERMAL GROWTH FACTOR.....	5R01 HD00700-15	88,829
COLLEY, DANIEL G.....	IMMUNOLOGIC RESPONSES TO SCHISTOSOMA MANSONI.....	5R22 AI11289-06	58,065
COLOWICK, SIDNEY P.....	ENZYMATIC OXIDATION AND PHOSPHORYLATION.....	3R01 GM20656-20S1	24,623
CONIGLIO, JOHN G.....	BIOSYNTHESIS AND INTERCONVERSIONS OF FATTY ACIDS.....	5R01 AM06483-15	39,496
CONIGLIO, JOHN G.....	LIPID CHEMISTRY AND METABOLISM IN REPRODUCTIVE TISSUE.....	3R01 HD07694-05S1	4,587
CONIGLIO, JOHN G.....	LIPID CHEMISTRY AND METABOLISM IN REPRODUCTIVE TISSUE.....	2R01 HD07694-06	45,873
CORBIN, JACKIE D.....	REGULATION OF METABOLISM BY CAMP-DEPENDENT KINASES.....	5R01 AM15988-07	51,781
CROFFORD, OSCAR B.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM20593-01	854,028
CUNNINGHAM, LEON W.....	COLLAGEN SYNTHESIS IN 'DIABETIC' FIBROBLASTS.....	5R01 AM19606-02	49,203
DANZO, BENJAMIN J.....	ENDOCRINE REGULATION OF EPIDIDYMAL FUNCTION.....	5R01 HD08295-04	67,471
DAVIES, JACK.....	PRENATAL ESTROGEN AND SEXUAL DEVELOPMENT IN THE MALE.....	1R01 HD11607-01	69,635
DE MARCHI, JEANETTE M.....	INDUCTION BY CYTOMEGALOVIRUS OF CELL DNA SYNTHESIS.....	1R01 CA20806-01A1	82,638
DES PREZ, ROGER M.....	PLATELET INJURY IN INFECTIOUS AND ALLERGIC DISEASES.....	5R01 HL08399-15	57,168
EXTON, JOHN H.....	ADRENERGIC CONTROL OF LIVER METABOLISM.....	5R01 AM18660-03	41,299
FLEISCHER, BECCA C.....	STRUCTURE AND FUNCTION OF GOLGI APPARATUS OF KIDNEY.....	5R01 AM17223-05	112,454
FLEISCHER, SIDNEY.....	MEMBRANES AND ORGANELLES—STRUCTURE AND FUNCTION.....	5R01 AM14632-15	171,570
FOX, ROBERT.....	THE SUPPRESSION MECHANISM IN BINOCULAR RIVALRY.....	2R01 EY00590-15	38,801
FOX, ROBERT.....	STEREOSCOPIC VISION IN ANIMALS.....	5R01 EY00931-06	39,250
FREDERIKSEN, DIXIE W.....	ATHEROSCLEROSIS AND THE ARTERIAL CONTRACTILE PROTEINS.....	5R01 HL18516-03	56,099
FREEMAN, JOHN A.....	SYNAPTIC ORGANIZATION OF THE OPTIC TECTUM.....	5R01 EY01117-06	82,934
FRIEDMAN, DANIEL L.....	ADULT LIVER CELL CULTURES AND HORMONAL STIMULATION.....	1R01 AM20419-01A1	53,735
GARBERS, DAVID L.....	GUANYLATE CYCLASE: LARGE SCALE PURIFICATION.....	1R01 GM24290-01	77,377
GARBERS, DAVID L.....	REGULATION OF SPERM CYCLIC NUCLEOTIDE METABOLISM.....	2R01 HD10254-03	76,689
GARST, JOHN E.....	STRUCTURE-TOXICITY RELATIONSHIPS AMONG HETEROCYCLES.....	1R23 ES01732-01	34,984
GRAHAM, THOMAS P, JR.....	VIDEOEORTHOGRAPHY IN CONGENITAL HEART DISEASE.....	1R01 HL21985-01	102,101
GUENGERICH, F PETER.....	ENZYMIC ACTIVATION OF ENVIRONMENTAL TOXINS.....	5R01 ES01590-02	62,392
HARBISON, RAYMOND D.....	ENVIRONMENTAL TOXICANT EFFECTS ON PERINATAL DEVELOPMENT.....	5R01 ES00782-06	62,144
HARDMAN, JOEL G.....	ROLE OF CYCLIC GMP: CONTROL OF CYCLIC GMP METABOLISM.....	5R01 GM16811-09	111,244
HARRIS, THOMAS M.....	TETRACYCLINES AND RELATED PHENOLIC NATURAL PRODUCTS.....	5R01 GM12848-14	73,285
HARRIS, THOMAS M.....	VANCOMYCIN, RISTOCETIN AND RELATED ANTIBIOTICS.....	5R01 GM23593-02	62,930
HARRIS, THOMAS R.....	CORONARY CAPILLARY EXCHANGE: THE EFFECTS OF ISCHEMIA.....	5R01 HL19370-03	72,693
HARRISON, ROBERT W, III.....	PHYSIOLOGY OF PITUITARY CELL GLUCOCORTICOID BINDING.....	5R01 CA19907-02	45,484
HASH, JOHN H.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00095-18	1,372,379
HASH, JOHN H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05424-17	200,462
HAWIGER, JACK J.....	PATHOBIOLOGY OF THROMBOEMBOLIC DISORDERS.....	5R01 HL16646-05	84,560
HELLERQVIST, CARL G.....	ANALYSIS OF EUKARYOTIC CELL SURFACES.....	2R01 CA16865-04	67,875
HNILICA, LUBOMIR S.....	PROTEINS OF THE CELL NUCLEUS.....	2R01 CA18389-04	111,427
HOFFMAN, LOREN H.....	UTERINE AND PLACENTAL CONTROL OF LUTEAL FUNCTION.....	2R01 HD05942-07	63,659
HOLLADAY, LESLIE A.....	SOMATOSTATIN-ISLET INTERACTION: EM AUTORADIOGRAPHY.....	1R01 AM23024-01	70,270
INAGAMI, TADASHI.....	RENIN AND PRECURSORS: STRUCTURE AND FUNCTION.....	1R01 HL22288-01	54,383
JOHNSON, L ENSIGN.....	CONTROL STRUCTURE IN PHYSIOLOGICAL KINETICS.....	1R01 GM24060-01	19,452
JOHNSON, ROGER A.....	REGULATION OF ADENYLATE CYCLASE & CAMP METABOLISM.....	2R01 AM18185-04	95,409
JOHNSON, ROGER A.....	ADENOSINE REGULATION OF C-AMP METABOLISM AND LIPOLYSIS.....	5R01 AM21170-02	66,402
JONES, MARK M.....	POSSIBLE NEW ANTIDOTES FOR MERCURY POISONING.....	2R01 ES01018-04	85,628
KAAS, JON H.....	VISUAL ASSOCIATION CORTEX.....	9R01 EY02686-04	67,924
KAPLAN, ALBERT S.....	METABOLISM OF CELLS INFECTED WITH NUCLEAR DNA VIRUSES.....	5R01 AI10947-07	250,901
KEELY, STANLEY L, JR.....	REGULATION OF HEART CAMP DEPENDENT PROTEIN KINASE.....	5R01 HL19181-02	49,453

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
KONO, TETSURO.....	ACTION OF INSULIN ON ITS RECEPTOR AND PHOSPHODIESTERASE.....	2R01 AM06725-17	92,803
KONO, TETSURO.....	ACTION OF INSULIN ON SUGAR TRANSPORT.....	5R01 AM19925-02	49,717
KRANTZ, SANFORD B.....	ERYTHROPOIETIN AND THE REGULATION OF ERYTHROPOIESIS.....	5R01 AM15555-07	81,679
KRONENBERG, MARVIN W.....	IMAGING & ECG IN ACUTE & CHRONIC ISCHEMIC HEART DISEASE.....	1R23 HL22004-01	49,301
LEMBACH, KENNETH J.....	GROWTH STIMULATION OF CULTURED ANIMAL CELLS.....	5R01 CA12810-07	69,652
LIDDLE, GRANT W.....	PITUITARY-ADRENAL PHYSIOLOGY AND PHARMACOLOGY.....	5R01 AM05318-17	122,348
LILJENQUIST, JOHN E.....	GLUCOSE REGULATION OF ORAL PROTEIN DISPOSITION.....	1R01 AM22195-01	91,133
MC GEE, ZELL A.....	PATHOGENIC MECHANISMS IN GONOCOCCAL INFECTIONS.....	5R01 AI13488-03	112,524
MC KANNA, JAMES A.....	OPHTHALMIC PARAMETERS IN THE DEVELOPMENT OF MYOPIA.....	1R01 EY02221-01	77,638
MC KANNA, JAMES A.....	MODIFIED (COATED) MEMBRANES: STRUCTURE AND COMPOSITION.....	5R01 GM23708-03	45,388
MENG, H C.....	ESSENTIAL FATTY ACID DEFICIENCY IN MAN AND ANIMAL.....	3R01 AM18281-03S1	188,766
MITCHELL, WILLIAM M.....	HUMAN PROCOLLAGEN STRUCTURE AND FUNCTION.....	2R01 AM18222-04	72,901
MOSIG, GISELA.....	DNA REPLICATION AND RECOMBINATION IN BACTERIOPHAGE.....	2R01 GM13221-14	119,730
MOYER, SUE A.....	REPLICATION AND INTERFERENCE OF RNA VIRUSES.....	1R01 AI14594-01	113,319
NEAL, ROBERT A.....	A STUDY OF THIAMINE METABOLISM IN MAMMALS.....	5R01 AM10297-12	31,966
NEAL, ROBERT A.....	ENZYMIC MECHANISMS OF INSECTICIDE METABOLISM.....	5R01 ES00075-14	76,900
NEAL, ROBERT A.....	CENTER IN ENVIRONMENTAL TOXICOLOGY.....	5P30 ES00267-11	551,741
NEAL, ROBERT A.....	MECHANISM(S) OF TOXICITY OF THE CHLORINATED P-DIOXINS.....	5R01 ES01552-02	45,227
O'DAY, DENIS M.....	STUDIES IN EXPERIMENTAL FUNGAL ENDOPHTHALMITIS.....	5R01 EY01621-03	57,152
OATES, JOHN A.....	RESEARCH CENTER FOR PHARMACOLOGY AND DRUG TOXICOLOGY.....	2P50 GM15431-11	1,269,530
OATES, JOHN A.....	SPECIALIZED CENTER OF RESEARCH IN HYPERTENSION.....	5P50 HL14192-08	1,136,278
OATES, JOHN A.....	RENAL PROSTAGLANDINS: SYNTHESIS AND FUNCTION.....	5R01 HL16489-04	170,252
OLDHAM, ROBERT K.....	SOUTHEASTERN CANCER STUDY GROUP.....	1R10 CA23909-01	152,181
OLSON, GARY E.....	DEVELOPMENTAL BIOLOGY OF MAMMALIAN SPERMATOZOA.....	1R01 HD11816-01	70,540
ONG, DAVID E.....	CANCER AND VITAMIN A.....	5R01 CA20850-02	43,023
ORGBIN-CRIST, MARIE.....	MALE REPRODUCTIVE PHYSIOLOGY.....	5R01 HD03820-10	63,224
ORGBIN-CRIST, MARIE.....	CENTER FOR POPULATION AND REPRODUCTIVE BIOLOGY RESEARCH.....	5P30 HD05797-07	241,524
ORTH, DAVID N.....	NEW HUMAN GROWTH-STIMULATING HORMONE: EGF/UROGASTRONE.....	5R01 AM19739-02	67,915
ORTH, DAVID N.....	TUMOR CELL SYNTHESIS & SECRETION OF PEPTIDE HORMONES.....	5R01 CA11685-09	110,538
ORTH, DAVID N.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19429-03	135,803
PARK, CHARLES R.....	HORMONAL REGULATION OF METABOLISM.....	5P01 AM07462-15	349,123
PARK, JANE H.....	STUDIES ON 3-PHOSPHOGLYCERALDEHYDE DEHYDROGENASE.....	5R01 GM07884-17	84,257
PATTON, JAMES A.....	EVALUATION OF A MOSAIC INTRINSIC GERMANIUM SCANNER.....	5R01 GM23627-02	62,793
PILKIS, SIMON J.....	HORMONAL CONTROL OF HEPATIC GLUCONEOGENESIS.....	2R01 AM18270-04	88,015
POST, ROBERT L.....	THE ION-PUMP IN THE ERYTHROCYTE.....	5R01 HL01974-24	153,933
PUETT, J DAVID.....	STRUCTURE AND METABOLISM OF PITUITARY HORMONES.....	5R01 AM15838-07	88,582
PUETT, J DAVID.....	GONADOTROPIN ACTIONS IN LEYDIG TUMOR CELLS.....	1R01 CA23603-01	47,184
RABINOWITZ, DAVID.....	HORMONAL CONTROL OF SPLANCHNIC AND FOREARM METABOLISM.....	5R01 AM19587-02	78,943
RABINOWITZ, DAVID.....	PITUITARY-GONADAL PHYSIOLOGY AND PHARMACOLOGY.....	5R01 HD10128-03	107,439
REED, PETER W.....	REGULATION OF POLYMERNUCLEAR LEUKOCYTE FUNCTION.....	1R01 GM24690-01	58,306
REGEN, DAVID M.....	GLUCOSE-TRANSPORT REGULATION IN THYMOCYTES.....	5R01 AM18733-03	69,134
ROSELLI, ROBERT J.....	TRANSVASCULAR FLUID AND PROTEIN EXCHANGE IN THE LUNG.....	1R23 HL22933-01	41,544
ROSENTHAL, RONALD E.....	STUDIES OF THE SYNOVIAL RESPONSE TO ACUTE TRAUMA.....	5R01 AM17475-05	46,397
SASTRY, B V.....	CHOLINERGIC SYSTEM, SPERM MOTILITY AND MALE FERTILITY.....	5R01 HD10607-02	72,381
SEAVER, SALLY S.....	THE HORMONAL REGULATION OF THE EXPRESSION OF A GENE.....	5R01 HD10610-02	49,710
SERGEANT, JOHN S.....	MULTIPURPOSE ARTHRITIS CENTER.....	1P60 AM22071-01	178,199
SLONIM, EPHRAIM A.....	REDOX CHANGES ON B CELL VIABILITY AND INSULIN RELEASE.....	5R01 AM21323-02	42,529
SODERLING, THOMAS R.....	REGULATION OF GLYCOGEN SYNTHASE KINASES AND PHOSPHATASE.....	2R01 AM17808-04	73,102
STAHLMAN, MILDRED T.....	APNEA AND S.I.D.S. FROM THE LARYNGEAL CHEMOREFLEX.....	5R01 HD10454-02	72,523
STAHLMAN, MILDRED T.....	NEWBORN LUNG CENTER FOR HYALINE MEMBRANE DISEASE.....	5P50 HL14214-07	617,165
STAHLMAN, MILDRED T.....	PULMONARY VASCULAR RESPONSE TO GROUP B STREPTOCOCCI.....	1R01 HL22520-01	131,499
STEIN, RICHARD S.....	LITHIUM INDUCED GRANULOCYTOSIS IN CANCER PATIENTS.....	1R01 CA23971-01	33,949
STOLTZFUS, CONRAD M.....	SUBUNIT STRUCTURE AND FUNCTION OF ONCORNAVIRUS RNA.....	5R01 CA16262-04	84,090
TABER, DOUGLASS F.....	SYNTHESIS OF CYTOTOXIC AGENTS.....	5R01 CA22757-02	35,856
TOUSTER, OSCAR.....	BIOCHEMICAL STUDIES ON LYSOSOMES AND RELATED ENZYMES.....	5R01 CA07489-15	84,963
WAGNER, CONRAD.....	TISSUE STORES OF FOLATE: DIETARY CONTROL AND ASSAY.....	2R01 AM15289-04	45,064
WELLS, JACK N.....	TISSUE SPECIFIC INHIBITORS OF PHOSPHODIESTERASE.....	2R01 GM21220-03A1	49,839
WELLS, JACK N.....	PHOSPHODIESTERASE INHIBITION AND MUSCLE CONTRACTION.....	5R01 HL19325-03	37,988
WILKINSON, GRANT R.....	WORKSHOP IN PHARMACOKINETICS.....	1R13 GM25283-01	8,776
WILLIAMS, ROBLEY C, JR.....	ASSEMBLY AND DISASSEMBLY OF CYTOPLASMIC MICROTUBULES.....	1R01 GM25638-01	78,214

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TENNESSEE—Continued			
WILSON, BENJAMIN J.....	NATURALLY OCCURRING FOOD TOXICANTS.....	5R01 ES00569-13	95,486
WILSON, FREDERICK A.....	MECHANISMS FOR INTESTINAL BILE ACID TRANSPORT.....	1R01 AM21696-01	61,252
ORGANIZATION TOTAL	127 15,528,301		
OAK RIDGE			
OAK RIDGE ASSOCIATED UNIVERSITIES ZIP CODE 37830			
GENGOZIAN, NAZARETH.....	'AUTOIMMUNE' THROMBOCYTOPENIA.....	2R01 HL16757-04	122,900
HAYES, RAYMOND L.....	CONCENTRATION OF RADIONUCLIDES BY MALIGNANT NEOPLASMS.....	5R01 CA11858-09	128,163
LITTLEFIELD, L GAYLE.....	EVALUATION OF INDUCED CYTOGENETIC LESIONS IN OOCYTES.....	1R01 HD11709-01	155,668
LUSHBAUGH, CLARENCE C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05746-06	34,979
RICHTER, CONRAD B.....	MARMOSET BREEDING FACILITY.....	1P40 RR01125-01	85,146
SNYDER, FRED L.....	ETHER LIPIDS IN CANCER-ENZYME MECHANISMS & INHIBITORS.....	5R01 CA11949-09	41,521
SNYDER, FRED L.....	SURFACTANT METABOLISM: ALVEOLAR CELLS & LUNG DISEASE.....	5R01 HL18181-04	42,692
ORGANIZATION TOTAL	7 611,069		
UNION CARBIDE CORPORATION—OAK RIDGE NATIONAL LABORATORY ZIP CODE 37830			
KENNEY, FRANCIS T.....	TURNOVER OF PROTEINS AND MRNAS IN MAMMALIAN CELLS.....	1R01 GM25210-01	46,461
ORGANIZATION TOTAL	1 46,461		
STATE TOTAL	283 29,942,837		
TEXAS			
ARLINGTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT ARLINGTON ZIP CODE 76010			
BELLION, EDWARD.....	BIOSYNTHESIS OF VITAMIN B1 (THIAMINE).....	1R01 GM24804-01	45,058
BROWN, KENNETH L.....	MECHANISM OF B12-MEDIATED METHYL TRANSFER REACTIONS.....	5R01 GM23215-03	36,067
ERICKSON, JAMES R.....	INVESTIGATION OF LEARNED HEART-RATE CONTROL.....	5R01 HL21426-02	33,224
ORGANIZATION TOTAL	3 114,349		
AUSTIN			
GENETICS SOCIETY OF AMERICA ZIP CODE 78712			
HOLLAENDER, ALEXANDER.....	XIV INTERNATIONAL CONGRESS OF GENETICS.....	1R13 CA23232-01	14,500
HOLLAENDER, ALEXANDER.....	XIV INTERNATIONAL CONGRESS OF GENETICS.....	1R13 ES01832-01	15,000
HOLLAENDER, ALEXANDER.....	TRAVEL OF U.S. GENETICISTS TO XIV INTERNATIONAL CONGRESS.....	1R13 HD11700-01	20,000
ORGANIZATION TOTAL	3 49,500		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712			
ACOSTA, DANIEL, JR.....	ISCHEMIC MYOCARDIAL INJURY IN CULTURED HEART CELLS.....	3R01 HL18647-03S1	12,934
BERRY, L JOE.....	RETICULOENDOTHELIAL INVOLVEMENT IN ENDOTOXEMIC EFFECTS.....	5R01 AI10087-09	42,489
BERRY, L JOE.....	IMMUNITY TO CHOLERA AND OTHER ENTEROTOXIC DISEASES.....	2R22 AI10466-07	56,171
BITTNER, GEORGE D.....	TROPHIC INTERACTIONS OF AXONS, GLIA, AND OTHER NEURONS.....	1R01 NS14412-01	33,529
BLOCH, DAVID P.....	SIMULTANEOUS FMF DETERMINATION OF DNA AND HISTONE.....	5R01 GM23331-02	35,018
BROWN, DENNIS T.....	TOGAVIRUS GROWTH IN VERTEBRATE AND INVERTEBRATE CELLS.....	1R01 AI14710-01A1	102,440
BROWN, JAMES R.....	PRIMARY AND TERTIARY STRUCTURE OF PROTEINS.....	5R01 HD02899-11	42,753
DAVIS, PATRICK J.....	CHEMICAL AND MICROBIAL MODIFICATIONS OF COLCHICINE.....	1R23 CA24171-01	30,690
DESJARDINS, CLAUDE.....	REPRODUCTIVE AGING IN MALE MICE.....	1R01 AG00958-01	184,010
DIEHL, RANDY L.....	SELECTIVE ADAPTATION TO SPEECH SOUNDS.....	5R01 NS13764-02	22,565
DILLER, KENNETH R.....	PHARMACOLOGICAL TREATMENT OF EDEMA IN BURN INJURY.....	2R01 GM22693-03	65,308
EBERHART, ROBERT C.....	ANALYSIS OF BLOOD TRAUMA FROM MICROPOROUS OXYGENATORS.....	2R01 HL19173-03	64,857
FALBO, TONI.....	FAMILY CONFIGURATION AND INTERPERSONAL BEHAVIOR.....	1R01 HD12605-01	53,970
FOLKERS, KARL.....	BIOLOGICAL INVESTIGATIONS OF SUBSTANCE P.....	5R01 HL18993-03	48,363
FREEMAN, GARY L.....	THE ROLE OF EGG ORGANIZATION DURING EARLY DEVELOPMENT.....	5R01 GM20024-05	31,604
GALLE, OMER R.....	POPULATION RESEARCH CENTER.....	5P30 HD06160-08	159,306

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
GIBSON, DAVID T.....	MICROBIAL DEGRADATION OF CARCINOGENIC HYDROCARBONS.....	5R01 CA19078-03	52,800
GIBSON, DAVID T.....	ENZYMATIC OXYGEN FIXATION INTO AROMATIC HYDROCARBONS.....	5R01 ES00537-08	67,104
GRANT, PHILIP G.....	CONTROL OF MUSCLE MIGRATION IN GROWING BONES.....	5R01 AM19632-02	59,322
HACKERT, MARVIN L.....	STRUCTURE AND FUNCTION OF SUPRA-MOLECULAR ASSEMBLAGES.....	5R01 GM23306-03	30,832
HAKES, DAVID T.....	THE EMERGENCE OF LINGUISTIC INTUITIONS IN CHILDREN.....	1R01 HD10969-01	41,217
HAMILTON, TERRELL H.....	CONTROL MECHANISMS IN REPRODUCTION.....	5P50 HD03803-10	420,374
HARDESTY, BOYD A.....	TRANSLATION CONTROL IN RETICULOCYTES AND LEUKEMIC CELLS.....	2R01 CA16608-04	131,316
HASKELL, BETTY E.....	HUMAN AMINO ACID REQUIREMENT: THEIR ENZYME BASIS.....	7R01 AM25629-01	73,956
HATCH, THOMAS P.....	ATTACHMENT, PENETRATION, AND GROWTH OF CHLAMYDIAE.....	5R01 AI13417-03	40,164
HIRAIZUMI, YUICHIRO.....	MALE RECOMBINATION-MUTATOR SYSTEM IN DROSOPHILA.....	5R01 GM19770-06	84,454
JEFFERY, WILLIAM R.....	STRUCTURE AND FUNCTION OF MESSENGER RIBONUCLEOPROTEIN.....	5R01 GM25119-02	46,410
KALTHOFF, KLAUS O.....	ANALYSIS OF A MORPHOGENETIC DETERMINANT IN AN EMBRYO.....	1R01 AI15046-01	70,205
LARIMER, JAMES L.....	NEURAL BASIS OF BEHAVIOR.....	2R01 NS05423-14A1	63,052
MABRY, TOM J.....	THE FUNCTION AND SYSTEMATIC ROLE OF NATURAL PRODUCTS.....	5R01 HD04488-14	50,415
MAGUIRE, MARJORIE P.....	CHROMOSOME STRUCTURES AND MEIOTIC MECHANISMS.....	5R01 GM19582-06	14,046
MANDY, WILLIAM J.....	STUDIES WITH ANTIGLOBULIN ANTIBODIES.....	5R01 AI07184-13	89,232
MC FADDEN, DENNIS.....	PSYCHOPHYSICS OF BINAURAL HEARING.....	5R01 NS08754-09	74,986
MENAKER, MICHAEL.....	REPRODUCTION, RHYTHMS AND PHOTORECEPTION.....	5R01 HD07727-04	40,045
MEYER, RICHARD J.....	REPLICATION AND HOST-RANGE OF RK2 AND ITS DERIVATIVES.....	1R01 GM25318-01	53,338
MYERS, JACK E.....	METABOLIC CONTROLS IN LIGHT-DRIVEN METABOLISM.....	5R01 GM11300-15	45,773
PARKER, CHARLOTTE D.....	STUDY OF PATHOGENIC MECHANISMS OF VIBRIO CHOLERAE.....	5R22 AI12819-03	76,065
PARKER, CHARLOTTE D.....	NEW APPROACHES TO PERTUSSIS VACCINE.....	2R01 AI12955-03	75,475
POLLAK, GEORGE D.....	A SINGLE UNIT ANALYSIS OF THE AUDITORY SYSTEM.....	5R01 NS13276-02	33,642
POWERS, EDWARD L.....	PHYSICO-CHEMICAL STUDIES OF RADIATION EFFECTS IN CELLS.....	5R01 GM13557-12	74,851
POWERS, EDWARD L.....	CENTER FOR FAST KINETICS RESEARCH.....	5P41 RR00886-04	121,363
RAVEL, JOANNE M.....	FACTORS CONTROLLING PROTEIN BIOSYNTHESIS.....	2R01 GM18775-07	56,376
REED, LESTER J.....	BIOCHEMISTRY OF ALPHA-KETO ACID DEHYDROGENASE COMPLEXES.....	5R01 GM06590-20	118,329
RIGGS, AUSTEN F, II.....	STRUCTURAL BIOCHEMISTRY OF HEMOGLOBINS.....	5R01 GM21314-03	66,809
ROBERTUS, JON D.....	X-RAY STRUCTURE ANALYSIS OF AN ANTIVIRAL PROTEIN.....	5R01 AI13584-03	33,560
ROBERTUS, JON D.....	STRUCTURAL ANALYSIS OF THE ANTI-TUMOR PROTEIN RICIN.....	1R01 CA24059-01	63,910
SANDERS, BOB G.....	EMBRYONIC & VIRALLY INDUCED TUMOR-CELL MEMBRANE ANTIGENS.....	2R01 CA12851-07	38,482
SANDERS, BOB G.....	IMMUNODEFICIENCY STUDIES IN MUSCULAR DYSTROPHY.....	1R01 NS14252-01A1	45,819
SMITH, ROBERT V.....	METABOLISM OF APOMORPHINE AND ITS ANALOGS.....	5R01 NS12259-04	40,525
SNELL, ESMOND E.....	NUTRITION AND METABOLISM OF MICROORGANISMS.....	2R01 AI13940-03	77,894
SNELL, ESMOND E.....	CATALYTIC FUNCTIONS AND METABOLISM OF VITAMIN B6.....	5R01 AM19898-03	74,006
STARR, RICHARD C.....	CONTROL OF CELLULAR DIFFERENTIATION.....	5R01 GM24138-02	40,541
SUSSMAN, HARVEY M.....	DYNAMIC PROPERTIES OF SPEECH SENSORIMOTOR SYSTEMS.....	5R01 NS10654-04	80,458
SUTTON, H ELDON.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07091-13	136,794
TABITA, FRED R.....	FUNCTION AND ASSEMBLY OF CO2 ASSIMILATORY ENZYMES.....	1R01 GM24497-01	48,671
THOMPSON, GUY A, JR.....	THE BIOCHEMISTRY OF MEMBRANE ASSEMBLY AND STABILITY.....	5R01 GM20148-05	38,336
WADE, CHARLES G.....	NMR RELAXATION OF LIQUID CRYSTAL SYSTEMS.....	2R01 HL12528-10	76,586
WALKER, JAMES R.....	REGULATION OF BACTERIAL CELL DIVISION.....	2R01 AI08286-10	8,412
WANG, KUAN.....	CONTRACTILE PROTEINS AND GROWTH CONTROL OF EUKARYOTES.....	5R01 AM20270-02	53,419
WHITESSELL, JAMES K.....	THE TOTAL SYNTHESIS OF SARRACENIN.....	5R01 CA21852-02	42,282
WISSLER, EUGENE H.....	AEROSOL GROWTH IN THE RESPIRATORY SYSTEM.....	5R01 HL19722-03	21,367
WOODRUFF, WILLIAM H.....	COPPER BINDING IN PROTEINS: RESONANCE RAMAN STUDY.....	1R01 AM21333-01	71,840
ORGANIZATION TOTAL	62	4,150,900	

COLLEGE STATION

TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY		ZIP CODE 77843	
ADAMS, EMORY T, JR.....	BILE SALT SYSTEMS—INTERACTIONS AND CATALYSES.....	5R01 GM23877-02	66,712
BATES, GEORGE W.....	IRON TRANSPORT AND UTILIZATION IN THE RETICULOCYTE.....	2R01 AM17790-04	26,775
COTTON, F ALBERT.....	STRUCTURE OF A MICROCOCCAL NUCLEASE.....	5R01 GM19455-07	84,701
FIFE, WILLIAM P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07090-13	63,212
GLOVER, GEORGE I.....	CHEMICAL AND PHYSICAL STUDIES ON PREPHENATE DEHYDRATASE.....	5R01 GM22791-03	26,251
GRANGER, HARRIS J.....	PATHOPHYSIOLOGY OF EDEMA.....	5R01 HL21498-02	43,687
GUNN, J MARTYN.....	REGULATION OF INTRACELLULAR PROTEOLYSIS BY INSULIN.....	1R01 AM19891-01A1	58,826
HOEVE, CORNELIS A.....	GUIDELINES FOR POLYMERS ACTING AS ELASTIN SUBSTITUTES.....	5R01 HL18441-03	35,266

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
IHLER, GARRET M.....	ROLE OF DNA IN DNA, RNA AND PROTEIN SYNTHESIS.....	5R01 GM24432-02	45,003
IPPEN-IHLER, KARIN.....	THE GENETICS OF PLASMID TRANSFER AND REPLICATION.....	2R01 AI14426-02	50,938
JONES, CARL E.....	INTERVENTIONS TO IMPROVE CARDIAC FUNCTION IN ISCHEMIA.....	5R01 HL20286-02	29,687
KEELEY, LARRY L.....	NEUROHORMONAL REGULATION OF CYTOCHROME SYNTHESIS.....	1R01 AI15190-01	55,224
KEMP, WALTER M.....	ANTIGEN SHARING BETWEEN SCHISTOSOMES AND SNAILS.....	1R22 AI15057-01	40,342
MACFARLANE, RONALD D.....	BIOMEDICAL USE OF PLASMA DESORPTION MASS SPECTROMETRY.....	7R01 GM26096-01	45,738
MARIANO, PATRICK S.....	SYNTHESIS OF MITOMYCIN AND ITS ANALOGS.....	2R01 CA16695-03A1	40,738
MARTELL, ARTHUR E.....	REACTIONS OF METAL CHELATES OF VITAMIN B6.....	5R01 AM11694-13	44,877
MEYER, EDGAR F.....	STRUCTURAL INVESTIGATION OF THE BILE PIGMENTS.....	5R01 AM20051-02	52,464
NAGYVARY, JOSEPH J.....	DESIGN OF NUCLEOTIDE PRO-DRUGS.....	2R01 CA11389-07A2	22,000
NAGYVARY, JOSEPH J.....	STUDIES OF RNA WITH 2'-SH SUBSTITUTION.....	5R01 GM16213-10	21,496
O'BRIEN, BARBARA C.....	REGULATION OF LIPOGENESIS BY POLYUNSATURATED DIET FAT.....	1R01 AM20477-01A1	31,853
OPHEIM, DENNIS J.....	THE BIOLOGICAL FUNCTIONS OF ALPHA MANNOSIDASE IN YEAST.....	1R01 GM25528-01	36,672
PACE, CARLOS N.....	MECHANISM OF DEGRADATION OF ARGINASE IN RAT LIVER.....	1R01 AM19112-01A1	38,986
SCOTT, A IAN.....	PORPHYRIN AND CORRINOID BIOSYNTHESIS.....	5R01 AM20528-02	140,713
SCOTT, A IAN.....	ANTITUMOR ALKALOIDS BIOSYNTHESIS & BIOGENETIC SYNTHESIS.....	5R01 CA22436-02	114,886
SEAGER, STEPHEN W.....	ANIMAL MODEL RESOURCE CENTER: A SPECIAL PROGRAM.....	1P40 RR01120-01A1	110,534
SHERTZER, HOWARD G.....	NITROGENOUS LIGANDS AND HEPATIC MONOOXYGENASES.....	1R01 GM25368-01	34,774
SIS, RAYMOND F.....	A MARMOSET COLONY FOR BIOMEDICAL RESEARCH.....	5P40 RR01060-02	89,442
SUMMERS, MAX D.....	BACULOVIRUS STRUCTURE AND PATHOGENIC MECHANISMS.....	5R01 AI14755-02	42,151
WOOD, RANDALL.....	TUMOR LIPIDS: METABOLISM AND STRUCTURAL STUDIES.....	5R01 CA20136-02	66,327
ZINGARO, RALPH A.....	BIOMOLECULES CONTAINING THE SASR2 OR SEASR2 GROUP.....	2R01 CA16912-04A1	44,008
ORGANIZATION TOTAL	30	1,604,283	
DALLAS			
BAYLOR COLLEGE OF DENTISTRY ZIP CODE 75226			
FRAZIER, LOY W, JR.....	PLASMA FACTOR(S) WHICH STIMULATE HO & NH4O EXCRETION.....	5R01 AM18689-04	27,025
KOLSTAD, ROBERT A.....	STREPTOCOCCUS MUTANS: STRAIN TYPING AND INHIBITION.....	5R01 DE03923-05	29,355
ORGANIZATION TOTAL	2	56,380	
BISHOP COLLEGE ZIP CODE 75241			
FOWLKS, EDISON R.....	INTERDISCIPLINARY RESEARCH IN MOLECULAR BIOLOGY.....	3S06 RR08050-07S1	1,800
FOWLKS, EDISON R.....	INTERDISCIPLINARY RESEARCH IN MOLECULAR BIOLOGY.....	5S06 RR08050-08	101,311
SCHACHAR, RONALD A.....	RAMANS SPECTROSCOPY OF THE LENS OF THE EYE.....	1R01 EY03021-01	45,539
WILSON, JOSEPH E.....	DEVELOPMENT OF ANTITHROMBOGENIC PLASTIC BIOMATERIALS.....	5R01 HL21194-02	24,985
ORGANIZATION TOTAL	4	173,635	
SOUTHERN METHODIST UNIVERSITY ZIP CODE 75275			
SOHAL, RAJINDAR S.....	AGE-ASSOCIATED CELLULAR ALTERATIONS IN THE HOUSEFLY.....	5R01 AG00171-02	34,365
UBELAKER, JOHN E.....	ULTRASTRUCTURE OF REPRODUCTION IN SCHISTOSOMES.....	1R22 AI14685-01	22,345
ORGANIZATION TOTAL	2	56,710	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS ZIP CODE 75235			
ANDERSON, RICHARD G.....	DEVELOPMENT AND FUNCTION OF THE OVIDUCT BASAL BODY.....	3R01 HD08987-03S1	11,181
ANDERSON, RICHARD G.....	AN INTEGRATED STUDY OF THE OVIDUCT BASAL BODY AND CILIUM.....	2R01 HD08987-04	65,845
ATKINS, JAMES M.....	CARDIOVASCULAR ADAPTATION TO STRESS IN DISEASE STATES.....	5R01 HL20678-02	54,129
BAXTER, CHARLES R.....	CIRCULATORY AND FLUID VOLUME CHANGES IN BURNS.....	5R01 GM21681-14	104,000
BEER, ALAN E.....	IMMUNOREGULATION OF MAMMALIAN REPRODUCTION.....	5R01 HD10413-02	116,025
BILHEIMER, DAVID W.....	LIPOPROTEIN METABOLISM IN RELATION TO ATHEROSCLEROSIS.....	5R01 HL15949-05	56,561
BILLINGHAM, RUPERT E.....	IMMUNOBIOLOGY OF TISSUE TRANSPLANTATION AND PREGNANCY.....	5R01 AI10678-07	355,156
BONTE, FREDERICK J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05426-17	200,462
BOYAR, ROBERT M.....	ONSET AND PROGRESSION OF PUBERTY.....	1R01 HD10909-01A1	50,701
BRATER, DONALD C.....	MODULATION BY DISEASE OF EFFECT OF FUROSEMIDE IN MAN.....	1R23 HL22882-01	38,344
BROWN, MICHAEL S.....	MOLECULAR BASIS OF CHOLESTEROL METABOLISM.....	5P01 HL20948-02	496,248
BRUCE, LARRY A.....	HORMONE INFLUENCES ON GI MOTOR FUNCTION.....	1R01 AM21657-01	50,649
BUTOW, RONALD A.....	REGULATION OF MITOCHONDRIAL BIOGENESIS IN YEAST.....	5R01 GM22525-03	43,314
CAMPBELL, WILLIAM B.....	ANGIOTENSIN AND PROSTAGLANDIN CONTROL OF ALDOSTERONE.....	5R23 HL21066-02	35,213
CAPRA, J DONALD.....	GENETIC STUDY OF IMMUNOGLOBULIN V REGION STRUCTURE.....	5R01 AI12127-04	78,121

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
CAPRA, J DONALD.....	STUDIES ON THE H-2 LINKED SS PROTEIN AND HUMAN C4.....	5R01 AI14742-02	65,401
CASSIDY, SHARON S.....	CARDIOVASCULAR EFFECTS OF LUNG DISTENSION.....	1R01 HL22589-01	50,259
COMBES, BURTON.....	PROGRAM-PROJECT IN LIVER DISEASES.....	5P01 AM19329-03	409,968
COTTAM, GENE L.....	NATURE OF THE REGULATION OF LIVER PYRUVATE KINASE.....	5R01 AM19031-03	49,503
CRAMER, ONEIDA M.....	NEUROENDOCRINE MECHANISMS OF HYPOPHYSEAL SECRETION.....	1R01 HD10358-01	38,711
DIETSCHY, JOHN M.....	MECHANISMS OF FAT AND STEROID ABSORPTION BY THE GUT.....	5R01 AM16386-07	56,663
DIETSCHY, JOHN M.....	CONTROL OF CHOLESTEROL METABOLISM—BILE ACID TRANSPORT.....	5R01 HL09610-14	173,548
DOWBEN, ROBERT M.....	FLUORESCENT PROBE STUDIES OF HEART MUSCLE PROTEINS.....	3R01 HL16678-03S1	5,284
DOWBEN, ROBERT M.....	STUDIES OF HEART ADENYL CYCLASE COMPLEX.....	3R01 HL18272-03S1	2,337
DOWNEY, H FRED.....	REGIONAL, NON-ISCHEMIC MYOCARDIAL HYPOXIA.....	1R01 HL21657-01	46,054
ERDOS, ERVIN G.....	VASOACTIVE PEPTIDES WHICH STIMULATE SMOOTH MUSCLES.....	5R01 HL16320-05	73,683
ERDOS, ERVIN G.....	RENAL ENZYMES THAT REGULATE BLOOD PRESSURE.....	5R01 HL20594-02	90,452
ESTABROOK, RONALD W.....	HEPATIC MICROSOMAL DRUG OXIDATION.....	5R01 GM16488-11	248,041
FAWCETT, C PETER.....	HYPOTHALAMIC REGULATION OF THE ENDOCRINE PANCREAS.....	5R01 AM21163-02	47,371
FEIT, HOWARD.....	THE ROLE OF TUBULIN AT THE NERVE ENDING.....	3R01 NS12743-03S1	33,187
FINKELSTEIN, RICHARD A.....	CHOLERA EXO-ENTEROTOXIN AND IMMUNITY IN CHOLERA.....	5R22 AI08877-10	81,813
FIXLER, DAVID E.....	CARDIOVASCULAR FOLLOW-UP OF HYPERTENSIVE ADOLESCENTS.....	5R01 HL18456-03	75,175
FORDTRAN, JOHN S.....	WATER AND SOLUTE MOVEMENT IN THE HUMAN INTESTINE.....	5R01 AM06506-17	161,793
FORDTRAN, JOHN S.....	GASTRIC ACID SECRETION AND BUFFER CONTENT AFTER EATING.....	5R01 AM16816-05	93,425
FORMAN, JAMES M.....	ANALYSIS OF H-2 MUTANT STRAINS.....	5R01 AI13111-03	85,235
FOSTER, DANIEL W.....	REGULATION OF KETOGENESIS IN TISSUES.....	5R01 AM18573-17	147,598
FRENKEL, EUGENE P.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED COMMUNITY).....	3P30 CA17065-03S1	175,972
FRENKEL, EUGENE P.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18132-04	101,993
FRENKEL, EUGENE P.....	NEW IMMUNOLOGIC APPROACHES TO LYMPHOID NEOPLASMS.....	1P01 CA23115-01	504,922
FRENKEL, RENE A.....	FUNCTION AND REGULATION OF MAMMALIAN MALIC ENZYMES.....	5R01 AM17983-04	35,399
GALOSY, RICHARD A.....	CARDIOVASCULAR ADJUSTMENT TO BEHAVIORAL STRESS.....	5R01 HL19257-03	48,609
GANT, NORMAN F, JR.....	PLACENTAL FUNCTION IN NORMAL AND ABNORMAL PREGNANCY.....	5R01 HD08360-05	108,958
GARRARD, WILLIAM T.....	STRUCTURE OF THE SUBUNITS OF EUKARYOTIC CHROMOSOMES.....	2R01 GM22201-04	81,741
GAULDEN, MARY E.....	CHROMOSOME MUTATIONS IN INFANTS AND CHILDREN.....	5R01 HD06832-07	86,814
GILLIAM, JAMES N.....	SKIN INVOLVEMENT IN SLE IN NEW ZEALAND MICE.....	5R01 AM19101-03	35,205
GOMEZ-SANCHEZ, CELSO E.....	ROLE OF MINERALOCORTICOIDS IN LOW RENIN HYPERTENSION.....	5R01 HL18730-03	48,086
GOMEZ-SANCHEZ, CELSO E.....	STEROIDS IN ADRENAL REGENERATION HYPERTENSION.....	1R01 HL21779-01	49,269
GONYEA, WILLIAM J.....	ADAPTATION OF MUSCLE TO HIGH-INTENSITY EXERCISE.....	2R01 AM17615-04	83,981
GOYAL, RAJ K.....	PATHOPHYSIOLOGY OF ESOPHAGEAL MOTOR DISORDERS.....	2R01 AM18403-04	35,591
GRIFFIN, BRENDA W.....	HEMEPROTEIN REACTIONS WITH LIPID HYDROPEROXIDES.....	5R01 AM19027-03	39,898
GRIFFIN, WILMA S.....	BRAIN DEVELOPMENT AND GRAFT VERSUS HOST DISEASE.....	1R01 AI14663-01	54,108
GRINNELL, FREDERICK L.....	ADHESION OF NORMAL AND MALIGNANT MAMMALIAN CELLS.....	5R01 CA14609-06	51,700
HART, DAVID A.....	REGULATION OF LYMPHOCYTE ACTIVITY BY PROTEASES.....	1R01 CA24444-01	41,019
HELDERMAN, J HAROLD.....	INSULIN RECEPTOR RELATIONSHIP WITH IMMUNOCOMPETENT CELLS.....	1R01 AM22150-01	83,070
HERNDON, JAMES H, JR.....	PERMEABILITY OF THE EPIDERMAL-DERMAL BASEMENT ZONE.....	5R01 AM19636-02	37,881
HERSH, LOUIS B.....	METHYLAMINE METABOLISM, STUDIES OF ENZYME HOMOLOGY.....	5R01 AM13443-10	55,795
HUMPHRIES, ERIC H.....	EXPRESSION OF AVIAN SARCOMA VIRUS IN RAT FIBROBLASTS.....	1R01 CA23041-01	70,573
JASIN, HUGO E.....	ROLE OF IMMUNE COMPLEXES IN CHRONIC INFLAMMATION.....	5R01 AM16209-05	29,110
JOHNSON, ALICE R.....	INTERACTION OF PEPTIDES AND TARGET CELLS IN LUNG.....	2R01 HL18826-04	47,809
JOHNSTON, JOHN M.....	INTESTINAL ABSORPTION AND METABOLISM OF LIPIDS.....	5R01 AM03108-20	78,546
KANG, CHIL-YONG.....	INFECTIOUS RETICULOENDOTHELIOSIS DNA PROVIRUS.....	5R01 CA20012-03	46,266
KETTMAN, JOHN R, JR.....	THE RELATION OF HUMORAL AND CELL MEDIATED IMMUNITIES.....	5R01 AI11630-05	51,958
KOKKO, JUHA P.....	TRANSPORT PROPERTIES OF ISOLATED PERFUSED NEPHRONS.....	2R01 AM14677-09	235,412
LEBOVITZ, ROBERT M.....	VESTIBULO-COCHLEAR EFFECTS OF UHF-MICROWAVE RADIATION.....	9R01 ES01937-04	75,450
LINN, TRACY C.....	REGULATION OF LIPOGENIC ENZYMES IN DIABETES.....	5R01 AM21287-02	33,202
LIPTON, JAMES M.....	EFFECTS OF AGING ON CENTRAL TEMPERATURE CONTROLS.....	5R01 AG00109-02	44,359
LIPTON, JAMES M.....	CENTRAL THERMOSENSITIVE CONTROLS OF BODY TEMPERATURE.....	2R01 NS10046-05	51,108
LONGHURST, JOHN C.....	CARDIOVASCULAR EFFECTS FROM VISCERAL AFFERENTS.....	1R23 HL22669-01	49,200
LOSPALLUTO, JOSEPH J.....	LYMPHOID CELL FUNCTION AND AGING.....	5R01 AG00461-04	48,844
MACDONALD, PAUL C.....	ESTROGEN PRODUCTION FROM PLASMA PRECURSORS IN HUMANS.....	5R01 AM06912-16	98,808
MACDONALD, PAUL C.....	INITIATION OF HUMAN LABOR: PREVENTION OF PREMATURITY.....	5P50 HD11149-02	513,177
MARKS, JAMES F.....	THE ONTOGENY OF PUBERTY IN DIABETES MELLITUS.....	5R01 AM20777-02	59,460
MARTINEZ, JOHN M, II.....	COLORIMETRIC ANALYSIS OF GLAUCOMA.....	1R01 EY02242-01	72,816
MARVER, DIANA H.....	CHARACTERIZATION OF HORMONE TARGET SITES ON CHROMATIN.....	1R01 AM21576-01	50,579
MASTERS, BETTIE S.....	MICROSOMAL ELECTRON TRANSPORT IN LIVER AND HEART.....	3R01 HL13619-08S1	5,972

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
MASTERS, BETTIE S.....	MICROSOMAL ELECTRON TRANSPORT IN LIVER AND HEART.....	2R01 HL13619-09	73,843
MC CANN, SAMUEL M.....	NEUROHUMORAL CONTROL OF THE ANTERIOR PITUITARY.....	5R01 AM10073-13	86,014
MC CANN, SAMUEL M.....	NEURAL CONTROL OF GONADOTROPIN AND PROLACTIN SECRETION.....	5P01 HD09988-02	219,580
MIHALOFF, GREGORY A.....	AN ANALYSIS OF STRUCTURE AND FUNCTION OF BASILAR PONS.....	1R01 NS12644-01A4	44,491
MITCHELL, JERE H.....	CARDIOVASCULAR AND PULMONARY ADAPTATION TO STRESS.....	5P01 HL06296-18	386,879
MOSS, ROBERT L.....	HYPOTHALAMIC PEPTIDES AND REPRODUCTIVE BEHAVIOR.....	1R01 HD11814-01	75,490
MOSS, ROBERT L.....	NEUROHUMORAL EVENTS IN CELLS ENDING IN MEDIAN EMINENCE.....	2R01 NS10434-07	36,840
MUNFORD, ROBERT S.....	ASSAYS FOR ENDOTOXIN IN PLASMA.....	1R23 AI14942-01	43,884
MURPHY, F KEVIN.....	CELLULAR IMMUNITY IN HUMAN HERPES SIMPLEX INFECTION.....	1R23 AI14591-01	39,924
NEAVES, WILLIAM B.....	BIOLOGY OF AGING LEYDIG CELLS.....	1R01 AG00793-01	31,454
OZANNE, BRADFORD W.....	MAPPING OF POLYPEPTIDES TO MURINE SARCOMA VIRUS RNA.....	1R01 CA23043-01	58,490
PAK, CHARLES Y.....	THEORETICAL AND THERAPEUTIC ASPECTS OF CALCIFICATION.....	5R01 AM16061-07	78,830
PAK, CHARLES Y.....	FORMULATION OF RATIONAL THERAPY OF UROLITHIASIS.....	5P50 AM20543-02	278,495
PETERSON, JULIAN A.....	REGULATION OF MICROBIAL OXIDATION REACTIONS.....	5R01 GM19036-10	54,082
PIERCE, ALAN K.....	DEFENSE MECHANISMS OF THE LUNG.....	1R01 HL21827-01	57,219
PORTER, JOHN C.....	HORMONE DYNAMICS & TARGET ORGANS IN AGING MEN & WOMEN.....	5P01 AG00306-02	329,601
PORTER, JOHN C.....	SECRETION OF HYPOTHALAMIC AND PITUITARY HORMONES.....	5R01 AM01237-23	99,433
PRICE, KENNETH F.....	AUTONOMIC PREDICTORS OF HYPERTENSION IN CHILDREN.....	5R01 HL20655-02	64,894
PROUGH, RUSSELL A.....	BIOCHEMICAL-PHARMACOLOGICAL EVALUATION OF LUNG CELLS.....	5R01 HL19654-03	34,952
RASKIN, PHILIP.....	HYPERLIPEMIA AND DIABETES: GLUCOSE LIPID INTERACTIONS.....	2R01 AM18179-04	40,436
RICHARDS, E GLEN.....	STUDIES OF CONTRACTILE PROTEINS OF HEART MUSCLE.....	5R01 HL14938-06	29,230
ROSENBERG, ROGER N.....	BIOCHEMICAL EVENTS IN DIFFERENTIATING NEUROBLASTOMA.....	5R01 CA21602-02	99,123
ROSENFELD, CHARLES R.....	STUDIES OF UTERO-PLACENTAL CIRCULATION.....	5R01 HD08783-05	93,719
SAID, SAMI I.....	VASOACTIVE INTESTINAL & LUNG POLYPEPTIDES-TUMOR.....	5R01 CA21570-02	42,366
SAID, SAMI I.....	SUPPORT FOR CENTER FOR LUNG RESEARCH.....	5P50 HL14187-07	634,123
SELDIN, DONALD W.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00633-06	674,651
SHADDUCK, JOHN A.....	ANIMAL RESOURCES DISEASE LABORATORY.....	5P40 RR00890-05	104,988
SHADDUCK, JOHN A.....	DIAGNOSIS AND TREATMENT OF MAMMALIAN ENCEPHALITIZOONOSIS.....	2R01 RR00938-04A1	56,945
SHAY, JERRY W.....	ANALYSIS OF HEART CELL CONTRACTION.....	5R01 HL20643-02	53,033
SMILEY, JAMES D.....	THE LOCAL IMMUNE RESPONSE IN RHEUMATOID SYNOVITIS.....	5R01 AM08418-15	56,126
SMITH, R GRAHAM.....	DIFFERENTIATION ANTIGENS OF HUMAN LYMPHOBLASTOID CELLS.....	5R01 CA22034-02	35,922
SMITH, THOMAS E.....	KINETICS AND CHEMISTRY OF ALLOSTERIC INTERACTIONS.....	2R01 GM21650-04	65,110
SNELL, WILLIAM J.....	CELL SURFACE RECOGNITION AND CELL INTERACTIONS.....	1R01 GM25661-01	59,699
SREBRO, RICHARD.....	MOLECULAR BASIS OF PHOTORECEPTOR ACTIVITY.....	5R01 EY02373-02	77,614
SRERE, PAUL A.....	STRUCTURES AND MECHANISMS OF CITRATE ENZYMES.....	5R01 AM11313-12	61,173
STASTNY, PETER.....	HLA-D AND IA-LIKE ANTIGENS IN RHEUMATOID ARTHRITIS.....	2R01 AI12563-04	98,563
STREILEIN, J WAYNE.....	PRODUCTION OF SYRIAN HAMSTER CONGENEIC STRAINS.....	5R01 RR01133-02	56,981
STULL, JAMES T.....	ROLE OF PHOSPHOPROTEIN IN CARDIAC INOTROPIC RESPONSES.....	7R01 HL23990-01	43,109
SUTKO, JOHN L.....	SODIUM-CALCIUM INTERACTIONS IN MAMMALIAN MYOCARDIUM.....	5R23 HL21262-02	39,855
TAUROG, ALVIN M.....	THYROID FUNCTION AND IODINE METABOLISM.....	5R01 AM03612-19	107,800
UHR, JONATHAN W.....	REGULATION OF THE IMMUNE RESPONSE.....	2R01 AI10967-06	103,134
UHR, JONATHAN W.....	THE BIOLOGY AND BIOCHEMISTRY OF THE LYMPHOCYTE SURFACE.....	5P01 AI11851-05	375,226
UNGER, ROGER H.....	THE GLUCOREGULATORY PEPTIDE HORMONES.....	2R01 AM02700-19	60,770
UYEDA, KOSAKU.....	STRUCTURE AND FUNCTION OF PHOSPHOFRUCTOKINASE.....	5R01 AM16194-07	41,092
VITETTA, ELLEN S.....	THE BIOLOGY AND BIOCHEMISTRY OF CELL SURFACE IGD.....	2R01 AI12789-04	102,227
VITETTA, ELLEN S.....	STRUCTURAL STUDIES OF H-2, TL AND T/T (F9) ANTIGENS.....	5R01 AI13448-03	73,563
WEISS, GEORGE B.....	MECHANISMS OF DRUG ACTION IN VASCULAR SMOOTH MUSCLE.....	5R01 HL14775-08	64,213
WILDENTHAL, C KERN.....	FETAL HEARTS IN ORGAN CULTURE.....	5R01 HL14706-07	77,126
WILDENTHAL, C KERN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07175-02	193,455
WILLERSON, JAMES T.....	INFLUENCE OF MANNITOL ON CARDIAC MUSCLE.....	5R01 HL15522-06	31,890
WILLERSON, JAMES T.....	ISCHEMIC HEART DISEASE CENTER (SCOR).....	5P50 HL17669-04	786,115
WILSON, JEAN D.....	ACTION OF HORMONES ON PROTEIN AND RNA METABOLISM.....	5R01 AM03892-20	165,705
ZAHLTEN, RAINER N.....	CYTOSOLIC FUMARASE IN DIABETES.....	5R01 AM20976-02	33,438
ZIFF, MORRIS.....	IMMUNOLOGIC AND OTHER ASPECTS OF THE RHEUMATIC DISEASES.....	5P01 AM09989-14	378,687
ZIFF, MORRIS.....	AUTOANTIBODY FORMATION IN RHEUMATOID ARTHRITIS AND SLE.....	5R01 AM18505-04	62,934
ZIFF, MORRIS.....	MULTIPURPOSE ARTHRITIS CENTER.....	5P60 AM20628-02	75,439
ORGANIZATION TOTAL	131	14,464,085	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
DENTON			
NORTH TEXAS STATE UNIVERSITY	ZIP CODE 76203		
GRACY, ROBERT W	STRUCTURE AND FUNCTION OF ALDOSE KETOSE ISOMERASES.....	5R01 AM14638-08	49,494
JACOBSON, MYRON K.....	ALTERATION OF NAD METABOLISM BY CHEMICAL CARCINOGENS.....	1R01 CA23994-01	18,290
LYLE, ROBERT E.....	STRUCTURAL REQUIREMENTS FOR NITROSAMINE CARCINOGENICITY.....	1R01 ES01975-01	37,052
SKINNER, CHARLES G.....	OXAPTERIDINE ANALOGS OF FOLIC ACID.....	5R01 CA18610-03	33,253
ORGANIZATION TOTAL	4 138,089		
TEXAS WOMAN'S UNIVERSITY	ZIP CODE 76204		
MILNER, ALICE N.....	BONE QUALITY CHANGES IN HUMANS: A 20-YEAR FOLLOW-UP.....	1R01 AM21518-01	29,758
RUDICK, MICHAEL J.....	THE MECHANISM OF GLYCOPROTEIN SECRETION.....	5R01 GM22707-03	21,440
ORGANIZATION TOTAL	2 51,198		
EDINBURG			
PAN AMERICAN UNIVERSITY	ZIP CODE 78539		
SAVAGE, NORMAN L.....	MINORITY BIOMEDICAL SUPPORT PROGRAM.....	3S06 RR08038-07S1	2,408
SAVAGE, NORMAN L.....	MINORITY BIOMEDICAL SUPPORT PROGRAM.....	5S06 RR08038-08	159,245
ORGANIZATION TOTAL	2 161,653		
EL PASO			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT EL PASO	ZIP CODE 79968		
BRISTOL, JOHN R.....	BIOMEDICAL RESEARCH INTERN PROGRAM.....	3S06 RR08012-07S1	1,277
BRISTOL, JOHN R.....	BIOMEDICAL RESEARCH INTERN PROGRAM.....	5S06 RR08012-08	167,612
ORGANIZATION TOTAL	2 168,889		
FORT WORTH			
TEXAS CHRISTIAN UNIVERSITY	ZIP CODE 76129		
BABITCH, JOSEPH A.....	SYNAPTIC MEMBRANE STRUCTURE AND FUNCTION.....	2R01 NS12485-04	54,985
BABITCH, JOSEPH A.....	A MODEL FOR STUDYING THE INTERIOR OF SYNAPSES.....	1R01 NS14408-01	38,670
BARTLETT, PAUL D.....	SMALL MOLECULES IN ORGANIC AND ENVIRONMENTAL CHEMISTRY.....	2R01 ES01130-03A1	52,538
BARTLETT, PAUL D.....	SMALL MOLECULES IN ORGANIC AND ENVIRONMENTAL CHEMISTRY.....	5R01 ES01130-04	55,833
SELLS, SAUL.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07106-04	25,356
ORGANIZATION TOTAL	5 227,382		
TEXAS COLLEGE OF OSTEOPATHIC MEDICINE	ZIP CODE 76107		
TAI, HSIN-HSIUNG.....	ENZYMES IN PROSTAGLANDIN METABOLISM.....	2R01 GM25247-02	47,390
ORGANIZATION TOTAL	1 47,390		
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	ZIP CODE 77550		
ABELL, CREED W.....	BIOCHEMISTRY OF NORMAL AND LEUKEMIC LYMPHOCYTES.....	2R01 CA14525-06A1	63,667
BARBER, JOHN C.....	TISSUE STABILIZED ALLOPLASTIC CORNEAL PROSTHESIS.....	1R01 EY02610-01	65,267
BARON, SAMUEL.....	ACUTE HEMORRHAGIC CONJUNCTIVITIS AND INTERFERON.....	5R01 EY01715-03	57,109
BARRANCO, SAM C.....	DRUG SENSITIVITY OF MAMMALIAN CELLS IN PLATEAU PHASE.....	5R01 CA15397-06	61,441
BARRANCO, SAM C.....	USE OF CELL KINETICS TO PLAN HUMAN TREATMENT.....	1P01 CA23114-01	111,552
BARRANCO, SAM C.....	DIFFERENTIAL DRUG SENSITIVITIES OF HUMAN TUMOR CELLS.....	1R01 CA23145-01	64,320
BAUR, PAUL S.....	STRUCTURE OF BARORECEPTORS IN HYPERTENSION.....	5R01 HL19048-03	56,581
BOOR, PAUL J.....	MOLECULAR MECHANISMS OF CHEMICAL MYOCARDIOPATHIES.....	5R23 HL21327-02	40,287
BOWMAN, BARBARA H.....	THE BASIC DEFECT IN CYSTIC FIBROSIS.....	1R01 AM20606-01	43,929
BOWMAN, BARBARA H.....	GENETIC CONTROL OF THE STRUCTURE OF HUMAN PROTEINS.....	5R01 HD03321-12	105,655
BROWN, ARTHUR M.....	INNERVATION OF CORONARY ARTERIES AND HEART.....	3R01 HL16657-05S1A1	34,170
BROWN, ARTHUR M.....	INNERVATION OF CORONARY ARTERIES AND HEART.....	5R01 HL16657-06	159,770
BROWN, ARTHUR M.....	NERVOUS AND IONIC FACTORS IN SUDDEN CARDIAC DEATH.....	2R01 HL18798-04	124,024

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
BROWN, ARTHUR M.....	IONIC MOVEMENTS ACROSS NERVE CELL BODY MEMBRANES.....	2R01 NS11453-04A1	91,549
BROWN, ARTHUR M.....	PHOTOTRANSDUCTION IN APLYSIA NEURONS.....	5R01 NS12655-04	55,500
BRYAN, GEORGE T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05427-17	178,917
CHAN, LEE-NIEN L.....	REGULATION OF HEMOGLOBIN SYNTHESIS IN CHICK EMBRYOS.....	7R01 HL24048-01	32,783
CHAN, TEH-SHENG.....	SOMATIC CELL GENETIC ANALYSIS OF MEMBRANE BIOGENESIS.....	7R01 CA25762-01	62,793
CHAN, TEH-SHENG.....	SOMATIC CELL HYBRIDS FOR STUDIES OF HUMAN DISEASES.....	7R01 GM26522-01	52,588
CHRISTENSEN, BURGESS N.....	SYNAPTIC ORGANIZATION IN THE CENTRAL NERVOUS SYSTEM.....	1R01 NS14429-01	56,578
COGGESHALL, RICHARD E.....	INDIVIDUAL NEURONS IN A SIMPLE NERVOUS SYSTEM.....	2R01 NS10161-08	33,709
COSTANZI, JOHN J.....	SOUTHWEST CANCER CHEMOTHERAPY STUDY GROUP.....	2R10 CA03096-21	208,873
COSTANZI, JOHN J.....	NEW APPROACHES TO IMMUNOTHERAPY OF CANCER PATIENTS.....	3P01 CA16964-03S1	40,964
COSTANZI, JOHN J.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	2P30 CA17701-04	504,838
CRANFORD, JERRY L.....	NEURAL MECHANISMS OF BINAURAL HEARING.....	7R01 NS15323-01	35,582
DAVIS, CHARLES P.....	BLADDER INFECTIONS: PATHOGENESIS AND RESISTANCE.....	1R01 AI14508-01A1	47,528
DENNEY, RICHARD M.....	SOMATIC CELL GENETICS OF AMINOACYL-TRNA SYNTHETASES.....	1R01 GM25090-01	61,996
DUNCAN, DONALD.....	FINE STRUCTURE OF THE SUBSTANTIA GELATINOSA.....	5R01 NS13171-02	49,690
EATON, DOUGLAS C.....	NAO TRANSPORT MECHANISMS IN MAMMALIAN URINARY BLADDER.....	1R01 AM20068-01A1	44,825
EWERT, ADAM.....	INTERACTIONS OF BRUGIA MALAYI AND MICROORGANISMS.....	5R01 AI11871-05	36,469
FISHMAN, HARVEY M.....	FLUCTUATION PHENOMENA AND ION MOVEMENTS IN MEMBRANES.....	5R01 NS11764-06	44,203
FISHMAN, HARVEY M.....	STOCHASTIC AND KINETIC PROCESSES IN MEMBRANE FUNCTION.....	5P01 NS13778-02	211,857
FULLER, GERALD M.....	REGULATION OF PLASMA PROTEIN BIOSYNTHESIS.....	2R01 HL16445-05	84,679
GALLAGHER, JOEL P.....	THE PHARMACOLOGY OF A GABA RECEPTOR.....	5R01 NS13727-02	40,364
GROSSMAN, ROBERT G.....	A CENTER FOR THE STUDY OF NERVOUS SYSTEM INJURY.....	2P50 NS07377-09	426,721
GUCKIAN, JAMES C.....	MEDIATORS OF INFLAMMATION IN LUNG DURING PNEUMONIA.....	5R01 AI13906-03	54,812
HABER, BERNARD.....	PURIFICATION OF ENDOTHELIAL MITOGEN CNS TUMOR ORIGIN.....	5R01 CA18877-02	53,538
HALL, CHARLES E.....	HORMONAL AND DIETARY MODIFICATION OF NACL TOXICITY.....	2R01 HL09911-12	41,966
HALL, CHARLES E.....	TRACE METALS, VASCULAR ACTIVITY AND HYPERTENSION.....	1R01 HL22603-01	39,175
HILLMAN, GILBERT R.....	EFFECTS OF ANTICHOLINERGIC AGENTS ON SCHISTOSOMES.....	5R22 AI14103-02	47,569
HOLOUBEK, VIKTOR.....	INTERFERENCE OF AZOCARCINOGENS WITH RNA PROCESSING.....	1R01 CA22559-01	54,437
HULET, WILLIAM H.....	CAPTURE AND MAINTENANCE OF THE SQUID LOLIGO PEALEI.....	2P40 RR01024-03	192,005
JENKINS, VERNON K.....	EFFECTS OF THERAPEUTIC RADIATION ON LYMPHOCYTE RESPONSE.....	3R01 CA13435-05S1	11,288
JENKINS, VERNON K.....	EFFECTS OF THERAPEUTIC RADIATION ON LYMPHOCYTE RESPONSE.....	5R01 CA13435-06	40,249
KITTREDGE, JAMES S.....	BAG CELL HORMONES: ISOLATION AND STRUCTURE.....	1R01 NS12952-01A1	64,651
KLEBE, ROBERT J.....	CELL ADHESION PROTEINS AND MALIGNANCY.....	5R01 CA19017-03	59,718
KLEBE, ROBERT J.....	SOMATIC CELL GENETICS OF DIFFERENTIATED PHENOTYPES.....	5R01 GM21433-05	63,340
KOBLASZ, ARTHUR.....	NONLINEAR ANALYSIS OF THE HUMAN ELECTRORETINOGRAM.....	1R23 EY02123-01	9,990
LA BELLE, EDWARD F, JR.....	HORMONE EFFECTS ON RECONSTITUTED MEMBRANES.....	1R01 AM25244-01	54,753
LEVIN, WILLIAM C.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00073-16	724,289
MC ADOO, DAVID J.....	GLYCINE AS A NEUROTRANSMITTER IN IDENTIFIED NEURONS.....	5R01 NS13311-02	30,807
MEYER, WALTER J, III.....	HYPERTENSION AND VASCULAR STEROID RECEPTORS.....	1R01 HL20201-01A1	42,249
NAKA, KEN-ICHI.....	FUNCTION OF NEURON NETWORKS IN VERTEBRATE VISUAL SYSTEMS.....	2R01 EY01897-03	104,624
NELSON, JAMES A.....	MECHANISMS OF ACTION OF ANTITUMOR AGENTS.....	5R01 CA21413-02	55,345
NELSON, JAMES A.....	PURINE METABOLISM IN LYMPHOCYTES.....	1R01 HD11881-01	41,665
NELSON, THOMAS E.....	SKELETAL MUSCLE LESION IN MALIGNANT HYPERTHERMIA.....	5R01 GM23875-02	29,829
PARKENING, TERRY A.....	OVARIAN MORPHOLOGY AND FUNCTION IN THE AGED MOUSE.....	5R23 AG00757-02	52,220
PEREZ-POLO, JOSE R.....	NEURAL DIFFERENTIATION: NERVE GROWTH FACTOR PROTEINS.....	5R01 NS14034-02	57,805
RAE, JAMES L.....	NORMAL AND CATARACTOUS LENS CELL BIOELECTRIC PROPERTIES.....	5R01 EY01207-04	43,950
REMMERS, JOHN E.....	NEURAL MECHANISMS CONTROLLING MOTOR ACT OF BREATHING.....	5R01 HL18007-05	70,488
RUSSELL, JOHN M.....	CHLORIDE TRANSPORT IN NERVE AND MUSCLE.....	5R01 NS11946-05	50,119
SANT'AMBROGIO, GIUSEPPE.....	OPERATIONAL MECHANISMS OF AIRWAY RECEPTORS.....	5R01 HL20122-02	68,615
SCHMALSTIEG, FRANK C, JR.....	ISOLATE CHARACTERIZE-INHIBITOR TO LYMPHOCYTE MOTILITY.....	5R23 AI14245-02	44,921
SCHNEIDER, ROSE G.....	HEMOGLOBIN VARIANTS IN RELATION TO DISEASE.....	5R01 AM00780-28	55,316
SMITH, LELAND L.....	POTENTIALLY CARCINOGENIC AND ATHEROGENIC STEROLS.....	5R01 CA21617-02	43,801
SMITH, LELAND L.....	AIR POLLUTANT-LIPID MEMBRANE INTERACTIONS.....	5R01 ES00944-05	48,150
SMITH, LELAND L.....	ORIGINS OF ATHEROSCLEROSIS.....	5R01 HL10160-13	60,165
SORDAHL, LOUIS A.....	MECHANISM(S) OF ALTERED CA20 TRANSPORT IN ISCHEMIC HEART.....	1R01 HL23153-01	43,559
SRIVASTAVA, SATISH K.....	METABOLIC STUDIES IN NORMAL AND CATARACTOUS LENSES.....	2R01 EY01677-04	55,763
SRIVASTAVA, SATISH K.....	STUDIES OF OCULAR MANIFESTATIONS IN SPHINGOLIPIDOSES.....	1R01 EY02260-01	36,263
STEINSLAND, ODD S.....	EFFECT OF INSULIN ON NEUROVASCULAR TRANSMISSION.....	5R01 HL20439-02	25,337
SZABO, GABOR.....	STRUCTURE AND PERMEABILITY IN BILAYERS AND NERVE.....	1R01 NS14247-01	41,485
THOMPSON, JAMES C.....	SURGICAL STUDIES ON METABOLISM OF GI HORMONES.....	5R01 AM15241-08	96,198

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
THUESON, DAVID O	BASOPHILS: ROLE IN CELL MEDIATED IMMUNE REACTIONS.....	1R23 AI14879-01	45,339
WILLIAMS, BETTY J.....	CARDIOTOXICITY OF CHRONIC LEAD EXPOSURE.....	1R01 ES01767-01	45,328
WILLIAMS, JOHN F, JR.....	FACTORS ALTERING THE COURSE OF MYOCARDIAL DYSFUNCTION.....	5R01 HL13639-07	63,048
WILLIS, WILLIAM D, JR.....	SYNAPTIC CONNECTIONS OF SPINAL CORD NEURONS.....	5R01 NS09743-09	60,075
WILLIS, WILLIAM D, JR.....	COMPARATIVE NEUROBIOLOGY.....	5P01 NS11255-05	230,670
YOUNES, MAGDY K.....	CONTROL OF BREATHING PATTERN IN HEALTH AND DISEASE.....	1R01 HL22910-01	92,145
ZIEGLER, MICHAEL G.....	CATECHOLAMINES, BLOOD PRESSURE AND CIRCULATION.....	1R01 HL21817-01	27,005
ORGANIZATION TOTAL	80 6,664,842		
HOUSTON			
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025			
ALFORD, BOBBY R.....	OTOPHYSIOLOGY AND OTOPATHOLOGY RESEARCH CENTER.....	2P50 NS10940-06	423,309
ALFREY, CLARENCE P, JR.....	EFFECTS OF PHYSICAL FORCES ON BLOOD.....	5R01 HL16938-05	105,563
ANDERSON, ROBERT E.....	CHEMISTRY AND METABOLISM OF RETINA LIPIDS.....	2R01 EY00871-07	141,620
APPEL, STANLEY H.....	ACETYLCHOLINE RECEPTOR TURNOVER IN MYASTHENIA GRAVIS.....	1R01 NS14380-01	55,447
AYALA, GIOVANNI F.....	EFFECT OF EPILEPTOGENIC DRUGS ON MEMBRANE PROPERTIES.....	5R01 NS14433-02	69,093
BAER, PAUL E.....	HIGH BLOOD PRESSURE IN THE YOUNG, PREVALENCE & PRECURSOR.....	5R01 HL19929-03	106,673
BAKER, CAROL J.....	HUMAN IMMUNITY TO GROUP B STREPTOCOCCUS.....	5R01 AI13249-03	71,747
BARNES, EUGENE M, JR.....	REGULATION OF TRANSPORT IN MAMMALIAN CELLS.....	5R01 AM17436-05	48,779
BASINGER, SCOTT F.....	RETINA: PHOTORECEPTOR MEMBRANE SYNTHESIS AND FUNCTION.....	5R01 EY01406-04	103,139
BEATTIE, KENNETH L.....	A BIOCHEMICAL STUDY OF ERROR-PRONE DNA SYNTHESIS.....	1R01 GM25530-01	29,296
BEAUDET, ARTHUR L.....	REGULATION OF HEMOGLOBIN BIOSYNTHESIS.....	5R01 AM18507-03	39,955
BEAUDET, ARTHUR L.....	LYSOSOMAL LIPASES AND PHOSPHOLIPASES IN HUMAN DISEASE.....	1R01 GM25397-01	56,599
BIRNBAUMER, LUTZ.....	ACTION OF GLUCAGON ON LIVER ADENYLYL CYCLASE.....	5R01 AM19318-03	69,409
BIRNBAUMER, LUTZ.....	GONADOTROPHIN AND PROSTAGLANDIN ACTION IN THE OVARY.....	5R01 HD09581-03	60,436
BIRNBAUMER, LUTZ.....	CATECHOLAMINE ACTION ON THE HEART.....	5R01 HL19423-03	59,960
BLACK, HOMER S.....	PHOTOCHEMICAL REACTIONS RELATED TO SKIN CANCER.....	5R01 CA13464-06	20,553
BLACK, HOMER S.....	EFFECTS OF DIETARY FACTORS ON UVL-CARCINOGENESIS.....	5R01 CA20907-02	40,899
BLATTNER, RUSSELL J.....	GENERAL CLINICAL RESEARCH CENTER (CHILDREN).....	5M01 RR00188-14	480,518
BRIDGES, C DAVID.....	PHOTO-AND BIOCHEMICAL REACTIONS IN THE VISUAL SYSTEM.....	5R01 EY02489-02	108,356
BRINKLEY, B R.....	CYTOSKELETON AND CELL TRANSFORMATION TO MALIGNANCY.....	1R01 CA22610-01	105,273
BRINKLEY, B R.....	STUDIES OF MITOSIS IN NORMAL AND NEOPLASTIC CELLS.....	2R01 CA23022-02	107,852
BULLOCK, DAVID W.....	UTERINE PROTEIN REGULATION IN EARLY PREGNANCY.....	2R01 HD09378-04	93,806
BUSCH, HARRIS.....	CANCER RESEARCH CENTER.....	5P01 CA10893-11	1,004,115
BUTEL, JANET S.....	BIOLOGICAL PROPERTIES OF SV40 EARLY PROTEINS.....	1R01 CA22555-01	82,647
BUTLER, WILLIAM T.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00350-12	553,137
BUTLER, WILLIAM T.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05425-17	200,462
CASKEY, CHARLES T.....	LABORATORY STUDIES ON ALPHA-1-ANTITRYPSIN DEFICIENCY.....	5R01 HL20070-02	10,243
CLARK, JAMES H.....	MAMMARY CANCER AND HORMONE INDUCED RESPONSES.....	5R01 CA20605-02	64,738
CLARK, JAMES H.....	ESTROGEN RECEPTORS AND REPRODUCTIVE FUNCTIONS.....	5R01 HD08436-06	52,113
COATS, ALFRED C.....	HUMAN AUDITORY NERVE AND BRAINSTEM EVOKED POTENTIALS.....	5R01 NS12910-03	57,595
CRANFORD, JERRY L.....	NEURAL MECHANISMS OF BINAURAL HEARING.....	2R01 NS11812-04A1	36,487
DE BAKEY, MICHAEL E.....	DEMONSTRATION CENTER FOR HEART AND VESSEL DISEASE.....	5P60 HL17269-04	3,938,440
DEDMAN, JOHN R.....	BIOLOGICAL ROLE OF INTRACELLULAR CA20-BINDING PROTEINS.....	1R01 GM25557-01	54,750
DI FERRANTE, NICOLA M.....	GLYCOSAMINOGLYCANS AND LIPOPROTEINS OF HUMAN PLASMA.....	5R01 HL18692-03	71,844
DI FERRANTE, NICOLA M.....	CONNECTIVE TISSUE AND DIABETIC VASCULAR DISEASE.....	5R01 HL20447-03	41,077
DRESDEN, MARC H.....	SCHISTOSOMA MANSONI: MECHANISMS OF PENETRATION.....	5R22 AI13802-02	30,930
DRISCOLL, DAVID J.....	CARDIOVASCULAR PHARMACODYNAMICS IN IMMATURE ANIMALS.....	1R23 HL22309-01	37,900
ENTMAN, MARK L.....	CONTROL OF MYOCARDIAL SARCO-TUBULAR CALCIUM STORES.....	5R01 HL13870-09	81,633
ENTMAN, MARK L.....	BIOLOGY OF MYOCARDIAL ISCHEMIA.....	1R01 HL23161-01	92,280
EPSTEIN, HENRY F.....	THE MOLECULAR BASIS OF NEUROMUSCULAR DEVELOPMENT.....	5R01 AG01302-02	96,125
EPSTEIN, HENRY F.....	DEVELOPMENTAL GENETICS OF MUSCLE STRUCTURE.....	7R01 HD12610-01	31,138
FEIGIN, RALPH D.....	PROSPECTIVE EVALUATION OF CHILDHOOD MENINGITIS.....	3R01 NS14292-01S1	5,316
FEIGIN, RALPH D.....	PROSPECTIVE EVALUATION OF CHILDHOOD MENINGITIS.....	2R01 NS14292-02	69,379
FERNBACH, DONALD J.....	SOUTHWEST ONCOLOGY GROUP (PEDIATRIC).....	2R10 CA03161-21	183,509
FIELD, JAMES B.....	FACTORS INVOLVED IN INSULIN HOMEOSTASIS.....	1R01 AM25253-01	57,624
GERBA, CHARLES P.....	HEPATITIS A AND GASTROENTERITIS VIRUSES IN MARINE LIFE.....	1R01 ES01738-01A1	41,724
GLEZEN, WILLIAM P.....	HOST FACTORS IN PATHOGENESIS OF RESPIRATORY DISEASE.....	3R01 HL19651-02S1	10,146

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
GLEZEN, WILLIAM P.....	HOST FACTORS IN PATHOGENESIS OF RESPIRATORY DISEASE.....	2R01 HL19651-03	56,117
GOLDSTEIN, MARGARET A.....	ANALYSIS OF Z BANDS IN HEART BY OPTICAL DIFFRACTION.....	2R01 HL17376-04	32,900
GRIFFITH, DONALD P.....	MEDICAL TREATMENT OF INFECTION-INDUCED STONES.....	1R01 AM20159-01A1	230,815
HARDIN, JAMES.....	ESTROGEN RECEPTOR IN VERY LOW DENSITY LIPOPROTEINS.....	1R01 HL22367-01	57,002
HARMON, MAURICE W.....	RAPID DIAGNOSIS OF VIRAL RESPIRATORY INFECTIONS.....	1R01 AI15089-01	49,701
HARRISON, GUNYON M.....	ROLE OF THE CILIOSTATIC FACTOR IN CYSTIC FIBROSIS.....	3R01 AM17524-02S1	30,456
HARTLEY, CRAIG J.....	ULTRASONIC INSTRUMENTATION FOR CARDIOVASCULAR STUDIES.....	1R01 HL22512-01	58,256
HAZLEWOOD, CARLTON F.....	ROLE OF WATER IN CANCER CELL DIVISION.....	5R01 CA21624-02	74,672
HAZLEWOOD, CARLTON F.....	PHYSIOLOGICAL ROLE OF WATER IN TISSUES.....	5R01 GM20154-06	84,296
HOLLYFIELD, JOE G.....	PHAGOCYtic ACTIVITY OF THE PIGMENT EPITHELIUM.....	5R01 EY02362-02	42,163
HOLLYFIELD, JOE G.....	DEVELOPMENT AND MAINTENANCE OF PHOTORECEPTOR CELLS.....	5R01 EY02363-02	99,081
HOLMQUIST, GERALD P.....	G-BANDING MECHANISMS IN MAMMALIAN CHROMOSOMES.....	5R01 GM23905-02	58,018
HORNING, EVAN C.....	RESEARCH IN ANALYTICAL BIOCHEMISTRY FOR HUMAN STUDIES.....	5P01 GM13901-13	336,372
HORNING, MARJORIE G.....	CHEMICAL BASIS FOR DRUG TOXICITY.....	1R01 GM24092-01	278,884
HUCKINS, CLAIRE.....	CONTROL OF STEM CELL SPERMATOGONIA IN RODENT TESTES.....	5R01 HD07655-05	66,063
IGARASHI, MAKOTO.....	PARTIAL ABLATION OF VESTIBULAR SYSTEM AND EQUILIBRIUM.....	5R01 NS07237-11	54,883
INSULL, WILLIAM, JR.....	TEST FOR ADHERENCE TO DIETS RICH IN LINOLEIC ACID.....	1R01 HL22847-01	79,031
JONES, DAN B.....	ENDOGENOUS FUNGAL ENDOPHTHALMITIS.....	1R01 EY02714-01	108,327
JOSHI, VASUDEV C.....	REGULATION OF FATTY ACID SYNTHESIS IN NEONATAL LIVER.....	5R01 HD07516-05	65,464
KAUFMAN, RAYMOND H.....	PREGNANCY AND DES ASSOCIATED UPPER GENITAL ANOMALIES.....	5R01 HD10989-02	68,726
KELLAWAY, PETER.....	EPILEPSY RESEARCH CENTER.....	2P50 NS11535-04	438,652
KIT, SAUL.....	BIOCHEMICAL ASPECTS OF VIRAL CARCINOGENESIS.....	2R01 CA06656-16	173,144
KNOX, JOHN M.....	SEXUALLY TRANSMITTED DISEASES RESEARCH PROGRAM PROJECT.....	5P01 AI12618-04	155,986
KRETZER, FRANK L.....	RETINA: ULTRASTRUCTURE OF PHOTORECEPTORS.....	1R01 EY02607-01	26,151
LAM, DOMINIC M.....	NEUROTRANSMITTERS IN THE VISUAL SYSTEM.....	5R01 EY02423-02	61,340
LAM, DOMINIC M.....	DEVELOPMENT AND REGENERATION OF THE VERTEBRATE RETINA.....	1R01 EY02608-01	84,276
LANE, MONTAGUE.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA03392-21	105,910
LANE, MONTAGUE.....	CLINICAL CANCER EDUCATION PROGRAM.....	1R25 CA24268-01	206,242
LIPSHULTZ, LARRY I.....	SERTOLI CELL AND ACCESSORY SEX GLAND FUNCTION IN MAN.....	1R01 HD11479-01	58,891
MARTIN, R RUSSELL.....	HUMAN MACROPHAGES AND OTHER CELLS IN CARCINOGENESIS.....	2R01 CA15784-04	57,735
MAYOR, HEATHER D.....	GROWTH & MATURATION OF ADENOASSOCIATED SATELLITE VIRUSES.....	5R01 CA14618-05	59,979
MC BRIDE, RAYMOND A.....	IMMUNOGENETIC ANALYSIS OF ROUS SARCOMA DEVELOPMENT.....	1R01 CA24497-01	159,092
MC CORMACK, SHIRLEY A.....	A MODEL FOR INDUCTION OF CHORIOCARCINOMA IN THE RAT.....	5R01 CA20853-02	65,683
MEANS, ANTHONY R.....	BIOLOGY OF THE TESTIS: ACTION OF FSH.....	5R01 HD07503-06	108,480
MEANS, ANTHONY R.....	LIPOPROTEIN METABOLISM AND HORMONAL REGULATION.....	5R01 HL16512-04	96,048
MEDINA, DANIEL.....	CHEMICAL CARCINOGENESIS OF MOUSE MAMMARY GLANDS.....	5R01 CA11944-08	86,801
MEDINA, DANIEL.....	CHEMOTHERAPY OF MOUSE MAMMARY PRENEOPLASIAS.....	1R01 CA22591-01	59,427
MEYER, JOHN S.....	CEREBROVASCULAR RESEARCH CENTER SUPPORT.....	5P50 NS09287-08	616,738
MOSES, ROBB E.....	MECHANISMS OF CHROMOSOME REPLICATION.....	3R01 GM19122-06S1	10,569
MOSES, ROBB E.....	MECHANISMS OF CHROMOSOME REPLICATION.....	2R01 GM19122-07	69,644
MOSES, ROBB E.....	CELLULAR DNA REPAIR MECHANISMS AND MUTAGENESIS.....	1R01 GM24711-01	86,991
O'BRIEN, WILLIAM E.....	BIOCHEMICAL BASIS FOR HYPERGLYCEMIA.....	7R01 HD12284-01	32,924
O'MALLEY, BERT W.....	CENTER FOR POPULATION RESEARCH AND REPRODUCTION STUDIES.....	2P30 HD07495-06	477,801
O'MALLEY, BERT W.....	SEX HORMONE RECEPTOR COMPONENTS AND THE CELL GENOME.....	5R01 HD07857-07	202,005
O'MALLEY, BERT W.....	REPRODUCTIVE HORMONES: BIOLOGICAL & MOLECULAR ACTIONS.....	5R01 HD08188-07	168,730
PECK, ERNEST J, JR.....	NEUROENDOCRINE CONTROL OF PITUITARY HORMONE SECRETION.....	5R01 HD08389-05	43,481
PECK, ERNEST J, JR.....	GAMMA-AMINOBUTYRIC ACID RECEPTORS OF THE CEREBELLUM.....	2R01 NS11753-04	56,313
PEREZ, FRANCISCO I.....	BEHAVIORAL ANALYSIS OF SENSORY EXTINCTION.....	5R01 NS13708-02	25,699
PIERSON, DUANE L.....	CHARACTERIZATION OF HUMAN CARBAMYLPHOSPHATE SYNTHETASE.....	1R01 AM21989-01	35,873
PITTS, BARRY J.....	PALMITYL-CARNITINE INHIBITION OF ION PUMPS IN ISCHEMIA.....	1R01 HL22813-01	41,435
POWNALL, HENRY J.....	DYNAMICS OF ATHEROGENESIS AND LIPOPROTEIN FORMATION.....	5R01 HL19459-03	36,348
RANDERATH, KURT.....	CHEMICAL STUDIES ON TUMOR NUCLEIC ACIDS.....	5R01 CA13591-07	75,690
RICH, ROBERT R.....	REGULATION OF CELL-MEDIATED IMMUNE RESPONSES.....	5R01 AI13810-02	120,502
ROSEN, JEFFREY M.....	HORMONAL REGULATION OF BREAST CANCER.....	2R01 CA16303-04	94,046
ROSSEN, ROGER D.....	VIRUSES, MYCOPLASMA AND L FORMS IN RHEUMATIC DISEASES.....	5R01 AM06450-15	43,259
ROSSEN, ROGER D.....	A ROLE FOR ANTIGLOBULIN IN GLOMERULONEPHRITIS.....	5R01 AM17555-05	46,025
ROSSEN, ROGER D.....	ANTIGEN-ANTIBODY COMPLEXES IN CANCER PATIENTS SERA.....	5R01 CA20543-03	68,257
SHEARER, WILLIAM T.....	STIMULATION OF TUMOR CELL GROWTH BY ANTIBODY.....	1R01 CA25567-01	51,225
SKINNER, JAMES E.....	BRAIN REGULATION OF CARDIAC ARRHYTHMIA.....	2R01 HL17907-04	88,404
SMITH, LOUIS C.....	LIPID METABOLISM: TRANSPORT BY LATERAL DIFFUSION.....	5R01 HL15648-06	65,552

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
SUKI, WADI N.....	NEPHRONAL SITES OF DIVALENT ION TRANSPORT.....	1R01 AM21394-01	82,119
TENG, CHING-SUNG.....	STUDY OF HORMONE-CONTROLLED SEX-ORGAN DIFFERENTIATION.....	5R01 HD08218-06	74,006
TENG, CHRISTINA T.....	MECHANISM OF AGING IN THE CHICK OVARY.....	5R01 AG00523-02	55,726
TENG, CHRISTINA T.....	REPRODUCTIVE BIOLOGY OF THE EMBRYONIC OVARY.....	5R01 HD09467-03	31,341
TERMAN, DAVID S.....	IMMUNOADSORBENTS FOR SPECIFIC IMMUNOTHERAPY.....	5R01 GM23517-02	60,281
TRENTIN, JOHN J.....	IMMUNOGENETIC RESISTANCE TO LYMPHOMA-LEUKEMIA.....	2R01 CA03367-21A1	99,217
TRENTIN, JOHN J.....	CONTROL OF HEMOPOIETIC STEM CELL DIFFERENTIATION.....	1R01 CA22670-01	93,432
TWOMEY, JEREMIAH J.....	RHEUMATOID FACTOR AND TUMOR-HOST INTERACTION.....	3R01 CA15333-04S1	5,495
TWOMEY, JEREMIAH J.....	RHEUMATOID FACTOR AND TUMOR-HOST INTERACTION.....	5R01 CA15333-05	47,510
TWOMEY, JEREMIAH J.....	TYPE AND REACTIVITY OF CELLS RELEASED FROM LYMPHOMAS.....	5R01 CA16108-05	40,685
TWOMEY, JEREMIAH J.....	THYMIC ACTIVITY IN PLASMA WITH THYMUS DISORDERS.....	5R01 CA19538-03	36,810
VON NOORDEN, GUNTER K.....	CLINICAL AND LABORATORY STUDIES OF AMBLYOPIA.....	5R01 EY01120-06	84,756
WAKIL, SALIH J.....	ROLE OF INSULIN IN FATTY ACID METABOLISM.....	5R01 AM21286-02	52,221
WAKIL, SALIH J.....	THE METABOLISM AND CONTROL OF FATTY ACIDS.....	5R01 GM19091-08	141,560
WARNER, MARLENE R.....	PERINATAL HORMONE-CARCINOGEN INTERACTIONS.....	5R01 CA18285-03	74,663
WILSON, JOHN H.....	ONCOGENIC MECHANISMS: SV40 AND HOST GENETIC ANALYSIS.....	5R01 CA15743-05	46,838
WRAY, GRANVILLE W.....	ISOLATED CHROMOSOMES IN GENETICS AND CANCER RESEARCH.....	5R01 CA18455-03	54,568
WU, JANG-YEN.....	STUDIES OF NEURONAL AND GLIAL GLUTAMATE DECARBOXYLASES.....	5R01 NS13224-03	102,753
WYDE, PHILIP R.....	IMMUNOPATHOLOGY OF INFLUENZA VIRUS PNEUMONIA.....	5R01 AI13905-03	52,885
ORGANIZATION TOTAL	126	17,033,075	
RICE UNIVERSITY ZIP CODE 77001			
CAMPBELL, JAMES W.....	METABOLISM OF GASTROPOD MOLLUSCS.....	5R01 AI05006-15	41,735
GORDON, W E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07103-12	58,047
HELLUMS, JESSE D.....	EFFECTS OF PHYSICAL FORCES ON PLATELETS.....	5R01 HL18584-03	48,234
HELLUMS, JESSE D.....	MASS TRANSFER IN THE MICROCIRCULATION.....	5R01 HL19824-02	29,124
MATTHEWS, KATHLEEN S.....	FLUORESCENCE STUDIES OF THE LACTOSE REPRESSOR PROTEIN.....	5R01 GM22441-03	38,790
MC INTIRE, LARRY V.....	'PERFUSION LUNG'-ROLE OF TRAUMATIZED LEUKOCYTES.....	3R01 HL17437-03S1	11,949
MC INTIRE, LARRY V.....	DYNAMIC STUDIES OF CLOT STRUCTURE FORMATION.....	5R01 HL18672-03	34,211
OLSON, JOHN S.....	FUNCTIONAL PROPERTIES OF HEMOGLOBIN AND ERYTHROCYTES.....	5R01 HL16093-05	44,509
PALMER, GRAHAM A.....	MOLECULAR MECHANISMS OF BIOLOGICAL REDOX REACTIONS.....	5R01 GM21337-04	109,276
PARRY, RONALD J.....	BIOSYNTHESIS OF COMPOUND 593A AND OF ELAIOMYCIN.....	1R01 CA25142-01	72,856
PARRY, RONALD J.....	BIOSYNTHESIS OF ANTILEUKEMIC CEPHALOTAXUS ALKALOIDS.....	7R01 GM26569-01	46,669
QUIOCHO, FLORANTE A.....	STRUCTURE AND FUNCTION OF SUGAR BINDING PROTEINS.....	2R01 GM21371-04	100,371
RUDOLPH, FREDERICK B.....	REGULATION OF METABOLISM BY PURINE INTERCONVERSIONS.....	5R01 CA14030-06	44,946
SASS, RONALD L.....	STRUCTURAL AND CHEMICAL STUDY OF TISSUE CALCIFICATION.....	2R01 AM18582-04	65,066
SCHROEPFER, GEORGE J, JR.....	INHIBITORS OF CHOLESTEROL BIOSYNTHESIS.....	1R01 HL22532-01	216,681
WALKER, WILLIAM F.....	CAVITATION PHENOMENA NEAR PROSTHETIC DEVICES.....	2R01 HL17821-03	43,855
WENKERT, ERNEST.....	ALKALOID SYNTHESIS.....	5R01 GM21076-06	98,414
ORGANIZATION TOTAL	17	1,104,733	
TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETAROIATION-TEXAS RESEARCH INST OF MENTAL SCIENCES ZIP CODE 77030			
SMITH, ROBERT C.....	AGING AND TOXICITY OF CHRONIC NEUROLEPTIC DRUGS.....	5R23 AG00725-02	40,465
ORGANIZATION TOTAL	1	40,465	
TEXAS HEART INSTITUTE ZIP CODE 77025			
AKUTSU, TETSUZO.....	ARTIFICIAL HEART AND RELATED PROBLEMS.....	3R01 HL18084-03S1	11,248
ORGANIZATION TOTAL	1	11,248	
TEXAS SOUTHERN UNIVERSITY ZIP CODE 77004			
CHAN, JARVIS T.....	ANTIOXIDANT REVERSED CYTOTOXICITY AND CARCINOGENESIS.....	5R01 CA23684-02	39,996
SESSION, JOHN J.....	BIOMEDICAL RESEARCH IMPROVEMENT PROGRAM.....	3S06 RR08061-07S1	2,487
SESSION, JOHN J.....	BIOMEDICAL RESEARCH IMPROVEMENT PROGRAM.....	5S06 RR08061-08	264,348
ORGANIZATION TOTAL	3	306,831	
UNIVERSITY OF HOUSTON ZIP CODE 77004			
BUCKLEY, JOSEPH P.....	MECHANISMS IN ANGIOTENSIN INDUCED HYPERTENSION.....	3R01 HL17401-03S1	995
CATES, LINDLEY A, JR.....	ORGANOPHOSPHORUS ONCOLYTIC ANALOGS AND INHIBITORS.....	5R01 CA19882-03	26,062
CATES, LINDLEY A, JR.....	TISSUE SPECIFIC AND IMINO-PHOSPHORUS ONCOLYTICS.....	1R01 CA24970-01	27,321
DYCKES, DOUGLAS F.....	PROTEIN CONFORMATIONAL STUDIES BY MULTINUCLEAR NMR.....	5R01 GM22927-03	31,290

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
DYCKES, DOUGLAS F.....	A PROTEINASE INHIBITOR MODEL WITH CLINICAL POTENTIAL.....	5R01 HL19514-03	38,788
EICHBERG, JOSEPH.....	ROLE OF LIPIDS AND LIPOPROTEINS IN MEMBRANES.....	5R01 NS12493-03	56,515
FELDMAN, STUART.....	ANTICOAGULANT DRUG ABSORPTION INTERACTIONS.....	5R01 HL21476-02	36,398
GRATCH, GERALD.....	PIAGET'S THEORY OF INFANTS' OBJECT CONCEPTS.....	5R01 HD10252-02	42,311
GRAY, HORACE B, JR.....	HYDRODYNAMICS OF CIRCULAR DNA FORMS.....	5R01 CA11761-08	56,142
GRAY, HORACE B, JR.....	NUCLEIC ACID MODIFICATION WITH SPECIFIC ENDONUCLEASES.....	2R01 GM21839-04	62,981
HARWERTH, RONALD S.....	BEHAVIORAL MEASURES OF BINOCULAR VISION.....	2R01 EY01139-04	28,694
HECHT, RALPH M.....	GENETIC CONTROL OF EMBRYOGENESIS.....	1R01 HD11071-01	66,563
KADISH, KARL M.....	REDOX REACTIONS OF HIGH SPIN IRON PORPHYRINS.....	1R01 GM25172-01	40,406
KIMBALL, AUBREY P.....	MECHANISMS OF ACTION OF ANTICANCER DRUGS.....	5R01 CA12327-08	69,742
KIMBALL, AUBREY P.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07147-06	45,224
LEVI, DENNIS M.....	CONTRAST SENSITIVITY IN AMBLYOPIA.....	5R01 EY01728-03	27,227
LOKHANDWALA, MUSTAFA F.....	PRESYNAPTIC REGULATORY MECHANISMS IN HYPERTENSION.....	1R01 HL22868-01	62,739
MAILMAN, DAVID S.....	CARDIOVASCULAR AND HORMONE EFFECTS ON GUT TRANSPORT.....	5R01 AM18964-03	54,436
VESTAL, MARVIN L.....	CROSSED-BEAM LC-MS INVOLATILE BIOLOGICAL SAMPLES.....	5R01 GM24031-02	93,270
ORGANIZATION TOTAL	19	867,104	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025			
BOOTH, FRANK W.....	BIOCHEMICAL ADAPTATIONS OF DISUSE AND REHABILITATION.....	5R01 AM19393-03	41,995
BOYAN-SALYERS, BARBARA D.....	THE ROLE OF LIPOPROTEINS IN MICROBIAL CALCIFICATION.....	2R01 DE04212-04	38,527
BOYAN-SALYERS, BARBARA D.....	PROTEOLIPIDS AND MINERALIZATION OF BONES AND TEETH.....	1R01 DE04919-01	27,142
BROWN, LEE R.....	STUDY OF THE ANTIMICROBIAL EFFECTS OF FLUORIDE.....	5R01 DE04542-03	57,064
CAPRIOLI, RICHARD M.....	PROTEIN PRIMARY STRUCTURE THROUGH DIPEPTIDE ANALYSIS.....	1R01 GM25405-01	61,873
CASTRO, GILBERT A.....	PHYSIOLOGIC BASIS OF IMMUNITY IN TRICHINOSIS.....	2R01 AI11361-05A1	57,244
CRAWFORD, M L.....	EXCITABILITY OF VISUAL PATHWAYS.....	2R01 EY00381-09A1	70,169
CUTTER, GARY R.....	THE IMPACT OF HYPERTENSION INFORMATION.....	5R01 HL20244-02	54,243
DE MOSS, JOHN A.....	ASSEMBLY OF A MEMBRANE-BOUND MULTI-ENZYME COMPLEX.....	5R01 GM19511-07	70,406
DOWHAN, WILLIAM.....	STRUCTURE AND FUNCTION OF MEMBRANE PROTEINS.....	5R01 GM20478-06	54,342
DOWHAN, WILLIAM.....	MEMBRANE PROTEIN BIOSYNTHESIS AND ASSEMBLY.....	1R01 GM25047-01	41,350
ENNA, SALVATORE J.....	NEUROBIOLOGY AND PHARMACOLOGY OF GABA RECEPTORS.....	1R01 NS13803-01A1	36,635
EVANS, DOLORES G.....	VIRULENCE FACTORS OF E. COLI ENTEROTOXIGENIC FOR MAN.....	5R22 AI13385-03	53,189
FRIEDMANN, NAOMI.....	ROLE OF ION FLUXES IN THE HYPOGLYCEMIC RESPONSE.....	5R01 AM18083-05	53,786
GILDENBERG, PHILIP L.....	30-YEAR INDEX OF HUMAN STEREOTACTIC SURGERY LITERATURE.....	1R01 LM03073-01	16,710
GROTJAN, H EDWARD, JR.....	GONADOTROPIN BIOSYNTHESIS—SUBCELLULAR ASPECTS.....	1R01 HD12006-01	58,613
GUYNN, ROBERT W.....	EFFECT OF SEIZURE UPON ENERGY METABOLISM IN BRAIN.....	2R01 NS11484-04A1	54,302
HENKIN, JACK.....	PHOTOCHEMICAL MAPPING AND INACTIVATION OF ENZYMES.....	1R01 AM22079-01	28,790
JOHNSON, LEONARD R.....	GI HORMONES AND OTHER FACTORS ON GROWTH OF GI MUCOSA.....	2R01 AM16505-06	80,959
JOHNSON, LEONARD R.....	ROLE OF FOOD IN THE GUT IN MAINTAINING GI FUNCTION.....	2R01 AM18164-04	54,421
KAHAN, BARRY D.....	ANTIGENIC STIMULUS IN HUMAN COLON CARCINOMA IMMUNITY.....	5R26 CA22370-02	108,910
KOHL, STEVE.....	IMMUNE CYTOTOXICITY TO HERPES SIMPLEX INFECTED CELLS.....	1R23 AI14450-01A1	32,836
KOZLOWSKI, GERALD P.....	IMMUNOTECHNIQUES FOR GN-RH AND RELATED NEUROPEPTIDES.....	7R01 HD12781-01	24,091
KOZLOWSKI, GERALD P.....	LIMBIC SYSTEM: VASOPRESSIN AND BEHAVIORAL CORRELATES.....	1R01 NS15337-01	24,331
LANDERS, TERRY A.....	ROLE OF TUMOR VIRUS STRUCTURAL PROTEINS IN INFECTION.....	5R01 CA21350-02	36,147
LEWIS, VAHN A.....	THE CENTRAL MECHANISMS OF DENTAL PAIN AND ANALGESIA.....	5R23 DE04646-02	13,773
LICHTENBERGER, LENARD M.....	REGULATION OF GASTRIN SYNTHESIS AND RELEASE.....	1R01 AM20686-01	45,060
MACKLER, BRUCE F.....	CELLULAR INFILTRATES IN HUMAN PERIODONTAL DISEASE.....	1R01 DE04762-01	39,490
MAILMAN, MARY L.....	GINGIVAL COLLAGEN METABOLISM IN HEALTH AND DISEASE.....	5R23 DE04691-02	25,118
MARC, ROBERT E.....	CHROMATIC INPUTS OF RETINAL NEURONS.....	1R01 EY02576-01	81,956
MC HENRY, CHARLES S.....	REGULATION OF THE SYNTHESIS OF REPLICATION PROTEINS.....	1R01 GM25457-01	38,134
MINER, MICHAEL E.....	SYSTEMIC EFFECTS OF INCREASING INTRACRANIAL PRESSURE.....	5R01 NS13251-02	23,849
MONTGOMERY, EDWARD H.....	INITIATORS AND MEDIATORS IN PERIODONTAL DISEASE.....	2R01 DE03743-06A1	54,390
MORRIS, FRANK H, JR.....	MATERNAL NUTRITIONAL REGULATION OF FETAL GROWTH.....	1R01 HD11337-01	51,742
MURPHY, SHELDON D.....	FACTORS AFFECTING PESTICIDE TOXICITY.....	1R01 ES01831-01	78,938
MURTHY, K KIRSHNA.....	MUSCLE SPINDLE SENSITIVITY MODULATION BY BETA EFFERENTS.....	1R01 NS14702-01	41,508
NEI, MASATOSHI.....	POPULATION DYNAMICS OF MUTANT GENES.....	5R01 GM20293-06	36,292
O'NEILL, PEGGY A.....	LYMPHOCYTE-MEDIATED CYTOTOXICITY IN PERIODONTAL DISEASE.....	2R01 DE04210-04	47,444
OLSON, JOHN V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05344-16	24,583
OVERTURF, MERRILL L.....	EFFECTS OF RENIN ON ATHEROGENESIS.....	1R01 HL20189-01A1	105,405
PRICHARD, HOWARD M.....	CARCINOGENIC IMPACT OF RADON IN WATER SUPPLIES.....	1R23 ES01742-01	49,790
RAMASWAMY, KRISHNAMURTHY.....	EFFECT OF DIABETES MELLITUS ON INTESTINAL FUNCTION.....	5R01 AM19876-02	39,283

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
REDBURN, DIANNA A.....	IDENTIFICATION OF TRANSMITTER AGENTS IN RETINA.....	5R01 EY01655-03	62,822
REDDY, YERRADHODDI S.....	PHOSPHORYLATION OF MYOCARDIAL REGULATORY PROTEIN.....	7R01 HL23587-01	24,547
ROSE, GEORGE G.....	HUMAN GINGIVAL LYOSOMES IN VIVO AND IN VITRO.....	5R01 DE04337-02	30,660
ROSE, GEORGE G.....	HISTOTYPIC LUNG TISSUE CULTURE IN CIRCUMFUSION SYSTEMS.....	5R01 HL19684-03	44,709
ROSENFELD, GARY C.....	HORMONAL REGULATION OF ISOLATED GASTRIC MUCOSAL CELLS.....	1R01 AM20431-01A1	74,303
RUTZKY, LYNNE P.....	SOCIAL BEHAVIOR OF CULTURED COLON ADENOCARCINOMA CELLS.....	1R23 CA23871-01	37,920
SANBORN, BARBARA M.....	UTERINE RELAXING FACTORS: MOLECULAR ASPECTS OF ACTION.....	5R01 HD09618-02	29,571
SHAW, MARGERY W.....	STUDY OF HUMAN GENETICS.....	3P50 GM19513-05S1	432,660
SHAW, MARGERY W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07148-05	56,702
SIMPSON, JOHN W.....	COLLAGENOLYTIC ACTIVITY IN PERIODONTAL DISEASE.....	5R01 DE04485-03	37,844
SPERLING, HARRY G.....	EXCITABILITY OF VISUAL PATHWAYS.....	3R01 EY00381-08S2	41,463
SPERLING, HARRY G.....	EFFECTS OF LIGHT ON THE RETINA.....	5R01 EY02388-05	71,167
STANCEL, GEORGE M.....	ESTROGEN CONTROL OF UTERINE GROWTH AND CELL DIVISION.....	5R01 HD08615-05	52,844
STEINBERGER, EMIL.....	MULTIDISCIPLINARY STUDY OF THE REPRODUCTIVE SYSTEM.....	2P50 HD08338-04	452,079
STROBEL, HENRY W.....	GASTROINTESTINAL HORMONES AND COLONIC CARCINOMA.....	5R26 CA19105-03	52,399
STROBEL, HENRY W.....	DRUG METABOLISM IN LIVER TUMORS.....	5R01 CA19621-03	37,184
THOMPSON, W JOSEPH.....	BIOLOGICAL ROLE OF CYCLIC NUCLEOTIDE PHOSPHODIESTERASES.....	5R01 GM21361-05	85,867
TOM, BALDWIN H.....	IN VITRO GENERATION OF IMMUNITY TO HUMAN COLON CANCER.....	1R01 CA24024-01	65,282
TSUCHITANI, CHIYOKO.....	SINGLE UNIT ANALYSIS OF THE SUPERIOR OLIVARY COMPLEX.....	5R01 NS11218-06	99,439
TUTTLE, ROBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05745-06	100,206
VOGEL, JAMES J.....	DENTAL CALCULUS FORMATION USING CALCIFIABLE LIPOPROTEIN.....	1R01 DE04439-01A1	25,424
WARNER, RAYMOND L.....	THE ROLE OF MONOAMINES IN SEXUAL DIFFERENTIATION.....	5R01 HD10848-02	26,201
WEEMS, WILLIAM A.....	RENAL AND VASCULAR CONTROL BY SYMPATHETIC GANGLIA.....	5R01 HL21351-02	30,579
WEISBRODT, NORMAN W.....	ADAPTIVE CHANGES IN INTESTINAL SMOOTH MUSCLE.....	5R01 AM19886-02	24,062
WEISS, KENNETH M.....	GENETIC EPIDEMIOLOGY OF CANCER.....	5R01 CA19311-02	101,373
WIGGINS, RICHARD C.....	STARVATION-VULNERABLE BRAIN SUBCELLULAR MEMBRANES.....	1R01 NS13799-01A1	26,195
WIGGINS, RICHARD C.....	BRAIN TERATOGENESIS OF AMBIENT AIR HALOTHANE.....	1R01 NS14355-01	39,639
WRIGHT, ANTHONY A.....	HUE DISCRIMINATION STUDIES IN PRIMATES.....	2R01 EY01256-04	36,756
ORGANIZATION TOTAL	70	4,234,727	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
ALEXANIAN, RAYMOND.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA03195-21	63,155
ANSEVIN, ALLEN T.....	A PHYSICAL APPROACH TO GENOMIC ANALYSIS.....	5R01 GM23067-03	45,300
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF ONCORNAVIRUS PROTEINS.....	3R01 CA15495-03S1	4,065
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF RAUSCHER MURINE LEUKEMIA VIRAL PROTEINS.....	5R01 CA18248-03	45,028
BECKER, FREDERICK F.....	ANALYSIS OF CHROMATIN DURING CHEMICAL CARCINOGENESIS.....	5R01 CA20131-03	100,392
BECKER, FREDERICK F.....	PHENOTYPIC ANALYSIS OF CHEMICAL CARCINOGENESIS.....	5R01 CA20657-03	81,545
BECKER, FREDERICK F.....	ANALYSIS OF CELLULAR EVENTS IN CHEMICAL CARCINOGENESIS.....	5R01 CA20659-03	76,111
BLUMENSCHN, GEORGE R.....	CLINICAL CANCER EDUCATION GRANT.....	5R25 CA19808-03	138,990
BOWEN, JAMES M.....	IMMUNOLOGY OF ANIMAL AND HUMAN BREAST CARCINOMA.....	5R01 CA16789-03	101,603
CLARK, R LEE.....	CANCER CLINICAL RESEARCH.....	5P01 CA05831-17	1,269,608
COPELAND, MURRAY M.....	NATIONAL STUDY OF LARGE BOWEL CANCER.....	2R26 CA14140-06	464,582
CORRY, PETER M.....	PREFERENTIAL KILLING OF MELANIZED TISSUES.....	2R01 CA17891-04	87,031
DICKE, KAREL A.....	EFFECT OF CHEMOTHERAPY ON STEM CELLS IN MICE.....	1R01 CA24770-01	23,955
DREWINKO, BENJAMIN.....	ANTITUMOR AGENTS ON HUMAN COLON CARCINOMA CELLS.....	2R26 CA16763-05	75,889
DREWINKO, BENJAMIN.....	EFFECTS OF NEW ANTICANCER DRUGS ON THE CELL CYCLE.....	1R01 CA23272-01	150,990
EAST, JAMES L.....	RELATEDNESS OF RNA TUMOR VIRUSES AND HUMAN NEOPLASIA.....	2R01 CA16781-04	94,985
FLETCHER, GILBERT H.....	EVALUATION OF SUPERVOLTAGE THERAPY.....	5R01 CA05654-18	80,680
FLETCHER, GILBERT H.....	EXTENSION OF RADIOTHERAPY RESEARCH.....	5P01 CA06294-17	1,685,104
FLETCHER, GILBERT H.....	FAST NEUTRON THERAPY WITH TAMVEC CYCLOTRON.....	3P01 CA12542-06S1	2,583,981
FLETCHER, GILBERT H.....	FAST NEUTRON THERAPY WITH TAMVEC CYCLOTRON.....	2P01 CA12542-07	1,125,832
FREIREICH, EMIL J.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA10376-11	174,846
FREIREICH, EMIL J.....	THERAPEUTIC RESEARCH IN CANCER.....	5P01 CA11520-09	628,841
FREIREICH, EMIL J.....	DEVELOPMENTAL THERAPEUTICS.....	5P01 CA14528-06	865,785
FREIREICH, EMIL J.....	INJECTIONS IN CANCER PATIENTS.....	5R01 CA19806-03	243,175
FURLONG, NORMAN B.....	RAPID TESTS FOR ENVIRONMENTAL CARCINOGENS.....	1R01 ES01967-01	45,955
GEHAN, EDMUND A.....	SOUTHWEST ONCOLOGY GROUP (STATISTICS).....	2R10 CA12014-09	766,506
GRDINA, DAVID J.....	RADIATION RESPONSE OF CELLS SEPARATED FROM TUMORS.....	5R01 CA18628-03	54,504
GUINEE, VINCENT F.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21784-02	94,807
HADLE, CHARLES W.....	INTERACTION OF ANTICANCER DRUGS WITH MACROMOLECULES.....	5R01 CA13246-07	49,166

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
HERSH, EVAN M.....	IMMUNOLOGICAL ASPECTS OF CANCER PROGNOSIS.....	5R01 CA14984-05	88,720
HEWITT, ROGER R.....	ORIGIN AND DIAGNOSTIC VALUE OF HUMAN SERUM DNASES.....	5R26 CA20142-03	37,886
HICKEY, ROBERT C.....	CANCER CENTER SUPPORT (CORE) GRANT - COMPREHENSIVE.....	2P30 CA16672-04	942,712
HICKEY, ROBERT C.....	1979 ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH.....	1R13 CA24525-01	34,692
HICKEY, ROBERT C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05511-16	200,462
HSU, T C.....	MONITORING MUTAGENS WITH MAMMALIAN CHROMOSOMES.....	5R01 ES01304-03	122,039
HUMPHREY, RONALD M.....	DNA REPAIR AND RECOVERY IN THE MAMMALIAN CELL CYCLE.....	5R01 CA04484-20	172,099
HUMPHREY, RONALD M.....	CELL CYCLE RELATED DNA REPAIR MECHANISMS.....	5R01 CA19281-03	57,133
JOHNSON, DOUGLAS E.....	CHEMOTHERAPY FOR THE NATIONAL PROSTATIC CANCER PROJECT.....	5R26 CA15107-05	58,493
LOTZOVA, EVA.....	GROWTH CONTROL OF HUMAN HEMOPOIETIC CELLS.....	5R01 CA21062-03	43,811
MAIZEL, ABBY L.....	CHROMATIN STRUCTURE OF NORMAL AND MALIGNANT T-CELLS.....	1R01 CA21927-01A1	55,075
MAVLIGHT, GIORA M.....	ADJUVANT IMMUNOTHERAPY TO SURGERY IN COLORECTAL CANCER.....	5R26 CA15458-05	165,018
MC KELVEY, EUGENE M.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA10379-10	111,098
MEISTRICH, MARVIN L.....	MUTAGENIC ACTION OF CANCER THERAPY ON TESTIS CELLS.....	2R01 CA17364-04	81,637
MEYN, RAYMOND E, JR.....	CELL CYCLE DEPENDENCE OF ANTICANCER DRUG CYTOTOXICITY.....	1R01 CA23270-01	88,133
MURGOLA, EMANUEL J.....	MISSENSE SUPPRESSION AND MUTATIONALLY ALTERED TRNAS.....	2R01 GM21499-04	43,264
PETERS, LESTER J.....	ANTITUMOR ACTIVITY OF CORYNEBACTERIUM PARVUM.....	5R01 CA17769-04	57,857
RAO, POTU N.....	ROLE OF POLYAMINES IN MAMMALIAN CELL PROLIFERATION.....	1R01 CA23878-01	39,198
RAO, POTU N.....	THE MOLECULAR BASIS OF CHROMOSOME ABERRATIONS.....	5R01 GM23252-03	48,284
RICHIE, ELLEN S.....	LYMPHOID CELL SUBPOPULATIONS IN LYMPHOCYTIC LEUKEMIA.....	5R01 CA20763-03	29,912
ROBBERSON, DONALD L.....	REGULATION OF MITOCHONDRIAL DNA REPLICATION.....	2R01 CA16527-04	54,671
SAUNDERS, GRADY F.....	INSULIN GENE EXPRESSION DURING PANCREAS DEVELOPMENT.....	5R01 AM20383-02	58,691
SAUNDERS, GRADY F.....	MESSANGER RNA OF NORMAL AND MALIGNANT HUMAN CELLS.....	5R01 CA20124-02	73,085
SAUNDERS, GRADY F.....	ORGANIZATION AND EXPRESSION OF THE HUMAN GENOME.....	1R01 GM23965-01	82,290
SCHLAMOWITZ, MAX.....	MULTIPLE MYELOMA: EVALUATION THROUGH RADIOIMMUNOASSAY.....	1R01 CA21587-01A1	60,629
SCHLAMOWITZ, MAX.....	CELL MEMBRANE RECEPTORS FOR MATERNOFETAL TRANSFER OF IGG.....	5R01 HD07752-05	56,271
SHALEK, ROBERT J.....	RADIOLOGICAL PHYSICS CENTER.....	2R10 CA10953-11	368,662
SHAW, CHARLES R.....	GENETIC AND COMPARATIVE STUDIES OF ENZYMES.....	5R01 GM15597-11	97,482
SICILIANO, MICHAEL J.....	MULTIPLE LOCI SCREEN FOR MUTATIONS IN MAMMALIAN CELLS.....	2R01 ES01287-04	99,403
TRUJILLO, JOSE M.....	CYTOLOGICAL STUDIES IN HUMAN LEUKEMIA.....	5R01 CA12687-07	151,738
VAN EYS, JAN.....	SOUTHWEST ONCOLOGY GROUP (PEDIATRIC).....	2R10 CA03713-21	199,825
WARD, DARRELL N.....	CHEMISTRY OF LUTEINIZING AND RELATED HORMONES.....	5R01 AM09801-14	132,174
WITHERS, H RODNEY.....	THE RADIOBIOLOGY OF NORMAL TISSUES.....	5R01 CA11138-10	91,980
ZERMENO, ALFONSO.....	RADIOMAMMOGRAPHY WITH LESS THAN 150 MR PER EXPOSURE.....	5R01 CA19976-03	57,153
ZIMMERMAN, STUART O.....	BIOMATHEMATICS AND COMPUTING IN A CANCER INSTITUTE.....	3R01 CA11430-12S1	59,421
ZIMMERMAN, STUART O.....	BIOMATHEMATICS AND COMPUTING IN A CANCER INSTITUTE.....	2R01 CA11430-13	348,654
ORGANIZATION TOTAL	65	15,692,063	

KINGSVILLE

UNIVERSITY SYSTEM OF SOUTH TEXAS—TEXAS AGRICULTURAL AND INDUSTRIAL UNIVERSITY		ZIP CODE 78363	
PEREZ, JOHN C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08107-04S1	790
PEREZ, JOHN C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08107-05	169,636
ORGANIZATION TOTAL	2	170,426	

LUBBOCK

TEXAS TECH UNIVERSITY		ZIP CODE 79409	
BARTSCH, RICHARD A.....	IONOPHORIC STABILIZATION OF CARCINOGEN INTERMEDIATES.....	5R01 CA21421-02	21,378
BARTSCH, RICHARD A.....	IMPROVED DIAZONIUM ION REAGENTS FOR CLINICAL TESTS.....	1R01 GM25170-01	11,380
DIEDRICH, DANA L.....	LYSYL-DERIVED CROSS-LINKS IN BACTERIAL MEMBRANES.....	1R01 AI14961-01	44,390
HOLLY, FRANK J.....	INVESTIGATION OF TEAR FILM PHYSIOLOGY.....	7R01 EY03002-01	88,715
HUGHES, MAYSIE J.....	THE CARDIAC HISTAMINE RECEPTOR.....	5R01 HL16240-05	51,963
KENNY, ALEXANDER D.....	CALCIUM HOMEOSTASIS: ENDOCRINE AND COMPARATIVE ASPECTS.....	5R01 AM19475-04	62,192
LEFKOWITZ, STANLEY.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05773-04	41,824
MARKWALD, ROGER R.....	MUCOPOLYSACCHARIDE METABOLISM IN CARDIAC ANOMALIES.....	5R01 HL19136-03	33,992
NATHAN, RICHARD D.....	VOLTAGE CLAMP OF EMBRYONIC HEART CELL AGGREGATES.....	5R01 HL20708-02	30,221
OREM, JOHN M.....	BREATHING IN SLEEP: AIRWAY CONTROL AND BLOOD GASES.....	5R01 HL21257-02	24,736
POTTER, DAVID E.....	OCULAR EFFECTS OF SELECTIVE BETA-ADRENERGIC DRUGS.....	5R01 EY02156-02	34,834

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
ROBERTS, LOU A.....	RESPONSE OF ATRIA TO HYPEROSMOLALITY-MECHANISMS.....	5R01 HL21145-02	32,155
ROBINSON, G WILSE.....	SUBNANOSECOND PRIMARY EVENTS IN BIOLOGY.....	5R01 GM23765-02	34,142
SELIGER, WILLIAM G.....	MATRIX-MEDIATED EXPRESSION IN CRANIOFACIAL EMBRYOLOGY.....	1R01 DE04603-01A1	35,171
SEVALL, JACK S.....	ANALYSIS OF DNA BINDING NONHISTONE CHROMOSOMAL PROTEINS.....	5R01 GM22653-03	29,295
SOUTH, MARY A.....	SECRETORY COMPONENT IN NEOPLASIA.....	7R01 CA25062-01	45,293
YANG, SHIANG P.....	EFFECT OF LIPID ON METABOLISM OF CHEMICAL CARCINOGENS.....	1R01 CA21020-01A1	53,977
YEE, JOHN A.....	CYTODIFFERENTIATION OF PERIODONTAL LIGAMENT FIBROBLASTS.....	5R23 DE04371-03	11,763
ORGANIZATION TOTAL	18	687,421	
PRAIRIE VIEW			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—PRAIRIE VIEW AGRI. AND MECH. UNIVERSITY		ZIP CODE 77445	
BERRY, JEWEL E.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08094-03S1	648
BERRY, JEWEL E.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08094-04	186,402
ORGANIZATION TOTAL	2	187,050	
RICHARDSON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT DALLAS		ZIP CODE 75080	
BREMER, HANS.....	REGULATION OF BACTERIAL GROWTH.....	5R01 GM15142-10	89,026
CLOWES, ROYSTON C.....	INFECTIOUS DRUG RESISTANCE PLASMIDS.....	5R01 AI10468-07	89,648
GRAY, DONALD M.....	SEQUENCE-DEPENDENCE OF POLYNUCLEOTIDE CONFORMATION-III.....	2R01 GM19060-07	75,220
JAGGER, JOHN.....	ACTION OF NEAR-ULTRAVIOLET RADIATION ON CELLS.....	5R01 AM14893-09	109,412
JAGGER, JOHN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07133-09	50,713
MARSH, ROBERT C.....	STRUCTURE OF BACTERIAL CHROMOSOME REPLICATION ORIGIN.....	5R01 GM23608-02	48,759
MOUSHEGIAN, GEORGE.....	BINAURAL NEUROPHYSIOLOGY.....	5R01 NS07925-08	72,648
ROESER, ROSS J.....	CENTRAL AUDITORY PROCESSING IN COMMUNICATION DISORDERS.....	5R01 HD10422-02	84,201
RUPERT, CLAUD S.....	REPAIR OF RADIATION-DAMAGED NUCLEIC ACID.....	5R01 GM16547-13	97,275
SHERRY, ALLAN D.....	LANTHANIDE IONS AS PROBES OF CON A-CELL INTERACTIONS.....	5R01 AM16947-05	74,398
ORGANIZATION TOTAL	10	791,300	
SAN ANTONIO			
INCARNATE WORD COLLEGE		ZIP CODE 78209	
HEALY, SISTER MARY D.....	MULTIDISCIPLINARY BIOMEDICAL RESEARCH PROGRAM.....	1S06 RR08170-01	265,471
ORGANIZATION TOTAL	1	265,471	
SOUTHWEST FOUNDATION FOR RESEARCH AND EDUCATION		ZIP CODE 78284	
CASTRACANE, V DANIEL.....	PROSTAGLANDINS AND DECIDUAL TISSUE.....	1R01 HD11806-01	65,538
GELLER, IRVING.....	EFFECTS OF ATMOSPHERIC POLLUTANTS ON BEHAVIOR.....	5R01 ES01246-02	84,177
GOLAND, MARTIN.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05519-16	53,214
KALTER, SEYMOUR S.....	REFERENCE CENTER FOR THE STUDY OF VIRUSES.....	5P40 RR00361-12	295,544
KUNTZ, ROBERT E.....	SCHISTOSOMIASIS: BIOLOGY OF SCH. HAEMATOBIIUM COMPLEX.....	9R22 AI14999-10	95,189
KUNTZ, ROBERT E.....	BLADDER CANCER IN SCHISTOSOMIASIS HAEMATOBIA.....	5R01 CA13208-06	85,839
MOORE, GARY T.....	ESTABLISHMENT OF A BABOON BREEDING PROGRAM.....	1P40 RR01104-01A1	417,440
SHAIKH, ABUBAKAR A.....	CONTRACEPTION BY INDUCTION OF LUTEOLYSIS.....	3R01 HD09964-03S1	15,951
SHAIN, SYDNEY A.....	PROSTATIC SENESCENCE: A STEROID HORMONE MODEL.....	5R01 AG00090-02	94,196
SHAIN, SYDNEY A.....	PROSTATIC CARCINOGENESIS: DISDIFFERENTIATION IN AGING.....	5R01 CA21864-02	91,289
ORGANIZATION TOTAL	10	1,298,377	
SOUTHWEST RESEARCH INSTITUTE		ZIP CODE 78228	
HALL, C WILLIAM.....	10TH ANNUAL INTERNATIONAL BIOMATERIALS SYMPOSIUM.....	1R13 DE05004-01	7,500
ORGANIZATION TOTAL	1	7,500	
TEXAS DEPARTMENT OF HEALTH RESOURCES—SAN ANTONIO CHEST HOSPITAL		ZIP CODE 78223	
COX, REBECCA A.....	C-ASWS: A COCCIDIOIDES CELL WALL ANTIGEN.....	5R01 AI13573-02	25,428
ORGANIZATION TOTAL	1	25,428	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
U.S. DEPARTMENT OF THE ARMY—BROOKE ARMY MEDICAL CENTER ZIP CODE 78234			
MC CRACKEN, JOSEPH D.....	SOUTHWEST ONCOLOGY GROUP.....	1R10 CA22411-01	6,462
ORGANIZATION TOTAL	1 6,462		
UNITED COLLEGES OF SAN ANTONIO ZIP CODE 78285			
HEALY, SISTER MARY D.....	MULTIDISCIPLINARY BIOMEDICAL RESEARCH PROGRAM.....	5S06 RR08077-06	67,556
ORGANIZATION TOTAL	1 67,556		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT SAN ANTONIO ZIP CODE 78285			
AYLING, JUNE E.....	INHIBITION OF PTERIDINE ENZYMES IN CANCER CHEMOTHERAPY.....	5R01 CA20708-03	82,599
LUDUENA, MARILYN A.....	PLASMA MEMBRANE PROTEINS OF DEVELOPING NEURONS.....	5R01 NS13501-02	45,403
PHILLIPS, JERRY L.....	ROLE OF ZINC TRANSFERRIN IN LYMPHOCYTE TRANSFORMATION.....	5R01 HL19132-04	62,415
ORGANIZATION TOTAL	3 190,417		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284			
ADRIAN, ERLE K, JR.....	CELL PROLIFERATION IN INJURED NERVOUS TISSUE.....	5R01 NS08949-09	33,305
ALBIN, MAURICE S.....	GRADED BRAIN RETRACTION PRESSURE AND THERAPY.....	7R01 NS15316-01	46,217
AUST, J BRADLEY.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA12029-07	23,474
BARNES, LARRY D.....	MECHANISMS OF ANGIOTENSIN II: CYCLIC NUCLEOTIDES & CA20.....	1R01 AM21550-01	48,136
BARTKE, ANDRZEJ.....	ANDROGENS IN RETE TESTIS FLUID AND SPERMATOGENESIS.....	7R01 HD12641-01	81,171
BARTKE, ANDRZEJ.....	INFLUENCE OF PROLACTIN ON THE TESTIS.....	7R01 HD12642-01	35,766
BECK, NAMA.....	CATECHOLAMINES AND CYCLIC AMP IN CARDIOVASCULAR SYSTEM.....	5R01 HL19057-03	86,157
BISHOP, VERNON S.....	EVALUATION OF LEFT VENTRICULAR FUNCTION.....	5R01 HL12415-10	71,835
BRANS, YVES W.....	BODY COMPOSITION IN NEONATES OF DIABETIC MOTHERS.....	1R01 AM21283-01A1	35,268
BROOKS, BARBARA A.....	VISUAL PROCESSING DURING EYE MOVEMENT.....	5R01 EY01497-05	36,768
CARRILLO, ALBERTO J.....	A NEUROENDOCRINOLOGICAL STUDY OF THE HIPPOCAMPUS.....	1R01 NS14581-01	59,199
CHAMNESS, GARY C.....	MECHANISM OF ANTIESTROGEN ACTION IN BREAST CANCER.....	5R01 CA22343-02	54,073
COLTMAN, CHARLES A, JR.....	SOUTHWEST ONCOLOGY GROUP.....	1R10 CA22433-01	140,555
DOUGLAS, MICHAEL G.....	ASSEMBLY OF ENERGY TRANSDUCING MEMBRANES.....	1R01 GM25648-01	59,100
DRUTZ, DAVID J.....	GONOCOCCAL ARTHRITIS.....	5R01 AI14272-02	63,317
EIDELBERG, EDUARDO.....	PROGRAM OF RESEARCH IN SPINAL CORD INJURY.....	1P50 NS14546-01	209,232
ELBEIN, ALAN D.....	LIPID-LINKED SACCHARIDES IN GLYCOPROTEIN SYNTHESIS.....	1R01 AM21800-01	63,810
ELBEIN, ALAN D.....	COMPLEX CARBOHYDRATES: STRUCTURE, FUNCTION, SYNTHESIS.....	5R01 HL17783-04	32,069
FELPEL, LESLIE P.....	DOPAMINERGIC MECHANISMS IN TARDIVE DYSKINESIAS.....	1R01 NS14216-01	28,900
FRIEDBERG, SAMUEL J.....	O-ALKYL LIPIDS IN SURFACE MEMBRANES OF TUMOR CELLS.....	5R01 CA15047-04	46,895
GAUMTT, CHARLES J.....	STUDIES OF COXSACKIEVIRUS-INDUCED MYOCARDITIS IN MICE.....	1R01 HL21047-01A1	62,672
GEORGE, JAMES N.....	THE ROLE OF MEMBRANE PROTEINS IN PLATELET FUNCTION.....	5R01 HL19996-02	32,813
GOLDSMITH, RALPH S.....	VITAMIN D METABOLISM IN MAN.....	5R01 AM18349-05	59,673
GOYAL, RAJ K.....	PATHOPHYSIOLOGY OF ESOPHAGEAL MOTOR DISORDERS.....	7R01 AM25609-01	82,606
GROSE, CHARLES F.....	ANTIGENIC DETERMINANTS OF VARICELLA VIRUS.....	1R23 AI14604-01	23,347
GULLEY, ROBERT L.....	ANTERIOVENTRAL COCHLEAR NUCLEUS DEGENERATION STUDY.....	3R01 NS15058-01S1	39,915
HAGINO, NOBUYOSHI.....	EXTEROCEPTIVE AND NEUROENDOCRINE REGULATION OF OVULATION.....	3R01 HD10071-03S1	13,263
HANAHAN, DONALD J.....	BIOCHEMICAL STUDIES ON THE BLOOD COAGULATION PROCESS.....	5R01 HL18852-03	76,708
HARRISON, FRANK.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05654-11	148,549
HERBERT, DAMON C.....	GONADOTROPHIC HORMONES IN MALNOURISHED RATS.....	1R01 HD10914-01	34,905
HERLIHY, JEREMIAH T.....	HYPOXIA-INDUCED RELAXATION OF VASCULAR SMOOTH MUSCLE.....	1R01 HL19082-01A2	31,638
HOROWITZ, PAUL M.....	STRUCTURE-FUNCTION IN RHODANASE BY FLUOROMETRY.....	1R01 GM25177-01	37,576
HORWITZ, LAWRENCE D.....	LEFT VENTRICULAR FUNCTION IN EXERCISE.....	5R01 HL16656-06	107,685
HUFFMAN, RONALD D.....	SYNAPTIC MECHANISMS OF THE GLOBUS PALLIDUS.....	1R01 NS14091-01	35,678
JOHNSON, JOHN M.....	REGULATION OF SKIN BLOOD FLOW IN MAN.....	5R01 HL20663-02	29,135
KEENAN, ROY W.....	THE METABOLISM AND FUNCTION OF THE POLYPRENOLS.....	2R01 AM17897-04	38,389
KING, RICHARD J.....	PHYSIOLOGICAL REGULATION OF PULMONARY SURFACTANT.....	5R01 HL16725-03	43,813
KING, RICHARD J.....	PHYSICOCHEMICAL INTERACTIONS IN PULMONARY SURFACTANT.....	5R01 HL19676-02	21,534
KOLB, WILLIAM P.....	COMPLEMENT ATTACK PROTEINS AS LYMPHOCYTE SURFACE AGS.....	1R01 CA24447-01	46,282
KUNAU, ROBERT T, JR.....	ANGIOTENSION, PROSTAGLANDINS, PRESSURE & THE KIDNEY.....	5R01 HL18875-03	49,954
LEE, JOHN C.....	REGULATION OF FETAL HEMOGLOBIN SYNTHESIS IN HUMANS.....	5R01 HL20939-02	20,286
LEVINSON, CHARLES.....	PHOSPHATE TRANSPORT AND METABOLISM IN CARCINOMA CELLS.....	2R01 CA10917-1J	37,732
MASORO, EDWARD J.....	AN APPROACH TO THE BIOCHEMICAL BASIS OF AGING.....	5R01 AG00166-04	75,599
MASORO, EDWARD J.....	PHYSIOLOGIC REGULATION OF LIPID METABOLISM.....	5R01 AM17476-05	69,477

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
TEXAS—Continued			
MATTINGLY, STEPHEN J.....	GROUP B STREPTOCOCCI AND NEONATAL DISEASE	1R01 AI13836-01A1	41,705
MC GILL, HENRY C, JR	A/S SCOR: ATHEROSCLEROSIS IN NONHUMAN PRIMATES.....	5P50 HL19362-02	1,496,652
MC GUIRE, WILLIAM L.....	MECHANISM OF HORMONAL CONTROL OF MAMMARY CARCINOMA.....	2R01 CA11378-09	102,154
MC NAY, JOHN L, JR	METABOLISM AND PHARMACOKINETICS OF AMPHOTERICIN B.....	5R01 GM23734-03	57,796
MEDINA, MIGUEL A.....	TOXIC EFFECTS OF PARAQUAT AND DIQUAT ON LUNG METABOLISM	1R01 ES01828-01	47,207
NISHIMURA, JONATHAN S.....	STUDIES ON SUCCINIC THIOKINASE AND RELATED ENZYMES	2R01 GM17534-08	57,184
NORLING, BARRY K.....	HARD COATING OF DENTAL ROTARY CUTTING INSTRUMENTS	5R23 DE04407-03	24,205
OLSON, MERLE S.....	REGULATION OF ENERGY METABOLISM IN LIVER	2R01 AM19473-03	36,081
OLSON, MERLE S.....	INTEGRATED REGULATION OF MYOCARDIAL ENERGY METABOLISM.....	3R01 HL20544-02S1	11,880
PAQUE, RONALD E.....	IMMUNOTHERAPY OF TUMORS WITH CELL LYSATES.....	5R01 CA17958-03	64,870
PAUERSTEIN, CARL J.....	PHYSIOLOGY OF TUBAL OVUM TRANSPORT.....	5R01 HD09309-03	33,896
PAUERSTEIN, CARL J.....	CONTROL MECHANISMS OF OVIDUCTAL SMOOTH MUSCLE.....	2R01 HD09339-04	48,790
PAUERSTEIN, CARL J.....	CENTER FOR RESEARCH IN REPRODUCTIVE BIOLOGY.....	5P30 HD10202-02	349,935
PINCKARD, ROBERT N.....	COMPLEMENT MEDIATED INJURY OF ISCHEMIC MYOCARDIUM.....	2R01 HL20394-03	91,354
PINCKARD, ROBERT N.....	STRUCTURE AND FUNCTION OF PLATELET ACTIVATING FACTOR.....	1R01 HL22555-01	166,504
PROPPE, DUANE W.....	CONTROL OF THE CIRCULATION IN HEAT-STRESS.....	5R01 HL20766-02	41,095
PROPPE, DUANE W.....	CONTROL OF CIRCULATION DURING HEAT STRESS AND FEVER	1R01 HL21451-01	39,030
REINECK, HENRY J.....	THE ETIOLOGY OF GENETIC HYPERTENSION	1R23 HL22438-01	41,479
RENNELS, EDWARD G.....	STUDIES ON A NEW CLONE OF NORMAL RAT PROLACTIN CELLS.....	2R01 AM12583-10	73,074
RENTHAL, ROBERT D.....	MOLECULAR MECHANISM OF A TRANSMEMBRANE PROTON PUMP	1R01 GM25483-01	39,600
ROBINSON, NEAL C.....	HYDROPHOBIC ASSOCIATIONS OF MEMBRANE COMPLEXES.....	1R01 GM24795-01	43,497
SEARS, DAVID A.....	STUDIES OF ERYTHROCYTE AND PLATELET MEMBRANE PROTEIN.....	2R01 AM17137-04	60,886
SERWER, PHILIP.....	BIOPHYSICS AND GENETICS OF VIRAL DNA PACKAGING.....	5R01 GM24365-02	48,634
SHERIDAN, PETER J.....	ANDROGEN RECEPTORS IN THE BRAIN.....	5R01 NS12933-03	62,709
SHIINO, MASATAKA.....	STUDIES OF FUNCTIONAL CLONAL GONADOTROPHS OF THE RAT.....	1R01 HD11826-01	46,976
STEIN, JAY H.....	PHYSIOLOGY AND PATHOPHYSIOLOGY OF KIDNEY FUNCTION	5P01 AM17387-06	482,510
WARD, WALTER F.....	LYSOSOMAL ROLE IN INSULIN AND GLUCAGON DEGRADATION	7R01 AM25633-01	47,128
WEINER, MARC H.....	IMMUNODIAGNOSIS OF SYSTEMIC CANDIDIASIS.....	5R01 AI13770-02	47,236
WHARTON, DAVID C.....	PROPERTIES OF CYTOCHROME OXIDASE.....	5R01 HL16686-04	81,673
WINBORN, WILLIAM B.....	ELECTRON MICROSCOPIC STUDIES OF PARIETAL CELLS.....	3R01 AM12950-09S1	6,691
ORGANIZATION TOTAL	74	6,266,907	
SAN MARCOS			
SOUTHWEST TEXAS STATE UNIVERSITY ZIP CODE 78666			
IRVIN, JAMES D.....	ENZYMATIC INACTIVATION OF EUKARYOTIC RIBOSOMES.....	1R01 AI15344-01	57,183
ORGANIZATION TOTAL	1	57,183	
TEMPLE			
SCDTT AND WHITE MEMORIAL HDSPITAL ZIP CODE 76501			
COULTER, JOHN B, III.....	BIOCHEMICAL INTERACTIONS OF INSULIN WITH THE LENS	2R01 EY00404-07A1	47,014
ORGANIZATION TOTAL	1	47,014	
STATE TOTAL	761	77,488,043	
UTAH			
LOGAN			
UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY ZIP CODE 84322			
BOEKER, ELIZABETH A.....	ENZYME DISSOCIATION MECHANISM.....	1R01 GM25471-01	32,656
EMERY, THOMAS F.....	MECHANISMS OF MICROBIAL IRON TRANSPORT.....	2R01 AI09580-07A1	59,505
GARDNER, ELDON J.....	STUDIES OF UTAH COLORECTAL CANCER FAMILIES	1R26 CA21623-01	136,509
HANSEN, ROGER G.....	PANTOTHENIC ACID NUTRITIONAL STATUS OF HUMANS.....	5R01 AM18746-03	45,104
OLSEN, RICHARD K.....	SYNTHESIS OF ANTIBIOTIC 593 A.....	1R01 CA22922-01	29,494
SPENCE, JACK T.....	THE FUNCTION OF MOLYBDENUM IN BIOLOGICAL SYSTEMS.....	5R01 GM08347-18	35,566

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
ORGANIZATION TOTAL	6	338,834	
PROVO			
BRIGHAM YOUNG UNIVERSITY ZIP CODE 84602			
ANDERSEN, FERRON L.....	EPIDEMIOLOGY OF ECHINOCOCCOSIS.....	2R01 AI10588-07	60,638
DALLEY, N KENT.....	X-RAY STUDY OF METAL-CYCLIC POLYETHER COMPLEXES.....	5R01 GM18811-06	38,348
GUBLER, CLARK J.....	PHYSIOLOGICAL FUNCTIONS AND METABOLISM OF THIAMINE.....	5R01 AM02448-19	42,827
SEEGMILLER, ROBERT E.....	CARTILAGE MATRIX IN HEREDITARY CHONDRODYSPLASIA IN MICE.....	1R01 AM21631-01	46,980
ORGANIZATION TOTAL	4	188,793	
SALT LAKE CITY			
LATTER-DAY SAINTS HOSPITAL SYSTEM ZIP CODE 84143			
BEAN, LEE L.....	POPULATION STUDIES OF MORMON GENEALOGIES.....	5R01 HD10267-03	90,165
MORRIS, ALAN H.....	CAPILLARY & TISSUE VOLUME AND LYMPH FLOW IN LUNG EDEMA.....	1R01 HL21948-01A1	62,251
ORGANIZATION TOTAL	2	152,416	
LATTER-DAY SAINTS HOSPITAL SYSTEM—LATTER-DAY SAINTS HOSPITAL ZIP CODE 84143			
CLAYTON, PAUL D.....	LEFT VENTRICULAR WALL MOTION ANALYSIS.....	1R01 HL21785-01	53,874
PLENK, HENRY P.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA17906-03	46,279
PRYOR, T ALLAN.....	COMPUTER CONTROLLED TWO-DIMENSIONAL ECHOCARDIOGRAPHY.....	5R01 HL16487-05	57,986
SKOLNICK, MARK H.....	CANCER INCIDENCE AND RISK FACTORS BY KINSHIP.....	2R01 CA16573-04	278,108
ORGANIZATION TOTAL	4	436,247	
LATTER-DAY SAINTS HOSPITAL SYSTEM—PRIMARY CHILDREN'S MEDICAL CENTER ZIP CODE 84103			
CLARK, JUSTIN S.....	A SELF-CALIBRATING IN VIVO BLOOD GAS MONITOR.....	5R01 HL20351-02	101,533
ORGANIZATION TOTAL	1	101,533	
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112			
ABILDSKOV, J A.....	CARDIAC ELECTROPHYSIOLOGY.....	5P01 HL13480-09	539,066
ANDRADE, JOSEPH D.....	SYNTHETIC HYDROGELS AS BLOOD TOLERABLE MATERIALS.....	5R01 HL16921-05	112,902
ANDRADE, JOSEPH D.....	ALBUMIN, ENDOTHELIUM, AND HEMOCOMPATIBILITY.....	5R01 HL18519-03	103,200
ATHENS, JOHN W.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA13238-07	107,089
BAKER, WILLIAM K.....	GENETIC CONTROL OF DIFFERENTIAL CELL FUNCTION.....	5R01 GM23707-02	45,273
BENTRUDE, WESLEY G.....	GEOMETRIES OF C-AMP AND CYCLOPHOSPHAMIDE ANALOGS.....	5R01 CA11045-10	82,314
BRITT, MICHAEL R.....	NOSOCOMIAL INFECTION IN SURGICAL PATIENTS.....	1R01 AI14533-01A1	109,593
BROOM, ARTHUR D.....	POLYRIBONUCLEOTIDES AS TUMOR AND VIRUS INHIBITORS.....	5R01 CA11935-08	76,288
BROWN, HAROLD M.....	TRANSDUCTION MECHANISM OF PHOTORECEPTORS.....	5R01 EY00762-07	132,218
BURGESS, MARY J.....	BASIC AND CLINICAL STUDIES OF THE ST-T DEFLECTION.....	3R01 HL12611-09S1	6,545
BURGESS, MARY J.....	BASIC AND CLINICAL STUDIES OF THE ST-T DEFLECTION.....	2R01 HL12611-10	70,638
BURGESS, MARY J.....	ELECTROCARDIOGRAPHIC METHODS OF QUANTIFYING INFARCT SIZE.....	1R01 HL21710-01	116,533
BURGESS, PAUL R.....	GROWTH AND INFORMATION SIGNALLING IN A SENSORY SYSTEM.....	5R01 NS08769-09	65,781
BURKE, JOHN P.....	CONTROL OF HOSPITAL-ACQUIRED URINARY TRACT INFECTIONS.....	5R01 AI11950-05	59,372
CAPECCHI, MARIO R.....	THE CONTROL, ASSEMBLY AND TERMINATION OF PROTEINS.....	5R01 GM21168-05	102,535
CARDINAL, JOHN R.....	CONTROLLED RELEASE OF PROGESTINS IN POLYMERIC SYSTEMS.....	5R01 HD09791-03	28,409
CARROLL, DANA.....	DEVELOPMENTAL CONTROL AND EVOLUTION OF 5S RNA GENES.....	2R01 GM22232-04	58,336
CHRISTENSEN, DOUGLAS A.....	HYPERTHERMIA PRODUCTION AND MEASUREMENT IN TISSUES.....	1R01 CA22189-01A1	123,732
CHRISTENSEN, DOUGLAS A.....	BIOLOGICAL THERMOMETRY SYSTEMS USING OPTICAL SENSORS.....	2R01 GM23373-03	38,542
COLE, BARRY C.....	MYCOPLASMA-CELL INTERACTIONS AND INTERFERON INDUCTION.....	2R01 AI12103-04A1	98,259
COLE, BARRY C.....	ROLE OF MYCOPLASMAS IN ANIMAL AND HUMAN DISEASE.....	2R01 AM02255-20	89,601
DAYNES, RAYMOND A.....	ULTRAVIOLET LIGHT RADIATION AND IMMUNOREGULATION.....	5R01 CA22126-02	133,435
DETHLEFSEN, LYLE A.....	OPTIMIZATION OF RADIATION THERAPY.....	2R01 CA14165-06	171,855
DETHLEFSEN, LYLE A.....	STUDIES ON INTERACTIONS OF DRUGS AND X-RAYS IN VIVO.....	5R01 CA22188-02	106,084
DICKINSON, WILLIAM J.....	THE CONTROL OF ENZYME EXPRESSION IN DEVELOPMENT.....	5R01 HD10723-02	46,832
DURNEY, CARL H.....	MICROWAVE METHODS OF LUNG WATER MEASUREMENT.....	5R01 HL20110-02	62,571
DUSTMAN, ROBERT E.....	ELECTROPHYSIOLOGICAL INDICES OF AGING.....	5R01 AG00568-02	55,371
EDMUNDSON, ALLEN B.....	IMMUNOGLOBULINS IN MULTIPLE MYELOMA AND AMYLOIDOSIS.....	5R01 CA19616-03	174,754
EHRENFELD, ELVERA R.....	VIRUS-HOST CELL INTERACTIONS.....	5R01 AI12387-04	66,447

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
EICHWALD, ERNST J.....	CELL MEDIATED HYPERACUTE REJECTION.....	1R01 CA23679-01	41,909
EPSTEIN, WILLIAM W.....	STUDIES ON FARNESYL PYROPHOSPHATE COUPLING.....	5R01 GM20196-06	53,157
EYRE, HARMON J.....	LEUKOCYTE MYELOPEROXIDASE DEFICIENCY FAMILY STUDIES.....	1R01 GM25600-01	39,684
EYRING, HENRY.....	EFFECTS OF STRUCTURE ON BIOLOGICAL MECHANISMS.....	5R01 GM12862-14	51,161
EYZAGUIRRE, CARLOS E.....	CHEMORECEPTOR ACTIVITY OF THE CAROTID BODY.....	2R01 NS05666-14	94,170
EYZAGUIRRE, CARLOS E.....	NEUROPHYSIOLOGY PROGRAM PROJECT (PERIPHERAL AND CNS).....	2P01 NS07938-10	358,513
FIDONE, SALVATORE J.....	CHEMICAL TRANSMISSION IN SENSORY RECEPTORS.....	2R01 NS12636-04	68,494
FRANKLIN, MICHAEL R.....	MODIFICATION OF PROCARCINOGEN ENZYMATIC ACTIVATION.....	5R01 CA15760-05	40,481
GANDHI, OM P.....	NONTHERMAL EFFECTS OF MICROWAVES ON LIVING TISSUE.....	5R01 CA20419-03	211,754
GELFAND, DONNA M.....	STUDY OF CHILDREN'S CHARITY BEHAVIOR.....	5R01 HD06914-06	42,220
GEORGOPOULOS, CONSTANTINE.....	BACTERIAL FUNCTIONS IN PHAGE DEVELOPMENT.....	5R01 GM23917-02	61,076
GIBBS, FREDERIC A, JR.....	HYPERTHERMIA—A DIFFERENTIAL RADIOSENSITIZER IN VIVO.....	5R01 CA20333-02	89,610
GIDDINGS, J CALVIN.....	BIOMEDICAL SEPARATIONS: OPTIMIZATION AND NEW METHODS.....	5R01 GM10851-21	95,710
GLASGOW, LOWELL A.....	INTERFERON AND HOST RESISTANCE TO VIRAL INFECTIONS.....	5R01 AI10217-09	82,560
GLASGOW, LOWELL A.....	INTERFERON TREATMENT OF A MURINE OSTEOGENIC SARCOMA.....	1R01 CA23475-01	79,395
GOLDEN, CAROLE A.....	MACROPHAGE FATTY ACIDS IN TUMOR CELL CYTOTOXICITY.....	5R01 CA19537-03	63,051
GRANT, DAVID M.....	CARBON-13 MAGNETIC RESONANCE—METHODS AND THEORY.....	2R01 GM08521-18	93,472
GRANT, DAVID M.....	REGIONAL RESEARCH FACILITY IN NMR.....	5P41 RR00574-08	197,208
GRAY, WILLIAM R.....	STRUCTURE, FUNCTION, GENETICS OF HISTIDINOL DH'ASE.....	1R01 GM24686-01	95,000
GREEN, JON A.....	UNEXPRESSED, RESTORABLE DELAYED HYPERSENSITIVITY.....	1R01 AI15074-01	85,685
GURNEY, ELIZABETH T.....	GROWTH CONTROL AND VIRAL GENE EXPRESSION.....	5R01 CA21797-02	67,102
HERRICK, GLENN A.....	OXYTRICHA GENE AND GENOME STRUCTURE AND FUNCTION.....	1R01 GM25203-01	73,198
HIBBS, JOHN B, JR.....	TRYPAN BLUE TUMOR ENHANCEMENT—STUDY MECHANISMS.....	5R01 CA14045-06	71,788
HILL, HARRY R.....	MECHANISM OF HOST RESISTANCE TO GROUP B STREPTOCOCCI.....	5R01 AI13150-02	41,580
HILL, HARRY R.....	MECHANISMS OF DIABETIC PHAGOCYTE CONTROL BY INSULIN.....	1R01 AM21140-01	73,089
HORCH, KENNETH W.....	SPECIFICITY IN REGENERATING SENSORY NEURONS.....	5R01 NS13283-02	36,114
HUANG, WAI M.....	STUDIES ON DNA INITIATION AND REPLICATION.....	2R01 GM21960-04	69,271
JACOBSEN, STEPHEN C.....	A UNIFIED CONTROL THEORY FOR ARTIFICIAL LIMBS.....	5R01 GM23499-02	130,501
JOHANSON, CONRAD E.....	ONTOGENY OF HOMEOSTATIC TRANSPORT IN CHOROID PLEXUS.....	5R01 NS13988-02	26,779
JOHNSON, STEVEN A.....	CANCER HYPERTHERMIA THERMOMETRY BY ULTRASOUND.....	1R01 CA23430-01	118,240
KECK, GARY E.....	NEW SYNTHETIC APPROACHES TO ANTITUMOR ALKALOIDS.....	1R01 CA24166-01	87,608
KIM, SUNG-WAN.....	INITIAL EVENTS IN THROMBUS FORMATION ON SURFACES.....	5R01 HL17623-05	40,749
KIM, SUNG-WAN.....	A NOVEL APPROACH TO NONTHROMBOGENIC POLYMER SURFACES.....	5R01 HL20251-02	34,782
KOLAKOFSKY, DANIEL.....	REPLICATION OF PARAINFLUENZA VIRUSES.....	5R01 AI12921-03	79,783
KOLFF, WILLEM J.....	CARDIAC ASSIST DEVICES AND ARTIFICIAL HEARTS.....	5P01 HL13738-08	510,331
KOLFF, WILLEM J.....	INTRA-AORTIC BALLOON PUMPING.....	5R01 HL20803-02	52,758
KRALIOS, FANY A.....	FUNCTIONAL SYMPATHETIC DEVELOPMENT IN NEONATAL HEARTS.....	5R01 HL17367-05	64,192
KRUEGER, GERALD G.....	IMMUNOLOGY OF PSORIASIS - 2 SECTIONS.....	1R01 AM21405-01	65,491
KUBY, STEPHEN A.....	STUDIES OF ADENOSINE TRIPHOSPHATE TRANSPHOSPHORYLASES.....	2R01 AM07824-16	65,623
KUBY, STEPHEN A.....	STUDIES OF ENZYMES OF METABOLIC AND GENETIC INTEREST.....	1R01 AM22088-01	85,880
KUEHL, LEROY R.....	INTRACELLULAR SITE OF SYNTHESIS OF SPECIFIC PROTEINS.....	5R01 GM13864-13	57,491
KUSHNER, JAMES P.....	PORPHYRIN BIOSYNTHESIS IN NORMAL AND DISEASE STATES.....	5R01 AM20503-02	111,069
LAHEY, M EUGENE.....	CHILDREN'S CANCER STUDY GROUP A.....	5R10 CA10198-11	67,596
LARK, KARL G.....	DNA REPLICATION IN EUKARYOTES AND PROKARYOTES.....	2R01 AI10056-09	160,989
LAZARUS, HARRISON M.....	EFFECTS OF ORGAN STORAGE ON RENAL RNA METABOLISM.....	2R01 AM16184-07	59,766
LEE, G RICHARD.....	STUDIES IN COPPER AND IRON METABOLISM.....	5R01 AM20207-02	225,518
LEE, G RICHARD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05428-17	200,462
LINKER, ALFRED.....	STRUCTURE AND FUNCTION OF MUCOPOLYSACCHARIDES.....	5R01 AM13412-18	42,726
LYMAN, DONALD J.....	BIOMEDICAL ENGINEERING.....	1P50 GM24487-01	465,095
LYON, JOSEPH L.....	EPIDEMIOLOGY OF CERVICAL CANCER IN AREA OF LOW INCIDENCE.....	5R01 CA19871-03	74,458
LYON, JOSEPH L.....	DIET AND COLON CANCER IN A LOW RISK POPULATION.....	5R01 CA21007-03	172,976
MC CLOSKEY, JAMES A.....	MASS SPECTROMETRY OF NUCLEIC ACIDS AND THEIR ANALOGS.....	2R01 CA18024-04	110,850
MC CLOSKEY, JAMES A.....	MASS SPECTROMETRY OF NUCLEIC ACIDS AND THEIR ANALOGS.....	2R01 GM21584-04	115,337
MEIKLE, ALFRED W.....	PROSTATIC CANCER: GENETIC AND ENDOCRINE RISK FACTORS.....	1R26 CA25031-01	110,249
MICHL, JOSEF.....	MAGNETIC CIRCULAR DICHROISM OF ORGANIC MOLECULES.....	2R01 GM21153-05	88,118
MILLER, SCOTT C.....	OSTEOCLAST SPECIALIZATIONS IN BONE RESORPTION.....	1R23 DE04931-01	34,288
MOODY, FRANK G.....	MECHANISMS OF GASTRIC ULCEROGENESIS.....	3R01 AM16233-07S1	21,100
MOODY, FRANK G.....	MECHANISMS OF GASTRIC ULCEROGENESIS.....	2R01 AM16233-08	56,958
MOODY, FRANK G.....	TRAUMA AND BURN RESEARCH CENTER.....	5P50 GM23095-03	335,570
MORTENSEN, J D.....	CHRONIC TOTAL CARDIOPULMONARY MECHANICAL SUBSTITUTION.....	1R01 HL22661-01	215,525

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
UTAH—Continued			
MOSS, STANLEY D.....	SENSITIVE FIELD-EFFECT TRANSDUCERS.....	5R01 GM22952-03	130,108
NELSON, DON H.....	CORTICOID EFFECT ON FAT CELL RESPONSE TO INSULIN.....	1R01 AM24038-01	84,585
NICHOLS, WILLIAM K.....	INSULIN REGULATION OF LEUKOCYTE METABOLISM.....	5R01 AM16330-06	37,176
NICHOLS, WILLIAM K.....	CYCLIC NUCLEOTIDES AND ALVEOLAR MACROPHAGE ACTIVATION.....	5R01 HL20125-02	36,223
O'NEILL, FRANK J.....	CONTROL OF NUCLEAR EVENTS IN NORMAL & NEOPLASTIC CELLS.....	5R01 CA15141-05	50,699
OLIVERA, BALDOMERO M.....	DISCONTINUOUS DNA SYNTHESIS IN VITRO.....	5R01 CA12096-08	67,354
OLIVERA, BALDOMERO M.....	A BIOCHEMICAL CHARACTERIZATION OF CONUS TOXINS.....	1R01 GM22737-01A2	67,685
OWEN, JEFFREY D.....	CA 20 ELECTRODE MEASUREMENTS IN LIMULUS PHOTORECEPTORS.....	1R01 EY02402-01	74,400
PARKINSON, JOHN S.....	GENETICS OF CHEMOTACTIC BEHAVIOR IN ESCHERICHIA COLI.....	5R01 GM19559-06	53,837
PARTLOW, LESTER M.....	NEURONAL GLIAL INTERACTIONS IN VITRO AND IN VIVO.....	2R01 NS12812-02	89,420
POULTER, C DALE.....	SUBSTRATE ANALOGS FOR TERPENE CONDENSATION REACTIONS.....	5R01 GM21328-04	66,486
PRAHL, JAMES W.....	STRUCTURAL BASIS OF THE FUNCTIONS OF HUMAN COMPLEMENT.....	5R01 AI13483-03	62,343
RECHSTEINER, MARTIN C.....	NAD METABOLISM AND CHROMOSOME LOSS IN HYBRID CELLS.....	1R01 GM24617-01	55,975
REED, DONALD J.....	ROLE OF THE CHOROID PLEXUS IN REGULATING THE CSF.....	5R01 NS12869-03	51,560
RILLING, HANS C.....	MECHANISMS AND ENZYMES OF TERPENE BIOSYNTHESIS.....	5R01 AM13140-18	107,514
RILLING, HANS C.....	STRUCTURAL & SPECTROSCOPIC STUDIES ON PRENYLTRANSFERASE.....	1R01 AM21745-01	41,712
RINGHAM, GARY L.....	CALCIUM AND TRANSMITTER RELEASE AT A CENTRAL SYNAPSE.....	5R01 NS13884-02	42,352
ROTH, JOHN R.....	AN ANALYSIS OF GENES INVOLVED IN TRNA PRODUCTION.....	5R01 GM23408-02	104,513
ROTI ROTI, JOSEPH L.....	RADIATION INDUCED ALTERATIONS OF CHROMOSOMAL PROTEINS.....	2R01 CA16465-04	116,315
SANDBERG, LAWRENCE B.....	BIOCHEMICAL STUDIES OF BLOOD VESSEL FORMATION & DISEASE.....	5R01 HL11963-10	100,103
SANDBERG, LAWRENCE B.....	CHEMICAL ANALYSIS OF HUMAN ARTERIAL ELASTIN.....	5R01 HL20546-02	29,492
SANDBERG, LAWRENCE B.....	CHEMICAL & FUNCTIONAL STUDIES OF LOW COPPER IN LUNG.....	1R01 HL22446-01	67,174
SCHWEIZER, MARTIN P.....	CARBON-13 NMR STUDIES OF TRNA SYNTHETASE INTERACTIONS.....	1R01 GM25512-01	67,838
SMITH, CHARLES B.....	INFECTIOUS ETIOLOGY OF CONNECTIVE TISSUE DISEASES.....	2R01 AM13463-09	80,927
SORENSEN, JAMES A.....	IMPROVED TECHNIQUE FOR IODINE QUANTITATION.....	5R01 GM22983-03	14,246
SORENSEN, JAMES A.....	MOVING-SLIT RADIOGRAPHY: X-RAY CONTRAST ENHANCEMENT.....	5R01 GM24029-02	104,785
SPIKES, JOHN D.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07092-13	134,911
STANG, PETER J.....	VINYL AND ALKYNYL TRIFLATE CHEMISTRY.....	2R01 CA16903-03A1	58,994
SUMMERS, DONALD F.....	COMPOSITION, ASSEMBLY AND REPLICATION OF RNA VIRUSES.....	5R01 AI12316-04	140,120
SWANSON, JOHN L.....	STUDIES OF GONOCOCCUS INFECTION.....	5R01 AI11073-06	60,082
SWEAT, FLOYD W.....	BIOCHEMICAL STUDY OF LIVER RETICULOENDOTHELIAL CELLS.....	3R01 AM18208-03S1	1,988
SYNHORST, DAVID P.....	EFFECT OF VASOACTIVE AGENTS ON LEFT-TO-RIGHT SHUNTS.....	5R23 HL21203-02	48,150
TOWNSEND, LEROY B.....	THE SYNTHESIS OF C-NUCLEOSIDES RELATED TO SHOWDOMYCIN.....	5R01 CA14252-06	33,191
TOWNSEND, LEROY B.....	CELLULAR-BIOCHEMICAL STUDIES ON ANTIMETABOLITES.....	5R01 CA20581-02	68,117
TYLER, FRANK H.....	THE STUDY OF METABOLIC AND HEREDITARY DISORDERS.....	3P01 AM00002-31S1	80,151
TYLER, FRANK H.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00064-14	694,729
UEDA, ISSAKU.....	ANESTHETIC INTERACTION WITH PHOSPHOLIPID MEMBRANES.....	1R01 GM25716-01	63,212
VELICK, SIDNEY F.....	THE PROPERTIES AND METABOLISM OF INDIVIDUAL PROTEINS.....	5R01 AM13115-15	52,868
WALKER, JOHN L.....	INTRACELLULAR IONIC ACTIVITIES IN HEART MUSCLE.....	5R01 HL18053-03	43,171
WARNICK, C TERRY.....	EFFECT OF ORGAN STORAGE ON NUCLEIC ACID METABOLISM.....	1R01 AM21395-01	50,281
WECHSLER, JAMES A.....	CONTROL OF NORMAL AND ABNORMAL CHROMOSOME GROWTH.....	1R01 GM25476-01	64,596
WILLIAMS, ROGER R.....	GENETIC PATTERNS IN DEATHS FROM MI AND STROKE IN UTAH.....	5R01 HL21088-02	82,874
WILSON, DANA E.....	LIPOPROTEIN LIPASE AND LIPOPROTEIN REMOVAL MECHANISMS.....	3R01 HL13626-06S1	4,749
WOLF, HAROLD H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05738-07	55,676
WOLSTENHOLME, DAVID R.....	STRUCTURE OF MITOCHONDRIAL DNA.....	5R01 GM18375-08	101,488
WOODBURY, DIXON M.....	THYROIDAL ANION TRANSPORT: MECHANISMS AND REGULATION.....	1R01 AM20935-01	76,574
WOODBURY, J WALTER.....	ION TRANSPORT THRU MEMBRANES AND CELL ACID-BASE STATE.....	9R01 AM20674-04	29,024
ORGANIZATION TOTAL	136 13,198,654		
STATE TOTAL	153 14,416,477		

VERMONT

BENNINGTON

PUTNAM MEMORIAL HOSPITAL ZIP CODE 05201

ELLEM, KAY A.....	REPLICATION CONTROL: NORMAL VS. TRANSFORMED HUMAN CELLS.....	3R01 CA17749-03S1	23,022
ELLEM, KAY A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05793-02	21,089

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VERMONT—Continued			
RHODE, SOLON L, III.....	REPLICON CONTROL IN NORMAL AND TRANSFORMING CELLS.....	5RD1 CA13414-05	44,032
TOOLAN, HELENE W.....	VIRUSES AND CANCER—ROLE OF LATENT VIRUSES IN RESISTANCE.....	5R01 CA07826-14	124,937
TOOLAN, HELENE W.....	STUDY OF A VIRUS-INDUCED CRANIOFACIAL ANOMALY.....	5R01 DE04512-03	39,671
ORGANIZATION TOTAL	5	252,751	
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
ALBERTINI, RICHARD J.....	STUDIES OF LYMPHOCYTE-DEFINED HLA AND B-CELL ANTIGENS.....	1RD1 CA25D36-01	49,295
ALPERT, NORMAN R.....	ACTIVATION AND CONTRACTION HEAT IN ENLARGED HEARTS.....	3R01 HL17592-02S1	9,420
ALPERT, NORMAN R.....	ACTIVATION AND CONTRACTION HEAT IN ENLARGED HEARTS.....	5R01 HL17592-03	88,710
BEEKEN, WARREN L.....	STUDIES OF PATHOGENESIS OF INFLAMMATORY BOWEL DISEASE.....	1RD1 AM21564-01	86,764
BRESNICK, EDWARD.....	POLYCYCLIC HYDROCARBON METABOLISM AND CARCINOGENESIS.....	5R01 CA20711-03	60,568
BRESNICK, EDWARD.....	IN VIVO-IN VITRO MODEL FOR IDENTIFICATION OF CARCINOGENS.....	5R01 CA21258-02	75,907
BRESNICK, EDWARD.....	DNA REPAIR AFTER POLYCYCLIC HYDROCARBON ADMINISTRATION.....	1R01 CA23514-01	87,702
BRESNICK, EDWARD.....	EXPRESSION OF CYTOCHROME P448 ENVIRONMENTAL INFLUENCES.....	1R01 ES01974-01	57,649
CHIU, JEN-FU.....	ALPHA-FETOPROTEIN REGULATION IN FETAL & CANCER LIVER.....	7R01 CA25098-01	52,867
CHIU, JEN-FU.....	MOLECULAR MECHANISMS IN LARGE BOWEL CARCINOGENESIS.....	7R26 CA25136-01	38,740
CIDLowski, JOHN A.....	GLUCOCORTICOID RECEPTORS IN SYNCHRONIZED CELLS.....	1R01 AM20892-01	61,955
CLAPP, JAMES F, III.....	FETAL METABOLISM & BRAIN FUNCTION DURING CHRONIC HYPOXIA.....	1R01 HD11122-01A1	67,560
CRAIGHEAD, JOHN E.....	DIABETES MODELS INDUCED BY VIRAL AND IMMUNE INSULTS.....	5RD1 AM20790-02	121,6D9
CRAIGHEAD, JOHN E.....	LUNG CENTER SUPPORT.....	5P6D HL17292-04	1,277,359
DANFORTH, ELLIOT, JR.....	EFFECTS OF OVER- AND UNDERNUTRITION ON THYROID HORMONE.....	2RD1 AM18535-04	93,065
DEPERSIO, EDWARD J.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA17571-03	37,058
DICKERSON, JOSEPH D.....	STUDIES OF PULMONARY INFECTION IN SPLENECTOMIZED ANIMALS.....	5RD1 HL2D170-02	56,028
DIONNE, VINCENT E.....	CHEMICAL RECEPTOR MECHANISMS.....	5RD1 NS13581-02	61,134
EVANS, JOHN N.....	MECHANICAL PROPERTIES OF ISOLATED SMALL BRONCHIOLES.....	5R23 HL21539-D2	40,701
FOSTER, ROGER S, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5RD1 CA20203-02	45,671
GANS, JOSEPH H.....	ADAPTATION TO CHEMICAL INJURY.....	5R01 CA21863-02	48,462
GIBBONS, WALTER R.....	VOLTAGE CONTROL OF CONTRACTION IN HEART.....	5R01 HL14614-07	46,266
GRAHAM, WILLIAM G.....	ALTITUDE ADAPTATION IN CHRONIC LUNG DISEASE.....	1R01 HL21117-01A1	56,692
GUMP, DIETER W.....	CHLAMYDIA AND MYCOPLASMA IN HUMAN INFERTILITY.....	1R01 HD11441-D1A1	72,098
HALPERN, WILLIAM.....	VISCOELASTIC AND OPTICAL PROPERTIES OF MUSCLE.....	2RD1 AM17163-D4A1	45,585
HALPERN, WILLIAM.....	CONTRACTILE PROPERTIES OF HYPERTENSIVE ARTERIOLES.....	5R01 HL17335-05	77,637
HAMRELL, BURT B.....	ACTIVE TENSION AND SHORTENING IN CARDIAC HYPERTROPHY.....	5R01 HL21182-D2	76,691
HAPP, GEORGE M.....	CONTROL OF REPRODUCTIVE MATURATION: AN INSECT MODEL.....	7RD1 AI15662-D1	49,538
JAFFE, JULIAN J.....	ANTIMETABOLITE TARGETS IN SCHISTOSOMES AND FILARIAE.....	2R22 AI12060-04	75,212
JOHNSTONE, DONALD B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5SD7 RR07125-D9	24,268
KELLEHER, PHILIP C.....	ALPHA-FETOPROTEIN SYNTHESIS BY HEPATOMA CELLS IN VITRO.....	5RD1 CA22099-02	56,912
KELLEY, JASON.....	COLLAGEN SYNTHESIS IN PULMONARY FIBROSIS CELLS.....	5R23 HL21504-02	44,519
KRAKOFF, IRWIN H.....	EXPLORATORY STUDIES IN CANCER RESEARCH.....	5P20 CA162D9-04	128,099
KRAKOFF, IRWIN H.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19381-03	119,052
KRAKOFF, IRWIN H.....	CANCER CENTER (CORE) SUPPORT GRANT.....	1P30 CA22435-D1	427,917
KUEHNE, MARTIN E.....	TOTAL SYNTHESSES OF INDOLE ALKALOIDS.....	5R01 CA12D1D-16	97,409
LAMBERT, LLDYD M, JR.....	MAGNETOSONIC IMAGE CONVERTER.....	5RD1 GM2D226-05	31,759
LEPESCHKIN, EUGENE.....	QUANTITATIVE STUDY OF T-WAVE MECHANISMS.....	3RD1 HL01486-23S1	18,259
LITTEN, RAYE Z, III.....	THE RESPONSE OF CARDIAC MYOSIN TO HYPERTROPHIC STRESS.....	1RD1 HL22845-D1	48,635
LOW, ROBERT B.....	INSULIN AMINO ACID POOLS AND MUSCLE PROTEIN SYNTHESIS.....	1R01 AM21621-01	57,125
LOW, ROBERT B.....	CORRELATED STUDIES OF PULMONARY FIBROSIS.....	5P5D HL14212-D7	716,547
LUGINBUHL, WILLIAM H.....	GENERAL CLINICAL RESEARCH CENTER.....	2MD1 RRD01D9-15	406,043
LUGINBUHL, WILLIAM H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5SD7 RRD5429-17	142,862
MAUGHAN, DAVID W.....	SARCOMERE MECHANICS IN DISRUPTED VENTRICULAR MUSCLE.....	1RD1 HL21312-D1	69,503
MOEHRING, THOMAS J.....	MAMMALIAN CELL RESPONSE TO DIPHTHERIA TOXIN.....	5RD1 AID9100-D9	79,108
NYBORG, WESLEY L.....	BIOPHYSICAL BASIS FOR THRESHOLDS IN BIO-ULTRASOUND.....	5RD1 GM082D9-14	110,407
PARSONS, RODNEY L.....	EXCITATION-CONTRACTION COUPLING IN ENLARGED HEARTS.....	1R01 HL22269-01	89,879
PARSONS, RODNEY L.....	KINETICS OF SYNAPTIC CURRENTS IN SYMPATHETIC GANGLIA.....	1RD1 NS14552-01	73,095
RUSH, STANLEY.....	EFFECT OF RESISTIVITY VARIATIONS ON ELECTROCARDIOGRAM.....	5RD1 HLD9831-12	66,856
SAYER, JANE M.....	TIMING OF PROTON TRANSFER IN CARBONYL ADDITIONS.....	5R01 GM22938-03	23,398
SCHAEFFER, WARREN I.....	STUDIES OF IN VITRO CARCINOGENESIS WITH AFLATOXIN B1.....	2RD1 CA12056-07	67,790

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VERMONT—Continued			
SIMS, ETHAN A.....	METABOLIC INTERRELATIONSHIPS OF OBESITY AND DIABETES.....	5R01 AM10254-13	138,238
SMITH, CAROL J.....	HEPATOMA ALPHA-FETOPROTEIN: CHEMISTRY AND METABOLISM.....	2R01 CA15222-04A1	109,087
SOYKA, LESTER F.....	ONTOGENETIC STUDIES OF DRUG METABOLISM.....	5R01 CA19647-06	66,793
TANNEN, RICHARD L.....	HYDROGEN ION REGULATION BY THE MAMMALIAN NEPHRON.....	3R01 AM14225-06S1	8,759
ORGANIZATION TOTAL	55 6,240,262		
WHITE RIVER JUNCTION			
VETERANS ADMINISTRATION CENTER ZIP CODE 05001			
PHILLIPS, PHILIP G.....	BIOCHEMICAL PROBES OF MALIGNANT CELL SURFACES.....	7R01 CA25626-01	31,222
ORGANIZATION TOTAL	1 31,222		
STATE TOTAL	61 6,524,235		
VIRGINIA			
ARLINGTON			
ARCTIC INSTITUTE OF NORTH AMERICA ZIP CODE 22201			
HOUSTON, CHARLES S.....	HUMAN PHYSIOLOGY AT 5360 METERS - MOUNTAIN ENVIRONMENT.....	2R01 HL14102-07A1	199,339
ORGANIZATION TOTAL	1 199,339		
BLACKSBURG			
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY ZIP CODE 24061			
BARNETT, RONALD E.....	STUDIES ON LIPID BILAYERS AND NATURAL MEMBRANES.....	1R01 GM24819-01	19,399
BUNCE, GEORGE E.....	CATARACT FROM A VEGETABLE PROTEIN BASED DIET.....	5R01 EY01060-08	50,213
CUMMINS, CECIL S.....	TUMOR-INHIBITORY PROPERTY OF ANAEROBIC CORYNEFORMS.....	3R01 CA17790-03S1	27,474
EBEL, RICHARD E.....	MEMBRANE CONTROL OF MICROSOMAL CYTOCHROME P-450.....	1R23 CA24364-01	27,804
FALKINHAM, JOSEPH O, III.....	MEMBRANE INVOLVEMENT IN BACTERIAL CONJUGATION.....	5R01 AI14086-02	19,017
GOOD, IRVING J.....	PROBABILITY ESTIMATION.....	5R01 GM18770-07	77,456
GREGORY, EUGENE M.....	SUPEROXIDE DISMUTASE AND CATALASE IN B FRAGILIS.....	1R01 AI15250-01	59,763
HOLTON, ROBERT A.....	SYNTHESIS OF PROSTAGLANDINS AND THROMBOXANES.....	1R01 GM26113-01	69,764
KINGSTON, DAVID G.....	PLANT TUMOR INHIBITORS.....	3R01 CA12831-06S1	361
KINGSTON, DAVID G.....	PLANT TUMOR INHIBITORS.....	2R01 CA12831-07	49,184
LIGHTFOOT, HAIDEH N.....	CONTROL OF DIPHTHERIA TOXIN SYNTHESIS BY IRON.....	5R01 AI14091-02	35,922
MC NABB, ROGER A.....	THE EXCRETION OF URIC ACID.....	3R01 AM14991-06S1	1,622
NIEHAUS, WALTER G, JR.....	STRUCTURE AND FUNCTION OF AMIDINATED HUMAN HEMOGLOBIN.....	5R01 HL20074-02	36,708
PATERSON, ROBERT A.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07095-11	55,502
RUTHERFORD, CHARLES L.....	ALTERNATE PATHWAYS IN CELLULAR AGING.....	5R01 AG00677-02	38,024
RUTHERFORD, CHARLES L.....	MICROANALYSIS OF CAMP ENZYMES IN HUMAN BREAST TUMORS.....	1R01 CA24150-01	36,006
SCHMIDT, ROBERT R.....	GENE-ENZYME CONTROL IN EUKARYOTIC CELL CYCLE.....	5R01 GM19871-06	90,928
SMIBERT, ROBERT M.....	T. PALLIDUM CULTIVATION AND TREPONEME LIPID STUDIES.....	5R01 AI12726-04	55,276
WILKINS, TRACY D.....	RELATIONSHIPS OF FECAL MUTAGENS TO COLON CANCER.....	1R26 CA23857-01	44,823
ORGANIZATION TOTAL	19 795,246		
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
ADLER, PAUL N.....	GENETIC AND MOLECULAR CONTROL OF DEVELOPMENT.....	1R01 HD11763-01	48,028
BARENHOLZ, YEchezkel.....	ROLE OF SPHINGOMYELIN IN BIOMEMBRANES AND BILAYERS.....	2R01 HL17576-04	52,559
BARNES, DENNIS W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07094-13	76,233
BENJAMIN, DAVID C.....	CELLULAR AND STRUCTURAL BASIS OF IMMUNOLOGICAL TOLERANCE.....	9R01 CA24431-07	70,560
BERNE, ROBERT M.....	BLOOD FLOW AND ADENINE NUCLEOTIDE METABOLISM.....	2R01 HL10384-13	183,707
BERNE, ROBERT M.....	STUDY OF VASCULAR SMOOTH MUSCLE.....	5P01 HL19242-02	444,242
BILTONEN, RODNEY L.....	THERMODYNAMICS OF TRNA AND AMINOACYL SYNTHETASES.....	5R01 GM20637-07	70,770
BLIZZARD, ROBERT M.....	STUDIES OF PITUITARY HORMONES AND HYPOPITUITARISM.....	5R01 HD08926-05	85,785

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
BRADBEER, CLIVE.....	STUDIES ON THE TRANSPORT OF VITAMIN B12.....	2R01 AM12653-10	52,398
BROOKER, GARY.....	METABOLIC AND HORMONAL CONTROL OF CARDIAC CONTRACTION.....	2R01 HL15985-06	74,912
BROWN, JAY C.....	ROLE OF THE CELL SURFACE IN CANCER AND DEVELOPMENT.....	2R01 HD06390-07	50,865
CARDELL, ROBERT R, JR.....	SUBCELLULAR EFFECTS OF METABOLIC HORMONES ON RAT LIVER.....	5R01 AM11854-11	81,433
CAREY, ROBERT M.....	RENAL CATECHOLAMINES: PATHOPHYSIOLOGY OF HYPERTENSION.....	1R01 HL22306-01	57,072
COHEN, DAVID H.....	STUDIES OF NEUROPLASTIC MECHANISMS.....	1P01 NS14620-01	201,751
COLLINS, CAROLYN J.....	INTEGRATION OF RNA TUMOR VIRUSES IN MAMMALIAN CELLS.....	1R01 CA24137-01	77,606
CURNOW, RANDALL T.....	PROTEIN PHOSPHATASE IN NORMAL AND DIABETIC LIVER.....	5R01 AM20787-02	57,697
DAVIS, JOHN S, IV.....	IMMUNOLOGICAL MECHANISMS IN RHEUMATIC DISEASES.....	3R01 AM11766-09S1	34,591
DECK, J DAVID.....	TISSUE ORGANIZATION AND TURNOVER IN SEMILUNAR VALVES.....	5R01 HL16935-05	38,285
DULING, BRIAN R.....	LOCAL REGULATION OF MICROVASCULAR FUNCTION.....	5R01 HL12792-09	57,862
DUNN, JOHN T.....	THYROGLOBULIN IN THYROID DISEASE.....	2R01 AM11043-09A3	75,297
EDWARDS, STEPHEN B.....	PROJECTIONS OF THE MIDBRAIN RETICULAR FORMATION.....	5R01 NS11254-06	46,346
EMERSON, CHARLES P, JR.....	CONTROL OF MUSCLE PROTEIN SYNTHESIS DURING MYOGENESIS.....	5R01 HD07796-06	87,277
EMERSON, SUZANNE U.....	VESICULAR STOMATITIS VIRUS RNA SYNTHESIS.....	5R01 AI11722-05	73,122
FAGER, ROGER S.....	PREPARATION AND CHARACTERIZATION OF CONE PIGMENTS.....	5R01 EY01505-04	75,852
FLICKINGER, CHARLES J.....	STRUCTURE AND FUNCTION OF MALE SEX ACCESSORY ORGANS.....	5R01 HD10073-03	75,135
GARFIELD, SANFORD A.....	STRUCTURE AND FUNCTION OF HEPATIC CELLULAR COMPONENTS.....	5R01 AM21253-02	67,336
GARRETT, REGINALD H.....	THE ENZYMOLOGY OF NITRATE ASSIMILATION.....	5R01 GM18955-10	40,571
GARRETT, REGINALD H.....	THE REGULATION OF NITRATE ASSIMILATION.....	5R01 GM22738-03	48,356
GARRISON, JAMES C, II.....	REGULATION OF GLUCONEOGENIC ENZYMES BY HORMONES.....	5R01 AM19952-02	31,475
GEAR, ADRIAN R.....	ERYTHROCYTE AND PLATELET AGGREGATION IN DIABETES.....	1R01 AM20727-01	38,058
GILMAN, ALFRED G.....	REGULATION OF CYCLIC NUCLEOTIDE METABOLISM.....	5R01 NS10193-07	145,594
GRAINGER, ROBERT M.....	FUNCTIONAL ORGANIZATION OF A PURIFIED EUKARYOTIC GENE.....	1R01 GM24430-01	64,993
GREENLEE, JOHN E.....	K VIRUS INFECTION IN MODEL.....	1R01 NS13982-01A1	46,850
GRISHAM, CHARLES M.....	MECHANISMS OF MEMBRANE TRANSPORT ENZYMES.....	5R01 AM19419-03	43,198
HAMLIN, JOYCE L.....	CONTROL OF EUKARYOTIC DNA SYNTHESIS.....	1R01 GM26108-01	69,308
HARBERT, GUY M, JR.....	STUDIES OF PRIMATE UTERINE PHYSIOLOGY.....	3R01 HD02798-10S1	3,282
HARBERT, GUY M, JR.....	STUDIES OF PRIMATE UTERINE PHYSIOLOGY.....	2R01 HD02798-11	63,476
HARRISON, WILLARD W.....	BIOLOGICAL TRACE ANALYSIS BY HOLLOW CATHODE DISCHARGE.....	5R01 GM14569-11	35,485
HAYNES, ROBERT C, JR.....	HORMONAL CONTROL OF HEPATIC GLUCONEOGENESIS.....	5R01 AM14347-10	79,180
HEIMER, LENNART.....	BASAL FOREBRAIN ORGANIZATION.....	2R01 NS10972-06	68,668
HENDLEY, J OWEN.....	CHARACTERIZATION OF THE CAPSULE ON NEISSERIA GONORRHOEA.....	5R01 AI14240-02	46,724
HOLLOWAY, CAROLINE T.....	UNSATURATED FATTY ACID BIOSYNTHESIS IN THE AORTA.....	5R01 HL19936-02	60,271
HOLLOWAY, PETER W.....	THE DYNAMIC STATE OF CYTOCHROME B5 IN MEMBRANES.....	1R01 GM23858-01A1	56,536
HOWARDS, STUART S.....	MICROPUNCTURE STUDIES OF THE TESTES AND EPIDIDYMS.....	2R01 HD09490-04	69,159
HOWARDS, STUART S.....	IN VITRO ASSAY OF HUMAN SPERM FERTILIZING CAPACITY.....	1R01 HD11477-01	48,624
HUANG, CHING-HSIEN.....	PHOSPHOLIPID VESICLES—MODEL FOR BIOLOGICAL MEMBRANES.....	5R01 GM17452-07	59,564
HUANG, CHING-HSIEN.....	PROTEIN KINASE—PHYSICAL STRUCTURE & BIOLOGICAL ACTIVITY.....	5R01 GM22430-03	44,322
HUANG, LAURA C.....	EFFECTS OF INSULIN ON PHOSPHOPROTEIN PHOSPHATASE.....	5R01 AM20983-02	37,683
IVEY, HALLAM H.....	THE USE OF NEBULIZED SURFACTANTS IN TREATMENT OF RDS.....	5R01 HD11192-02	69,191
JOHNSON, LEWIS B.....	COMPOSITION CHANGES IN DENTAL ALLOY.....	5R01 DE03965-05	59,197
JONES, WARREN C, JR.....	HIRUDIN ISOLATION AND UTILIZATION.....	3R01 HL19331-02S1	1,208
JONES, WARREN C, JR.....	HIRUDIN ISOLATION AND UTILIZATION.....	5R01 HL19331-03	36,499
KADNER, ROBERT J.....	GENE AMPLIFICATION AND MEMBRANE PROTEINS.....	2R01 GM19078-07	50,360
KELLY, THADDEUS E.....	STUDIES IN LYSOSOMAL NEURAMINIDASE DEFICIENCY.....	1R01 HD11263-01	43,178
KHALIFAH, RAJA G.....	HUMAN ERYTHROCYTE CARBONIC ANHYDRASE.....	2R01 HL17963-04	51,086
KNORR, NORMAN, JR.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00847-05	435,132
KNORR, NORMAN, JR.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05431-17	187,590
KONIGSBERG, IRWIN R.....	CONTROL OF PROLIFERATION DURING MUSCLE DEVELOPMENT.....	2R01 HD07083-06	147,365
KRETSINGER, ROBERT H.....	CRYSTALLOGRAPHY OF MODULATOR PROTEIN AND TROPONIN.....	2R01 AM16253-07	68,664
KRETSINGER, ROBERT H.....	DEVELOPMENT OF AN AREA X-RAY DIFFRACTOMETER.....	1P41 RR01135-01	35,759
KUEHL, KAREN S.....	CHARACTERIZATION OF THE B PROTEINS OF SERUM LIPOPROTEINS.....	5R01 HL20712-02	45,674
KUEHL, W MICHAEL.....	CONTROL OF IMMUNOGLOBULIN SYNTHESIS IN MYELOMA CELLS.....	2R01 AI12525-04	68,315
KUTCHAI, HOWARD C.....	RED CELLS AND CHICK HEART: TRANSPORT AND FLUIDITY.....	5R01 GM24168-02	24,932
KUTCHAI, HOWARD C.....	LIMITING FACTORS IN OXYGEN UPTAKE IN THE LUNG.....	3R01 HL17967-03S1	693
KUTCHAI, HOWARD C.....	LIMITING FACTORS IN OXYGEN UPTAKE IN THE LUNG.....	2R01 HL17967-04	26,025
LANGDON, ROBERT G.....	BIOLOGICAL MEMBRANES AND PLASMA LIPOPROTEINS.....	5R01 GM19319-06	39,758
LANGMAN, JAN.....	ABNORMAL DEVELOPMENT OF THE NERVOUS SYSTEM.....	2R01 NS06188-14	150,698
LARNER, JOSEPH.....	CHEMICAL MECHANISM OF ACTION OF INSULIN.....	5R01 AM14334-10	131,850

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
LARNER, JOSEPH.....	DIABETES RESEARCH CENTER SUPPORT.....	5P30 AM17042-04	223,945
LARNER, JOSEPH.....	DIABETES RESEARCH AND TRAINING CENTER.....	1P60 AM22125-01	773,170
LITMAN, BURTON J.....	EFFECT OF MICROENVIRONMENT ON OISC MEMBRANE FUNCTION.....	5R01 EY00548-07	35,539
LONGNECKER, OAVIO E.....	ANESTHETICS AND MICROVASCULAR RESPONSE TO HEMORRHAGE.....	5R01 HL17091-05	64,344
LOONEY, WILLIAM B.....	THE EFFECT OF RADIOTHERAPY ON EXPERIMENTAL SOLID TUMORS.....	5R01 CA20516-03	128,828
MACLEOD, ROBERT M.....	INFLUENCE OF HORMONES ON TISSUE METABOLISM.....	5R01 CA07535-15	69,647
MANOELL, GERALD L.....	MECHANISMS OF LEUKOCYTE BACTERICIDAL ACTIVITY.....	5R01 AI09504-09	68,263
MARTIN, R BRUCE.....	ANTITUMOR COMPLEXES.....	2R01 CA14832-04A2	32,684
MILLER, EDWARD O, JR.....	ANESTHETIC EFFECTS—RENIN/SYMPATHETIC NERVOUS SYSTEM.....	5R23 GM24313-02	41,627
MILLER, JOSEPH C.....	DISEASE AND MEDICINE IN THE ANGOLAN SLAVE TRADE.....	1R01 LM03003-01	13,505
MILLER, OSCAR L, JR.....	BIOLOGICAL SAFETY P-3 FACILITY.....	1P30 AI15314-01	34,000
MILLER, OSCAR L, JR.....	ULTRA STRUCTURAL STUDIES OF GENETIC ACTIVITY.....	2R01 GM21020-02	122,092
MURAO, FERIO.....	FACTORS WHICH REGULATE THE ACTION OF CYCLIC AMP.....	5R01 AM15316-08	116,838
MURAO, FERIO.....	CYCLIC NUCLEOTIDE METABOLISM IN LUNG TISSUES.....	5R01 HL18260-04	63,265
NOLAN, STANTON P.....	FUNCTION AND STRUCTURE OF SEMILUNAR VALVES.....	2R01 HL17969-04	77,136
OONESSEY, RICHARD.....	CONTROL OF AMINO ACID METABOLISM IN SKELETAL MUSCLE.....	5R01 AM19120-03	36,407
OLIPHANT, EDWARD E.....	MECHANISM OF INDUCTION OF THE SPERM ACROSOME REACTION.....	2R01 HO08573-04A1	80,853
PAULSEN, ELSA P.....	COMPARATIVE STUDIES OF THREE FORMS OF CHILDHOOD DIABETES.....	5R01 AM20520-02	51,376
POHL, STEPHEN L.....	CELL BIOLOGY OF THE ADIPOCYTE.....	5R01 AM19361-02	29,759
RALL, THEODORE W.....	CYCLIC AMP IN ACTIONS OF NEUROHORMONES.....	2R01 NS12764-04	105,585
REBHUN, LIONEL I.....	THE ANTICANCER AGENT MAYTANSINE: MECHANISM OF ACTION.....	5R01 CA21732-05	134,790
REBHUN, LIONEL I.....	CALCIUM SULFHYDRYLS AND THE MITOTIC APPARATUS.....	5R01 GM22407-03	41,610
RITCHIE, WALLACE P, JR.....	REFLUX OF BILE ACID AS A FACTOR IN GASTRIC DISEASE.....	5R01 AM17591-05	43,088
ROCHESTER, QUOLEY F.....	PERFORMANCE OF RESPIRATORY MUSCLES UNDER STRESS.....	5R01 HL21500-02	55,372
ROCHESTER, QUOLEY F.....	RESPIRATORY MUSCLE DYSFUNCTION IN RESPIRATORY FAILURE.....	1R01 HL22022-01	58,053
ROEHWALD, RICHARD O.....	TRANSCELLULAR TRANSPORT OF IMMUNOGLOBULINS.....	5R01 AI11937-04	49,350
ROEHWALD, RICHARD O.....	ULTRASTRUCTURAL BASIS OF GLOMERULAR PERMEABILITY.....	5R01 HL19316-03	28,546
ROGOL, ALAN O.....	STRUCTURE AND PROPERTIES OF DIABETOGENIC PEPTIDES.....	5R01 AM19271-02	31,877
SAOLER, THOMAS W.....	EPITHELIAL FUSION FACTORS INVOLVED IN TERATOGENESIS.....	1R01 HD11578-01	37,640
SANDERS, DONALD B.....	MYASTHENIA GRAVIS: PHYSIOLOGICAL STUDIES.....	5R01 NS12905-03	59,769
SCHNAITMAN, CARL A.....	CELL SURFACE MEMBRANE PROTEINS.....	5R01 GM18006-07	46,902
SHEBILSKIE, WAYNE L.....	VISUOMOTOR COORDINATION.....	1R01 EY02291-01	18,588
SHERMAN, S MURRAY.....	EFFECTS OF VISUAL DEPRIVATION ON THE VISUAL SYSTEM.....	5R01 EY01565-04	79,028
SPELAKIS, NICK.....	ELECTROPHYSIOLOGY OF HEART CELLS.....	5R01 HL18711-03	63,489
STEINBERG, WILLIAM.....	REGULATION OF BACTERIAL SPORE DEVELOPMENT.....	5R01 GM19236-06	36,905
STEWART, OSWALD.....	POST-LESION PLASTICITY OF NEURONAL CIRCUITRY.....	2R01 NS12333-04	48,202
SUNDBERG, RICHARD J.....	COORDINATION CHEMISTRY OF IMIDAZOLE DERIVATIVES.....	1R01 GM25294-01	58,635
THOMPSON, THOMAS E.....	A STUDY OF PHOSPHOLIPID BILAYER MEMBRANES.....	5R01 GM14628-13	81,486
THOMPSON, THOMAS E.....	PROPERTIES OF BILAYERS CONTAINING GLYCOSPHINGOLIPIDS.....	5R01 GM23573-02	44,315
THOMPSON, THOMAS E.....	SYMPOSIUM ON FLUCTUATIONS IN BIOLOGICAL SYSTEMS.....	1R13 GM25241-01	1,000
WAGNER, ROBERT R.....	CELLULAR RESISTANCE TO VIRAL INFECTION.....	2R01 AI11112-12	175,208
WAGNER, ROBERT R.....	CANCER CELL AND VIRUS MEMBRANES: STRUCTURE AND FUNCTION.....	5P01 CA18701-03	108,208
WANEBO, HAROLD J.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17990-04	76,388
WAWNER, FRANKLIN E.....	A STUDY OF REINFORCEMENTS IN DENTAL COMPOSITES.....	5R01 OE03925-04	44,551
WILEY, LYNN M.....	CELL SURFACE-CYTOSKELETAL FUNCTION IN MORPHOGENESIS.....	1R01 HD11788-01	50,654
WILSON, JAMES R.....	DEVELOPMENT OF CENTRAL VISUAL PATHWAYS.....	1R01 EY02530-01	58,816
WINFIELD, JOHN B.....	ANTILYMPHOCYTE ANTIBODIES IN LUPUS ERYTHEMATOSUS.....	5R01 AM19096-03	5,627
WRIGHT, THEODORE R.....	ONTOGENY AND THE GENETIC CONTROL OF ENZYME ACTIVITY.....	5R01 GM19242-07	122,063
WYANDT, HERMAN E.....	SOMATIC STUDIES OF HUMAN RING CHROMOSOMES.....	5R01 GM25244-02	58,108
ORGANIZATION TOTAL	117	9,078,403	
HARRISONBURG			
JAMES MADISON UNIVERSITY	ZIP CODE 22801		
ACTON, JEAN D.....	EFFECT OF NITROGEN DIOXIDE ON PULMONARY MONOCYTES.....	7R01 ES02136-01	37,004
ORGANIZATION TOTAL	1	37,004	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
NORFOLK			
EASTERN VIRGINIA MEDICAL AUTHORITY—EASTERN VIRGINIA MEDICAL SCHOOL ZIP CODE 23507			
CASTLE, MANFORD C.....	PHARMACOKINETICS OF DIGOXIN AND DIGITOXIN IN HUMANS.....	5R23 HL21083-02	32,561
CONRAD, MARGARET C.....	COMPENSATORY RESPONSES TO ARTERIAL OCCLUSION.....	1R01 HL21034-01A1	50,244
COOKE, WILLIAM J.....	HEPATIC EXCRETION OF ANIONIC DRUGS.....	5R01 AM21374-02	32,936
FAULCONER, ROBERT J.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18067-04	78,382
MC COMBS, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05771-02	20,460
MC COMBS, ROBERT M.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09028-02	98,365
MERCHANT, DONALD J.....	CHARACTERIZATION OF CELLS GROWN FROM HUMAN PROSTATE.....	1R26 CA23699-01	84,179
PORTER, STANLEY F.....	STUDIES OF IRON LOADING IN SICKLE CELL DISEASE.....	5R01 AM19466-03	35,639
SOMERS, KENNETH D.....	GENETICS OF MURINE SARCOMA VIRUS.....	5R01 CA19714-03	43,929
WILLIAMS, PATRICIA B.....	CHARACTERIZATION OF COLLATERAL BLOOD VESSELS.....	5R01 HL19275-03	36,601
ORGANIZATION TOTAL	10 513,296		
NORFOLK STATE COLLEGE ZIP CODE 23504			
BEMPONG, MAXWELL A.....	BIOLOGICAL EFFECTS OF MUTAGENS AND ANTICANCER DRUGS.....	3S06 RR08033-07S1	2,166
BEMPONG, MAXWELL A.....	BIOLOGICAL EFFECTS OF MUTAGENS AND ANTICANCER DRUGS.....	5S06 RR08033-08	187,282
ORGANIZATION TOTAL	2 189,448		
DLO DDMINION UNIVERSITY ZIP CODE 23508			
SITZ, THOMAS O.....	RNA METHYLATION: A PARADOX IN NORMAL AND CANCER CELLS.....	1R01 CA23632-01	66,257
ORGANIZATION TOTAL	1 66,257		
PETERSBURG			
VIRGINIA STATE COLLEGE ZIP CODE 23803			
DIVERS, FRED C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08090-06	28,135
DIVERS, FRED C.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	2S06 RR08090-07	186,466
ORGANIZATION TOTAL	2 214,601		
RICHMOND			
UNIVERSITY OF RICHMDND ZIP CODE 23173			
TOPHAM, RICHARD W.....	PHYSIOLOGICAL SIGNIFICANCE OF FERROXIDASE-II.....	5R01 AM20148-02	51,146
ORGANIZATION TOTAL	1 51,146		
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284			
ARCHER, GORDON L.....	ENDOCARDITIS ON PROSTHETIC HEART VALVES.....	5R01 HL19818-02	30,097
BARNES, ROBERT W.....	DIAGNOSTIC TECHNIQUES IN VENOUS THROMBOEMBOLISM.....	1R01 HL22852-01	55,117
BECKER, DONALD P.....	HEAD INJURY CLINICAL RESEARCH CENTER.....	3P50 NS12587-02S2	21,180
BECKER, DONALD P.....	HEAD INJURY CLINICAL RESEARCH CENTER.....	5P50 NS12587-03	481,039
BIBER, THOMAS U.....	SOLUTE AND WATER TRANSPORT ACROSS MEMBRANES.....	3R01 AM19166-02S1	7,357
BLACKARD, WILLIAM G.....	PATHOGENESIS OF DIABETES MELLITUS.....	3R01 AM18903-03S1	28,740
BOND, JUDITH S.....	INTRACELLULAR PROTEIN CATABOLISM IN DIABETES MELLITUS.....	5R01 AM19691-02	28,285
BRIGGS, F NORMAN.....	CA UPTAKE BY NORMAL AND FAILED CARDIAC (CAOMG)ATPASE.....	5R01 HL19485-03	35,156
CABRAL, GUY A.....	HERPESVIRUS ANTIGENS IN TRANSFORMED CELLS.....	7R01 CA25737-01	45,057
CHING, MELVIN C.....	BRAIN RELEASING HORMONES IN PITUITARY PORTAL BLOOD.....	5R01 HD12276-02	46,100
CLAMANN, H PETER.....	MOTOR POOL ORGANIZATION IN SYNERGISTIC INTERACTION.....	2R01 NS11677-04	48,805
CLEARY, STEPHEN F.....	MICROWAVE EFFECTS ON EXCITABLE MEMBRANE SYSTEMS.....	1R01 ES01938-01	38,107
COHEN, IRWIN K.....	COLLAGEN METABOLISM IN WOUND REPAIR AND KELOID.....	5R01 GM20298-05	79,871
COLLINS, JAMES M.....	DNA SYNTHESIS IN TRANSFORMED CELLS.....	1R01 CA24158-01	63,042
CORLEY, KARL C, JR.....	BEHAVIORAL STRESS AND CARDIOMYOPATHY.....	5R01 HL13454-08	52,805
DE SIMONE, JOHN A.....	A PHYSICOCHEMICAL INVESTIGATION OF TASTE.....	5R01 NS13767-02	36,113
DE VRIES, GEORGE H.....	CHEMISTRY AND METABOLISM OF CNS MYELIN-FREE AXONS.....	5R01 NS10821-06	38,604
DIASIO, ROBERT B.....	MECHANISM OF CLINICAL TOXICITY OF 5-FLUOROCYTOSINE.....	1R01 CA23412-01	50,052
ECKBERG, DWAIN L.....	AUTONOMIC MECHANISMS IN MAN.....	1R01 HL22296-01	50,089
ECKBERG, DWAIN L.....	BARORECEPTOR REFLEX MECHANISMS IN MAN.....	5R01 HL22546-02	36,846
ECKBERG, DWAIN L.....	NEUROCIRCULATORY CONTROL IN DIABETES MELLITUS.....	5R01 HL22581-02	26,942

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
ELFORD, HOWARD L.....	RIBONUCLEOTIDE REDUCTASE AND CANCER CHEMOTHERAPY.....	5R01 CA21305-02	46,221
ELZAY, RICHARD P.....	CLINICAL CANCER EDUCATION PROGRAM (DENTAL).....	5R25 CA19294-03	28,139
FABIATO, ALEXANDRE.....	CONTRACTILE ACTIVATION OF SKINNED CARDIAC CELLS.....	5R01 HL19138-03	73,124
FALLON, HAROLD J.....	LIVER METABOLISM PROGRAM PROJECT.....	5P01 AM18976-03	505,716
FRANSON, RICHARD C.....	MECHANISMS OF MEMBRANE AND TISSUE DAMAGE IN LUNG.....	5R23 HL21116-02	40,355
FREER, RICHARD J.....	CIRCULATORY SYSTEM EFFECTS OF ANGIOTENSIN ANALOGS.....	5R01 HL19653-03	30,920
GARRETTSON, LORNE K.....	THEOPHYLLINE: AGE-DEPENDENT DISPOSITION AND EFFECTS.....	1R01 GM24187-01	68,949
GLAUSER, FREDERICK L.....	PULMONARY ALVEOLAR-CAPILLARY PERMEABILITY CHARACTERISTIC.....	5R01 HL22435-02	45,984
GOLDBERG, STEPHEN J.....	INPUTS TO ABDUCENS NEURONS: AN INTRACELLULAR STUDY.....	2R01 EY01442-04	52,539
GOLDMAN, I DAVID.....	CELLULAR PHARMACOKINETICS OF ANTICANCER AGENTS.....	5R01 CA16906-05	125,027
GUZELIAN, PHILIP S, JR.....	PHARMACOKINETICS & TOXICITY OF KEPONE R.....	5R01 ES01519-02	98,219
HAAR, JACK L.....	IN VITRO YOLK SAC AND THYMIC LYMPHOGENESIS.....	5R01 AI13486-02	30,714
HAWKRIDGE, FRED M.....	A ROUTINE SCREENING ANALYSIS FOR MYOGLOBINEMIA.....	1R01 HL22821-01	45,727
HAZRA, TAPAN A.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA22032-02	162,961
HUF, ERNST G.....	METABOLISM AND ACTIVE ION TRANSPORT IN SKIN.....	5R01 GM03545-24	22,148
HYLEMON, PHILLIP B.....	BACTERIAL 7-A-DEHYDROXYLATION AND COLON CARCINOGENESIS.....	2R01 CA17747-04	49,559
JAMDAR, SUBHASH C.....	REGULATION OF ADIPOSE LIPID METABOLISM.....	2R01 AM18068-03A1	52,969
JAMES, G WATSON, III.....	CANCER AND LEUKEMIA GROUP B CHEMOTHERAPY PROTOCOLS.....	5R10 CA03735-21	98,864
JOHNSON, JAMES H.....	NEUROENDOCRINE CONTROL OF GONADOTROPINS AT PUBERTY.....	5R01 HD11247-02	44,341
JOHNSON, JAMES H.....	ANALYSIS OF NEURAL INHIBITION OF PITUITARY LH RELEASE.....	1R01 HD12165-01	64,562
KAPLAN, ALAN M.....	THE CELLULAR BASIS OF ACQUIRED IMMUNOLOGIC TOLERANCE.....	2R01 AI11561-04	74,713
KNAUER, THOMAS E.....	ACYL COENZYME A HYDROLASE(S) OF RAT SALIVARY GLANDS.....	5R23 DE05000-02	29,686
KONTOS, HERMES A.....	CEREBRAL MICROCIRCULATION IN EXPERIMENTAL HYPERTENSION.....	1R01 HL21851-01	128,361
KOONTZ, WARREN W, JR.....	EVALUATION AND MANAGEMENT OF BLADDER CARCINOMA.....	2R26 CA15492-05	65,182
LAWRENCE, WALTER, JR.....	COOPERATIVE CANCER CENTER CORE SUPPORT.....	5P30 CA16059-03	294,193
LAWRENCE, WALTER, JR.....	BIOCHEMICAL CORRELATES WITH HUMAN BREAST CANCER.....	3R01 CA17116-03S1	3,995
LAWRENCE, WALTER, JR.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20195-02	27,863
LIBERTI, JOSEPH P.....	PURIFICATION AND BIOCHEMISTRY OF SOMATOMEDIN.....	2R01 AM16457-05	55,808
LITTMAN, BRUCE H.....	REGULATION OF CELLULAR COOPERATION BY SOLUBLE FACTORS.....	5R01 AM20317-02	41,200
LORIA, ROGER M.....	DIABETES HEREDITY AND VIRAL PANCREOPATHY.....	1R01 AM21872-01	72,725
MACRINA, FRANCIS L.....	STUDIES ON THE GENETICS OF ORAL MICROFLORA.....	2R01 DE04224-04	40,011
MAKHLOUF, GABRIEL M.....	HORMONAL INTEGRATION OF EXOCRINE AND ENDOCRINE ORGANS.....	5R01 AM15564-07	92,744
MARTINEZ-CARRION, MARINO.....	PROBES OF MOLECULAR FUNCTION IN PYRIDOXAL ENZYMES.....	5R01 GM24885-02	65,767
MARTINEZ-CARRION, MARINO.....	ISOZYMES OF HEART GLUTAMATE ASPARTATE TRANSAMINASE.....	5R01 HL22265-02	70,850
MOORE, EDWARD W.....	NH3 ELECTRODE STUDIES OF AMMONIA METABOLISM.....	5R01 AM18887-03	103,064
MULLINAX, PERRY F.....	IMMUNOGLOBULINS AS GLYCOPROTEINS.....	5R01 CA20174-03	76,258
MURRAY, BYRON K.....	TRANSFORMATION BY DEFECTIVE HERPES SIMPLEX VIRUSES.....	5R01 CA19238-03	55,287
MURRAY, BYRON K.....	VACCINATION AGAINST ORAL HERPETIC LESIONS.....	5R01 DE04700-02	78,763
NANCE, WALTER E.....	OVARIAN CANCER IN UNLIKE SEXED DIZYGOTIC TWINS.....	5R01 CA20453-02	23,686
NANCE, WALTER E.....	MEDICAL COLLEGE OF VA HUMAN TWIN PANEL—TWINNING BIOLOGY.....	5P01 HD10291-03	357,158
OKEN, DONALD E.....	PATHOPHYSIOLOGY OF ACUTE RENAL FAILURE.....	5R01 HL19463-02	82,201
PANG, DAVID C.....	CONTRACTILITY IN CARDIAC FAILURE.....	5R01 HL21493-02	28,346
PITTMAN, ROLAND N.....	VASODILATION AND MICROVASCULAR OXYGEN DELIVERY.....	5R01 HL18292-04	39,053
PRICE, STEVEN.....	A MOLECULAR GENETIC APPROACH TO OLFACTION.....	2R01 DE04271-03	62,258
QUATTROPANI, STEVEN L.....	OVARIAN AGING: MORPHOGENESIS OF A SEROUS CYSTADENOMA.....	1R01 AG00652-01A1	47,831
RANNEY, RICHARD R.....	SEVERE PERIODONTITIS: IMMUNOLOGIC STUDIES.....	5R01 DE04397-03	201,379
RANNEY, RICHARD R.....	CLINICAL RESEARCH CENTER FOR PERIODONTAL DISEASE.....	1P50 DE05139-01	321,856
RANNEY, RICHARD R.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05724-07	46,273
RAO, GOPALA.....	A SEALED CHAMBER IONOGRAPHIC X-RAY IMAGING SYSTEM.....	1R01 GM23838-01	87,089
RIDGWAY, ELLIS B.....	CALCIUM MOVEMENTS DURING E-C COUPLING IN MUSCLE.....	5R01 NS10919-06	31,602
ROGERS, MICHAEL E.....	MESOIONIC PURINONES AS PHOSPHODIESTERASE INHIBITORS.....	1R01 HL22566-01	53,888
ROSENBLUM, WILLIAM I.....	FLUOROCARBON EMULSIONS AS ARTIFICIAL BLOOD.....	3R01 HL16643-02S1	1,600
ROSENBLUM, WILLIAM I.....	BRAIN MICROCIRCULATION OBSERVED IN VIVO AFTER TRAUMA.....	5R01 HL18932-03	28,716
RUBIN, RONALD P.....	THE ACTION OF CALCIUM ON SECRETION.....	5R01 AM18066-05	55,325
RUDDY, SHAUN.....	CELLULAR INTERACTIONS WITH COMPLEMENT AND PROPERDIN.....	5R01 AI13049-03	85,952
RUFFOLO, JOHN J.....	PRIMATE OCULAR PHOTOPATHOLOGY OF THE LENS AND RETINA.....	1R01 EY02324-01	91,084
RUTHERFORD, R BRUCE.....	MACROPHAGE AND FIBROBLAST PROLIFERATION IN VITRO.....	7R23 DE05355-01	35,190
SCOTT, ROBERT B.....	DIFFERENTIATION AND FUNCTION OF HEMATOPOIETIC CELLS.....	5R01 CA08482-13	86,291
SHELTON, KEITH R.....	NONHISTONE PROTEINS OF REACTIVATED ERYTHROCYTE NUCLEI.....	2R01 CA15923-04A1	66,024
SMITH, WADE K.....	NEUTROPHIL ANTIGENS IN IMMUNE NEUTROPENIA.....	1R01 CA25045-01	53,895

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
VIRGINIA—Continued			
SPENCER, ROBERT F.....	ANATOMY OF OCULOMOTOR SYSTEMS.....	1R01 EY02191-01	77,379
STEINFELD, JESSE.....	GENERAL CLINICAL RESEARCH CENTER.....	2M01 RR00065-16	566,153
STEINFELD, JESSE.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05430-17	184,393
STILL, WILLIAM J.....	PATHOGENESIS OF ATHEROSCLEROSIS.....	5R01 HL09622-14	42,430
STREET, SIBYL F.....	TENSION BEARING CELL COMPONENTS OF FROG MYOFIBERS.....	1R01 AM22001-01	8,350
SULLIVAN, HUMBERT G.....	INTRACRANIAL PRESSURE DYNAMICS.....	1R01 NS14309-01	98,642
SWELL, LEON.....	MECHANISM OF CHOLESTEROL GALLSTONE FORMATION IN MAN.....	5R01 AM14668-08	57,043
TERZ, JOSE J.....	INTRATUMORAL IMMUNOTHERAPY PRIOR TO SURGERY.....	1R01 CA23338-01	107,042
TEW, JOHN G.....	REGULATION OF THE IMMUNE RESPONSE BY PERSISTING ANTIGEN.....	5R01 AI11101-06	37,504
THOMAS, JUDITH M.....	CELLULAR IMMUNITY IN RENAL TRANSPLANT RECIPIENTS.....	5R01 AM19644-02	66,342
TUCKER, HENRY S.....	MACROPHAGE ROLE IN IMMUNITY TO MURINE LEUKEMIA VIRUS.....	1R23 CA24172-01	32,200
VAN TUYLE, GLENN C.....	MEMBRANE-BINDING AND FOLDING OF MITOCHONDRIAL DNA.....	5R01 GM22597-03	25,291
WAMPLER, GALEN L.....	ANALYSIS OF COMPLEX DOSE RESPONSE SURFACES.....	1R01 CA23333-01	53,155
WATLINGTON, CHARLES O.....	CHLORIDE TRANSPORT REGULATORY HORMONES IN MAN.....	1R01 AM19694-01A2	58,463
WEAVER, WARREN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05697-09	29,729
WEBB, STANLEY R.....	DIABETES MELLITUS: ROLE OF HOST GENETICS AND VIRUSES.....	1R01 AM21730-01	60,835
WEGLICKI, WILLIAM B.....	MYOCARDIAL ORGANELLE LIPID STRUCTURE AND FUNCTION.....	3R01 HL19148-02S2	29,949
WEGLICKI, WILLIAM B.....	MYOCARDIAL ORGANELLE LIPID STRUCTURE AND FUNCTION.....	2R01 HL19148-03	97,239
WEGLICKI, WILLIAM B.....	MECHANISMS OF MEMBRANE INJURY IN MYOCARDIAL ISCHEMIA.....	1R01 HL23142-01	91,573
WEIR, GORDON C.....	STUDIES OF PANCREATIC SOMATOSTATIN.....	5R01 AM19343-02	49,035
WEIR, GORDON C.....	MECHANISMS OF PANCREATIC GLUCAGON SECRETION.....	3R01 AM20349-02S1	15,134
WITORSCH, RAPHAEL J.....	PROLACTIN BINDING IN NORMAL AND NEOPLASTIC PROSTATE.....	1R26 CA23653-01	34,437
YOUNG, HAROLD F.....	HOST-NEOPLASIA INTERACTIONS OF GLIOMAS.....	3R01 CA16096-03S1	15,917
ORGANIZATION TOTAL	104	8,087,844	
STATE TOTAL	258	19,232,584	

WASHINGTON

BELLINGHAM

WESTERN WASHINGTON UNIVERSITY		ZIP CODE 98225		
KLEINKNECHT, RONALD A.....	THE ASSESSMENT AND TREATMENT OF FEAR OF DENTISTRY.....	5R01 DE04014-04	103,082	
ORGANIZATION TOTAL	1	103,082		

ISSAQUAH

ISSAQUAH GROUP FOR HEALTH AND ENVIRONMENTAL RESEARCH		ZIP CODE 98027		
SHEARER, RUTH W.....	MOLECULAR GENETICS OF TUMORS.....	5R01 CA20781-03	82,703	
STUART, KENNETH D.....	MITOCHONDRIAL DNA OF NORMAL AND MUTANT TRYPANOSOMES.....	2R01 AI14102-03	114,434	
ORGANIZATION TOTAL	2	197,137		

OLYMPIA

WASHINGTON DEPARTMENT OF SOCIAL AND HEALTH SERVICES		ZIP CODE 98504		
LANDESMAN-DWYER, SHARON J.....	A PROSPECTIVE STUDY OF RESIDENTIAL ALTERNATIVES.....	1R01 HD11551-01	101,844	
ORGANIZATION TOTAL	1	101,844		

PULLMAN

WASHINGTON STATE UNIVERSITY		ZIP CODE 99163		
BROSEMER, RONALD W.....	THE ROLE OF GLYOXYLIC ACID IN DISEASE.....	1R01 NS14317-01	32,134	
BUSTAD, LEO K.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05465-16	41,449	
CAMPBELL, KENNETH B.....	MECHANICAL INTERACTIONS BETWEEN VENTRICLE ARTERIES.....	5R23 HL21462-02	36,905	
CARLSON, JAMES R.....	TRYPTOPHAN-INDUCED PULMONARY EMPHYSEMA.....	5R01 HL13645-11	68,369	
CRAWFORD, TIMOTHY B.....	STUDIES OF VIRAL PERSISTENCE IN EQUINE INFECTIOUS ANEMIA.....	2R01 AI07471-12	92,086	
CRAWFORD, TIMOTHY B.....	VIRAL ARTHRITIS-LEUKOENCEPHALITIS OF ANIMALS.....	5R01 AM18801-03	88,958	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
DUNKER, A KEITH.....	HYDROPHOBIC PEPTIDES FROM SARCOPLASMIC RETICULUM	1R01 GM25097-01	36,527
GOLLNICK, PHILIP D.....	SUBCELLULAR RESPONSE OF HEART TO FUNCTIONAL OVERLOAD	5R01 HL18527-03	108,698
GRISWOLD, MICHAEL D.....	HORMONAL REGULATION OF SERTOLI CELL MATURATION.....	5R01 HD10808-02	42,412
HARDING, JOSEPH W.....	CONTROL OF OLFACTORY NEURON REPLACEMENT.....	5R01 NS13976-02	50,856
HAYTON, WILLIAM L.....	EFFECTS OF AGING ON DRUG BIOAVAILABILITY.....	5R23 AG00674-02	14,395
HEGREBERG, GERALD A.....	AGING & DEFECTIVE COLLAGEN IN EHLERS-DANLOS SYNDROME.....	5R01 AG00030-04	81,327
HEGREBERG, GERALD A.....	REFERENCE TOOLS ON ANIMAL MODELS OF HUMAN DISEASE.....	1R01 LM03071-01	25,453
HOSICK, HOWARD L.....	CULTURE OF PRENEOPLASTIC MAMMARY CELLS OF THE MOUSE.....	5R01 CA16392-05	42,356
KOLATTUKUDY, P E.....	BIOCHEMISTRY OF NATURAL PRODUCTS.....	5R01 GM18278-08	110,627
KRAMER, JOHN W.....	A NEW ANIMAL MODEL OF INHERITED DIABETES MELLITUS.....	5R01 AM20462-02	62,675
LEGG, JOHN I.....	SUBSTITUTION-INERT METAL IONS AS BIOLOGICAL PROBES.....	5R01 GM23081-03	56,994
LOEWUS, FRANK A.....	INOSITOL METABOLISM.....	5R01 GM22427-04	110,623
MAGNUSON, JAMES A.....	METAL ION FUNCTION IN CONCAVALIN A.....	5R01 CA14496-06	47,801
MAGNUSON, JAMES A.....	NA23 PLUS NMR—A PROBE FOR MALIGNANCY.....	5R01 CA18452-03	28,258
MC FADDEN, BRUCE A.....	BIOCHEMISTRY OF MEMBRANE AND CATALYTIC PROTEINS.....	5R01 GM19972-09	68,467
MOFFETT, STACIA B.....	REGENERATION OF CENTRAL NERVOUS PATHWAYS.....	1R01 NS14333-01	44,840
NEWBREY, JARRETT W.....	THE ROLE OF MACROPHAGES IN IN VITRO BONE RESORPTION.....	1R23 DE04847-01	29,303
NYMAN, C J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07097-13	65,307
PAZNOKAS, JOHN L.....	PYRUVATE KINASE AND DEVELOPMENT IN MUCOR.....	1R01 GM24670-01	47,803
PERRYMAN, LANCE E.....	INVESTIGATIONS OF COMBINED IMMUNODEFICIENCY.....	5R01 HD08886-05	101,749
REEVES, JERRY J.....	OVULATION, OVIDUCT MOTILITY AND HORMONAL RELATIONSHIPS.....	5R01 HD09257-04	39,092
RITTER, WILMA S.....	PSYCHOBIOLOGY OF STRESS-INDUCED BEHAVIORAL DEFICITS.....	1R01 NS14450-01	50,356
RONALD, ROBERT C.....	NOVEL ANTIBIOTICS FROM CYTOSPORA.....	1R01 AI15296-01	52,073
SCHROEDER, ALICE L.....	NEUROSPORA DNA REPAIR.....	1R01 CA22587-01	51,969
WAY, JAMES L.....	CYANIDE LIBERATION BY ALKYLPHOSPHATE ANTAGONISTS.....	5R01 ES00945-02	39,768
WILSON, ROBERT B.....	ANIMAL MODELS FOR COMPARATIVE MEDICAL RESEARCH.....	2P40 RR00515-09	47,624
WILSON, ROBERT B.....	ANIMAL MODELS FOR COMPARATIVE MEDICAL RESEARCH.....	5P40 RR00515-10	117,980
YOUNG, FRANCIS A.....	GROWTH ENVIRONMENTAL REFRACTIVE CHANGES.....	3R01 EY00284-11S2	20,948
YOUNT, RALPH G.....	INTERACTION OF ATP ANALOGS WITH MYOSIN.....	5R01 AM05195-18	64,600
ORGANIZATION TOTAL	35 2,020,782		
RICHLAND			
BATTELLE MEMORIAL INSTITUTE—PACIFIC NDRTHWEST LABORATORIES ZIP CODE 99352			
FREE, MICHAEL J.....	TESTICULAR AND EPIDIDYMAL FUNCTION IN VIVO.....	2R01 HD08868-03	74,812
SIKOV, MELVIN R.....	EFFECT OF EXPOSURE OF THE PRENATAL RAT TO ULTRASOUND.....	5R01 GM20661-05	126,210
WESTERMAN, RICHARD E.....	POROUS METAL DENTAL ANCHORS IN LONG-TERM FUNCTION.....	5R01 DE03938-04	44,706
ORGANIZATION TOTAL	3 245,728		
SEATTLE			
BATTELLE MEMDRIAL INSTITUTE ZIP CODE 98105			
DAVIDSON, ANDREW R.....	PREDICTION OF COUPLE DECISION MAKING AND BEHAVIOR.....	5R01 HD10683-03	19,275
MARINI, MARGARET M.....	SEX DIFFERENCES IN OUTCOMES OF ADOLESCENT EXPERIENCE.....	3R01 HD09637-01S2	35,891
MARINI, MARGARET M.....	SEX DIFFERENCES IN OUTCOMES OF ADOLESCENT EXPERIENCE.....	2R01 HD09637-02	107,621
MARINI, MARGARET M.....	WOMEN'S LABOR FORCE PARTICIPATION AND FERTILITY.....	1R01 HD11807-01	131,189
MICKLIN, MICHAEL.....	ADOLESCENT SOCIALIZATION AND HETEROSEXUAL BEHAVIOR.....	1R01 HD11061-01	133,035
ORGANIZATION TOTAL	5 427,011		
CHILDREN'S DRTHOPEDIC HOSPITAL AND MEDICAL CENTER ZIP CODE 98105			
BLEYER, WERNER A.....	CLINICAL PHARMACOLOGY OF INTRATHECAL METHOTREXATE.....	2R01 CA16525-04	36,185
CHARD, RONALD L, JR.....	CHILDREN'S CANCER STUDY GROUP A.....	5R10 CA10382-12	155,463
DOCTER, JACK M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05655-08	16,119
HARTMANN, JOHN R.....	CLINICAL CANCER EDUCATION PROGRAM (PEDIATRIC).....	5R25 CA18039-04	87,873
PENDERGRASS, THOMAS W.....	ENVIRONMENTAL EXPOSURES AND CHILDHOOD LEUKEMIA.....	1R23 CA24186-01	30,346
SMITH, ARNOLD L.....	DEVELOPMENT AND UTILIZATION OF MICRO-ENZYMATIC ASSAYS.....	7R01 GM26337-01	94,407
SMITH, ARNOLD L.....	AMINOGLYCOSIDE PHARMACOLOGY IN CHILDREN.....	1R01 GM26550-01	75,601
STREETER, DANIEL D, JR.....	FIBER GEOMETRY IN HYPERTROPHY AND CARDIOMYOPATHY.....	5R01 HL20883-02	62,294
ORGANIZATION TOTAL	8 558,288		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
FRED HUTCHINSON CANCER RESEARCH CENTER ZIP CODE 98104			
BERNSTEIN, IRWIN D.....	MECHANISMS OF BCG-MEDIATED SUPPRESSION OF TUMOR GROWTH.....	2R01 CA19170-03	58,155
EISENMAN, ROBERT N.....	CONTROL MECHANISMS IN AVIAN ONCORNAVIRUS REPLICATION.....	5R01 CA20525-02	59,238
FLETCHER, T LLOYD.....	APPROACHES TO CHEMICAL CARCINOGENESIS MECHANISMS.....	3R01 CA19279-01S1	5,193
FLETCHER, T LLOYD.....	APPROACHES TO CHEMICAL CARCINOGENESIS MECHANISMS.....	5R01 CA19279-02	91,642
HAKOMORI, SEN-ITIROH.....	RELATION OF BLOOD GROUP AND HUMAN TUMOR ANTIGENS.....	5R01 CA19224-03	45,407
HAKOMORI, SEN-ITIROH.....	IMMUNOSPECIFIC GLYCOLIPIDS OF NORMAL AND CANCER CELLS.....	2R01 CA20026-03	47,871
HAKOMORI, SEN-ITIROH.....	GALACTOPROTEIN A AND B IN NORMAL AND TRANSFORMED CELLS.....	1R01 CA23907-01	117,142
HAKOMORI, SEN-ITIROH.....	ANTICARBOHYDRATE ANTIBODY IN CELL BIOLOGY.....	5R01 GM23100-03	38,409
HELLSTROM, INGEGERD E.....	TRANSPLANTATION ANTIGENICITY OF VIRUS INDUCED TUMORS.....	5R01 CA19149-04	114,131
HELLSTROM, KARL E.....	LYMPHOCYTE ALLOGENEIC INHIBITION AND TUMOR IMMUNITY.....	5R01 CA19148-04	154,041
HENNEY, CHRISTOPHER S.....	IN VITRO STUDIES OF CELL MEDIATED IMMUNITY.....	7R01 AI15383-01	97,322
HENNEY, CHRISTOPHER S.....	IMMUNOBIOLOGY OF CYTOTOXIC LYMPHOID CELLS.....	7R01 AI15384-01	109,774
HENNEY, CHRISTOPHER S.....	MURINE EFFECTOR CELLS.....	1R01 CA24537-01	62,250
HUTCHINSON, WILLIAM B.....	CANCER CENTER SUPPORT GRANT (COMPREHENSIVE).....	5P30 CA15704-05	2,075,056
HUTCHINSON, WILLIAM B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05761-04	124,223
LINIAL, MAXINE L.....	VIRAL CODED FUNCTIONS IN ROUS SARCOMA.....	5R01 CA18282-03	54,659
NEIMAN, PAUL E.....	MOLECULAR MECHANISMS IN NEOPLASIA.....	5R01 CA20068-03	100,718
NOWINSKI, ROBERT C.....	IMMUNOLOGICAL ASPECTS OF MOUSE LEUKEMIAS.....	2R01 CA18074-04	113,056
NOWINSKI, ROBERT C.....	IMMUNOBIOLOGY OF PRELEUKEMIC LYMPHOCYTES.....	5R01 CA22961-02	6,782
POLLACK, SYLVIA B.....	SPECIFIC ANTITUMOR ACTIVITY BY 'ARMED' LYMPHOID CELLS.....	5R01 CA18647-04	50,788
PRENTICE, ROSS L.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA CONTROL.....	5R10 CA21193-02	86,187
PRENTICE, ROSS L.....	STATISTICAL METHODS FOR CASE-CONTROL STUDIES.....	1R01 GM24472-01	23,729
REEDER, RONALD H.....	ISOLATION AND STUDY OF RIBOSOMAL GENE CHROMATIN.....	7R01 GM26560-01	60,141
ROHRSCHNEIDER, LARRY R.....	MECHANISMS OF ONCORNAVIRUS-INDUCED TRANSFORMATION.....	5R01 CA20551-02	33,991
SCRIBNER, JOHN D.....	EARLY AND CRITICAL EVENTS IN CHEMICAL CARCINOGENESIS.....	3R01 CA18632-03S1	19,378
STORB, RAINER F.....	MARROW GRAFTING IN TREATMENT OF HEMATOLOGIC MALIGNANCIES.....	2P01 CA18221-04	333,799
THOMAS, E DONNALL.....	PROTECTIVE ENVIRONMENT IN INTENSIVE CANCER THERAPY.....	2R01 CA17117-04	457,388
THOMAS, E DONNALL.....	ADULT LEUKEMIA RESEARCH CENTER.....	5P01 CA18029-03	2,105,020
THOMAS, E DONNALL.....	SEPARATION OF BLOOD BY CONTINUOUS CENTRIFUGE.....	5R01 CA18579-04	115,591
WEIDEN, PAUL L.....	IMMUNOTHERAPY STUDIES OF SPONTANEOUS MALIGNANCY.....	5R01 CA18105-03	89,699
WEISS, NOEL S.....	EPIDEMIOLOGY OF GYNECOLOGIC CANCER.....	5R01 CA18764-03	29,330
WEISS, NOEL S.....	EPIDEMIOLOGY OF LARGE BOWEL CANCER IN WOMEN.....	5R01 CA22495-02	16,701
WEISS, NOEL S.....	EPIDEMIOLOGY OF MYELOMA AND LYMPHOCYTIC LEUKEMIA.....	1R01 CA23350-01	162,756
WRIGHT, PETER W.....	MECHANISMS OF ALLOGRAFT TOLERANCE.....	2R01 CA17481-04	73,512
ORGANIZATION TOTAL	34	7,133,079	
INSTITUTE OF APPLIED PHYSIOLOGY AND MEDICINE ZIP CODE 98122			
REID, JOHN M.....	NEW ULTRASONIC METHODS FOR BREAST CANCER DETECTION.....	1R01 CA23616-01	35,748
SPENCER, MERRILL P.....	ULTRASONIC DETECTION OF THE ATHEROSCLEROTIC PLAQUE.....	5R01 HL19341-03	60,620
ORGANIZATION TOTAL	2	96,368	
PACIFIC NORTHWEST RESEARCH FOUNDATION ZIP CODE 98104			
BAKKE, JOHN L.....	THYROTROPIN ASSAY OF BODY FLUIDS AND TISSUES.....	5R01 AM05638-18	106,753
HUTCHINSON, WILLIAM B.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05520-16	15,873
JOHNSTONE, MURRAY A.....	FACTORS REGULATING AQUEOUS OUTFLOW IN GLAUCOMA.....	5R01 EY01906-02	58,164
SCRIBNER, JOHN D.....	EARLY AND CRITICAL EVENTS IN CHEMICAL CARCINOGENESIS.....	1R01 CA23712-01	101,388
ORGANIZATION TOTAL	4	282,178	
PROVIDENCE MEDICAL CENTER ZIP CODE 98122			
REID, JOHN M.....	ULTRASONIC SCATTERING STUDY FOR TISSUE CHARACTERIZATION.....	5R01 HL14785-07	77,896
SAUVAGE, LESTER R.....	PROSTHESES FOR AORTOCORONARY BYPASS.....	5R01 HL18644-03	168,441
ORGANIZATION TOTAL	2	246,337	
PUGET SOUND BLOOD CENTER ZIP CODE 98104			
DONOHUE, DENNIS M.....	COMMUNITY BLOOD RESOURCE CENTER SUPPORT.....	5P60 HL17265-04	711,823
ORGANIZATION TOTAL	1	711,823	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
SEATTLE PACIFIC UNIVERSITY ZIP CODE 98119			
MC HENRY, DELBERT S, JR.....	EXPECTATIONS AND RELOCATION STRESS OF THE ELDERLY.....	1R01 AG00857-01	65,028
ORGANIZATION TOTAL	1 65,028		
SWEDISH HOSPITAL MEDICAL CENTER ZIP CODE 98104			
CHANDLER, JOHN W, JR.....	IMMUNOPATHOLOGY AND THERAPY OF CORNEAL DISEASE.....	1R01 EY02673-01	63,367
CHANDLER, JOHN W, JR.....	HERPETIC KERATITIS: EARLY VIRUS-NEURON INTERACTIONS.....	1R01 EY02902-01	38,228
RIVKIN, SAUL E.....	SOUTHWEST ONCOLOGY GROUP.....	2R10 CA20319-02	53,679
ORGANIZATION TOTAL	3 155,274		
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—PHS HOSPITAL ZIP CODE 98114			
NISHIMURA, EDWIN T.....	CATALASE ISOZYMES IN NORMAL AND NEOPLASTIC TISSUES.....	1R01 CA24966-01	18,942
ORGANIZATION TOTAL	1 18,942		
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ADAMSON, JOHN W.....	STUDIES OF IN VITRO ERYTHROPOIETIC REGULATION.....	5R01 AM19410-03	41,768
AFROMOWITZ, MARTIN A.....	IMPLANTABLE SOLID-STATE HYBRID ION-SENSITIVE DEVICE.....	5R01 GM23417-02	29,101
AGABIAN, NINA.....	REGULATION OF CELL SURFACE DEVELOPMENT IN CAULOBACTER.....	1R01 GM25527-01	61,798
ALBERS, JOHN J.....	LECITHIN-CHOLESTEROL ACYLTRANSFERASE.....	5R01 HL15263-06	29,424
ALEXANDER, E RUSSELL.....	CLINICAL EPIDEMIOLOGY—PATHOGENESIS OF GENITAL HERPES.....	1R01 AI14495-01	128,492
ALMERS, WOLFHARD.....	ELECTRIC STUDIES OF MUSCLE EXCITATION AND CONTRACTION.....	5R01 AM17803-05	46,400
ANDERSEN, NIELS H.....	THE MOLECULAR BASIS OF PROSTAGLANDIN BIOCHEMISTRY.....	2R01 GM20848-04	54,728
ANDERSEN, NIELS H.....	PROSTACYCLIN-TXA2 ANALOG CHEMISTRY AND PHARMACOLOGY.....	1R01 HL23103-01	14,892
AREND, WILLIAM P.....	STUDIES OF MONONUCLEAR PHAGOCYTES.....	3R01 AI10825-06S1	5,176
AUTH, DAVID C.....	ENDOSCOPIC INSTRUMENTS FOR CONTROL OF BLEEDING.....	1R01 GM25262-01	62,407
BAGDADE, JOHN D.....	MECHANISMS OF ATHEROGENESIS IN CHRONIC UREMIA.....	5R01 HL16219-05	94,300
BAGDADE, JOHN D.....	POLYAMINES AS CELLULAR MEDIATORS OF ATHEROGENESIS.....	1R01 HL22623-01	85,138
BAKER, DONALD W.....	NONINVASIVE CARDIOVASCULAR MEASUREMENTS.....	5P01 HL07293-17	803,752
BASSINGTHWAIGHTE, JAMES B.....	HETEROGENEITY OF REGIONAL MYOCARDIAL BLOOD FLOW.....	2R01 HL19135-04	77,642
BASSINGTHWAIGHTE, JAMES B.....	DISPERSION OF DIFFUSIBLE INDICATORS IN THE BODY.....	2R01 HL19139-03	115,450
BEAVO, JOE A.....	METABOLISM AND FUNCTION OF CYCLIC NUCLEOTIDES.....	1R01 AM21723-01	54,068
BENDICH, ARNOLD J.....	REPEATED DNA SEQUENCES AND LAND PLANT EVOLUTION.....	5R01 GM22870-03	74,632
BENDITT, EARL P.....	MECHANISMS OF ACUTE VASCULAR REACTION TO INJURY.....	2P01 HL03174-23	585,238
BENSINGER, RICHARD E.....	SUPEROXIDE DISMUTASE: TRANSPORT, AGING AND DEGENERATION.....	1R01 EY02726-01	54,457
BIERMAN, EDWIN L.....	AGING, METABOLISM AND ATHEROSCLEROSIS.....	5P01 AG00299-08	293,566
BIERMAN, EDWIN L.....	PATHOBIOLOGY OF DIABETES MELLITUS.....	5P01 AM02456-20	335,853
BLANDAUI, RICHARD J.....	PROGRAM PROJECT ON GAMETE TRANSPORT IN MAMMALS.....	5P50 HD03752-09	207,107
BOATMAN, EDWIN S.....	EFFECT OF OZONE ON LUNG GROWTH AND DEVELOPMENT.....	5R01 ES01049-05	61,812
BOLENDER, ROBERT P.....	ANALYTICAL MORPHOLOGY AND BIOCHEMISTRY OF HEPATOCYTES.....	5R01 GM22759-03	36,228
BOOTHE, RONALD G.....	DEVELOPMENT OF SPATIAL VISION.....	1R01 EY02510-01	69,115
BORNSTEIN, PAUL.....	BIOGENESIS AND FUNCTION OF CONNECTIVE TISSUE PROTEINS.....	5R01 AM11248-12	71,838
BRUNZELL, JOHN D.....	PATHOPHYSIOLOGY OF GENETIC HYPERTRIGLYCERIDEMIAS.....	5R01 HL18687-03	58,273
BUCHANAN, THOMAS M.....	IMMUNOCHEMISTRY & PATHOGENIC ROLE OF GONOCOCCAL PILI.....	5R01 AI13149-03	56,057
BUNT, ANN H.....	PROTEIN TRANSPORT IN RETINAL PHOTORECEPTORS AND AXONS.....	5R01 EY01311-05	67,096
BUTLER, JOHN.....	SITES OF LEAKAGE IN PULMONARY EDEMA.....	1R01 HL20652-01A2	52,345
BUTLER, JOHN.....	PULMONARY HEMODYNAMICS IN LUNG EDEMA DURING PEEP.....	5R01 HL20690-02	88,233
BYERS, BRECK E.....	MOLECULAR CYTOLOGY OF THE YEAST CELL CYCLE.....	5R01 GM18541-07	85,478
CALVIN, WILLIAM H.....	NEURON REPETITIVE FIRING MECHANISMS.....	5R01 NS09677-08	33,712
CAMERMAN, ARTHUR.....	STEREOCHEMICAL PRINCIPLES FOR ANTICANCER DRUGS.....	2R01 CA15879-04A1	56,224
CARRICO, C JAMES.....	PROGRAM STUDY OF THE TRAUMATIZED PATIENT.....	3P50 GM21797-03S1	253,969
CARRICO, C JAMES.....	BURN RESEARCH CENTER SUPPORT.....	5P50 GM22550-03	167,782
CARRICO, C JAMES.....	SYSTEMIC RESPONSE TO MECHANICAL AND THERMAL INJURY.....	1P50 GM24990-01	754,481
CARTER, DENNIS R.....	FATIGUE DAMAGE AND REPAIR IN BONE.....	1R01 AM20190-01A1	70,287
CATTERALL, WILLIAM A.....	THE MOLECULAR BASIS OF ELECTRICAL EXCITABILITY.....	1R01 HL22239-01	86,298
CHAMPOUX, JAMES J.....	BIOCHEMICAL STUDIES ON THE DNA UNTWISTING ENZYME.....	5R01 GM23224-03	54,948
CHAPMAN, C RICHARD.....	ACUPUNCTURE AND PERCEPTION OF DENTAL PAIN IN MAN.....	3R01 DE04004-03S1	18,028
CHAPMAN, C RICHARD.....	ACUPUNCTURE AND PERCEPTION OF DENTAL PAIN IN MAN.....	2R01 DE04004-04	69,750
CHAPMAN, WARREN H.....	EXPERIMENTAL BLADDER TUMORS.....	5R01 CA03842-20	42,119
CHAPMAN, WARREN H.....	IMMUNOLOGY OF BLADDER TUMORS.....	5R26 CA14135-06	130,179

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
CHATRIAN, GIAN E.....	RESPONSES TO TOOTH PULP STIMULATION IN HUMANS.....	2R01 DE03485-05	77,547
CHENEY, FREDERICK W, JR.....	CHRONIC ANIMAL MODEL OF PULMONARY VASCULAR INJURY.....	5R01 HL20612-02	56,206
CHRISTENSEN, GERALD M.....	RESIDUAL POSTNATAL INJURY FROM PRENATAL X-IRRADIATION.....	5R01 CA15844-04	65,562
CHRISTIAN, GARY D.....	A VIDEO FLUOROMETER FOR BIOLOGICAL ANALYSES.....	2R01 GM22311-03	66,565
CLAGETT, JAMES A.....	PERIODONTAL DISEASES: B CELLS ACTIVATED BY MITOGENS.....	1R01 DE04887-01	47,682
CLOPTON, BEN M.....	DEVELOPMENT OF NEURAL MECHANISMS IN HEARING.....	5R01 NS13052-04	32,655
COHEN, M MICHAEL, JR.....	CRANIOFACIAL ANOMALY SYNDROMES.....	5R01 DE04502-02	63,564
CONRAD, JOHN T.....	STRETCH CHANGES IN THE RABBIT CERVIX BY PROSTAGLANDIN.....	1R01 HD11227-01	52,073
COONEY, MARION K.....	RHINOVIRUS ANTIGENIC VARIATION AND ANTIBODY RESPONSE.....	1R01 AI15018-01	72,834
COREY, LAWRENCE.....	THE IMMUNOLOGY OF GENITAL HERPES.....	1R23 AI14415-01A1	37,136
CRILL, WAYNE E.....	PANCREATIC ISLET ELECTRICAL ACTIVITY AND SECRETION.....	5R01 AM21185-02	29,481
DALE, BEVERLY A.....	KERATOHYALIN IN KERATINIZATION: ORAL MUCOSA AND SKIN.....	5R01 DE04660-03	71,262
DALE, DAVID C.....	MARROW REGULATION IN CYCLIC HEMATOPOIESIS.....	5R01 AM18951-03	36,037
DAVIDSON, ERNEST R.....	ELECTRONIC STRUCTURE OF BIOCARBONYLS.....	5R01 GM22937-03	53,489
DAVIE, EARL W.....	PROTEINS OF BLOOD COAGULATION.....	5R01 HL16919-05	345,466
DE TORNYAY, RHEBA.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05758-05	39,528
DETWILER, PETER B.....	A STUDY OF ELECTRICAL COUPLING IN VERTEBRATE RETINA.....	5R01 EY02048-02	29,309
DILLARD, DAVID H.....	SURGICAL APPROACH TO CONGENITAL HEART DISEASES.....	5R01 HL19203-03	117,160
DOBSON, MARGARET V.....	CLINICAL ASSESSMENT OF VISUAL ACUITY.....	1R01 EY02581-01	70,782
DODGE, HAROLD T.....	SUDDEN CARDIAC DEATH AND LETHAL ARRHYTHMIAS.....	2R01 HL18805-04	486,695
DODGE, HAROLD T.....	FUNCTIONAL CHARACTERISTICS OF THE LEFT HEART.....	5R01 HL19451-03	133,676
DOERMANN, AUGUST H.....	INVESTIGATION OF GENETIC PROBLEMS WITH BACTERIOPHAGES.....	2R01 GM13280-15	161,466
DOUGLAS, ROBERT J.....	AGING AND INHIBITION.....	5R01 AG00013-02	25,162
EDWARDS, JOHN S.....	NEURAL DEVELOPMENT.....	5R01 NS07778-11	82,434
EMANUEL, IRVIN.....	RESEARCH IN MENTAL RETARDATION AND CHILD DEVELOPMENT.....	5P30 HD02274-13	811,671
ENSINCK, JOHN W.....	REGULATION OF BIOSYNTHESIS AND SECRETION OF GLUCAGON.....	2R01 AM16008-06	77,319
EVANS, CHARLES A.....	FLORA OF HUMAN SKIN.....	9R01 AM22082-03	36,629
FALKOW, STANLEY.....	NATURE OF ENTEROTOXIN PRODUCTION BY E COLI & V CHOLERAEE.....	2R22 AI10885-07	46,462
FANGMAN, WALTON L.....	EUKARYOTIC CHROMOSOME STRUCTURE AND REPLICATION.....	5R01 GM18926-07	88,800
FEFER, ALEXANDER.....	ADOPTIVE CHEMOIMMUNOTHERAPY OF TUMORS IN MICE.....	5R01 CA10777-10	102,250
FETZ, EBERHARD E.....	NEURAL CONTROL OF MUSCLE ACTIVITY.....	2R01 NS12542-04	73,646
FIALKOW, PHILIP J.....	HUMAN CANCER—ORIGIN AND GENETIC MARKERS.....	2R01 CA16448-04	49,279
FINCH, CLEMENT A.....	KINETIC STUDIES OF THE BLOOD.....	3R01 HL06242-17S1	15,000
FINCH, CLEMENT A.....	KINETIC STUDIES OF THE BLOOD.....	2R01 HL06242-18	346,363
FINK, B RAYMOND.....	LARYNGEAL BIOMECHANICS IN PULMONARY THERAPY.....	5R01 HL19975-02	30,483
FISCHER, EDMOND H.....	RELATION OF STRUCTURE TO FUNCTION OF ENZYMES.....	2R01 AM07902-16	155,760
FOX, JOHN P.....	FAMILY STUDY OF INFLUENZA AND RHINOVIRUS EPIDEMIOLOGY.....	3R01 AI12269-03S2	4,082
FOX, JOHN P.....	FAMILY STUDY OF INFLUENZA AND RHINOVIRUS EPIDEMIOLOGY.....	5R01 AI12269-04	90,701
FRANK, ROBERT.....	INHALED AEROSOLS: BEHAVIOR, EFFECTS, AND CLEARANCE.....	5P01 ES01478-02	267,505
FUCHS, ALBERT F.....	NEUROPHYSIOLOGICAL STUDIES OF THE OCULOMOTOR SYSTEM.....	5R01 EY00745-08	41,802
FUJIMOTO, WILFRED Y.....	CELL CULTURE STUDY OF DIABETES AND VASCULAR DISEASE.....	2R01 AM15312-07	71,692
FUTTERMAN, SIDNEY.....	RETINAL METABOLISM.....	5R01 EY00343-13	16,557
FUTTERMAN, SIDNEY.....	INTERDISCIPLINARY VISION AND OPHTHALMIC RESEARCH CENTER.....	3P30 EY01730-02S2	40,505
FUTTERMAN, SIDNEY.....	INTERDISCIPLINARY VISION AND OPHTHALMIC RESEARCH CENTER.....	5P30 EY01730-03	149,961
GALLANT, JONATHAN A.....	CONTROL OF RNA SYNTHESIS.....	5R01 GM13626-12	52,133
GERACI, JOSEPH P.....	LATE EFFECTS IN NEUTRON RADIOTHERAPY.....	1R01 CA22431-01	100,880
GILES, WAYNE R.....	INITIATION OF THE HEARTBEAT: A VOLTAGE-CLAMP STUDY.....	1R01 HL22426-01	58,015
GLOMSET, JOHN A.....	PLASMA CHOLESTEROL METABOLISM.....	5R01 HL10642-18	48,856
GOODNER, CHARLES J.....	CNS REGULATION OF FUEL MOBILIZATION AND STORAGE.....	5R01 AM10866-13	91,518
GORBMAN, AUBREY.....	HORMONAL ACTION ON CENTRAL NERVOUS FUNCTION.....	5R01 NS11343-05	121,260
GORDON, ALBERT M.....	CONTROL OF CONTRACTION IN STRIATED MUSCLE.....	2R01 NS08384-10	41,832
GOULD, KENNETH L.....	MEASUREMENT OF REGIONAL CORONARY FLOW RESERVE IN MAN.....	3R01 HL18492-03S1	8,198
GOULD, KENNETH L.....	VALIDATION OF QUANTITATIVE CORONARY ARTERIOGRAPHY.....	1R01 HL22952-01	47,222
GRAYSTON, J THOMAS.....	PREVENTION OF TRACHOMA & RELATED INFECTIONS.....	5R01 EY00219-18	181,533
GRAYSTON, J THOMAS.....	REGIONAL PRIMATE RESEARCH CENTER.....	5P40 RR00166-18	2,090,459
GREEN, WILLIAM L.....	STUDIES OF THYROID HORMONE METABOLISM.....	5R01 AM15810-06	60,176
GRIFFIN, THOMAS W.....	RADIATION THERAPY ONCOLOGY GROUP.....	5R10 CA12260-07	62,150
GROMAN, NEAL B.....	PHAGE-BACTERIAL EFFECTS ON VIRULENCE OF C DIPHTHERIAE.....	5R01 AI10492-07	41,097
GUEST, AVERY M.....	ATTACHMENT OF METROPOLITAN NEIGHBORHOOD & COMMUNITY AREA.....	1R01 HD11930-01	93,251
GUNTHEROTH, WARREN G.....	HYPOXIA IN SUDDEN INFANT DEATH SYNDROME.....	5R01 HD10340-02	60,375

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
HALBERT, SHERIDAN A	ANALYSIS OF THE MECHANISMS OF OVIDUCTAL TRANSPORT	5R01 HD10988-02	77,643
HALL, BENJAMIN D	EXPRESSION AND REGULATION OF EUKARYOTIC GENES	5R01 GM11895-15	110,918
HARKER, LAURENCE A	PLATELET MECHANISMS IN DISEASE	5R01 HL11775-11	106,110
HARKINS, STEPHEN W	BRAIN ELECTRICAL POTENTIALS IN AGING AND DEMENTIA	5R01 AG00573-02	51,660
HARRIS, A BASIL	ANATOMY OF EXPERIMENTAL SEIZURES	5R01 NS09037-09	45,374
HARTWELL, LELAND H	GENETIC ANALYSIS OF THE EUKARYOTIC CELL CYCLE	5R01 GM17709-09	99,553
HASCHKE, RICHARD H	RETROGRADE AXONAL TRANSPORT IN THE VISUAL SYSTEM	5R01 EY01756-03	80,524
HAUSCHKA, STEPHEN D	CLONAL ANALYSIS OF SKELETAL MUSCLE DEVELOPMENT	5R01 AM18860-03	61,913
HAZZARD, WILLIAM R	ROLE OF APOLIPOPROTEIN-E IN LIPOPROTEIN METABOLISM	1R01 HL22607-01	63,100
HENDRICKSON, ANITA E	PRIMATE VISUAL SYSTEM DEVELOPMENT AND DEPRIVATION	5R01 EY01208-05	78,216
HILLE, BERTIL	MOLECULAR PROPERTIES OF IONIC PERMEABILITY IN NERVE	5R01 NS08174-10	88,989
HILLE, MERRILL B	ACTIVATION OF PROTEIN SYNTHESIS IN ECHINOIDEA EMBRYOS	5R01 HD11070-02	51,492
HILLMAN, ROBERT S	FOLATE AND PYRIDOXINE METABOLISM	5R01 AM20192-02	68,298
HLASTALA, MICHAEL P	VENTILATION/PERFUSION DISTRIBUTION IN THE LUNG	5R01 HL12174-11	117,519
HODSON, WILLIAM A	PEDIATRIC PULMONARY SCOR: HYALINE MEMBRANE DISEASE	5P50 HL19187-02	464,980
HOFFMAN, ALLAN S	SURFACE THROMBOGENESIS: MECHANISMS AND PREVENTION	1P01 HL22163-01	459,903
HOGNESS, JOHN R	BIOMEDICAL RESEARCH SUPPORT GRANT	5S07 RR07096-13	173,235
HOHL, THOMAS H	SURGICAL EFFECTS ON CRANIOFACIAL GROWTH AND DEVELOPMENT	5R01 DE04478-03	17,170
HOLMES, KING K	VENEREAL DISEASE RESEARCH PROGRAM PROJECT	2P01 AI12192-04	443,279
HORBETT, THOMAS A	CELLULAR INTERACTIONS WITH FOREIGN MATERIALS	5R01 HL19419-03	136,457
HORNBEIN, THOMAS	ANESTHESIA RESEARCH CENTER	3P50 GM15991-10S1	180,896
HUNTSMAN, LEE L	NONINVASIVE DETERMINATION OF AORTIC BLOOD VELOCITIES	5R01 HL16830-05	62,789
HUNTSMAN, LEE L	MECHANICAL PROPERTIES OF ISOLATED MYOCARDIUM	5R01 HL20613-02	12,868
ISHIMARU, AKIRA	OPTICAL DETECTION OF PLATELET AGGREGATES	5R01 HL19993-02	53,382
JENSEN, LYLE H	MOLECULAR STRUCTURE	5R01 AM03288-20	47,166
JENSEN, LYLE H	CRYSTALLOGRAPHIC STUDY OF PROTEINS	2R01 GM13366-14	161,450
JOHNSON, DALE E	ENERGY LOSS MICROANALYSIS OF MYOCARDIAL CATIONS	5R01 HL21371-02	36,950
JOHNSON, DORTHEA A	EFFECT OF PAROTID FUNCTION ON SALIVA AND CELLS	5R01 DE04468-02	51,747
JONES, ROBERT F	CLINICAL CANCER EDUCATION PROGRAM	5R25 CA21880-02	94,293
JUCHAU, MONT R	METABOLISM OF DRUG SUBSTRATES BY HUMAN PLACENTA	5R01 HD04839-06	45,517
KEHL, THEODORE H	SUPPORT FOR PHYSIOLOGY AND BIOPHYSICS COMPUTER	5P41 RR00374-12	243,546
KENNEY, NANCY J	CNS REGULATION OF BODY FLUIDS	1R01 AM22024-01	32,350
KENNY, GEORGE E	ANTIGEN COMPOSITION OF MYCOPLASMA PNEUMONIAE	2R01 AI06720-12A1	88,062
KLEBANOFF, SEYMOUR J	ANTIMICROBIAL EFFECT OF PEROXIDASE IN LEUKOCYTES	2R01 AI07763-12	82,708
KLEBANOFF, SEYMOUR J	TUMOR CELL CYTOTOXICITY OF PHAGOCYtic CELLS	5R01 CA18354-03	70,561
KLEBANOFF, SEYMOUR J	UTERINE EOSINOPHIL STRUCTURE AND FUNCTION	5R01 HD02266-13	56,522
KUO, CHO-CHOU	IMMUNOLOGY OF CHLAMYDIA TRACHOMATIS GENITAL INFECTION	5R01 AI14180-02	72,467
KWIRAM, ALVIN L	ODMR OF FLAVINS AND FLAVOPROTEINS	5R01 GM22603-03	53,197
LABBE, ROBERT F	METABOLIC ABNORMALITIES IN MENTAL RETARDATION	5P01 HD04665-08	232,346
LAGUNOFF, DAVID	MAST CELL GRANULES: STRUCTURE AND SECRETION	1R01 HL23593-01A1	53,066
LAIRD, CHARLES D	NUCLEOTIDE SEQUENCE CHANGES IN EVOLUTION	5R01 GM19179-07	60,900
LEITCH, CYNTHIA J	PSYCHOSOMATIC PREDICTORS OF HEART DISEASE IN ADOLESCENCE	1R01 HL22378-01	75,141
LOCKARD, ROBERT B	PERIODIC BEHAVIOR IN FIELD AND LABORATORY	3R01 HD00942-14S1	7,981
LOCKARD, ROBERT B	PERIODIC BEHAVIOR IN FIELD AND LABORATORY	5R01 HD00942-15	42,770
LOEB, LAWRENCE A	THE FIDELITY OF DNA REPLICATION IN HUMAN LYMPHOCYTES	7R01 CA24845-01	64,179
LUND, JENNIFER S	STRUCTURAL BASIS FOR PROCESSING VISUAL INFORMATION	5R01 EY01086-06	98,818
LUND, RAYMOND D	DEVELOPMENT AND PLASTICITY OF VISUAL CONNECTIONS	5R01 EY00596-10	66,356
LUND, RAYMOND D	TRANSPLANTATION STUDIES OF THE RAT VISUAL SYSTEM	5R01 EY01950-02	80,396
LUSCHEI, ERICH S	NEURAL PROCESSES IN SOMATIC MOVEMENT	5R01 DE04884-10	39,067
MACKLER, BRUCE	STUDIES OF BIOLOGICAL OXIDATIONS	5R01 GM23006-19	58,446
MACKLER, BRUCE	STUDIES OF HUMAN AND MAMMALIAN DEVELOPMENT	5P01 HD05961-08	321,310
MAKOUS, WALTER L	DUPLICITY THEORY AND THE STILES-CRAWFORD EFFECT	5R01 EY00788-06	57,478
MANNIK, MART	STUDIES OF THE RENAL DISEASE OF SYSTEMIC LUPUS	5R01 AM11476-12	95,345
MANNIK, MART	RHEUMATOID ARTHRITIS IMMUNOLOGY STUDIES	5R01 AM12849-10	65,745
MARTIN, GEORGE M	ABNORMAL PROTEINS IN THE PATHOGENESIS OF DISEASE	5R01 AG00592-18	94,018
MARTIN, JOAN C	CONTRIBUTION OF IRON DEFICIENCY TO MENTAL RETARDATION	1P01 HD11680-01	381,740
MARTIN, ROY W	BLOOD FLOW MEASUREMENT BY ULTRASONIC CATHETER TIP METHOD	5R01 HL14645-07	79,712
MATSEN, FREDERICK A, III	INCREASED PRESSURE IN COMPARTMENTS OF THE EXTREMITIES	5R01 AM18642-02	27,176
MAYO, MICHAEL E	MECHANICAL EFFECTS OF URETERAL CALCULI	1R01 AM20671-01	53,456
MC CLEAN, MICHAEL D	AFFERENT FUNCTION IN LIP MOTOR CONTROL FOR SPEECH	1R01 NS14048-01	4,395

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
MILLER, JOSEF M.....	AUDITORY THALAMO-CORTICAL PROJECTIONS.....	5R01 NS08181-07	66,999
MILLER, JOSEF M.....	STUDIES OF THE COCHLEAR PROSTHESIS.....	5P50 NS13056-03	196,508
MINSHAW, BARBARA H.....	GENETICS OF ESCHERCHIA COLI VIRULENCE FACTORS.....	1R01 AI14740-01	36,383
MOFFETT, BENJAMIN C, JR.....	CRANIOFACIAL ARTICULATIONS AND MASTICATORY FUNCTION.....	5R01 DE02931-12	71,720
MOORE, ALTON W.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05346-17	72,962
MORITZ, WILLIAM E.....	ULTRASONIC MEASUREMENT OF CARDIAC GEOMETRY AND FLOW.....	5R01 HL16759-05	56,631
MORRIS, DAVID R.....	BIOSYNTHESIS AND BIOLOGICAL FUNCTION OF POLYAMINES.....	2R01 GM13957-12	77,047
MOTTET, N KARLE.....	METHYLMERCURY EMBRYOPATHY.....	5R01 ES00677-08	183,444
MOTULSKY, ARNO G.....	SUPPORT FOR STUDY OF INHERITED DISEASES.....	5P50 GM15253-12	1,168,494
NEAFSEY, EDWARD J.....	THE TWO MOTOR SYSTEMS.....	1R01 NS14698-01	39,351
NELSON, SIDNEY D.....	HYDRAZINE METABOLISM AS IT RELATES TO TOXICITY.....	1R23 ES01717-01	34,530
NELSON, SIDNEY D.....	ALTERATION OF METABOLISM BY STRUCTURAL MODIFICATION.....	1R01 GM25418-01	51,685
NESTER, EUGENE W.....	MOLECULAR BASIS OF CROWN GALL TUMORIGENESIS.....	2R01 CA13015-07	127,359
NEURATH, HANS.....	BIOLOGICAL CONTROL BY LIMITED PROTEOLYSIS.....	5P01 GM15731-11	322,214
NORWOOD, THOMAS H.....	CLONAL SENESCENCE OF SOMATIC CELLS.....	2R01 AG00257-04	110,847
NUTE, PETER E.....	HEMOGLOBIN Y-CHAIN GENES: EVOLUTION AND INDUCIBILITY.....	5R01 HL20961-02	68,131
PAGE, ROY C.....	SUPPORT FOR ORAL BIOLOGY RESEARCH CENTER.....	5P50 DE02600-12	1,740,001
PAGE, ROY C.....	CONNECTIVE TISSUE OF THE PERIODONTIUM.....	5R01 DE03301-08	62,913
PALMITER, RICHARD D.....	HORMONAL CONTROL OF DIFFERENTIATION AND GENE ACTION.....	2R01 HD09172-04	119,647
PAVLIN, DOROTHY J.....	MECHANISMS OF RE-EXPANSION PULMONARY EDEMA.....	5R23 HL21050-02	39,972
PETRA, PHILIP H.....	STRUCTURE-FUNCTION OF STEROID BINDING PROTEINS.....	5R01 HD07190-07	44,574
PIOUS, DONALD A.....	GENETIC STRUCTURE AND FUNCTION IN HUMAN CELLS.....	2R01 GM15883-14	95,236
POCKER, YESHAYAU.....	PHYSICO-CHEMICAL STUDIES OF ENZYMIC HYDRATION.....	5R01 AM09221-14	76,584
POLLACK, GERALD H.....	MECHANISM OF CARDIAC PACEMAKING.....	1R01 HL22235-01	42,188
POLLAKOWSKI, HENRY O.....	ECONOMIC DETERMINANTS OF POPULATION DISTRIBUTION.....	2R01 HD07410-03	56,442
PORTE, DANIEL, JR.....	NEURAL REGULATION OF PANCREATIC HORMONE SECRETION.....	5R01 AM12829-10	75,565
PORTE, DANIEL, JR.....	DIABETES-ENDOCRINOLOGY RESEARCH CENTER.....	3P30 AM17047-03S1	34,860
PORTE, DANIEL, JR.....	DIABETES-ENDOCRINOLOGY RESEARCH CENTER.....	5P30 AM17047-04	391,777
PRINZ, PATRICIA N.....	SLEEP AND OTHER NEUROBIOLOGICAL CHANGES WITH AGING.....	5R01 AG00667-02	39,045
PULLUM, THOMAS W.....	CENTER FOR STUDIES IN DEMOGRAPHY AND ECOLOGY.....	5P30 HD09397-03	107,889
RASEY, JANET S.....	CYTOTKINETIC APPROACH TO EMT-6 SOLID TUMOR THERAPY.....	5R01 CA19899-03	44,020
RAUSCH, ROBERT L.....	STUDIES OF ECHINOCOCCUS SPECIES AND HYATID DISEASE.....	1R01 AI15172-01	61,458
REICHENBACH, DENNIS D.....	ELECTROCARDIOGRAPHIC QUANTIFICATION OF INFARCT SIZE.....	5R01 HL21750-02	16,566
RICHARDSON, WILLIAM C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05714-08	84,909
RICHMOND, VIRGINIA L.....	LUNG ELASTIC TISSUE CHARACTERISTICS.....	5R01 HL18931-02	45,800
ROMAN, HERSCHEL L.....	GENETIC INVESTIGATIONS IN YEAST-SACCHAROMYCES.....	5R01 AI00328-27	108,365
ROSEN, JONATHAN J.....	TISSUE CELL INTERACTIONS WITH VASCULAR PROSTHESES.....	1R23 HL21805-01	39,623
ROSS, RUSSELL.....	WOUND REPAIR, INFLAMMATION AND CONNECTIVE TISSUE.....	2R01 AM13970-17	87,315
ROSS, RUSSELL.....	BIOLOGY OF THE ARTERY WALL AND ATHEROSCLEROSIS.....	5P01 HL18645-03	484,248
ROSSE, CORNELIUS.....	LYMPHOCYTE PRODUCTION AND TRAFFIC IN THE BONE MARROW.....	5R01 CA20823-03	52,540
RUBIN, CYRUS E.....	THE PATHOGENESIS OF HUMAN ALIMENTARY MUCOSAL DISEASE.....	3R01 AM16059-19S1	64,182
RUBIN, CYRUS E.....	THE PATHOGENESIS OF HUMAN ALIMENTARY MUCOSAL DISEASE.....	2R01 AM16059-20	175,493
SAARI, JOHN C.....	BIOCHEMISTRY OF THE RETINA AND PIGMENT EPITHELIUM.....	5R01 EY02317-02	25,764
SACKETT, GENE P.....	PREMATURITY IN PRIMATES: CAUSES, EFFECTS, PREVENTION.....	5P01 HD08633-05	304,860
SANDLER, LAURENCE M.....	CYTOGENETICS OF MEIOSIS AND DEVELOPMENT IN DROSOPHILA.....	5R01 GM09965-16	92,789
SCHER, ALLEN M.....	REGULATION OF THE PERIPHERAL CIRCULATION.....	5P01 HL16910-05	567,965
SCHER, ALLEN M.....	CARDIAC FIBER DIRECTION AND THE QRS COMPLEX.....	5R01 HL20273-02	75,102
SCHINKE, STEVEN P.....	DETERMINANTS OF ADOLESCENT FERTILITY.....	1R01 HD11095-01	120,133
SCHUBIGER, GEROLD A.....	DETERMINATION AND DIFFERENTIATION IN DROSOPHILA.....	1R01 GM24879-01	81,802
SCHWARTZKROIN, PHILIP A.....	DEVELOPMENT OF ACTIVITY AT A CNS SYNAPSE.....	7R01 NS15317-01	34,827
SCOTT, C RONALD.....	BIOCHEMICAL CAUSES OF CHILD IMMUNE DEFICIENCY STATES.....	5R01 AI12617-04	88,869
SHAPIRO, BENNETT M.....	FERTILIZATION: MOLECULAR EVENTS OF CORTICAL REACTION.....	5R01 GM23910-02	48,386
SHEPARD, THOMAS H.....	LABORATORY FOR THE STUDY OF HUMAN EMBRYOS AND FETUSES.....	5R01 HD00836-15	42,084
SIBLEY, CAROL H.....	MEMBRANE IMMUNOGLOBULINS: STRUCTURE, FUNCTION, CONTROL.....	5R01 CA20314-02	37,657
SIMKIN, PETER A.....	STUDIES OF URIC ACID TRANSPORT.....	3R01 AM13925-08S1	25,459
SIMPSON, JOHN B.....	CIRCUMVENTRICULAR SITES OF PRESSOR ACTION OF ANGIOTENSIN.....	1R01 HL21799-01	22,527
SIMPSON, JOHN B.....	ANGIOTENSIN EFFECTS ON WATER INTAKE AND EXCRETION.....	1R01 HL21800-01	25,686
SMITH, LYNWOOD S.....	PATHOGENESIS OF BUBBLE AND CLOT FORMATION.....	5R01 HL16254-05	67,291
SMITH, ORVILLE A, JR.....	ORAL-FACIAL GROWTH AND DEVELOPMENT IN PRIMATES.....	5R01 DE02918-10	136,606
SPARKS, DAVID W.....	INVESTIGATION OF A TACTUAL SPEECH-TRANSMISSION AID.....	1R01 NS14177-01	52,913

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
SPENCE, ALEXANDER M.....	IMMUNITY AGAINST NITROSOUREA-INDUCED RAT BRAIN TUMORS.....	5R01 CA18385-03	44,399
STAMATOYANNOPOULOS, GEORGE ...	CELLULAR MECHANISMS OF HEMOGLOBIN F REGULATION.....	5R01 HL20899-02	98,666
STIRLING, CHARLES E.....	ACTIVE TRANSPORT IN EPITHELIA.....	2R01 AM13182-10	45,589
STIRLING, CHARLES E.....	RETINAL TRANSPORT MECHANISMS.....	1R01 EY02393-01	36,274
STRANDNESS, DONALD E, JR.....	LONG-TERM STUDY OF DIABETIC VASCULAR DISEASE.....	3R01 HL20381-02S1	1,238
STRANDNESS, DONALD E, JR.....	LONG-TERM STUDY OF DIABETIC VASCULAR DISEASE.....	5R01 HL20381-03	131,881
STRANDNESS, DONALD E, JR.....	ULTRASONIC EVALUATION IN DIRECT ARTERIAL SURGERY.....	5R01 HL20898-02	57,949
STRANDNESS, DONALD E, JR.....	NATURAL HISTORY OF THE POSTPHLEBITIC SYNDROME.....	1R01 HL21572-01	37,508
SU, JUDY Y.....	MECHANISM OF ANESTHETIC-INDUCED MYOCARDIAL DEPRESSION.....	5R01 HL20754-02	48,457
SWANSON, PHILLIP D.....	ENERGY UTILIZING PROCESSES IN THE CENTRAL NERVOUS SYSTEM.....	2R01 NS05424-13A1	104,748
TELLER, DAVID C.....	STUDIES OF ASSOCIATION REACTIONS OF ENZYMES.....	2R01 GM13401-13	62,211
TELLER, DAVIDA Y.....	VISION IN HUMAN INFANTS.....	5R01 EY01695-03	15,302
TENG, LIN-NAR L.....	MOLECULAR MODIFICATION OF HEPARIN BY CHEMICAL MEANS.....	1R01 HL22035-01A1	42,384
THOMAS, EDONNALL.....	IRRADIATION AND MARROW TRANSPLANTATION IN LARGE ANIMALS.....	5R01 CA18047-15	140,424
TOWE, ARNOLD L.....	SINGLE UNIT ANALYSIS IN THE SOMATOSENSORY SYSTEM.....	5R01 NS00396-26	58,214
TOWE, ARNOLD L.....	HIGH-SPEED DATA ACQUISITION AND COMPUTER ANALYSIS.....	5R01 NS05136-15	77,186
TRAGER, WILLIAM F.....	PRODUCT RATIOS AND MICROSOMAL MULTIPLICITY.....	1R01 GM25136-01	50,955
TRUMAN, JAMES W.....	HORMONE ACTION ON THE CENTRAL NERVOUS SYSTEM.....	5R01 NS13079-03	60,085
VAN CITTERS, ROBERT L.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00037-18	774,194
VAN CITTERS, ROBERT L.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05432-17	200,462
VAN HOOSIER, GERALD L, JR.....	ANIMAL RESOURCES DEVELOPMENT.....	5P40 RR01095-02	73,311
VEROUGO, PEDRO.....	CILIARY ACTIVITY OF THE LUNG STUDIED BY LASER SCATTERING.....	5R01 HL20192-02	62,387
VINCENZI, FRANK F.....	RED BLOOD CELL CALCIUM IN HEALTH AND DISEASE.....	2R01 AM16436-05	39,677
WALL, ROBERT T.....	ENDOTHELIAL CELL MECHANISMS IN VASCULAR DISEASE.....	1R23 HL21950-01	39,274
WARO, ARTHUR A, JR.....	EPILEPSY RESEARCH SUPPORT.....	5P50 NS04053-17	509,218
WARD, RICHARD H.....	DEMOGRAPHY OF NATIVE AMERICAN POPULATIONS IN 1900.....	1R01 HD11708-01	79,018
WARO, RICHARD H.....	GENETIC EPIDEMIOLOGY OF PRECURSORS OF HYPERTENSION.....	5R01 HL20159-03	71,999
WEDGWOOD, RALPH J.....	DEVELOPMENTAL AND GENETIC DEFECTS OF IMMUNITY.....	2R01 AI07073-12	64,991
WESTRUM, LESNICK E.....	TEETH AND TRIGEMINAL PATHWAYS.....	1R01 DE04942-01	40,825
WESTRUM, LESNICK E.....	FINE STRUCTURE OF DEAFFERENTATION.....	2R01 NS09678-07A1	64,513
WHISLER, HOWARD C.....	BIOLOGY OF ENTOMOGENOUS FUNGI.....	5R01 AI05882-16	68,988
WHITE, THOMAS T.....	PANCREATIC DUCTAL VERSUS OVULEN SECRETIONS.....	5R01 CA14380-06	87,487
WHITELEY, ARTHUR H.....	BLOCKED TRANSLATION IN ECHINIOID EGGS & HYBRID EMBRYOS.....	5R01 HO10312-03	48,760
WHITELEY, HELEN R.....	REGULATION OF RNA SYNTHESIS.....	5R01 GM20784-04	73,467
WOODRUM, DAVID E.....	ETIOLOGY OF RECURRENT APNEA AND SIDS.....	5R01 HD10356-02	88,833
WOODS, STEPHEN C.....	INSULIN AND CNS CONTROL OF BODY WEIGHT AND FEEDING.....	2R01 AM17844-04	56,212
YOUNG, ELTON T, II.....	CONTROL OF FUNCTIONAL MESSENGER RNA SYNTHESIS.....	5R01 AI09456-09	57,700
ZICK, GREGORY L.....	DIRECT DETERMINATION OF PO2 IN THE CLINICAL ENVIRONMENT.....	5R01 HL20354-02	34,738
ORGANIZATION TOTAL	262	32,247,240	
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 98108			
HALTER, JEFFREY B.....	THE PATHOGENESIS OF IMPOTENCE IN DIABETES MELLITUS.....	5R01 AM20754-02	38,247
ORGANIZATION TOTAL	1	38,247	
VIRGINIA MASON RESEARCH CENTER ZIP CODE 98101			
BEAN, MICHAEL A.....	CELLULAR IMMUNE RESPONSES TO HUMAN BLADDER CARCINOMA.....	5R26 CA19165-04	76,902
CUMMINGS, KENNETH B.....	EVALUATION AND MANAGEMENT OF BLADDER CARCINOMA.....	2R26 CA17466-04	62,598
CUMMINGS, KENNETH B.....	IMMUNE RESPONSES IN PATIENTS WITH BLADDER CANCER.....	5R26 CA18667-03	46,480
D'AOUST, BRIAN G.....	ISOBARIC VASCULAR BUBBLES AND DECOMPRESSION SICKNESS.....	1R01 HL22406-01	53,822
D'AOUST, BRIAN G.....	ENHANCED DETECTION OF BUBBLES IN DOPPLER FLOW SIGNALS.....	1R01 HL22413-01	20,276
GIBBONS, ROBERT P.....	CHEMOTHERAPY FOR ADVANCED PROSTATIC CANCER.....	5R26 CA15421-05	123,315
GLEISNER, JOHN M.....	ENZYMES OF M. TUBERCULOSIS & OBSTRUCTIVE LUNG DISEASE.....	5R01 HL21095-02	57,032
HILDEBRANDT, JACOB.....	LUNG AND TISSUE MECHANICS.....	5R01 HL14854-07	55,776
HILDEBRANDT, JACOB.....	SURFACTANT, PULMONARY EDEMA, AND LUNG MECHANICS.....	5R01 HL20773-02	39,780
HILDEBRANDT, JUDITH R.....	CARDIORESPIRATORY CONTROL IN EXERCISE.....	3R01 HL13233-08S1	2,485
HOUCK, JOHN C.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05588-12	47,211
LAI, YIH-LOONG.....	RESPIRATION DURING PROLONGED HYPERCAPNIA.....	5R01 HL20568-03	32,305
MARTIN, CARROLL J.....	LUNG ELASTIC RECOIL: AGE AND DISEASE.....	1R01 HL22313-01	39,429
SCURLOCK, JAMES E.....	ULTRALONG NERVE BLOCK AND UNCONVENTIONAL ANESTHETICS.....	7R23 GM26136-01	34,300
SUTTON, DWIGHT.....	LIMBIC AND NEOCORTEX MECHANISMS IN PHONATION.....	2R01 NS12165-04	60,245

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WASHINGTON—Continued			
TAYLOR, EUGENE M.....	HYPOXEMIA IN INFANT PRIMATES.....	5R01 HD10761-02	108,519
ORGANIZATION TOTAL	16 860,475		
STATE TOTAL	382 45,508,863		
WEST VIRGINIA			
HUNTINGTON			
VETERANS ADMINISTRATION HOSPITAL ZIP CODE 25701			
BURCH, ROBERT E.....	AGING: TISSUE TRACE ELEMENTS AND ENZYMATIC ACTIVITY.....	5R01 AG01003-02	36,217
ORGANIZATION TOTAL	1 36,217		
MORGANTOWN			
WEST VIRGINIA UNIVERSITY ZIP CODE 26506			
BARANOWSKI, TOM.....	A RURAL MINING COMMUNITY HYPERTENSION CONTROL PROJECT.....	1R01 HL22802-01	84,663
BLAIR, JAMES B.....	HORMONAL REGULATION OF GLUCONEOGENESIS.....	5R01 AM17664-05	53,397
BUTCHER, FRED R.....	ROLE OF CYCLIC NUCLEOTIDES IN PAROTID GLAND FUNCTION.....	7R01 AM25249-01	51,823
BUTCHER, ROY L.....	ALTERATIONS IN THE OOCYTE DURING PREOVULATORY AGING.....	5R01 HD11679-02	49,003
CHARON, NYLES W.....	A GENETIC-BIOCHEMICAL ANALYSIS OF SPIROCHETE MOTILITY.....	1R23 DE04645-01A1	25,109
COLASANTI, BRENDA K.....	ADRENERGIC AND CHOLINERGIC INTERACTIONS IN THE EYE.....	5R01 EY01217-05	30,193
COLBY, HOWARD D.....	ADRENAL CARCINOGEN METABOLISM.....	5R01 CA22152-02	64,549
ELLINGSON, JOHN S.....	METABOLISM OF PHOSPHOLIPIDS IN SECONDARY LYSOSOMES.....	1R01 GM23807-01A1	46,636
FLEMING, WILLIAM W.....	MECHANISM OF NONSPECIFIC SUPERSENSITIVITY TO DRUGS.....	5R01 NS08300-10	80,141
FRIST, RAMSEY E.....	COMOVIRUS RIBONUCLEIC ACIDS: STRUCTURE AND FUNCTION.....	5R01 AI09934-06	32,857
HAINES, DUANE E.....	CEREBELLAR EVOLUTION AND FUNCTION.....	3R01 NS11327-04S1	3,159
HARRIS, CHARLES L.....	ROLE OF THIONUCLEOTIDES IN TRANSFER RNA.....	1R01 GM25620-01	47,145
HEDGE, GEORGE A.....	NEUROENDOCRINE REGULATION OF ACTH AND TSH SECRETION.....	5R01 AM21348-02	66,201
JONES, BARBARA.....	ACUTE LEUKEMIA GROUP B.....	5R10 CA07757-14	177,629
JONES, JOHN E.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05433-17	51,486
KLETZIEN, ROLF F.....	GLUCOCORTICOID PERMISSIVE EFFECTS ON GLUCONEOGENESIS.....	1R01 AM24051-01	39,867
LEE, PING.....	ERYTHROCYTES DURING EARLY DEVELOPMENT.....	5R01 HL13237-09	41,315
MAWHINNEY, MICHAEL G.....	METABOLISM AND INHIBITION OF PROSTATIC CANCER.....	2R01 CA13103-07	48,743
MC CUSKEY, ROBERT S.....	HEPATIC MICROVASCULAR REGULATORY MECHANISMS.....	7R01 HL23604-01	30,133
MENGOLI, HENRY F.....	IGG FC-RECEPTOR ON ORAL STREPTOCOCCI.....	1R01 DE04631-01	48,423
MILLER, MICHAEL R.....	CONTROL OF DNA REPLICATION IN THE ANIMAL CELL CYCLE.....	1R01 GM25677-01	58,072
QUICK, CEDRIC A.....	ETIOLOGY AND IMMUNOBIOLOGY OF LARYNGEAL PAPILLOMA.....	7R01 CA25124-01	60,315
QUINLAN, DENNIS C.....	MEMBRANE DYNAMICS IN NORMAL AND TUMOR CELLS.....	1R01 GM24556-01	56,981
RAICH, PETER C.....	SUPPRESSOR T-CELLS IN MALIGNANT LYMPHOMA.....	1R01 CA25072-01	48,645
REYER, RANDALL W.....	LENS AND NEURAL RETINA DEVELOPMENT AND REGENERATION.....	2R01 EY00196-21	31,778
ROBINSON, ROBERT L.....	CNS CONTROL OF ADRENAL MEDULLARY SECRETION.....	5R01 NS12861-03	39,384
ROWLES, GRAHAM D.....	THE GEOGRAPHICAL EXPERIENCE OF THE ELDERLY.....	1R23 AG00862-01	18,616
SANDER, EUGENE G.....	BIOCHEMICAL MECHANISMS OF PYRIMIDINE ALKYLATION.....	2R01 CA21167-03	68,256
WATNE, ALVIN L.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA19530-03	80,438
WIRTZ, GEORGE H.....	RADIOIMMUNOASSAY OF A FAT SOLUBLE VITAMIN.....	1R01 AM19716-01A1	38,233
ORGANIZATION TOTAL	30 1,573,190		
SHEPHERDSTOWN			
SHEPHERD COLLEGE ZIP CODE 25443			
FIALA, SILVIO E.....	THE ROLE OF CARCINOGEN IN NUCLEIC ACID METABOLISM.....	5R01 CA14084-06	35,114
ORGANIZATION TOTAL	1 35,114		
STATE TOTAL	32 1,644,521		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN			
KENOSHA			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-PARKSIDE ZIP CODE 53140			
CHEN, CHONG-MAW.....	MOLECULAR CONTROL OF CELL DIVISION AND DIFFERENTIATION.....	5R01 GM22543-02	21,121
ORGANIZATION TOTAL	1 21,121		
MADISON			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706			
ADLER, JULIUS.....	BEHAVIOR OF BACTERIA—BIOCHEMISTRY AND GENETICS.....	5R01 AI08746-10	97,844
ALLEN, CAROL A.....	THE STRUCTURAL BASIS OF TISSUE CELL MOTILITY.....	1R01 GM25133-01	34,110
ALLEN, JAMES R.....	HEPATOCELLULAR METABOLISM OF CHLORINATED HYDROCARBONS.....	5R01 ES00472-08	45,122
ALLEN, JAMES R.....	PATHOBIOLOGICAL RESPONSE OF PRIMATES TO BIPHENYLS.....	5R01 ES00958-04	46,248
ALLEN, JAMES R.....	IMPLICATIONS OF LOW LEVEL EXPOSURE TO DIOXINS.....	5R01 ES01339-02	76,218
ALLEN, JAMES R.....	DIOXIN INDUCED TOXICITY AND CARCINOGENICITY.....	5R01 ES01839-02	43,892
ALLEN, JAMES R.....	RESPONSE OF PRIMATES TO POLYBROMINATED BIPHENYLS.....	1R01 ES01943-01	72,528
ANDERSON, LAURENS.....	CHEMICAL SYNTHESIS OF OLIGOSACCHARIDES.....	5R01 AM10588-13	51,399
ANSLOW, RALPH O.....	CREATION OF RESEARCH ANIMAL RESOURCES PROGRAM.....	3P40 RR00952-03S1	32,057
ATLEE, JOHN L.....	CARDIAC CONDUCTION AND ARRHYTHMIAS DURING ANESTHESIA.....	1R23 GM25064-01	42,054
AUERBACH, ROBERT.....	DEVELOPMENT OF IMMUNITY.....	1R01 AI14607-01	97,794
AZEN, EDWIN A.....	GENETIC POLYMORPHISMS OF SALIVA.....	5R01 DE03658-14	30,021
BACH, FRITZ H.....	GENETIC FACTORS IN TRANSPLANT SURVIVALS.....	5R01 AI08439-11	165,236
BACH, FRITZ H.....	PROGRAM PROJECT IN LYMPHOCYTE BIOLOGY.....	3P01 AI11576-05S1	94,956
BACH, FRITZ H.....	PROGRAM PROJECT IN TUMOR & ALLOGRAFT IMMUNITY.....	5P01 CA16836-04	325,501
BASS, PAUL.....	MOTOR, ELECTRIC PROPERTIES OF STOMACH AND SMALL BOWEL.....	5R01 AM15417-05	43,734
BEINERT, HELMUT.....	COMPONENTS AND PATHWAYS IN BIOLOGICAL OXIDATIONS.....	5R01 GM12394-15	123,320
BELZER, FOLKERT O.....	ORGAN PRESERVATION STUDIES.....	5R01 AM18624-03	70,051
BELZER, FOLKERT O.....	IMPROVED MATCHING TECHNIQUES IN RENAL TRANSPLANTATION.....	1R01 AM21579-01	182,036
BENEVENGA, NORLIN J.....	EFFECT OF AGE ON SULFUR AMINO ACID METABOLISM.....	5R01 AM15227-07	39,245
BERKOFF, HERBERT A.....	RELATION OF MITOCHONDRIAL CHANGES TO CARDIAC FAILURE.....	5R01 HL19378-03	63,140
BISGARD, GERALD E.....	PERIPHERAL AND CENTRAL VENTILATORY CONTROL.....	2R01 HL15473-04A1	57,834
BITTAR, NEVILLE.....	STUDIES OF MYOCARDIAL REACTIVE HYPEREMIA.....	3R01 HL17759-03S1	15,085
BLATTNER, FREDERICK R.....	REGULATORY SITES IN PRO- AND EUKARYOTIC GENOMES.....	5R01 GM21812-04	81,957
BOCK, ROBERT M.....	DETERMINATION OF TRANSFER RIBONUCLEIC ACID STRUCTURE.....	5R01 GM12395-14	68,411
BOCK, ROBERT M.....	REGIONAL PRIMATE RESEARCH CENTER SUPPORT.....	5P40 RR00167-18	2,217,821
BOCK, ROBERT M.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07098-13	200,462
BORISY, GARY G.....	MECHANISM AND CONTROL OF MICROTUBULE ASSEMBLY.....	1R01 GM25062-01	115,098
BOWMAN, ROBERT E.....	EFFECTS OF LEAD ON FETAL AND NEONATAL DEVELOPMENT.....	2R01 ES01062-04	138,951
BOWMAN, ROBERT E.....	EFFECTS OF PCBs ON FETAL AND NEONATAL DEVELOPMENT.....	1R01 ES01847-01	130,792
BOWNS, M DERIC.....	MOLECULAR BIOLOGY OF VISUAL RECEPTOR OUTER SEGMENTS.....	3R01 EY00463-09S1	8,911
BOWNS, M DERIC.....	MOLECULAR BIOLOGY OF VISUAL RECEPTOR OUTER SEGMENTS.....	2R01 EY00463-10	98,609
BREMEL, ROBERT D.....	OXYTOCIN IN EXCITATION-CONTRACTION COUPLING.....	5R01 HD09764-03	32,229
BRIDSON, WILLIAM E.....	HYPOTHALAMIC-PITUITARY-TESTICULAR DEVELOPMENT.....	5R01 HD10533-02	65,135
BRILL, WINSTON J.....	MOLYBDENUM METABOLISM.....	2R01 GM22130-04	84,597
BROWN, RAYMOND R.....	EFFECT OF FAT SATURATION ON CANCER INCIDENCE IN MICE.....	3R01 CA20908-02S1	31,877
BUCHLER, DOLORES A.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA18397-04	141,452
BUCKNER, CARL K.....	AUTONOMIC RECEPTORS OF THE PULMONARY VASCULATURE.....	1R01 HL23209-01	48,349
BUMPASS, LARRY L.....	CENTER FOR POPULATION RESEARCH.....	5P30 HD05876-07	371,008
BURKHOLDER, PETER M.....	IN VITRO CULTURE STUDIES OF RENAL GLOMERULAR DISEASES.....	5R01 AM18640-03	33,067
BURRIS, ROBERT H.....	BIOLOGICAL FIXATION OF NITROGEN BY MICROORGANISMS.....	2R01 AI00848-23	54,822
CALDWELL, WILLIAM L.....	MULTIDISCIPLINARY PROGRAM IN RADIATION ONCOLOGY.....	5P01 CA19278-03	728,053
CARBONE, PAUL P.....	CLINICAL ONCOLOGY (MULTIDISCIPLINARY).....	5P01 CA20432-02	669,870
CARBONE, PAUL P.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA21076-02	43,175
CARBONE, PAUL P.....	EASTERN COOPERATIVE ONCOLOGY - WISCONSIN STUDIES.....	2R10 CA21076-03	282,398
CARBONE, PAUL P.....	EASTERN COOPERATIVE ONCOLOGY GROUP OPERATIONS OFFICE.....	5R10 CA21115-02	173,947
CARBONE, PAUL P.....	EASTERN COOPERATIVE ONCOLOGY GROUP OPERATIONS OFFICE.....	2R10 CA21115-03	673,689
CARLSON, STANLEY D.....	NEUROPILE RECONSTRUCTION BY HVEM AND OTHER METHODS.....	5R01 EY01686-03	40,684
CHESNEY, RUSSELL W.....	INDUCERS OF MATURATION OF RENAL AMINO ACID TRANSPORT.....	1R01 AM19489-01A1	60,997
CHU, FUN S.....	IMMUNOCHEMICAL STUDIES ON CARCINOGENIC MYCOTOXINS.....	5R01 CA15064-06	55,465

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
CLARK, ALLEN W.....	TRANSMITTER RELEASE FROM THE NEUROMUSCULAR JUNCTION.....	2R01 NS11445-04A1	53,927
CLELAND, W WALLACE.....	DETERMINATION OF ENZYME MECHANISMS BY KINETIC STUDIES.....	5R01 GM18938-07	68,547
CLIFTON, KELLY H.....	RADIATION IN VITRO & MAMMARY CELL SURVIVAL & NEOPLASIA.....	5R01 CA13881-06	126,535
COHEN, PHILIP P.....	ENZYME BIOSYNTHESIS AND REGULATION: UREA BIOSYNTHESIS.....	5R01 CA03571-22	87,545
COLAS, ANTONIO E.....	BIOCHEMICAL AND CLINICAL ASPECTS OF STEROID RECEPTORS.....	1R01 CA23921-01	63,525
COOPER, STUART L.....	PROTEIN AND THROMBUS DEPOSITION ON VASCULAR GRAFTS.....	1R01 HL21001-01A1	66,706
CRAVEN, GARY R.....	THE STRUCTURE AND ASSEMBLY OF THE 30S RIBOSOME.....	5R01 GM24109-02	128,148
CRIPPS, DEREK J.....	ACTION SPECTRA AND BIOCHEMISTRY OF PHOTODERMATOSES.....	5R01 AM09995-13	35,686
CROW, JAMES F.....	THE EFFECT OF MUTATION ON FITNESS.....	5R01 GM22038-04	94,814
CROW, JAMES F.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05435-17	200,462
CROWLEY, JOHN J.....	EXPLORATORY STUDIES ON CANCER PATIENT DATA.....	5R10 CA21077-02	85,091
D'ALESSIO, DONN J.....	EPIDEMIOLOGY AND COURSE OF VIRAL MYOPERICARDITIS.....	5R01 HL18535-03	63,874
DAHLBERG, JAMES E.....	SMALL RNAs OF RNA TUMOR VIRUSES.....	5R01 CA15166-05	84,416
DAVIES, JULIAN E.....	MECHANISMS OF ANTIBIOTIC RESISTANCE IN MICROORGANISMS.....	5R01 AI10076-12	58,008
DAVIES, JULIAN E.....	MACROMOLECULAR SYNTHESIS IN YEAST—GENETICS/BIOCHEMISTRY.....	5R01 AI12448-05	49,741
DAVIS, GARY A.....	CAMP AND CATECHOLAMINES IN REPRODUCTIVE FUNCTION.....	1R01 HD11515-01	36,464
DAVIS, LARRY D.....	CELLULAR POTENTIAL CHANGES CAUSING CARDIAC ARRHYTHMIA.....	2R01 HL13375-09	23,380
DE FOLIART, GENE R.....	TRANSMISSION AND CONTROL OF CALIFORNIA-GROUP VIRUSES.....	2R01 AI07453-12	56,438
DE FOLIART, GENE R.....	MAN-BITING ACTIVITY OF COLOMBIA BLOODSUCKING DIPTERA.....	1R01 AI14947-01	26,263
DE LUCA, HECTOR F.....	METABOLISM AND FUNCTION OF THE FAT-SOLUBLE VITAMINS.....	5P01 AM14881-08	385,167
DE MARS, ROBERT I.....	GENETIC STUDIES WITH CULTIVATED MAMMALIAN CELLS.....	5R01 GM06983-19	154,768
DE VENECIA, GUILLERMO B.....	THE EYE IN MALIGNANT HYPERTENSION.....	5R01 EY01007-05	45,498
DE VENECIA, GUILLERMO B.....	PRIMATE RETINA AND CHOROID IN MALIGNANT HYPERTENSION.....	5R01 EY02034-02	70,279
DEMLING, ROBERT H.....	PATHOPHYSIOLOGY OF LUNGS AFTER THERMAL INJURY.....	1R01 GM24975-01	32,660
DEMLING, ROBERT H.....	LUNG FLUID, PROTEIN EXCHANGE AFTER HEMORRHAGIC SHOCK.....	5R01 HL21076-02	46,320
DEMPSEY, JEROME A.....	HUMAN VENTILATORY ADAPTATION.....	5R01 HL15469-06	61,851
DEMPSEY, JEROME A.....	VALIDATION OF INDIRECT TESTS OF SMALL AIRWAYS FUNCTION.....	5R01 HL20815-02	38,785
DEUTSCH, HAROLD F.....	HUMAN BLOOD PROTEINS.....	5R01 CA01786-24	119,854
EBENHOLTZ, SHELDON M.....	DETERMINANTS OF PERCEPTUAL ORIENTATION.....	1R01 EY02264-01	26,384
ENGERMAN, RONALD L.....	STUDY OF DIABETIC RETINOPATHY.....	2R01 EY00300-13	206,055
ENSIGN, JERALD C.....	EXPLANATION OF WHY STREPTOMYCES PRODUCE ANTIBIOTICS.....	5R01 AI13948-02	35,314
ERNEST, J TERRY.....	PATHOPHYSIOLOGY OF THE OCULAR CIRCULATION.....	1R01 EY02526-01	113,389
FAHIEN, LEONARD A.....	REGULATION OF MAMMALIAN AMINO ACID METABOLISM.....	2R01 AM17587-04A1	53,933
FARRELL, PHILIP M.....	FETAL LUNG DEVELOPMENT IN THE DIABETIC PREGNANCY.....	1R01 HD11429-01	97,347
FERRY, JOHN D.....	VISCOELASTIC PROPERTIES OF BIOLOGICAL MACROMOLECULES.....	2R01 GM21652-04	56,701
FILLINGAME, ROBERT H.....	CHARACTERIZATION OF A MEMBRANE PROTON-TRANSLOCASE.....	5R01 GM23105-03	41,656
FOLTS, JOHN D.....	CORONARY FLOW STUDIES OF PARTIALLY OBSTRUCTED VESSELS.....	5R01 HL15681-06	59,989
GANTHER, HOWARD E.....	ORGANOSELENIUM COMPOUNDS: BIOSYNTHESIS AND FUNCTION.....	2R01 AM14184-09	86,569
GARTLAN, JOHN S.....	SURVEYS & CENSUSES OF WEST AFRICAN RAIN-FOREST PRIMATES.....	5R01 RR01055-02	21,409
GIBBONS, WILLIAM A.....	STRUCTURE, SPECTROSCOPY AND FUNCTION OF NEUROPEPTIDES.....	5R01 AM18604-04	78,667
GILBERT, ENID F.....	MECHANISMS OF CARDIOVASCULAR TERATOGENESIS.....	2R01 HL18050-04	71,686
GILBOE, DAVID D.....	METABOLISM OF THE BRAIN.....	5R01 NS05961-13	146,529
GOLDFARB, STANLEY.....	CHOLESTEROL METABOLISM IN HEPATIC NEOPLASMS.....	5R01 CA15664-05	63,885
GOODFRIEND, THEODORE L.....	KININ INHIBITORS DETECTED BY USE OF RECEPTORS.....	5R01 HL19836-03	53,575
GORSKI, JACK.....	PROLACTIN IN NORMAL AND NEOPLASTIC PITUITARY TISSUE.....	2R01 CA18110-04	67,442
GORSKI, JACK.....	ESTROGEN REGULATION OF UTERINE GROWTH AND FUNCTION.....	2R01 HD08192-06	121,401
GRAHAM, FRANCES K.....	SHORT-TIME AND ORIENTING SYSTEMS IN INFANCY.....	5R01 HD01490-11	43,356
GREASER, MARION L.....	THIN FILAMENT CONTROL OF HEART CONTRACTION.....	5R01 HL18612-03	46,696
GREEN, DAVID E.....	MOLECULAR BIOLOGY OF MEMBRANE SYSTEMS.....	2P01 GM12847-13A1	271,133
HALL, TIMOTHY C.....	INFECTIVE ROLE OF AMINO ACID BINDING BY VIRAL RNA.....	5R01 AI11572-06	75,396
HANING, RAY V, JR.....	CONTROL FACTORS FOR PLACENTAL HORMONES.....	1R01 HD11990-01	42,010
HARPER, ALFRED E.....	EFFECTS OF ALTERED DIET AND PLASMA AMINO ACID PATTERN.....	5R01 AM10747-13	93,811
HARPER, ALFRED E.....	EFFECT OF DIET AND HORMONES ON ENZYMES AND METABOLISM.....	5R01 AM10748-12	57,885
HARTING, JOHN K.....	CORTICAL EFFECTS OF SENSORY DEPRIVATION.....	5R01 EY01277-04	41,756
HEBER, RICK F.....	WISCONSIN CENTER ON MENTAL RETARDATION—CORE SUPPORT.....	5P30 HD03352-11	598,196
HIND, JOSEPH E.....	RESEARCH PROGRAM ON THE NEURAL BASIS OF HEARING.....	2P01 NS12732-04	439,044
HINZE, HARRY C.....	VACCINATION AGAINST AN ONCOGENIC HERPES VIRUS.....	5R01 CA21195-02	67,672
HOKIN, LOWELL E.....	BIOCHEMISTRY AND PHARMACOLOGY OF NA-K TRANSPORT.....	2R01 HL16318-21	166,832
HOKIN, MABEL R.....	CONTROL OF MEMBRANE ACTIVITY BY NEUROTRANSMITTERS.....	5R01 NS13878-02	72,690
HONG, RICHARD.....	ALLERGIC DISEASE CENTER.....	5P50 AI10404-08	147,423

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
HONG, RICHARD.....	CLINICAL AND EXPERIMENTAL STUDIES OF CULTURED THYMUS.....	5R01 AI14354-02	133,712
HONG, RICHARD.....	STUDY AND THERAPY OF IMMUNE DEFICIENCY.....	2R01 HD07778-06	89,050
HSIA, MONG-TSENG S.....	TOXICOLOGY OF POLYCHLORINATED AZOXY AND AZOBENZENES.....	1R23 ES01737-01	40,943
HUTCHINSON, C RICHARD.....	CHEMISTRY/METABOLISM OF NATURAL ANTITUMOR COMPOUNDS.....	2R01 CA17127-05	41,991
HUTCHINSON, C RICHARD.....	SYNTHESIS OF ANTHRACYCLINE ANTIBIOTICS FROM TETRACYCLINE.....	1R01 CA22937-01	21,374
INMAN, ROSS B.....	STRUCTURE AND REPLICATION OF DNA.....	5R01 GM14711-12	129,304
JEFCOATE, COLIN R.....	CYTOCHROME P450, CHEMICAL CARCINOGENESIS BENZO(A)PYRENE.....	5R01 CA16265-04	49,363
KAESBERG, PAUL J.....	STRUCTURE OF BIOLOGICAL MACROMOLECULES.....	5R01 AI01466-22	94,061
KAESBERG, PAUL J.....	TRANSLATION OF RNA VIRUS MESSENGERS.....	5R01 CA15613-05	80,182
KAHAN, BRENDA.....	DEVELOPMENTAL POTENTIALITIES OF TERATOMA CELLS.....	5R01 CA18994-03	62,666
KAHAN, LAWRENCE.....	IMMUNOCHEMICAL ANALYSIS OF 30S RIBOSOME STRUCTURE.....	2R01 GM22150-04	76,734
KALIL, KATHERINE.....	DEVELOPMENTAL STUDIES OF THE MOTOR SYSTEM.....	1R01 NS14428-01	50,390
KALIL, RONALD E.....	DEVELOPMENTAL STUDIES OF THE VISUAL SYSTEM.....	2R01 EY01331-05A1	73,389
KARAVOLAS, HARRY J.....	STEROID BIOCHEMISTRY OF THE HYPOTHALAMIC-OVARIAN AXIS.....	5R01 HD05414-07	77,332
KASPER, CHARLES B.....	NUCLEAR & MICROSOMAL MEMBRANES FROM NORMAL & TUMOR CELLS.....	5R01 CA17300-04	60,732
KEESEY, RICHARD E.....	PHYSIOLOGICAL REGULATION OF BODY WEIGHT.....	5R01 AM19944-14	58,298
KENDRICK, JOHN E.....	NEURAL INTEGRATION OF THE CARDIOVASCULAR REFLEXES.....	1R01 HL22715-01	57,045
KLOTZ, JEROME H.....	LONG-TERM ANALYSIS OF CENTRAL ONCOLOGY GROUP DATA.....	2R10 CA12271-06A1	36,884
KLOTZ, JEROME H.....	STATISTICAL PROBLEMS IN CLINICAL CANCER RESEARCH.....	2R01 CA18332-04	66,126
KUNG, CHING.....	GENETIC DISSECTION OF BEHAVIOR IN PARAMECIUM.....	5R01 GM22714-04	113,570
LAGE, GARY L.....	ALTERATION OF DIGITALIS AND ALDOSTERONE DISPOSITION.....	1R01 HL21996-01	40,740
LARDY, HENRY A.....	CONTROL PROCESSES IN MAMMALIAN CELLS.....	2R01 AM10334-13	246,788
LARDY, HENRY A.....	REGULATION OF GLUCONEOGENESIS IN DIABETES.....	5R01 AM20678-02	40,843
LEAVITT, JUDITH W.....	HEALTH AND POLITICS IN NINETEENTH CENTURY MILWAUKEE.....	1R01 LMO3052-01	23,447
LEMANSKI, LARRY F.....	GENETIC CARDIOMYOPATHIES.....	5R01 HL22550-02	75,001
LIGHTFOOT, E N.....	EVALUATION OF ELECTROPOLARIZATION CHROMATOGRAPHY.....	1R01 GM24747-01	120,502
LINKSWILER, HELLEN M.....	MECHANISMS OF PROTEIN-INDUCED HYPERCALCIURIA IN MAN.....	5R01 AM19290-02	54,940
LIPTON, PETER.....	KO ACTIVATED PROTEIN SYNTHESIS ON BRAIN CELL FUNCTION.....	1R01 NS14175-01	49,888
LOWER, GERALD M, JR.....	METABOLIC FACTORS INVOLVED IN BLADDER CARCINOGENESIS.....	5R26 CA14524-06	95,507
MACDONALD, MAURICE M.....	RELATIVE INCOME AND FERTILITY: LONGITUDINAL ANALYSIS.....	1R01 HD10751-01	71,277
MACK, EBERHARD A.....	BILE ACIDS: LIVER INJURY AND GALLSTONE DISSOLUTION.....	5R01 AM19245-03	55,275
MADSEN, PAUL O.....	PATHOGENESIS AND THERAPY OF BACTERIAL PROSTATITIS.....	5R01 AM20474-02	46,552
MANNING, DEAN D.....	MECHANISM AND USES OF ANTI-IG IMMUNOSUPPRESSION.....	2R01 CA17531-04	46,512
MARLETT, JUDITH A.....	MEASURING DIETARY FIBER.....	1R01 AM21712-01	38,143
MARSH, RICHARD F.....	SLOW INFECTION BY CONVENTIONAL/UNCONVENTIONAL VIRUSES.....	9R01 NS14822-06	127,930
MAZESS, RICHARD B.....	TOTAL BODY ABSORPTIOMETRY.....	5R01 AM17892-04	36,785
MAZESS, RICHARD B.....	MULTIWIRE PROPORTION COUNTER FOR AREA ABSORPTIOMETRY.....	5R01 AM20364-02	35,392
MC CLAIN, WILLIAM H.....	GENETIC ANALYSIS OF TRNA'S CODED BY PHAGE T4.....	5R01 AI10257-07	70,784
METZENBERG, ROBERT L, JR.....	THE GENETIC CONTROL OF PROTEIN SYNTHESIS.....	5R01 GM08995-17	71,756
MILLER, JAMES A.....	BIOCHEMICAL STUDIES IN CHEMICAL CARCINOGENESIS.....	1P01 CA22484-01	805,281
MOSHER, DEANE F, JR.....	STUDIES OF FIBRONECTIN AND RELATED GLYCOPROTEINS.....	1R01 HL21644-01	63,938
MUELLER, GERALD C.....	REGULATORY MECHANISMS IN TUMOR BIOLOGY.....	1P01 CA23076-01	1,052,892
NELSEN, STEPHEN F.....	RADICAL ION REACTION.....	1R01 GM25428-01	30,089
NETSELL, RONALD W.....	NEUROGENIC SPEECH DISORDERS.....	5P50 NS13274-02	276,631
NOMURA, MASAYASU.....	GENETICS AND BIOCHEMISTRY OF RIBOSOME BIOSYNTHESIS.....	2R01 GM20427-06	208,924
NORBACK, DIANE H.....	CARCINOGENIC ACTION OF POLYCHLORINATED BIPHENYLS.....	5R01 CA22140-02	44,432
NORTHROP, DEXTER B.....	KINETIC MECHANISMS OF ANTIBIOTIC INACTIVATING ENZYMES.....	5R01 AI11603-03	35,919
O'BRIEN, JOHN F.....	BIOSYNTHESIS OF FRACTIONATED PROTEOGLYCANS OF LUNG.....	5R01 HL21646-02	17,840
O'LEARY, MARION H.....	COENZYME BINDING AND NERVOUS DISORDERS.....	5R01 NS07657-11	66,032
ODELL, GERARD B.....	MATURATION OF LIVER FOR THE METABOLISM OF BILIRUBIN.....	9R01 AM21668-02	112,185
OLSEN, WARD A.....	INTESTINAL MUCOSAL FUNCTION IN DIABETES.....	5R01 AM13927-09	29,202
OPITZ, JOHN M.....	PROGRAM PROJECT IN CLINICAL GENETICS.....	5P01 GM20130-05	493,981
ORME-JOHNSON, WILLIAM, III.....	EPR AND X-RAY STUDIES OF ELECTRON-TRANSFER ENZYMES.....	5R01 GM17170-07	87,028
PAMUKCU, A M.....	URINARY BLADDER CARCINOGENESIS BY BRACKEN FERN.....	5R26 CA14523-05	168,530
PATAU, EEVA THERMAN.....	HUMAN CYTOGENETICS: SELECTED PROBLEMS.....	5R01 GM22881-03	80,496
PATE, JACK L.....	BIOLOGY OF ASTICCACAULIS BIPROSTHECUM.....	5R01 GM19859-06	37,759
PERLMAN, DAVID.....	MICROBIAL METABOLITE INHIBITION OF TUMOR B12 BINDING.....	5R01 CA16904-05	55,939
PETERSON, RICHARD E.....	ENVIRONMENTAL POLLUTANTS AND TOXICOLOGY OF THE LIVER.....	2R01 ES01332-04	45,839
PITOT, HENRY C.....	CANCER RESEARCH AT THE MC ARDLE LABORATORY.....	2P30 CA07175-16	1,579,178
POLAND, ALAN P.....	TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS.....	5R01 ES01884-02	72,386

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
PORTER, JOHN W.....	ENZYMATIC SYNTHESIS OF FATTY ACIDS AND CHOLESTEROL.....	5R01 AM01383-22	110,724
PORTER, JOHN W.....	REGULATION OF LIPOGENESIS BY INSULIN AND GLUCAGON.....	5R01 AM21148-02	53,110
PORTER, JOHN W.....	REGULATION OF LIPID BIOSYNTHESIS AND TRANSPORT.....	5R01 HL16364-04	40,445
POTTER, VAN R.....	ONCOGENY AS BLOCKED ONTOGENY: STUDIES OF LIVER CANCER.....	5R01 CA17334-03	86,882
RAETZ, CHRISTIAN R.....	SYNTHESIS AND FUNCTION OF MEMBRANE PHOSPHOLIPIDS.....	5R01 AM19551-02	59,210
RAETZ, CHRISTIAN R.....	BIOGENESIS OF MEMBRANE LIPIDS IN ANIMAL CELLS.....	1R01 AM21722-01	51,975
RANKIN, JOHN H.....	REGULATION OF UTERINE BLOOD FLOW.....	5R01 HD06736-05	44,543
RANKIN, JOHN H.....	PLACENTAL DRUG TRANSFER.....	1R01 HD11185-01A1	36,737
RANKIN, JOHN H.....	METABOLISM IN PERFUSED FETAL AND NEWBORN RABBIT LUNGS.....	5R01 HL18952-03	26,592
RECORD, M THOMAS, JR.....	ION EFFECTS ON INTERACTIONS OF RNA POLYMERASE AND DNA.....	5R01 GM23467-02	55,521
REZNIKOFF, WILLIAM S.....	RECOGNITION OF TRANSCRIPTION REGULATORY SIGNALS.....	5R01 GM19670-07	70,537
RICH, DANIEL H.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05456-16	38,509
RIS, HANS.....	SUBMICROSCOPIC ORGANIZATION OF CHROMOSOMES.....	5R01 GM04738-23	68,753
RIS, HANS.....	ELECTRON MICROSCOPE FACILITY FOR BIOMEDICAL RESEARCH.....	5P41 RR00570-08	129,575
ROSE, DAVID P.....	PITUITARY AND THYROID FUNCTION IN BREAST CANCER.....	2R01 CA17579-04	36,839
ROSS, JEFFREY.....	SYNTHESIS AND PROCESSING OF GLOBIN MRNA.....	5R01 CA21510-02	55,085
ROSS, LEONARD E.....	DEVELOPMENTAL PROCESSES IN CHILDREN AT RISK FOR MR.....	5P01 HD08240-05	147,265
ROWND, ROBERT H.....	THE CONTROL OF THE REPLICATION OF BACTERIAL EPISOMES.....	5R01 GM14398-13	120,684
ROYCE, GEORGE J.....	THALAMIC CONNECTIONS.....	5R01 NS13453-02	33,808
RUECKERT, ROLAND R.....	STRUCTURE AND SYNTHESIS OF AVIAN RNA TUMOR VIRUSES.....	2R01 CA08662-12A1	75,933
RUOHO, ARNOLD E.....	MOLECULAR CHARACTERIZATION—BETA-ADRENERGIC RECEPTORS.....	2R01 NS12392-04	66,806
RUSCH, HAROLD P.....	CLINICAL CANCER CENTER SUPPORT (COMPREHENSIVE).....	5P30 CA14520-06	1,323,384
SHAHIDI, NASROLLAH T.....	CHILDREN'S CANCER STUDY GROUP A.....	5R10 CA05436-18	61,358
SHAPIRO, SANDER S.....	INDUCTION OF PROTEIN SYNTHESIS IN HUMAN ENDOMETRIUM.....	1R01 HD11726-01	27,996
SHRAGO, EARL S.....	CONTROL MECHANISMS IN GLUCONEOGENESIS.....	5R01 GM14033-12	49,210
SHUG, AUSTIN L.....	METABOLIC CHANGE DURING CARDIAC ISCHEMIA.....	2R01 HL17736-04	82,258
SIEGEL, FRANK L.....	EFFECTS OF HYPERTHERMIA ON MAMMALIAN DEVELOPMENT.....	1R01 HD12001-01	68,100
SIEGEL, FRANK L.....	CALCIUM-BINDING PROTEINS IN NERVOUS TISSUE.....	2R01 NS11652-05	70,214
SIH, CHARLES J.....	BIOSYNTHESIS OF PENICILLINS AND CEPHALOSPORINS.....	5R01 AI10519-07	71,473
SIH, CHARLES J.....	CHEMISTRY AND SYNTHESIS OF BIO-ACTIVE SUBSTANCES.....	5R01 AM04874-18	76,196
SIH, CHARLES J.....	PROSTAGLANDINS AND OTHER PHYSIOLOGICALLY-ACTIVE LIPIDS.....	5R01 AM09688-14	70,787
SIH, CHARLES J.....	SYNTHESIS OF ANTICANCER ANTHRACYCLINE ANTIBIOTICS.....	5R01 CA21387-02	28,006
SIMPSON, DAVID P.....	ACID-BASE BALANCE REGULATION OF RENAL METABOLISM.....	3R01 AM18351-04S1	20,280
SMITH, DEAN O.....	MECHANISMS OF AXON CONDUCTION BLOCK.....	5R01 NS13600-02	35,182
SMITHIES, OLIVER.....	DNA CONTROLLING THE SYNTHESIS OF HUMAN HEMOGLOBINS F & A.....	5R01 AM20120-02	86,253
SMITHIES, OLIVER.....	GENETIC CONTROL OF PROTEIN STRUCTURE AND SYNTHESIS.....	2R01 GM20069-06	186,806
SPEAR, PETER D.....	VISUAL INTEGRATION IN THE BRAIN.....	5R01 EY01916-03	46,863
SPEAR, PETER D.....	BINOCULAR INTERACTIONS IN VISUAL SYSTEM DEVELOPMENT.....	1R01 EY02545-01	91,318
STEELE, THOMAS H.....	THE SPONTANEOUSLY HYPERTENSIVE KIDNEY.....	1R01 HL22836-01	58,765
STONE, WILLIAM H.....	IMMUNOGENETICS AND REPRODUCTION IN RHESUS MONKEYS.....	5R01 HD07385-05	70,295
STONE, WILLIAM H.....	IMMUNOGENETIC STUDIES OF A SPERM ENZYME PGK-B.....	1R01 HD11200-01	64,388
SUGIYAMA, HIROSHI.....	STRUCTURE-TOXICITY RELATIONSHIP OF BOTULINUM TOXIN.....	5R01 ES01822-05	27,415
SUNDARALINGAM, MUTTAIYA.....	X-RAY STUDIES ON NUCLEIC ACID CONSTITUENTS.....	2R01 GM17378-09	92,331
SUTTIE, JOHN W.....	NUTRITIONAL AND METABOLIC EFFECTS OF FLUORIDES.....	5R01 AM15521-07	40,306
SUTTIE, JOHN W.....	PEPTIDE SUBSTRATES TO STUDY VITAMIN K ACTION.....	1R01 AM21472-01	45,490
SWEET, JAMES A.....	RECENT CHANGE IN ACTIVITIES AND STATUS OF YOUNG WOMEN.....	1R01 HD11366-01	131,463
SWICK, ROBERT W.....	PROTEIN TURNOVER IN PROTEIN AND CALORIE DEPRIVATION.....	5R01 AM14704-08	51,498
TAKAYAMA, KUNI K.....	MECHANISM OF ACTION OF ISONIAZID ON TUBERCLE BACILLUS.....	5R01 AI11297-06	40,516
TAKAYAMA, KUNI K.....	ANTITUMOR ACTIVITY OF GLYCOLIPID-ENDOTOXIN MIX.....	5R01 CA21790-02	66,521
TEMIN, HOWARD M.....	MOLECULAR BIOLOGY AND GENETICS OF TUMOR VIRUSES.....	1P01 CA22443-01	457,040
TERASAWA, EI.....	HYPOTHALAMIC CONTROL OF PUBERTY.....	1R01 HD11355-01	54,584
THOMPSON, WAYNE H.....	LA CROSSE ARBOVIRUS STUDIES IN FORESTED AREAS.....	5R01 AI11547-06	112,565
THURLOW, WILLARD R.....	INEXPENSIVE VISUAL COMMUNICATION DEVICE FOR THE DEAF.....	1R01 NS14299-01	24,022
TROST, BARRY M.....	NOVEL SYNTHETIC APPROACHES TO ANTITUMOR AGENTS.....	5R01 CA20916-02	57,587
TROST, BARRY M.....	MACROLIDES, STEROIDS, PROSTANOIDS, ETC—SYNTHETIC DESIGN.....	2R01 GM13598-13	96,832
TULUNAY-KEESEY, ULKER.....	VISUAL PROCESSES WITH A MOTIONLESS RETINAL IMAGE.....	5R01 EY00308-11	84,029
TULUNAY-KEESEY, ULKER.....	MOTION OF RETINAL IMAGE AND CONTRAST SENSITIVITY.....	1R01 EY02483-01	60,619
UEHLING, DAVID T.....	BACTERIAL ADHERENCE IN URINARY TRACT INFECTIONS.....	1R01 AM21426-01	44,912
UEMURA, ETSURO.....	AGING PRIMATE NEUROPATHOLOGICAL STUDIES.....	1R23 AG01038-01	37,311
UPDIKE, STUART J.....	IMMOBILIZED ENZYMES TO ALTER AND ANALYZE METABOLISM.....	5R01 GM16133-11	55,233

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
UPOIKE, STUART J.....	EXTRACORPOREAL RESPIRATORY GAS EXCHANGE: NEW APPROACH.....	5R01 HL15668-06	85,190
VAN RYZIN, JOHN R.....	ESTIMATORS AND TESTS FOR CENSORED SURVIVAL DATA.....	2R01 GM23129-03	25,553
VEDEJS, EOWIN.....	CYTOTOXIC MACROCYCLES: CYTOCHALASIN ANALOGS.....	2R01 CA17918-04	70,677
WALKER, DUARD L.....	STUDY OF A NEW HUMAN PAPOVAVIRUS.....	2R01 AI11217-06	125,209
WALLOW, INGOLF H.....	THE BLOOD-RETINAL BARRIER IN DIABETIC RETINOPATHY.....	5R01 EY01634-03	70,330
WELKER, WALLACE I.....	TRIGEMINAL LOCALIZATION OF TACTILE COOING FUNCTION.....	1R01 NS14748-01	115,279
WELLS, ROBERT D.....	DNA STRUCTURE AND GENE REGULATION.....	1R01 CA20279-01A1	115,635
WHITLOCK, HOWARD W, JR.....	A PRACTICAL SYNTHESIS OF DAUNOMYCIN.....	1R01 CA23837-01	39,803
WOOLSEY, CLINTON N.....	COMPARATIVE STUDIES ON NERVOUS SYSTEM.....	5R01 NS03641-11	46,370
YATVIN, MILTON B.....	ROLE OF MEMBRANE LIPIDS IN HYPERTHERMIC KILLING.....	1R01 CA23754-01	48,806
YATVIN, MILTON B.....	MEMBRANE COMPOSITION AND HYPERTHERMIC CELL DEATH.....	1R01 CA24872-01	26,872
YIN, TOM C.....	CENTRAL NERVOUS SYSTEM CONTROL OF EYE MOVEMENTS.....	1R01 EY02606-01	85,842
YODA, ATSUNOBU.....	INTERACTION OF CARBOIC ACID ANHYDRASES WITH NAK-ATPASE.....	5R01 HL16549-04	45,244
YU, HYUK.....	MEMBRANE FLUIDITY AND PHOTORECEPTOR FUNCTION.....	5R01 EY01483-05	53,260
YUILL, THOMAS M.....	WILDLIFE RESERVOIRS OF ARBOVIRUSES.....	5R01 AI00771-23	58,108
ZACHMAN, RICHARD D.....	CONVERSION OF CHOLINE TO PHOSPHATIDYLCHOLINE IN LUNG.....	1R01 HL22500-01	29,339
ZARLING, JOYCE M.....	CELLULAR IMMUNITY TO TUMORS AND HERPES INFECTIONS.....	5R01 CA20409-02	64,013
ZIMMERMAN, HOWARD E.....	PHOTOCHEMISTRY OF ORGANIC MOLECULES.....	5R01 GM07487-18	103,150
ZIMMERMAN, STEPHEN W.....	NEPHROTOXIC EFFECTS OF ENVIRONMENTAL HYDROCARBONS.....	5R01 ES01480-02	51,240
ZOGRAFI, GEORGE.....	INTERFACIAL LIPO-LIPO INTERACTIONS.....	5R01 GM22478-03	27,960
ZU RHEIN, GABRIELE M.....	MORPHOLOGY OF CHRONIC VIRAL INFECTIONS OF THE BRAIN.....	5R01 NS11129-06	63,188
ORGANIZATION TOTAL	251	29,487,550	
MILWAUKEE			
MARQUETTE UNIVERSITY ZIP CODE 53233			
ABRAMOWITZ, JOSEPH.....	BIOMEDICAL RESEARCH DEVELOPMENT GRANT.....	5S08 RR09016-02	74,890
ROSKA, A KAY.....	HYPERSENSITIVITY PNEUMONITIS IN GUINEA PIGS.....	1R23 HL21918-01	40,155
ORGANIZATION TOTAL	2	115,045	
MEDICAL COLLEGE OF WISCONSIN ZIP CODE 53233			
AMMON, HELMUT V.....	BILE ACIDS, FATTY ACIDS AND INTESTINAL FUNCTION.....	3R01 AM17941-03S1	23,099
ANTHOLINE, WILLIAM E.....	ESR CHARACTERIZATION OF IMMOBILIZED FREE RADICALS.....	5R01 CA20737-03	46,746
BARBORIAK, JOSEPH J.....	LIPEMIAS AND RECONSTRUCTIVE CAROTID SURGERY.....	5R01 HL14378-07	80,218
BONCHEK, LAWRENCE I.....	MECHANISMS OF HYPERTENSION IN COARCTATION OF THE AORTA.....	5R01 HL21071-02	33,760
BORELLA, LUIS O.....	IMMUNOCOMPETENT CELLS IN ACUTE LYMPHOCYTIC LEUKEMIA.....	2R01 CA18602-04	103,618
BUCKMIRE, FRANCIS L.....	SPECIFIC ENVELOPE COMPONENTS OF H. INFLUENZAE TYPE B.....	1R01 AI13808-01A1	39,376
CATLIN, B WESLEY.....	DEOXYRIBONUCLEIC ACIDS AND NUCLEASES OF BACTERIA.....	5R01 AI02353-21	57,878
DAVIS, STARKEY O.....	EXPERIMENTAL PSEUDOMONAS KERATITIS.....	3R01 EY01665-03S1	9,105
DAVIS, STARKEY O.....	EXPERIMENTAL PSEUDOMONAS KERATITIS.....	2R01 EY01665-04	95,115
DAWSON, CHRISTOPHER A.....	PULMONARY HEMODYNAMICS.....	5R01 HL19298-03	28,640
DAWSON, CHRISTOPHER A.....	ABSORPTION OF ANTIGEN THROUGH INFLAMED LUNGS.....	5R01 HL19733-03	19,561
DEWOS, WYLIE J.....	ESOPHAGEAL MOTION IN HEALTH AND DISEASE.....	2R01 AM15540-07	57,952
DUCK, STEPHEN C.....	THERAPY-INDUCED GROWTH DISORDERS IN CHILDHOOD CANCER.....	1R01 CA23968-01	60,273
EDELHAUSER, HENRY F.....	PATHOGENESIS OF CORNEAL EDEMA AFTER INTRAOCULAR SURGERY.....	3R01 EY00933-05S1	18,000
EDELHAUSER, HENRY F.....	PATHOGENESIS OF CORNEAL EDEMA AFTER INTRAOCULAR SURGERY.....	5R01 EY00933-06	52,296
FINK, JORDAN N.....	SUPPORT FOR PULMONARY DISEASE RESEARCH CENTER.....	5P50 HL15389-07	955,256
FRERMAN, FRANK E.....	STUDIES OF LIPID TRANSPORT.....	5R01 AM15527-08	44,155
FRERMAN, FRANK E.....	UTILIZATION OF KETONES AND FATTY ACIDS IN HEART.....	1R01 AM22104-01	48,784
FRERMAN, FRANK E.....	ACYL COA DEHYDROGENASES: REGULATION OF B-OXIDATION.....	1R01 GM25486-01	82,096
FUJIMOTO, JAMES M.....	ALTERATION IN DRUG METABOLISM BY CERTAIN CARBAMATES.....	5R01 GM16503-10	52,322
GHAZARIAN, JACOB G.....	CONTROL OF ENZYMES IN THE VITAMIN D3 ENDOCRINE COMPLEX.....	5R01 AM19145-03	36,356
GIROTTI, ALBERT W.....	PHOTOCHEMISTRY OF BILIRUBIN AND BLOOD COMPONENTS.....	5R01 HD07753-05	42,966
GLICK, DAVID M.....	GASTRIC ZYMOGENS, PROTEASES AND INHIBITORS.....	5R01 AM09826-13	72,964
GRAUSZ, JOHN P.....	NEWBORN LUNG FUNCTION DURING MECHANICAL VENTILATION.....	1R01 HL22636-01	75,966
GRAY, RICHARD W.....	CONTROL OF 1,25 (OH) ₂ D LEVELS IN MALES AND FEMALES.....	1R01 AM22014-01	48,167
GROSSBERG, SIDNEY E.....	MOLECULAR MECHANISMS OF ANTIVIRAL RESISTANCE.....	5R01 AI13818-02	101,154
HAROMAN, HAROLD F.....	EFFECTS OF DRUGS UPON MYOCARDIAL HYPOXIA.....	5R01 HL08311-14	55,314
HAUGHTON, VICTOR M.....	ARACHNOIDITIS FOLLOWING MYELOGRAPHY.....	1R01 NS14274-01	59,158

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
HEBERT, LEE A.....	INTRARENAL PRESSURE AND RENAL FUNCTION.....	5R01 HL13323-08	93,453
HOLCENBERG, JOHN S.....	PROGRAM FOR RESEARCH WITH ENZYMES AS ANTITUMOR AGENTS.....	5R01 CA20061-02	56,892
HOPWOOD, LARRY E.....	RESPONSE OF HUMAN CELLS TO HYPERTHERMIA AND RADIATION.....	1R01 CA23564-01	46,213
HUSSA, ROBERT O.....	ECTOPIC HCG-BETA FROM PURE BETA-PRODUCING CELLS.....	1R01 CA23357-01	53,221
HYDE, JAMES S.....	PHYSICAL PROPERTIES OF NITROXIDE RADICAL SPIN LABELS.....	5R01 GM22923-03	70,960
ITSKOVITZ, HAROLD D.....	SURGICAL AND PHYSIOLOGIC STUDIES OF ISOLATED KIDNEYS.....	2R01 HL12677-10	128,960
JELSEMA, CAROLE L.....	THE ACTION OF ARA-C AND 5-AZA ON MEMBRANE SYNTHESIS.....	1R23 CA25783-01	29,028
JORDON, ROBERT E.....	IMMUNOPATHOLOGY OF BULLOUS SKIN DISEASES.....	5R01 AI14550-02	71,096
KALKHOFF, RONALD K.....	METABOLIC EFFECTS OF INSULIN ANTAGONISM & DEFICIENCY.....	2R01 AM10305-13	60,164
KAMPINE, JOHN P.....	SYMPATHETIC AFFERENT ACTIVITY OF CARDIAC ORIGIN.....	2R01 HL16511-04	61,743
KISSEBAH, AHMED H.....	METABOLISM OF 'REMNANT VLDL' IN DIABETES.....	1R01 AM24087-01	66,777
KOSTREVA, DAVID R.....	CARDIOPULMONARY REFLEXES AND THEIR ANATOMICAL BASIS.....	1R23 HL21042-01A1	43,585
LECH, JOHN J.....	ADRENERGIC COMPONENTS OF LIPID METABOLISM.....	5R01 AM07681-13	38,744
LECH, JOHN J.....	METABOLISM OF ENVIRONMENTAL CONTAMINANTS BY FISH.....	2R01 ES01080-04	34,417
LECH, JOHN J.....	FRESHWATER BIOMEDICAL CENTER SUPPORT.....	1P30 ES01985-01	129,611
LEMANN, JACOB, JR.....	SUGAR INGESTION, CALCIURIA, CRYSTALLURIA, AND STONES.....	2R01 AM15089-09	94,004
LENNON, EDWARD J.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05434-17	137,771
LIGHTFOOT, ROBERT W, JR.....	AN ARTHRITIS CENTER FOR SOUTHEASTERN WISCONSIN.....	1P60 AM20647-01A1	193,776
LOMBARD, JULIAN H.....	MICROCIRCULATORY FUNCTION IN HYPOTENSION.....	1R23 HL22972-01	43,591
MC CARTY, DANIEL J.....	STUDIES OF CRYSTAL DEPOSITION DISEASE.....	5R01 AM18074-05	73,668
MC CARTY, DANIEL J.....	GENERAL CLINICAL RESEARCH CENTER.....	5M01 RR00058-17	429,269
MIZIORKO, HENRY M.....	HMG-COA-CYCLE CONTROL IN NORMAL AND DIABETIC LIVER.....	1R01 AM21491-01	59,954
MOORE, VERNON L.....	IMMUNOGENETICS OF CHRONIC PULMONARY INFLAMMATION.....	1R01 HL22301-01	53,475
MURRAY, M PATRICIA.....	KINEMATIC STUDIES OF NORMAL AND ABNORMAL LOCOMOTION.....	5R01 AM13854-15	64,144
PINKEL, DONALD P.....	CANCER CENTER SUPPORT GRANT (SPECIALIZED).....	5P30 CA17700-04	376,575
PINKEL, DONALD P.....	COMBINATION CHEMOTHERAPY IN CHILDHOOD LEUKEMIA.....	3R01 CA17851-03S1	23,865
SCHULTZ, RICHARD O.....	DIABETES MELLITUS AND THE ANTERIOR SEGMENT OF THE EYE.....	1R01 EY02901-01	67,493
SKIBBA, JOSEPH L.....	LIVER THERMOCHEMOTHERAPY BY ISOLATED PERFUSION.....	7R01 CA25790-01	59,397
SOERGEL, KONRAD H.....	PATHOPHYSIOLOGY OF DIARRHEA.....	3R01 AM18526-03S1	37,622
SOERGEL, KONRAD H.....	GASTROINTESTINAL FUNCTION IN DIABETES MELLITUS.....	1R01 AM22090-01	57,657
SPURR, GERALD B.....	NUTRITION & DEVELOPMENT OF PHYSICAL FITNESS IN CHILDREN.....	1R22 HD10814-01A1	123,907
STEKIEL, WILLIAM J.....	VASCULAR SMOOTH MUSCLE REACTIVITY IN HYPOTENSIVE STRESS.....	5R01 GM23594-03	34,342
STOWE, DAVID F.....	INTRINSIC CONTROL OF CORONARY BLOOD FLOW BY CHEMICALS.....	5R23 HL21434-02	36,673
SWARTZ, HAROLD M.....	BIOMEDICAL ESR SPECTROSCOPY CENTER.....	5P41 RR01008-03	239,519
TAKETA, FUMITO C.....	STRUCTURE AND FUNCTION OF HEMOGLOBIN.....	5R01 AM15770-10	56,579
VAN HORN, DIANE L.....	REGENERATIVE CAPACITY OF CORNEAL ENDOTHELIUM.....	5R01 EY01436-04	71,636
VAN HORN, DIANE L.....	OPHTHALMIC RESEARCH CENTER.....	5P30 EY01931-02	93,788
WINKELHAKE, JEFFREY L.....	ANTIBODY METABOLISM DURING AGING.....	5R23 AG00648-02	45,299
ORGANIZATION TOTAL	66	5,859,163	
MILWAUKEE BLOOD CENTER ZIP CODE 53233			
ASTER, RICHARD H.....	HEMORRHAGIC DISEASES.....	5R01 HL13629-08	102,449
DUQUESNOY, RENE J.....	IMMUNOBIOLOGY OF HLA AND ITS CLINICAL APPLICATIONS.....	2R01 AI12507-04	91,389
ORGANIZATION TOTAL	2	193,838	
MILWAUKEE CHILDREN'S HOSPITAL ZIP CODE 53233			
PINKEL, DONALD P.....	CLINICAL CANCER EDUCATION PROGRAM.....	2R25 CA17997-04	53,071
ORGANIZATION TOTAL	1	53,071	
MOUNT SINAI MEDICAL CENTER ZIP CODE 53233			
BLASECKI, JOHN W, JR.....	ROLE OF FREE TUMOR ANTIGEN IN IMMUNITY TO SV40 TUMORS.....	5R01 CA24490-02	57,091
BORTIN, MORTIMER M.....	SPECIFIC ADOPTIVE IMMUNOTHERAPY OF AKR LEUKEMIA.....	3R01 CA20484-02S1	12,402
TRUITT, ROBERT L.....	GERMFREE TECHNIQUES APPLIED TO ADOPTIVE IMMUNOTHERAPY.....	5R01 CA18440-04	44,894
TRUITT, ROBERT L.....	ADOPTIVE IMMUNOTHERAPY USING ENDOTOXIN-TREATED DONORS.....	5R01 CA21998-02	41,464
ORGANIZATION TOTAL	4	155,851	
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MILWAUKEE ZIP CODE 53201			
BALMER, ROBERT T.....	ENTROPY AND METABOLISM: A MACROSCOPIC VIEW OF AGING.....	5R01 AG00498-02	42,361
COOK, JAMES M.....	SYNTHESIS OF ALPHA AND BETA ADRENERGIC ANTAGONISTS.....	5R01 HL17897-03	23,456
MC FARLAND, JAMES T.....	RESONANCE RAMAN PROBE STUDIES OF FLAVOPROTEINS.....	2R01 GM21916-04	36,913

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
WISCONSIN—Continued			
PETERING, DAVID H.....	METALS AND ANTITUMOR ACTIVITY OF THIOSEMICARBAZONES.....	5R01 CA16156-05	54,337
PETERING, DAVID H.....	METAL COMPLEXES OF KNOWN ANTITUMOR AGENTS.....	5R01 CA22184-02	35,788
PETERING, DAVID H.....	METALLOTHIONEIN: STRUCTURE-FUNCTION RELATIONSHIPS.....	5R01 ES01504-02	71,090
WATTERS, KENNETH L.....	BIOMEDICAL RESEARCH.....	1S07 RR07181-01	37,829
ORGANIZATION TOTAL	7 301,774		
STATE TOTAL	334 36,187,413		
WYOMING			
LARAMIE			
UNIVERSITY OF WYOMING ZIP CODE 82070			
BARDEN, ROLAND E.....	AFFINITY LABELS FOR ACYL-COA UTILIZING ENZYMES.....	2R01 GM20077-04	41,101
HALEY, BOYD E.....	APPLICATION OF PHOTO AFFINITY NUCLEOTIDE ANALOGS.....	2R01 GM21998-04	90,711
JENKINS, ROBERT A.....	INTRANUCLEAR SPINDLE AS A MODEL FOR MITOSIS.....	5R01 GM23878-02	32,259
JI, TAE H.....	CROSSLINKS OF BINDING PROTEINS TO RECEPTORS.....	5R01 GM23586-02	39,202
KAISER, IVAN I.....	NUCLEOTIDE ANALOGS AS STRUCTURAL & FUNCTIONAL PROBES.....	5R01 GM20326-05	36,395
MEYER, E GERALD.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR07157-03	17,814
ROSE, JAMES D.....	ELECTROPHYSIOLOGY OF THE GENITAL SENSORY SYSTEM.....	2R01 NS13748-03	47,154
SMITH, DAVID V.....	ADAPTATION AND SENSORY CODING IN TASTE.....	2R01 NS10211-06	34,587
ORGANIZATION TOTAL	8 339,223		
STATE TOTAL	8 339,223		
PUERTO RICO			
MAYAGUEZ			
UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS ZIP CODE 00708			
MISKIMEN, GEORGE W.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	3S06 RR08103-04S2	2,250
MISKIMEN, GEORGE W.....	SUPPORT FOR STUDY OF BIOMEDICAL SCIENCES.....	5S06 RR08103-05	24,436
ORGANIZATION TOTAL	2 26,686		
PONCE			
CATHOLIC UNIVERSITY OF PUERTO RICO ZIP CODE 00731			
CARRASQUILLO, ARNALDO.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	3S06 RR08067-07S1	1,500
INFANTE, GABRIEL.....	BIOMEDICAL RESEARCH PROGRAM.....	5S06 RR08067-08	231,189
ORGANIZATION TOTAL	2 232,689		
SAN JUAN			
INTER AMERICAN UNIVERSITY OF PUERTO RICO ZIP CODE 00936			
FRAME, ANNE D.....	BIOMEDICAL RESEARCH.....	1S06 RR08159-01	108,974
ORGANIZATION TOTAL	1 108,974		
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS ZIP CODE 00936			
BRUSH, JAMES S.....	PLASMA INHIBITORS OF INSULIN PROTEASE.....	5R01 AM20050-02	28,046
DE MELLO, WALMOR C.....	EFFECTS OF HORMONES ON CARDIAC ELECTROGENESIS.....	3R01 HL10897-12S1	2,304
EBBESSON, SVEN O.....	ORGANIZATION OF THE VERTEBRATE VISUAL SYSTEM.....	5R01 EY02024-02	111,853
EBBESSON, SVEN O.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S07 RR05419-17	44,496
HABEEB, AHMED F.....	DETERMINATION OF THE ANTIGENIC STRUCTURE OF LYSOZYME.....	5R01 AI14791-02	37,641
HADDOCK, LILLIAN.....	CLINICAL CANCER EDUCATION PROGRAM.....	5R25 CA18927-03	107,058
KICLITER, E EARL, JR.....	RETINAL PROJECTIONS FOR WAVE LENGTH DISCRIMINATION.....	5R01 EY02500-02	30,205
MAHGOUB, AHMED.....	EFFECTS OF VITAMIN D3 METABOLITES ON BONE, IN VITRO.....	5R01 AM19989-02	23,453

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
PUERTO RICO—Continued			
MARCIAL, VICTOR A.....	RADIATION THERAPY ONCOLOGY GROUP	5R10 CA12258-07	76,805
PEREZ-SANTIAGO, ENRIQUE	GENERAL CLINICAL RESEARCH CENTER	3M01 RR00063-15S1	258,780
SPECHT, SUSAN C.....	AXONAL TRANSPORT DURING VISUAL DEVELOPMENT	1R01 EY02334-01	40,751
VELEZ-GARCIA, ENRIQUE O.....	SOUTHEASTERN CANCER STUDY GROUP.....	5R10 CA12223-07	203,070
ORGANIZATION TOTAL	12 964,462		
UNIVERSITY OF PUERTO RICO RIO PIEDRAS CAMPUS ZIP CODE 00931			
HILLYER, GEORGE V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	5S06 RR08102-06	80,894
HILLYER, GEORGE V.....	BIOMEDICAL RESEARCH SUPPORT GRANT.....	2S06 RR08102-07	623,772
ORGANIZATION TOTAL	2 704,666		
STATE TOTAL	19 2,037,477		
OTHER COUNTRIES			
ARGENTINA			
BUENOS AIRES			
INSTITUTE OF BIOLOGY AND EXPERIMENTAL MEDICINE			
GUTNISKY, ABRAHAM.....	HUMAN URINARY ERYTHROPOIETIN COLLECTION.....	5R01 HL16675-05	46,451
ORGANIZATION TOTAL	1 46,451		
INSTITUTO DE INVESTIGACIONES BIOQUIMICAS 'FUNDACION CAMPOMAR'			
LELOIR, LUIS F.....	POLYPRENOLS AND POLYSACCHARIDES.....	5R01 GM19808-06	50,000
ORGANIZATION TOTAL	1 50,000		
NAVAL INSTITUTE OF SCIENTIFIC AND TECHNICAL RESEARCH			
CASTRO, JOSE A.....	MECHANISM OF CARBON TETRACHLORIDE HEPATOTOXICITY.....	5R01 AM13195-09	16,610
ORGANIZATION TOTAL	1 16,610		
UNIVERSITY OF BUENOS AIRES			
FRYDMAN, BENJAMIN J.....	BIOSYNTHETIC INTERMEDIATES OF PORPHYRINS.....	2R01 GM11973-13	29,040
ORGANIZATION TOTAL	1 29,040		
COUNTRY TOTAL	4 142,101		
AUSTRALIA			
CANBERRA			
AUSTRALIAN NATIONAL UNIVERSITY			
WHITE, MICHAEL J.....	CYTOGENETICS--CHROMOSOME REARRANGEMENTS.....	2R01 GM22710-03	17,539
ORGANIZATION TOTAL	1 17,539		
KENSINGTON			
UNIVERSITY OF NEW SOUTH WALES			
WICKEN, ANTHONY J.....	VARIATIONS IN THE SURFACE STRUCTURES OF ORAL BACTERIA.....	2R01 DE04175-04	52,020
ORGANIZATION TOTAL	1 52,020		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
AUSTRALIA—Continued			
MELBOURNE			
WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH			
ADAMS, JERRY M.....	STRUCTURE OF IMMUNOGLOBULIN MESSENGER RNAS AND GENES.....	2R01 CA12421-07	48,002
METCALF, DONALD.....	REGULATION OF B-LYMPHOCYTE COLONIES.....	5R01 CA22492-02	45,514
METCALF, DONALD.....	DIFFERENTIATION OF GRANULOCYTES AND MONOCYTES.....	1R01 CA22556-01	31,698
NOSSAL, GUSTAV J.....	MECHANISMS OF LYMPHOCYTE-ANTIGEN INTERACTIONS.....	2R01 AI03958-18	75,394
ORGANIZATION TOTAL	4	200,608	
MURDOCH			
MURDOCH UNIVERSITY			
RENFREE, MARILYN B.....	DELAYED IMPLANTATION AND DEVELOPMENT IN MARSUPIALS.....	5R01 HD09387-02	25,432
ORGANIZATION TOTAL	1	25,432	
PARKVILLE			
UNIVERSITY OF MELBOURNE			
AUGUSTEYN, ROBERT C.....	THE MECHANISM OF SENILE CATARACT FORMATION.....	3R01 EY01525-03S1	4,388
AUGUSTEYN, ROBERT C.....	THE MECHANISM OF SENILE CATARACT FORMATION.....	2R01 EY01525-04	21,942
MC KENZIE, IAN F.....	IA ANTIGENIC SPECIFICITIES IN MOUSE AND MAN.....	5R01 CA21224-02	42,036
NIALL, HUGH D.....	CHEMICAL STUDIES OF RELAXIN AND ITS RECEPTORS.....	1R01 HD11908-01	104,580
ORGANIZATION TOTAL	4	172,946	
PRAHRAN			
BAKER MEDICAL RESEARCH INSTITUTE			
MALONEY, JOHN E.....	RESPIRATORY SYSTEM DEVELOPMENT & SUDDEN INFANT DEATH.....	5R01 HD10135-03	39,227
ORGANIZATION TOTAL	1	39,227	
SYDNEY			
INSTITUTE OF DENTAL RESEARCH			
KNOX, KENNETH W.....	VARIATIONS IN THE SURFACE STRUCTURE OF ORAL BACTERIA.....	2R01 DE04174-04	48,092
ORGANIZATION TOTAL	1	48,092	
COUNTRY TOTAL	13	555,864	
BELGIUM			
BRUSSELS			
CATHOLIC UNIVERSITY OF LOUVAIN			
BAZIN, HERVE.....	REGULATION OF THE RAT IGE SYNTHESIS.....	2R01 AI12840-04	23,109
HERS, HENRI-GERY.....	INBORN ERRORS OF CARBOHYDRATE METABOLISM.....	5R01 AM09235-13	35,000
ORGANIZATION TOTAL	2	58,109	
EUROPEAN ORGANIZATION FOR RESEARCH ON TREATMENT OF CANCER			
TAGNON, HENRI J.....	COOPERATIVE CLINICAL CANCER STUDY (COORDINATING/DATA).....	5R10 CA11488-09	298,286
ORGANIZATION TOTAL	1	298,286	
FREE UNIVERSITY OF BRUSSELS			
CHRISTOPHE, JEAN P.....	MOLECULAR BASIS OF SECRETION IN THE EXOCRINE PANCREAS.....	2R01 AM17010-04	37,000
VASSART, GILBERT M.....	STUDY OF THE EXPRESSION OF THE THYROGLOBULIN GENE.....	1R01 AM21732-01	34,000
ORGANIZATION TOTAL	2	71,000	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
BELGIUM—Continued			
LIEGE			
UNIVERSITY OF LIEGE			
GHUYSEN, JEAN-MARIE.....	BACTERIAL TRANSPeptIDASES AND PENICILLIN ACTION	5R01 AI13364-03	28,643
ORGANIZATION TOTAL	1 28,643		
COUNTRY TOTAL	6 456,038		
CANADA			
CALGARY			
UNIVERSITY OF CALGARY			
TAN, YIN-HWEE.....	HUMAN INTERFERON PRODUCTION FOR ANTITUMOR STUDIES.....	5R01 CA19721-03	47,658
ORGANIZATION TOTAL	1 47,658		
DOWNSVIEW			
YORK UNIVERSITY			
SIMMONS, HARVEY G.....	MENTAL RETARDATION POLICY IN ONTARIO: 1840-1977	1R01 LM03190-01	9,019
ORGANIZATION TOTAL	1 9,019		
EDMONTON			
UNIVERSITY OF ALBERTA			
LOWN, J WILLIAM	THE MODE OF ANTITUMOR ACTION OF NITROSOUREAS.....	5R01 CA21488-02	24,435
ORGANIZATION TOTAL	1 24,435		
GUELPH			
UNIVERSITY OF GUELPH			
ETCHES, ROBERT J	TRACE MINERAL METABOLISM IN GENETIC CHONDRODYSPLASIA	5R01 AM18758-03	34,350
SAFE, STEPHEN H	METABOLISM & CARCINOGENICITY OF HALOAROMATIC POLLUTANTS.....	1R01 CA21814-01	30,552
ORGANIZATION TOTAL	2 64,902		
HALIFAX			
DALHOUSIE UNIVERSITY			
CYNADER, MAX S.....	ETIOLOGY OF STRABISMUS IN ANIMALS.....	1R01 EY02248-01	27,252
ORGANIZATION TOTAL	1 27,252		
HAMILTON			
AMERICAN ASSOCIATION FOR THE HISTORY OF MEDICINE			
POTTER, PAUL M.....	LOEB CLASSICAL LIBRARY, HIPPOCRATES, VOLUME FIVE	5R01 LM02813-03	16,600
SMITH, WESLEY D.....	LOEB CLASSICAL LIBRARY, HIPPOCRATES, VOLUME SIX.....	1R01 LM03047-01	4,730
ORGANIZATION TOTAL	2 21,330		
MC MASTER UNIVERSITY			
EPAND, RICHARD M.....	THE ROLE OF GLUCAGON IN DIABETES.....	1R01 AM21285-01	23,000
ORGANIZATION TOTAL	1 23,000		
KINGSTON			
QUEEN'S UNIVERSITY AT KINGSTON			
WYATT, GERARD R.....	BIOCHEMISTRY OF DEVELOPMENT AND REGULATION.....	5R01 HD07951-05	46,255

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CANADA—Continued			
ORGANIZATION TOTAL	1	46,255	
LONDON			
UNIVERSITY OF WESTERN ONTARIO			
BANTING, DAVID W.....	LONGITUDINAL STUDY OF DENTAL ROOT SURFACE CARIES.....	5R01 DE04465-03	5,181
BARNETT, HENRY J.....	EXTRACRANIAL/INTRACRANIAL ARTERIAL ANASTOMOSIS STUDY.....	5R10 NS14164-02	645,811
CHERIAN, M. GEORGE.....	NATURE OF LEAD AND MERCURY BINDING NUCLEAR PROTEINS.....	2R01 ES01535-02	18,910
DALES, SAMUEL.....	ALTERATIONS OF NUCLEOPROTEINS AND MEMBRANES.....	5R01 AI13395-02	95,647
MORRIS, VINCENT L.....	CONTROL OF EXPRESSION OF MOUSE MAMMARY TUMOR VIRUS.....	5R01 CA21311-02	34,114
PERCY, DEAN H.....	HERPETIC OPHTHALMITIS.....	5R01 EY01833-02	8,625
TREVITHICK, JOHN R.....	EYE LENS EPITHELIAL CELL DIFFERENTIATION AND CATARACT.....	5R01 EY01927-02	40,578
ORGANIZATION TOTAL	7	848,866	
MONTREAL			
CLINICAL RESEARCH INSTITUTE OF MONTREAL			
HAMET, PAVEL.....	GROWTH OF VASCULAR SMOOTH MUSCLE IN DIABETES MELLITUS.....	5R01 AM21299-02	28,370
ORGANIZATION TOTAL	1	28,370	
JEWISH GENERAL HOSPITAL			
MARGOLESE, RICHARD G.....	PRIMARY BREAST CANCER THERAPY GROUP (NSABP).....	5R10 CA20156-02	31,037
PERDUE, JAMES F.....	CONTROL OF CELL GROWTH BY MITOGEN RECEPTORS.....	5R01 GM23763-02	55,966
ORGANIZATION TOTAL	2	87,003	
MAISONNEUVE HOSPITAL			
GAGNAN-BRUNETTE, MICHELE.....	PHYSIOLOGY OF MAGNESIUM IN THE PAPILLA OF RAT KIDNEY.....	5R01 AM20136-02	22,955
ORGANIZATION TOTAL	1	22,955	
MC GILL UNIVERSITY			
MC KENZIE, JOHN M.....	PATHOGENESIS OF HYPERTHYROIDISM.....	5R01 AM04121-17	51,663
PATEL, YOGESH C.....	STUDIES OF PANCREATIC SOMATOSTATIN PHYSIOLOGY.....	1R01 AM21373-01	45,700
POSNER, BARRY I.....	POLYPEPTIDE HORMONE RECEPTORS.....	5R01 AM19573-02	43,620
SNIDERMAN, ALLAN D.....	REPERFUSION INJURY RELATION TO POSTOPERATIVE INFARCTION.....	1R01 HL22098-01	26,605
SOLOMON, SAMUEL.....	FORMATION, METABOLISM AND ROLE OF HORMONES IN PREGNANCY.....	5R01 HD04365-17	60,144
ORGANIZATION TOTAL	5	227,732	
NOTRE DAME HOSPITAL			
BAND, PIERRE R.....	EASTERN COOPERATIVE ONCOLOGY GROUP.....	5R10 CA21653-02	34,947
ORGANIZATION TOTAL	1	34,947	
ROYAL VICTORIA HOSPITAL			
SHIBATA, HENRY R.....	PRIMARY BREAST CANCER THERAPY GROUP.....	5R10 CA20321-02	39,408
ORGANIZATION TOTAL	1	39,408	
ST. JUSTINE HOSPITAL			
MOMPARLER, RICHARD L.....	PHARMACOLOGY OF AN ANTILEUKEMIC AGENT 5-AZADEOXYTIDINE.....	1R01 CA23340-01	47,555
ORGANIZATION TOTAL	1	47,555	
SAINT JOHNS			
MEMORIAL UNIVERSITY OF NEWFOUNDLAND			
LAIRD, MARSHALL.....	LABORATORY BIOCONTROL EVALUATIONS AGAINST SIMULIIDAE.....	1R01 AI14754-01	19,000
ORGANIZATION TOTAL	1	19,000	
SHERBROOKE			
UNIVERSITY OF SHERBROOKE			
GIBSON, DAVID M.....	GENETIC CONTROL OF IMMUNOGLOBULIN IN LIGHT CHAINS.....	1R01 AI15202-01	24,010

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
CANADA—Continued			
ORGANIZATION TOTAL	1	24,010	
TORONTO			
UNIVERSITY OF TORONTO			
CAMERMAN, NORMAN.....	STEREOCHEMICAL BASIS OF ANTICONVULSANT DRUG ACTIVITY.....	5R01 NS09839-08	16,000
ELLEN, RICHARD P.....	LONGITUDINAL STUDY OF DENTAL ROOT SURFACE CARIES.....	5R01 DE04464-03	53,616
EYLAR, EDWIN H.....	GUILLIAN-BARRE SYNDROME AND ALLERGIC NEURITIS.....	1R01 NS14422-01	52,810
FARBER, EMMANUEL.....	PATHOGENESIS OF LIVER CANCER INDUCED BY CHEMICALS.....	5R01 CA21157-02	64,258
FRITZ, IRVING B.....	HORMONE ACTIONS ON SERTOLI CELLS IN SPERMATOGENESIS.....	1R01 HD11741-01	80,500
LUCIER, GREGORY E.....	NEURAL MECHANISMS IMPLICATED IN SUDDEN INFANT DEATH.....	1R01 HD10983-01	47,473
PEARSON, MARK L.....	BACTERIOPHAGE DEVELOPMENT.....	1R01 GM24361-01	63,720
SARMA, D S.....	DNA REPAIR/REPLICATION IN CHEMICAL CARCINOGENESIS.....	1R01 CA23958-01	49,932
SCHACHTER, HARRY.....	GLYCOPROTEIN-GLYCOLIPID METABOLISM IN SPERMATOGENESIS.....	5R01 HD07889-05	42,314
SEN, AMAR K.....	MECHANISMS REGULATING ACTIVITY OF (NAOK)ATPASE.....	1R01 AM20425-01	32,678
SESSLE, BARRY J.....	DENTAL AND OROFACIAL PAIN: BRAIN STEM MECHANISMS.....	1R01 DE04786-01	53,505
ORGANIZATION TOTAL	11	556,806	
VANCOUVER			
UNIVERSITY OF BRITISH COLUMBIA			
CANDIDO, E PETER.....	BIOCHEMICAL STUDIES IN DROSOPHILA MELANOGASTER.....	5R01 GM22753-03	28,969
DENNIS, PATRICK P.....	REGULATION OF TRANSCRIPTION AND TRANSLATION ELEMENTS.....	5R01 GM24010-02	25,000
DOLPHIN, DAVID H.....	PORPHYRIN IONS AND RADICALS IN METABOLIC PROCESSES.....	2R01 AM17989-04	46,000
MOLDAY, ROBERT S.....	A STUDY OF RETINAL PHOTORECEPTOR MEMBRANE PROTEINS.....	1R01 EY02422-01	30,000
SLEMMER, GLENN L.....	CELL BIOLOGY OF MAMMARY GLAND NEOPLASIA.....	5R01 CA18987-03	52,241
WADA, JUHN A.....	CHRONIC FOCAL EPILEPTOGENIC LESION AND DEEP STRUCTURES.....	2R01 NS02812-18	35,430
ORGANIZATION TOTAL	6	217,640	
WINNIPEG			
UNIVERSITY OF MANITOBA			
FRIESEN, HENRY G.....	PLACENTAL & PITUITARY PROTEIN & POLYPEPTIDE HORMONES.....	5R01 HD07843-05	71,660
SEHON, ALEC.....	SUPPRESSION OF THE IGE RESPONSE.....	1R01 AI14526-01	74,620
SEHON, ALEC.....	IMMUNOLOGIC DESTRUCTION OF TUMOR CELLS.....	5R01 CA13192-06	65,258
ORGANIZATION TOTAL	3	211,538	
COUNTRY TOTAL	51	2,629,681	
DENMARK			
AARHUS			
UNIVERSITY OF AARHUS			
MAGNUSSON, STAFFAN M.....	PROTEIN STRUCTURE IN COAGULATION AND FIBRINOLYSIS.....	5R01 HL16238-05	44,968
ORGANIZATION TOTAL	1	44,968	
COPENHAGEN			
DANISH CANCER REGISTRY			
CLEMMESSEN, JOHANNES.....	CASE-CONTROL STUDY OF URINARY CANCER, COPENHAGEN.....	1R26 CA24119-01	39,400
ORGANIZATION TOTAL	1	39,400	
COUNTRY TOTAL	2	84,368	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
FINLAND			
HELSINKI			
UNIVERSITY OF HELSINKI			
KONTIAINEN, SIRKKA K.....	STIMULATION OF T-CELLS WITH PROTEIN ANTIGENS.....	5R01 AI13145-03	21,461
ORGANIZATION TOTAL	1 21,461		
TURKU			
UNIVERSITY OF TURKU			
HARTIALA, KAARLO J.....	GASTROINTESTINAL AND PULMONARY METABOLIC FUNCTIONS.....	5R01 ES01684-17	51,400
ORGANIZATION TOTAL	1 51,400		
COUNTRY TOTAL	2 72,861		
FRANCE			
NANTES			
UNIVERSITY OF NANTES			
LE DOUARIN, NICOLE M.....	MIGRATION AND DIFFERENTIATION OF NEURAL CREST CELLS.....	5R01 DE04257-03	11,000
ORGANIZATION TOTAL	1 11,000		
PARIS			
ST. LOUIS HOSPITAL			
BERNARD, JEAN.....	COOPERATIVE STUDY OF ACUTE LEUKEMIA.....	5R10 CA13239-06	50,000
ORGANIZATION TOTAL	1 50,000		
UNIVERSITY OF PARIS VII			
DAUSSET, JEAN.....	SURFACE LEUCOCYTE ANTIGENS AND SKIN GRAFTS.....	5R01 AI09293-18	22,500
ORGANIZATION TOTAL	1 22,500		
COUNTRY TOTAL	3 83,500		
GERMANY FED R			
ESSEN			
UNIVERSITY OF ESSEN			
RAJEWSKY, MANFRED F.....	NERVOUS SYSTEM-SPECIFIC CHEMICAL CARCINOGENESIS.....	5R01 CA20017-02	41,411
ORGANIZATION TOTAL	1 41,411		
TUBINGEN			
MAX PLANCK SOCIETY FOR THE ADVANCEMENT OF SCIENCE--INSTITUTE FOR BIOLOGY			
KLEIN, JAN.....	POLYMORPHISM OF THE MAJOR HISTOCOMPATIBILITY COMPLEX.....	1R01 AI14736-01	68,440
ORGANIZATION TOTAL	1 68,440		
COUNTRY TOTAL	2 109,851		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ICELAND			
REYKJAVIK			
ICELAND CANCER SOCIETY			
BJARNASON, OLAFUR	GENELOGICAL RESOURCE FOR MEDICAL RESEARCH.....	3R01 GM22370-02S1	11,703
BJARNASON, OLAFUR	GENELOGICAL RESOURCE FOR MEDICAL RESEARCH.....	2R01 GM22370-03	48,019
ORGANIZATION TOTAL	2 59,722		
COUNTRY TOTAL	2 59,722		
IRELAND			
DUBLIN			
ST. VINCENT'S HOSPITAL			
MC KENNA, TERENCE J.....	HORMONAL DISTURBANCES IN ANOVULATORY-HIRSUITE PATIENTS.....	1R01 HD12248-01	65,375
ORGANIZATION TOTAL	1 65,375		
COUNTRY TOTAL	1 65,375		
ISRAEL			
HAIFA			
TECHNION-ISRAEL INSTITUTE OF TECHNOLOGY			
BRANDON, DAVID G.....	EPITAXIAL SANDWICHING OF BIOPOLYMERS.....	5R01 GM22264-03	21,023
GERSHON, DAVID	STUDY OF FAULTY PROTEIN MOLECULES IN SENESCENCE.....	5R01 AG00459-05	44,100
ORGANIZATION TOTAL	2 65,123		
JERUSALEM			
HEBREW UNIVERSITY OF JERUSALEM			
CEDAR, HOWARD.....	TRANSCRIPTION AND MODIFICATION OF CHROMATIN DNA.....	5R01 GM20483-05	48,607
CERASI, EROL.....	STUDIES ON THE PATHOGENESIS OF DIABETES MELLITUS.....	1R01 AM21598-01	119,808
COHEN, ALAN M.....	EPIDEMIOLOGY OF DIABETES AMONG NEW IMMIGRANT YEMENITES.....	1R01 AM20733-01	44,950
COHEN, ARTHUR M.....	CHANGE OF THE HORMONAL STATUS IN DIABETIC RETINOPATHY.....	5R01 EY01837-02	43,373
FRIEDLANDER, DOV.....	FERTILITY CHANGE AND VARIATION IN ISRAEL.....	5R01 HD06721-06	22,229
GATT, SHIMON.....	METABOLISM OF THE SPHINGOLIPIDS AND C24 FATTY ACIDS.....	5R01 NS02967-18	49,009
GLASER, GAD.....	STRUCTURE AND CONTROL OF E COLI PROMOTER ACTIVITY.....	1R01 GM25286-01	33,149
NAOR, DAVID.....	IMMUNE RESPONSE TO MOLONEY INDUCED YAC TUMOR.....	1R01 CA23874-01	38,001
SCHRAMM, MICHAEL.....	ENZYME SECRETION AND ITS METABOLIC CONTROL.....	2R01 AM10451-13	75,465
SHOSHAN, SHMUEL.....	COLLAGEN IN GENETICALLY SELECTED DIABETIC RATS.....	1R01 AM21239-01	33,755
WERMAN, ROBERT.....	THE MOTONEURON IN SPINAL CORD SLICES.....	5R01 NS13935-02	31,664
ORGANIZATION TOTAL	11 540,010		
REHOVOTH			
KAPLAN HOSPITAL			
BENTWICH, ZVI H.....	VARIATION IN CANCER PATIENT SURVIVAL BY RACE.....	1R01 CA24418-01	34,584
ORGANIZATION TOTAL	1 34,584		
WEIZMANN INSTITUTE OF SCIENCE			
ALONI, YOSEF.....	CONTROL OF GENE EXPRESSION IN TUMOR VIRUSES AND CELLS.....	5R01 CA14995-05	49,551
BERENBLUM, ISAAC.....	NEW APPROACHES TO SYSTEMIC TWO-STAGE CARCINOGENESIS.....	5R01 CA21088-02	39,590
COHEN, IRUN R.....	RECRUITMENT OF T CELL IMMUNITY TO ANTIGENS AND TUMORS.....	5R01 CA21329-02	58,571
GIVOL, DAVID.....	CHARACTERIZATION OF SPECIFIC T-CELL FACTORS.....	5R01 AI13200-03	48,330

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
ISRAEL—Continued			
HAGLER, ARNOLD T.....	MONTE CARLO SIMULATION OF WATER IN BIOLOGICAL SYSTEMS.....	1R01 GM24117-01	24,230
SCHECHTER, ISRAEL.....	STRUCTURE AND FUNCTION OF IG GENES AND IG PRECURSORS.....	5R01 CA20817-03	72,985
SILBERBERG, ALEXANDER.....	MUCUS CLEARANCE IN SECRETORY OTITIS MEDIA.....	5R01 NS10048-08	44,263
YAFFE, DAVID.....	CONTROL OF DIFFERENTIATION IN ESTABLISHED CELL LINES.....	5R01 GM22767-03	48,000
ORGANIZATION TOTAL	8	385,520	
TEL AVIV			
TEL AVIV UNIVERSITY			
WITZ, ISAAC P.....	TUMOR-BOUND IG—AN EXPRESSION OF ANTITUMOR IMMUNITY.....	5R01 CA20088-02	55,811
ORGANIZATION TOTAL	1	55,811	
COUNTRY TOTAL	23	1,081,048	
ITALY			
NAPLES			
UNIVERSITY OF NAPLES			
ALOJ, SALVATORE M.....	STRUCTURE & FUNCTION OF HORMONE, TOXINS & IF RECEPTORS.....	1R01 AM21689-01	32,000
ORGANIZATION TOTAL	1	32,000	
PISA			
UNIVERSITY OF PISA			
POMPEIANO, OTTAVIO.....	SENSORY MECHANISMS AND MOTOR CONTROL.....	2R01 NS07685-10	15,400
ORGANIZATION TOTAL	1	15,400	
ROME			
UNIVERSITY OF ROME			
MONACO, FABRIZIO.....	COMPARATIVE ROLE OF CARBOHYDRATES IN THYROGLOBULIN.....	5R01 AM16932-05	22,050
ORGANIZATION TOTAL	1	22,050	
COUNTRY TOTAL	3	69,450	
JAPAN			
KAWASAKI			
ST. MARIANNA UNIVERSITY			
TOYODA, JUN-ICHI.....	IONIC BASIS OF RETINAL CELL POTENTIAL.....	1R01 EY02392-01	19,560
ORGANIZATION TOTAL	1	19,560	
TOKYO			
JUNTENDO UNIVERSITY			
KABASAWA, IZUMI.....	AGING LENS PROTEINS AND CATARACT.....	1R01 EY02900-01	18,000
ORGANIZATION TOTAL	1	18,000	
KITASATO INSTITUTE			
OKADA, HIDECHIKA.....	NONIMMUNOLOGIC COMPLEMENT ACTIVATION BY TUMOR CELL.....	5R01 CA19229-03	45,204
ORGANIZATION TOTAL	1	45,204	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
JAPAN—Continued			
SCIENCE UNIVERSITY OF TOKYO			
SATOH, KENSHI	CALCIUM-INDUCED AGGREGATION OF HUMAN LENS PROTEIN.....	5R01 EY01879-02	14,000
ORGANIZATION TOTAL	1 14,000		
COUNTRY TOTAL	4 96,764		
KOREA REP OF			
SEOUL			
KOREA ADVANCED INSTITUTE OF SCIENCE			
SHIM, SANG C.....	PHOTOCHEMISTRY OF DIMETHOXYCOUMARIN.....	5R01 CA21729-02	11,005
ORGANIZATION TOTAL	1 11,005		
COUNTRY TOTAL	1 11,005		
MEXICO			
MEXICO			
NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO			
PASANTES-MORALES, HERMINIA.....	TAURINE AND IONIC FLUXES IN RETINA.....	1R01 EY02540-01	15,140
ORGANIZATION TOTAL	1 15,140		
NATIONAL POLYTECHNIC INSTITUTE			
GONZALEZ-SERRATOS, HUGO.....	EXCITATORY PROCESSES IN SARCOBUBULAR MUSCLE MEMBRANES.....	1R01 NS14206-01	38,133
RUDOMIN, PEDRO	DISCHARGE PATTERNS OF MOTONEURONS.....	5R01 NS09196-07	40,000
ORGANIZATION TOTAL	2 78,133		
COUNTRY TOTAL	3 93,273		
NETHERLANDS			
LEIDEN			
STATE UNIVERSITY OF LEIDEN			
SOBELS, FREDERIK H.....	INDUCTION OF GENETIC DAMAGE BY CHEMICAL MUTAGENS.....	5R01 ES01027-05	127,000
ORGANIZATION TOTAL	1 127,000		
COUNTRY TOTAL	1 127,000		
NEW ZEALAND			
PALMERSTON NORTH			
MASSEY UNIVERSITY			
JOLLY, ROBERT D.....	MANNOSIDOSIS—A MODEL FOR LYSOSOMAL STORAGE DISEASES.....	5R01 NS11238-05	36,378
ORGANIZATION TOTAL	1 36,378		
COUNTRY TOTAL	1 36,378		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
S AFR REP OF			
PRETORIA			
UNIVERSITY OF PRETORIA			
FALKSON, GEOFFREY.....	EASTERN COOPERATIVE ONCOLOGY GROUP STUDIES.....	3R10 CA21692-01S1	13,297
FALKSON, GEOFFREY.....	EASTERN COOPERATIVE ONCOLOGY GROUP STUDIES.....	2R10 CA21692-02	39,893
ORGANIZATION TOTAL	2	53,190	
COUNTRY TOTAL	2	53,190	
SWEDEN			
GOTHENBURG			
GOTHENBURG UNIVERSITY			
ABRAHAMSSON, SIXTEN.....	MOLECULAR ARRANGEMENT IN COMPLEX LIPIDS.....	2R01 GM11653-18	42,112
EKHOLM, RAGNAR E.....	THYROID FUNCTIONAL MORPHOLOGY.....	5R01 AM18842-02	26,000
ORGANIZATION TOTAL	2	68,112	
LUND			
UNIVERSITY OF LUND			
FALCK, BENGT O.....	NEW METHODS FOR THE STUDY OF AMINE TRANSMITTERS.....	5R01 NS06701-12	35,771
SIESJO, BO K.....	PATHOPHYSIOLOGY OF HYPOXIC BRAIN DAMAGE.....	2R01 NS07838-10	42,236
SJOGREN, HANS O.....	IMMUNITY TO BOWEL NEOPLASMS IN RATS AND MAN.....	2R26 CA14924-06	112,358
ORGANIZATION TOTAL	3	190,365	
STOCKHOLM			
CAROLINE INSTITUTE			
BLOMBACK, BIRGER E.....	STRUCTURE AND FUNCTION OF FIBRINOGEN.....	5R01 HL07379-13	55,395
KLEIN, GEORGE.....	MALIGNANT BEHAVIOR AND CELLULAR ANTIGEN EXPRESSION.....	5R01 CA14054-06	118,000
PERNOW, BENGT B.....	SUBSTANCE P: OCCURRENCE, PHARMACOLOGY AND PHYSIOLOGY.....	5R01 HL18994-03	27,792
ORGANIZATION TOTAL	3	201,187	
UPPSALA			
UNIVERSITY OF UPPSALA			
BARANY, ERNST H.....	COMPARATIVE STUDIES OF GLAUCOMA.....	5R01 EY00231-14	83,397
BILL, ANDERS A.....	STUDIES ON THE NUTRITION OF THE EYE.....	5R01 EY00475-12	44,000
PETERSON, PER A.....	RETINOL METABOLISM WITH SPECIAL REGARD TO THE EYE.....	1R01 EY02417-01	53,197
WIGZELL, HANS L.....	ISOLATION AND USE OF ANTIGEN-BINDING T CELL RECEPTORS.....	5R01 AI13485-03	67,200
ORGANIZATION TOTAL	4	247,794	
COUNTRY TOTAL	12	707,458	
SWITZERLAND			
BASEL			
UNIVERSITY OF BASEL			
SHOWE, MICHAEL K.....	SYNTHESIS AND FUNCTION OF ORGANIZED ELEMENTS IN CELLS.....	2R01 AI13165-03	61,511
ORGANIZATION TOTAL	1	61,511	

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
SWITZERLAND—Continued			
GENEVA			
INTERNATIONAL UNION AGAINST CANCER			
DELAFRESNAYE, JOHN F.....	CANCER CENTER SUPPORT GRANT.....	5R01 CA05096-17	99,162
ORGANIZATION TOTAL	1 99,162		
LAUSANNE			
WORLD HEALTH ORGANIZATION—INTERNATIONAL REFERENCE CENTRE IMMUNOGLOBULINS			
MAUEL, JACQUES.....	PROTECTIVE IMMUNITY IN LEISHMANIASIS.....	5R01 AI13126-03	21,500
ORGANIZATION TOTAL	1 21,500		
COUNTRY TOTAL	3 182,173		
THAILAND			
BANGKOK			
MAHIOOL UNIVERSITY			
LAMB, ADRIAN J.....	METABOLISM AND FUNCTION OF CAROTENOIDS AND VITAMIN A.....	5R01 AM11367-11	46,900
VALYASEVI, AREE.....	STUDIES OF BLADDER STONE DISEASE IN THAILAND.....	5R22 AM13066-09	54,400
WASI, PRAWASE.....	THALASSEMIAS, HEMOGLOBINOPATHIES AND RELATED PROBLEMS.....	5R01 AM09805-11	20,000
ORGANIZATION TOTAL	3 121,300		
COUNTRY TOTAL	3 121,300		
UNITED KINGDOM			
BRISTOL			
UNIVERSITY OF BRISTOL			
PURVES, MICHAEL J.....	THE CONTROL OF BREATHING BEFORE AND AFTER BIRTH.....	5R01 HD09457-03	56,324
SINNOTT, MICHAEL L.....	BRAIN GLYCOSIDASES—MECHANISM AND SPECIFICITY.....	1R01 GM22769-01A1	23,417
ORGANIZATION TOTAL	2 79,741		
CAMBRIDGE			
AGRICULTURAL RESEARCH COUNCIL—INSTITUTE OF ANIMAL PHYSIOLOGY			
HOWARD, JONATHAN C.....	GENETICS OF RESPONSE TO HISTOCOMPATIBILITY ANTIGENS.....	5R01 AI13162-03	5,596
ORGANIZATION TOTAL	1 5,596		
EDINBURGH			
UNIVERSITY OF EDINBURGH			
WILLETTS, NEIL S.....	GENETIC ANALYSIS OF PSEUDOMONAS R FACTORS.....	5R01 AI12899-02	15,954
ORGANIZATION TOTAL	1 15,954		
LEEDS			
UNIVERSITY OF LEEDS			
POWELL, KENNETH L.....	HERPES SIMPLEX VIRUS NON-STRUCTURAL PROTEINS.....	1R01 AI15034-01	44,467
ORGANIZATION TOTAL	1 44,467		

Table 2.—NIH Research Grants, by Area, Organization, and Principal Investigator, Fiscal Year 1978—Continued

Principal investigator	Project title	Grant number	Dollars
UNITED KINGDOM—Continued			
LONDON			
ST. MARK'S HOSPITAL			
MORSON, BASIL C.....	RANDOMIZED TRIAL OF AN ANTIOXIDANT IN POLYPOSIS COLI	1R26 CA23760-01	31,313
ORGANIZATION TOTAL	1 31,313		
UNIVERSITY OF LONDON			
BELOFF-CHAIN, ANNE.....	REGULATION OF INSULIN SECRETION BY THE PITUITARY.....	5R01 AM19488-02	23,173
BIRD, ALAN C.....	DISCIFORM MACULAR DISEASE: CONTROLLED TREATMENT TRIAL.....	1R01 EY02168-01	15,000
CARTER, NICHOLAS D.....	GENETIC ISOLATES WITH HIGH INCIDENCE OF LYMPHOMA.....	5R01 CA19821-03	24,600
PAULING, PETER J.....	THE THREE-DIMENSIONAL STRUCTURE OF PROTEIN MOLECULES.....	1R01 GM25435-01	20,000
SIMS, PETER.....	METABOLIC ACTIVATION OF THE POLYCYCLIC HYDROCARBONS.....	5R01 CA21959-02	36,690
STEEL, G GORDON.....	THERAPEUTIC RESPONSE OF HUMAN TUMOR XENOGRAFTS.....	5R01 CA20519-02	72,367
WILLIAMSON, ROBERT.....	GENE SEQUENCES ACTIVATING GAMMA-GLOBIN GENE TRANSCRIPTON.....	1R01 AM20125-01A1	89,900
WILLS, E D.....	EFFECTS OF RADIATION AND HYPERTHERMIA ON TUMOR LYSOSOME.....	5R01 CA18286-03	20,978
ORGANIZATION TOTAL	8 302,708		
OXFORD			
UNIVERSITY OF OXFORD			
BALDWIN, JACK E.....	CHELATING AGENTS AS BLOOD SUBSTITUTES.....	1R01 HL23120-01	24,794
KREBS, HANS A.....	REGULATION OF METABOLIC PROCESSES.....	5R01 AM11748-11	35,453
PIRIE, ANTOINETTE.....	STUDIES OF SERIOUS CORNEAL XEROPHTHALMIA.....	5R01 EY01937-02	28,707
WEATHERALL, DAVID J.....	SYNTHESIS OF FETAL HEMOGLOBIN IN HUMAN ERYTHROID CELLS.....	5R01 HL20905-02	33,635
ORGANIZATION TOTAL	4 122,589		
COUNTRY TOTAL	18 602,368		
URUGUAY			
MONTEVIDEO			
BIOLOGICAL SCIENCES RESEARCH INSTITUTE			
TRUJILLO-CENOZ, OMAR.....	NEURON DIFFERENTIATION AND SPECIFICATION IN THE EYE.....	5R01 EY01674-03	5,860
ORGANIZATION TOTAL	1 5,860		
COUNTRY TOTAL	1 5,860		

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978

Awardee	Project title	Grant number
ALABAMA		
BIRMINGHAM		
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294		
CASSELL, GAIL H.....	MURINE CRD: A MODEL OF CHRONIC PULMONARY INFLAMMATION.....	5K04 HL00387-02
LAMON, EDDIE W.....	VIRAL TUMOR IMMUNOLOGY.....	5K04 CA00059-04
LAWTON, ALEXANDER R, III.....	DIFFERENTIATION OF B-LYMPHOCYTES.....	5K04 AI70780-05
NAVAR, LUIS G.....	INTRINSIC REGULATION OF RENAL HEMODYNAMICS.....	5K04 HL00143-05
OYSTER, CLYDE W.....	NEURAL INTERACTIONS IN THE RETINA AND VISUAL PATHWAYS.....	5K04 EY00033-04
PACE, CAROLINE S.....	ELECTROPHYSIOLOGICAL STUDIES OF CULTURED ISLET CELLS.....	1K04 AM00499-01
RYNERSTON, RICHARD H.....	GLOMERULAR B.M. GLYCOSYLTRANSFERASE RADIOIMMUNOASSAY.....	1K08 AM00465-01
MOBILE		
UNIVERSITY OF SOUTH ALABAMA ZIP CODE 36688		
BASS, JOHN B, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00125-04
FUNKHOUSER, JANE D.....	FETAL LUNG DEV. & DIFFERENTIATION IN ORGAN CULTURE.....	1K04 HD00210-01
GREENBERG, STANLEY.....	VASCULAR SMOOTH MUSCLE MECHANISMS IN HYPERTENSION.....	7K04 HL00428-02
KIRKPATRICK, MICHAEL B.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	1K08 HL00543-01
ARIZONA		
TUCSON		
UNIVERSITY OF ARIZONA ZIP CODE 85721		
CUSANOVICH, MICHAEL A.....	BIOLOGICAL ELECTRON TRANSPORT/VISUAL PROCESS.....	5K04 EY00013-04
HALONEN, MARILYN J.....	ANIMAL MODEL OF IGE-INDUCED PULMONARY DISEASE.....	1K04 HL00463-01
KIM, HYUN D.....	MEMBRANE-LIMITED METABOLISM IN MAMMALIAN RED CELLS.....	5K04 AM00316-02
MEEZAN, ELIAS.....	GLYCOPROTEIN STRUCTURE AND METABOLISM IN DIABETES.....	5K04 AM00256-02
PUTNAM, ANNE H.....	BIOMECHANICS OF NORMAL & DISORDERED SPEECH PRODUCTION.....	1K07 NS00303-01
RUSSELL, DIANE H.....	POLYAMINES IN GROWTH—NORMAL AND NEOPLASTIC.....	5K04 CA00072-04
ARKANSAS		
LITTLE ROCK		
UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201		
BURNS, E ROBERT.....	CHRONOBIOLOGICAL STUDY OF CELL GROWTH.....	5K04 CA70594-05
FEWELL, JAMES E.....	PULMONARY DISEASES.....	1K08 HL00445-01

NOTE.—Grants are listed according to the State and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
CALIFORNIA		
BERKELEY		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720		
FREEMAN, RALPH D.....	VISUAL DEVELOPMENT & DEPRIVATION IN HUMANS & ANIMALS.....	5K04 EY00092-02
DAVIS		
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616		
CROSS, CARROLL E.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70820-05
GERSHWIN, M ERIC.....	THE PATHOGENESIS OF AUTOIMMUNITY IN NEW ZEALAND MICE.....	5K04 AI00193-02
JOHNSON, CHRIS A.....	PSYCHOPHYSICAL EXAMINATION OF THE VISUAL FIELDS.....	1K07 EY00095-01
KING, BARRY F.....	FUNCTIONAL CYTOLOGY OF THE PLACENTA & FETAL MEMBRANES.....	5K04 HD00238-02
LEWIS, ALVIN E.....	ANALYTIC PATHOLOGY.....	1K10 LM00007-01
OVERSTREET, JAMES W.....	SPERM MOTILITY, TRANSPORT AND FERTILITY IN MAMMALS.....	1K04 HD00224-01
TROY, FREDERIC A.....	MEMBRANE-BOUND ENZYME INTERACTIONS AND GROWTH CONTROL.....	5K04 CA00095-04
IRVINE		
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664		
BENNETT, ALBERT F.....	PHYSIOLOGICAL BASIS OF METABOLISM AND ACTIVITY.....	1K04 AM00351-01
CUNNINGHAM, DENNIS D.....	INITIATION OF FIBROBLAST DIVISION BY GLUCOCORTICOID.....	5K04 CA00171-03
GUTMAN, GEORGE A.....	SEROLOGICAL AND STRUCTURAL STUDIES ON RAT KAPPA CHAINS.....	1K04 AI00286-01
HAMKALO, BARBARA A.....	ULTRASTRUCTURAL ASPECTS OF GENE REGULATION.....	5K04 GM00233-03
LONGMUIR, KENNETH J.....	PULMONARY DISEASES.....	1K08 HL00456-01
LYNCH, GARY S.....	AXONAL GROWTH AND BRAIN PLASTICITY.....	5K04 NS00043-04
STANBRIDGE, ERIC J.....	GENETIC ANALYSIS OF HUMAN MALIGNANCY.....	1K04 CA00271-01A1
WATSON, JAMES D.....	MECHANISM REGULATING INDUCTION OF ANTIBODY SYNTHESIS.....	5K04 AI00182-03
WHITE, STEPHEN H.....	MODEL STUDIES OF MYELIN STABILITY.....	5K04 NS00146-03
LA JOLLA		
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037		
KIDOKORO, YOSHIKI.....	MUSCLE DIFFERENTIATION AND SYNAPSE FORMATION IN VITRO.....	5K04 NS00102-04
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037		
CARSON, DENNIS A.....	ROLE OF RHEUMATOID FACTOR IN RHEUMATOID ARTHRITIS.....	1K08 AM00369-01
CHISARI, FRANCIS V.....	IMMUNOBIOLOGY AND PATHOGENESIS OF HEPATITIS B.....	5K04 AI00174-03
EDWARDS, DAVID L.....	REGULATION OF MITOCHONDRIAL MEMBRANE ASSEMBLY.....	5K04 GM00413-04
GINSBERG, MARK H.....	MEDIATOR CELL ACTIVATION BY IMMUNE COMPLEXES AND LPS.....	5K08 AM00393-02
GRIFFIN, JOHN H.....	BIOCHEMISTRY AND REGULATION OF HUMAN FACTOR XII.....	5K04 HL00192-03
HOCH, SALLIE O.....	MOLECULAR INTERACTIONS IN DIFFERENTIATION.....	5K04 CA00004-04
MORGAN, WILLIAM T.....	MECHANISMS OF SERUM PROTEIN FUNCTIONS.....	5K04 AM00110-04
MORRISON, DAVID C.....	BIOCHEMICAL PARAMETERS OF LPS-MEDIATED DIC AND SHOCK.....	5K04 AI00081-04
PAINTER, RICHARD G.....	THE ROLE OF MECHANOCHEMICAL PROTEINS IN SECRETION.....	1K04 AM00437-01
PELLEGRINO, MICHELE A.....	URINE AS SOURCE OF HUMAN HISTOCOMPATIBILITY ANTIGENS.....	1K04 CA00246-01A1
TAVASSOLI, MEHDI.....	STRUCTURAL BASIS OF HEMOPOIESIS.....	5K04 AM70551-05
THEOFILOPOULOS, ARGYRIOS N.....	CIRCULATING IMMUNE COMPLEXES—CANCER/IMMUNOLOGIC DIS.....	5K04 CA00303-02
WELSH, RAYMOND M, JR.....	MAINTENANCE OF CHRONIC VIRUS DISEASE.....	1K04 AI00253-01A1
WHITELEY, JOHN M.....	THE BIOCHEMISTRY OF PTERIDINE AND FOLATE COENZYMES.....	5K04 CA00106-04
ZINKERNAGEL, ROLF M.....	STUDIES OF RECEPTORS OF VIRUS IMMUNE T CELLS.....	5K04 AI00248-02
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093		
ALHADEFF, JACK A.....	HUMAN LIVER SIALYLTRANSFERASES AND ALPHA-L-FUCOSIDASE.....	1K04 AM00257-01A1
BAUGH, ROBERT F.....	BIOCHEMICAL CHARACTERIZATION OF HEMOPHILIA.....	5K04 HL00271-02
BONE, HENRY G.....	SKELETAL AND CALCIUM DISEASES: HORMONAL ABNORMALITIES.....	1K08 AM00383-01
BRODY, STUART.....	DEVELOPMENTAL GENETICS OF NEUROSPORA.....	5K04 GM70761-05
HIGGINS, CHARLES B.....	EFFECTS OF CONTRAST MEDIA & HEART FAILURE ON CHEMOREFLEX.....	5K04 HL00201-03
KAGNOFF, MARTIN F.....	INDUCTION OF INTESTINAL ANTIGEN-SENSITIVE CELLS.....	5K04 AM00021-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
CALIFORNIA—Continued		
KYTE, JACK E.....	MOLECULAR STRUCTURE OF THE QUABAIN SENSITIVE ATPASE.....	5K04 HL00206-03
MENDELSON, JOHN.....	CONTROL OF IMMUNE AND MALIGNANT LYMPHOCYTE GROWTH.....	5K04 CA70891-05
MILLER, ARNOLD L.....	I-CELL DISEASE AND MENTAL RETARDATION.....	5K04 NS00050-04
NESBITT, MURIEL N.....	CELLULAR MAPPING OF BEHAVIOR TRAITS IN MICE.....	5K04 GM00138-04
NINNEMANN, JOHN L.....	IMMUNE RESPONSE DURING THERMAL INJURY.....	5K04 GM00264-03
OKAMURA, MELVIN Y.....	ELECTRON TRANSPORT IN BACTERIAL MEMBRANES.....	5K04 GM00106-04
ROSENFELD, MICHAEL G.....	MECHANISM OF HORMONAL AND CAMP REGULATORY ACTION.....	5K04 AM00078-04
RYAN, ALLEN F.....	AUDITORY DEVELOPMENT—NORMAL & ABNORMAL ENVIRONMENTS.....	1K04 NS00176-01A1
SAIER, MILTON H, JR.....	REGULATION OF MEMBRANE FUNCTION IN C-6 RAT GLIOMA CELLS.....	5K04 CA00138-04
WAGNER, PETER D.....	VENTILATION AND BLOOD FLOW IN CARDIOPULMONARY DISEASE.....	5K04 HL00111-04
WOO, SAVIO L.....	BIOMECHANICS OF NORMAL & REPAIRED LIGAMENTS AND TENDONS.....	5K04 AM00304-02
LOMA LINDA		
LOMA LINDA UNIVERSITY ZIP CODE 92354		
KISSINGER, DAVID G.....	DIET AND ETIOLOGY OF BREAST CANCER.....	1K04 HD00188-01
QUILLIGAN, JAMES J, JR.....	VIRUSES, VACCINATION AND ANTIVIRAL IMMUNITY.....	4K06 AI20517-16
ROOS, PHILIP J.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	1K08 HL00536-01
LOS ANGELES		
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LOS ANGELES ZIP CODE 90032		
BROWN, COSTELLO L.....	NEGATIVE IONIZATION OF BIOORGANIC MOLECULES.....	5K04 GM00131-04
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027		
BENEDICT, WILLIAM F.....	CYTOGENETICS OF HUMAN CANCER AND CHEMICAL TRANSFORMATION.....	5K04 CA70996-05
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024		
BARNARD, R JAMES.....	EFFECT OF ACUTE AND CHRONIC EXERCISE ON THE HEART.....	5K04 HL00052-04
CLARK, WILLIAM R.....	MECHANISMS OF GENERATION OF CYTOTOXIC EFFECTOR T CELLS.....	5K04 AI00009-04
FINE, LEON G.....	FUNCTIONAL PROFILE OF THE ISOLATED UREMIC NEPHRON.....	7K04 AM00585-02
FOGELMAN, ALAN M.....	CHOLESTEROL METABOLISM AND ATHEROSCLEROSIS.....	1K04 HL00426-01
GOLUB, SIDNEY H.....	IN VITRO LYMPHOCYTE SENSITIZATION TO TUMOR ANTIGENS.....	5K04 CA70970-05
GONG, HENRY, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00340-02
HEIDNER, ELIZABETH G.....	X-RAY & EM STUDIES—RNA-POLYMERASE & GLYCOGEN SYNTHESIS.....	5K04 GM00085-03
HOLLISTER, DAVID W.....	BIOCHEMICAL STUDIES OF THE CHONDRODYSSTROPHIES.....	5K04 AM00293-02
HOMSHER, EARL.....	ENERGY LIBERATION AND TRANSDUCTION IN CONTRACTING MUSCLE.....	5K04 AM70792-05
HORWITZ, JOSEPH.....	HUMAN LENS, BIOCHEMICAL AND BIOPHYSICAL PROPERTIES.....	5K04 EY00058-02
JENKINS, HERMAN A.....	OPTOKINETIC AND VESTIBULAR INTERACTIONS.....	5K07 NS00294-02
LETINSKY, MICHAEL S.....	STRUCTURE AND FUNCTION OF DEVELOPING SYNAPSES.....	5K04 NS00282-02
MEAD, JAMES F.....	METABOLISM OF BRAIN FATTY ACIDS.....	4K06 GM19177-16
MEYERS, ROBERTA L.....	IMMUNOLOGY AND IMMUNOPATHOLOGY OF CORNEAL DISEASE.....	5K04 EY00014-04
MUSTAFA, MOHAMMAD G.....	PULMONARY OXIDANT INJURY AND METABOLIC ADAPTATION.....	5K04 HL00301-03
NEUFELD, NAOMI D.....	EFFECTS OF INSULIN ON FETAL LUNG CHO METABOLISM.....	1K08 AM00380-01
NUWAYHID, BAHJ S.....	NEUROHUMORAL CONTROL OF THE CIRCULATION.....	1K04 HD00253-01
PARDRIDGE, WILLIAM M.....	MUSCLE AMINO ACID METABOLISM AND HEPATIC GLUCONEOGENESIS.....	1K08 AM00409-01
PESKOFF, ARTHUR.....	MATH DESCRIPTION OF ELECTRICAL PROPERTIES OF CELLS.....	5K04 GM00222-03
QUINTON, PAUL M.....	PHYSIOLOGY OF ISOLATED SWEAT GLANDS: CYSTIC FIBROSIS.....	5K04 AM00324-02
RIVIERE, GEORGE R.....	TOOTH TRANSPLANTATION GENETICS AND IMMUNOLOGY.....	5K04 DE00044-02
SEGER, ROBERT C.....	IMMUNE RESPONSE OF CHILDREN TO NEUROBLASTOMA.....	5K04 CA00069-04
SHOME, BASUDEV.....	STRUCTURE OF HUMAN PITUITARY FSH AND LH.....	5K04 HD70636-05
SIMMONS, NORMAN S.....	ORAL MEDICINE AND BIOPHYSICS.....	5K06 DE01094-15
STRELIOFF, DAVID.....	NEURAL EXCITATION IN THE COCHLEA.....	5K04 NS00255-02
WISNIESKI, BERNADINE J.....	PHYSICAL STRUCTURE OF ANIMAL CELL MEMBRANES.....	5K04 GM00228-03
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007		
APPLEMAN, M MICHAEL.....	CYCLIC NUCLEOTIDES AS MEDIATORS OF PHYSIOLOGICAL CONTROL.....	5K04 AM70518-04
BAU, ROBERT.....	THE MOLECULAR BASIS OF ANTITUMOR PLATINUM DRUG ACTIVITY.....	5K04 CA00015-04
BEIERLE, JOHN W.....	CELL EXUDATES: EFFECTS ON ORAL AND OTHER TUMORS.....	5K04 CA70675-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
CALIFORNIA—Continued		
MITCHELL, MALCOLM S.....	CHEMOTHERAPY AND TUMOR IMMUNOLOGY.....	7K04 CA00531-05
SOBIN, SIDNEY S.....	STUDIES OF THE MICROCIRCULATION.....	5K06 HL07064-18
WALSH, DAVID A.....	AGE-RELATED DIFFERENCES IN HUMAN COGNITION.....	1K04 AG00017-01
PALO ALTO		
PALO ALTO MEDICAL RESEARCH FOUNDATION ZIP CODE 94301		
KRAHENBUHL, JAMES L.....	CELLULAR IMMUNITY TO OPPORTUNISTIC PATHOGENS AND TUMORS.....	5K04 AI70931-05
PASADENA		
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125		
ALLMAN, JOHN M.....	FUNCTIONAL ORGANIZATION OF VISUAL CORTEX.....	5K04 NS00178-03
LESTER, HENRY A.....	NICOTINIC SYNAPSES.....	5K04 NS00272-02
RIVERSIDE		
UNIVERSITY OF CALIFORNIA AT RIVERSIDE ZIP CODE 92502		
HENRY, HELEN L.....	KIDNEY CELL CULTURE: REGULATION OF CALCIUM METABOLISM.....	1K04 AM00412-01
LUBEN, RICHARD A.....	NORMAL AND PATHOLOGIC INFLUENCES ON BONE METABOLISM.....	1K04 DE00057-01
OLSEN, RICHARD W.....	BIOCHEMISTRY OF NEUROTRANSMITTER RECEPTOR MECHANISMS.....	5K04 NS00224-02
SAN FRANCISCO		
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN FRANCISCO STATE UNIVERSITY ZIP CODE 94132		
WALKER, FRANCES A.....	HEME & HEMOPROTEIN MODELS—SPECTRA & REDOX STUDIES.....	5K04 GM00227-03
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143		
BASBAUM, ALLAN I.....	ANATOMICAL SUBSTRATES OF PAIN CONTROL MECHANISMS.....	1K04 NS00364-01
BERGER, ALBERT J.....	NEURAL REGULATION OF RESPIRATION.....	5K04 NS00238-02
BISSELL, DWIGHT M, JR.....	REGULATION OF HEPATIC HEMOPROTEIN METABOLISM.....	5K04 GM00149-04
BLOIS, MARSDEN S, JR.....	MONOGRAPH: MEDICAL INFORMATION SCIENCE.....	1K10 LM00014-01
BOUSHEY, HOMER A, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00130-04
CHAPLIN, EDWARD R, JR.....	INTRAVENTRICULAR HEMORRHAGE IN PRETERM INFANTS.....	1K07 NS00283-01
CHAR, DEVRON H.....	UVEITIS AND EYE TUMORS: IMMUNODIAGNOSIS AND MONITORING.....	1K04 EY00117-01
COFFINO, PHILIP.....	GENETIC ANALYSIS OF C-AMP ACTION IN LYMPHOMA CELLS.....	5K04 GM00308-02
COOKE, ROGER.....	CONTRACTION IN SKELETAL AND CARDIAC MUSCLE.....	1K04 AM00479-01
DALLMAN, MARY F.....	BRAIN-PITUITARY-ADRENAL INTERRELATIONSHIPS.....	5K04 AM00072-04
FIELDS, HOWARD L.....	NEUROPHYSIOLOGY OF PAIN.....	5K04 NS70777-05
GLANTZ, STANTON A.....	EXTERNAL CONSTRAINTS EFFECTS ON LEFT VENTRICLE MECHANICS.....	5K04 HL00345-02
GOLDSTEIN, GARY W.....	METABOLIC ACTIVITY OF ISOLATED BRAIN CAPILLARIES.....	5K04 NS00278-02
KENYON, GEORGE L.....	PROBING THE ACTIVE SITE OF CREATINE KINASE.....	5K04 AM00014-04
KIRSCHNER, MARC W.....	MECHANISM OF MICROTUBULAR ASSEMBLY AND MITOSIS.....	7K04 GM00475-04
KOLLMAN, PETER A.....	INTERMOLECULAR INTERACTIONS IN CHEMISTRY AND BIOLOGY.....	5K04 GM70718-05
KORENBROT, JUAN I.....	RHODOPSIN AND TRANSDUCTION IN ROD PHOTORECEPTORS.....	1K04 EY00050-01
KOROBKIN, MELVYN T.....	UROGRAPHIC AND HEMODYNAMIC CHANGES IN RENAL ISCHEMIA.....	5K04 GM00055-04
KUN, ERNEST.....	BIOCHEMICAL REGULATORY MECHANISMS.....	5K06 GM04615-15
KUNTZ, IRWIN D, JR.....	MACROMOLECULAR STRUCTURE AND HYDRATION.....	5K04 GM00042-04
LA VAIL, MATTHEW M.....	CELLULAR MECHANISMS OF INHERITED RETINAL DEGENERATION.....	5K04 EY70871-04
LEVY, JAY A.....	ROLE OF C-TYPE VIRUS IN AUTOIMMUNE DISEASE AND CANCER.....	5K04 CA70990-05
LIPTON, MARTIN J.....	CARDIAC RECONSTRUCTION USING COMPUTERIZED TOMOGRAPHY.....	5K04 HL00360-02
MARTON, LAURENCE J.....	DIAGNOSIS AND EVALUATION OF BRAIN TUMOR CHEMOTHERAPY.....	5K04 CA00112-04
MENTZER, WILLIAM C, JR.....	RBC METABOLISM IN SICKLEMLIA AND OTHER CHILDHOOD ANEMIAS.....	5K04 HL00086-04
MILLER, WALTER L.....	ISOLATION OF THE GENE FOR HUMAN GROWTH HORMONE.....	1K08 AM00422-01
NICHOLS, BARBARA A.....	THE DEFENSE OF THE LUNG BY ALVEOLAR MACROPHAGES.....	1K04 AI00294-01
NICOLL, ROGER A.....	BARBITURATES: ACUTE AND CHRONIC SYNAPTIC EFFECTS.....	5K04 NS00287-02
OSTWALD, THOMAS J.....	ION TRANSPORT AND NA-K ATPASE OF PIGMENT EPITHELIUM.....	1K07 EY00131-01
RAPOPORT, BASIL.....	THYROID STIMULATORS IN HEALTH AND DISEASE.....	1K04 AM00500-01
REID, IAN A.....	SYMPATHETIC REGULATION OF RENIN SECRETION.....	5K04 HL00104-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
CALIFORNIA—Continued		
ROSEN, STEVEN D.....	BIOCHEMISTRY OF CELL ADHESION.....	5K04 GM00322-02
SANTI, DANIEL V.....	STUDIES OF TMP SYNTHETASE & THE GLUCOCORTICOID RECEPTOR.....	5K04 CA00123-04
SCHARSCHMIDT, BRUCE F.....	MECHANISM OF BILE FORMATION AND ORGANIC ANION EXCRETION.....	5K04 AM00323-02
SCHINDLER, ROBERT A.....	PROJECTION ORGANIZATION TO/FROM SUPERIOR OLIVARY COMPLEX.....	5K07 NS00175-03
SEVERINGHAUS, JOHN W.....	RESPIRATORY CHEMORECEPTOR SENSITIVITY CONTROL MECHANISMS.....	4K06 HL19412-16
SIEGEL, ROBERT C.....	PATHOGENESIS OF CONNECTIVE TISSUE DISEASE.....	5K04 AM00114-04
TYBERG, JOHN V.....	AN ANALYSIS OF ISCHEMIC DYSFUNCTION.....	5K04 HL00016-04
WARA, DIANE W.....	EFFECTS OF THYMIC HORMONE (THYMOSIN) IN MAN.....	1K04 HD00170-01
WEINKAM, ROBERT J.....	CHEMICAL IONIZATION MASS SPECTROMETRY-BIOMEDICAL.....	5K04 GM00007-04
WIKMAN-COFFELT, JOAN.....	CONTRACTILE PROTEINS IN ISCHEMIA.....	3K04 HL00466-01S1
WIKMAN-COFFELT, JOAN.....	CONTRACTILE PROTEINS IN ISCHEMIA.....	5K04 HL00466-02
WILLIAMS, MARY C.....	LUNG SURFACTANT: SYNTHESIS, SECRETION, AND STRUCTURE.....	3K04 HL00221-02S1
WILLIAMS, MARY C.....	LUNG SURFACTANT: SYNTHESIS, SECRETION, AND STRUCTURE.....	5K04 HL00221-03
YAMAMOTO, KEITH R.....	MECHANISM OF GENE REGULATION BY STEROID RECEPTOR PROTEIN.....	5K04 CA00347-02
SANTA BARBARA		
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106		
PURICH, DANIEL L.....	ENZYME REGULATION BY COVALENT MODIFICATION.....	5K04 GM00250-02
SANTA CRUZ		
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ ZIP CODE 95064		
MC MURRY, JOHN E.....	TOTAL SYNTHESIS OF CARDIAC AGLYCONES.....	5K04 CA00163-03
STANFORD		
STANFORD UNIVERSITY ZIP CODE 94305		
BLASCHKE, TERENCE F.....	KINETICS OF DRUG-DISEASE AND DRUG-DRUG INTERACTIONS.....	1K04 GM00407-01
CHOW, KAO L.....	NEUROBIOLOGY OF LEARNING AND VISION.....	5K06 NS18512-17
COOPER, ALLEN D.....	REGULATION OF HEPATIC CHOLESTEROL SYNTHESIS.....	1K04 AM00503-01
EPSTEIN, HENRY F.....	GENETIC & MOLECULAR BASIS OF MUSCLE DEVELOPMENT.....	5K04 HD00182-02
FRIEDBERG, ERROL C.....	DNA REPAIR MECHANISMS AND DNA-PROTEIN INTERACTION.....	3K04 CA71005-03S1
FRIEDBERG, ERROL C.....	DNA REPAIR MECHANISMS AND DNA-PROTEIN INTERACTION.....	5K04 CA71005-04
GLADER, BERTIL E.....	PATHOPHYSIOLOGY OF HEMOLYSIS: ROLE OF RBC DEHYDRATION.....	5K04 AM00435-03
HELLER, H CRAIG.....	CENTRAL NERVOUS SYSTEM REGULATION OF BODY TEMPERATURE.....	5K04 NS00041-04
HUDSON, BRUCE S.....	MEMBRANES: NEW TECHNIQUES.....	5K04 GM00284-02
HUESTIS, WRAY H.....	NEUROTRANSMITTER RECEPTORS IN HUMAN ERYTHROCYTES.....	5K04 HL00258-02
LUETSCHER, JOHN A, JR.....	SECRETION AND METABOLISM OF ADRENAL HORMONES.....	5K06 AM14176-17
PEDLEY, TIMOTHY A.....	EPILEPTOGENESIS AND NEURAL PLASTICITY.....	3K07 NS11075-03S1
PEDLEY, TIMOTHY A.....	EPILEPTOGENESIS AND NEURAL PLASTICITY.....	5K07 NS11075-04
PERKINS, DAVID D.....	GENETICS OF NEUROSPORA.....	5K06 GM04899-15
SAKITT, BARBARA.....	PHYSICAL AND NEURAL BASIS OF SENSATION AND PERCEPTION.....	5K04 EY00004-04
SIMONI, ROBERT D.....	STRUCTURE-FUNCTION RELATIONSHIPS IN MEMBRANES.....	5K04 GM00225-03
THEODORE, JAMES.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00129-04
TORRANCE		
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT-LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL ZIP CODE 90509		
JOBE, ALAN H.....	LUNG PHOSPHOLIPID METABOLISM DURING DEVELOPMENT.....	1K04 HD00252-01
SPERLING, MARK A.....	ENDOCRINE REGULATION OF CARBOHYDRATE METABOLISM.....	5K04 HD00029-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
COLORADO		
BOULDER		
UNIVERSITY OF COLORADO AT BOULDER ZIP CODE 80309		
CARLSON, LAWRENCE E.....	MULTI-MODE CONTROL OF UPPER-LIMB PROSTHESES.....	5K04 AM00166-03
CARUTHERS, MARVIN H.....	BIOCHEMICAL AND BIOLOGICAL STUDIES OF DNA CONTROL REGION.....	5K04 GM00076-04
GOLD, LAWRENCE M.....	GENE EXPRESSION: BIOCHEMISTRY/GENETICS OF TWO CISTRONS.....	5K04 GM00103-04
HALLICK, RICHARD B.....	GENE EXPRESSION IN ORGANELLES DURING CELL DEVELOPMENT.....	5K04 GM00372-02
JONES, RICHARD E.....	ENDOCRINE CONTROL OF OVARIAN FOLLICULAR GROWTH-REPTILES.....	5K04 HD70165-05
DENVER		
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206		
CHILLER, JACQUES M.....	CELLULAR BASIS OF IMMUNOREGULATORY MECHANISMS.....	5K04 AI00133-03
PACE, NORMAN R.....	SYNTHESIS AND REGULATION OF RIBOSOMAL RNA.....	5K04 GM00189-03
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262		
ANDERSON, ROBERT J.....	WATER METABOLISM IN HEART FAILURE AND EDEMATOUS STATES.....	5K04 HL00316-02
FINK, LOUIS M.....	TRANSFORMATION OF CELLS BY CHEMICAL CARCINOGENS.....	5K04 CA00050-04
GAENSBauer, THEODORE J.....	REGULATION OF AFFECT EXPRESSION IN INFANCY.....	5K04 HD00214-02
KOLTERMAN, ORVILLE G.....	MECHANISM OF INSULIN RESISTANCE IN OBESITY.....	1K08 AM00580-01
LEVINE, JOEL S.....	THE CELLULAR BIOLOGY OF G. I. HORMONE SECRETION.....	1K08 AM00484-01
MOORHEAD, JOHN W.....	INTERACTION OF T-CELLS IN IMMUNITY AND TOLERANCE.....	5K04 AI00125-03
MURPHY, ROBERT C.....	APPLICATION OF MASS SPECTROMETRY TO BIOMEDICAL RESEARCH.....	5K04 HD00128-03
NEVILLE, MARGARET C.....	ROLE OF INTRACELLULAR COMPARTMENTS IN NUTRIENT TRANSPORT.....	5K04 AM00038-04
NORRIS, DAVID A.....	CYTODESTRUCTIVE MECHANISMS IN CUTANEOUS DISEASE.....	1K08 AM00510-01
PATTERSON, DAVID.....	GENETIC BIOCHEMICAL REGULATION IN MAMMALIAN CELLS.....	5K04 AM00044-04
ROPER, STEPHEN D.....	SPROUTING OF SYNAPTIC TERMINALS.....	1K04 NS00257-01A1
SIMON, FRANCIS R.....	SURFACE MEMBRANE REGULATION OF BILE ACID TRANSPORT.....	5K04 AM00347-02
WENGER, DAVID A.....	BETA-GALACTOSIDASE DEFICIENCY NEURODEGENERATIVE DISEASE.....	5K04 NS00108-03
ZWILLICH, CLIFFORD W.....	VENTILATORY CONTROL AND RESPIRATORY FAILURE.....	5K04 HL00225-03
FORT COLLINS		
COLORADO STATE UNIVERSITY ZIP CODE 80521		
HILL, GEORGE C.....	DNA AND CYTOCHROMES IN KINETOPLASTIDAE.....	5K04 AI70813-05
CONNECTICUT		
FARMINGTON		
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032		
CATALANOTTO, FRANK A.....	SENSORY PHYSIOLOGY IN HEALTH & DISEASE.....	5K04 DE00012-04
CHAN, LEE-NIEN L.....	STUDIES OF CHICK ERYTHROID CELL DIFFERENTIATION.....	1K04 AM00370-01
HOCK, JANET M.....	MICROCIRCULATORY FUNCTION IN EARLY GINGIVAL INFLAMMATION.....	5K04 DE00035-03
KOLAKOWSKI, DONALD L.....	GENETICS OF THE HUMAN DENTITION IN SEVERAL POPULATIONS.....	5K04 DE00015-04
PAPPANO, ACHILLES J.....	PHARMACOLOGY OF DEVELOPING CARDIAC TISSUES.....	5K04 HL00027-04
YOSHIDA, TAKESHI.....	LYMPHOKINE MEDIATORS OF CELLULAR IMMUNITY IN VIVO.....	5K04 AI00082-04
MIDDLETOWN		
WESLEYAN UNIVERSITY ZIP CODE 06457		
ALLEWELL, NORMA M.....	THERMODYNAMICS OF MEMBRANE-LIGAND INTERACTIONS.....	5K04 AM00283-02
LYNCH, CAROL B.....	GENETIC ANALYSIS OF BEHAVIORAL THERMOREGULATION.....	1K04 ES00042-01
WOLFE, JASON S.....	THE DIVISION/DIFFERENTIATION DECISION-FOCUS ON G1.....	5K04 GM00140-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
CONNECTICUT—Continued		
NEW HAVEN		
YALE UNIVERSITY ZIP CODE 06520		
ASKENASE, PHILIP W.....	ALLERGIC DISEASES ACADEMIC AWARD.....	5K07 AI70829-05
CANELLAKIS, EVANGELO S.....	MECHANISMS OF BIOSYNTHESIS OF NUCLEIC ACIDS.....	5K06 GM03070-15
COHEN, STEVEN R.....	BIOLOGIC EFFECTS OF ENVIRONMENTAL FACTORS ON THE SKIN.....	1K08 AM00511-01
COLE, PATRICIA E.....	BIOPHYSICAL STUDIES OF GENE EXPRESSION.....	7K04 GM00471-03
DE LORENZO, ROBERT J.....	PROTEIN PHOSPHORYLATION, ANTICONVULSANTS, & EPILEPSY.....	5K04 NS00245-02
DOBBINS, JOHN W.....	EFFECT OF LITHIUM ON INTESTINAL ABSORPTION & SECRETION.....	5K08 AM00232-03
GERLT, JOHN A.....	THE INTERACTIONS OF CYCLIC NUCLEOTIDES WITH ENZYMES.....	1K04 CA00499-01
HOWARD-FLANDERS, PAUL.....	MECHANISMS FOR THE PERSERVATION OF THE GENOME.....	4K06 AM09397-16
MANUELIDIS, LAURA M.....	BIOCHEMISTRY/ULTRASTRUCTURE: CNS TUMORS, DEVELOPING CELL.....	5K04 NS00101-04
MILLER, DENIS J.....	NATURE OF IMMUNE MECHANISMS IN PATHOGENESIS OF HEPATITIS.....	1K08 AM00488-01
MILSTONE, LEONARD M.....	DIFFERENTIATION OF EPIDERMIS: ROLE OF KERATINOSOMES.....	5K08 AM00389-02
OGDEN, JOHN A.....	ANALYSIS OF POST-NATAL SKELETAL DEVELOPMENT.....	1K04 AM00300-01
PANJABI, MANOHAR M.....	MEASUREMENT OF HUMAN SPINE MOTION SEGMENT BEHAVIOR.....	1K04 AM00299-01A1
PAPERMASTER, DAVID S.....	MEMBRANE BIOSYNTHESIS IN RETINA.....	5K04 EY00017-04
POWLEY, TERRY L.....	HYPOTHALAMIC CONTROL OF BODY WEIGHT AND FEEDING.....	5K04 AM00363-02
SAHA, SUBRATA.....	EVALUATION & MODELLING OF MECHANICAL PROPERTIES OF BONE.....	1K04 AM00379-01
SHERWIN, ROBERT S.....	INSULIN, GLUCAGON, SOMATOSTATIN AND BODY FUEL METABOLISM.....	5K04 AM00334-02
SOMAN, VIJAY R.....	GLUCAGON AND INSULIN RECEPTORS IN GLUCOSE HOMEOSTASIS.....	5K08 AM00356-02
VARGA, JANOS M.....	SPECIFICITY AND EXPRESSION OF CELL SURFACE RECEPTORS.....	5K04 AI00154-03
WADE, JAMES B.....	PHYSIOLOGY OF EPITHELIA AND MEMBRANE STRUCTURE.....	5K04 AM00217-03
STORRS		
UNIVERSITY OF CONNECTICUT ZIP CODE 06268		
BALL, LAURENCE A.....	THE CONTROL OF VIRAL GENE EXPRESSION.....	1K04 AI00273-01
ROTH, JAY S.....	NUCLEASES AND DNA METABOLISM STUDIES.....	5K06 CA18379-17
ZEAMAN, DAVID.....	RETARDATE DISCRIMINATION LEARNING AND ATTENTION.....	4K06 HD20325-16
DELAWARE		
NEWARK		
UNIVERSITY OF DELAWARE ZIP CODE 19711		
WAGNER, ROGER C.....	MICROPINOCYTIC TRANSPORT IN CAPILLARY ENDOTHELIUM.....	5K04 HL00270-02
WHITE, HAROLD B, III.....	GLYCEROL 3-P DEHYDROGENASE AND EGG YOLK AVIDIN.....	5K04 AM00152-02
DIST OF COL		
WASHINGTON		
AMERICAN NATIONAL RED CROSS ZIP CODE 20006		
INGHAM, KENNETH C.....	PRECIPITATION OF PROTEINS WITH POLYETHYLENE GLYCOL.....	5K04 HL00325-02
FLORIDA		
CORAL GABLES		
UNIVERSITY OF MIAMI ZIP CODE 33124		
CORBETT, MICHAEL D.....	FORMATION AND FATE OF HYDROXAMATES IN THE ENVIRONMENT.....	1K04 ES00038-01

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1978—Continued**

Awardee	Project title	Grant number
FLORIDA—Continued		
GAINESVILLE		
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611		
BIRDELL, DALE C.....	PATHOGENICITY OF BACTERIAL TEICHOIC ACIDS.....	5K04 DE00030-03
DUCKWORTH, DONNA H.....	BACTERIOPHAGE AND CELL SURFACE PHENOMENON.....	5K04 AI00054-03
DUNN, BEN M.....	CONTROL OF PEPSIN BY ACTIVATION PEPTIDE ANALOGS.....	5K04 AM00303-02
GASSET, ANTONIO R.....	TERATOGENIC & TOXIC EFFECTS OF OPHTHALMIC DRUGS.....	5K04 EY00002-04
HARTY, RICHARD F.....	GASTROINTESTINAL PEPTIDE HORMONE SYNTHESIS AND SECRETION.....	5K08 AM00298-02
KARLAN, MARC S.....	PHYSIOLOGY & PATHOPHYSIOLOGY OF HEARING.....	5K07 NS00281-02
MC CAREY, BERNARD E.....	CORNEAL ENDOTHELIAL MORPHOLOGY AND FUNCTION.....	5K07 EY00031-03
MISBIN, ROBERT I.....	SERCA-DIABETES MELLITUS: CARDIOVASCULAR.....	1K01 AM00561-01
WYNNE, JAMES W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00122-03
MIAMI		
UNIVERSITY OF MIAMI ZIP CODE 33152		
BRADY, AL H.....	STRUCTURE OF ENZYME COMPLEXES IN NEOPLASMS.....	5K04 CA00100-04
BREW, KEITH.....	CHEMICAL STUDIES OF ENZYMES AND PROTEINS.....	5K04 GM00147-04
DOWNEY, KATHLEEN M.....	RNA-DEPENDENT RNA POLYMERASE OF ERYTHROID CELLS.....	5K04 HL00031-04
HINKLEY, ROBERT E, JR.....	VOLATILE ANESTHETICS ON NERVE CELL STRUCTURE & FUNCTION.....	3K04 GM00454-02S1
HINKLEY, ROBERT E, JR.....	VOLATILE ANESTHETICS ON NERVE CELL STRUCTURE & FUNCTION.....	5K04 GM00454-03
PENNEYS, NEAL S.....	CUTANEOUS INHIBITORS OF PROSTAGLANDIN SYNTHESIS.....	5K04 AM00203-03
RABINOVITCH, ALEXANDER.....	FUNCTIONS OF PANCREATIC ISLET CELLS CULTURED IN VITRO.....	1K04 AM00552-01
SCOTT, WALTER A.....	SV40 TRANSFORMED ENDOCRINE CELLS/SV40 CHROMATIN.....	1K04 AM00549-01
THET, LYN A.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00374-02
TALLAHASSEE		
FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES ZIP CODE 32301		
BOROVSKY, DOV.....	VITELLOGENIN SYNTHESIS IN BITING DIPTERA.....	1K04 AI00263-01
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306		
BERKLEY, KAREN J.....	NEUROANATOMY OF SOMATIC PATHWAYS AFFERENT TO THALAMUS.....	5K04 NS00118-04
FREEMAN, MARC E.....	HYPOTHALAMIC CONTROL OF PITUITARY FUNCTION.....	1K04 HD00231-01
MARZLUFF, WILLIAM F, JR.....	SPECIFIC GENE EXPRESSION IN ANIMAL CELLS IN VITRO.....	5K04 CA00178-03
RILL, RANDOLPH L.....	THE STRUCTURE OF CHROMATIN AND MODEL NUCLEOPROTEINS.....	5K04 GM00087-04
GEORGIA		
ATHENS		
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601		
COLE, RONALD S.....	REPAIR OF DNA CONTAINING INTERSTRAND CROSS-LINKS.....	5K04 CA00046-04
KUSHNER, SIDNEY R.....	BIOCHEMISTRY OF GENETIC RECOMBINATION AND DNA REPAIR.....	5K04 GM00048-04
VAPNEK, DANIEL.....	MOLECULAR STUDIES OF R-PLASMIDS IN E. COLI.....	5K04 GM00090-04
ATLANTA		
ATLANTA UNIVERSITY ZIP CODE 30314		
LUMB, JUDITH R.....	A THEORETICAL AND BIOCHEMICAL STUDY OF LEUKEMIA.....	5K04 CA00067-04
EMORY UNIVERSITY ZIP CODE 30322		
BRESSACK, MICHAEL A.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	5K08 HL00313-03
HARTZELL, H CRISS, JR.....	ACETYLCHOLINE RECEPTORS IN FROG CARDIAC MUSCLE.....	1K04 HL00435-01
HONIG, ERIC G.....	PULMONARY MEDICINE.....	5K08 HL00314-02
NOE, BRYAN D.....	ROLE OF PROGLUCAGON IN GLUCAGON BIOSYNTHESIS.....	5K04 AM00142-02
SMITH, P DENNIS.....	RECOMBINATION PROFICIENCY IN DROSOPHILA MELANOGASTER.....	5K04 GM70758-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
GEORGIA—Continued		
WHITE, JOHN F.....	MECHANISMS OF INTESTINAL C1 ABSORPTION AND SECRETION.....	1K04 AM00367-01
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332		
YU, NAI-TENG.....	NEW METHODS FOR BIOMEDICAL RESEARCH.....	5K04 EY00073-03
AUGUSTA		
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902		
OKABE, TORU.....	DIFFUSION IN AMALGAM-AMALGAMATION ON AG-SN (TX) ALLOYS.....	5K04 DE00039-03
SPEIR, WILLIAM A, JR.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70057-05
HAWAII		
HONOLULU		
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANA ZIP CODE 96822		
FURUIKE, ALVIN N.....	PULMONARY DISEASES.....	1K08 HL00451-01
HALLENBORG, CARL P.....	MEDICAL SCHOOL PULMONARY TRAINING AWARD.....	5K08 HL00312-03
MORISHIGE, WALTER K.....	HORMONAL REGULATION OF LUNG FUNCTION.....	5K04 HL00216-03
POPPER, ARTHUR N.....	PHYSIOLOGICAL DETERMINATIONS OF INNER EAR FUNCTION.....	1K04 NS00312-01
SMITH, RICHARD M.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	5K08 HL00303-02
IDAHO		
MOSCOW		
UNIVERSITY OF IDAHO ZIP CODE 83843		
WILLETT, JAMES D.....	HORMONES & HORMONAL SYSTEMS IN NEMATODES.....	5K04 AG00011-04
ILLINOIS		
CHICAGO		
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616		
SCHNEIDER, ARTHUR B.....	HORMONE STRUCTURE & SECRETION: NORMAL GLANDS & TUMORS.....	5K04 AM00103-04
STACHURA, MAXIMILLIAN E.....	SYNTHESIS STORAGE AND RELEASE OF PITUITARY GH AND PRL.....	5K04 AM00288-02
NORTHWESTERN UNIVERSITY ZIP CODE 60611		
ANDERSON, BYRON E.....	STUDY OF RHEUMATOID ARTHRITIS; GLYCOPROTEIN ANTIGENS.....	5K04 AM70787-05
LIPTON, HOWARD L.....	THEILER'S VIRUS-INDUCED DEMYELINATION.....	5K04 AI00228-02
RUBIN, DAVID B.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	5K03 HL00310-02
TEN EICK, ROBERT E.....	ELECTROPHYSIOLOGICAL BASIS OF HUMAN DYSRHYTHMIAS.....	5K04 HL00033-04
YEY, JAY Z.....	MOLECULAR MECHANISM OF LOCAL ANESTHETIC ACTION.....	1K04 GM00442-01
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER--RUSH UNIVERSITY ZIP CODE 60612		
ANDRIACCHI, THOMAS P.....	BIOMECHANICAL STUDY OF TOTAL KNEE REPLACEMENT.....	1K04 AM00493-01
GOTTLIEB, GERALD L.....	EXPERIMENTAL INVESTIGATION OF HUMAN MOTOR MECHANISMS.....	5K04 NS00196-03
SCHAUF, CHARLES L.....	KINETIC STUDIES OF MYXICOLA AXONS/DRUGS FOR M.S. THERAPY.....	5K04 NS00004-04
UNIVERSITY OF CHICAGO ZIP CODE 60637		
AGARWAL, KAN L.....	NUCLEIC ACID-PROTEIN INTERACTIONS.....	5K04 GM00224-03
ARNSDORF, MORTON F.....	ELECTROPHARMACOLOGY OF ANTIARRHYTHMIC DRUGS.....	5K04 HL00196-03
BOYER, JAMES L.....	ACADEMIC CAREER DEVELOPMENT AWARD IN DIGESTIVE DISEASES.....	5K07 AM70218-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
ILLINOIS—Continued		
DAWSON, GLYN.....	METABOLISM OF GLYCOLIPIDS AND GLYCOPROTEINS.....	5K04 NS00029-04
FRIED, JOSEF.....	STEROIDS, PROSTAGLANDINS AND CARCINOGENIC HYDROCARBONS.....	5K06 AM21846-15
GEPPERT, EUGENE F.....	PULMONARY DISEASES.....	5K08 HL00252-03
GROBSTEIN, PAUL.....	DEVELOPMENT OF CONNECTIVITY IN ANURAN VISUAL SYSTEMS.....	5K04 EY00057-02
GUNN, ROBERT B.....	MOLECULAR MECHANISMS OF ION TRANSPORT IN HUMAN RBC.....	5K04 HL00208-03
HORWITZ, DAVID L.....	RESIDUAL BETA-CELL FUNCTION IN DIABETES MELLITUS.....	5K04 AM00181-03
HUNTER, ROBERT L.....	IMMUNOPATHOLOGY OF HUMAN AND ANIMAL CANCER.....	5K04 CA00032-04
JOSEPHS, ROBERT.....	MOLECULAR STRUCTURE OF SICKLE CELL FIBERS.....	1K04 HL00434-01
MAUSOLF, FREDERICK A.....	EXPERIMENTAL HYPERVISCOSITY RETINOPATHY.....	5K07 EY00074-02
POKORNY, JOEL M.....	AN ANALYSIS OF NORMAL AND DEFECTIVE COLOR VISION.....	5K04 EY70652-04
QUINTANS, JOSE.....	IDIOTYPES, LYMPHOCYTES AND MACROPHAGES.....	1K04 AI00268-01
RECKARD, CRAIG R.....	EFFECTS OF PANCREATIC ISLET TRANSPLANTATION IN RATS.....	5K08 AM00401-02
ROTHMAN-DENES, LUCIA B.....	NOVEL TRANSCRIBING ACTIVITIES IN N4-INFECTED E. COLI.....	5K04 AI00078-04
SCHERBERG, NEAL H.....	VARIATIONS IN MESSENGER RNA IN ENDOCRINE TISSUES.....	5K04 AM00179-02
SCHNEIDER, JOHN F.....	CLINICAL APPLICATION OF STABLE ISOTOPE TRACERS.....	5K04 AM00133-04
SCHREIBER, HANS.....	PATHOBIOLOGY OF MULTIPLE MYELOMA.....	1K04 CA00432-01
SHAPIRO, JAMES A.....	PSEUDOMONAS ALKANE METABOLISM; C. GLUTAMICUM GENETICS.....	5K04 AI00118-03
SPARGO, BENJAMIN H.....	ULTRASTRUCTURAL RENAL CHANGES—CLINICAL/EXPERIMENTAL.....	5K06 HL04418-15
SPEAR, PATRICIA G.....	MEMBRANE PROTEINS SPECIFIED BY HERPES VIRUSES.....	5K04 CA00035-04
TAGER, HOWARD S.....	BIOSYNTHESIS AND SECRETION OF PEPTIDE HORMONES.....	5K04 AM00145-03
TRIMBLE, JOHN L.....	NONLINEAR ANALYSIS OF THE HUMAN VER.....	5K07 EY00079-02
WILSON, HUGH R.....	SIGNIFICANCE OF SPATIAL INHOMOGENEITY AND HYSTERESIS.....	1K04 EY00062-01
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE ZIP CODE 60680		
OSCAI, LAWRENCE B.....	EXERCISE AND LIPID METABOLISM.....	5K04 AM00216-03
SCHULTZ, ALBERT B.....	BIOCHEMICAL STUDIES OF IDIOPATHIC SCOLIOSIS.....	5K04 AM00029-04
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612		
BELL, CLARA G.....	FOREIGN RNA FOR ANTIBODY SYNTHESIS BY LYMPHOID CELLS.....	5K04 AI70235-05
FRIEDENSON, BERNARD A.....	IGG ANTIBODIES WITH THE SAME H OR L CHAIN.....	5K04 AI00147-03
DE KALB		
NORTHERN ILLINOIS UNIVERSITY ZIP CODE 60115		
BLAKE, ROBERT R.....	SPATIAL VISION IN NORMAL AND VISUALLY DEPRIVED ANIMALS.....	1K04 EY00106-01A1
ERMAN, JAMES E.....	ELECTRON TRANSFER AND HEME PROTEIN REACTIVITY.....	5K04 GM00249-03
EVANSTON		
NORTHWESTERN UNIVERSITY ZIP CODE 60201		
DUMAS, LAWRENCE B.....	ROLE OF HOST CELL PROTEINS IN VIRUS DNA REPLICATION.....	5K04 AI70632-05
KERTESZ, ANDREW E.....	INVESTIGATION OF HUMAN FUSIONAL RESPONSE.....	5K04 EY70887-04
LEWIS, JACK L.....	MECHANICAL PROPERTIES OF BONE AND IMPLANT DESIGN.....	5K04 AM00081-04
LORAND, LASZLO.....	BLOOD, MUSCLE AND PROSTATE CHEMISTRY.....	4K06 HL03512-16
TUREK, FRED W.....	PHOTOPERIODIC REGULATION OF REPRODUCTION IN MAMMALS.....	1K04 HD00249-01
WIGHTMAN, FREDERIC L.....	PITCH PERCEPTION.....	5K07 NS11072-04
WU, TAI T.....	STRUCTURES OF THE VARIABLE REGIONS OF ANTIBODIES.....	5K04 AI70497-05
MAYWOOD		
LOYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153		
STODOLSKY, MARVIN.....	BACTERIAL GENE ACQUISITION BY PROPHAGE P1.....	5K04 GM00113-04
URBANA		
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801		
BROWN, ANN L.....	MEMORY FOR STORIES IN CHILDREN.....	5K04 HD00111-03
EBREY, THOMAS G.....	MECHANISM OF VISUAL EXCITATION.....	5K04 EY00025-04
GENNIS, ROBERT B.....	LIPID-REQUIRING MEMBRANE ENZYMES.....	5K04 HL00040-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
ILLINOIS—Continued		
GLASER, MICHAEL.....	ROLE OF PHOSPHOLIPIDS IN MEMBRANES AND CELL GROWTH.....	5K04 GM00193-03
KONISKY, JORDAN.....	MECHANISM OF ACTION OF I-COLICINS ON ESCHERICHIA COLI.....	5K04 AI00049-04
ORDAL, GEORGE W.....	CHEMOTAXIS AND PHOTOTAXIS IN BACTERIA.....	5K04 GM00160-03
SHAPIRO, DAVID J.....	REGULATION OF DEVELOPMENT AND CHOLESTEROL SYNTHESIS.....	1K04 HL00482-01
SHERWOOD, ORRIN D.....	RELAXIN: STRUCTURAL AND PHYSIOLOGICAL STUDIES.....	5K04 HD00019-03
WEBER, MICHAEL J.....	EARLY CELL-SURFACE CHANGES IN VIRAL ONCOGENESIS.....	5K04 CA00092-04
INDIANA		
BLOOMINGTON		
INOIANA UNIVERSITY AT BLOOMINGTON ZIP CODE 47401		
BLUMENTHAL, THOMAS.....	QBETA REPLICASE & PROTEIN SYNTHESIS ELONGATION FACTORS.....	5K04 GM00016-04
ELIZONDO, REYNALDO S.....	THERMOREGULATION IN THE RHESUS MONKEY.....	5K04 AM00061-04
JASKUNAS, S RICHARD.....	REGULATION OF RIBOSOME BIOSYNTHESIS.....	1K04 GM00401-01
MAHLER, HENRY R.....	RESPIRATORY ENZYMES—STRUCTURE, FUNCTION, BIOSYNTHESIS.....	5K06 GM05060-17
RAFF, RUDOLF A.....	REGULATION OF PROTEIN SYNTHESIS IN EARLY DEVELOPMENT.....	5K04 HD00047-04
INDIANAPOLIS		
INOIANA UNIVERSITY-PURQUE UNIVERSITY AT INOIANAPOLIS ZIP CODE 46202		
BEN-JONATHAN, NIRA.....	HORMONAL FUNCTIONS OF CATECHOLAMINES.....	1K04 NS00219-01A1
BENSON, MERRILL D.....	IMMUNOBIOLOGY OF THE SERUM FACTOR OF SECONDARY AMYLOID.....	1K04 AM00352-01
KARN, ROBERT C.....	AMYLASE LOCI: BIOCHEMICAL AND GENETIC DIFFERENTIATION.....	5K04 AM00284-02
RHOADES, RODNEY A.....	SUBSTRATE METABOLISM AND LUNG FUNCTION.....	5K04 HL00317-03
NOTRE DAME		
UNIVERSITY OF NOTRE DAME ZIP CODE 46556		
CASTELLINO, FRANCIS J.....	PLASMINOGEN AND PLASMIN: STRUCTURE AND FUNCTION.....	5K04 HL70717-05
WEST LAFAYETTE		
PURQUE UNIVERSITY ZIP CODE 47907		
BRENCHLEY, JEAN E.....	ROLE OF T-RNA IN REGULATING ENZYME SYNTHESIS.....	5K04 GM00449-03
CRANE, FREDERICK L.....	ORGANIZATION AND FUNCTION OF SUBCELLULAR PARTICLES.....	5K06 GM21839-15
DIXON, JACK E.....	THYROTROPIN RELEASING HORMONE BIOSYNTHESIS; DEGRADATION.....	5K04 AM00218-03
FETH, LAWRENCE L.....	AUDITORY SPECTRAL RESOLUTION.....	1K04 NS00267-01A1
HARTL, DANIEL L.....	EVOLUTION OF NEW GENES, DYNAMICS OF GENE SUBSTITUTION.....	5K04 GM00023-04
MARKLEY, JOHN L.....	THE USE OF NMR TO SOLVE PROBLEMS IN PROTEIN CHEMISTRY.....	5K04 HL00061-04
PINTO, LAWRENCE H.....	PHOTORECEPTOR SIGNAL GENERATION.....	5K04 EY00009-04
WEITH, H LEE.....	SEQUENCE ANALYSIS OF TUMOR VIRUS RNA.....	1K04 CA00447-01
IOWA		
IOWA CITY		
UNIVERSITY OF IOWA ZIP CODE 52242		
ARNONE, ARTHUR.....	X-RAY STUDIES OF HEMOGLOBIN AND REGULATORY ENZYMES.....	5K04 AM00099-04
AUTOR, ANNE P.....	STUDIES ON MECHANISM OF OXYGEN & FREE RADICAL TOXICITY.....	5K04 HD00068-04
BARON, JEFFREY.....	MECHANISMS AND CONTROL OF MAMMALIAN STERIODOGENESIS.....	5K04 AM00091-04
BURNS, CHARLES P.....	LEUKEMIC LEUKOCYTES; LIPIDS AND MEMBRANE STRUCTURE.....	1K04 CA00324-01A1
ERENBERG, ALLEN P.....	THYROID HORMONES AND THE FETAL AND NEONATAL LUNG.....	5K04 HD00155-02
HALMI, NICHOLAS S.....	INVESTIGATION OF THE THYROID AND PITUITARY.....	5K06 AM13576-17
HERMSMEYER, R KENT.....	MEMBRANE ELECTRICAL PROPERTIES OF VASCULAR MUSCLE.....	5K04 HL00073-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
IOWA—Continued		
MARCUS, MELVIN L.....	MYOCARDIAL PERFUSION AND CARDIAC HYPERTROPHY	5K04 HL00328-02
NEWLON, CAROL S.....	YEAST DNA REPLICATION	5K04 GM00265-03
ONOFRIO, JOHN M.....	PULMONARY DISEASES.....	1K08 HL00453-01
OWEN, WHYTE G.....	BIOCHEM OF ANTIHEMOPHILIC FACTOR AND HEPARIN COFACTOR.....	5K04 HL00348-02
ROBILLARD, JEAN E.....	MATURATION OF THE RENAL FUNCTION DURING FETAL LIFE	1K04 HD00254-01
STRAUSS, RONALD G.....	NEUTROPHIL FUNCTIONS IN THE NEONATE.....	1K04 HD00255-01
THAMES, MARC D.....	CARDIAC RECEPTORS WITH VAGAL C-FIBER AFFERENTS.....	1K04 HL00402-01
WELSH, MICHAEL J.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	5K08 HL00362-02
KANSAS		
KANSAS CITY		
UNIVERSITY OF KANSAS ZIP CODE 66103		
BELMONT, JOHN M.....	CHILDREN'S INFORMATION-PROCESSING STRATEGY DECISIONS.....	5K04 HD00026-04
KERBY, GERALD R.....	SUPPORT FOR IMPROVEMENT OF PULMONARY DISEASE CURRICULUM	5K07 HL70073-05
LIU, CHIEN.....	PATHOGENETIC STUDY & DIAGNOSIS OF INFECTIOUS DISEASES.....	4K06 AI01826-16
MINER, PHILIP B, JR.....	GLUCOCORTICOID EFFECTS ON THE LIVER SURFACE MEMBRANE	1K08 AM00487-01
PAZDERNIK, THOMAS L.....	PHARMACOLOGICAL MANIPULATION OF HEMO/IMMUNOPOIESIS.....	5K04 CA00006-04
WOOD, JACKIE D.....	FUNCTION OF ENTERIC NEURONS.....	5K04 AM70726-05
LAWRENCE		
UNIVERSITY OF KANSAS ZIP CODE 66045		
BELL, WILLIAM J.....	BEHAVIORAL MECHANISMS IN CHEMO-ORIENTATION.....	5K04 NS00190-03
CRAWFORD, MICHAEL H.....	DENTITION GENETIC ANALYSES OF ESKIMOS AND MEXICANS	5K04 DE00028-03
HOUSTON, L LUGENE.....	PROTEIN INTERACTIONS.....	5K04 CA00114-04
MC CHESNEY, JAMES D.....	GROWTH/DEVELOPMENT AND BIOLOGICALLY ACTIVE TERPENOIDS	5K04 GM00102-04
MANHATTAN		
KANSAS STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE ZIP CODE 66506		
REECK, GERALD R.....	NONHISTONE CHROMATIN PROTEINS FROM HEPATOMA CELLS	1K04 CA00425-01
ROCHE, THOMAS E.....	ENZ. CONVERSION AND RELATED MITOCHONDRIAL TRANSITIONS.....	1K04 AM00460-01
RODKEY, L SCOTT.....	AUTOREGULATION OF IMMUNE PROCESSES.....	5K04 AI00217-02
ROUFA, DONALD J.....	GENETICS OF DNA REPLICATION IN ANIMAL CELLS.....	5K04 GM00245-03
KENTUCKY		
LEXINGTON		
UNIVERSITY OF KENTUCKY ZIP CODE 40506		
COLEMAN, MARY S.....	TERMINAL TRANSFERASE IN MAMMALIAN HEMOPOIETIC TISSUE.....	1K04 CA00494-01
JOKL, ERNST.....	THE THIRD CULTURE—A TEXT ON SPORTS MEDICINE.....	5K10 LM00009-02
LOUISVILLE		
UNIVERSITY OF LOUISVILLE ZIP CODE 40208		
WESTPHAL, ULRICH F.....	STEROID-PROTEIN INTERACTIONS.....	5K06 GM14138-17

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
LOUISIANA		
COVINGTON		
TULANE UNIVERSITY ZIP CODE 70433		
SU-CHEN, LI C.....	BIOCHEMICAL STUDIES ON SPHINGOLIPIDOSES.....	5K04 AM00016-04
NEW ORLEANS		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119		
LOPEZ-S, ALFREDO.....	ACADEMIC CAREER DEVELOPMENT AWARD IN NUTRITION.....	5K07 AM70349-05
RAWLS, HENRY R.....	ANTICARIES THERAPIES-POLYMER & PHYSICAL CHEMISTRY.....	5K04 DE00050-02
REEVES, RICHARD E.....	THE NUTRITION & METABOLISM OF ANAEROBIC ORGANISMS.....	5K06 GM14023-15
TULANE UNIVERSITY ZIP CODE 70118		
IGNARRO, LOUIS J.....	BIOREGULATION OF LYSOSOMAL ENZYME SECRETION.....	5K04 AM00076-04
KLAWITTER, JEROME J.....	DESIGN CRITERIA FOR DENTAL IMPLANTS.....	5K04 DE00041-02
MALEK, EMILE A.....	EPIDEMIOLOGY AND CONTROL OF SCHISTOSOMIASIS.....	4K06 AI18424-16
TOU, JEN-SIE H.....	PHOSPHOLIPID METABOLISM BY LEUKEMIC LEUKOCYTES.....	5K04 CA00013-04
WEINSTEIN, ALLAN M.....	IMPLANT PERFORMANCE EVALUATION AND ATTACHMENT TO BONE.....	5K04 AM00222-03
SHREVEPORT		
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT SHREVEPORT ZIP CODE 71101		
PRATHER, NEALAN D.....	PULMONARY DISEASES.....	1K08 HL00444-01
MAINE		
PORTLAND		
MAINE MEDICAL CENTER ZIP CODE 04102		
NELSON, CLIFFORD V.....	ACCURATE MEASUREMENTS OF HEART DIPOLE MOMENT.....	5K06 HL01932-17
MARYLAND		
BALTIMORE		
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218		
BATSHAW, MARK L.....	GENETIC AND METABOLISM OF UREA CYCLE ENZYMOPATHIES.....	1K07 NS00342-01
BAYLIN, STEPHEN B.....	BIOGENIC AMINES AND HORMONE RELEASE IN ENDOCRINE TUMORS.....	5K04 CA00027-04
BENBOW, ROBERT M.....	CONTROL OF DNA REPLICATION IN XENOPUS LAEVIS EMBRYOS.....	5K04 GM00366-02
CHILDS, BARTON.....	STUDIES IN HUMAN GENETICS.....	5K06 HD01104-17
COHEN, STEVEN R.....	IMMUNOCHEMICAL STUDY OF MYELINATION AND DEMYELINATION.....	1K04 NS00315-01
COLVIN, MICHAEL O.....	PHARMACOLOGY OF CYCLOPHOSPHAMIDE AND NITROSUREAS.....	5K04 CA00103-04
COMSTOCK, GEORGE W.....	FOLLOW-UP STUDIES OF CARDIORESPIRATORY DISEASE.....	5K06 HL21670-15
CUTILLETTA, ANTHONY F.....	TRANSCRIPTIONAL REGULATION OF MYOCARDIAL HYPERTROPHY.....	1K04 HL00521-01
DE LONG, MAHLON R.....	NEUROLOGY AND NEUROPHYSIOLOGY.....	5K07 NS11069-05
FLAHERTY, JOHN T.....	PATHOPHYSIOLOGY OF MYOCARDIAL ISCHEMIA.....	5K04 HL00019-04
GAFFNEY, BETTY J.....	PHYSICAL PROPERTIES OF MEMBRANE PROTEINS.....	5K04 CA00168-03
GILLESPIE, ELIZABETH.....	ROLE OF MICROTUBULES IN ALLERGY.....	5K04 AI00043-04
JAKAB, GEORGE J.....	BRONCHOPULMONARY RESISTANCE TO BACTERIAL INFECTIONS.....	5K04 HL00415-02
KRISTT, DONALD A.....	BIRTH DEFECTS OF THE CEREBRAL CORTEX.....	5K07 NS00279-02
LATTMAN, EATON E.....	X-RAY DIFFRACTION STUDIES OF SV-40 AND POLYOMAVIRUS.....	9K04 AI00271-03
LEVIN, LESLIE S.....	LINKAGE AND HERITABLE DISORDERS OF CONNECTIVE TISSUE.....	5K04 DE00021-03
LILIENFELD, ABRAHAM M.....	RESEARCH IN PUBLIC HEALTH ASPECTS OF CHRONIC DISEASES.....	5K06 GM13901-17
LIN, SHIN.....	SUGAR TRANSPORT AND CELL MOVEMENT IN MAMMALIAN CELLS.....	5K04 GM00241-03
MENKES, HAROLD A.....	PULMONARY INTERDEPENDENCE.....	5K04 HL00058-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MARYLAND—Continued		
MIGEON, CLAUDE J.....	RELATION OF HORMONES TO GROWTH AND DEVELOPMENT.....	5K06 AM21855-15
MITCH, WILLIAM E.....	NUTRITIONAL THERAPY OF UREMIA.....	5K08 AM00214-03
MITZNER, WAYNE A.....	PULMONARY INTERSTITIAL PRESSURES AND EDEMA FORMATION.....	1K04 HL00347-01
MURPHY, PATRICK A.....	CHEMISTRY AND PHYSIOLOGY OF LEUCOCYTE PYROGEN.....	5K04 AI00089-04
PESTRONK, ALAN.....	TROPHIC CONTROL OF NERVE SPROUTING AND ACH RECEPTORS.....	1K07 NS00310-01
PHILLIPS, JOHN A, III.....	REGULATION OF GLOBIN GENE EXPRESSION.....	1K08 AM00423-01
PLAUT, MARSHALL.....	CELL-MEDIATED IMMUNITY: MODULATION BY HISTAMINE.....	5K04 AI00231-02
ROTH, STEPHEN A.....	MORPHOGENESIS IN EMBRYONIC AND MALIGNANT SYSTEMS.....	5K04 HD00148-03
SHOUKAS, ARTIN A.....	SYSTEMIC CIRCULATION: CAPACITY AND RESISTIVE PROPERTY.....	5K04 HL00219-03
SUN, TUNG-TIEN.....	STUDIES OF CORNEAL EPITHELIAL DIFFERENTIATION.....	1K04 EY00125-01
TSAN, MIN-FU.....	STUDY OF NEUTROPHIL METABOLISM AND FUNCTION.....	5K04 AI00194-02
ZEE, DAVID S.....	MECHANISMS OF HUMAN VESTIBULAR AND OCULOMOTOR DISORDERS.....	5K07 NS11071-04
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201		
KOSKI, CAROL L.....	GLYCOPROTEINS AND NEUROMUSCULAR INTERACTIONS.....	5K07 NS00172-03
PADMANABHAN, RADHAKRISHNAN.....	DNA SEQUENCE ANALYSIS ON HUMAN ADENOVIRUS GENOMES.....	5K04 CA00235-04
REGGIA, JAMES A.....	ARTIFICIAL INTELLIGENCE SYSTEM IN STROKE DIAGNOSIS.....	1K07 NS00348-01
CATONSVILLE		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND BALTIMORE COUNTY CAMPUS ZIP CODE 21228		
LOVETT, PAUL S.....	CONSTRUCTION OF PLASMIDS FOR BACILLUS SUBTILIS.....	5K04 AI00119-03
COLLEGE PARK		
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742		
PENNER, MERRILYNN J.....	TEMPORAL ANALYSIS OF AUDITORY STIMULI.....	5K04 NS00241-02
VIJAY, INDER K.....	BIOSYNTHESIS OF MAMMARY GLYCOPROTEINS.....	1K04 AM00452-01
MASSACHUSETTS		
AMHERST		
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE D1002		
LEVIN, BRUCE R.....	SELECTION IN BACTERIA AND THEIR VIRUSES AND PLASMIDS.....	5K04 GM00112-04
WADE, GEORGE N.....	HORMONES, BRAIN FUNCTION AND BEHAVIOR.....	5K04 NS00090-04
ZIMMERMANN, ROBERT A.....	STRUCTURE OF PROTEIN BINDING SITES IN RIBOSOMAL RNA.....	5K04 GM00129-04
BOSTON		
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120		
GLASS, DAVID N.....	RHEUMATIC DISEASE, COMPLEMENT AND CHROMOSOME SIX.....	1K08 AM00449-01
LIPSON, STEPHEN J.....	INVESTIGATIONS IN INTERVERTEBRAL DISC.....	1K08 AM00411-01
WINTROUB, BRUCE U.....	NEUTRAL PEPTIDE PATHWAY AND BULLOUS PEMPFIGOID.....	1K08 AM00430-01
BETH ISRAEL HOSPITAL ZIP CODE D2215		
DICHTER, MARC A.....	CNS CELL CULTURE PHYSIOLOGY & MECHANISMS OF EPILEPSY.....	5K04 NS00130-04
FROMM, DAVID G.....	GASTRIC MUCOSAL PERMEABILITY AND ION TRANSPORT.....	5K04 AM00053-04
GLASS, JONATHAN.....	IRON METABOLISM IN ERYTHROID PRECURSOR CELLS.....	1K04 AM00513-01
STEER, MICHAEL L.....	REGULATION OF ADENYLATE CYCLASE AND CELL FUNCTION.....	5K04 NS00160-03
BOSTON BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 02114		
LU, RENNE C.....	STRUCTURE-FUNCTION RELATIONS IN MYOSINS.....	1K04 AM00485-01
BOSTON UNIVERSITY ZIP CODE 02215		
APSTEIN, CARL S.....	PATHOPHYSIOLOGY OF MYOCARDIAL ISCHEMIA.....	1K04 HL00425-01
BENNETT, MICHAEL.....	IMMUNOBIOLOGY OF VIRAL LEUKEMIA AND ITS TREATMENT.....	5K04 CA70879-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
BERMAN, MARLENE O.....	NORMAL AND PATHOLOGICAL HUMAN BRAIN FUNCTION.....	5K04 NS00161-03
BRECHER, PETER I.....	ANGIOTENSIN ACTION ON TARGET TISSUES.....	5K04 HL00050-04
CHIDECKEL, ELLIOTT W.....	FUEL AND AMINO ACID METABOLISM IN PRIMATE BRAIN.....	7K08 AM00620-02
CLARK, ROBERT A.....	ANTI-TUMOR ACTIVITY OF PHAGOCYtic CELLS.....	7K04 CA00441-03
COUSER, WILLIAM G.....	IMMUNOLOGIC MECHANISMS OF GDMERULAR INJURY.....	5K04 AM00102-04
DIAMOND, RICHARD D.....	CELLULAR IMMUNITY IN OPPORTUNISTIC MYCOSES.....	7K04 AI00325-04
FELDMAN, MARTIN L.....	NEURONAL AGING IN THE AUDITORY AND VISUAL SYSTEMS.....	3K04 AG00016-01S1
FELDMAN, MARTIN L.....	NEURONAL AGING IN THE AUDITORY AND VISUAL SYSTEMS.....	5K04 AG00016-02
GAENSLER, EDWARD A.....	APPLIED PULMONARY PHYSIOLOGY.....	5K06 HL01173-15
LAING, RONALD A.....	MEASUREMENT OF RETINAL A-VO2 DIFFERENCE.....	5K04 EY28936-04
LANG, FREDERICK.....	TROPHIC INFLUENCES ON DEVELOPING MUSCLES AND NEURONS.....	1K04 NS00307-01
LANGE, YVONNE.....	CHOLESTEROL IN ERYTHROCYTE MEMBRANES.....	1K04 HL00481-01
MAKE, BARRY J.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00246-03
MONETTE, FRANCIS C.....	REGULATION OF STEM CELL PROLIFERATION/DIFFERENTIATION.....	5K04 AM00200-02
OPPENHEIM, FRANK G.....	CHEMISTRY OF SALIVARY PROTEINS.....	5K04 DE00004-04
SULLIVAN, ALBERT L.....	CHARACTERIZATION OF MEMBRANE TRANSFERRIN RECEPTOR SITES.....	5K04 AM00054-04
TOSELLI, PAUL A.....	STUDIES OF MUSCLE Z-DISCS.....	1K04 HL00243-01A2
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115		
ABELSON, HERBERT T.....	REGULATION OF RNA METABOLISM IN MAMMALIAN CELLS.....	5K04 CA00075-04
ALTER, BLANCHE P.....	HEMOGLOBIN REGULATION/DIFFERENTIATION DURING DEVELOPMENT.....	5K04 HL00177-04
COHEN, HARVEY J.....	OXIDATIVE METABOLISM IN PHAGOCYtic CELLS.....	1K04 AI00311-01
EDELSON, PAUL J.....	MECHANISMS OF MACROPHAGE ANTI-TUMOR ACTIVATION.....	1K04 CA00464-01
ELLISON, ROBERT C.....	PRIMARY PREVENTION OF HYPERTENSION AND ATHEROSCLEROSIS.....	5K04 HL00265-02
FOX, THOMAS O.....	STEROID RECEPTOR MECHANISMS IN DEVELOPING MOUSE BRAIN.....	5K04 HD00221-02
FULTON, ANNE B.....	SIGNAL PROCESSING IN NORMAL AND ABNORMAL RETINA.....	1K07 EY00107-01
KATZ, AUBREY J.....	IMMUNOLOGIC BASIS OF INTESTINAL DISEASE IN CHILDHOOD.....	1K08 AM00234-01A1
LATT, SAMUEL A.....	HUMAN CHROMOSOME STRUCTURE AND REPLICATION.....	5K04 GM00122-04
MC CAFFREY, RONALD P.....	ANALYZE KINDS OF DNA POLYMERASES IN HUMAN LEUKEMIA.....	5K04 CA00099-04
SELKOE, DENNIS J.....	NEURONAL PROTEINS IN HUMAN DEMENTIA.....	1K07 NS00289-01
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114		
ADLER, ALICE J.....	BIOCHEMICAL ASPECTS OF RETINAL ADHESION.....	1K07 EY00134-01
ADOLPH, ALAN R.....	SYNAPTIC TRANSMITTERS IN VERTEBRATE RETINAE.....	5K07 EY00053-02
CHAKRABARTI, BIRESWAR.....	THE STRUCTURE AND INTERACTION OF VITREOUS COMPONENTS.....	5K04 EY00070-02
RIVA, CHARLES E.....	BLOOD FLOW AND TRANSCAPILLARY EXCHANGE IN EYE FUNDUS.....	1K04 EY00120-01
FORSYTH DENTAL CENTER ZIP CODE 02115		
SKOBE, ZIEDONIS.....	ULTRASTRUCTURE OF AMELOGENESIS & ODDNTOPATHIC BACTERIA.....	5K04 DE00018-03
SMITH, DANIEL J.....	EFFECTS OF IMMUNIZATION ON EXPERIMENTAL DENTAL CARIES.....	5K04 DE00024-03
HARVARD UNIVERSITY ZIP CODE 02138		
ALEXANDER, R WAYNE.....	VASCULAR SMOOTH MUSCLE: RECEPTORS AND PROSTAGLANDINS.....	5K04 HL00332-02
BEEUWKES, REINIER, III.....	RENAL MECHANISMS OF SALT AND WATER BALANCE.....	5K04 AM00224-03
BERSON, ELIOT L.....	ELECTROPHYSIOLOGICAL STUDIES OF RETINAL DEGENERATIONS.....	5K04 EY70800-05
BING, OSCAR H.....	COMPUTER FEEDBACK STUDY DF CARDIAC MUSCLE MECHANICS.....	5K04 HL00072-04
CAREY, MARTIN C.....	ALIMENTARY TRACT LIPIDS IN HEALTH AND DISEASE.....	5K04 AM00195-03
CHERNIN, ELI.....	STUDY OF PATHOGENS BY IN VITRO AND RELATED METHODS.....	5K06 AI02455-15
CHURCHILL, WINTHROP H, JR.....	THE ROLE OF MACROPHAGES & BASOPHILS IN TUMOR IMMUNITY.....	5K04 CA00116-04
CHYLACK, LEO T, JR.....	LENS METABOLISM AND CATARACT FORMATION.....	5K04 EY00034-04
COHEN, JONATHAN B.....	MECHANISM OF CHOLINERGIC POSTSYNAPTIC RESPONSE.....	5K04 NS00155-03
CRUMPACKER, CLYDE S, II.....	HERPES VIRUS NUCLEIC ACIDS IN HUMAN TUMORS.....	5K04 CA00139-04
DORF, MARTIN E.....	COMPLEMENTATION STUDIES ON H-LINKED IR GENES.....	5K04 AI00152-03
DRAGER, URSULA C.....	DEVELOPMENTAL ABNORMALITIES IN MOUSE VISUAL SYSTEM.....	5K07 EY00067-02
EVANS, CARLA A.....	EXPERIMENTAL FACIAL GROWTH.....	5K04 DE00051-02
FALCHUK, Z MYRON.....	GASTROINTESTINAL IMMUNDLOGY AND FUNCTION.....	5K04 AM00210-03
FEARON, DOUGLAS T.....	ALTERNATIVE COMPLEMENT PATHWAY.....	5K04 AI00245-02
FRANK, ERIC.....	DEVELOPMENT OF IA SYNAPSES IN THE SPINAL CORD.....	5K07 NS00212-02
FRIEDMAN, PAUL A.....	PLACENTAL TRANSPORT OF VITAMIN B12.....	5K04 HD00023-04
GOLDMAN, MICHAEL D.....	NEURDMUSCULAR CONTROL OF BREATHING.....	5K04 HL00256-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
GOLDSTEIN, RICHARD N.....	MORPHOGENESIS AND GENE CONTROL OF SATELLITE PHAGE P4	5K04 AI00084-04
GOODENOUGH, DANIEL A.....	STRUCTURE & FUNCTION OF LIVER & HEART GAP JUNCTIONS.....	5K04 GM00231-03
HANDIN, ROBERT I.....	ROLE OF PLATELET PROTEINS IN DEVELOPMENT OF THROMBOSIS.....	1K04 HL00236-01A1
HAUSCHKA, PETER V.....	CONTROL OF CALCIUM BINDING BY PROTEIN CARBOXYLATION.....	5K04 DE00049-03
HEGSTED, DAVID M.....	QUANTITATION OF NUTRITION REQUIREMENTS.....	5K06 AM18455-17
HENNEKENS, CHARLES H.....	RISK FACTORS FOR CORONARY HEART DISEASE.....	5K04 HL00286-02
HESSEL, SAMUEL J.....	PERCEPTUAL AND COGNITIVE STUDIES IN RADIOLOGY.....	1K04 HL00474-01
JAEGER, RUDOLPH J.....	PULMONARY TOXICITY OF INHALED PYROLYSIS PRODUCTS.....	1K04 ES00027-01A1
KASPER, DENNIS L.....	IMMUNOCHEMISTRY OF BACTERIAL ANTIGENS.....	5K04 AI00126-03
KUSHMERICK, MARTIN J.....	MUSCLE ENERGY METABOLISM.....	5K04 AM00178-03
LE VAY, SIMON.....	DEVELOPMENT AND PLASTICITY OF THE VISUAL SYSTEM.....	5K04 EY00090-02
MARTZ, ERIC.....	T LYMPHOCYTE DIFFERENTIATION AND EFFECTOR FUNCTION.....	5K04 AI00233-02
MC FADDEN, EDWARD R, JR.....	PATHOPHYSIOLOGY OF EXERCISE-INDUCED ASTHMA.....	5K04 HL00013-04
MC NEIL, BARBARA J.....	MEASURES OF EFFICACY IN RADIOLOGY AND NUCLEAR MEDICINE.....	5K04 GM00194-03
MOORE-EDE, MARTIN C.....	ORGANIZATION OF CIRCADIAN TIMING SYSTEM.....	5K04 NS00247-02
MOSKOWITZ, MICHAEL A.....	AMPHETAMINE TOXICITY AND BRAIN PROTEIN SYNTHESIS.....	5K07 NS11081-04
MURPHY, JOHN R.....	VIRULENCE FACTORS OF CORYNEBACTERIUM DIPHTHERIAE.....	5K04 AI00146-03
NEUFELD, ARTHUR H.....	REGULATION OF AQUEOUS HUMOR DYNAMICS.....	5K04 EY00114-03
NEUTRA, MARIAN R.....	MUCUS SECRETION IN CYSTIC FIBROSIS & NORMAL INTESTINE.....	1K04 AM00407-01
PARKER, JOHN A.....	RADIONUCLIDE STUDIES OF REGIONAL MYOCARDIAL FUNCTION.....	1K04 HL00465-01
PATTERSON, PAUL H.....	CELLULAR INTERACTION IN TISSUE CULTURE.....	5K04 NS70806-05
POLLARD, THOMAS D.....	THE MOLECULAR MECHANISM OF CELLULAR MOTILITY.....	5K04 GM70755-05
RANDO, ROBERT R.....	SUBSTRATE INDUCED IRREVERSIBLE INHIBITION OF ENZYMES.....	5K04 GM00014-04
ROCKLIN, ROSS E.....	MECHANISMS OF CELLULAR IMMUNITY IN MAN.....	5K04 AI70796-05
SAKAMOTO, SEIZABURO.....	COLLAGENASE IN THE DEGRADATION OF BONE COLLAGEN.....	5K04 DE00048-02
SCHNITMAN, PAUL A.....	RADIOISOTOPE SCAN OF BONE AROUND DENTAL IMPLANTS.....	5K04 DE00006-04
SHAW, JAMES H.....	BIOCHEMISTRY OF ORAL TISSUES, SECRETIONS AND DISEASES.....	5K06 DE22634-15
STROM, TERRY B.....	REGULATION OF THE CELLULAR EVENTS IN TRANSPLANT IMMUNITY.....	5K04 AI00155-03
STUART, ANN E.....	SYNAPTIC TRANSMISSION.....	5K04 EY70985-05
THENEN, SHIRLEY W.....	EXPERIMENTAL OBESITY—GENETIC AND ACQUIRED.....	5K04 AM00106-04
VEATCH, WILLIAM R.....	MEMBRANE CHANNEL STRUCTURE: SPECTROSCOPIC APPROACHES.....	1K04 AI00320-01
WASSERMAN, STEPHEN I.....	BIOLOGY OF MEDIATORS OF IMMEDIATE HYPERSENSITIVITY.....	5K07 AI00254-02
WAXMAN, STEPHEN G.....	ORGANIZATION OF MYELINATED AND DEMYELINATED AXONS.....	5K04 NS00010-04
WEINER, HOWARD L.....	IMMUNOLOGY OF MEASLES VIRUS.....	5K07 NS00237-02
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE 02114		
NADOL, JOSEPH B, JR.....	STUDY OF SENSORINEURAL HEARING LOSS.....	5K07 NS00174-03
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114		
AUSIELLO, DENNIS A.....	PROTEIN PHOSPHORYLATION AND HORMONE ACTION.....	5K04 AM00342-02
BEITINS, INESE Z.....	GONADOTROPIN HETEROGENEITY.....	5K04 HD00132-03
CROWELL, ROBERT M.....	NEUROSURGERY—CEREBROVASCULAR DISEASE.....	5K07 NS11001-05
DIENSTAG, JULES L.....	ACUTE AND CHRONIC LIVER DISEASE: ETIOLOGIC STUDIES.....	1K08 AM00458-01
GOITEIN, MICHAEL.....	DOSE AND TUMOR LOCALIZATION PROTONS THERAPY.....	5K04 CA00251-03
KAPLAN, JOAN C.....	INDUCTION OF SV40 VIRUS FROM TRANSFORMED MAMMALIAN CELLS.....	5K04 CA00198-03
LINSENMAYER, THOMAS F.....	BIOSYNTHESIS AND ROLE OF MATRIX IN DEVELOPMENT.....	5K04 AM00031-04
MASLAND, RICHARD H.....	NEUROTRANSMISSION IN MAMMALIAN RETINA.....	5K04 EY00072-02
MATHIS, RICHARD K.....	ROLE OF PROTEASES AND ANTIPROTEASES IN THE LIVER.....	5K08 AM00136-03
MILLER, KEITH W.....	MOLECULAR PHARMACOLOGY OF GENERAL ANESTHETIC ACTION.....	5K04 GM00199-03
MURPHY, RICHARD A.....	A NEW NERVE GROWTH FACTOR: ISOLATION AND FUNCTION.....	1K04 NS00311-01
SEGRE, GINO V.....	PHYSIOLOGY AND METABOLISM OF PARATHYROID HORMONE.....	5K04 AM00070-02
WALKER, W ALLAN.....	ANTIBODY CONTROL OF ANTIGEN UPTAKE IN SMALL INTESTINE.....	5K04 AM00025-04
WITTERS, LEE A.....	HORMONAL REGULATION OF LIPID METABOLISM.....	1K04 AM00520-01
WOLFE, ROBERT R.....	METABOLIC EFFECTS OF BURN INJURY AND SEPSIS.....	1K04 GM00455-01
NEW ENGLAND DEACONESS HOSPITAL ZIP CODE 02215		
KNOX, W EUGENE.....	CONTROL OF ENZYME CONCENTRATIONS IN ANIMAL CELLS.....	4K06 AM02018-16
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111		
AGNELLO, VINCENT.....	STUDIES OF HUMAN IMMUNE COMPLEX DISEASES.....	5K04 AI70968-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MASSACHUSETTS—Continued		
DWYER, JOHANNA T.....	NEW DIETARY TREATMENTS IN DIABETES AND OBESITIES.....	5K04 AM00272-02
FURIE, BARBARA C.....	METAL-DEPENDENT COMPLEX FORMATION IN BLOOD COAGULATION.....	3K04 HL00235-02S1
FURIE, BARBARA C.....	METAL-DEPENDENT COMPLEX FORMATION IN BLOOD COAGULATION.....	5K04 HL00235-03
PAUKER, STEPHEN G.....	CLINICAL DECISION MAKING.....	5K04 GM00349-02
SOKOL, SAMUEL.....	ELECTROPHYSIOLOGICAL INDICES OF PHOTOPIC MECHANISMS.....	5K04 EY70275-04
NORTHEASTERN UNIVERSITY ZIP CODE 02115		
STRAUSS, PHYLLIS R.....	THYMIDINE TRANSPORT IN NORMAL AND LEUKEMIC LYMPHOCYTES.....	1K04 CA00460-01
SIONEY FARBER CANCER INSTITUTE ZIP CODE 02115		
LAGAKOS, STEPHEN W.....	STATISTICAL PROBLEMS IN CANCER RESEARCH.....	7K04 CA00505-01
CAMBRIDGE		
HARVARD UNIVERSITY ZIP CODE 02138		
ELGIN, SARAH C.....	CHROMOSOMAL PROTEINS AND GENE EXPRESSION IN DROSOPHILA.....	5K04 GM00234-03
KESSIN, RICHARD H.....	CONTROL OF AGGREGATION IN D. DISCOIDEUM.....	5K04 HD00220-02
TAYLOR, D LANSING.....	MUSCLE CONTRACTION AND CYTOPLASMIC STREAMING.....	5K04 AM00292-02
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139		
ARCHER, MICHAEL C.....	NITROSAMINES AS ENVIRONMENTAL CARCINOGENS.....	5K04 ES00033-02
HECHT, SIDNEY M.....	THE TOTAL SYNTHESIS OF BLEOMYCIN.....	5K04 CA00021-04
HYNES, RICHARD O.....	CELL SURFACE PROTEINS AND CELLULAR BEHAVIOR.....	1K04 CA00382-01
WEISS, THOMAS F.....	MECHANICAL TO NEURAL TRANSDUCTION IN THE COCHLEA.....	5K04 NS00113-04
CHESTNUT HILL		
BOSTON COLLEGE ZIP CODE 02167		
KELLY, T ROSS.....	SYNTHESIS OF THE ANTITUMOR AGENT HARRINGTONINE.....	5K04 CA00040-04
SHREWSBURY		
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545		
CHANG, MIN C.....	FERTILIZABILITY OF MAMMALIAN EGGS.....	5K06 HD18334-17
WALTHAM		
BRANDEIS UNIVERSITY ZIP CODE D2154		
HALL, JEFFREY C.....	DEVELOPMENT AND BEHAVIOR OF NEUROLOGICAL MUTANTS.....	5K04 GM00297-02
HONG, JEN-SHIANG.....	BIOCHEMISTRY AND GENETICS OF MEMBRANE FUNCTIONS.....	5K04 GM00092-04
HUDSON, ROBERT B.....	AGING AND HEALTH POLICY: CRITICAL POLICY LINKAGES.....	5K04 AG00005-02
MILLER, CHRISTOPHER.....	IONOPHORES OF THE SARCOPLASMIC RETICULUM MEMBRANE.....	1K04 AM00354-01
PARRY, RONALD J.....	BIOSYNTHESIS OF CEPHALOTAXUS AND SECURINEGA ALKALOIDS.....	5K04 GM00143-04
PRESS, JOAN L.....	IMMUNOGENETIC ANALYSIS OF B CELL DIFFERENTIATION.....	1K04 AI00266-01
ROSBASH, MICHAEL M.....	MACROMOLECULES IN OOGENESIS AND DEVELOPMENT.....	5K04 HD00134-03
VAN VUNAKIS, HELEN.....	STRUCTURE & ACTIVITY OF BIOLOGICALLY IMPORTANT MOLECULES.....	4K06 AI02372-16
WENSINK, PIETER C.....	SEQUENCE ARRANGEMENT IN EUKARYOTIC DNA AND CHROMOSOMES.....	5K04 GM00212-03
EUNICE KENNEY SHRIVER CENTER FOR MENTAL RETARDATION ZIP CODE D2154		
JUNGALWALA, FIROZE B.....	EXPERIMENTAL NEUROTUMORS AND MYELIN METABOLISM.....	5K04 CA00144-04
LANDIS, DENNIS M.....	MEMBRANE STRUCTURE DURING SYNAPTOGENESIS.....	1K07 NS00353-01
WORCESTER		
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE D1605		
FAY, FREDRIC S.....	GENERATION AND REGULATION OF FORCE IN SMOOTH MUSCLE.....	5K04 HL00048-04
KANE, EILEEN S.....	CENTRAL AUDITORY SYSTEM CONNECTIONS IN MAMMALS.....	5K04 NS00290-04
SINGER, ROBERT H.....	MRNA CONTROL IN DIFFERENTIATING MUSCLE CELLS.....	1K04 NS00288-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MICHIGAN		
ANN ARBOR		
UNIVERSITY OF MICHIGAN ZIP CODE 48109		
BECKER, MARSHALL H.....	ENHANCING COMPLIANCE WITH MEDICAL RECOMMENDATIONS.....	5K04 HD00237-04
CLEWELL, DON B.....	STRUCTURE, MAINTENANCE, AND EXPRESSION OF PLASMID DNA.....	5K04 AI00061-04
ERNST, STEPHEN A.....	CYTOCHEMICAL LOCALIZATION OF TRANSPORT ATPASE.....	7K04 GM00473-04
MISTRETTA, CHARLOTTE M.....	TASTE RECEPTORS IN ORAL FACIAL DEVELOPMENT.....	1K04 DE00066-01
MITCHELL, BEVERLY S.....	REGULATION OF ADENOSINE DEAMINASE ACTIVITY.....	1K08 AM00442-01
NIEDERHUBER, JOHN E.....	IMMUNE RESPONSES IN VITRO-H-2(IR) REGION FUNCTIONS.....	5K04 AI00237-05
OLSON, GARY M.....	INFANT MEMORY PROCESSES.....	5K04 HD00169-02
RICHARDS, JOANNE S.....	HORMONE ACTION IN OVARIAN CELL DIFFERENTIATION.....	1K04 HD00174-01A1
DETROIT		
WAYNE STATE UNIVERSITY ZIP CODE 48202		
BENJAMINS, JOYCE A.....	ASSEMBLY OF MYELIN AND OTHER NEURAL MEMBRANES.....	5K04 NS00220-02
BOECKMAN, ROBERT K, JR.....	SYNTHESIS OF BIOLOGICALLY ACTIVE NATURAL PRODUCTS.....	5K04 CA00273-03
ENJETI, SURESH.....	PULMONARY FACULTY TRAINING AWARD.....	5K08 HL00306-02
GORELIC, LESTER S.....	RADIATION-INDUCED CARCINOGENESIS; MRNA TURNOVER.....	5K04 CA70999-05
KAPLAN, JOSEPH.....	TUMOR IMMUNOLOGY OF CHILDHOOD LEUKEMIA AND LYMPHOMA.....	5K04 CA00188-03
LEWIS, BENJAMIN M.....	PHYSIOL & PATHOL REACTIONS OF PULMONARY CAPILLARY BED.....	4K06 HL02182-16
PETSKO, GREGORY A.....	X-RAY CRYOENZYMOLGY.....	1K04 GM00402-01
VIEF, GISELA L.....	CONTEXTUAL APPROACH TO ADULT COGNITIVE DEVELOPMENT.....	1K04 AG00018-01
ZWAS, FRED.....	PSYCHOPHYSICAL STUDIES OF RETINITIS PIGMENTOSA.....	5K07 EY00045-03
EAST LANSING		
MICHIGAN STATE UNIVERSITY ZIP CODE 48823		
ROMSOS, DALE R.....	METABOLIC EFFECTS OF DIET AND MEAL PATTERN.....	5K04 AM00112-04
VELICER, LELAND F.....	MOLECULAR BIOLOGY OF RNA TUMOR VIRUSES.....	5K04 CA70808-05
ROCHESTER		
DAKLAND UNIVERSITY ZIP CODE 48063		
ROY, ARUN K.....	REGULATION OF ALPHA2U GLOBULIN IN THE RAT.....	5K04 AM00141-03
MINNESOTA		
MINNEAPOLIS		
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS ZIP CODE 55455		
AZAR, SILVIA H.....	GENETIC PRE-HYPERTENSION, NAO, PRE-NATAL BP MATURATION.....	1K04 HL00431-01
BACHE, ROBERT J.....	THE RESPONSE OF THE CORONARY VASCULATURE TO ISCHEMIA.....	5K04 HL00367-03
CRADDOCK, PHILIP R.....	GRANULOCYTES, COMPLEMENT, AND VASCULAR ENDOTHELIUM.....	1K04 HL00479-01
DILLMAN, WOLFGANG H.....	CARDIAC EFFECTS OF THYROID HORMONES & PROTEIN SYNTHESIS.....	5K04 HL00315-03
DRAGE, CHARLES W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70063-05
EATON, JOHN W.....	MECHANISMS OF ERYTHROCYTE DESTRUCTION.....	1K04 AM00403-01
FRIEND, PETER S.....	INJURY TO GLOMERULAR FILTER: IMMUNOGENETIC DETERMINANTS.....	1K08 AM00445-01
GILLUM, RICHARD F.....	SODIUM INTAKE AND HYPERTENSION.....	5K04 HL00329-02
HALBERG, FRANZ.....	TEMPORAL PARAMETERS OF PHYSIOL FUNCTIONS IN HLTH/DISEASE.....	5K06 GM13981-17
HOWARD, RICHARD J.....	VIRUS-IMMUNE INTERACTION IN MICE & TRANSPLANT PATIENTS.....	5K04 AI00167-03
JACOBS, DAVID R, JR.....	EPIDEMIOLOGY AND PREVENTION OF CARDIOVASCULAR DISEASE.....	5K04 HL00287-02
LEE, CHING Y.....	GONADOTROPIN RECEPTORS IN OVARIES & GRANULOSA CELLS.....	5K04 HD00191-02
NELSON, ROBERT D.....	HUMAN MONOCYTE FUNCTION IN CANCER AND INFECTION.....	1K04 AI00212-01A1
ROBINSON, HARRY J, JR.....	PATHOGENESIS OF DEGENERATIVE HIP AND KNEE DISEASE.....	1K08 AM00466-01
SCHNEIMAN, JON I.....	SMOOTH MUSCLE PROTEINS IN DIABETIC VASCULAR DISEASE.....	5K04 AM00126-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
MINNESOTA—Continued		
SCHWARTZ, SAMUEL.....	BIOLOGICAL AND BIOCHEMICAL EFFECTS OF PORPHYRINS.....	4K06 GM14086-16
SUTHERLAND, DAVID E.....	ISOLATION AND TRANSPLANTATION OF PANCREATIC ISLETS.....	5K04 AM00161-04
ROCHESTER		
MAYO FOUNDATION ZIP CODE 55901		
DEWALD, GORDON W.....	MALIGNANT PLEURAL EFFUSIONS DIAG. BY CHROMOSOME ANALYSIS.....	1K04 CA00440-01
GREENLEAF, JAMES F.....	3-D DISTRIBUTION OF BLOOD FLOW USING RECONSTRUCTION.....	5K04 HL00060-04
JOHNSON, STEVEN A.....	X-RAY AND ULTRASOUND MEDICAL 3-D IMAGE FORMATION.....	5K04 HL00170-04
RODARTE, JOSEPH R.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70816-05
YUNGINGER, JOHN W.....	ISOLATION AND CHARACTERIZATION OF MOLD ALLERGENS.....	5K07 AI00107-04
MAYO FOUNDATION—MAYO MEDICAL SCHOOL ZIP CODE 55901		
BRIMUOIN, WILLIAM S.....	AXONAL TRANSPORT IN ADRENERGIC NERVES.....	5K04 NS00119-04
MALAGELADA, JUAN R.....	HUMAN GASTRIC RESPONSES TO MEALS AND THEIR REGULATION.....	1K04 AM00330-01
SAINT PAUL		
UNIVERSITY OF MINNESOTA AT SAINT PAUL ZIP CODE 55455		
MUNCK, ECKARD.....	PROPERTIES OF NITROGENASE SYSTEMS/HEMES.....	5K04 GM00057-05
MISSISSIPPI		
JACKSON		
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216		
YOUNG, DAVID B.....	CONTROL, CARDIOVASCULAR AND RENAL EFFECTS OF POTASSIUM.....	5K04 HL00373-02
MISSOURI		
COLUMBIA		
UNIVERSITY OF MISSOURI-COLUMBIA ZIP CODE 65201		
FORTE, LEONARD R.....	STUDIES OF KIDNEY HORMONE RECEPTORS.....	5K04 AM70756-05
FREEMAN, RONALD H.....	EXPERIMENTAL TWO-KIDNEY RENOVASCULAR HYPERTENSION.....	5K04 HL00257-02
GERHARDT, H CARL.....	ACOUSTIC PATTERN RECOGNITION.....	5K04 NS00217-02
SAINT LOUIS		
JEWISH HOSPITAL OF ST. LOUIS ZIP CODE 63110		
BIRGE, STANLEY J.....	MECHANISMS OF CALCIUM TRANSPORT.....	5K04 AM00109-04
ST. LOUIS UNIVERSITY ZIP CODE 63103		
BARISAS, B GEORGE.....	LATERAL DYNAMICS OF MEMBRANES COMPONENTS.....	1K04 AI00291-01
GREEN, MAURICE.....	BIOCHEMISTRY OF VIRAL REPLICATION.....	5K06 AI04739-17
MARRS, BARRY L.....	MEMBRANE DEVELOPMENT: A BIOCHEMICAL GENETICS APPROACH.....	5K04 GM00098-04
SECKER-WALKER, ROGER H.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00251-03
WASHINGTON UNIVERSITY ZIP CODE 63130		
AGRAWAL, HARISH C.....	STUDIES ON MYELIN PROTEIN IN DEVELOPING BRAIN.....	5K04 NS70090-05
BAUER, EUGENE A.....	CONTROL OF COLLAGENASE BIOSYNTHESIS IN CELL CULTURE.....	5K04 AM00077-04
BOIME, IRVING.....	BIOSYNTHESIS OF PROTEIN HORMONES.....	5K04 AM00174-02
CULLEN, SUSAN E.....	STRUCTURAL AND SEROLOGICAL STUDIES ON IA AND H-2 ANTIGEN.....	5K04 CA00348-02
DODSON, WILLIAM E.....	METABOLISM OF ANTICONVULSANTS.....	5K07 NS11074-04
GOTTLIEB, DAVID I.....	STUDIES ON MOLECULAR BASIS OF MEMBRANE RECOGNITION.....	5K04 NS00185-03

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1978—Continued**

Awardee	Project title	Grant number
MISSOURI—Continued		
HILLMAN, RICHARD E.....	MEMBRANE TRANSPORT OF AMINO ACIDS.....	5K04 AM00080-04
HOFFSTEN, PHILLIP E.....	IMMUNOMANIPULATION OF IMMUNE COMPLEX NEPHRITIS.....	1K04 AM00296-01
KIM, DUCK O.....	INNER EAR AND COCHLEAR NUCLEUS MECHANISMS.....	5K04 NS00162-03
KRUPIN, THEODORE.....	CENTRAL NERVOUS SYSTEM INFLUENCE ON OCULAR DYNAMICS.....	5K04 EY00082-02
LIN, HSIU-SAN.....	EFFECT OF CYTOTOXIC DRUGS ON LYMPHOMA CELLS.....	5K04 CA70730-05
MC KEEL, DANIEL W, JR.....	HORMONE SECRETION BY NORMAL AND NEOPLASTIC HYPOPHYSIS.....	5K04 AM00184-03
NAKEFF, ALEXANDER N.....	MEGAKARYOCYTE PROLIFERATION AND ITS CONTROL.....	1K04 HL00440-01
PERMUTT, MARSHALL A.....	STUDIES OF INSULIN BIOSYNTHESIS.....	5K04 AM00333-02
ROOS, ALBERT.....	PULMONARY BLOOD FLOW & TRANSMEMBRANE IONIC FLUX.....	4K06 HL19608-16
SCHARP, DAVID W.....	ISLET TRANSPLANTATION IN DIABETES MELLITUS.....	5K04 AM00318-02
SULLIVAN, TIMOTHY J.....	BIOCHEMISTRY OF MAST CELL SECRETION.....	5K07 AI00190-03
SWEET, FREDERICK.....	STEROID BIOSYNTHESIS, TRANSPORT AND MECHANISM OF ACTION.....	5K04 HD70788-05
TROTTER, JOHN L.....	ISOLATION AND IMMUNOLOGY OF MYELIN PROTEINS.....	1K07 NS00221-01A1
UITTO, JOUNI J.....	BIOSYNTHESIS OF COLLAGEN BY HUMAN SKIN FIBROBLASTS.....	1K04 AM00455-01
VOLPE, JOSEPH J.....	REGULATION OF FATTY ACID SYNTHESIS DURING DEVELOPMENT.....	5K04 HD70608-05
WEDNER, H JAMES.....	CYCLIC NUCLEOTIDES AND LYMPHOCYTE ACTIVATION.....	5K04 AI00041-04
WILLARD, MARK B.....	AXONALLY TRANSPORTED PROTEINS IN THE VISUAL SYSTEM.....	5K04 NS00170-03
WINDER, WILLIAM W.....	EFFECT OF EXERCISE AND AGING ON ENDOCRINE FUNCTION.....	1K04 AM00361-01A1

MONTANA

MISSOULA

MONTANA UNIVERSITY SYSTEM—UNIVERSITY OF MONTANA ZIP CODE 59801

LARSON, CARL L.....	SPECIFIC AND NONSPECIFIC RESISTANCE CAUSED BY T. BACILLI.....	4K06 AI16502-16
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NEW HAMPSHIRE

HANOVER

DARTMOUTH COLLEGE ZIP CODE 03755

CULP, WILLIAM J.....	SODIUM CHANNEL COMPONENTS OF EXCITABLE MEMBRANES.....	5K04 NS00058-03
DAUBENSPECK, JOHN A.....	DYNAMICS OF BREATHING PATTERN RESPONSES TO LOADING.....	5K04 HL00280-02
HASSELBACHER, PETER.....	EFFECT OF PROTEIN-CRYSTAL INTERACTIONS IN ARTHRITIS.....	7K08 AM00587-02
KILHAM, LAWRENCE.....	RELATION OF VIRUSES TO CANCER.....	5K06 CA22652-15
NATTIE, EUGENE E.....	BRAIN METABOLISM/ACID-BASE BALANCE/RESPIRATION CONTROL.....	5K04 HL00364-02
ST JOHN, WALTER M.....	BRAINSTEM INTEGRATION OF CHEMORECEPTOR ACTIVITY.....	5K04 HL00346-02

NEW JERSEY

NEWARK

COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103

REICHMAN, LEE B.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00124-04
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NEW BRUNSWICK

RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903

NIEDERMAN, ROBERT A.....	MOLECULAR ASPECTS OF MEMBRANE DEVELOPMENT.....	5K04 GM00093-04
PIECZENIK, GEORGE.....	GENOTYPIC SELECTION: SYNTAX AND STRUCTURE.....	5K04 GM00281-02
VALENTINE, JOAN S.....	THE CHEMISTRY AND BIOCHEMISTRY OF SUPEROXIDE ANION.....	5K04 AM00194-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NEW JERSEY—Continued		
PISCATAWAY		
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL ZIP CODE D8854		
DOYLE, BARBARA B.....	X-RAY DIFFRACTION OF CONNECTIVE TISSUE.....	5K04 AM00168-03
PRINCETON		
PRINCETON UNIVERSITY ZIP CODE D8540		
WORCEL, ABRAHAM.....	STRUCTURE OF PROKARYOTIC AND EUKARYOTIC CHROMOSOMES.....	5K04 GM00101-04
NEW MEXICO		
ALBUQUERQUE		
UNIVERSITY OF NEW MEXICO ZIP CODE 87131		
SCHADE, DAVID S.....	COUNTER REGULATORY HORMONES IN DIABETIC KETOACIDOSIS.....	5K04 AM00260-02
SCHMIDT-NOWARA, WOLFGANG W.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70833-05
VANDER JAGT, DAVID L.....	ROLE OF GLYOXALASE AND GLUTATHIONE IN CARCINOGENESIS.....	5K04 CA70939-05
WATERMAN, ROBERT E.....	NORMAL AND CLEFT PALATE DEVELOPMENT IN MAMMALS.....	5K04 DE00013-04
NEW YORK		
ALBANY		
STATE UNIVERSITY OF NEW YORK AT ALBANY ZIP CODE 12222		
SCHOLES, CHARLES P.....	PROBING HEME AND HEMOPROTEINS BY ENDOR.....	5K04 AM00274-02
STRATTON, HOWARD H.....	MARKOV CHAIN PROBABILISTIC FUNCTIONS—CLINICAL MODELING.....	5K04 GM00082-04
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE ZIP CODE 12208		
MALIK, ASRAR B.....	PULMONARY VASCULAR ADJUSTMENTS IN CIRCULATORY COLLAPSE.....	5K04 HL00363-02
BUFFALO		
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263		
GUTAI, MARY W.....	THE SV40 REPLICATION ORIGIN, AND RECOMBINATION WITH HOST.....	1K04 CA00449-01
HUI, SEK W.....	ELECTRON DIFFRACTION OF CANCER CELL MEMBRANES.....	5K04 CA00084-04
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260		
ALTSCHULER, MARTIN D.....	DIVERGING-BEAM 3-D IMAGE RECONSTRUCTION.....	5K04 GM00381-02
APICELLA, MICHAEL A.....	NEISSERIAL ANTIGENS.....	5K04 AI70747-05
FOURTNER, CHARLES R.....	NEURAL CONTROL OF RHYTHMIC BEHAVIOR PATTERNS.....	5K04 NS00141-03
REED, MICHAEL J.....	ROLE OF CELL-MEDIATED IMMUNITY IN PERIODONTAL DISEASE.....	5K04 DE70859-04
SALTZMAN, ALAN R.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00342-02
COLD SPRING HARBOR		
COLD SPRING HARBOR LABORATORY ZIP CODE 11724		
BUKHARI, AHMAD I.....	THE LIFE CYCLE OF MUTATOR PHAGE MU.....	5K04 GM00127-04
ITHACA		
CORNELL UNIVERSITY ZIP CODE 1485D		
CORRADINO, ROBERT A.....	ORGAN CULTURED DUODENUM: CA ABSORPTIVE MECHANISM, ETC.....	5K04 AM00115-04
CYPESS, RAYMOND H.....	PARASITIC DISEASES AS A MODEL FOR IMMUNE RESPONSES.....	5K04 AI00301-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
HAUSFATER, GLENN	LONGITUDINAL STUDIES OF PRIMATE SOCIOBIOLOGY.....	3K04 HD00261-01S1
HAUSFATER, GLENN	LONGITUDINAL STUDIES OF PRIMATE SOCIOBIOLOGY.....	5K04 HD00261-02
HOY, RONALD R.....	GENETIC & DEVELOPMENTAL ANALYSES OF NERVOUS SYSTEMS.....	1K04 NS00309-01
LEVITSKY, DAVID A.....	NUTRITION AND BEHAVIOR.....	5K04 HD70510-05
MOFFAT, JOHN K.....	CALCIUM TRANSPORT AND BINDING.....	1K04 AM00322-01
ROBERTS, JEFFREY W.....	GENE CONTROL IN INFECTION & LYSOGENY BY PHAGE LAMBDA.....	5K04 GM00185-03
WRIGHT, LEMUEL D.....	NEW BIOLOGICALLY ACTIVE COMPOUNDS.....	4K06 AM16612-16
NEW YORK		
AMERICAN HEALTH FOUNDATION ZIP CODE 10017		
HECHT, STEPHEN S.....	ISOLATION AND CHEMISTRY OF ENVIRONMENTAL CARCINOGENS.....	5K04 CA00124-04
CITY UNIVERSITY OF NEW YORK—COLLEGE OF STATEN ISLAND ST. GEORGE CAMPUS ZIP CODE 10301		
NAIDER, FRED R.....	PEPTIDE TRANSPORT IN MICROORGANISMS AND MAMMALIAN CELLS.....	5K04 GM00025-04
CITY UNIVERSITY OF NEW YORK—HUNTER COLLEGE ZIP CODE 10021		
CHAPPELL, RICHARD L.....	STUDY OF NEURAL INTERACTIONS OF THE RETINA.....	5K04 EY00040-03
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029		
AARONSON, ROBERT P.....	STRUCTURE AND FUNCTION OF THE NUCLEAR ENVELOPE.....	5K04 GM00278-03
BARKER, LOUIS A.....	REGULATION OF ACH SYNTHESIS IN THE CNS.....	1K04 NS00274-01
BENDER, ADAM N.....	LOCALIZATION OF NICOTINIC ACETYLCHOLINE RECEPTOR.....	5K07 NS00207-02
DESNICK, ROBERT J.....	THERAPY OF METABOLIC DISEASES.....	5K04 AM00451-04
GERBER, MICHAEL A.....	ANTIGENIC STRUCTURE AND MORPHOLOGY OF HB AG.....	5K04 AI00035-04
KEUSCH, GERALD T.....	SHIGELLOSIS: EXOTOXIN, PATHOGENESIS & TOXOID VACCINE.....	5K04 AI70847-05
KIRCHBERGER, MADELEINE A.....	REGULATION OF CARDIAC SR CA20-PUMP BY PROTEIN KINASE.....	5K04 HL00053-04
KRULWICH, TERRY A.....	TRANSPORT IN MEMBRANE VESICLES AND RELATED METABOLISM.....	5K04 GM00020-04
LORIMER, WILLIAM V.....	METHODOLOGICAL APPROACHES TO STUDY OF TOXIC AGENTS.....	1K04 ES00035-01
MINDEL, JOEL S.....	OCULAR CHOLINERGIC SYSTEMS.....	5K04 EY70959-04
RAYFIELD, ELLIOT J.....	CARBOHYDRATE METABOLISM—INFECTION INTERRELATIONSHIPS.....	5K04 AM00089-04
RITCH, ROBERT H.....	(NAO O KO)-ATPASE IN AQUEOUS HUMOR DYNAMICS.....	1K07 EY00133-01
SMITH-WRIGHT, MOYRA.....	CONTROL OF IMMUNOGLOBULIN SYNTHESIS IN CELL HYBRIDS.....	5K04 AI00249-02
COLUMBIA UNIVERSITY ZIP CODE 10027		
BENESCH, REINHOLD.....	RELATION BETWEEN STRUCTURE & FUNCTION IN PROTEINS.....	5K06 HL01137-17
BILEZIKIAN, JOHN P.....	THE BETA ADRENERGIC CATECHOLAMINE RECEPTOR.....	5K04 HL00383-02
BRASEL, JO ANNE.....	NUTRITION AND CELL GROWTH.....	5K04 HD70760-05
BRASITUS, THOMAS A.....	PATHO-PHYSIOLOGY OF INTESTINAL MICROVILLUS MEMBRANES.....	1K08 AM00386-01
BRAUN, NORMA M.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00371-02
FENOGLIO, JOHN J, JR.....	GENESIS OF ARRHYTHMIAS FOLLOWING MYOCARDIAL INFARCTION.....	5K04 HL00185-02
FISCHBARG, JORGE.....	WATER & ELECTROLYTE TRANSPORT BY CORNEAL ENDOTHELIUM.....	5K04 EY00006-04
HARVEY, REJANE M.....	CONTROL OF PULMONARY CIRCULATION.....	4K06 HL16603-16
HENDERSON, ANN S.....	HUMAN GENE SITE LOCALIZATION USING HYBRIDIZATION IN SITU.....	5K04 GM00017-04
HOCHBERG, RICHARD B.....	MECHANISMS IN STEROID HORMONE BIOSYNTHESIS.....	5K04 CA00174-03
ISHII, DOUGLAS N.....	NGF AND DIFFERENTIATION OF NEURONAL TUMOR II.....	1K04 NS00375-01
JAN, KUNG-MING.....	RHEOLOGY OF RBC INTERACTION IN HEALTH AND DISEASE.....	5K04 HL00036-04
KHANNA, SHYAM M.....	PERIPHERAL AUDITORY FUNCTION.....	5K04 NS00292-02
KILCOYNE, MARGARET M.....	ADOLESCENT HYPERTENSION—NATURAL HISTORY AND DYNAMICS.....	5K04 HL00183-03
KOOPMANS, HENRY S.....	THE REGULATION OF FOOD INTAKE AND BODY FAT.....	5K04 AM00198-03
LIM, JONG J.....	ENDOTHELIAL CELL ADHESION AND DIELECTRIC PROPERTIES.....	1K07 EY00105-01A1
LO GERFO, PAUL.....	IMMUNOLOGICAL APPROACHES TO THE DIAGNOSIS OF CANCER.....	5K04 CA00192-03
ROSSO, PEDRO P.....	MATERNAL MALNUTRITION AND TRANSFER OF NUTRIENTS.....	5K04 HD00116-04
SILVERSTEIN, SAUL J.....	REGULATION OF VIRAL GENES IN TRANSFORMED CELLS.....	1K04 CA00491-01
THOMPSON, ELIZABETH B.....	MORPHOLOGY OF IDENTIFIED SYNAPSES.....	5K04 NS00122-04
TONDORF, JUERGEN.....	PHYSIOLOGY OF THE EAR.....	5K06 NS21691-15
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021		
COOPER, ARTHUR.....	AMMONIA METABOLISM IN LIVER DISEASE.....	1K04 NS00343-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
GARDNER, DANIEL.....	SYNAPTIC ORGANIZATION OF IDENTIFIED NEURAL NETWORKS.....	5K04 NS00003-04
JAFFE, ERIC A.....	BIOLOGY OF ENDOTHELIAL CELLS.....	5K04 HL00237-03
JONES, THOMAS C.....	MECHANISMS OF MICROBIAL SURVIVAL IN PHAGOCYtic CELLS.....	5K04 AI70754-05
KESSLER, JOHN A.....	TRANS-SYNAPTIC REGULATION OF NEURONAL FUNCTION.....	1K07 NS00351-01
NATHAN, MARC A.....	A MODEL OF SUSTAINED ARTERIAL HYPERTENSION.....	5K04 HL00222-03
PETERSON, RALPH E.....	METABOLISM AND REGULATION OF ADRENOCORTICAL SECRETIONS.....	5K06 AM14241-17
WEKSLER, MARC E.....	LYMPHOBLAST-ASSOCIATED ANTIGENS.....	5K04 CA32102-05
HOSPITAL FOR SPECIAL SURGERY ZIP CODE 10021		
BOSKEY, ADELE L.....	MECHANISM OF TOOTH & BONE MINERALIZATION.....	5K04 DE00002-04
LANE, JOSEPH M.....	MOLECULAR BIOLOGY OF FRACTURE HEALING.....	5K04 AM00295-02
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021		
ROTTENBERG, DAVID A.....	INVESTIGATION OF CSF DYNAMICS IN MAN.....	5K07 NS00286-02
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467		
BELLHORN, MARGARET B.....	ION LOCALIZATION IN EYE PHYSIOLOGY: NEW TECHNIQUES.....	1K04 EY00104-01
COHEN, MICHAEL V.....	EFFECT OF EXERCISE ON CORONARY COLLATERAL FUNCTION.....	5K04 HL00281-02
NEW YORK BLOOD CENTER ZIP CODE 10021		
STEVENS, CLADD E.....	POST-TRANSFUSION HEPATITIS IN CHILDREN.....	5K04 HL00261-02
NEW YORK MEDICAL COLLEGE ZIP CODE 10029		
SHARMA, SANSAR C.....	THE FORMATION OF VISUAL NEURONAL CONNECTIONS.....	1K04 EY00101-01
NEW YORK UNIVERSITY ZIP CODE 10003		
BERNHEIMER, ALAN W.....	STAPHYLOCOCCAL AND STREPTOCOCCAL PROTEINS.....	5K06 AI14198-17
FINKELSTEIN, MARTIN S.....	PLANT LECTIN-INDUCED VIRAL RESISTANCE.....	5K04 AI36028-05
FINLAY, THOMAS H.....	STRUCTURE-FUNCTION STUDIES OF AHF, VWF AND AT III.....	5K04 HL00277-02
FREEDMAN, MICHAEL L.....	TRANSLATIONAL CONTROL OF HUMAN HEMOGLOBIN SYNTHESIS.....	5K04 AM49358-05
GARDNER, ESTHER P.....	NEURAL MECHANISMS OF CUTANEOUS SPATIAL INTEGRATION.....	5K04 NS00142-03
GUNNISON, ALBERT F.....	MAMMALIAN TOXICOLOGY OF SO ₂ AND SULFITE SALTS.....	3K04 ES00005-03S1
GUNNISON, ALBERT F.....	MAMMALIAN TOXICOLOGY OF SO ₂ AND SULFITE SALTS.....	5K04 ES00005-04
HOFFSTEIN, SYLVIA T.....	LYSOSOMAL ENZYME RELEASE AND TISSUE INJURY.....	5K04 HL00356-02
KREIBICH, GERT.....	ORGANIZATION AND BIOSYNTHESIS OF ER MEMBRANE PROTEINS.....	5K04 GM00232-03
MAAS, WERNER K.....	ENZYME REPRESSION, PLASMIDS GENETICS, E COLI ENTEROTOXIN.....	5K06 GM15129-15
MEISS, HARRIET K.....	ISOLATION AND ANALYSIS OF TS DNA MUTANTS OF BHK CELLS.....	5K04 CA00020-04
PEREZ, H DANIEL.....	HOST DEFENSES IN SYSTEMIC LUPUS ERYTHEMATOSUS.....	1K08 AM00463-01
SCHAEFFER, HELENE E.....	TRANSCORNEAL PILOCARPINE FLUX ENHANCEMENT VIA LIPOSOMES.....	1K07 EY00138-01
TSAI, JIR-SHIONG.....	EFFECT OF THYROID HORMONE ON CULTURED CARDIAC CELLS.....	5K04 HL00178-04
POLYTECHNIC INSTITUTE OF NEW YORK ZIP CODE 11201		
TOONEY, NANCY M.....	FIBRINOGEN: STRUCTURE AND MOLECULAR INTERACTIONS.....	5K04 HL00062-04
ROCKEFELLER UNIVERSITY ZIP CODE 10021		
ANDERSON, KARL E.....	NUTRITION AND DRUG METABOLISM IN MAN.....	5K04 GM00330-02
BEERS, WILLIAM H.....	THE ROLE OF PLASMINOGEN ACTIVATOR IN OVULATION.....	5K04 HD00189-02
BROWNLEE, MICHAEL A.....	SERCA-DIABETES MELLITUS: CARDIOVASCULAR.....	1K01 AM00589-01
CHUA, NAM-HAI.....	STRUCTURE AND BIOGENESIS OF THYLAKOID MEMBRANE.....	5K04 GM00223-03
FISCHETTI, VINCENT A.....	PROPERTIES OF STREPTOCOCCAL M PROTEIN.....	5K04 AI00259-02
GILULA, NORTON B.....	CELL MEMBRANE INTERACTIONS AND CELL COMMUNICATION.....	5K04 HL00110-04
GOLDBERG, ALLAN R.....	RSV FUNCTIONS INVOLVED IN TRANSFORMATION.....	5K04 CA70992-05
JONES, ROBERT L.....	SERCA-DIABETES MELLITUS: CARDIOVASCULAR.....	1K01 AM00590-01
KAPLAN, EHUD.....	EFFECT OF CORTICAL FEEDBACK ON THE LGN.....	1K07 EY00108-01
LIZARDI, PAUL M.....	BIOGENESIS OF SILK FIBROIN MESSENGER RNA.....	5K04 GM00316-02
PETERSON, BARRY W.....	PROPERTIES OF PREMOTOR NEURONS IN GAZE CONTROL SYSTEM.....	1K04 EY00100-01
SHAPLEY, ROBERT M.....	SPATIAL INTERACTIONS IN VISUAL NEURONS.....	5K04 EY00087-02
WINCHESTER, ROBERT J.....	HUMAN B LYMPHOCYTE ALLOANTIGENS AND SURFACE MAKERS.....	5K04 AI00216-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021		
ARTZT, KAREN.....	TERATOCARCINOMA AND EMBRYONAL TUMORS: SURFACE ANTIGENS.....	5K04 CA00276-03
KINCADE, PAUL W.....	DEVELOPMENT OF B-CELL FUNCTIONAL HETEROGENEITY.....	1K04 AI00265-01
MARQUARDT, HANS W.....	CHEMICALLY INDUCED MALIGNANT TRANSFORMATION IN VITRO.....	5K04 CA00127-04
SCHEID, MARGRIT P.....	IMMUNOGENETICS OF LYMPHOCYTES IN HEALTH AND DISEASE.....	1K04 AI00270-01
STEWART, WILLIAM E, II.....	CHARACTERIZATIONS OF INTERFERONS AND THEIR ACTIONS.....	5K04 AI00219-02
WACHTEL, STEPHEN S.....	SEROLOGY OF HY & SK ANTIGENS.....	5K04 HD00171-02
STATE UNIVERSITY OF NEW YORK—DOWNSTATE MEDICAL CENTER ZIP CODE 11203		
BIANCO, CELSO.....	TUMOR RECOGNITION BY NORMAL AND ACTIVATED MACROPHAGES.....	7K04 CA00463-02
FEINMAN, RICHARD D.....	HEPARIN AND PLASMA COAGULATION INHIBITORS.....	1K04 HL00406-01
YESHIVA UNIVERSITY ZIP CODE 10033		
BREWER, CURTIS F.....	NMR STUDIES OF HAPTEN-ANTIBODY INTERACTIONS.....	5K04 CA00184-04
FEIN, FREDERICK S.....	MYOCARDIAL FUNCTION IN EXPERIMENTAL DIABETES MELLITUS.....	1K01 AM00593-01
FEIN, JACK M.....	OXIDATIVE METABOLISM IN CEREBRAL ISCHEMIA.....	5K04 NS00198-03
FROSOLONO, MICHAEL F.....	BIOCHEMISTRY OF PULMONARY SURFACTANT SYSTEM.....	5K04 HL00105-04
GASKIN, FELICIA A.....	NEUROTUBULE, NEUROFILAMENT, & TWISTED TUBULE ASSEMBLY.....	3K04 AG00002-03S1
GASKIN, FELICIA A.....	NEUROTUBULE, NEUROFILAMENT, & TWISTED TUBULE ASSEMBLY.....	5K04 AG00002-04
HENRY, SUSAN A.....	GENETICS AND DEVELOPMENT OF YEAST MEMBRANE MUTANTS.....	5K04 GM00024-04
HIGHSTEIN, STEPHEN M.....	OCULOMOTOR SYNAPTIC LINKAGE CNS SYNAPTIC TRANSMISSION.....	5K04 EY00003-04
KEISER, HAROLD D.....	IMMUNOCHEMISTRY OF CARTILAGE PROTEOGLYCAN.....	5K04 AM00024-04
LEE, KWANG-SUN.....	PLASMA FREE FATTY ACIDS AND BILIRUBIN TOXICITY.....	5K08 AM00219-03
LEVENSON, STANLEY M.....	PROBLEMS OF SURGICAL METABOLISM.....	5K06 GM14208-17
NOVIKOFF, ALEX B.....	BIOCHEMICAL CYTOLOGY OF NORMAL AND MALIGNANT CELLS.....	5K06 CA14923-17
RUBIN, CHARLES S.....	CYCLIC AMP AND PROTEIN KINASES IN CELL REGULATION.....	5K04 AM00190-03
RUBIN, MERYL S.....	REGULATION OF MEMBRANE PERMEABILITY: MOLECULAR BASIS.....	5K04 AM00010-04
SHAFRITZ, DAVID A.....	PROTEIN SYNTHESIS IN NORMAL AND REGENERATING LIVER.....	5K04 AM00027-04
WITTENBERG, JONATHAN B.....	OXYGEN METABOLISM.....	5K06 HL00733-15
WOLKOFF, ALLAN W.....	HEPATIC ORGANIC ANION TRANSPORT.....	5K08 AM00236-03
POUGHKEEPSIE		
VASSAR COLLEGE ZIP CODE 12601		
GREENWOOD, MARY R.....	NUTRITION AND DEVELOPMENT OF ADIPOSE TISSUE.....	1K04 HD00283-01
ROCHESTER		
UNIVERSITY OF ROCHESTER ZIP CODE 14627		
ABRAHAM, GEORGE N.....	SUPPORT FOR IMPROVEMENT OF ALLERGIC-DISEASE CURRICULUM.....	5K07 AI70834-05
AMATRUDA, JOHN M.....	INSULIN ACTION IN LIVER TISSUE AND ADIPOSE TISSUE.....	1K04 AM00366-01
BEGENISICH, TED B.....	ION MOVEMENTS AND DRUG INTERACTIONS IN GIANT AXONS.....	1K04 NS00322-01
BRAND, JOHN S.....	SEPARATION & CHARACTERIZATION OF ISOLATED BONE CELLS.....	5K04 AM00101-04
COHEN, NICHOLAS.....	LYMPHOCYTE PHYLOGENY—DIVERSE REACTIONS TO H-ANTIGENS.....	5K04 AI70736-05
CONNETT, RICHARD J.....	CONTROL OF ENERGY TURNOVER IN SKELETAL MUSCLE.....	5K04 AM00155-03
EMERSON, ROBERT C.....	IMAGE MOVEMENT: NEURAL PROCESSING MECHANISMS.....	5K04 EY00081-02
FORBES, GILBERT B.....	CHEMICAL STUDIES IN GROWTH AND DEVELOPMENT.....	5K06 HD18454-17
GOROVSKY, MARTIN A.....	ORGANIZATION AND FUNCTION OF THE EUKARYOTIC GENOME.....	5K04 GM00238-03
HALL, WILLIAM J.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70822-05
HINKLE, DAVID C.....	ENZYMATIC MECHANISM OF DNA REPLICATION.....	5K04 GM00221-03
HOFFMAN, GLORIA E.....	IMMUNOCYTOCHEMISTRY OF LHRH AND OTHER NEUROPEPTIDES.....	1K04 NS00321-01
KIRKPATRICK, FRANCIS H, JR.....	RED CELL DEFORMABILITY: ROLE OF SPECTRIN AND ACTIN.....	5K04 HL00146-04
KRUGH, THOMAS R.....	PHYSICO-CHEMICAL STUDIES OF INTERCALATION DRUGS.....	5K04 CA00257-03
LIVINGSTON, JAMES N.....	INSULIN ACTION IN ADIPOSE TISSUE.....	1K04 AM00470-01
PRAKASH, LOUISE.....	REPAIR OF DAMAGED DNA AND MUTAGENESIS IN YEAST.....	5K04 GM00004-04
SCHNEIDER, MARTIN F.....	CALCIUM CONCENTRATION CHANGES IN MUSCLE FIBERS.....	5K04 NS00078-04
SEGEL, GEORGE B.....	PHYSIOLOGY AND CELL DIVISION IN NORMAL & LEUKEMIC CELLS.....	5K04 CA00019-04
SHRAGER, PETER G.....	BIOCHEMICAL PROBES OF EXCITABLE MEMBRANES.....	5K04 NS00133-02
SLADEK, CELIA D.....	MECHANISMS CONTROLLING VASOPRESSIN SECRETION.....	5K04 NS00259-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NEW YORK—Continued		
TABER, HARRY W.....	CONTROL OF BACTERIAL MEMBRANE SYNTHESIS.....	5K04 A170655-05
THOMPSON, DEAN A.....	SERCA-DIABETES MELLITUS AND CARDIOVASCULAR.....	1K01 AM00564-01
WAAG, ROBERT C.....	COMPUTER-BASED CARDIAC ULTRASOUND IMAGING.....	5K04 HL00067-04
WILHELM, JAMES M.....	STUDIES OF VIRUS REPLICATION AND TRANSFORMATION.....	5K04 CA00061-04
SARANAC LAKE		
TRUDEAU INSTITUTE ZIP CODE 12983		
CARTER, PHILIP B.....	HOST RESPONSE TO INTESTINAL FLORA.....	5K04 AM00073-04
STONY BROOK		
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794		
COHEN, IRA S.....	CARDIAC ELECTROPHYSIOLOGY EFFECTS OF IONS AND DRUGS.....	1K04 HL00395-01
DALTON, LARRY R.....	NEW INSTRUMENTAL TECHNIQUES FOR BIOMEDICAL RESEARCH.....	5K04 GM00374-03
HUREWITZ, ADAM.....	PULMONARY DISEASES.....	1K07 HL00439-01
JESTY, JOLYON.....	CONTROL MECHANISMS IN COAGULATION.....	1K04 HL00477-01
OWEN, WILLIAM G.....	SIGNAL TRANSFER BETWEEN RETINAL CELLS.....	1K04 EY00113-01
SIMON, SANFORD R.....	CONFORMATION STUDIES OF MODIFIED HEMOGLOBINS.....	5K04 HL00088-04
SMALDONE, GERALD C.....	PULMONARY DISEASES.....	1K08 HL00461-01
SYRACUSE		
STATE UNIVERSITY OF NEW YORK-UPSTATE MEDICAL CENTER ZIP CODE 13210		
COULSON, RICHARD.....	CYCLIC NUCLEOTIDES AND KIDNEY METABOLISM AND FUNCTION.....	1K04 AM00326-01
HAMERNIK, ROGER P.....	NOISE EXPOSURE-AUDIOMETRIC & ULTRASTRUCTURAL CORRELATES.....	3K04 ES00011-01A1S1
HAMERNIK, ROGER P.....	NOISE EXPOSURE-AUDIOMETRIC & ULTRASTRUCTURAL CORRELATES.....	5K04 ES00011-02
RAY, TUSHAR K.....	MEMBRANE BIOLOGY AND CELLULAR PHYSIOLOGY.....	7K04 AM00623-02
TROY		
RENSSELAER POLYTECHNIC INSTITUTE ZIP CODE 12181		
KRAUSE, SONJA.....	ELECTRO-OPTIC STUDIES OF BIOPOLYMERS.....	5K04 AM00048-05
UPTON		
ASSOCIATED UNIVERSITIES-BROOKHAVEN NATIONAL LABORATORY ZIP CODE 11973		
SUTHERLAND, BETSY M.....	PHOTOREACTIVATING ENZYMES.....	7K04 CA00466-03
SUTHERLAND, BETSY M.....	PHOTOREACTIVATING ENZYMES.....	5K04 CA00466-04
SUTHERLAND, JOHN C.....	PHYSICAL STUDIES OF THE PHOTOREACTIVATING ENZYME.....	7K04 CA00465-02
VALHALLA		
NEW YORK MEDICAL COLLEGE ZIP CODE 10595		
THEIS, GAIL A.....	MAREK'S DISEASE: AN IMMUNOGENETIC STUDY.....	5K04 CA70812-05
NORTH CAROLINA		
CHAPEL HILL		
UNIVERSITY OF NORTH CAROLINA SYSTEM-UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514		
BASEMAN, JOEL B.....	METABOLISM OF TREPONEMES: PATHOGENESIS OF RESP DISEASE.....	5K04 AI00178-03
BRIGGAMAN, ROBERT A.....	EPIDERMAL-DERMAL JUNCTION AND BULLOUS DISEASES.....	5K04 AM00119-04
BUTLER, THOMAS C.....	STUDIES OF DRUG METABOLISM AND OF INTRACELLULAR PH.....	4K06 GM19429-16
CARDENAS, JANET M.....	PYRUVATE AND PROTEIN KINASES IN METABOLIC REGULATION.....	7K04 AM00529-02
COFFEY, JAMES C, JR.....	ACTION OF ANDROGEN ON SUBMAXILLARY GLAND FUNCTION.....	5K04 DE00014-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
NORTH CAROLINA—Continued		
COOPER, HERBERT A.....	HEMOPHILIA AND VON WILLEBRAND'S DISEASE.....	5K04 HL00081-04
DONOHUE, JAMES F.....	PULMONARY DISEASES.....	1K07 HL00449-01
DREYER, DUANE A.....	ANATOMOPHYSIOLOGICAL BASES OF OROFACIAL SENSATION.....	5K04 DE00011-04
EDGE, MARSHALL H.....	EUKARYOTIC GENE ORGANIZATION.....	5K04 GM00126-04
HARRISON, JOHN H.....	STUDY OF MALATE DEHYDROGENASE FROM PORCINE HEART.....	5K04 HL70728-05
HUANG, ENG-SHANG.....	THE BIOLOGY AND GENETICS OF HUMAN CYTOMEGALOVIRUS.....	1K04 AI00229-01A1
KAFFER, ENID R.....	NEURAL AND VENTILATORY RESPONSES TO MECHANICAL LOADS.....	5K04 HL00218-03
KAUFMAN, DAVID G.....	CHEMICAL CARCINOGENESIS AND CELL PROLIFERATION.....	1K04 CA00431-01
KUPPER, LAWRENCE L.....	STATISTICAL MODELS FOR ENVIRONMENTAL HEALTH DATA.....	5K04 ES00003-04
KUSY, ROBERT P.....	NOVEL USES OF MATERIALS FOR HEALTH RESEARCH.....	5K04 DE00052-02
MANN, JOHN D.....	METABOLIC ENCEPHALOPATHY BRAIN BARRIER SYSTEMS—UREMIA.....	5K07 NS00244-03
PIMMEL, RUSSELL L.....	ANALYSIS OF RESPIRATORY MECHANICS AND SOUNDS.....	5K04 HL00207-03
RUSSELL, STEPHEN W.....	CAUSES OF SPONTANEOUS TUMOR REGRESSION.....	7K04 CA00497-02
RUSSELL, STEPHEN W.....	CAUSES OF SPONTANEOUS TUMOR REGRESSION.....	5K04 CA00497-03
SOBSEY, MARK D.....	ENTERIC VIRUS CONTAMINATION OF WATER AND SHELLFISH.....	5K04 ES00026-02
SWIFT, MICHAEL R.....	SPECIAL SCIENTIFIC PROJECT: HUMAN CANCER GENETICS.....	1K10 LM00016-01
VAN WYK, JUDSON J.....	ENDOCRINOLOGIC AND METABOLIC PROBLEMS IN CHILDREN.....	5K06 AM14115-17

DURHAM

DUKE UNIVERSITY ZIP CODE 27706

AMOS, D BERNARD.....	FUNDAMENTALS OF THE MECHANISMS OF HOMOGRAFT IMMUNITY.....	5K06 AI18399-17
BIGNER, DARELL D.....	NEUROPATHOLOGY—IMMUNOLOGY AND VIROLOGY.....	5K07 NS11063-05
BUCKLEY, REBECCA H.....	ALLERGIC DISEASES ACADEMIC AWARD.....	5K07 AI70830-05
CARTMILL, MATTHEW.....	COMPARATIVE ANATOMY OF ANTERIOR CAROTID ARTERY.....	5K04 HD00083-04
CORLESS, JOSEPH M.....	X-RAY, EM AND FREEZE-FRACTURE STUDIES ON DISK MEMBRANES.....	5K04 EY00016-03
DENNIS, VINCENT W.....	RENAL HANDLING OF INORGANIC PHOSPHATE.....	1K04 AM00384-01
EVANS, EVAN A.....	MATERIAL BEHAVIOR AND VIABILITY OF PLASMA MEMBRANES.....	5K04 HL00063-04
GERMAN, VICTOR F.....	PATHOGENESIS OF ACUTE AND CHRONIC CHEMICAL PNEUMONITIS.....	5K08 HL00309-02
GOLDSMITH, LOWELL A.....	STRUCTURAL PROTEINS IN GENETIC DEFECTS OF EPIDERMIS.....	5K04 AM00008-04
HACKEL, DONALD B.....	PATHOLOGIC, PHYSIOLOGIC, AND METABOLIC HEART STUDIES.....	5K06 HL14188-17
HANDWERGER, STUART.....	THE CHEMISTRY AND PHYSIOLOGY OF PLACENTAL LACTOGEN.....	5K04 HD00065-04
HERSHFIELD, MICHAEL S.....	A LYMPHOBLAST MODEL FOR DISEASE OF PURINE METABOLISM.....	1K04 AM00434-01
HEYMAN, ALBERT.....	CIRCULATORY CHANGES IN CEREBROVASCULAR DISEASE.....	4K06 NS16677-16
HYLANDER, WILLIAM L.....	BIOMECHANICS OF THE PRIMATE CRANIOFACIAL REGION.....	5K04 DE00027-03
KIM, SUNG-HOU.....	CRYSTALLOGRAPHIC STUDIES OF TRNA-'LIGAND' COMPLEXES.....	5K04 CA00352-02
LEIS, JONATHAN P.....	MECHANISM OF RNA TUMOR VIRUS REPLICATION.....	5K04 CA70876-05
MC CLAY, DAVID R, JR.....	EMBRYONIC CELLULAR RECOGNITION.....	1K04 HD00259-01
MODRICH, PAUL L.....	MOLECULAR BASIS OF ECORI DNA RESTRICTION MODIFICATION.....	1K04 CA00495-01
PORTER, NED A.....	LIPID OXIDATION IN PG SYNTHESIS AND MEMBRANE DAMAGE.....	5K04 HL00324-02
RICHARDSON, DAVID C.....	X-RAY CRYSTALLOGRAPHY OF SUPEROXIDE DISMUTASES.....	5K04 GM00041-04
SCHMIDT-NIELSEN, KNUT.....	COMP. PHYSIOLOGY OF HEAT, WATER METABOLISM, & EXCRETION.....	5K06 GM21522-15
SCOTT, DAVID W.....	MANIPULATION OF THE IMMUNE RESPONSE AND TOLERANCE.....	5K04 AI00093-04
STRAUSS, HAROLD C.....	CHARACTERIZATION OF CARDIAC PACEMAKER ACTIVITY.....	5K04 HL00268-02
TANFORD, CHARLES.....	THE STRUCTURE OF PROTEINS.....	5K06 GM14222-17

WINSTON-SALEM

WAKE FOREST UNIVERSITY ZIP CODE 27109

MC CALL, CHARLES E.....	FUNCTIONAL & METABOLIC PROPERTIES OF TOXIC NEUTROPHILS.....	5K04 AI70767-05
SMITH, PETER B.....	BIOCHEMICAL DEVELOPMENT OF SARCOLEMMA MEMBRANES.....	1K07 NS00330-01
TURNER, JAMES E.....	NERVE GROWTH FACTOR: ROLE IN CNS REGENERATION.....	1K04 NS00338-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
OHIO		
CINCINNATI		
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 45229		
SPERLING, MARK A.....	ENDOCRINE REGULATION OF CARBOHYDRATE METABOLISM.....	7K04 HD00278-04
UNIVERSITY OF CINCINNATI ZIP CODE 45221		
ARMENTROUT, RICHARD W.....	SELECTIVE REPLICATION OF PARVOVIRUS IN TUMOR CELLS.....	5K04 CA00134-04
ASHRAF, MUHAMMAD.....	ISCHEMIC HEART ULTRASTRUCTURE: MODIFICATION BY THERAPY.....	7K04 HL00540-03
BLUMENTHAL, KENNETH M.....	STRUCTURE AND FUNCTION OF POLYPEPTIDE NEUROTOXINS.....	1K04 NS00304-01
COLLINS, JOHN H.....	STRUCTURE AND FUNCTION OF NAO, KO -ATPASE.....	1K04 HL00555-01
CORBIN, RICHARD P.....	PULMONARY ACADEMIC AWARD.....	5K07 HL70068-05
JOHNSON, CARL L.....	HISTAMINE AND CARDIAC ADENYL CYCLASE.....	1K04 HL00414-01
KNOWLES, HARVEY C, JR.....	CARBOHYDRATES & MINERAL METABOLISM GENERAL STUDIES.....	5K06 AM02364-17
MARTIN, ANNE F.....	PROTEIN METABOLISM CONTROL IN HYPERTROPHIED HEART MUSCLE.....	1K04 HL00487-01
REDDY, K NAGENDRA.....	MECHANISM OF ACTIVATION OF PLASMINOGEN BY SK.....	1K04 HL00420-01
SOLARO, R JOHN.....	CONTROL OF MYOFIBRILS IN NORMAL AND O2 DEPRIVED HEARTS.....	1K04 HL00464-01
CLEVELAND		
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106		
ALLEY, KEITH E.....	ONTOGENESIS OF BRAIN STEM VISUO-MOTOR SYSTEMS.....	5K04 NS00147-03
CHISOLM, GUY M, III.....	MACROMOLECULAR TRANSPORT IN ARTERIAL TISSUE.....	5K04 HL00359-02
CULP, LLOYD A.....	SURFACE PROPERTIES OF CANCER AND REVERTANT CELLS.....	5K04 CA70709-05
DOUGLAS, JANICE G.....	ANGIOTENSIN: METABOLISM, RECEPTOR CONTROL AND FUNCTION.....	1K04 HL00399-01
GOLDTHWAIT, DAVID A.....	NUCLEIC ACIDS STUDIES.....	5K06 GM21444-15
HARRIS, JOHN W.....	A STUDY OF NUTRITIONAL AND HEMOLYTIC ANEMIAS.....	5K06 AM14370-17
HOPFER, ULRICH.....	INTESTINAL TRANSPORTS OF NUTRIENTS AND ELECTROLYTES.....	5K04 AM00199-03
KELSEN, STEVEN G.....	PULMONARY DISEASES.....	1K07 HL00450-01
PECKHAM, PAUL H.....	ELECTRICAL ACTIVATION OF PARALYZED SKELETAL MUSCLE.....	1K04 NS00363-01
SPECK, WILLIAM T.....	CARCINOGENIC POTENTIAL OF PHOTOTHERAPY.....	1K04 CA00443-01
COLUMBUS		
OHIO STATE UNIVERSITY ZIP CODE 43210		
ALTMAN, MICHAEL.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00539-04
GAGINELLA, TIMOTHY S.....	INTESTINAL SECRETION: RECEPTOR MECHANISMS.....	1K04 AM00471-01
KLAPPER, MICHAEL H.....	PROTEIN STRUCTURE-FUNCTION, PHEROMONES IN LOWER PLANTS.....	5K04 GM00428-05
MARZLUF, GEORGE A.....	GENE EXPRESSION & ENZYME SYNTHESIS IN NEUROSPORA.....	5K04 GM00431-04
RALL, JACK A.....	ENERGETICS OF CA2O CYCLING DURING MUSCLE CONTRACTION.....	1K04 NS00324-01
ROYER, GARFIELD P.....	ENZYME IMMOBILIZATION FOR CONFORMATION CHANGE DETECTION.....	5K04 GM00430-04
SCOTT, ROY A, III.....	MONTE CARLO CALCULATIONS OF POLYPEPTIDE AND NUCLEIC ACID.....	5K04 GM00429-05
KENT		
KENT STATE UNIVERSITY ZIP CODE 44242		
ROE, BRUCE A.....	THE ROLE OF MODIFIED NUCLEOTIDES IN HUMAN TRNA.....	5K04 GM00178-03
TOLEDO		
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614		
HORTON, FRANK O, III.....	PULMONARY DISEASES.....	5K08 HL00244-03
REIMANN, ERWIN M.....	PHYSIOLOGICAL ROLE OF PROTEIN KINASES.....	1K04 AM00446-01
SCHLENDER, KEITH K.....	REGULATION OF THE GLYCOGEN SYNTHASE SYSTEM.....	1K04 AM00337-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
OKLAHOMA		
NORMAN		
UNIVERSITY OF OKLAHOMA	ZIP CODE 73069	
FUNG, BING-MAN.....	THE STATE OF WATER IN BIOLOGICAL SYSTEMS.....	5K04 AM00058-04
TULSA		
ORAL ROBERTS UNIVERSITY	ZIP CODE 74102	
PETERSON, DONALD F.....	BEAT-TO-BEAT REGULATION OF THE CIRCULATION.....	7K04 HL00542-03
OREGON		
BEAVERTON		
OREGON GRADUATE CENTER FOR STUDY AND RESEARCH	ZIP CODE 97005	
HAUSER, FRANK M.....	SYNTHESES OF SELECTED ANTICANCER ANTIBIOTICS.....	1K04 CA00486-01
CORVALLIS		
OREGON STATE HIGHER EDUCATION SYSTEM--OREGON STATE UNIVERSITY	ZIP CODE 97331	
CARDENAS, JANET M.....	PYRUVATE AND PROTEIN KINASES IN METABOLIC REGULATION.....	5K04 AM00191-02
SCHAUP, HENRY W.....	MACROMOLECULAR INTERACTIONS WITHIN THE RIBOSOME.....	5K04 GM00073-04
WHITE, JAMES D.....	SYNTHESIS OF MACROLIDE ANTIBIOTICS.....	5K04 AI00180-03
EUGENE		
OREGON STATE HIGHER EDUCATION SYSTEM--UNIVERSITY OF OREGON	ZIP CODE 97403	
HERSKOWITZ, IRA.....	GENE REGULATORY MECHANISMS IN YEAST AND PHAGE LAMBDA.....	5K04 AI00163-03
HUDSON, BRUCE S.....	MEMBRANES: NEW TECHNIQUES.....	7K04 GM00476-02
POSTLETHWAIT, JOHN H.....	GENETIC/HORMONE CONTROL OF OOGENESIS & MORPHOGENESIS.....	5K04 GM00119-04
PORTLAND		
6000 SAMARITAN HOSPITAL AND MEDICAL CENTER	ZIP CODE 97210	
NASHNER, LEWIS M.....	STUDIES OF CONTROL OF HUMAN POSTURE.....	5K04 NS00148-03
OREGON STATE HIGHER EDUCATION SYSTEM--UNIVERSITY OF OREGON HEALTH SCIENCES CENTER	ZIP CODE 97201	
BISSONNETTE, JOHN M.....	MECHANISMS OF PLACENTAL TRANSFER.....	5K04 HD00139-03
BUIST, A SONIA.....	SMOKING AND CHRONIC AIRWAYS OBSTRUCTION.....	5K04 HL00115-04
BUXMAN, MELODIE M.....	EPIDERMAL TRANSGLUTAMINASE--ROLE IN KERATINIZATION.....	5K08 AM00391-02
FAUST, CHARLES H, JR.....	GENE EXPRESSION IN NORMAL AND MALIGNANT ANIMAL CELLS.....	5K04 CA00117-04
GIPSON, ILENE K.....	CELL MOTILITY AND ADHESION DURING CORNEAL WOUND HEALING.....	1K04 EY00124-01
GREER, MONTE A.....	NEUROENDOCRINOLOGY & THYROID PHYSIOLOGY.....	5K06 AM02122-17
HOLDEN, WILLIAM E.....	MEDICAL SCHOOL PULMONARY TRAINING AWARD.....	5K08 HL00304-03
KABAT, DAVID.....	CONTROL OF GENE EXPRESSION IN DIFFERENTIATING CELLS.....	5K04 CA00264-03
MORSE, STEPHEN A.....	PHYSIOLOGY OF NEISSERIA GONORRHOEAE.....	5K04 AI00140-03
WEITLAUF, HARRY M.....	METABOLIC CHANGES IN THE PREIMPLANTATION EMBRYO.....	5K04 HD00020-04
PENNSYLVANIA		
HERSHEY		
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER	ZIP CODE 17033	
BARTLETT, GERALD L.....	ANTIGENIC STRENGTH OF NONVIRAL TUMORS.....	5K04 CA70948-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
PENNSYLVANIA—Continued		
BULLOCK, LESLIE P.....	ANIMAL MODELS OF GENETIC REPRODUCTIVE ABNORMALITIES.....	5K04 HD00137-03
LADDA, ROGER L.....	GROWTH FACTORS: CONTROL OF ANIMAL CELL PROLIFERATION.....	5K04 AG00006-02
MC CALLISTER, LAWRENCE P.....	ULTRASTRUCTURAL CORRELATES OF MYOCARDIAL ISCHEMIA.....	5K04 HL00204-03
PAGE, ROBERT B.....	VASCULAR/VENTRICULAR RELATIONS OF THE MEDIAN EMINENCE.....	5K07 NS00179-03
RANNELS, D EUGENE, JR.....	REGULATION OF PROTEIN TURNOVER IN LUNG TISSUE.....	5K04 HL00294-02
TAYLOR, JOHN M.....	CONTROL OF ALBUMIN SYNTHESIS IN LIVER AND HEPATOMAS.....	1K04 CA00393-01
TENSER, RICHARD B.....	LATENT VIRUS INFECTIONS OF THE TRIGEMINAL GANGLION.....	5K07 NS00248-02
VAN BUSKIRK, E MICHAEL.....	THE VERTEBRATE EYE: STUDIES IN AQUEOUS OUTFLOW.....	5K04 EY00051-03
PHILADELPHIA		
CHILDREN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104		
COHN, ROBERT M.....	METABOLIC DERANGEMENTS FROM GALACTOSE TOXICITY.....	5K04 HD00008-04
PARKS, JOHN S.....	HORMONAL INTERACTIONS WITH CULTURED HUMAN LYMPHOCYTES.....	5K04 AM00005-04
ROTH, KARL S.....	BIOCHEMICAL BASIS FOR EXPTL. FANCONI SYNDROME.....	1K04 HD00257-01
HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102		
KALIA, MADHU.....	CENTRAL MECHANISMS IN PULMONARY REFLEXES.....	5K04 HL00103-04
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111		
GUPTA, RAJ K.....	SPECTRAL STUDIES OF HEME- AND METAL PROTEINS.....	5K04 AM00231-03
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129		
CULPEPPER, ROBERT L.....	MEDICAL SCHOOL PULMONARY ACADEMIC AWARD.....	5K08 HL00349-02
GREENSPAN, LEE W.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	1K08 HL00535-01
LEVINE, RHEA J.....	STUDY OF LIMULUS MUSCLE.....	5K04 NS70476-05
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE ZIP CODE 19104		
JOSHI, HEYNER S.....	ANTIGEN EXPRESSION IN EARLY MOUSE EMBRYOS.....	1K04 HD00223-01
TEMPLE UNIVERSITY ZIP CODE 19122		
COHEN, ALLEN B.....	BIOCHEMICAL MECHANISM OF ALPHA-1-ANTITRYPSIN.....	3K04 HL00153-05S1
FIEL, STANLEY B.....	PULMONARY DISEASES.....	1K07 HL00446-01
KIRBY, EDWARD P.....	STRUCTURE AND FUNCTION OF FACTORS VIII AND XII.....	5K04 HL00275-02
TRUEX, RAYMOND C.....	COMPARATIVE CARDIOLOGY.....	5K06 GM14092-17
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107		
LIBERTI, PAUL A.....	PHYSICAL BIOCHEMISTRY OF ANTIGEN-ANTIBODY INTERACTIONS.....	5K04 AI70731-05
LUBLIN, FRED D.....	STUDY OF THE CELLULAR IMMUNE RESPONSE WITHIN THE CNS.....	1K07 NS00271-01A1
ROVETTO, MICHAEL J.....	MYOCARDIAL ENERGY AND ADENINE NUCLEOTIDE METABOLISM.....	5K04 HL00289-02
SCHULMAN, EDWARD S.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	1K08 HL00462-01
WESSON, LAURENCE G.....	RENAL RESEARCH.....	5K06 HL15447-17
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104		
CLARK, CHARLES C.....	STRUCTURE AND BIOSYNTHESIS OF CONNECTIVE TISSUE.....	5K04 AM00360-02
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174		
AGUS, ZALMAN S.....	REGULATION OF RENAL CALCIUM AND PHOSPHATE TRANSPORT.....	5K04 AM00258-02
BARCHI, ROBERT L.....	STRUCTURE AND FUNCTION OF MUSCLE MEMBRANE ION CHANNELS.....	5K04 NS00112-02
CRANDALL, EDWARD D.....	GAS EXCHANGE AND PH: INTERACTIONS AND IMPORTANCE.....	5K04 HL00134-04
DANIELE, RONALD P.....	STRUCTURE AND FUNCTION OF THE LUNG'S IMMUNE SYSTEM.....	5K04 HL00210-03
DUTTON, PETER L.....	MEMBRANE BIOENERGETICS BY SPECTROPHOTOMETRY.....	5K04 GM70771-05
EPPLE, GISELA M.....	PHEROMONES IN PRIMATE REPRODUCTION AND SOCIAL BEHAVIOR.....	5K04 HD70575-05
EPSTEIN, PAUL E.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00354-02
GIL, JUAN.....	PINDOCYTOTIC VESICLES AND PULMONARY EDEMA.....	5K04 HL00436-02
GOLDFARB, STANLEY.....	REGULATION OF RENAL PHOSPHATE AND CALCIUM TRANSPORT.....	1K08 AM00414-01
HAYES, WILSON C.....	MATERIAL AND STRUCTURAL PROPERTIES OF THE KNEE.....	1K04 AM00368-01
HENLE, WERNER.....	ANTIGENIC STRUCTURE OF HSV-VIRUS INTERACTIONS.....	5K06 AI22683-15
HOGUE-ANGELETTI, RUTH A.....	STUDY OF PROTEINS OF THE CATECHOLAMINE STORAGE VESICLES.....	5K04 NS00201-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
PENNSYLVANIA—Continued		
JANICKI, JOSEPH S.....	WALL DYNAMICS & SHAPE ANALYSIS OF ABNORMAL HEARTS.....	1K04 HL00411-01
JOSEPHSON, MARK E.....	ELECTROPHYSIOLOGY OF ARRHYTHMIAS AND THEIR TREATMENT.....	1K04 HL00361-01
KARUSH, FRED.....	IMMUNOLOGY AND IMMUNOCHEMISTRY.....	5K06 AI14012-17
KIM, SEUNG U.....	EXPERIMENTAL NEUROPATHOLOGY IN TISSUE CULTURE.....	5K04 NS00151-03
LEIGH, JOHN S, JR.....	KINETICS AND STRUCTURE IN BIOLOGICAL MEMBRANES.....	5K04 GM00142-04
LU, PONZY.....	MECHANISM OF GENE REGULATION.....	5K04 GM00354-02
MC ARTHUR, WILLIAM P.....	CELLULAR INTERACTIONS IN PERIODONTAL DISEASE.....	1K04 DE00070-01
MILLER, MICHAEL F.....	ORAL DISEASE LONGITUDINAL STUDY/RECURRENT APHTHOUS ULCER.....	5K04 DE00025-03
OWEN, CHARLES S.....	BIOPHYSICAL PROBES OF IMMUNE RESPONSE & HEMEPROTEINS.....	5K04 GM00318-02
PALMER, LARRY A.....	FUNCTIONAL CONNECTIVITY IN VISUAL CORTEX.....	5K04 EY00060-02
PUGH, EDWARD N, JR.....	MECHANISMS OF VISUAL ADAPTATION.....	1K04 EY00102-01
SCHERER, PETER W.....	FLOW OF AEROSOLS, MUCUS AND HEAT IN BRONCHIAL TREE.....	1K04 HL00424-01
SELZER, MICHAEL E.....	SYNAPTIC TRANSMISSION IN THE CENTRAL NERVOUS SYSTEM.....	5K07 NS11083-04
SHAPIRO, BERNARD H.....	PERINATAL IMPRINTING OF BRAIN AND SEXUAL FUNCTION.....	5K04 HD00260-03
STERLING, PETER.....	MICROCIRCUITRY OF THE VISUAL SYSTEM.....	5K04 EY00080-02
TROTMAN, BRUCE W.....	UNCONJUGATED HYPERBILIRUBINEMIA IN A MODEL.....	5K08 AM00235-03
VANDERKOOI, JANE M.....	LATERAL DIFFUSION IN MEMBRANES.....	5K04 GM00053-04
WEBER, KARL T.....	MECHANICS OF RIGHT AND LEFT VENTRICULAR CONTRACTION.....	5K04 HL00187-03
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 191D4		
BORUN, THADDEUS W.....	HISTONE M-RNA TRANSCRIPTION/TRANSITION MECHANISM CONTROL.....	5K04 CA00088-04
CROCE, CARLO M.....	GENETICS OF CELL TRANSFORMATION.....	5K04 CA00143-04
KNOWLES, BARBARA B.....	IMMUNOMANIPULATION OF SOMATIC CELL HYBRIDS.....	5K04 AI00053-04
KRITCHEVSKY, DAVID.....	CHOLESTEROL METABOLISM.....	5K06 HL00734-17
PITTSBURGH		
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213		
CHURCH, ROBERT L.....	BIOLOGY AND GENETICS OF PROCOLLAGEN.....	5K04 EY00071-02
MONTEFIORE HOSPITAL ZIP CODE 15213		
FROMM, HANS.....	BILE ACID METABOLISM IN GALLSTONE DISEASE.....	5K04 AM00290-02
UNIVERSITY OF PITTSBURGH ZIP CODE 1526D		
BYRNE, JOHN H.....	ANALYSIS OF THE NEURAL CONTROL OF BEHAVIOR.....	1K04 NS00200-01A1
COOPER, TERRANCE G.....	SYNTHESIS AND ASSEMBLY OF ENZYMES IN EUKARYOTES.....	5K04 GM00091-04
CRAMER, DONALD V.....	MAJOR HISTOCOMPATIBILITY COMPLEX OF THE RAT.....	1K04 AI00314-01
CURTHOYS, NORMAN P.....	GLUTAMINASE ISOENZYMES AND RAT RENAL AMMONIAGENESIS.....	5K04 AM00068-03
FRIZZELL, RAYMOND A.....	ION TRANSPORT BY MAMMALIAN COLON, IN VITRO.....	5K04 AM00173-03
GLEW, ROBERT H.....	METABOLISM OF MAMMALIAN GLYCOPROTEINS AND GLYCOLIPIDS.....	5K04 AM00036-04
HENDRIX, ROGER W.....	ASSEMBLY AND STRUCTURE OF BACTERIOPHAGE LAMBDA HEADS.....	5K04 AI00023-04
ROBINSON, ALAN G.....	PHYSIOLOGY OF NEUROPHYSIN SECRETION.....	5K04 AM00093-04
TROY, WILLIAM C.....	MATHEMATICAL MODELLING OF EXCITABLE SYSTEMS.....	1K04 NS00306-01
UNIVERSITY PARK		
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802		
PHILLIPS, WINFRED M.....	RHEOLOGY OF BIOLOGICAL FLUIDS, BLOOD FLOW.....	5K04 HL00085-04
RHEUBEN, MARY B.....	SYNAPSE FUNCTION DURING GROWTH AND DEGENERATION.....	1K04 NS00301-01
WEINREB, STEVEN M.....	TOTAL SYNTHESIS OF THE CYTOCHALASINS.....	7K04 HL00541-04
RHODE ISLAND		
PROVIDENCE		
BROWN UNIVERSITY ZIP CODE D2912		
CANE, DAVID E.....	BIOSYNTHESIS OF NATURAL PRODUCTS.....	1K04 AI00318-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
RHODE ISLAND—Continued		
CZECH, MICHAEL P.....	INSULIN ACTION ON FAT CELL METABOLISM.....	5K04 AM00249-03
DAHLBERG, ALBERT E.....	RIBOSOME STRUCTURE AND FUNCTION.....	5K04 GM00044-04
GERBI, SUSAN A.....	FINE STRUCTURE OF RRNA.....	5K04 GM00036-04
LUSK, JOAN E.....	MEMBRANE PERMEABILITY AND TRANSPORT.....	5K04 GM00257-03
SOUTH CAROLINA		
CHARLESTON		
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401		
KARAM, JIM D.....	DNA REPLICATION AND REPAIR OF T4 PHAGE.....	5K04 GM70725-05
LOPES-VIRELLA, MARIA F.....	SERCA-DIABETES MELLITUS: CARDIOVASCULAR.....	1K01 AM00591-01
ONDO, JEROME G.....	AMINO ACID NEUROTRANSMITTERS AND REPRODUCTION.....	1K04 HD00248-01
SPECTOR, MYRON.....	DENTAL IMPLANTS WITH POROUS ROOTS AND CALCIFICATION.....	1K04 DE00067-01
WISE, WILLIAM C.....	AMINO ACID TRANSPORT IN NORMAL AND NEOPLASTIC CELLS.....	5K04 CA70412-05
SOUTH DAKOTA		
VERMILLION		
UNIVERSITY OF SOUTH DAKOTA ZIP CODE 57069		
BRADY, FRANK O.....	METALLOENZYMES: IN VIVO REGULATION IN RAT ORGANS.....	5K04 ES00022-03
PARRY, RODNEY R.....	PULMONARY DISEASES.....	1K07 HL00454-01
TENNESSEE		
KNOXVILLE		
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE ZIP CODE 37916		
BECKER, JEFFREY M.....	PEPTIDE TRANSPORT IN YEAST AND TISSUE CULTURE.....	5K04 GM00094-04
FUHR, JOSEPH E.....	CONTROL OF PROTEIN BIOSYNTHESIS.....	5K04 AM00085-03
MACCABE, JEFFREY A.....	THE EARLY MORPHOGENESIS OF THE VERTEBRATE LIMB.....	1K04 HD00228-01
MILLER, ROBERT V.....	EXTRACHROMOSOMAL DNA ESTABLISHMENT IN P. AERUGINOSA.....	1K04 AI00298-01
MEMPHIS		
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101		
PHILLIPS, DAVID R.....	PLATELET MEMBRANE PROTEINS IN AGGREGATION.....	5K04 HL00080-04
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163		
BURGHEN, GEORGE A.....	STUDY OF INSULIN AND PROINSULIN IN JUVENILE DIABETES.....	5K04 HD70462-05
DUCKWORTH, WILLIAM C.....	MECHANISMS OF INSULIN AND GLUCAGON DEGRADATION.....	5K04 AM00187-03
GOLDEN, EMMEL B, JR.....	MEDICAL SCHOOL PULMONARY FACULTY TRAINING AWARD.....	1K08 HL00530-01
MALIK, KAFAT U.....	ANGIOTENSIN-PROSTAGLANDINS-ADRENERGIC INTERACTIONS.....	3K04 HL00142-03S1
MALIK, KAFAT U.....	ANGIOTENSIN-PROSTAGLANDINS-ADRENERGIC INTERACTIONS.....	5K04 HL00142-04
NASILETTI, ALBERTO.....	VASOACTIVE HORMONES AND BLOOD PRESSURE REGULATION.....	5K04 HL00163-04
REEVES, ROBERT H.....	THE BIOLOGICAL SIGNIFICANCE OF TRNA MODIFICATIONS.....	5K04 GM00420-04
VAN MIDDLESWORTH, LESTER V.....	IODINE METABOLISM AND THE BASIC CAUSE OF GOITER.....	5K06 AM00040-17
NASHVILLE		
MEHARRY MEDICAL COLLEGE ZIP CODE 37208		
ARINZE, IFEANYI J.....	DEVELOPMENT & CONTROL OF HEPATIC & RENAL GLUCONEOGENESIS.....	1K04 HD00226-01

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
TENNESSEE—Continued		
RUSSELL, JAMES D.....	KELOIDS: AN IN VITRO MODEL OF TUMOR GROWTH REGULATION.....	5K04 CA00122-04
STINSON, JOSEPH M.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00341-02
VANDERBILT UNIVERSITY ZIP CODE 37240		
CASAGRANDE, VIVIEN A.....	EFFECTS OF VISUAL DEPRIVATION IN PRIMATES.....	5K07 EY00061-02
CHERRINGTON, ALAN D.....	GLUCONEOGENESIS AND GLYCOGENOLYSIS: ROLE AND REGULATION.....	1K04 AM00480-01
FRANCIS, SHARRON H.....	HORMONAL REGULATION OF HEPATIC PHOSPHODIESTERASE.....	5K04 AM00205-03
GUENGERICH, F PETER.....	ENZYMIC ACTIVATION OF ENVIRONMENTAL TOXINS.....	1K04 ES00041-01
MANN, GEORGE V.....	MECHANISM OF ATHEROGENESIS.....	5K06 HL08288-17
PUETT, J DAVID.....	GONADOTROPINS: STRUCTURE, METABOLISM, AND MECHANISMS.....	5K04 AM00055-04
ROELOFS, ROBERT L.....	A STUDY OF HUMAN SKELETAL MUSCLE IN TISSUE CULTURE.....	5K04 NS70793-05
STOLTZFUS, CONRAD M.....	SUBUNIT STRUCTURE AND FUNCTION OF ONCORNAVIRUS RNA.....	5K04 CA00205-03
TEXAS		
AUSTIN		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712		
BITTNER, GEORGE D.....	REGENERATION IN INVERTEBRATE NERVOUS SYSTEMS.....	5K04 NS00070-04
MYERS, JACK E.....	PHYSIOLOGY AND BIOCHEMISTRY OF ALGAE.....	5K06 GM18373-17
PEREZ-POLO, JOSE R.....	NEURAL DIFFERENTIATION: NERVE GROWTH FACTOR PROTEIN.....	5K04 NS00213-02
POLLAK, GEORGE D.....	NEUROPHYSIOLOGICAL BASIS OF ECHOLOCAION.....	1K04 NS00367-01
COLLEGE STATION		
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY ZIP CODE 77843		
GRANGER, HARRIS J.....	TRANSCAPILLARY FLUID BALANCE AND EDEMA.....	1K04 HL00409-01
MATIS, JAMES H.....	STOCH COMP ANAL: MODELLING, ESTIMATION, APPLICATION.....	5K04 GM00033-04
DALLAS		
BISHOP COLLEGE ZIP CODE 75241		
FOWLKS, EDISON R.....	STRUCTURE-FUNCTION OF MULTIPLE COMPONENT VIRAL RNA.....	5K04 AI00175-03
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS ZIP CODE 75235		
ANDERSEN, JOHN M.....	REGULATION OF CHOLESTEROL SYNTHESIS IN THE GI TRACT.....	1K08 AM00475-01
BOYAR, ROBERT M.....	HORMONE SECRETORY PATTERNS IN PUBERTY.....	1K04 HD00153-01
COHEN, PHILIP L.....	IN VITRO STUDIES OF B LYMPHOCYTE FUNCTION.....	3K08 AM00378-01S1
COHEN, PHILIP L.....	IN VITRO STUDIES OF B LYMPHOCYTE FUNCTION.....	5K08 AM00378-02
GILLIAM, JAMES N.....	IMMUNOLOGIC INVESTIGATION OF SLE SKIN DISEASE.....	5K04 AM00278-02
GOMEZ-SANCHEZ, CELSO E.....	NEW MINERALOCORTICIDS IN LOW RENIN HYPERTENSION.....	1K04 HL00429-01
MC GARRY, J DENIS.....	REGULATION AND TREATMENT OF DIABETIC KETOACIDOSIS.....	5K04 AM70763-05
MC KELVY, JEFFERY F.....	CONTROL OF HYPOTHALAMIC RELEASING FACTOR METABOLISM.....	5K04 AM00331-02
MOSS, ROBERT L.....	NEURAL CONTROL OF HORMONE RELEASE AND SEX BEHAVIOR.....	5K04 HD00146-03
PROUGH, RUSSELL A.....	METABOLISM OF FOREIGN COMPOUNDS IN LIVER AND LUNG.....	5K04 HL00255-03
SHAY, JERRY W.....	ANALYSIS OF HEART CELL CONTRACTION.....	1K04 HL00422-01
TAUROG, ALVIN M.....	BIOSYNTHESIS AND MECHANISM OF ACTION OF THYROXINE.....	4K06 AM15276-16
ZIFF, MORRIS.....	CLINICAL AND BASIC IMMUNOLOGY.....	5K06 AM14155-17
DENTON		
NORTH TEXAS STATE UNIVERSITY ZIP CODE 76203		
HARRIS, BEN G.....	PROTEIN STRUCTURE AND FUNCTION IN PARASITIC HELMINTHS.....	5K04 AI00057-03

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
TEXAS—Continued		
FORT WORTH		
TEXAS CHRISTIAN UNIVERSITY ZIP CODE 76129		
BABITCH, JOSEPH A.....	MECHANISM OF SYNAPTIC NEUROTRANSMITTER RELEASE.....	1K04 NS00233-01A1
GALVESTON		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON ZIP CODE 77550		
EATON, DOUGLAS C.....	NAO TRANSPORT MECHANISMS IN MAMMALIAN URINARY BLADDER.....	1K04 AM00432-01
FULLER, GERALD M.....	REGULATION OF FIBRINOGEN BIOSYNTHESIS.....	5K04 HL00162-04
GRANT, J ANDREW.....	COMPLEMENT-INDUCED RELEASE OF INFLAMMATORY MEDIATORS.....	5K07 AI00110-04
REMMERS, JOHN E.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00131-04
HOUSTON		
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025		
AUNE, KIRK C.....	INTERPRETATIONS OF MACROMOLECULAR INTERACTIONS.....	5K04 GM00071-04
BARNES, EUGENE M, JR.....	MECHANISMS OF TRANSPORT IN MEMBRANE VESICLES.....	5K04 AM00052-04
BASINGER, SCOTT F.....	PHOTORECEPTOR-PIGMENT EPITHELIUM INTERACTION.....	1K04 EY00119-01
EPSTEIN, HENRY F.....	GENETIC AND MOLECULAR BASIS OF MUSCLE DEVELOPMENT.....	7K04 HD00277-03
GOLDSTEIN, MARGARET A.....	Z BANDS, MICROTUBULES AND RELATED HEART STRUCTURES.....	5K04 HL00321-02
HANSEN, THOMAS N.....	PULMONARY DISEASES.....	1K08 HL00460-01
HARTLEY, CRAIG J.....	CARDIOVASCULAR APPLICATIONS—PULSED DOPPLER TECHNIQUES.....	5K04 HL00181-03
HOLLYFIELD, JOE G.....	DEVELOPMENT OF RETINA AND PIGMENT EPITHELIUM.....	5K04 EY00112-04
JOSHI, VASUDEV C.....	ROLE OF INSULIN IN REGULATION OF FATTY ACID SYNTHESIS.....	1K04 AM00397-01A1
KIT, SAUL.....	BIOCHEMICAL ASPECTS OF VIROLOGY.....	4K06 AI02352-16
LAM, DOMINIC M.....	SYNAPTIC CHEMISTRY IN THE VISUAL SYSTEM.....	5K04 EY00123-02
MARTIN, R RUSSELL.....	INFLAMMATION: LEUKOCYTES & MACROPHAGES IN HOST DEFENSE.....	5K04 AI70335-05
PECK, ERNEST J, JR.....	NEUROENDOCRINE CONTROL OF REPRODUCTION.....	5K04 HD00022-03
ROSEN, JEFFREY M.....	HORMONAL REGULATION OF BREAST CANCER.....	5K04 CA00154-03
TERMAN, DAVID S.....	EXTRACORPOREAL IMMUNOADSORBENTS FOR SPEC IMMUNOTHERAPY.....	1K04 AI00302-01
TRENTIN, JOHN J.....	TISSUE TRANSPLANTATION, RADIOBIOLOGY, AND CANCER BIOLOGY.....	5K06 CA14219-17
WILSON, JOHN H.....	ONCOGENIC MECHANISMS: SV40 AND HOST GENETIC ANALYSIS.....	5K04 CA00058-04
RICE UNIVERSITY ZIP CODE 77001		
PARRY, RONALD J.....	BIOSYNTHESIS OF CEPHALOTAXUS AND SECURINEGA ALAKOIDS.....	7K04 GM00472-04
UNIVERSITY OF HOUSTON ZIP CODE 77004		
HARWERTH, RONALD S.....	STUDIES OF BINOCULAR VISION.....	5K07 EY00052-03
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025		
BOYAN-SALYERS, BARBARA D.....	PROTEOLIPID AND CALCIFICATION OF BONES AND TEETH.....	1K04 DE00056-01
CASTRO, GILBERT A.....	IMMUNOLOGY & PATHOPHYSIOLOGY OF INTESTINAL PARASITISM.....	5K04 AI00087-04
ENNA, SALVATORE J.....	NEUROBIOLOGY AND PHARMACOLOGY OF GABA.....	1K04 NS00335-01
MILLER, WARREN C.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00245-03
REDBURN, DIANNA A.....	CHARACTERIZATION OF NEUROTRANSMITTERS IN RETINA.....	5K04 EY00088-02
REDDY, YERRADHODDI S.....	ROLE OF PHOSPHORYLATION IN MYOCARDIAL CONTRACTION.....	7K04 HL00520-02
ROSENFELD, GARY C.....	FUNCTION AND HUMORAL CONTROL OF PARIETAL CELLS.....	1K04 AM00457-01
SANBORN, BARBARA M.....	MOLECULAR ACTIONS OF STEROID AND POLYPEPTIDE HORMONES.....	5K04 HD00126-03
STANCEL, GEORGE M.....	ESTROGEN CONTROL OF UTERUS AND PITUITARY FUNCTION.....	5K04 HD00099-03
STROBEL, HENRY W.....	DRUG CARCINOGEN METABOLISM IN HEPATOMAS.....	1K04 CA00311-01A1
WEISS, KENNETH M.....	EVOLUTIONARY MODELS OF HUMAN HEALTH PATTERNS.....	5K04 GM00230-03
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025		
ANDERSON, JAMES H.....	NEW AND IMPROVED TECHNIQUES OF INTERVENTION RADIOLOGY.....	5K04 CA00083-04
GUTTERMAN, JORDAN U.....	TUMOR IMMUNITY AND IMMUNOTHERAPY OF HUMAN CANCER.....	5K04 CA71007-05
MAVLIGIT, GIORA M.....	IMMUNOLOGICAL APPROACHES TO CANCER THERAPY.....	5K04 CA00130-04
MURGOLA, EMANUEL J.....	MISSENSE SUPPRESSION AND MUTATIONALLY ALTERED TRNAS.....	5K04 GM00047-04

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
TEXAS—Continued		
LUBBOCK		
TEXAS TECH UNIVERSITY ZIP CODE 79409		
MARKWALD, ROGER R.....	MATRICAL MACROMOLECULAR EFFECTS ON CARDIOGENESIS.....	3K04 HL00228-02S1
MARKWALD, ROGER R.....	MATRICAL MACROMOLECULAR EFFECTS ON CARDIOGENESIS.....	5K04 HL00228-03
RICHARDSON		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT DALLAS ZIP CODE 75080		
MARSH, ROBERT C.....	ORIGINS OF DNA REPLICATION: STRUCTURE AND FUNCTION.....	1K04 CA00490-01
SAN ANTONIO		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT SAN ANTONIO ZIP CODE 78285		
NATHAN, MARC A.....	A MODEL OF SUSTAINED ARTERIAL HYPERTENSION.....	7K04 HL00558-04
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284		
KOLB, WILLIAM P.....	CANCER CELL DESTRUCTION BY LYMPHOCYTES AND COMPLEMENT.....	5K04 CA00412-05
SHERIDAN, PETER J.....	ANDROGEN RECEPTORS IN THE BRAIN.....	5K04 NS00164-03
SMITH, JAN D.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00384-02
UTAH		
SALT LAKE CITY		
LATTER-DAY SAINTS HOSPITAL SYSTEM—LATTER-DAY SAINTS HOSPITAL ZIP CODE 84143		
WARNER, HOMER R.....	MATHEMATICAL ANALYSIS OF THE CIRCULATION.....	5K06 HL18344-17
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112		
CASJENS, SHERWOOD R.....	BACTERIOPHAGE P22 ASSEMBLY AND ITS GENETIC CONTROL.....	5K04 GM00237-03
GALANT, STANLEY P.....	PMN BETA-2 ADRENERGIC RECEPTOR IN ASTHMA.....	1K07 AI00304-01
HUANG, WAI M.....	STUDIES OF T4 DNA REPLICATION.....	5K04 GM00148-04
JOHANSON, CONRAD E.....	ONTOGENY OF HOMEOSTATIC SYSTEMS IN CHOROID PLEXUS.....	5K04 NS00302-02
KIM, SUNG-WAN.....	PLATELET INTERACTIONS/INTERFACE INDUCED THROMBOSIS.....	5K04 HL00272-02
MARCUS, STANLEY.....	RESISTANCE TO INFECTIOUS AND NEOPLASTIC DISEASE.....	5K06 AI14924-17
NELSON, JAMES A.....	FACTORS INFLUENCING HEPATIC CONTRAST MEDIA KINETICS.....	5K04 GM00164-03
NICHOLS, WILLIAM K.....	INSULIN AND IMMUNE RESPONSES.....	1K04 AM00528-01
NIELSON, DENNIS W.....	PULMONARY DISEASES.....	1K08 HL00452-01
PARMA, DAVID H.....	GENETICS OF CHROMOSOMAL ABERRATIONS IN PHAGE T4D.....	5K04 AI00024-04
POULTER, C DALE.....	SUBSTRATE ANALOGS FOR TERPENE CONDENSATION REACTIONS.....	5K04 HL00084-04
ROTI ROTI, JOSEPH L.....	MITOTIC DELAY MECHANISMS AND CELL KINETICS MODELS.....	5K04 CA00234-03
TYLER, FRANK H.....	MUSCLE, STEROID, AND CARBOHYDRATE METABOLISM.....	5K06 AM14913-17
WILLIAMS, ROGER R.....	GENETICS AND EPIDEMIOLOGY OF CORONARY ARTERY DISEASES.....	5K04 HL00379-02
WOODBURY, DIXON M.....	PHARMACOLOGY AND CELLULAR BIOCHEMISTRY OF THE CNS.....	5K06 NS13838-17
VERMONT		
BURLINGTON		
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401		
CLAPP, JAMES F, III.....	PHYSIOLOGY OF MATERNAL-FETAL INTERACTION.....	1K04 HD00213-01
CUTRONEO, KENNETH R.....	ANTI-INFLAMMATORY STEROIDS AND COLLAGEN SYNTHESIS.....	5K04 AM00120-05
LEPESCHKIN, EUGENE.....	BASIC STUDIES IN CARDIAC ELECTROPHYSIOLOGY.....	5K06 HL00440-17
STRATMAN, WILLIAM C.....	SPECIAL SCIENTIFIC PROJECT: THE GENESEE EXPERIMENT.....	1K10 LM00020-01
STRAUSS, MICHAEL J.....	SYNTHESIS OF NEW PHARMACEUTICALS.....	5K04 GM70714-05

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
VIRGINIA		
CHARLOTTESVILLE		
UNIVERSITY OF VIRGINIA ZIP CODE 22903		
BENJAMIN, DAVID C.....	CELLULAR AND STRUCTURAL BASIS OF IMMUNOLOGIC TOLERANCE.....	5K04 AI00029-04
BROOKER, GARY.....	METABOLIC AND HORMONAL CONTROL OF CARDIAC CONTRACTION.....	5K04 HL00098-04
CURNOW, RANDALL T.....	PROTEIN PHOSPHATASE IN NORMAL AND DIABETIC LIVER.....	1K04 AM00477-01
DAMMANN, JOHN F.....	CARDIOPULMONARY PHYSIOLOGY IN CRITICALLY ILL PATIENTS.....	5K06 HL14213-17
DANIELSON, DONALD A.....	MATHEMATICAL MODELS FOR PROBLEMS IN PHYSIOLOGY.....	5K04 GM70733-05
EMERSON, CHARLES P, JR.....	PROTEINS SYNTHESIS IN DEVELOPING AND DYSTROPHIC MUSCLE.....	5K04 HD00177-02
EMERSON, SUZANNE U.....	FUNCTIONS AND BIOCHEMISTRY OF RHABDOVIRUS PROTEINS.....	5K04 AI00013-04
GARRISON, JAMES C, II.....	HORMONAL CONTROL OF GLUCONEOGENIC ENZYMES.....	1K04 AM00491-01
GEAR, ADRIAN R.....	PLATELET SURVIVAL AND FUNCTION: ROLE OF MITOCHONDRIA.....	5K04 HL70759-05
GILMAN, ALFRED G.....	REGULATION OF CYCLIC AMP IN CULTURED CELLS.....	5K04 NS00026-04
GOLDBERG, STEVEN K.....	PULMONARY DISEASES.....	1K07 HL00339-01A1
GREENLEE, JOHN E.....	PATHOGENESIS OF PAPOVAVIRUS INFECTIONS.....	1K07 NS00317-01
HOWARDS, STUART S.....	MICROPUNCTURE STUDIES OF TESTIS AND EPIDIDYMIS.....	5K04 HD00108-03
HUANG, LAURA C.....	STRUCTURE & REGULATION OF PROTEIN KINASES.....	5K04 AM00212-02
KADNER, ROBERT J.....	GENETIC CONTROL OF MEMBRANE TRANSPORT IN E. COLI.....	5K04 GM00019-04
KEEFER, DONALD A.....	MORPHOLOGY AND CONNECTIVITY OF SEX-HORMONE NEURONS.....	1K04 HD00243-01
KUEHL, W MICHAEL.....	CONTROL OF IMMUNOGLOBULIN SYNTHESIS IN MYELOMA CELLS.....	1K04 AI00293-01
KUTCHAI, HOWARD C.....	RED CELL O2 TRANSPORT AND TRANSPORT SYSTEMS IN HEART.....	5K04 HL00014-04
LEE, JEN-SHIH.....	ENGINEERING STUDY OF PULMONARY MECHANICS AND EDEMA.....	5K04 HL00004-04
LONGNECKER, DAVID E.....	ANESTHETICS AND MICROVASCULAR RESPONSE TO HEMORRHAGE.....	5K04 HL00037-04
MILLER, EDWARD D, JR.....	ANESTHETICS INTERACTION WITH RENIN/SYMPATHETIC NERV. SYS.....	1K04 GM00457-01
POHL, STEPHEN L.....	MECHANISMS OF POLYPEPTIDE HORMONE ACTION.....	5K04 AM00183-05
ROGOL, ALAN D.....	HETEROGENEITY OF PLASMA HORMONES.....	5K04 AM00153-03
RUBEL, EDWIN W.....	ACOUSTIC EXPERIENCE AND BRAIN DEVELOPMENT.....	1K04 NS00305-01
SHERMAN, S MURRAY.....	MAMMALIAN VISUAL DEVELOPMENT AND AMBLYOPIA.....	5K04 EY00020-04
STEWART, OSWALD.....	POST-LESION PLASTICITY OF NEURONAL CIRCUITY.....	1K04 NS00325-01
TAYLOR, RONALD P.....	QUANTITATIVE STUDIES OF BIOLOGICAL RECOGNITION.....	5K04 AI00062-04
VAUGHAN, DARRACOTT, JR.....	DES-ASP1-ANGIOTENSIN II: FORMATION AND ACTION.....	5K04 HL00140-03
GREAT FALLS		
INDIVIDUAL AWAROO-DOWLING, HARRY F. ZIP CODE 22066		
DOWLING, HARRY F.....	SPECIAL SCIENTIFIC PROJECT: U S MUNICIPAL HOSPITALS.....	1K10 LM00008-01
NORFOLK		
EASTERN VIRGINIA MEDICAL AUTHORITY-EASTERN VIRGINIA MEDICAL SCHOOL ZIP CODE 23507		
WRIGHT, GEORGE L, JR.....	ISOLATION OF TUMOR ANTIGENS.....	5K04 CA00012-04
RICHMOND		
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284		
ARCHER, GORDON L.....	ENDOCARDITIS ON PROSTHETIC CARDIAC VALVES.....	5K04 HL00285-02
BOND, JUDITH S.....	HORMONAL CONTROL OF PROTEIN TURNOVER.....	1K04 AM00427-01
GREENBERG, RICHARD P.....	TRAUMA-BRAIN DYSFUNCTION LOCALIZATION/EVOKED POTENTIALS.....	1K07 NS00346-01
LIBERTI, JOSEPH P.....	BIOCHEMISTRY OF SOMATOMEDIN.....	5K04 AM00125-04
LITTMAN, BRUCE H.....	REGULATION OF CELLULAR COOPERATION BY SOLUBLE FACTORS.....	5K04 AM00336-02
MORAHAN, PAGE S.....	VIRAL DISEASE-IMMUNITY AND RESISTANCE INDUCING AGENTS.....	5K04 AI70863-05
PANG, DAVID C.....	EXCITATION-CONTRACTION COUPLING IN CARDIAC FAILURE.....	1K04 HL00488-01
PATTERSON, JOHN L, JR.....	NORMAL & PATHOPHYSIOLOGY OF CIRCULATION & RESPIRATION.....	5K06 HL18678-17
TEW, JOHN G.....	REGULATION OF THE IMMUNE RESPONSE BY PERSISTING ANTIGEN.....	5K04 AI00008-04
WEIR, GORDON C.....	STUDIES OF GLUCAGON AND SOMATOSTATIN SECRETION.....	5K04 AM00255-02

Table 3.—NIH Research Career Program Awards by Area, Organization, and Awardee, Fiscal Year 1978—Continued

Awardee	Project title	Grant number
WASHINGTON		
PULLMAN		
WASHINGTON STATE UNIVERSITY ZIP CODE 99163		
PRIEUR, DAVID J.....	CHARACTERIZATION OF NEW GENETIC ANIMAL DISEASE MODELS.....	5K04 RR00003-03
SEATTLE		
UNIVERSITY OF WASHINGTON ZIP CODE 98195		
AFROMOWITZ, MARTIN A.....	IMPLANTABLE SOLID-STATE HYBRID ION-SENSITIVE DEVICE.....	5K04 GM00323-02
ALVARES, OLAV F.....	NUTRITION AND THE ORAL MUCOUS MEMBRANES.....	5K04 DE00037-03
ANDERSEN, NIELS H.....	THE MOLECULAR BASIS OF PROSTAGLANDIN BIOCHEMISTRY.....	5K04 GM00134-04
BERGER, ALBERT J.....	NEURAL REGULATION OF RESPIRATION.....	7K04 NS00378-02
CAMERMAN, ARTHUR.....	STEREOCHEMICAL BASIS OF DRUG AND HORMONE ACTION.....	5K04 NS70801-05
CHAIT, ALAN.....	SERCA-DIABETES MELLITUS: CARDIOVASCULAR.....	1K01 AM00592-01
CULVER, BRUCE H.....	PULMONARY ACADEMIC AWARD.....	5K07 HL00248-03
FURLONG, CLEMENT E.....	BACTERIAL AND HUMAN MEMBRANE TRANSPORT SYSTEMS.....	3K04 GM00452-03S1
FURLONG, CLEMENT E.....	BACTERIAL AND HUMAN MEMBRANE TRANSPORT SYSTEMS.....	5K04 GM00452-04
GARTLER, STANLEY M.....	STUDIES IN MAMMALIAN SOMATIC CELL GENETICS.....	5K06 GM03874-15
HENDRICKSON, ANITA E.....	DEVELOPMENT OF PRIMATE RETINA.....	5K04 EY39039-04
HLASTALA, MICHAEL P.....	TOTAL BODY GAS EXCHANGE.....	5K04 HL00182-03
HOHL, THOMAS H.....	SURGICAL EFFECTS ON GROWTH OF CRANIOFACIAL COMPLEX.....	5K04 DE00040-03
HUNTSMAN, LEE L.....	MECHANICAL PROPERTIES OF ISOLATED MYOCARDIUM.....	5K04 HL00344-02
JOHNSON, DALE E.....	MYOCARDIAL CATIONS—ELECTRON ENERGY LOSS MICROANALYSIS.....	1K04 HL00472-01
JOHNSON, DAVID G.....	THE REGULATION OF INSULIN RELEASE.....	5K04 AM70727-05
KANEKO, CHRIS R.....	PREMOTONEURONAL CONTROL OF FAST EYE MOVEMENTS.....	1K07 EY00096-01
KURACHI, KOTOKU.....	STRUCTURE AND FUNCTION OF BLOOD COAGULATION FACTORS.....	1K04 HL00404-01
MC CLEAN, MICHAEL D.....	AFFERENT FUNCTION IN LIP MOTOR CONTROL FOR SPEECH.....	1K04 NS00291-01
MINSHEW, BARBARA H.....	GENETICS OF ESCHERICHIA COLI VIRULENCE FACTORS.....	1K04 AI00290-01
PALMER, JERRY P.....	BASAL GLUCOSE, GLUCAGON-INSULIN SECRETION IN DIABETES.....	1K08 AM00535-01
RUBIN, CYRUS E.....	HUMAN MUCOSAL STRUCTURE AND FUNCTION.....	5K06 CA03449-17
RUSHMER, ROBERT F.....	HEALTH RESEARCH & DEVELOPMENT PRIORITIES—SPECIAL.....	5K10 LM00010-02
SAARI, JOHN C.....	RETINOL BINDING PROTEINS: METABOLISM AND FUNCTION.....	5K07 EY00043-03
SLATKIN, MONTGOMERY W.....	SPATIAL AND TEMPORAL PATTERNS IN NATURAL POPULATIONS.....	5K04 GM00396-04
STORM, DANIEL R.....	FUNCTIONAL ASPECTS OF BACTERIAL AND MAMMALIAN MEMBRANES.....	7K04 AI00310-02
THOMAS, EDWARD D.....	TRANSPLANTATION OF MARROW AND MARROW METABOLISM.....	5K06 AI02425-15
TRAGER, WILLIAM F.....	ASPECTS OF THE METABOLISM OF ORAL ANTICOAGULANTS.....	5K04 GM00211-03
TRUMAN, JAMES W.....	HORMONE ACTION ON THE CENTRAL NERVOUS SYSTEM.....	5K04 NS00193-03
WEISS, NOEL S.....	MENOPAUSAL ESTROGENS AND THE EPIDEMIOLOGY OF CANCER.....	5K04 CA00048-04
WHITELEY, HELEN R.....	METABOLISM OF ANAEROBIC MICROCOCCI.....	4K06 GM00442-16
WILLSON, RICHARD A.....	ACUTE LIVER INJURY AND FAILURE.....	5K04 AM00151-03
WYLER, ALLEN R.....	SINGLE NEURON NEUROPHYSIOLOGY IN CHRONIC EPILEPTIC FOCI.....	1K07 NS00195-01A2
VIRGINIA MASON RESEARCH CENTER ZIP CODE 98101		
HILDEBRANDT, JUDITH R.....	CONTROL OF LUNG FUNCTION AND RESPIRATION IN EXERCISE.....	5K04 HL00047-04
WEST VIRGINIA		
MORGANTOWN		
WEST VIRGINIA UNIVERSITY ZIP CODE 26506		
ALBRINK, MARGARET J.....	SERUM TRIGLYCERIDES AND VASCULAR DISEASE.....	4K06 HL00486-16
BLAIR, JAMES B.....	HORMONAL REGULATION OF GLUCONEOGENESIS.....	1K04 AM00428-01
BUTCHER, FRED R.....	CYCLIC NUCLEOTIDES IN PAROTID GLAND METABOLISM.....	7K04 AM00586-04
COLASANTI, BRENDA K.....	ADRENERGIC AND CHOLINERGIC INTERACTIONS IN THE EYE.....	5K07 EY00075-02

**Table 3.—NIH Research Career Program Awards by Area, Organization,
and Awardee, Fiscal Year 1978—Continued**

Awardee	Project title	Grant number
WISCONSIN		
MADISON		
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706		
BEINERT, HANS H.....	BASIC MECHANISMS IN BIOLOGICAL OXIDATIONS.....	5K06 GM18442-17
BLATTNER, FREDERICK R.....	REGULATORY SITES IN PRO- AND EUKARYOTIC GENOMES.....	5K04 GM00150-04
BORISY, GARY G.....	MICROTUBULE ASSEMBLY AND FUNCTION.....	5K04 GM00066-04
DAVIS, LARRY D.....	CELLULAR POTENTIAL CHANGES CAUSING CARDIAC ARRHYTHMIA.....	5K04 HL70740-05
DEMPSEY, JEROME A.....	PULMONARY ADAPTATION TO CHRONIC HYPOXIA.....	5K04 HL00149-04
HOWE, MARTHA M.....	INTEGRATION, REGULATION, AND GROWTH OF PHAGE MU.....	1K04 AI00274-01
HUTCHINSON, C RICHARD.....	METABOLISM OF NATURALLY OCCURRING ANTITUMOR COMPOUNDS.....	5K04 CA00253-03
JACOB, CLYDE T, JR.....	NEUROSENSORY MECHANISMS OF SPEECH MOTOR CONTROL.....	1K07 NS00355-01
JEFCOATE, COLIN R.....	CYTOCHROME P450 CARCINOGENESIS AND STEROID SYNTHESIS.....	5K04 CA00250-03
KAESBERG, PAUL J.....	STRUCTURE AND SYNTHESIS OF VIRUSES.....	5K06 AI21942-15
LAGE, GARY L.....	CARDIAC GLYCOSIDE DISPOSITION AND TOXICITY.....	5K04 HL00096-04
MC CLAIN, WILLIAM H.....	BIOSYNTHESIS & FUNCTION OF MOLECULAR GENETICS OF T-RNA.....	5K04 AI00020-04
MUELLER, GERALD C.....	STUDIES ON GROWTH REGULATING MECHANISMS.....	5K06 CA00685-18
NELSON, DAVID L.....	SPATIAL DIFFERENTIATION PLUS ION CONDUCTANCE.....	5K04 NS00085-04
NICKLES, ROBERT J.....	RADIOTRACER DEVELOPMENT FOR CARDIOVASCULAR STUDIES.....	5K04 HL00217-03
NORTHROP, DEXTER B.....	MECHANISMS OF DEHYDROGENASES/ANTIBIOTIC INACTIVATION.....	5K04 GM00254-03
OLSON, EARL B, JR.....	METABOLISM IN PERFUSED FETAL & NEWBORN RABBIT LUNGS.....	5K04 HL00438-02
POLAND, ALAN P.....	DRUG METABOLISM AND ENZYME INDUCTION.....	5K04 ES00039-04
RAETZ, CHRISTIAN R.....	RECOMBINANT DNA COMPLIANCE WITH NIH GUIDELINES.....	1K04 AM00584-01
RHODE, WILLIAM S.....	MECHANICAL AND ELECTRICAL STUDIES OF THE INNER EAR.....	5K04 NS00107-04
RIS, HANS.....	STRUCTURE & MOLECULAR ORGANIZATION OF GENETIC SYSTEMS.....	5K06 GM21948-15
RUOHO, ARNOLD E.....	MOLECULAR CHARACTERIZATION OF ADRENERGIC RECEPTORS.....	5K04 NS00158-03
SPEAR, PETER D.....	VISUAL INTEGRATION IN THE BRAIN.....	3K04 EY00089-01S1
SPEAR, PETER D.....	VISUAL INTEGRATION IN THE BRAIN.....	5K04 EY00089-02
MILWAUKEE		
MEDICAL COLLEGE OF WISCONSIN ZIP CODE 53233		
GHAZARIAN, JACOB G.....	CONTROL OF ENZYMES IN THE VITAMIN D3 ENDOCRINE COMPLEX.....	5K04 AM00220-03
HOPWOOD, LARRY E.....	CELL KILLING AND MUTATION BY COMBINED HEAT AND X-RAYS.....	5K04 CA00283-02
KOZIN, FRANKLIN.....	MECHANISMS OF CRYSTAL-INDUCED INFLAMMATION.....	1K08 AM00483-01
LECH, JOHN J.....	METABOLISM AND DISPOSITION OF FOREIGN COMPOUNDS BY FISH.....	5K04 ES00002-04
WYOMING		
LARAMIE		
UNIVERSITY OF WYOMING ZIP CODE 82070		
BARDEN, ROLAND E.....	KINETICS AND AFFINITY LABELLING OF LIPID ENZYMES.....	5K04 GM00246-03
SMITH, DAVID V.....	ADAPTATION AND TASTE QUALITY CODING.....	5K04 NS00168-02
PUERTO RICO		
SAN JUAN		
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS ZIP CODE 00936		
DEL CASTILLO, JOSE.....	PHYSIOLOGY AND PHARMACOLOGY OF EXCITATION.....	5K06 NS14938-17
UNIVERSITY OF PUERTO RICO RIO PIEDRAS CAMPUS ZIP CODE 00931		
ADAM, WALDEMAR.....	SYNTHESIS OF ENDOPEROXIDE PRECURSORS TO PROSTAGLANDIN.....	5K04 GM00141-04

APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetical sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization. The tables in which the organizations may be found are shown in parentheses following their locations.

- Affiliated Hospitals Center--Boston (3 units), Mass. (2,3)
American Dental Association--Chicago (2 units), Ill. (2)
American Health Foundation--New York, Valhalla, N.Y. (2,3)
American Institutes for Research--Palo Alto, Calif.; Washington, D.C. (2)
Battelle Memorial Institute--Columbus, Ohio; Richland, Seattle, Wash. (2)
Boston Health and Hospitals Department (may include awards to Mallory Institute of Pathology Foundation)--Boston, Mass. (2)
California State Health and Welfare Agency--Berkeley, Sacramento, Calif. (2)
California State University and Colleges System--Arcata, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, San Diego, San Francisco, San Jose, Calif. (2,3)
Chicago Health Department (may include awards to Chicago Health Research Foundation)--Chicago, Ill. (2)
City University of New York--New York (9 units), N.Y. (2,3)
Claremont Colleges System--Claremont (4 units), Calif. (2)
College of Medicine and Dentistry of New Jersey--Newark, Piscataway (2 units), N.J. (2,3)
Cornell University--Ithaca, New York, N.Y. (2,3)
Denver Health and Hospitals Department (may include awards to Denver Health Research Foundation)--Denver, Colo. (2)
Florida Department of Health and Rehabilitative Services--Tallahassee, Vero Beach, Fla. (2,3)
Gulf South Research Institute--Baton Rouge, New Orleans, La. (2)
Harvard University--Boston, Cambridge, Mass. (2,3)
Indiana University--Bloomington, Indianapolis, Ind. (2,3)
Johns Hopkins University--Baltimore, Silver Spring, Md. (2,3)
Kapiolani-Children's Medical Center (formerly shown as Kapiolani Hospital)--Honolulu, Hawaii (2)
Latter-Day Saints Hospital System--Salt Lake City (3 units), Utah (2,3)
Long Island University--Greenvale, New York, N.Y. (2)
Los Angeles County Health Services Department--Downey, Los Angeles, Torrance, Calif. (2,3)
Louisiana State University--Baton Rouge, New Orleans (2 units), Shreveport, La. (2,3)
Loyola University of Chicago--Chicago, Maywood, Ill. (2,3)

Masonic Foundation for Medical Research and Human Welfare--New York, Utica, N.Y. (2)

Massachusetts General Hospital--Belmont, Boston, Mass. (2,3)

Massachusetts Office of Human Services (may include awards to Massachusetts Mental Health Research Corporation)--Boston, Mass. (2)

Mayo Foundation--Rochester (2 units), Minn. (2,3)

Montana University System--Bozeman, Missoula, Mont. (2,3)

New York Medical College--New York, Valhalla, N.Y. (2,3)

New York State Department of Health (may include awards to Health Research, Inc.)--Albany, Buffalo, N.Y. (2,3)

New York State Department of Mental Hygiene (may include awards to New York State Research Foundation for Mental Hygiene, Inc.)--Albany, Buffalo, New York (3 units), Orangeburg, N.Y. (2)

North Carolina Department of Human Resources--Morganton, Raleigh (2 units), N.C. (2)

Northwestern University--Chicago, Evanston, Ill. (2,3)

Oregon State Higher Education System--Corvallis, Eugene, Portland (2 units), Oreg. (2,3)

Pennsylvania State University--Hershey, University Park, Pa. (2,3)

Rutgers The State University--New Brunswick, Newark, N.J. (2,3)

Southern Illinois University System--Carbondale, Edwardsville, Ill. (2)

State University and Community College System of Tennessee--Johnson City, Memphis, Nashville, Tenn. (2)

State University of New York--Albany, Binghamton, Brockport, Buffalo (2 units), Cortland, New York, Plattsburgh, Purchase, Stony Brook, Syracuse (2 units), N.Y. (2,3)

State University System of Florida--Gainesville, Jacksonville, Tallahassee (2 units), Tampa, Fla. (2,3)

Texas Agricultural and Mechanical University System--College Station, Prairie View, Tex. (2,3)

Texas Department of Mental Health and Mental Retardation (may include awards to Texas Foundation for Mental Health Research)--Houston, Tex. (2)

Tufts University--Boston, Medford, Mass. (2)

Tulane University--Covington, New Orleans, La. (2,3)

U.S. Department of Health, Education, and Welfare--New York, N.Y.; Seattle, Wash. (2)

U.S. Department of the Army--Washington, D.C.; San Antonio, Tex. (2)

University of Alabama System--Birmingham, University, Ala. (2,3)

University of Arkansas--Fayetteville, Little Rock, Ark. (2,3)

University of California--Berkeley, Davis, Irvine, La Jolla, Los Angeles, Riverside, San Francisco, Santa Barbara, Santa Cruz, Calif. The unit in La Jolla may include awards to Friends of Psychiatric Research of San Diego. (2,3)

University of Colorado--Boulder, Denver (2 units), Colo. (2,3)

University of Connecticut--Farmington, Storrs, Conn. (2,3)

University of Illinois--Chicago (2 units), Peoria, Urbana, Ill. (2,3)

University of Kansas--Kansas City, Lawrence, Kans. (2,3)

University of Maine--Orono, Portland, Me. (2)

University of Maryland System--Baltimore, Catonsville, College Park (2 units), Princess Anne, Md. (2,3)

University of Massachusetts--Amherst, Boston, Worcester, Mass. (2,3)

University of Miami--Coral Gables, Miami, Fla. (2,3)

University of Minnesota at Minneapolis--Austin, Duluth, Minneapolis, Saint Paul, Minn. (2,3)

University of Mississippi--Jackson, University, Miss. (2,3)
University of Missouri--Columbia, Kansas City, Mo. (2,3)
University of Nebraska System--Lincoln, Omaha, Nebr. (2)
University of North Carolina System--Chapel Hill, Cullowhee,
Durham, Elizabeth City, Greensboro, Greenville, Raleigh,
Winston-Salem, N.C. (2,3)
University of Oklahoma--Norman, Oklahoma City, Okla. (2,3)
University of Puerto Rico--Mayaguez, San Juan (2 units), P.R.
(2,3)
University of Tennessee System--Knoxville, Memphis, Tenn. (2,3)
University of Texas System--Arlington, Austin, Dallas, El Paso,
Galveston, Houston (2 units), Richardson, San Antonio (2 units),
Tex. (2,3)
University of Wisconsin System--Kenosha, Madison, Milwaukee,
Wisc. (2,3)
University System of Georgia--Albany, Athens, Atlanta (2 units),
Augusta, Fort Valley, Savannah, Statesboro, Ga. (2,3)
Utah State Higher Education System--Logan, Salt Lake City, Utah
(2,3)
Veterans Administration--Los Angeles, Calif.; Hines, North Chicago,
Ill.; Lexington, Ky.; Shreveport, La.; Boston, Mass.; Durham,
N.C.; Oklahoma City, Okla.; Portland, Oreg.; Pittsburgh, Pa.;
White River Junction, Vt.; Seattle, Wash.; Huntington, W. Va. (2)

DHEW Publication No. (NIH) 79-1042

NATIONAL INSTITUTES OF HEALTH

Grants
for
Training
Construction
Cancer Control
Medical Libraries

Fiscal Year 1978 Funds



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service National Institutes of Health

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

National Institutes of Health

DHEW Publication No. (NIH) 79-1043

Prepared by
NATIONAL INSTITUTES OF HEALTH
DIVISION OF RESEARCH GRANTS
Statistics and Analysis Branch

PREFACE

The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents the fellowships, training grants, cancer research facilities construction, cancer control, and medical library grants awarded by the National Institutes of Health from fiscal year 1978 funds. Awards for training and construction made by other constituent agencies of the Public Health Service are not included in this volume.

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TECHNICAL NOTE

Cancer Control Grants

The research demonstration and dissemination projects of the National Cancer Institute, formerly presented in the volume listing NIH Research Grants, are being shown in this volume effective with fiscal year 1978 funds. These grants, commonly referred to as cancer control grants, are shown separately from research grants in the budget, and their exclusion from the volume on research grants was for the purpose of conforming with their treatment in the budgetary process. To reflect their uniqueness, the cancer control grants are shown in a separate table in this volume.

Organization Identification

In the presentation of grants made from fiscal year 1978 funds, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the principal investigator lies. Study of the structure of grantee organizations in the United States (primarily universities and colleges, and State Departments of Mental Health or their equivalents) has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education is comprised of two or more campuses reporting directly to the central administration, each campus is listed separately.
2. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and the organization is listed as many times within a given city as there are components of the organization receiving grants.
3. If a foundation has been established for the purpose of receiving and administering funds for grants, the name and location of the organization having professional responsibility for the grant are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
4. If an association receiving a grant has a fixed national headquarters, the grants are listed at the headquarters location. If however, the association does not have a fixed headquarters, the grants are listed in the city shown for this organization in either the Encyclopedia of Associations (1) or the Research Centers Directory (2).

These qualifications do not apply to foreign institutions or to some domestic organizations, because a systematic study of their organizational structure has not been made. Organizations which require a clarifying comment, or which appear in more than one geographical location are listed alphabetically in the Appendix.

Supplemental Awards

In this publication, supplemental awards are combined with the parent grant, or with other supplements, when both awards are made from the same fiscal year funds. Supplemental grants awarded in fiscal year 1978 to parent grants awarded in a previous fiscal year are shown separately; if two or more such supplements were made during fiscal year 1978, these supplements are combined.

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- (1) Fiske, M. (Ed.): Encyclopedia of Associations. Gale Research Co., Detroit, Mich., 12 ed., Vol. 1, 1978.
 - (2) Palmer, A.M. (Ed.): Research Centers Directory. Gale Research Co., Detroit, Mich., 5 ed., 1975.

ABBREVIATIONS

The NIH component supporting a grant is indicated by the code letters in the left-hand column. These code letters form part of the identification of the grant number.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, Metabolism, and Digestive Diseases.....	NIAMDD
CA	National Cancer Institute.....	NCI
DE	National Institute of Dental Research.....	NIDR
ES	National Institute of Environmental Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences.....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RR	Division of Research Resources.....	DRR
TW	Fogarty International Center.....	FIC
LM	National Library of Medicine.....	NLM
	National Institutes of Health.....	NIH

TABLE 1.--SUMMARY OF NIH TRAINING, CONSTRUCTION, MEDICAL LIBRARY, AND CANCER CONTROL GRANTS, BY SUPPORTING COMPONENT, FISCAL YEAR 1978

SUPPORTING COMPONENT	TOTAL TRAINING DOLLARS		RESEARCH TRAINING GRANTS		FELLOWSHIPS AND NAT'L RESEARCH SERVICE AWARDS*		CONSTRUCTION GRANTS		CANCER CONTROL GRANTS		MEDICAL LIBRARY GRANTS	
	DOLLARS	NO.	DOLLARS	NO.	DOLLARS	NO.	DOLLARS	NO.	DOLLARS	NO.	DOLLARS	NO.
TOTAL NATIONAL INSTITUTES OF HEALTH.....	148,528,051	1,330	118,809,760	2,070	29,718,291	14	12,000,000	81	17,601,433	52	2,013,313	
INSTITUTES AND RESEARCH DIVISIONS.....	147,167,668	1,321	117,449,377	2,070	29,718,291	14	12,000,000	81	17,601,433	..	.....
DIVISION OF RESEARCH RESOURCES..	515,000	8	468,800	3	46,200	..	.....	..	.....	..	.....
FOGARTY INTERNATIONAL CENTER....	3,412,295	..	.....	205	3,412,295	..	.....	..	.....	..	.....
NATIONAL CANCER INSTITUTE.....	19,995,950	147	15,711,184	292	4,284,766	14	12,000,000	81	17,601,433	..	.....
NATIONAL EYE INSTITUTE.....	4,558,349	54	3,335,734	92	1,222,615	..	.....	..	.....	..	.....
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE.....	21,151,454	229	18,163,766	215	2,987,688	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES.....	8,108,902	86	5,870,245	157	2,238,657	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF ARTHRITIS, METABOLISM, AND DIGESTIVE DISEASES.....	14,898,095	188	10,912,855	304	3,985,240	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT..	10,186,929	98	8,398,626	133	1,788,303	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF DENTAL RESEARCH.....	3,295,005	28	2,671,667	50	623,338	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES.	4,519,304	42	4,086,204	30	433,100	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES.....	46,818,573	371	42,342,783	312	4,475,790	..	.....	..	.....	..	.....
NATIONAL INSTITUTE OF NEUROLOGICAL AND COMMUNICATIVE DISORDERS AND STROKE.....	7,321,993	46	3,583,486	244	3,738,507	..	.....	..	.....	..	.....
NATIONAL INSTITUTE ON AGING.....	2,385,819	24	1,904,027	33	481,792	..	.....	..	.....	..	.....
NATIONAL LIBRARY OF MEDICINE.....	1,360,383	9	1,360,383	..	.....	..	.....	..	.....	52	2,013,313

*Supplemental and supply allowances for an award made in a previous year are not included in the count, although dollars are included. Thus, an organization receiving only a supply allowance will have an entry under dollars but no entry under number.

NOTE: For information as to how this table is structured, see Technical Note, p. vii. Also, for comments on organizations, see Appendix.

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards*		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
GRAND TOTAL	2,070	29,718,291	1,815	25,336,722	50	969,274	205	3,412,295
UNITED STATES**	1,995	28,650,720	1,744	24,366,379	46	872,046	205	3,412,295
OTHER COUNTRIES	75	1,067,571	71	970,343	4	97,228		
ALABAMA								
AUBURN								
AUBURN UNIVERSITY.....	3	49,050			3	49,050		
BIRMINGHAM								
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM.....	11	172,974	8	125,300			3	47,674
MOBILE								
UNIVERSITY OF SOUTH ALABAMA.....	1	14,500	1	14,500				
STATE TOTAL	15	236,524	9	139,800	3	49,050	3	47,674
ARIZONA								
TUCSON								
UNIVERSITY OF ARIZONA.....	10	124,786	9	113,500			1	11,286
STATE TOTAL	10	124,786	9	113,500			1	11,286

ARKANSAS

FAYETTEVILLE

UNIVERSITY OF ARKANSAS.....

1 19,500

1 19,500

LITTLE ROCK

UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS.....

1 17,000

1 17,000

STATE TOTAL.....

2 36,500

1 19,500

CALIFORNIA

BERKELEY

UNIVERSITY OF CALIFORNIA AT BERKELEY.....

35 526,064

32 470,522

1 19,112

2 36,430

WRIGHT INSTITUTE.....

1 16,200

1 16,200

CLAREMONT

CLAREMONT COLLEGES SYSTEM--PITZER COLLEGE.....

1 13,000

1 13,000

DAVIS

UNIVERSITY OF CALIFORNIA AT DAVIS.....

17 257,975

15 226,700

2 31,275

DUARTE

CITY OF HOPE NATIONAL MEDICAL CENTER.....

2 31,000

2 31,000

IRVINE

UNIVERSITY OF CALIFORNIA AT IRVINE.....

15 218,272

14 202,500

1 15,772

LA JOLLA

SALK INSTITUTE FOR BIOLOGICAL STUDIES.....

2 34,200

2 34,200

SCRIPPS CLINIC AND RESEARCH FOUNDATION.....

19 284,324

14 195,042

5 89,282

* Includes one individual research fellowship award for \$13,800 to the University of North Carolina at Chapel Hill, N.C.

** Includes Puerto Rico.

NOTE 1.—Supplemental and supply allowances for an award made in a previous year are not included in the count, although the dollars are included. Thus, an organization receiving only a supply allowance will have an entry under dollars but no entry under number.

NOTE 2.—For information as to how this table is structured, see Technical Note, p. vii. Also for comments on organizations, see Appendix.

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
CALIFORNIA—Con.								
UNIVERSITY OF CALIFORNIA AT SAN DIEGO	43	600,247	37	496,390			6	103,857
LOS ANGELES								
UNIVERSITY OF CALIFORNIA AT LOS ANGELES	50	735,208	43	620,166			7	115,042
UNIVERSITY OF SOUTHERN CALIFORNIA	14	197,655	13	187,980			1	9,675
OAKLAND								
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA	1	13,800	1	13,800				
PALO ALTO								
PALO ALTO MEDICAL RESEARCH FOUNDATION	2	35,800	2	35,800				
PASADENA								
CALIFORNIA INSTITUTE OF TECHNOLOGY	27	395,367	26	375,400			1	19,967
SAN DIEGO								
VETERANS ADMINISTRATION HOSPITAL		565						565
SAN FRANCISCO								
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO	64	953,995	58	836,734			5	97,906
UNIVERSITY OF THE PACIFIC	1	17,270					1	17,270
SANTA BARBARA								
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA	3	43,200	3	43,200				
SANTA CRUZ								
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ	3	40,200	2	26,000			1	14,200

STANFORD						
1	11,800	1	11,800			
52	736,605	47	667,082		5	69,523
TORRANCE						
6	88,602	5	67,100		1	21,502
359	5,251,349	319	4,570,616	2	38,467	642,266
COLORADO						
BOULDER						
10	143,000	10	143,000			
DENVER						
2	29,100	2	29,100			
7	105,700	7	105,700			
21	336,011	19	293,666		2	42,345
1	13,400	1	13,400			
FORT COLLINS						
7	100,900	7	100,900			
48	728,111	46	685,766		2	42,345
CONNECTICUT						
FARMINGTON						
13	178,723	11	161,900		2	16,823
MIDDLETOWN						
1	13,400	1	13,400			
NEW HAVEN						
3	45,000	3	45,000			
2	26,800	2	26,800			
66	964,600	61	875,103		5	89,497

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
CONNECTICUT—Con.								
STORRS								
UNIVERSITY OF CONNECTICUT	1	16,400	1	16,400				
STATE TOTAL	86	1,244,923	79	1,138,603			7	106,320
DELAWARE								
NEWARK								
UNIVERSITY OF DELAWARE	2	29,951	1	13,400	1	16,551		
STATE TOTAL	2	29,951	1	13,400	1	16,551		
DIST OF COL								
WASHINGTON								
CATHOLIC UNIVERSITY OF AMERICA	1	28,000			1	28,000		
GALLAUDET COLLEGE	1	15,800	1	15,800				
GEORGETOWN UNIVERSITY	5	82,931	2	27,008	1	15,966	2	39,957
HOWARD UNIVERSITY	1	21,042			1	21,042		
U.S. DEPARTMENT OF DEFENSE	1	10,708	1	10,708				
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—ST. ELIZABETH'S HOSPITAL	1	10,809					1	10,809
U.S. DEPARTMENT OF THE ARMY—WALTER REED ARMY MEDICAL CENTER	1	13,853					1	13,853
STATE TOTAL	11	183,143	4	53,516	3	65,008	4	64,619

FLORIDA									
GAINESVILLE									
STATE UNIVERSITY SYSTEM OF FLORIDA--UNIVERSITY OF FLORIDA.....	10	147,931	8	115,200				2	32,731
U.S. DEPARTMENT OF AGRICULTURE--INSECT ATTRACTANTS, BEHAVIOR, AND BASIC BIOLOGY RESEARCH LAB.....	1	3,967						1	3,967
MIAMI									
UNIVERSITY OF MIAMI.....	7	101,295	6	81,900				1	19,395
TALLAHASSEE									
STATE UNIVERSITY SYSTEM OF FLORIDA--FLORIDA STATE UNIVERSITY.....	3	42,100	3	42,100					
STATE TOTAL.....	21	295,293	17	239,200				4	56,093
GEORGIA									
ATHENS									
UNIVERSITY SYSTEM OF GEORGIA--UNIVERSITY OF GEORGIA.....	2	31,200	1	14,500				1	16,700
ATLANTA									
ATLANTA UNIVERSITY.....	2	33,600						2	33,600
EMORY UNIVERSITY.....	9	128,950	8	122,800				1	6,150
UNIVERSITY SYSTEM OF GEORGIA.....	1	13,000	1	13,000					
AUGUSTA									
UNIVERSITY SYSTEM OF GEORGIA--MEDICAL COLLEGE OF GEORGIA.....	2	33,200	2	33,200					
STATE TOTAL.....	16	239,950	12	183,500				3	50,300
HAWAII									
HONOLULU									
UNIVERSITY OF HAWAII SYSTEM--UNIVERSITY OF HAWAII AT MANOA.....	3	59,906	1	14,074				2	45,450
STATE TOTAL.....	3	59,906	1	14,074				2	45,450

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
IDAHO								
CALDWELL								
CALDWELL MEMORIAL HOSPITAL.....	1	15,600			1	15,600		
STATE TOTAL.....	1	15,600			1	15,600		
ILLINOIS								
ARGONNE								
U.S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION.....	1	13,000	1	13,000				
CARBONDALE								
SOUTHERN ILLINOIS UNIVERSITY SYSTEM—SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE.....	1	3,550	1	3,550				
CHICAGO								
MICHAEL REESE HOSPITAL AND MEDICAL CENTER.....	1	14,200	1	14,200				
NORTHWESTERN UNIVERSITY.....	6	71,307	5	65,800			1	5,507
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER—RUSH UNIVERSITY.....	2	26,400	2	26,400				
UNIVERSITY OF CHICAGO.....	29	388,301	29	388,301				
UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE.....	1	13,400	1	13,400				
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER.....	5	71,656	4	54,767			1	16,889
EVANSTON								
NORTHWESTERN UNIVERSITY.....	11	156,704	9	120,600	1	15,089	1	21,015
URBANA								
UNIVERSITY OF ILLINOIS AT URBANA—CHAMPAIGN.....	9	136,784	8	120,600			1	16,184
STATE TOTAL.....	66	895,302	61	820,618	1	15,089	4	59,595

INDIANA									
BLOOMINGTON									
INDIANA UNIVERSITY AT BLOOMINGTON	4	61,989	3	41,700	1	20,289			
INDIANAPOLIS									
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS	3	43,905	3	43,700					205
NOTRE DAME									
UNIVERSITY OF NOTRE DAME	3	39,800	3	39,800					
WEST LAFAYETTE									
PURDUE UNIVERSITY	7	103,200	6	87,200	1	16,000			
STATE TOTAL	17	248,894	15	212,400	2	36,289			205
IOWA									
AMES									
IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY	2	28,513	1	8,143					20,370
IOWA CITY									
UNIVERSITY OF IOWA	16	233,821	14	204,175					29,646
STATE TOTAL	18	262,334	15	212,318					50,016
KANSAS									
KANSAS CITY									
UNIVERSITY OF KANSAS	7	99,023	4	54,800					44,223
STATE TOTAL	7	99,023	4	54,800					44,223

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
KENTUCKY								
LEXINGTON								
UNIVERSITY OF KENTUCKY.....	5	80,217	4	65,600			1	14,617
LOUISVILLE								
UNIVERSITY OF LOUISVILLE.....	2	27,600	2	27,600				
STATE TOTAL.....	7	107,817	6	93,200			1	14,617
LOUISIANA								
BATON ROUGE								
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AT BATON ROUGE.....	2	39,754			2	39,754		
NEW ORLEANS								
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS.....	3	51,434	2	31,100			1	20,334
TULANE UNIVERSITY.....	1	19,000	1	19,000				
SHREVEPORT								
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT SHREVEPORT.....	1	14,200	1	14,200				
STATE TOTAL.....	7	124,388	4	64,300	2	39,754	1	20,334
MAINE								
BAR HARBOR								
JACKSON LABORATORY.....	2	26,400	2	26,400				
STATE TOTAL.....	2	26,400	2	26,400				

MARYLAND

BALTIMORE

BALTIMORE CITY HOSPITALS.....	1	11,595	1	11,595					
CARNEGIE INSTITUTION OF WASHINGTON, D. C.....	3	38,717	3	38,717					
JOHNS HOPKINS UNIVERSITY.....	26	383,320	24	346,500				2	36,820
SINAI HOSPITAL OF BALTIMORE.....	1	20,000	1	20,000					
UNIVERSITY OF MARYLAND SYSTEM--UNIVERSITY OF MARYLAND AT BALTIMORE.....	2	30,600	2	30,600					
BELTSVILLE									
U.S. DEPARTMENT OF AGRICULTURE--AGRICULTURAL RESEARCH CENTER.....	1	16,500						1	16,500

BETHESDA

U.S. DEPARTMENT OF DEFENSE--ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE.....		1,402		1,402					
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE--NATIONAL INSTITUTES OF HEALTH.....	108	1,339,503	82	855,102	2	46,073		24	438,328

CATONSVILLE

UNIVERSITY OF MARYLAND SYSTEM--UNIVERSITY OF MARYLAND BALTIMORE COUNTY CAMPUS.....	1	13,000	1	13,000					
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COLLEGE PARK

UNIVERSITY OF MARYLAND SYSTEM--UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS.....	1	16,170	1	16,000					170
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ROCKVILLE

AMERICAN FOUNDATION FOR BIOLOGICAL RESEARCH--BIOMEDICAL RESEARCH INSTITUTE.....	1	3,864			1	3,864			
U S DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE--ALCOHOL, DRUG ABUSE, AND MENTAL HLTH ADMIN.....	5	65,069	3	34,069				2	31,000
U S DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE--FOOD AND DRUG ADMINISTRATION.....	1	7,232						1	7,232
STATE TOTAL	151	1,946,972	118	1,366,985	3	49,937		30	530,050

MASSACHUSETTS

AMHERST

UNIVERSITY OF MASSACHUSETTS AT AMHERST.....	1	19,800	1	19,800					
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Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
MASSACHUSETTS—Con.								
BOSTON								
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL	13	202,492	10	144,450			3	58,042
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL	2	29,300	2	29,300				
BETH ISRAEL HOSPITAL	6	103,517	5	83,800			1	19,717
BOSTON BIOMEDICAL RESEARCH INSTITUTE	4	64,237	3	43,400			1	20,837
BOSTON UNIVERSITY	9	132,550	7	103,200	1	28,000	1	1,350
CENTER FOR BLOOD RESEARCH	2	24,500	2	24,500				
CHILDREN'S HOSPITAL MEDICAL CENTER	12	178,092	12	178,092				
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION	4	62,800	4	62,800				
FORSYTH DENTAL CENTER	2	26,000	2	26,000				
HARVARD UNIVERSITY	73	1,016,971	66	911,526			7	105,445
JOSLIN DIABETES FOUNDATION	3	36,350	3	36,350				
MASSACHUSETTS EYE AND EAR INFIRMARY	1	19,600	1	19,600				
MASSACHUSETTS GENERAL HOSPITAL	25	384,666	22	348,100			3	36,566
NEW ENGLAND MEDICAL CENTER HOSPITAL	1	15,800	1	15,800				
SIDNEY FARBER CANCER INSTITUTE	21	303,250	21	303,250				
TUFTS UNIVERSITY	6	89,934	6	89,934				
VETERANS ADMINISTRATION OUTPATIENT CLINIC		778		778				
CAMBRIDGE								
HARVARD UNIVERSITY	36	495,144	32	423,184			4	71,960
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	35	505,111	32	449,350			3	55,761
SHREWSBURY								
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY	3	58,255	2	38,800			1	19,455
STOW								
RED ACRE FARM	1	14,600	1	14,600				

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
MINNESOTA—Con.								
MINNEAPOLIS								
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS.....	28	441,263	28	441,263				
ROCHESTER								
MAYO FOUNDATION.....	6	90,895	5	73,600			1	17,295
MAYO FOUNDATION-MAYO MEDICAL SCHOOL.....	3	34,800	3	34,800				
SAINT PAUL								
UNIVERSITY OF MINNESOTA AT SAINT PAUL.....	3	42,800	3	42,800				
STATE TOTAL.....	41	625,758	40	608,463			1	17,295
MISSISSIPPI								
JACKSON								
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER.....		3,000		3,000				
TOUGALOO								
TOUGALOO COLLEGE.....	1	1,838			1	1,838		
STATE TOTAL.....	1	4,838		3,000	1	1,838		
MISSOURI								
COLUMBIA								
UNIVERSITY OF MISSOURI-COLUMBIA.....	7	101,300	7	101,300				

SAINT LOUIS

JEWISH HOSPITAL OF ST. LOUIS	1	13,000	1	13,000				
ST. LOUIS UNIVERSITY	1	14,900	1	14,900				
WASHINGTON UNIVERSITY	34	489,936	29	402,353			5	87,583
STATE TOTAL	43	619,136	38	531,553			5	87,583

NEBRASKA**OMAHA**

CREIGHTON UNIVERSITY	1	21,257	1				1	21,257
UNIVERSITY OF NEBRASKA SYSTEM-UNIVERSITY OF NEBRASKA MEDICAL CENTER	3	41,400	3	41,400				
STATE TOTAL	4	62,657	3	41,400			1	21,257

NEW HAMPSHIRE**DURHAM**

UNIVERSITY SYSTEM OF NEW HAMPSHIRE-UNIVERSITY OF NEW HAMPSHIRE	1	20,884					1	20,884
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HANOVER

DARTMOUTH COLLEGE	2	29,500	2	29,500				
STATE TOTAL	3	50,384	2	29,500			1	20,884

NEW JERSEY**NEWARK**

COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY	2	26,800	2	26,800				
RUTGERS THE STATE UNIVERSITY NEWARK	1	13,800	1	13,800				

NEW BRUNSWICK

RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK	1	13,800	1	13,800				
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Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
NEW JERSEY—Con.								
PISCATAWAY								
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY—RUTGERS MEDICAL SCHOOL.....	2	30,533	2	30,533				
PRINCETON								
PRINCETON UNIVERSITY.....	7	100,667	7	100,667				
STATE TOTAL.....	13	185,600	13	185,600				
NEW MEXICO								
ALBUQUERQUE								
UNIVERSITY OF NEW MEXICO.....	6	79,702	5	62,200	1	17,502		
STATE TOTAL.....	6	79,702	5	62,200	1	17,502		
NEW YORK								
ALBANY								
NEW YORK STATE DEPARTMENT OF HEALTH.....	1	20,090					1	20,090
BUFFALO								
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE.....	8	116,200	8	116,200				
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—RESEARCH INSTITUTE ON ALCOHOLISM.....	1	14,200	1	14,200				
STATE UNIVERSITY OF NEW YORK AT BUFFALO.....	10	150,359	7	105,400			3	44,959

COLD SPRING HARBOR

COLD SPRING HARBOR LABORATORY

1

17,200

1

17,200

ITHACA

CORNELL UNIVERSITY

24

324,721

23

303,833

1

20,888

NEW YORK

CITY UNIVERSITY OF NEW YORK--CITY COLLEGE OF NEW YORK

1

14,600

1

14,600

CITY UNIVERSITY OF NEW YORK--GRADUATE SCHOOL AND UNIVERSITY CENTER

1

16,200

1

16,200

CITY UNIVERSITY OF NEW YORK--MOUNT SINAI SCHOOL OF MEDICINE

10

156,645

9

137,800

1

18,845

COLUMBIA UNIVERSITY

34

481,585

28

401,500

6

80,085

CORNELL UNIVERSITY MEDICAL CENTER

22

314,269

21

302,742

1

11,527

HOSPITAL FOR SPECIAL SURGERY

1

16,200

1

16,200

NEW YORK CITY HEALTH SERVICES ADMINISTRATION--PUBLIC HEALTH RESEARCH INSTITUTE OF CITY OF N Y

2

24,967

2

24,967

NEW YORK MEDICAL COLLEGE

3

47,600

3

47,600

NEW YORK UNIVERSITY

10

165,265

9

145,500

1

19,765

POPULATION COUNCIL

1

19,016

1

19,016

ROCKEFELLER UNIVERSITY

36

534,533

33

482,695

1

28,000

SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH

4

68,165

3

49,200

1

23,838

STATE UNIVERSITY OF NEW YORK--DOWNSTATE MEDICAL CENTER

3

38,157

2

30,700

1

7,457

YESHIVA UNIVERSITY

12

166,850

12

166,850

ROCHESTER

UNIVERSITY OF ROCHESTER

17

235,923

14

183,332

1

23,856

2

28,735

STONY BROOK

STATE UNIVERSITY OF NEW YORK AT STONY BROOK

6

90,500

6

90,500

SYRACUSE

STATE UNIVERSITY OF NEW YORK--COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

4

3,000

3

3,000

STATE UNIVERSITY OF NEW YORK--UPSTATE MEDICAL CENTER

4

57,393

3

41,300

1

16,093

TROY

RENSELAEER POLYTECHNIC INSTITUTE

2

34,000

2

34,000

UPTON

ASSOCIATED UNIVERSITIES--BROOKHAVEN NATIONAL LABORATORY

4

56,000

4

56,000

UTICA

MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE

1

3,000

1

3,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
NEW YORK—Con.								
VALHALLA								
AMERICAN HEALTH FOUNDATION.....	2	33,875	1	13,000			1	20,875
NEW YORK MEDICAL COLLEGE.....		3,000		3,000				
STATE TOTAL.....	220	3,223,513	195	2,820,519	3	72,744	22	330,250
NORTH CAROLINA								
CHAPEL HILL								
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL.....	28	382,961	25	330,142			3	52,819
DURHAM								
DUKE UNIVERSITY.....	17	231,958	16	210,955			1	21,003
RALEIGH								
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH.....		3,000		3,000				
RESEARCH TRIANGLE PARK								
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—NIEHS ENVIRONMENTAL HEALTH SCIENCES CENTER.....	1	10,800	1	10,800				
WINSTON-SALEM								
WAKE FOREST UNIVERSITY.....	1	13,000	1	13,000				
STATE TOTAL.....	47	641,719	43	567,897			4	73,822

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
OREGON—CON.								
PORTLAND								
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER.....	4	42,600	4	42,600				
STATE TOTAL.....	13	175,824	13	175,824				
PENNSYLVANIA								
BETHLEHEM								
LEHIGH UNIVERSITY.....	1	18,940		3,000			1	15,940
HERSHEY								
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER.....	12	162,803	11	151,885			1	10,918
PHILADELPHIA								
CHILDREN'S HOSPITAL OF PHILADELPHIA.....		3,000		3,000				
DREXEL UNIVERSITY.....	1	14,500	1	14,500				
HARNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.....	2	31,254	1	14,200			1	17,054
INSTITUTE FOR CANCER RESEARCH.....	3	42,900	3	42,900				
MEDICAL COLLEGE OF PENNSYLVANIA.....	6	94,748	3	39,400	1	20,000	2	35,348
PENNSYLVANIA COLLEGE OF OPTOMETRY.....	2	11,667	2	11,667				
TEMPLE UNIVERSITY.....	5	59,598	5	59,598				
UNIVERSITY OF PENNSYLVANIA.....	45	661,437	40	559,750			5	101,687
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY.....	2	18,800	2	18,800				
PITTSBURGH								
EYE AND EAR HOSPITAL OF PITTSBURGH.....	1	15,467	1	15,467				
UNIVERSITY OF PITTSBURGH.....	17	218,430	16	204,066			1	14,364

UNIVERSITY PARK

PENNSYLVANIA STATE UNIVERSITY

1	14,500	1	14,500				
98	1,368,044	86	1,152,733	1	20,000	11	195,311
STATE TOTAL							

RHODE ISLAND**KINGSTON**

UNIVERSITY OF RHODE ISLAND

1	22,750	1	22,750				
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PROVIDENCE

BROWN UNIVERSITY

ROGER WILLIAMS GENERAL HOSPITAL

7	90,059	6	72,634			1	17,425
2	29,800	2	29,800				
10	142,609	8	102,434	1	22,750	1	17,425

STATE TOTAL**SOUTH CAROLINA****CHARLESTON**

MEDICAL UNIVERSITY OF SOUTH CAROLINA

2	29,400	2	29,400				
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COLUMBIA

UNIVERSITY OF SOUTH CAROLINA

2	42,200	1	14,200	1	28,000		
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STATE TOTAL**TENNESSEE****JOHNSON CITY**

STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE--EAST TENNESSEE STATE UNIVERSITY

1	13,400	1	13,400				
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KNOXVILLE

UNIVERSITY OF TENNESSEE SYSTEM--UNIVERSITY OF TENNESSEE AT KNOXVILLE

1	14,900	1	14,900				
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Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
TENNESSEE—Con.								
MEMPHIS								
ST. JUDE CHILDREN'S RESEARCH HOSPITAL.....	2	34,582	1	16,700			1	17,882
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES.....	4	61,700	2	27,200	2	34,500		
NASHVILLE								
MEHARRY MEDICAL COLLEGE.....	2	40,305			2	40,305		
VANDERBILT UNIVERSITY.....	19	285,515	15	215,279			4	70,236
OAK RIDGE								
UNION CARBIDE CORPORATION—OAK RIDGE NATIONAL LABORATORY.....	1	13,000	1	13,000				
STATE TOTAL.....	30	463,402	21	300,479	4	74,805	5	88,118
TEXAS								
AUSTIN								
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN.....	11	162,400	11	162,400				
COLLEGE STATION								
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY.....	2	31,700	2	31,700				
DALLAS								
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS.....	19	264,310	18	249,410			1	14,900
DENTON								
NORTH TEXAS STATE UNIVERSITY.....	1	13,800	1	13,800				

EDINBURG

PAN AMERICAN UNIVERSITY.....

1

15,470

1

15,470

GALVESTON

UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON.....

13

175,781

175,781

HOUSTON

BAYLOR COLLEGE OF MEDICINE.....

28

388,434

388,434

UNIVERSITY OF HOUSTON.....

2

28,600

28,600

UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON.....

8

124,667

71,200

18,075

2

35,392

1

LUBBOCK

TEXAS TECH UNIVERSITY.....

1

13,800

13,800

RICHARDSON

UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS AT DALLAS.....

2

33,995

14,500

19,495

1

SAN ANTONIO

UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO.....

5

75,000

75,000

UTAH

STATE TOTAL.....

93

1,327,957

1,224,625

52,470

3

50,862

3

UTAH**SALT LAKE CITY**

UTAH STATE HIGHER EDUCATION SYSTEM--UNIVERSITY OF UTAH.....

8

108,400

108,400

STATE TOTAL

8

108,400

108,400

VERMONT**BURLINGTON**

UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE.....

4

50,017

39,900

10,117

1

STATE TOTAL

4

50,017

39,900

10,117

1

10,117

1

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
VIRGINIA								
BLACKSBURG								
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.....	2	33,210	1	13,400			1	19,810
CHARLOTTESVILLE								
UNIVERSITY OF VIRGINIA.....	22	291,472	20	255,481			2	35,991
RICHMOND								
VIRGINIA COMMONWEALTH UNIVERSITY.....	7	111,487	4	52,500	1	28,000	2	30,987
STATE TOTAL.....	31	436,169	25	321,381	1	28,000	5	86,788
WASHINGTON								
PULLMAN								
WASHINGTON STATE UNIVERSITY.....	1	13,800	1	13,800				
SEATTLE								
FRED HUTCHINSON CANCER RESEARCH CENTER.....	3	36,200	3	36,200				
UNIVERSITY OF WASHINGTON.....	59	845,552	56	789,300			3	56,252
VIRGINIA MASON RESEARCH CENTER.....	1	15,600	1	15,600				
STATE TOTAL.....	64	911,152	61	854,900			3	56,252

MORGANTOWN									
2	WEST VIRGINIA UNIVERSITY	28,461	1	15,800	1	12,661			
2	STATE TOTAL	28,461	1	15,800	1	12,661			
WISCONSIN									
48	MADISON	649,457	45	595,114	3	54,343			
	UNIVERSITY OF WISCONSIN SYSTEM--UNIVERSITY OF WISCONSIN-MADISON								
1	MILWAUKEE	16,000	1	16,000					
2	MARQUETTE UNIVERSITY	28,200	2	28,200					
1	MEDICAL COLLEGE OF WISCONSIN	19,887	1		1	19,887			
1	MILWAUKEE BLOOD CENTER	14,200	1	14,200					
	UNIVERSITY OF WISCONSIN SYSTEM--UNIVERSITY OF WISCONSIN-MILWAUKEE								
53	STATE TOTAL	727,744	49	653,514	4	74,230			
PUERTO RICO									
3	SAN JUAN	42,000	1	13,800	2	28,200			
	UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS								
1	UNIVERSITY OF PUERTO RICO RIO PIEDRAS CAMPUS	16,299	1		1	16,299			
4	STATE TOTAL	58,299	1	13,800	3	44,499			
AUSTRALIA									
1	CANBERRA	16,400	1	16,400					
	AUSTRALIAN NATIONAL UNIVERSITY								
1	KENSINGTON	13,400	1	13,400					
	UNIVERSITY OF NEW SOUTH WALES								
2	COUNTRY TOTAL	29,800	2	29,800					

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
BELGIUM								
BRUSSELS								
CATHOLIC UNIVERSITY OF LOUVAIN.....	2	39,856	1	10,972	1	28,884		
LIEGE								
UNIVERSITY OF LIEGE.....	1	11,956	1	11,956				
LOUVAIN								
CATHOLIC UNIVERSITY OF LOUVAIN.....	1	13,460	1	13,460				
COUNTRY TOTAL.....	4	65,272	3	36,388	1	28,884		
CANADA								
HALIFAX								
DALHOUSIE UNIVERSITY.....	1	13,800	1	13,800				
KINGSTON								
QUEEN'S UNIVERSITY AT KINGSTON.....	1	13,800	1	13,800				
MONTREAL								
JEWISH GENERAL HOSPITAL.....		3,000		3,000				
MC GILL UNIVERSITY.....	1	10,000	1	10,000				
MONTREAL NEUROLOGICAL HOSPITAL.....	1	10,000	1	10,000				

TORONTO								
UNIVERSITY OF TORONTO	3	34,470	3	34,470				
VANCOUVER								
UNIVERSITY OF BRITISH COLUMBIA	1	16,400	1	16,400				
COUNTRY TOTAL	8	101,470	8	101,470				
FRANCE								
PARIS								
LARIBOSIERE HOSPITAL	1	13,976	1	13,976				
UNIVERSITY OF PARIS VII	1	10,650	1	10,650				
VERSAILLES								
NATIONAL AGRONOMY RESEARCH CENTER	1	10,987	1	10,987				
COUNTRY TOTAL	3	35,613	3	35,613				
GERMANY FED R								
FRANKFURT								
MAX PLANCK SOCIETY FOR THE ADVANCEMENT OF SCIENCE-INSTITUTE FOR BRAIN RESEARCH, FRANKFURT	1	15,269	1	15,269				
GOTTINGEN								
MAX PLANCK SOCIETY FOR THE ADVANCEMENT OF SCIENCE-INSTITUTE FOR BIOPHYSICAL CHEMISTRY	1	13,400	1	13,400				
HEIDELBERG								
EUROPEAN MOLECULAR BIOLOGY ORGANIZATION	1	10,500	1	10,500				
RUPERT CHARLES UNIVERSITY OF HEIDELBERG	1	10,800	1	10,800				
TUBINGEN								
MAX PLANCK SOCIETY FOR THE ADVANCEMENT OF SCIENCE-INSTITUTE FOR BIOLOGY	2	27,870	2	27,870				
COUNTRY TOTAL	6	77,839	6	77,839				

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
ISRAEL								
JERUSALEM								
HEBREW UNIVERSITY OF JERUSALEM.....	2	30,400	2	30,400				
TEL AVIV								
TEL AVIV UNIVERSITY.....	1	10,000	1	10,000				
COUNTRY TOTAL.....	3	40,400	3	40,400				
NETHERLANDS								
EINDHOVEN								
INSTITUTE FOR PERCEPTION RESEARCH.....		600		600				
GRONINGEN								
STATE UNIVERSITY AT GRONINGEN.....	1	13,907	1	13,907				
RIJSWIJK								
NETHERLANDS CENTRAL ORGANIZATION TNO.....	1	11,120	1	11,120				
ROTTERDAM								
ERASMUS UNIVERSITY OF ROTTERDAM.....	1	13,400	1	13,400				
COUNTRY TOTAL.....	3	39,027	3	39,027				

SWEDEN**GOTHENBURG**

GOTHENBURG UNIVERSITY 30

LUND

UNIVERSITY OF LUND 2 31,391

STOCKHOLM

CAROLINE INSTITUTE 2 33,450

UNIVERSITY OF STOCKHOLM 1 16,200

UPPSALA

UNIVERSITY OF UPPSALA 2 29,101

COUNTRY TOTAL 7 110,172

SWITZERLAND**BERN**

UNIVERSITY OF BERN 3 56,560

GENEVA

UNIVERSITY OF GENEVA 2 24,500

LAUSANNE

SWISS INSTITUTE FOR EXPERIMENTAL CANCER RESEARCH 1 14,200

ZURICH

SWISS FEDERAL INSTITUTE OF TECHNOLOGY 1 13,000

UNIVERSITY OF ZURICH 1 13,800

COUNTRY TOTAL 8 122,060

UNITED KINGDOM**BRIGHTON**

UNIVERSITY OF SUSSEX 1 10,000

Table 2.—Summary of NIH Fellowships by Area, Organization, and Activity, Fiscal Year 1978—Continued

Area and organization	Total		Postdoctoral indiv. nat'l. res. serv. awards		Minority fellowship awards		International fellowship awards	
	No.	Dollars	No.	Dollars	No.	Dollars	No.	Dollars
UNITED KINGDOM—Con.								
CAMBRIDGE								
MEDICAL RESEARCH COUNCIL.....	7	112,772	7	112,772				
UNIVERSITY OF CAMBRIDGE.....	8	105,170	8	105,170				
EDINBURGH								
UNIVERSITY OF EDINBURGH.....	2	33,700	1	13,400	1	20,300		
GLASGOW								
UNIVERSITY OF GLASGOW.....	1	11,113	1	11,113				
HARROW								
CLINICAL RESEARCH CENTER.....	1	17,086	1	17,086				
KEELE								
UNIVERSITY OF KEELE.....		3,000		3,000				
LEEDS								
UNIVERSITY OF LEEDS.....	1	18,884			1	18,884		
LONDON								
MEDICAL RESEARCH COUNCIL.....	1	11,116	1	11,116				
UNIVERSITY OF LONDON.....	2	25,000	2	25,000				
NORTHWOOD								
MOUNT VERNON HOSPITAL.....	1	16,954	1	16,954				
OXFORD								
UNIVERSITY OF OXFORD.....	6	81,123	6	81,123				
COUNTRY TOTAL.....	31	445,918	29	406,734	2	39,184		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978

Program director	General area of training	Grant number	Dollars
TOTAL, 1,330 GRANTS.....			118,809,760
ALABAMA			
BIRMINGHAM			
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294			
ACTON, RONALD T.....	TUMOR BIOLOGY—MULTIDISCIPLINARY.....	5T32 CA09128-02	208,116
ACTON, RONALD T.....	PATHOLOGY OF MEMBRANES AND ORGANELLES.....	5T32 GM07561-02	70,444
CHRISTENSEN, JERRY.....	VISUAL SCIENCES.....	5T32 EY07033-03	27,509
COMPANS, RICHARD W.....	BASIC MECHANISMS IN VIROLOGY.....	1T32 AI07150-01	48,751
COMPANS, RICHARD W.....	VIRAL ONCOLOGY.....	1T32 CA09202-01	46,874
CONRAD, MARCEL E.....	CLINICAL AND BASIC STUDIES OF ONCOLOGIC DISORDERS.....	1T32 CA09293-01	57,390
CURTISS, ROY, III.....	INFECTIOUS DISEASES.....	5T32 AI07041-03	103,658
CURTISS, ROY, III.....	MOLECULAR, CELLULAR AND MEDICAL GENETICS.....	5T32 GM07090-04	56,081
CURTISS, ROY, III.....	MOLECULAR CELL BIOLOGY.....	5T32 GM07164-04	90,283
HALSEY, JAMES H, JR.....	CEREBROVASCULAR DISEASE.....	1T32 NS07123-01	20,384
HIRAMOTO, RAYMOND N.....	MOLECULAR AND CELLULAR AGING.....	5T32 AG00042-02	68,595
HURST, DAVID C.....	COMPUTER APPLICATIONS FOR HEALTH PROFESSIONALS.....	5T15 LM07015-02	127,535
JAMES, THOMAS N.....	CARDIOLOGY.....	1T32 HL07327-01A1	64,332
LINDSEY, J RUSSELL.....	LABORATORY ANIMAL MEDICINE/COMPARATIVE PATHOLOGY.....	5T32 RR07003-02	41,303
NAVAR, LUIS G.....	MINORITY HYPERTENSION.....	1T32 HL07395-01	38,156
NAVIA, JUAN M.....	NUTRITION AND ORAL HEALTH.....	5T32 DE07020-04	90,000
RODEN, LENNART.....	BIOCHEMISTRY AND IMMUNOLOGY OF JOINTS, BONE AND SKIN.....	5T32 AM07069-04	72,170
SCHAFFER, JAMES A.....	PHYSIOLOGY AND PATHOLOGY OF TRANSPORT PROCESSES.....	5T32 GM07195-04	107,454
SHIOTA, TETSUO.....	CARIES RESEARCH.....	5T32 DE07026-02	84,448
STROUD, ROBERT M.....	ALLERGIC AND IMMUNOLOGIC DISEASES AND BASIC IMMUNITY.....	5T32 AI07051-03	81,146
ORGANIZATION TOTAL	20	1,504,629	
TALLADEGA			
TALLADEGA COLLEGE ZIP CODE 35160			
BACON, ARTHUR L.....	MARC HONORS RESEARCH.....	5T32 GM07660-02	89,632
ORGANIZATION TOTAL	1	89,632	
TUSKEGEE INSTITUTE			
TUSKEGEE INSTITUTE ZIP CODE 36088			
BOWIE, WALTER C.....	HEALTH RELATED SCIENCES.....	5T01 GM02264-05	75,892
ORGANIZATION TOTAL	1	75,892	
UNIVERSITY			
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN UNIVERSITY ZIP CODE 35486			
ELLIS, NORMAN R.....	MENTAL RETARDATION.....	5T01 HD00124-13	68,602

NOTE: Grants are listed according to the State or country and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
ALABAMA—Con.			
ORGANIZATION TOTAL	1	68,602	
STATE TOTAL	23	1,738,755	
ARIZONA			
TUCSON			
UNIVERSITY OF ARIZONA ZIP CODE 85721			
BERNSTEIN, HARRIS	MOLECULAR AND CELLULAR ASPECTS OF BIOLOGICAL FUNCTION	5T32 GM07239-04	39,590
BRESSLER, RUBIN	CLINICAL PHARMACOLOGY	5T32 GM07533-02	69,278
CLAYTON, JOHN W, JR	ENVIRONMENTAL TOXICOLOGY	1T32 ES07091-01	50,762
GERNER, EUGENE W	CANCER BIOLOGY	1T32 CA09213-01A1	28,786
JOHNSON, PAUL C	PHYSIOLOGY	5T32 HL07249-02	93,281
KNUDSON, RONALD J	RESPIRATORY DISEASES	5T32 HL07243-02	75,748
WELLS, MICHAEL A	BIOCHEMISTRY	5T01 GM01982-10	51,147
ORGANIZATION TOTAL	7	408,592	
STATE TOTAL	7	408,592	
CALIFORNIA			
BERKELEY			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY--DEPARTMENT OF HEALTH ZIP CODE 94704			
LENNETTE, EDWIN H	MICROBIOLOGY	5T01 AI00457-15	34,710
ORGANIZATION TOTAL	1	34,710	
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
BUDINGER, THOMAS F	QUANTITATIVE CARDIOVASCULAR RESEARCH	1T32 HL07367-01	86,379
CARPENTER, KENNETH J	NUTRITIONAL SCIENCES	1T32 AM07291-01	87,508
ECHOLS, G HARRISON, JR	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07232-02	400,150
FOGEL, SEYMOUR	GENETICS	5T32 GM07127-04	117,486
FORTE, GERTRUDE M	LIPOPROTEIN METHODOLOGY, STRUCTURE AND FUNCTION	5T32 HL07279-02	56,108
FOSTER, GEORGE M	ANTHROPOLOGY	5T01 GM01224-15	138,498
KEPPEL, GEOFFREY	PSYCHOLOGY	5T01 GM01207-15	68,616
LINN, STUART M	STUDIES OF ENVIRONMENTAL MUTAGENS AND CARCINOGENS	1T32 ES07075-01A1	105,682
MARGEN, SHELDON	HUMAN NUTRITION	5T32 AM07155-02	40,867
MEL, HOWARD C	SYSTEMS AND INTEGRATIVE BIOLOGY	5T32 GM07379-02	379,315
MISHELL, ROBERT I	IMMUNOLOGY	5T32 CA09179-04	136,874
MORTIMER, ROBERT K	RADIATION BIOPHYSICS	5T32 CA09272-02	131,146
MUSSEN, PAUL H	DEVELOPMENTAL PSYCHOLOGY	5T01 HD00153-10	50,776
NANDI, SATYABRATA	EXPERIMENTAL BIOLOGY OF CANCER AND ALLIED AREAS	5T32 CA09041-04	151,744
SHORE, VIRGIE	NUTRITION IN HEART AND VASCULAR DISEASE	5T32 HL07058-04	26,595
STARK, LAWRENCE	PHYSIOLOGICAL OPTICS	5T32 EY07043-02	84,504
SYME, S LEONARD	BEHAVIORAL FACTORS IN CARDIOVASCULAR DISEASE ETIOLOGY	1T32 HL07365-01	81,636
WERBLIN, FRANK S	NEUROBIOLOGY	5T32 GM07048-04	37,590
ORGANIZATION TOTAL	18	2,181,474	
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
CROSS, CARROLL E	PULMONARY DISEASES	5T32 HL07013-04	82,151
DUNGWORTH, DONALD L	ENVIRONMENTAL PATHOLOGY	5T32 ES07055-02	105,036
ENDERS, ALLEN C	REPRODUCTIVE BIOLOGY	1T32 HD07131-01	33,298

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
HANSCH, PAUL	GENETICS	5T32 GM07467-02	142,304
HURLEY, LUCILLE S	NUTRITION IN RELATION TO PROBLEMS OF ORAL BIOLOGY	5T32 DE07001-04	57,900
PREISS, JACK	BIOCHEMISTRY	5T01 GM00119-20	113,538
PREISS, JACK	MOLECULAR AND CELLULAR BIOLOGY	5T32 GM07377-02	57,150
RENKIN, EUGENE M	INTEGRATIVE FUNCTIONS OF HIGHER ORGANISMS	5T32 GM07416-02	70,261
ORGANIZATION TOTAL	8	661,638	
DUARTE			
CITY OF HOPE NATIONAL MEDICAL CENTER ZIP CODE 91010			
RAPPAPORT, HENRY	NEOPLASTIC HEMATOPATHOLOGY	1T32 CA09308-01	41,933
ORGANIZATION TOTAL	1	41,933	
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
GRANGER, GALE A	CARCINOGENESIS	5T32 CA09054-04	98,771
SCHNEIDERMAN, HOWARD A	DEVELOPMENTAL MECHANISMS UNDERLYING CONGENITAL DEFECTS	5T32 HD07029-04	73,915
SYPHERD, PAUL S	REGULATION OF BIOLOGICAL PROCESSES	5T32 GM07134-04	85,241
SYPHERD, PAUL S	INFECTIOUS AGENTS AND DISEASE PROCESSES	5T32 GM07307-04	65,063
TILLES, JEREMIAH G	VIRAL DISEASES	5T01 AI00466-05	33,414
WARNER, ROBERT C	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07311-04	82,619
ORGANIZATION TOTAL	6	439,023	
LA JOLLA			
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
COHN, MELVIN	ONCOLOGY RESEARCH	5T32 CA09254-03	81,796
ORGANIZATION TOTAL	1	81,796	
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
DIXON, FRANK J	IMMUNOPATHOLOGY	5T32 GM07437-02	167,266
FELDMAN, JOSEPH D	PATHOGENESIS AND IMMUNOLOGY OF DISEASE	5T32 AI07104-02	68,317
HUENNEKENS, FRANK M	BIOCHEMISTRY	5T32 AM07097-04	78,806
KATZ, DAVID H	CELLULAR AND CANCER IMMUNOLOGY	5T32 AI07065-02	54,922
MULLER-EBERHARD, HANS J	BLOOD SYSTEMS IN COAGULATION AND VESSEL DISEASE	5T32 HL07195-03	68,121
SPIZIZEN, JOHN	MICROBIOLOGY	5T01 GM02293-05	51,519
VAUGHAN, JOHN H	IMMUNOLOGY IN RHEUMATIC DISEASES	5T32 AM07144-04	56,643
ORGANIZATION TOTAL	7	545,594	
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
BERNSTEIN, EUGENE F	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES	5T32 HL07089-04	109,479
BLOOR, COLIN M	MULTIDISCIPLINARY RESPIRATORY DISEASES	5T32 HL07104-04	97,471
BRAUDE, ABRAHAM I	RESEARCH IN INFECTIOUS DISEASES	5T32 AI07036-03	90,310
DEFTOS, LEONARD J	DISEASES OF BONE AND CALCIUM METABOLISM	5T32 AM07048-04	36,820
DUTTON, RICHARD W	REGULATORY MECHANISMS IN THE IMMUNE RESPONSE	5T32 CA09174-04	174,890
FANESTIL, DARRELL D	ACADEMIC NEPHROLOGY	1T32 AM07249-01A1	38,761
FANESTIL, DARRELL D	HYPERTENSION	5T32 HL07261-02	105,294
GEIDUSCHEK, E PETER	CELL AND MOLECULAR BIOLOGY	5T32 GM07313-04	281,394
GILL, GORDON N	EXPERIMENTAL ENDOCRINOLOGY AND METABOLISM	1T32 AM07044-01A2	37,579
GOULIAN, MEHRAN	HEMATOLOGY	5T32 HL07107-04	50,118
HOFMANN, ALAN F	GASTROENTEROLOGY	5T32 AM07202-03	44,163
HOUGIE, CECIL	HEMATOLOGY	5T32 HL07059-04	33,695
LAMPERT, PETER W	PATHOGENESIS OF VIRUS INDUCED BRAIN DISEASE	5T32 NS07078-02	38,761
LINDSLEY, DAN L, JR	GENETIC MECHANISMS AND REGULATION	5T32 GM07240-04	154,220
MASOUREDIS, SERAFEIM P	BLOOD BANKING SCIENCES AND RELATED PROGRAMS	5T32 HL07119-04	32,031
MAYER, STEVEN E	PHARMACOLOGY	5T01 GM02267-05	79,191
MENDELSON, JOHN	CANCER RESEARCH	1T32 CA09290-01	63,022

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
MOSER, KENNETH M	PULMONARY MEDICINE	3T32 HL07022-03S1	29,767
MOSER, KENNETH M	PULMONARY MEDICINE	5T32 HL07022-04	98,593
NESBITT, MURIEL N	BASIC AND MEDICAL GENETICS	5T32 GM07199-04	113,195
O'BRIEN, JOHN S	NEUROBIOLOGY	5T32 NS07086-03	80,395
SATO, GORDON H	CANCER BIOLOGY AND BIOCHEMISTRY	5T01 CA05274-05	89,440
SEEGMILLER, JARVIS E	GENETIC CONTROL OF HUMAN METABOLISM	1T32 AM07318-01	71,097
SELVERSTON, ALLEN I	NEUROBIOLOGY	5T32 GM07153-04	82,935
SPOONER, CHARLES E, JR	MEDICAL SCIENTIST	5T32 GM07198-04	129,704
STEINBERG, DANIEL	LIPIDS, LIPOPROTEINS AND ATHEROSCLEROSIS	5T32 HL07276-02	95,682
TRAYLOR, TEDDY G	HEMOGLOBIN AND BLOOD PROTEIN CHEMISTRY	5T32 AM07233-03	118,729
WEST, JOHN B	PHYSIOLOGICAL BASIS OF PULMONARY DISEASE	3T32 HL07212-02S1	2,466
WEST, JOHN B	PHYSIOLOGICAL BASIS OF PULMONARY DISEASE	5T32 HL07212-03	61,299
YGUERABIDE, JUAN	MEMBRANE BIOLOGY IN RELATION TO DISEASE	5T32 GM07169-04	118,948
ZETTNER, ALFRED	INVESTIGATIVE AND CLINICAL PATHOLOGY	5T01 GM02179-05	30,845
ZVAIFLER, NATHAN J	RHEUMATIC DISEASES	5T32 AM07062-04	27,931
ORGANIZATION TOTAL	32	2,618,225	
LOMA LINDA			
LOMA LINDA UNIVERSITY ZIP CODE 92354			
KUZMA, JAN W	CANCER EPIDEMIOLOGY	5T32 CA09175-03	20,664
ORGANIZATION TOTAL	1	20,664	
LOS ANGELES			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT LOS ANGELES ZIP CODE 90032			
GUTIERREZ, CARLOS G	BIOMEDICAL SCIENCES	1T32 GM07646-01	34,317
ORGANIZATION TOTAL	1	34,317	
CEDARS-SINAI MEDICAL CENTER ZIP CODE 90048			
SWAN, HAROLD J	FUNCTIONAL AND METABOLIC EFFECTS OF CARDIAC ISCHEMIA	1T32 HL07380-01	82,126
ORGANIZATION TOTAL	1	82,126	
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027			
HANSON, VIRGIL	PEDIATRIC RHEUMATOLOGY	5T32 AM07262-02	20,232
ORGANIZATION TOTAL	1	20,232	
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
ALFIN-SLATER, ROSLYN B	EXPERIMENTAL AND CLINICAL NUTRITION	1T32 AM07154-01	39,693
AMSTUTZ, HARLAN C	BASIC AND CLINICAL RESEARCH IN JOINT REPLACEMENTS	1T32 AM07207-01A1	58,257
BROWN, JOSIAH	ENDOCRINOLOGY AND METABOLISM	5T32 AM07094-04	58,365
CLINE, MARTIN J	HEMATOLOGY	1T32 AM07285-01	63,288
DETELS, ROGER	CANCER EPIDEMIOLOGY	5T32 CA09142-04	54,173
DETELS, ROGER	ENVIRONMENTAL EPIDEMIOLOGY AND STATISTICS	1T32 ES07050-01A1	76,212
EISERLING, FREDERICK A	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07185-04	286,313
FAHEY, JOHN L	CLINICAL AND FUNDAMENTAL IMMUNOLOGY	5T32 AI07126-02	88,903
FAHEY, JOHN L	TUMOR IMMUNOLOGY	5T32 CA09120-04	136,582
FOX, CHARLES F	TUMOR CELL SURFACES AND CHROMOSOMES	5T32 CA09056-04	176,243
FOX, CHARLES F	PATHOPHYSIOLOGY OF NEOPLASIA	1T14 CA09334-01	37,746
GORSKI, ROGER A	SYSTEMS AND INTEGRATIVE PHYSIOLOGY WITH COGNATE SCIENCES	5T32 GM07191-04	137,546
GREENFIELD, MOSES A	MEDICAL PHYSICS	5T32 CA09092-04	106,226
GRINNELL, ALAN D	CELLULAR NEUROBIOLOGY	1T32 NS07101-01A1	63,912
GROSSMAN, MORTON I	GASTROENTEROLOGY	5T32 AM07180-03	56,365
HONRUBIA, VICENTE	DEVELOPMENTAL NEUROLOGY	5T32 NS07059-03	51,060
JENDEN, DONALD J	PHARMACOLOGICAL SCIENCES	5T32 GM07304-04	63,082
LONGMIRE, WILLIAM P, JR	SURGERY	5T01 GM01559-13	73,851
MARTINEZ, RAFAEL J	BIOCHEMISTRY OF HOST-PARASITE INTERACTIONS	1T32 AI07116-01A1	71,335
MORTON, DONALD L	SURGICAL ONCOLOGY	2T32 CA09010-04	129,468

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
NIERLICH, DONALD P.....	GENETIC MECHANISMS.....	5T32 GM07104-04	137,609
SCHUMAKER, VERNE N.....	ATHEROSCLEROSIS RESEARCH.....	1T32 HL07386-01	184,969
SHINE, KENNETH I.....	PATHOPHYSIOLOGY OF MYOCARDIAL DISEASE.....	1T32 HL07412-01	81,621
SIMMONS, DANIEL H.....	RESPIRATORY DISEASE—BASIC AND CLINICAL RESEARCH.....	5T32 HL07014-03	82,717
STIEHM, E RICHARD.....	PEDIATRIC ALLERGIC DISEASES.....	5T32 AI07008-04	36,058
STRAATSMA, BRADLEY R.....	VISION RESEARCH.....	5T32 EY07026-04	84,869
TARJAN, GEORGE.....	MENTAL RETARDATION.....	5T32 HD07032-02	173,904
VAN LANCKER, JULIEN L.....	MECHANISMS OF CARCINOGENESIS.....	5T32 CA09030-04	130,775
ORGANIZATION TOTAL	28 2,741,142		
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
BESSMAN, SAMUEL P.....	CARDIAC NUTRITION AND PHARMACOLOGY.....	1T32 HL07402-01	38,992
GORDON, IRVING.....	VIROLOGY AND IMMUNOLOGY: MECHANISMS BASIC TO DISEASE.....	1T32 AI07078-01A1	56,080
GRODINS, FRED S.....	SYSTEMS PHYSIOLOGY AND BIOMEDICAL ENGINEERING.....	5T32 GM07139-04	80,663
GRODINS, FRED S.....	CARDIOPULMONARY BIOMEDICAL ENGINEERING.....	5T32 HL07012-04	72,033
HORTON, RICHARD.....	ENDOCRINE HYPERTENSION AND ENDOCRINOLOGY—METABOLISM.....	5T32 AM07119-04	53,077
QUILLIGAN, EDWARD J.....	MATERNAL-FETAL MEDICINE.....	5T32 HD07086-03	107,799
SCHAIK, K WARNER.....	GERONTOLOGY.....	5T32 AG00037-02	95,654
SLAVKIN, HAROLD C.....	CRANIOFACIAL BIOLOGY.....	5T32 DE07006-04	159,070
ORGANIZATION TOTAL	8 663,368		
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125			
BROKAW, CHARLES J.....	BIOLOGY AND CHEMISTRY.....	1T32 GM07616-01	239,369
DAVIDSON, NORMAN R.....	BIOCHEMISTRY.....	5T01 GM01262-15	171,055
FENDER, DEREK H.....	BIOLOGICAL SYSTEMS ANALYSIS OF THE VISUAL PROCESS.....	5T01 EY00085-05	28,346
FENDER, DEREK H.....	VISUAL SYSTEM.....	5T32 EY07011-04	35,250
HOROWITZ, NORMAN H.....	GENETICS.....	5T32 GM07401-02	94,663
KONISHI, MASAKAZU.....	BEHAVIORAL SCIENCES.....	5T01 GM02031-10	54,449
ORGANIZATION TOTAL	6 623,132		
RIVERSIDE			
UNIVERSITY OF CALIFORNIA AT RIVERSIDE ZIP CODE 92502			
NORMAN, ANTHONY W.....	CELLULAR & MOLECULAR ENDOCRINOLOGY.....	1T32 AM07310-01	89,432
ORGANIZATION TOTAL	1 89,432		
SAN FRANCISCO			
INSTITUTES OF MEDICAL SCIENCES ZIP CODE 94120			
SCOTT, ALAN B.....	EYE MOVEMENT DISORDERS.....	5T32 EY07027-04	34,219
ORGANIZATION TOTAL	1 34,219		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143			
BARINGER, J RICHARD.....	NEUROVIROLOGY.....	5T32 NS07073-03	40,084
BISHOP, J MICHAEL.....	THE MOLECULAR ANALYSIS OF TUMOR VIRUSES.....	5T32 CA09043-04	216,769
BLOIS, MARSDEN S, JR.....	MEDICAL INFORMATION SCIENCES.....	2T15 LM07000-04	201,161
BURKHALTER, ALAN.....	PHARMACOLOGY—TOXICOLOGY—PHARMACEUTICAL CHEMISTRY.....	5T32 GM07175-02	130,539
CLARK, M MARGARET.....	ANTHROPOLOGICAL GERONTOLOGY.....	5T32 AG00045-02	57,145
COLERIDGE, JOHN C.....	HEART AND VASCULAR DISEASES.....	5T32 HL07192-02	293,713
COMROE, JULIUS H, JR.....	PULMONARY FACULTY TRAINING CENTER GRANT.....	5T17 HL07159-04	30,000
DIAMOND, IVAN F.....	MOLECULAR STUDIES OF AGING IN THE NERVOUS SYSTEM.....	5T32 AG00047-02	100,939
EPSTEIN, CHARLES J.....	MEDICAL GENETICS.....	5T32 GM07085-03	73,423
FISKE, MARJORIE E.....	HUMAN DEVELOPMENT AND AGING.....	1T32 AG00041-01A1	38,932
FUKUYAMA, KIMIE.....	DERMATOLOGY RESEARCH.....	5T32 AM07175-03	44,733
GANONG, WILLIAM F.....	NEURAL REGULATION OF ENDOCRINE FUNCTION.....	5T32 AM07265-02	70,667
GRUMBACH, MELVIN M.....	PEDIATRIC ENDOCRINOLOGY.....	5T32 AM07161-03	73,607

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
CALIFORNIA—Con.			
HALL, ZACH W.....	NEUROBIOLOGY.....	5T32 GM07449-02	56,974
HALL, ZACH W.....	NEUROSCIENCES.....	5T32 NS07067-02	64,986
MARGULIS, ALEXANDER R.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01272-14	183,748
MARTIN, DAVIO W, JR.....	MEDICAL SCIENTIST.....	1T32 GM07618-01	58,413
MC CARTHY, BRIAN J.....	MOLECULAR BIOLOGY OF EUKARYOTIC CELLS AND VIRUSES.....	5T32 CA09270-03	167,262
NAOEL, JAY A.....	MULTI-DISCIPLINARY TRAINING PROGRAM IN LUNG DISEASES.....	5T32 HL07185-02	279,502
OCKNER, ROBERT K.....	DIGESTIVE DISEASES AND NUTRITION.....	5T32 AM07007-04	77,795
OSTLER, H BRUCE.....	OCULAR INFLAMMATORY DISEASES.....	5T01 EY00094-05	95,537
PHILLIPS, THEODORE L.....	RADIATION ONCOLOGY.....	1T32 CA09215-01	34,502
RECTOR, FLOYD C, JR.....	ACADEMIC NEPHROLOGY AND ELECTROLYTE METABOLISM.....	5T32 AM07219-03	87,509
SHEINER, LEWIS.....	CLINICAL PHARMACOLOGY AND PHARMACOKINETICS.....	5T22 GM00001-05	208,258
SHEINER, LEWIS.....	CLINICAL PHARMACOLOGY—PHARMACOKINETICS.....	5T32 GM07546-02	40,911
SHELOON, GEORGE F.....	TRAUMA CENTER.....	5T32 GM07032-04	16,124
SHOHET, STEPHEN B.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07100-04	78,099
TALAL, NORMAN.....	ACADEMIC RHEUMATOLOGY AND CLINICAL IMMUNOLOGY.....	1T32 AM07304-01	56,811
THALER, M MICHAEL.....	PEDIATRIC GASTROENTEROLOGY.....	5T32 AM07179-02	41,217
WILSON, CHARLES B.....	BRAIN TUMOR BIOLOGY AND THERAPY.....	5T32 CA09291-02	40,785
ORGANIZATION TOTAL	30	2,960,145	
SANTA BARBARA			
UNIVERSITY OF CALIFORNIA AT SANTA BARBARA ZIP CODE 93106			
HORVATH, STEVEN M.....	PHYSIOLOGY OF EXERCISE AND STRESS.....	5T01 AG00021-10	108,493
ORGANIZATION TOTAL	1	108,493	
STANFORD			
STANFORD UNIVERSITY ZIP CODE 94305			
CAVALLI-SFORZA, LUIGI.....	GENETICS.....	5T01 GM00295-20	117,243
CLAYTON, DAVID.....	MEDICAL SCIENTIST.....	5T32 GM07365-02	130,784
CLAYTON, DAVID.....	MEDICAL SCIENTIST.....	5T32 GM07365-03	438,171
COHEN, STANLEY N.....	CLINICAL PHARMACOLOGY.....	5T32 GM07065-04	38,539
CUTLER, ROBERT W.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07012-04	76,367
FARQUHAR, JOHN W.....	CARDIOVASCULAR DISEASE PREVENTION.....	5T32 HL07034-04	88,780
GRAY, GARY M.....	GASTROENTEROLOGY.....	5T32 AM07056-04	38,969
GRUMET, FRANK C.....	BLOOD BANKING AND TISSUE TYPING.....	5T32 HL07127-03	27,325
HANAWALT, PHILIP C.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07276-04	216,406
HELLER, H CRAIG.....	INTEGRATIVE BIOLOGY.....	5T32 GM07181-04	120,027
KALLMAN, ROBERT F.....	CANCER ETIOLOGY, PREVENTION, DETECTION & DIAGNOSIS.....	5T32 CA09302-02	262,153
KORN, DAVIO.....	TUMOR BIOLOGY.....	5T32 CA09151-04	124,479
KORN, DAVID.....	PATHOLOGY.....	5T01 GM02236-05	51,295
LEHMAN, I ROBERT.....	BIOCHEMISTRY.....	5T01 GM00196-20	106,948
LEHMAN, I ROBERT.....	BIOCHEMISTRY.....	1T32 GM07599-01	27,665
MANSOUR, TAG.....	PHARMACOLOGY.....	5T32 GM07149-04	128,195
MERIGAN, THOMAS C.....	INFECTIOUS DISEASES (MICROBES, DRUGS AND HOST).....	5T32 AI07089-02	85,223
REAVEN, GERALD M.....	DIABETES, ENDOCRINOLOGY AND METABOLOGY.....	5T32 AM07217-03	77,334
ROBIN, EUGENE D.....	PULMONARY SCIENTIST.....	1T32 HL07316-01A1	115,185
ROSENBERG, SAUL A.....	INVESTIGATIVE ONCOLOGY.....	1T32 CA09287-01	39,368
ROSENTHAL, A RALPH.....	BASIC SCIENCES.....	1T32 EY07053-01	56,104
RUBINSTEIN, LUCIEN J.....	NEUROPATHOLOGY.....	5T32 NS07111-02	170,375
SUNSHINE, PHILIP.....	DEVELOPMENTAL BIOLOGY AND NEONATOLOGY.....	5T01 HD00049-18	151,518
ORGANIZATION TOTAL	23	2,688,453	
TORRANCE			
LDS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LDS ANGELES COUNTY HARBOR GENERAL HOSPITAL ZIP CODE 90509			
FISHER, OELBERT A.....	PERINATAL BIOLOGY.....	5T32 HD07013-02	80,838
IMAGAWA, DAVIO T.....	PATHOGENESIS AND EPIDEMIOLOGY OF INFECTIOUS DISEASES.....	5T32 AI07014-03	29,027

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director		General area of training	Grant number	Dollars
CALIFORNIA—Con.				
ODELL, WILLIAM D		ENDOCRINOLOGY AND METABOLISM	1T32 AM07214-01A1	58,587
RIMOIN, DAVID L		MEDICAL GENETICS	5T32 GM07414-02	39,649
WASSERMAN, KARLMAN		BIOLOGICAL BASIS OF RESPIRATORY DISEASE	1T32 HL07388-01	38,740
ORGANIZATION TOTAL	5	246,841		
STATE TOTAL	181	16,916,957		
COLORADO				
BOULDER				
UNIVERSITY OF COLORADO AT BOULDER ZIP CODE 80309				
MC CLEARN, GERALD E		BEHAVIORAL PHARMACOGENETICS	5T32 GM07305-04	28,068
PORTER, KEITH R		BIOMEDICAL SCIENCES (NORMAL AND ABNORMAL DEVELOPMENT)	5T32 HD07077-02	33,668
PRESCOTT, DAVID M		MOLECULAR AND CELLULAR BIOLOGY	5T32 GM07385-02	49,928
SUEOKA, NOBORU		MOLECULAR BIOLOGY	5T32 GM07135-04	68,349
ORGANIZATION TOTAL	4	180,013		
DENVER				
NATIONAL ASTHMA CENTER ZIP CODE 80204				
ALEXANDER, A BARNEY		RESPIRATORY DISEASES	5T32 HL07026-04	37,410
ORGANIZATION TOTAL	1	37,410		
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206				
FARR, RICHARD S		CLINICAL IMMUNOLOGY	2T32 AI00048-04	71,013
ORGANIZATION TOTAL	1	71,013		
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262				
ALFREY, ALLEN C		RENAL AND ELECTROLYTE DISEASE & HYPERTENSION	2T32 AM07135-05	37,579
BATTAGLIA, FREDERICK C		PERINATAL MEDICINE	5T01 HD00429-05	85,717
CLAMAN, HENRY N		ALLERGY AND IMMUNOLOGY	1T32 AI07166-01	89,387
CROWLE, ALFRED J		CELLULAR IMMUNOLOGY	5T32 AI07035-03	103,466
EICKHOFF, THEODORE C		INFECTIOUS DISEASES	5T32 AI07029-03	48,745
ERIKSON, RAYMOND L		MOLECULAR AND CELLULAR PATHOBIOLOGY	5T32 GM07378-02	34,682
GROVER, ROBERT F		RESPIRATION AND CIRCULATION DURING HYPOXIA	5T32 HL07171-02	69,979
HENDEE, WILLIAM R		MEDICAL PHYSICS	5T32 CA09073-04	33,641
KERN, FRED, JR		GASTROINTESTINAL DISEASES	5T32 AM07038-04	39,028
NIES, ALAN		CLINICAL PHARMACOLOGY	5T32 GM07063-04	92,248
O'BRIEN, DONOUGH		MENTAL RETARDATION	5T32 HD07096-02	103,280
PETTY, THOMAS L		MULTIDISCIPLINARY RESPIRATORY DISEASES	3T32 HL07085-03S1	31,212
PETTY, THOMAS L		MULTIDISCIPLINARY RESPIRATORY DISEASES	5T32 HL07085-04	141,288
PIERCE, G BARRY		TUMOR BIOLOGY—DEVELOPMENT AND NEOPLASIA	5T32 CA09157-04	65,066
PUCK, THEODORE T		BIOPHYSICS	5T01 GM00781-20	77,700
SCHRIER, ROBERT W		RENAL AND ELECTROLYTE DISEASE	5T32 AM07135-04	29,294
VERNADAKIS, ANTONIA O		DEVELOPMENTAL PHARMACOLOGY	5T32 HD07072-03	67,599
WALKER, STROTHER H		BIOMETRICS	5T01 GM02241-05	42,406
WEINER, NORMAN		INFLUENCE OF DRUGS ON REGULATORY MECHANISMS	5T01 GM01983-10	85,647
WEINER, NORMAN		PHARMACOLOGY	1T32 GM07635-01	61,109
WHITLOCK, DAVID G		ANATOMY	5T01 GM01981-10	51,210
ORGANIZATION TOTAL	21	1,390,283		
FORT COLLINS				
COLORADO STATE UNIVERSITY ZIP CODE 80521				
BEDFORD, JOEL S		RADIATION BIOLOGY BASIC TO TUMOR THERAPY	5T32 CA09236-03	111,849

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
COLORADO—Con.			
NISWENDER, GORDON D.....	MAMMALIAN REPRODUCTIVE BIOLOGY.....	5T32 HD07031-02	56,956
ORGANIZATION TOTAL	2 168,805		
STATE TOTAL	29 1,847,524		
CONNECTICUT			
FARMINGTON			
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032			
BECKER, ELMER L.....	BASIC IMMUNOLOGY & IMMUNOLOGIC CELL INJURY.....	5T32 AI07080-02	73,309
COHEN, STANLEY.....	IMMUNOPATHOLOGY OF NEOPLASTIC DISEASES.....	5T32 CA09205-03	197,623
HOYER, LEON W.....	HEMATOLOGY.....	1T32 HL07324-01	38,476
KATZ, ARNOLD M.....	CARDIAC CELL MEMBRANE PHYSIOLOGY.....	1T32 HL07420-01	35,684
KEGELES, S STEPHEN.....	PAIN CONTROL AND HUMAN MOTIVATION.....	5T32 DE07004-03	77,105
OSBORN, MARY J.....	MOLECULAR BIOLOGY AND BIOCHEMISTRY.....	1T32 GM07407-01A1	30,465
RAISZ, LAWRENCE G.....	ENDOCRINOLOGY AND METABOLISM.....	1T32 AM07290-01	37,935
WARD, PETER A.....	PATHOGENESIS OF INFLAMMATORY LUNG DISEASES.....	5T32 HL07202-03	178,511
WEINSTEIN, SAM.....	BIOENGINEERING AND OTHODONTICS.....	5T32 DE07047-02	73,830
ORGANIZATION TOTAL	9 742,938		
NEW HAVEN			
YALE UNIVERSITY ZIP CODE 06520			
BERTINO, JOSEPH R.....	MEDICAL ONCOLOGY, HEMATOLOGY, AND PHARMACOLOGY.....	5T32 CA09200-03	146,662
BINDER, HENRY J.....	GASTROENTEROLOGY.....	5T32 AM07017-02	42,909
BLACK, FRANCIS L.....	CENTRAL NERVOUS SYSTEM-VIROLOGICAL INFECTIONS.....	5T32 NS07036-04	86,714
BOULPAEP, EMILE L.....	TRANSPORT PROCESSES IN BIOLOGICAL SYSTEMS.....	5T32 AM07259-02	38,504
CHANDLER, WILLIAM K.....	MEMBRANE BIOPHYSICS AND SENSORY MECHANISMS.....	5T32 NS07102-02	56,322
COHEN, LAWRENCE B.....	CELLULAR AND PHARMACOLOGICAL BASIS OF ORGAN FUNCTION.....	5T32 GM07527-02	128,492
COOPER, JACK R.....	GENERAL PHARMACOLOGY.....	5T32 GM07324-04	65,344
EISENSTADT, JEROME M.....	CONGENITAL DEFECTS: STRUCTURAL, METABOLIC, BEHAVIORAL.....	1T32 HD07149-01	78,080
FELIG, PHILIP.....	METABOLIC DISEASES AND DIABETES.....	5T32 AM07058-04	38,878
FISCHER, JAMES J.....	RADIATION THERAPY, BIOLOGY, AND PHYSICS.....	1T32 CA09259-01	50,291
FORGET, BERNARD G.....	RED BLOOD CELL DISEASES, HEMOSTASIS AND BLOOD BANKING.....	5T32 HL07262-02	73,122
GALL, JOSEPH G.....	CELL AND DEVELOPMENTAL BIOLOGY.....	5T01 HD00032-15	287,438
GERSHON, RICHARD K.....	INTERDISCIPLINARY IMMUNOLOGY.....	5T32 AI07019-03	140,232
HAYSLETT, JOHN P.....	PATHOPHYSIOLOGY OF ACUTE AND CHRONIC RENAL DISEASE.....	1T32 AM07276-01A1	38,965
HITCHCOCK, MARGARET.....	ENVIRONMENTAL TOXICOLOGY AND PHYSIOLOGY.....	1T32 ES07086-01	92,597
HSIUNG, GUEH-DJEN G.....	CLINICAL VIROLOGY.....	5T32 AI07018-03	66,182
HUTCHINSON, FRANKLIN.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07223-04	543,368
JAMIESON, JAMES D.....	MEDICAL SCIENTIST.....	5T32 GM07205-04	347,209
KANTOR, FRED S.....	ALLERGY AND IMMUNOLOGY.....	5T01 AI00271-13	72,300
KELSEY, JENNIFER L.....	EPIDEMIOLOGY OF BONE DISEASES.....	5T32 AM07250-02	32,669
LERNER, AARON B.....	DERMATOLOGY.....	5T32 AM07016-04	77,907
MALAWISTA, STEPHEN E.....	INVESTIGATIVE RHEUMATOLOGY.....	5T32 AM07107-03	38,135
MARCHESI, VINCENT T.....	EXPERIMENTAL AND HUMAN PATHOBIOLOGY.....	5T32 GM07562-02	117,225
PATTON, CURTIS L.....	PARASITOLOGY (INTERDISCIPLINARY).....	5T32 AI07136-02	50,920
PRUSOFF, WILLIAM H.....	BIOCHEMICAL ASPECTS OF CANCER CHEMOTHERAPY.....	5T32 CA09085-04	150,514
REID, TED W.....	VISUAL SCIENCES.....	5T32 EY07000-04	90,340
ROOT, RICHARD K.....	INFECTIOUS DISEASES MICROBIAL AND IMMUNE MECHANISMS.....	5T32 AI07033-03	77,668
ROSENBERG, LEON E.....	GENETICS AND MEDICAL SCIENCES.....	5T32 GM07439-02	137,748
RUDDLE, FRANK H.....	GENETICS.....	5T32 GM07499-02	220,632
SCHULTZ, T PAUL.....	POPULATION AND LABOR.....	1T32 HD07146-01	58,230
SHOPE, ROBERT E.....	VIRAL DISEASE MECHANISMS, EPIDEMIOLOGY, AND CONTROL.....	5T32 AI07098-02	56,021
STOLWIJK, JAN A.....	ENVIRONMENTAL EPIDEMIOLOGY AND STATISTICS.....	1T32 ES07085-01	86,268

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
CONNECTICUT—Con.			
TALNER, NORMAN S.....	POSTNATAL DEVELOPMENT OF CARDIOVASCULAR FUNCTION	5T32 HL07272-02	82,683
WARSHAW, JOSEPH B.....	RESEARCH IN PERINATAL MEDICINE	5T32 HD07094-02	76,602
WEISSMAN, SHERMAN M.....	MOLECULAR AND ONCOLOGIC VIROLOGY.....	5T32 CA09159-04	92,611
WHITE, COLIN.....	CANCER EPIDEMIOLOGY AND BIOSTATISTICS.....	1T32 CA09279-01	66,670
ORGANIZATION TOTAL	36 3,906,452		
STORRS			
UNIVERSITY OF CONNECTICUT ZIP CODE 06268			
GOETINCK, PAUL F.....	CONTROL MECHANISMS IN CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07219-02	39,670
SPEYER, JOSEPH F.....	GENETICS	1T32 GM07584-01	20,524
ORGANIZATION TOTAL	2 60,194		
STATE TOTAL	47 4,709,584		
DIST OF COL			
WASHINGTON			
GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
MANDEL, H GEORGE.....	CANCER PHARMACOLOGY.....	1T32 CA09223-01	24,764
ORGANIZATION TOTAL	1 24,764		
GEORGETOWN UNIVERSITY ZIP CODE 20007			
BELLANTI, JOSEPH A.....	DEVELOPMENTAL IMMUNOLOGY.....	5T01 HD00261-10	82,566
LILIENFIELD, LAWRENCE S.....	VASCULAR CONTROL AND HYPERTENSION.....	5T32 HL07213-02	129,085
STANDAERT, FRANK G.....	NEUROPHARMACOLOGY.....	5T32 GM07443-02	66,268
ORGANIZATION TOTAL	3 277,919		
HOWARD UNIVERSITY ZIP CODE 20001			
COSTELLO, LESLIE.....	PHYSIOLOGY.....	5T02 GM05010-02	125,404
CURRY, CHARLES L.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07302-02	28,787
LEAK, LEE V.....	ANATOMICAL SCIENCES.....	5T02 GM05008-02	15,852
TALBERT, PRESTON.....	BIOCHEMISTRY.....	5T02 GM05001-02	82,870
WEST, WILLIAM L.....	PHARMACOLOGY.....	5T02 GM05000-02	144,988
ORGANIZATION TOTAL	5 397,901		
STATE TOTAL	9 700,584		
FLORIDA			
GAINESVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611			
BERNS, KENNETH I.....	BASIC MICROBIOLOGY AND INFECTIOUS DISEASES	1T32 AI07110-01A1	61,012
EITZMAN, DONALD V.....	GROWTH AND DEVELOPMENTAL PHYSIOLOGY.....	5T01 HD00054-17	66,998
ENNEKING, WILLIAM F.....	INVESTIGATIVE MUSCULOSKELETAL PATHOLOGY.....	5T32 AM07141-04	36,817
ENOCH, JAY M.....	VISUAL SCIENCES—CLINICAL.....	5T32 EY07046-02	50,006
FREGLY, MELVIN J.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07298-02	10,479
HOLLIEN, HARRY.....	COMMUNICATION SCIENCES.....	1T32 NS07107-01A1	36,690
MC GUIGAN, JAMES E.....	GASTROENTEROLOGY.....	5T32 AM07209-02	38,915
MOHAMMED, M HAMDI.....	RESTORATIVE BIOMATERIALS RESEARCH.....	5T32 DE07045-03	33,996
MORELAND, ALVIN F.....	LABORATORY ANIMAL COMPARATIVE MEDICINE TRAINING.....	5T32 RR07001-02	66,855
POLACK, FRANK M.....	OPHTHALMOLOGY.....	5T32 EY07012-04	33,692
RENNERT, OWEN M.....	GENETICS, ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07164-03	55,184

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
FLORIDA—Con.			
SMITH, RICHARD T.....	CELL BIOLOGY AND IMMUNOBIOLOGY OF CANCER.....	5T32 CA09126-04	79,276
ORGANIZATION TOTAL	12 569,920		
MIAMI			
UNIVERSITY OF MIAMI ZIP CODE 33152			
ANDERSON, DOUGLAS R.....	OPHTHALMOLOGY.....	5T32 EY07021-04	25,192
BASSETT, ARTHUR L.....	CARDIOVASCULAR PHARMACOLOGY.....	5T32 HL07188-03	125,818
BLANK, HARVEY.....	DERMATOLOGY.....	5T32 AM07081-04	71,215
BOURGOIGNIE, JACQUES J.....	NEPHROLOGY.....	5T32 AM07205-03	39,671
LOEWENSTEIN, WERNER R.....	DEVELOPMENTAL NEUROSCIENCES.....	5T32 NS07044-04	128,429
MARSH, JOHN M.....	FERTILIZATION AND REPRODUCTIVE BIOLOGY.....	1T32 HD07129-01	58,824
MASSARO, DONALD J.....	LUNG BIOCHEMISTRY AND ANATOMY.....	5T32 HL07283-02	123,301
TEJADA, FRANCISCO.....	BASIC AND CLINICAL CANCER RESEARCH.....	1T32 CA09212-01	57,000
WHELAN, WILLIAM J.....	CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07332-01A1	65,283
YUNIS, ADEL A.....	INTERNAL MEDICINE—HEMATOLOGY.....	5T32 AM07114-04	52,280
ORGANIZATION TOTAL	10 747,013		
MIAMI BEACH			
MOUNT SINAI MEDICAL CENTER ZIP CODE 33140			
SACKNER, MARVIN A.....	PULMONARY DISEASE.....	1T32 HL07358-01A1	78,115
ORGANIZATION TOTAL	1 78,115		
TALLAHASSEE			
STATE UNIVERSITY SYSTEM OF FLORIDA—FLORIDA STATE UNIVERSITY ZIP CODE 32306			
BEIDLER, LLOYD M.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07010-04	77,484
LEYSIEFFER, FREDERICK W.....	ENVIRONMENTAL HEALTH MEASUREMENT AND STATISTICS.....	5T32 ES07011-04	212,879
NAM, CHARLES B.....	POPULATION (MULTIDISCIPLINARY).....	5T32 HD07082-02	46,427
ORGANIZATION TOTAL	3 336,790		
STATE TOTAL	26 1,731,838		
GEORGIA			
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601			
GILES, NORMAN H.....	GENETICS.....	5T32 GM07103-04	83,824
ORGANIZATION TOTAL	1 83,824		
ATLANTA			
ATLANTA UNIVERSITY ZIP CODE 30314			
HUNTER, ROY, JR.....	DEVELOPMENTAL AND CELL BIOLOGY.....	5T02 GM05007-02	84,332
ORGANIZATION TOTAL	1 84,332		
ATLANTA UNIVERSITY CENTER ZIP CODE 30310			
HARRIS, WINFRED.....	MARC HONORS RESEARCH.....	5T32 GM07666-02	175,152
ORGANIZATION TOTAL	1 175,152		
EMORY UNIVERSITY ZIP CODE 30322			
DI GIROLAMO, MARIO.....	ENDOCRINOLOGY, METABOLISM AND DIABETES.....	1T32 AM07298-01	35,856
ELSAS, LOUIS.....	MEDICAL SCIENTIST.....	5T32 GM07415-02	43,610
FREDERICKSON, EVAN L.....	ANESTHESIOLOGY.....	5T01 GM01508-13	31,631

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
GEORGIA—Con.			
MORAN, NEIL C.....	PHARMACOLOGY.....	5T01 GM00179-20	79,548
MORAN, NEIL C.....	PHARMACOLOGICAL SCIENCES.....	1T32 GM07594-01	32,925
NAHMIAS, ANDRE J.....	BIOLOGY OF ORO-FACIAL HERPES SIMPLEX VIRUS INFECTION.....	5T32 DE07074-02	74,797
NEILL, JIMMY D.....	GONADOTROPIC HORMONES: SECRETION AND FUNCTION.....	5T32 HD07121-02	32,252
SHULMAN, NEIL B.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07305-02	64,325
ORGANIZATION TOTAL	8 394,944		
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA INSTITUTE OF TECHNOLOGY ZIP CODE 30332			
HOCHMAN, ROBERT F.....	DENTAL MATERIALS SCIENCE.....	5T32 DE07053-03	78,868
ORGANIZATION TOTAL	1 78,868		
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
MAHESH, VIRENDRA B.....	ENDOCRINE AND POPULATION ASPECTS OF REPRODUCTIVE BIOLOGY.....	1T32 HD07110-01A2	27,115
ORGANIZATION TOTAL	1 27,115		
STATE TOTAL	13 844,235		
HAWAII			
HONOLULU			
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANOA ZIP CODE 96822			
GREENWOOD, FREDERICK C.....	BIOMEDICAL SCIENCES.....	1T32 GM07684-01	39,600
HUNT, JOHN A.....	HUMAN GENETICS.....	5T01 HD00400-05	98,004
ORGANIZATION TOTAL	2 137,604		
STATE TOTAL	2 137,604		
ILLINOIS			
CHICAGO			
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
FREINKEL, NORBERT.....	METABOLOGY.....	5T32 AM07169-03	70,042
GREENER, EVAN H.....	DENTAL MATERIALS SCIENCE.....	5T32 DE07042-03	66,694
LAUTENSCHLAGER, EUGENE P.....	BIOMEDICAL MATERIALS.....	5T32 AM07228-02	19,475
NARAHASHI, TOSHIO.....	PHARMACOLOGY.....	5T32 GM07263-04	80,797
PATTERSON, ROY.....	ALLERGIC AND IMMUNOLOGIC DISEASE.....	5T32 AI07075-02	39,205
STAMLER, JEREMIAH.....	CARDIOVASCULAR EPIDEMIOLOGY, BIOSTATISTICS, NUTRITION.....	5T32 HL07113-04	90,431
ORGANIZATION TOTAL	6 366,644		
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER—RUSH UNIVERSITY ZIP CODE 60612			
SCHAUF, CHARLES L.....	BIOPHYSICS AND CARDIOLOGY.....	1T32 HL07320-01	58,652
TROBAUGH, FRANK E, JR.....	HEMATOLOGY.....	5T01 HL06021-05	65,403
ORGANIZATION TOTAL	2 124,055		
UNIVERSITY OF CHICAGO ZIP CODE 60637			
ARNASON, BARRY G.....	IMMUNOLOGY OF NERVOUS SYSTEM DISEASES.....	5T32 NS07113-02	113,031
BUTLER, ROBERT A.....	PATHOLOGY OF AUDITORY AND VESTIBULAR SYSTEMS.....	1T32 NS07038-01A1	18,411
CEITHAML, JOSEPH.....	MEDICAL SCIENTIST.....	5T32 GM07281-04	530,749
COWAN, JACK D.....	THEORETICAL BIOLOGY.....	5T01 GM02037-10	80,114
DE GROOT, LESLIE J.....	INTEGRATED CLINICAL AND BASIC ENDOCRINOLOGY.....	5T32 AM07011-04	89,110
DORFMAN, ALBERT.....	GROWTH AND DEVELOPMENT.....	5T32 HD07009-04	111,080

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
ILLINOIS—Con.			
EPSTEIN, WOLFGANG.....	GENETICS AND REGULATION.....	5T32 GM07197-04	305,066
EPSTEIN, WOLFGANG.....	HUMAN AND BIOCHEMICAL GENETICS.....	5T32 GM07543-02	84,874
FOZZARD, HARRY A.....	MULTIDISCIPLINARY CARDIAC SCIENCES.....	1T32 HL07381-01	252,708
GETZ, GODFREY S.....	PATHOBIOLOGY.....	5T32 GM07190-04	113,274
GOLDBERG, LEON I.....	CLINICAL THERAPEUTICS.....	2T32 GM07019-04	57,181
GOLDWASSER, EUGENE.....	DEVELOPMENTAL BIOLOGY.....	1T32 HD07136-01	107,897
HELLER, ALFRED.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07151-04	206,816
JENSEN, ELWOOD V.....	EXPERIMENTAL ONCOLOGY.....	5T32 CA09183-04	122,053
KIEFF, ELLIOTT D.....	INFECTIOUS DISEASES.....	5T32 AI07099-02	141,715
KITAGAWA, EVELYN M.....	SOCIOLOGICAL CONSEQUENCES OF POPULATION.....	1T32 HD07153-01	64,507
MC NEILL, DAVID.....	DEVELOPMENTAL PSYCHOLINGUISTICS.....	5T01 HD00419-05	60,517
NEUGARTEN, BERNICE L.....	ADULT DEVELOPMENT AND AGING.....	5T32 AG00039-02	84,367
POKORNY, JOEL M.....	ASSESSMENT OF COLOR VISION IN NORMAL/DISEASED EYES.....	3T32 EY07010-03S1	12,420
POKORNY, JOEL M.....	ASSESSMENT OF COLOR VISION IN NORMAL/DISEASED EYES.....	5T32 EY07010-04	16,365
ROIZMAN, BERNARD.....	VIROLOGY.....	5T01 AI00238-15	102,282
ROIZMAN, BERNARD.....	VIRAL ONCOLOGY.....	1T32 CA09241-01	103,556
ROSENBERG, IRWIN H.....	DIGESTIVE DISEASES.....	5T32 AM07074-04	51,788
SINGER, RONALD.....	ANATOMY.....	5T01 GM00094-20	81,537
STRAUSS, BERNARD S.....	ENVIRONMENTAL BIOLOGY.....	1T32 CA09273-01	56,916
SWIFT, HEWSON H.....	CANCER BIOLOGY.....	1T32 CA09267-01	57,584
TAYLOR, EDWIN W.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07183-04	594,973
WISSLER, ROBERT W.....	CARDIOVASCULAR PATHOPHYSIOLOGY AND BIOCHEMISTRY.....	5T32 HL07237-03	145,215
YACHNIN, STANLEY.....	HEMATOLOGY/ONCOLOGY.....	5T32 AM07134-04	56,351
ORGANIZATION TOTAL	29	3,822,457	
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
GELFAND, HENRY M.....	CANCER EPIDEMIOLOGY.....	1T32 ES07077-01	53,376
GOLDBERG, MORTON F.....	OPHTHALMOLOGY.....	5T32 EY07038-02	100,011
NYHUS, LLOYD M.....	ACADEMIC SURGERY.....	5T01 GM01930-10	82,402
ROSEN, KENNETH M.....	CARDIOLOGY-ARRHYTHMIA.....	1T32 HL07387-01A1	40,151
SCHULMAN, MARTIN P.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07115-04	58,942
ORGANIZATION TOTAL	5	334,882	
EVANSTON			
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
CANTER, GERALD J.....	SPEECH AND LANGUAGE PATHOLOGY.....	5T32 NS07100-02	151,198
ELLIOTT, LOIS L.....	NEUROBIOLOGY OF HEARING.....	5T32 NS07108-02	155,937
JACOBS, JOHN E.....	BIOMEDICAL ENGINEERING.....	5T32 GM07350-02	91,028
SCHWARTZ, NEENA B.....	REPRODUCTIVE BIOLOGY.....	1T32 HD07068-01A1	42,021
SHEMIN, DAVID.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07291-04	107,890
ORGANIZATION TOTAL	5	548,074	
MAYWOOD			
LOYOLA UNIVERSITY MEDICAL CENTER ZIP CODE 60153			
MC DONALD, HUGH J.....	CLINICAL CHEMISTRY.....	5T01 GM02122-05	93,895
ORGANIZATION TOTAL	1	93,895	
URBANA			
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801			
COHEN, LESLIE B.....	NORMAL AND RETARDED DEVELOPMENT.....	5T01 HD00244-10	128,241
DUCOFF, HOWARD S.....	RADIATION BIOPHYSICS & BIOENGINEERING IN ONCOLOGY.....	5T32 CA09067-04	127,579
DUNN, FLOYD.....	BIOENGINEERING.....	5T01 GM02271-05	33,636
DZIUK, PHILIP J.....	REPRODUCTIVE BIOLOGY.....	5T32 HD07028-03	68,507
EBREY, THOMAS G.....	PHYSIOLOGY AND BIOCHEMISTRY OF VISION.....	5T32 EY07005-04	45,584
FRIEDMAN, STANLEY.....	COLLABORATIVE PROGRAMS IN PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07110-04	39,404

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
ILLINOIS—Con.			
HAGER, LOWELL P.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07283-04	380,189
HEATH, JAMES E.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07143-04	66,909
LEVY, ALLAN H.....	COMPUTER SCIENCES (PHYSICIAN).....	5T15 LM07011-02	184,995
METCALF, ROBERT L.....	ENVIRONMENTAL STUDIES.....	5T32 ES07001-04	90,980
ORGANIZATION TOTAL	10	1,166,024	
STATE TOTAL	58	6,456,031	
INDIANA			
BLOOMINGTON			
INDIANA UNIVERSITY AT BLOOMINGTON ZIP CODE 47401			
PUTNAM, FRANK W.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07227-04	115,360
RHOADES, MARCUS M.....	GENETICS.....	5T01 GM00082-20	97,905
ORGANIZATION TOTAL	2	213,265	
INDIANAPOLIS			
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS ZIP CODE 46202			
BAEHNER, ROBERT L.....	IMMUNOLOGIC AND MORPHOLOGIC STUDY OF PHAGOCYTES.....	5T32 AM07193-03	75,757
BIXLER, DAVID.....	ORAL-FACIAL GENETICS.....	5T32 DE07043-02	75,070
FISCH, CHARLES.....	CARDIOVASCULAR MEDICINE.....	5T32 HL07182-03	69,642
FORNEY, ROBERT B.....	TOXICOLOGY.....	5T32 GM07097-04	21,602
JOHNSTON, CYRUS C, JR.....	ENDOCRINOLOGY AND METABOLISM.....	1T32 AM07293-01	36,099
PALMER, CATHERINE G.....	MEDICAL GENETICS.....	1T32 GM07468-01	90,712
WEINBERGER, MYRON H.....	HYPERTENSION.....	5T32 HL07181-02	59,769
ORGANIZATION TOTAL	7	428,651	
NOTRE DAME			
UNIVERSITY OF NOTRE DAME ZIP CODE 46556			
BORKOWSKI, JOHN G.....	MENTAL RETARDATION.....	5T01 HD00329-05	54,982
WEINSTEIN, PAUL P.....	EXPERIMENTAL PARASITOLOGY AND VECTOR BIOLOGY.....	5T32 AI07030-03	76,057
ORGANIZATION TOTAL	2	131,039	
WEST LAFAYETTE			
PURDUE UNIVERSITY ZIP CODE 47907			
ALTMAN, JOSEPH.....	RETARDATION OF NEURAL AND BEHAVIORAL DEVELOPMENT.....	5T01 HD00427-05	100,090
CHRISTIAN, JOHN E.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07039-01A2	68,187
PAK, WILLIAM L.....	VISUAL PHYSIOLOGY AND CHEMISTRY.....	5T32 EY07008-04	75,229
TESSMAN, IRWIN.....	MOLECULAR MECHANISMS OF CELL FUNCTIONS.....	5T32 GM07211-04	152,803
UMBARGER, H EDWIN.....	REGULATION OF GENE EXPRESSION.....	5T32 GM07076-04	97,944
YIM, GEORGE K.....	PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07095-04	49,638
ORGANIZATION TOTAL	6	543,891	
STATE TOTAL	17	1,316,846	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
IOWA			
IOWA CITY			
UNIVERSITY OF IOWA ZIP CODE 52242			
ABBOUD, FRANCOIS M.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07121-04	239,248
BRODY, MICHAEL J.....	MECHANISMS OF HYPERTENSION.....	1T32 HL07393-01	14,706
CHALKLEY, ROGER.....	MOLECULAR BIOLOGY OF TUMOR CELLS.....	5T32 CA09119-04	90,510
CHRISTENSEN, JAMES.....	GASTROENTEROLOGY.....	5T32 AM07072-04	78,114
CONWAY, THOMAS W.....	GENETICS.....	5T32 GM07091-04	65,365
FELLOWS, ROBERT E, JR.....	MEDICAL SCIENTIST.....	5T32 GM07337-02	57,701
GRANNER, DARYL K.....	DIABETES AND ENDOCRINOLOGY.....	5T32 AM07018-04	58,254
GRANNER, DARYL K.....	DIABETES AND ENDOCRINOLOGY.....	2T32 AM07018-05	117,172
GRIGSBY, WILLIAM.....	BASIC RESEARCH IN PERIODONTOLOGY.....	5T32 DE07007-03	57,229
HOAK, JOHN C.....	HEMOSTASIS AND THROMBOSIS.....	1T32 HL07344-01	34,266
LAUER, RONALD M.....	RESEARCH TRAINING PROGRAM IN PEDIATRIC CARDIOLOGY.....	1T32 HL07413-01	39,945
LONG, JOHN P.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07069-04	140,802
MENNINGER, JOHN R.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07228-04	79,455
OSBORNE, JAMES W.....	BIOMEDICAL RADIOLOGY.....	2T32 CA09125-04	87,589
PONSETI, IGNACIO V.....	OSTEOARTHROPATHY.....	5T32 AM07075-04	76,903
ROBERTS, ROBERT J.....	CLINICAL PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07442-02	41,472
STEINMETZ, PHILIP R.....	EPITHELIAL TRANSPORT AND RENAL PATHOPHYSIOLOGY.....	5T32 AM07140-02	38,169
TIPTON, CHARLES M.....	PHYSICAL EDUCATION SCIENTISTS.....	1T32 GM07045-01A1	37,761
WALLACE, ROBERT B.....	CANCER EPIDEMIOLOGY.....	5T32 CA09027-04	12,222
WILLIAMS, TERENCE H.....	ANATOMICAL SCIENCES.....	5T01 GM00148-20	36,725
ORGANIZATION TOTAL 20	1,403,608		
STATE TOTAL 20	1,403,608		
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
GRANTHAM, JARED J.....	IN VITRO STUDIES OF ISOLATED KIDNEY TUBULE PHYSIOLOGY.....	5T32 AM07065-04	32,111
HUFFMAN, DAVID.....	CLINICAL PHARMACOLOGY.....	5T32 GM07041-02	31,968
KLAASSEN, CURTIS D.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07079-01	45,410
WALASZEK, EDWARD J.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07044-04	76,772
ORGANIZATION TOTAL 4	186,261		
LAWRENCE			
UNIVERSITY OF KANSAS ZIP CODE 66045			
GIRARDEAU, FREDERIC L.....	MENTAL RETARDATION AND OTHER DEVELOPMENTAL DISABILITIES.....	5T32 HD07066-03	137,110
HOROWITZ, FRANCES D.....	DEVELOPMENT AND CHILD PSYCHOLOGY.....	5T01 HD00247-10	70,773
MITSCHER, LESTER A.....	MEDICINAL CHEMISTRY.....	5T01 GM01341-13	122,330
STERNSON, LARRY A.....	CLINICAL DRUG ANALYSIS OF ANTICANCER AGENTS.....	5T32 CA09242-03	65,011
ORGANIZATION TOTAL 4	395,224		
MANHATTAN			
KANSAS STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE ZIP CODE 66506			
PITTENGER, THAD H.....	CELLULAR AND DEVELOPMENTAL BIOLOGY.....	5T01 HD00422-05	98,194
ORGANIZATION TOTAL 1	98,194		
STATE TOTAL 9	679,679		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
KENTUCKY			
LEXINGTON			
UNIVERSITY OF KENTUCKY ZIP CODE 40506			
KOTCHEN, THEODORE A.....	MINORITY HYPERTENSION RESEARCH SUMMER PROGRAM.....	1T32 HL07390-01	22,384
MARUYAMA, YOSH.....	RADIATION ONCOLOGY.....	5T32 CA09040-03	30,876
ORGANIZATION TOTAL	2 53,260		
LOUISVILLE			
UNIVERSITY OF LOUISVILLE ZIP CODE 40208			
POTTS, ALBERT M.....	BASIC SCIENCES.....	5T32 EY07049-02	66,424
ORGANIZATION TOTAL	1 66,424		
STATE TOTAL	3 119,684		
LOUISIANA			
COVINGTON			
TULANE UNIVERSITY ZIP CODE 70433			
ROBERTS, JAMES A.....	UROLOGY.....	5T32 AM07212-03	18,493
ORGANIZATION TOTAL	1 18,493		
NEW ORLEANS			
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119			
BERLIN, CHARLES I.....	AUDITORY PHYSIOLOGY AND ANATOMY.....	5T32 NS07058-02	58,587
SPITZER, JOHN J.....	METABOLIC AND MICROBIAL STUDIES IN TRAUMA AND BURNS.....	2T32 GM07029-04	55,746
SPITZER, JOHN J.....	CARDIOVASCULAR DYNAMICS AND METABOLISM.....	5T32 HL07098-04	109,870
ORGANIZATION TOTAL	3 224,203		
TULANE UNIVERSITY ZIP CODE 70118			
EPPS, ANNA C.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07299-02	38,263
FISHER, JAMES W.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07177-04	83,512
FRIEDMAN, LORRAINE.....	MYCOTIC DISEASES AND BASIC MECHANISMS.....	1T32 AI07152-01	44,659
SALVAGGIO, JOHN E.....	FIBROTIC AND IMMUNOLOGIC PULMONARY DISEASE.....	1T32 HL07376-01	123,945
ORGANIZATION TOTAL	4 290,379		
STATE TOTAL	8 533,075		
MAINE			
BAR HARBOR			
JACKSON LABORATORY ZIP CODE 04609			
EICHER, EVA M.....	GENETICS.....	1T32 GM07386-01	51,494
WAYMOUTH, CHARITY.....	CANCER BIOLOGY.....	1T32 CA09217-01	40,378
ORGANIZATION TOTAL	2 91,872		
STATE TOTAL	2 91,872		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MARYLAND			
BALTIMORE			
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218			
ANNAU, ZOLTAN	BEHAVIORAL AND ENVIRONMENTAL TOXICOLOGY	1T32 ES07094-01	135,960
AUGUST, J THOMAS	PHARMACOLOGY	5T01 GM01183-15	77,785
AUGUST, J THOMAS	PHARMACOLOGY	1T32 GM07626-01	22,839
BANG, FREDERIK B	PARASITOLOGY AND MEDICAL ENTOMOLOGY	1T32 AI07168-01	89,103
BEER, MICHAEL	CELLULAR AND MOLECULAR BIOPHYSICS	5T32 GM07231-04	367,427
CONLEY, C LOCKARD	HEMATOLOGY	5T32 HL07143-04	64,218
GANN, DONALD S	HORMONAL AND CARDIOVASCULAR RESPONSE TO INJURY	5T32 GM07031-04	35,433
GANN, DONALD S	BIOMEDICAL ENGINEERING	5T32 GM07057-04	102,639
GORDIS, LEON	CARDIOVASCULAR EPIDEMIOLOGY	5T32 HL07024-04	125,805
GREEN, LAWRENCE W	BEHAVIORAL RESEARCH IN CARDIOVASCULAR RISK REDUCTION	5T32 HL07180-03	220,470
GURTNER, GAIL H	PULMONARY MEDICINE	5T17 HL07137-04	53,680
GURTNER, GAIL H	PULMONARY MEDICINE	5T32 HL07199-02	257,126
HARRINGTON, WILLIAM F	MOLECULAR AND CELLULAR ASPECTS OF DEVELOPMENT	5T32 HD07103-02	87,666
HENDRIX, THOMAS R	DIGESTIVE DISEASES	5T32 AM07192-03	39,837
JOHNSON, RICHARD T	NEUROVIROLOGY	5T32 NS07000-04	100,024
KIDD, LANGFORD	PEDIATRIC CARDIOLOGY	5T01 HL06005-05	84,869
LENNARZ, WILLIAM J	BIOCHEMISTRY	5T01 GM00184-20	167,403
LENNARZ, WILLIAM J	BIOCHEMISTRY, CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07445-02	61,460
LEVY, DAVID A	PARASITIC INFECTIONS (IMMUNOLOGY, BIOCHEMISTRY)	1T32 AI07057-01A1	45,840
MARGOLIS, SIMEON	ENDOCRINOLOGY, DIABETES AND METABOLOGY	5T32 AM07109-04	77,557
MAYER, MANFRED M	MOLECULAR AND CELLULAR MECHANISMS OF INFLAMMATION	1T32 AI07147-01	36,694
MIGEON, CLAUDE J	PEDIATRIC ENDOCRINOLOGY AND METABOLISM	5T32 AM07116-04	49,100
MONEY, JOHN	EPHEBOLOGY AND EPHEBIATRICS	5T32 HD07111-02	71,966
MURPHY, EDMOND A	MEDICAL GENETICS	5T32 GM07471-02	118,784
NATHANS, DANIEL	VIRAL CARCINOGENESIS	5T32 CA09139-04	101,577
NATHANSON, NEAL	NEUROVIROLOGY	5T32 NS07077-03	36,934
NORMAN, PHILIP S	BASIC AND CLINICAL IMMUNOLOGY	5T32 AI07056-03	80,057
ROBINSON, CECIL H	ANTICANCER DRUG DEVELOPMENT	1T32 CA09243-01	91,208
ROBINSON, DAVID A	VISUAL SCIENCES—MULTIDISCIPLINARY	5T32 EY07047-02	97,899
RUBIN, ROBERT J	ENVIRONMENTAL BIOLOGY AND TOXICOLOGY	3T32 ES07067-01S1	25,872
SACHS, MURRAY B	AUDITORY PROCESSES	5T32 NS07049-03	31,585
STRANDBERG, JOHN D	LABORATORY ANIMAL MEDICINE AND PATHOLOGY	5T32 RR07002-02	56,367
TALALAY, PAUL	MEDICAL SCIENTIST	5T32 GM07309-04	327,029
TALAMO, RICHARD C	PEDIATRIC ALLERGY AND IMMUNOLOGY	5T32 AI07007-04	35,547
TS'0, PAUL O	MOLECULAR/CELLULAR STUDIES OF CHEMICAL CARCINOGENESIS	5T32 CA09110-04	104,632
WAGNER, HENRY N, JR	ONCOLOGY—TRACER PRINCIPLES	1T32 CA09199-01	53,075
WALKER, W GORDON	NUTRITIONAL AND METABOLIC ASPECTS OF RENAL DISEASE	5T32 AM07145-04	64,420
WEISFELDT, MYRON L	PATHOPHYSIOLOGY OF MYOCARDIAL DISEASES	5T32 HL07227-03	63,644
ORGANIZATION TOTAL	38	3,663,531	
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
BARRACLOUGH, CHARLES A	REPRODUCTIVE ENDOCRINOLOGY	5T01 HD00435-05	75,116
WISSEMAN, CHARLES L, JR	VIROLOGY AND RICKETTSIOLOGY	5T01 AI00016-20	47,093
ORGANIZATION TOTAL	2	122,209	
STATE TOTAL	40	3,785,740	
MASSACHUSETTS			
AMHERST			
UNIVERSITY OF MASSACHUSETTS AT AMHERST ZIP CODE 01002			
BLACK, DONALD L	MAMMALIAN REPRODUCTION	5T01 HD00204-10	56,310

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
HONIGBERG, BRONISLAW M.....	EXPERIMENTAL PARASITOLOGY.....	5T32 AI07109-02	52,170
WESTHEAD, EDWARD W, JR.....	PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07473-02	52,629
ORGANIZATION TOTAL	3	161,109	
BOSTON			
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
COTRAN, RAMZI S.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07066-04	63,160
INGRAM, ROLAND H, JR.....	RESPIRATORY MEDICINE.....	5T32 HL07010-04	84,624
LARSEN, P REED.....	ACADEMIC ENDOCRINOLOGY.....	1T32 AM07315-01	37,967
MERRILL, JOHN P.....	NEPHROLOGY.....	5T32 AM07241-02	57,172
TRIER, JERRY S.....	ALIMENTOLOGY.....	5T32 AM07121-04	58,825
WILLIAMS, GORDON H.....	HYPERTENSION.....	5T32 HL07236-03	68,123
WILSON, RICHARD E.....	SURGICAL ONCOLOGY.....	1T32 CA09280-01	20,953
ORGANIZATION TOTAL	7	390,824	
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
AUSTEN, K FRANK.....	IMMUNOLOGIC BASIS OF RESISTANCE AND HYPERSENSITIVITY.....	1T32 AI07167-01	161,128
AUSTEN, K FRANK.....	MECHANISMS OF ARTHRITIC AND DERMATOLOGIC DISORDERS.....	5T32 AM07031-04	76,866
ORGANIZATION TOTAL	2	237,994	
BETH ISRAEL HOSPITAL ZIP CODE 02215			
BULL, DAVID M.....	GASTROENTEROLOGY.....	5T32 AM07183-03	58,803
EPSTEIN, FRANKLIN H.....	KIDNEY AND MEMBRANE TRANSPORT AND METABOLISM.....	5T32 AM07199-02	37,579
FREIMAN, DAVID G.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00568-17	17,920
ROBINSON, STEPHEN H.....	HEMATOLOGY.....	5T32 AM07026-04	61,091
SILEN, WILLIAM.....	ACADEMIC SURGERY.....	5T01 GM02019-10	76,315
ORGANIZATION TOTAL	5	251,708	
BOSTON BIOMEDICAL RESEARCH INSTITUTE ZIP CODE 02114			
GERGELY, JOHN.....	ENERGY METABOLISM OF CARDIAC AND SKELETAL MUSCLE.....	5T32 HL07266-02	55,923
ORGANIZATION TOTAL	1	55,923	
BOSTON UNIVERSITY ZIP CODE 02215			
BRODY, JEROME S.....	PULMONARY BIOCHEMISTRY AND CELL BIOLOGY.....	5T32 HL07035-04	156,493
CHOBANIAN, ARAM V.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07308-02	29,300
COHEN, ALAN S.....	RHEUMATOLOGY.....	5T32 AM07014-04	78,112
FRANZBLAU, CARL.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07052-04	71,523
HOOD, WILLIAM B, JR.....	BASIC SCIENCE CARDIOVASOLOGY.....	5T32 HL07224-03	115,606
LEIBOWITZ, HOWARD M.....	VISION RESEARCH—MULTIDISCIPLINARY.....	1T32 EY07054-01	94,071
LEVINSKY, NORMAN G.....	NEPHROLOGY.....	5T32 AM07053-04	83,463
MELBY, JAMES C.....	ENDOCRINE AND METABOLIC RESEARCH.....	5T32 AM07201-03	56,188
PETERS, ALAN.....	ANATOMY.....	5T01 GM01979-09	47,086
SINEX, F MAROTT.....	BIOCHEMISTRY OF AGING.....	5T01 AG00020-10	89,316
SMALL, DONALD M.....	LIPOPROTEINS & ATHEROSCLEROTIC LESIONS PHYSICAL CHEM.....	5T32 HL07291-02	51,736
ORGANIZATION TOTAL	11	872,894	
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
GREENE, LLOYD A.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07017-03	136,545
NADAS, ALEXANDER S.....	CARDIOVASCULAR DISEASE—INFANCY, CHILDHOOD & ADOLESCENCE.....	1T32 HL07193-01A2	120,299
NATHAN, DAVID G.....	HEMATOLOGY.....	5T32 HL07146-04	100,512
ORGANIZATION TOTAL	3	357,356	
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
DOHLMAN, CLAES H.....	PHYSIOLOGY AND BIOCHEMISTRY OF CORNEAL DISEASE.....	5T32 EY07018-04	41,237
SCHEPENS, CHARLES L.....	VISUAL SCIENCES—INTERDISCIPLINARY.....	5T32 EY07028-02	57,329
ORGANIZATION TOTAL	2	98,566	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
HARVARD UNIVERSITY ZIP CODE 02138			
ABELMANN, WALTER H.....	CARDIOVASCULAR RESEARCH.....	1T32 HL07374-01	151,833
ABRAMS, HERBERT L.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01910-10	95,623
ABRAMS, HERBERT L.....	CARDIOVASCULAR RADIOLOGY.....	1T32 HL07334-01	38,948
BECKWITH, JONATHAN R.....	GENE EXPRESSION REGULATION IN PROKARYOTES & EUKARYOTES.....	5T32 GM07196-04	201,882
BENACERRAF, BARUJ.....	IMMUNOLOGY.....	5T32 CA09130-04	125,595
BIGGERS, JOHN D.....	REPRODUCTIVE BIOLOGY.....	1T32 HD07130-01	66,458
BJARNGARD, BENGT E.....	MEDICAL RADIOLOGICAL PHYSICS.....	5T32 CA09088-04	97,247
BUNN, H FRANKLIN.....	HEMATOLOGY.....	5T32 HL07142-04	62,000
ESSEX, MAX.....	RICKETTSIOLOGY AND VIROLOGY.....	5T01 AI00014-20	80,984
FISCHBACH, GERALD D.....	DEVELOPMENTAL NEUROBIOLOGY.....	5T32 NS07009-04	90,252
FITZPATRICK, THOMAS B.....	DERMATOLOGY.....	5T32 AM07098-04	56,367
GESCHWIND, NORMAN.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07011-03	39,037
GEYER, ROBERT P.....	NUTRITION IN CARDIOVASCULAR DISEASES.....	5T32 HL07064-04	103,145
GLIMCHER, MELVIN J.....	ACADEMIC ORTHOPEDICS.....	5T32 AM07112-02	57,107
GOLDBERG, IRVING H.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07306-04	118,225
HELLMAN, SAMUEL.....	ACADEMIC RADIOTHERAPY.....	1T32 CA09221-01	39,783
HORTON, JOHN E.....	PERIODONTIA.....	5T32 DE07010-04	116,593
HUANG, ALICE S.....	VIRUS-HOST INTERACTIONS IN CANCER.....	3T32 CA09031-02S1	15,351
HUANG, ALICE S.....	VIRUS-HOST INTERACTIONS IN CANCER.....	5T32 CA09031-04	159,757
HUTCHISON, GEORGE B.....	CANCER EPIDEMIOLOGY.....	2T32 CA09001-04	92,997
KARNOVSKY, MORRIS J.....	PATHOLOGY.....	5T01 GM01235-14	31,737
KARNOVSKY, MORRIS J.....	CELLULAR AND DEVELOPMENTAL BIOLOGY.....	5T32 GM07226-04	183,528
KING, NORVAL W, JR.....	VETERINARY AND COMPARATIVE PATHOLOGY.....	2T32 RR07000-04	66,649
LEEMAN, SUSAN.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07258-04	76,289
LITTLE, JOHN B.....	RADIATION BIOLOGY.....	5T32 CA09078-04	171,086
MEAD, JERE.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07118-04	184,522
MONSON, RICHARD R.....	ENVIRONMENTAL EPIDEMIOLOGY.....	5T32 ES07069-02	187,369
MOORREES, COENRAAD F.....	RESEARCH IN CRANIOFACIAL ANOMALIES.....	5T32 DE07008-03	130,324
O'CONNOR, NICHOLAS E.....	TRAUMA AND BURN RESEARCH.....	5T32 GM07560-02	40,537
PERLMAN, ROBERT L.....	ENDOCRINOLOGY.....	1T32 AM07337-01	54,533
POTTER, DAVID D.....	NEUROBIOLOGY.....	5T32 NS07112-02	142,165
SHKLAR, GERALD.....	ORAL CANCER—CLINICAL.....	5T12 CA08159-05	43,601
SMITH, THOMAS W.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07049-04	160,652
SOLOMON, ARTHUR K.....	BIOPHYSICS.....	5T01 GM00782-20	109,687
SPEIZER, FRANK E.....	CLINICAL EPIDEMIOLOGY OF HEART AND LUNG DISEASE.....	5T01 HL05998-05	132,155
SWARTZ, MORTON N.....	INFECTIOUS DISEASE AND BASIC MICROBIOLOGICAL MECHANISMS.....	5T32 AI07061-03	148,140
UNANUE, EMIL R.....	IMMUNOLOGY.....	5T32 CA09141-04	167,623
VALLEE, BERT L.....	MEDICAL SCIENTIST.....	5T05 GM02220-05	221,402
WELLER, THOMAS H.....	TROPICAL MEDICINE.....	5T01 AI00177-15	103,914
WIESEL, TORSTEN N.....	BASIC NEUROBIOLOGICAL SCIENCES.....	5T32 EY07042-02	133,789
ORGANIZATION TOTAL	40	4,298,886	
JOSLIN DIABETES FOUNDATION ZIP CODE 02215			
CAHILL, GEORGE F, JR.....	DIABETES AND METABOLISM.....	5T32 AM07260-02	55,568
ORGANIZATION TOTAL	1	55,568	
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE 02114			
DOHLMAN, CLAES H.....	OPHTHALMOLOGY.....	5T01 EY00089-05	123,018
ORGANIZATION TOTAL	1	123,018	
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
ALPERT, NATHANIEL M.....	RADIOLOGICAL PHYSICS.....	5T32 CA09076-04	71,835
BLOCH, KURT J.....	IMMUNOLOGY AND IMMUNOPATHOLOGY.....	5T32 AI07040-03	40,452
BURKE, JOHN F.....	RESEARCH IN BURNS AND TRAUMA.....	2T32 GM07035-04	67,051
DVORAK, HAROLD F.....	IMMUNOLOGY AND TUMORS.....	1T32 CA09216-01	41,722
ERBE, RICHARD W.....	DEVELOPMENTAL MEDICINE.....	5T32 HD07092-03	95,313
HABER, EDGAR.....	CARDIOLOGY—MULTIDISCIPLINARY.....	5T32 HL07208-03	76,138

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
ISSELBACHER, KURT J.....	GASTROINTESTINAL DISEASE.....	5T32 AM07191-03	103,396
KAZEMI, HOMAYOUN.....	PULMONARY PATHOPHYSIOLOGY.....	1T32 HL07354-01	71,883
KITZ, RICHARD J.....	BASIC SCIENCE RESEARCH-ANESTHESIOLOGY.....	1T32 GM07592-01	47,715
KRANE, STEPHEN M.....	CONNECTIVE TISSUE STRUCTURE, FUNCTION AND DISEASE.....	5T32 AM07258-02	37,852
POTTS, JOHN T, JR.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07028-04	113,978
RICHARDSON, EDWARD P, JR.....	NEUROPATHOLOGY.....	5T32 NS07069-03	3,842
RUSSELL, PAUL S.....	IMMUNOGENETICS, TRANSPLANTATION, AND TUMOR IMMUNOLOGY.....	5T32 AI07027-03	58,405
STOSSEL, THOMAS P.....	ONCOLOGY AND HEMATOLOGY.....	1T32 CA09321-01	45,785
STRAUSS, H W.....	CARDIOVASCULAR NUCLEAR MEDICINE.....	1T32 HL07416-01	43,104
ORGANIZATION TOTAL	15	918,471	
NEW ENGLAND MEDICAL CENTER HOSPITAL ZIP CODE 02111			
COHEN, JORDAN J.....	RENAL AND ELECTROLYTE PHYSIOLOGY.....	5T32 AM07078-03	58,746
DESFORGES, JANE F.....	RESEARCH IN BLOOD COMPONENTS.....	1T32 HL07437-01	38,407
FANBURG, BARRY L.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07053-04	41,769
KAPLAN, MARSHALL M.....	BIOCHEMISTRY AND IMMUNOLOGY OF DIGESTIVE DISEASES.....	5T32 AM07024-03	37,414
NECHELES, THOMAS F.....	CHEMOTHERAPY OF CHILDHOOD MALIGNANCIES.....	5T32 CA09077-04	44,844
REICHLIN, SEYMOUR.....	CLINICAL AND BASIC NEUROENDOCRINOLOGY.....	5T32 AM07039-04	63,428
SCHWARTZ, BERNARD.....	VISUAL SCIENCES.....	5T32 EY07045-02	59,348
ORGANIZATION TOTAL	7	343,956	
NORTHEASTERN UNIVERSITY ZIP CODE 02115			
ARMINGTON, JOHN C.....	CORRELATIVE METHODS FOR STUDING VISUAL FUNCTION.....	5T32 EY07036-03	39,999
ORGANIZATION TOTAL	1	39,999	
SIDNEY FARBER CANCER INSTITUTE ZIP CODE 02115			
FREI, EMIL, III.....	CANCER TREATMENT AND RESTORATIVE CARE.....	2T32 CA09172-04	214,498
ORGANIZATION TOTAL	1	214,498	
ST. ELIZABETH'S HOSPITAL OF BOSTON ZIP CODE 02135			
EBBE, SHIRLEY N.....	HEMATOLOGY.....	3T01 HL05600-13S1	390
ORGANIZATION TOTAL	1	390	
TUFTS UNIVERSITY ZIP CODE 02111			
PARK, JAMES T.....	MOLECULAR BIOLOGY OF BASIC CELL FUNCTIONS.....	5T32 GM07310-04	75,074
ORGANIZATION TOTAL	1	75,074	
TUFTS-NEW ENGLAND MEDICAL CENTER ZIP CODE 02111			
PIRO, ANTHONY J.....	RADIATION ONCOLOGY.....	5T32 CA09045-04	88,480
ORGANIZATION TOTAL	1	88,480	
CAMBRIDGE			
HARVARD UNIVERSITY ZIP CODE 02138			
GUIDOTTI, GUIDO.....	BIOCHEMISTRY, CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07598-01	369,151
JENKINS, FARISH A, JR.....	BIOLOGY OF THE MUSCULOSKELETAL SYSTEM.....	5T32 GM07117-04	58,977
LOSICK, RICHARD M.....	GENETICS.....	1T32 GM07620-01	203,460
ORGANIZATION TOTAL	3	631,588	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
BRAIDA, LOUIS D.....	AUDITORY PERCEPTION IN NORMAL AND IMPAIRED LISTENERS.....	5T32 NS07099-02	34,799
BROWN, GENE M.....	BIOLOGICAL SCIENCES.....	5T32 GM07287-04	688,520
BUCHI, GEORGE H.....	CARCINOGENESIS AND DRUG DEVELOPMENT.....	5T32 CA09112-04	237,438
EISEN, HERMAN N.....	IMMUNOLOGY.....	1T32 CA09255-01	67,516
HELD, RICHARD M.....	STUDIES OF INTEGRATIVE SYSTEMS.....	5T32 GM07484-02	128,386
LETTYIN, JEROME Y.....	PHYSIOLOGY OF VISION.....	5T01 EY00090-05	96,088
MUNRO, HAMISH N.....	BASIC NUTRITION.....	5T32 AM07095-04	93,811
PEAKE, WILLIAM T.....	AUDITORY PHYSIOLOGY.....	5T32 NS07047-02	60,952

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MASSACHUSETTS—Con.			
SCRIMSHAW, NEVIN S.....	CLINICAL NUTRITION FOR PHYSICIANS.....	5T32 AM07070-03	104,415
SIEBERT, WILLIAM M.....	SYSTEM AND INTEGRATIVE BIOLOGY.....	5T32 GM07301-04	199,239
SINSKEY, ANTHONY J.....	MICROBIOLOGY AND BIOTECHNOLOGY IN DRUG DEVELOPMENT.....	1T32 CA09258-01	31,393
STEVENS, KENNETH N.....	SPEECH SCIENCES.....	5T32 NS07040-04	53,873
WOGAN, GERALD N.....	ENVIRONMENTAL AND FOOD TOXICOLOGY.....	5T32 ES07020-04	150,229
ORGANIZATION TOTAL	13 1,946,659		
WALTHAM			
BRANDEIS UNIVERSITY ZIP CODE 02154			
HALVORSON, HARLYN O.....	GENETIC AND BIOCHEMICAL MECHANISMS OF REGULATION.....	5T32 GM07122-04	81,213
JENCKS, WILLIAM P.....	BASIC BIOMEDICAL RESEARCH AWARD.....	5T32 AM07251-02	39,057
LEVINE, LAWRENCE.....	BIOCHEMISTRY.....	5T01 GM00212-20	156,554
LOWENSTEIN, JOHN M.....	BIOLOGICAL STRUCTURE AND FUNCTION.....	1T32 GM07596-01	42,568
MACEACHRON, ANN E.....	MENTAL RETARDATION.....	5T01 HD00146-10	88,545
NISONOFF, ALFRED.....	INVESTIGATION OF MECHANISMS IN THE IMMUNE RESPONSE.....	5T32 AI07069-02	51,781
ORGANIZATION TOTAL	6 459,718		
WOODS HOLE			
MARINE BIOLOGICAL LABORATORY ZIP CODE 02543			
GROSS, PAUL.....	PHYSIOLOGY AND MOLECULAR BIOLOGY.....	5T01 GM00265-19	90,200
PORTER, KEITH R.....	EMBRYOLOGY.....	5T32 HD07098-02	55,448
ORGANIZATION TOTAL	2 145,648		
WORCESTER			
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605			
BRAVERMAN, LEWIS E.....	INTERDISCIPLINARY STUDIES OF HORMONE FUNCTION.....	1T32 AM07302-01	60,477
ORGANIZATION TOTAL	1 60,477		
STATE TOTAL	128 11,828,804		
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48109			
ALPERN, MATHEW.....	VISION RESEARCH.....	5T32 EY07022-04	106,206
BEIERWALTES, WILLIAM H.....	NUCLEAR MEDICINE.....	2T32 CA09015-04	117,731
BERNSTEIN, ISADORE A.....	ENVIRONMENTAL BIOLOGY: EPIDERMAL NEO- AND HYPERPLASIA.....	5T32 AM07236-03	57,476
BOLE, GILES G, JR.....	ARTHRITIS RESEARCH SCIENTISTS.....	5T32 AM07080-03	58,016
BREWER, GEORGE J.....	GENETICS.....	1T32 GM07544-01A1	266,182
BURCKHALTER, JOSEPH H.....	MEDICINAL CHEMISTRY.....	5T01 GM02010-10	7,413
COHEN, BENNETT J.....	LABORATORY ANIMAL SCIENCE AND MEDICINE.....	5T32 RR07008-02	77,972
COOMBS, CLYDE H.....	MATHEMATICAL PSYCHOLOGY.....	5T01 GM01231-15	109,789
COON, MINOR J.....	BIOCHEMISTRY.....	5T01 GM00187-20	134,421
CORNISH, HERBERT H.....	ENVIRONMENTAL TOXICOLOGY.....	1T32 ES07062-01	134,037
CRAIG, ROBERT G.....	RESTORATIVE DENTAL MATERIALS.....	5T32 DE07057-03	95,032
FAJANS, STEFAN S.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07245-02	74,268
HAGEN, JOHN W.....	DEVELOPMENTAL PSYCHOLOGY.....	5T32 HD07109-02	134,150
HAWKINS, JOSEPH E, JR.....	AUDITORY AND VESTIBULAR MECHANISMS AND DISTURBANCES.....	5T32 NS07106-02	52,701
HERMALIN, ALBERT I.....	POPULATION AND HUMAN ECOLOGY.....	1T32 HD07064-01A1	119,343
HIGGINS, IAN T.....	RESPIRATORY DISEASES—EPIDEMIOLOGY.....	1T32 HL07337-01	47,754
JACQUEZ, JOHN A.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07106-04	175,517
LA DU, BERT.....	PHARMACOLOGY.....	5T01 GM00198-20	9,837

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MICHIGAN—Con.			
LEE, RONALD D.....	ECONOMIC DEMOGRAPHY.....	5T32 HD07060-03	103,234
LEVINE, MYRON.....	MOLECULAR AND CELL BIOLOGY-HEALTH SCIENCES.....	5T32 GM07315-04	185,342
MIDGLEY, A REES, JR.....	REPRODUCTIVE ENDOCRINOLOGY.....	5T32 HD07048-04	105,934
NEEL, JAMES V.....	GENETICS.....	5T32 GM07123-04	90,678
SCHORK, MICHAEL A.....	HEART AND VASCULAR DISEASES-BIOSTATISTICAL.....	5T32 HL07082-03	41,013
SUSSMAN, ALFRED S.....	MEDICINAL CHEMISTRY-INTERDEPARTMENTAL.....	1T32 GM07767-01	219,945
VOORHEES, JOHN J.....	CELL AND MOLECULAR DERMATOLOGY.....	5T32 AM07197-02	33,048
ORGANIZATION TOTAL	25	2,557,039	
DETROIT			
WAYNE STATE UNIVERSITY ZIP CODE 48202			
HARDING, CLIFFORD V.....	CELLULAR BASIS OF OCULAR DISORDERS.....	5T32 EY07034-02	55,480
LEON, MYRON A.....	CANCER IMMUNOLOGY AND VIROLOGY.....	1T32 CA09304-01	49,879
MARKS, BERNARD H.....	PHARMACOLOGY.....	5T32 GM07176-04	56,528
PARRISH, CHARLES J.....	SOCIAL POLICY AND AGING.....	5T32 AG00002-02	69,665
POLGAR, GEORGE.....	RESEARCH TECHNIQUES AND THEIR APPLICATION.....	5T32 HL07228-02	38,219
ORGANIZATION TOTAL	5	269,771	
EAST LANSING			
MICHIGAN STATE UNIVERSITY ZIP CODE 48823			
BRODY, THEODORE M.....	PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07392-02	76,038
MC CORMICK, J JUSTIN.....	ENVIRONMENTAL MUTAGENESIS-CARCINOGENESIS.....	1T32 ES07076-01	33,169
MICHELAKIS, ANDREW M.....	CLINICAL PHARMACOLOGY.....	5T32 GM07096-04	44,676
SCOTT, JERRY B.....	CARDIOVASCULAR PHYSIOLOGY AND PATHOPHYSIOLOGY.....	1T32 HL07404-01	69,024
THOMAS, J W.....	NUTRITION.....	5T01 GM01818-10	94,438
ORGANIZATION TOTAL	5	317,345	
ROCHESTER			
OAKLAND UNIVERSITY ZIP CODE 48063			
REDDY, VENKAT N.....	OPHTHALMIC PHYSIOLOGY AND BIOCHEMISTRY.....	3T32 EY07044-01S1	2,592
REDDY, VENKAT N.....	OPHTHALMIC PHYSIOLOGY AND BIOCHEMISTRY.....	5T32 EY07044-02	75,053
ORGANIZATION TOTAL	2	77,645	
STATE TOTAL	37	3,221,800	
MINNESOTA			
AUSTIN			
UNIVERSITY OF MINNESOTA AT AUSTIN ZIP CODE 55912			
HOLMAN, RALPH T.....	LIPID RESEARCH.....	1T32 HL07311-01	68,800
ORGANIZATION TOTAL	1	68,800	
DULUTH			
UNIVERSITY OF MINNESOTA AT DULUTH ZIP CODE 55812			
POZOS, ROBERT S.....	INDIAN RESEARCH CAREERS-PHYSIOLOGY.....	1T32 GM07680-01	66,518
ORGANIZATION TOTAL	1	66,518	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MINNESOTA—Con.			
MINNEAPOLIS			
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS ZIP CODE 55455			
ACKERMAN, EUGENE.....	HEALTH COMPUTER SCIENCES.....	5T01 LM00160-05	118,855
BLACKBURN, HENRY W.....	PREVENTION OF CARDIOVASCULAR DISEASES.....	5T32 HL07036-02	63,065
CARPENTER, ANNA M.....	DIABETES RESEARCH.....	5T32 AM07196-03	35,992
COHN, JAY N.....	MULTIDISCIPLINARY CARDIOVASCULAR RESEARCH.....	5T32 HL07184-03	127,689
GOLTZ, ROBERT W.....	ACADEMIC DERMATOLOGY.....	5T32 AM07165-03	28,282
JACOB, HARRY S.....	HEMOGLOBIN AND CELL MEMBRANE RESEARCH.....	5T32 HL07062-02	65,731
KJELSBERG, MARCUS O.....	BIOMETRY OF CARDIOVASCULAR CLINICAL TRIALS.....	5T32 HL07023-04	34,110
KRIVIT, WILLIAM.....	HEMATOLOGY.....	5T32 HL07145-04	35,934
KRONENBERG, RICHARD S.....	MULTIDISCIPLINARY RESEARCH FELLOWSHIP AWARD.....	5T32 HL07009-03	39,057
LUCAS, RUSSELL V, JR.....	PEDIATRIC CARIOLOGY.....	1T32 HL07359-01A1	66,801
LUEPKER, RUSSELL V.....	BEHAVIORAL ASPECTS OF CARDIOVASCULAR DISEASE.....	1T32 HL07328-01	46,905
MIRKIN, BERNARD L.....	DEVELOPMENTAL AND PEDIATRIC CLINICAL PHARMACOLOGY.....	5T32 GM07466-02	42,225
NAJARIAN, JOHN S.....	IMMUNOLOGY AND ITS RELATION TO SURGERY.....	2T32 CA09024-04	38,963
OPPENHEIMER, JACK H.....	DIABETES, ENDOCRINOLOGY, AND METABOLISM.....	5T32 AM07203-02	58,382
PAPARELLA, MICHAEL M.....	OTOLOGY.....	5T32 NS07084-02	44,077
PICK, HERBERT L, JR.....	CENTER FOR RESEARCH IN HUMAN LEARNING.....	1T32 HD07151-01	174,421
PLAGEMANN, PETER G.....	MICROBIOLOGY—CANCER.....	5T32 CA09138-04	105,061
QUIE, PAUL G.....	INFECTIOUS DISEASES IN PEDIATRICS.....	5T32 AI07054-02	58,230
SCHACHTELE, CHARLES F.....	DENTISTRY.....	5T32 DE07014-04	89,362
SHOEMAN, FREDERICK E.....	PHARMACOLOGY, TOXICOLOGY AND ALLIED SCIENCES.....	5T32 GM07397-02	109,816
SOINE, TAITO O.....	MEDICINAL CHEMISTRY.....	5T32 GM07480-02	32,619
VERNIER, ROBERT L.....	PEDIATRIC NEPHROLOGY.....	5T32 AM07087-04	77,738
WANNAMAKER, LEWIS W.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07116-04	83,282
WATSON, DENNIS W.....	MICROBIOLOGY.....	5T01 GM00966-17	46,630
WILSON, IVAN D.....	DIGESTIVE AND LIVER DISEASES.....	5T32 AM07177-03	40,786
ORGANIZATION TOTAL 25	1,664,013		
ROCHESTER			
AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY ZIP CODE 55901			
FONT, RAMON I.....	OPHTHALMIC PATHOLOGY.....	5T32 EY07040-02	58,005
ORGANIZATION TOTAL 1	58,005		
MAYO FOUNDATION ZIP CODE 55901			
BLINKS, JOHN R.....	PHARMACOLOGY.....	1T32 GM07624-01	14,915
BROWN, RONALD D.....	HYPERTENSION (MULTIDISCIPLINARY).....	5T32 HL07269-02	115,443
GLEICH, GERALD J.....	ALLERGIC DISEASES.....	5T32 AI07047-03	42,591
GO, VAY L.....	DIGESTIVE DISEASES—MULTIDISCIPLINARY.....	5T32 AM07198-03	58,408
GORMAN, COLUM A.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07147-03	94,022
HYATT, ROBERT E.....	LUNG DISEASES.....	5T32 HL07222-03	75,852
KNOX, FRANKLYN G.....	KIDNEY DISEASES.....	5T32 AM07013-04	73,276
KOTTKE, BRUCE A.....	ATHEROSCLEROSIS AND NUTRITION.....	1T32 HL07329-01	39,264
MANN, KENNETH G.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07069-04	55,743
MC OUFFIE, FREDERIC C.....	ARTHRITIS.....	5T32 AM07034-04	72,681
RYAN, ROBERT J.....	REPRODUCTIVE BIOLOGY.....	5T32 HD07108-02	50,934
TANCREO, ROBERT G.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07111-04	112,405
TOMASI, THOMAS B, JR.....	TUMOR IMMUNOLOGY.....	5T32 CA09127-04	115,044
ORGANIZATION TOTAL 13	920,578		
SAINT PAUL			
UNIVERSITY OF MINNESOTA AT SAINT PAUL ZIP CODE 55455			
CARR, CHARLES.....	CHEMICAL BASES OF CELL AND MOLECULAR BIOLOGY.....	5T32 GM07323-04	135,652
SAUERBIER, WALTER.....	GENETIC MECHANISMS AND REGULATION.....	5T32 GM07094-04	169,523
ORGANIZATION TOTAL 2	305,175		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MINNESOTA—Con.			
STATE TOTAL	43	3,083,089	
MISSISSIPPI			
JACKSON			
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER		ZIP CODE 39216	
COLEMAN, THOMAS G.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	1T32 GM07600-01	25,007
HAYES, A WALLACE.....	TOXICOLOGY.....	5T32 ES07045-02	70,460
KLEIN, RICHARD L.....	HYPERTENSION RESEARCH PROGRAM.....	1T32 HL07392-01	16,263
ORGANIZATION TOTAL	3	111,730	
TOUGALOO			
TOUGALOO COLLEGE		ZIP CODE 39174	
MEHROTRA, BHARATI.....	HONORS SCIENCE RESEARCH.....	5T32 GM07651-02	64,048
ORGANIZATION TOTAL	1	64,048	
UNIVERSITY			
UNIVERSITY OF MISSISSIPPI		ZIP CODE 38677	
GILMORE, W FRANKLIN.....	PHARMACEUTICAL SCIENCES.....	5T32 GM07099-04	53,049
ORGANIZATION TOTAL	1	53,049	
STATE TOTAL	5	228,827	
MISSOURI			
COLUMBIA			
UNIVERSITY OF MISSOURI-COLUMBIA		ZIP CODE 65201	
DAVIS, JAMES O.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07094-04	77,742
EISENSTARK, ABRAHAM.....	GENETICS.....	5T32 GM07494-02	37,105
HARRIS, PATRICK.....	CARDIOVASCULAR CONTROL IN ALTERED METABOLIC STATES.....	5T32 HL07187-03	16,135
JONES, ALLAN W.....	GENESIS AND MAINTENANCE OF EXPERIMENTAL HYPERTENSION.....	1T32 HL07394-01	9,019
LINDBERG, DONALD A.....	MEDICAL INFORMATION SCIENCE.....	5T15 LM07006-04	170,310
MIDDLETON, CHARLES C.....	LABORATORY ANIMAL MEDICINE.....	5T32 RR07004-02	56,404
ORGANIZATION TOTAL	6	366,715	
KANSAS CITY			
UNIVERSITY OF MISSOURI-KANSAS CITY		ZIP CODE 64110	
PETERSON, WARREN A.....	ADULT DEVELOPMENT AND AGING.....	5T01 AG00018-11	182,788
ORGANIZATION TOTAL	1	182,788	
SAINT LOUIS			
JEWISH HOSPITAL OF ST. LOUIS		ZIP CODE 63110	
LUBOWITZ, HERBERT.....	CARDIOVASCULAR-COAGULATION PROBLEMS IN NEPHROLOGY.....	5T01 HL06008-05	58,459
OLIVER, G CHARLES.....	ACADEMIC CARDIOLOGY.....	5T01 HL06011-05	39,613
ORGANIZATION TOTAL	2	98,072	
ST. LOUIS UNIVERSITY		ZIP CODE 63103	
GREEN, MAURICE.....	MOLECULAR AND TUMOR VIROLOGY.....	5T32 CA09222-02	49,414

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
MISSOURI—Con.			
OLSON, ROBERT E	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07050-04	189,403
ORGANIZATION TOTAL	2	238,817	
WASHINGTON UNIVERSITY ZIP CODE 63130			
ALPERS, DAVID H.....	CLINIC/LABORATORY—ACADEMIC GASTROENTEROLOGY	5T32 AM07130-04	36,760
ATKINSON, JOHN P.....	IMMUNOLOGY OF CONNECTIVE TISSUE DISEASES.....	5T32 AM07279-02	18,112
AVIOLI, LOUIS V.....	MINERAL AND SKELETAL METABOLISM.....	5T32 AM07033-04	78,058
BALLINGER, WALTER F, II.....	SURGERY.....	5T01 GM00371-18	73,101
BALLINGER, WALTER F, II.....	TRAUMA AND BURNS RESEARCH.....	1T32 GM07602-01	56,720
BANASZAK, LEONARD J.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07067-04	249,494
BAUER, WALTER C.....	TUMOR BIOLOGY—MULTIRESOURCE PROGRAM.....	5T32 CA09118-04	205,576
BOTWINICK, JACK.....	AGING AND DEVELOPMENT.....	5T32 AG00030-02	58,203
BUNGE, RICHARD P.....	NEUROBIOLOGY.....	5T32 NS07071-02	311,760
COWAN, W MAXWELL.....	VISION RESEARCH.....	5T01 EY00092-05	123,910
DAUGHAOAY, WILLIAM H.....	DIABETES AND RELATED METABOLIC DISEASES.....	5T32 AM07120-04	111,510
DAVIE, JOSEPH M.....	IMMUNOLOGY AND MEMBRANES.....	5T32 GM07157-04	144,163
EISEN, ARTHUR Z.....	DERMATOLOGY.....	1T32 AM07284-01	36,860
GLASER, LUIS.....	MEDICAL SCIENTIST.....	5T32 GM07200-04	484,397
HUNT, CARLTON C.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07057-03	180,292
JARETT, LEONARD.....	CELL BIOLOGIC APPROACHES TO DIABETES RESEARCH.....	1T32 AM07296-01	97,644
KLAHR, SAULO.....	RENAL DISEASES.....	5T32 AM07126-04	76,810
KOBAYASHI, GEORGE S.....	FUNGAL DISEASES.....	5T32 AI07015-03	66,168
LIEBERMAN, MICHAEL W.....	MECHANISMS OF DISEASE IN ENVIRONMENTAL PATHOLOGY.....	5T32 ES07066-02	289,104
LOWRY, OLIVER H.....	BIOCHEMICAL PHARMACOLOGY.....	5T01 GM00096-20	42,375
LOWRY, OLIVER H.....	NEUROPHARMACOLOGY RESEARCH.....	1T32 NS07129-01	86,932
MAJERUS, PHILIP W.....	HEMATOLOGY.....	5T32 HL07088-04	122,470
MEDOFF, GERALD.....	INFECTIOUS DISEASES.....	5T01 AI00459-05	54,159
MOLNAR, CHARLES E.....	ANALYTICAL AND COMPUTATIONAL METHODS IN PHYSIOLOGY.....	1T32 GM07564-01	58,071
NEELEMAN, PHILIP.....	BLOOD VESSELS & HEART—FUNCTION REGULATION PHARMACOLOGY.....	5T32 HL07275-02	131,677
PARKER, CHARLES W.....	ALLERGY AND IMMUNOLOGY.....	2T32 AI00112-04	79,917
PIERCE, JOHN A.....	PULMONARY SCIENTIST.....	1T32 HL07317-01	75,156
PRENSKY, ARTHUR L.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07027-03	67,376
RASKAS, HESCHEL J.....	MOLECULAR VIROLOGY.....	5T32 CA09129-04	93,742
SHANK, ROBERT E.....	NUTRITION.....	5T32 AM07226-02	39,057
SHERMAN, LAURENCE A.....	BLOOD BANKING.....	5T32 HL07038-04	89,359
SHREFFLER, DONALD C.....	IMMUNOLOGY AND IMMUNOGENETICS.....	1T32 AI07163-01	132,649
SOBEL, BURTON E.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07081-04	141,020
WIEST, WALTER G.....	REPRODUCTIVE BIOLOGY.....	5T01 HO00379-05	76,539
ORGANIZATION TOTAL	34	3,989,141	
STATE TOTAL	45	4,875,533	

NEBRASKA

OMAHA

UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER		ZIP CODE 68105	
METCALF, WILLIAM K.....	DEVELOPMENTAL BASIS OF INFANT MORBIDITY AND MORTALITY.....	5T32 HD07097-02	33,512
ORGANIZATION TOTAL	1	33,512	
STATE TOTAL	1	33,512	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW HAMPSHIRE			
HANOVER			
DARTMOUTH COLLEGE ZIP CODE 03755			
VALTIN, HEINZ.....	RENAL AND NEUROHYPOPHYSICAL FUNCTION AND DISEASE.....	1T32 AM07301-01	33,271
ORGANIZATION TOTAL	1 33,271		
STATE TOTAL	1 33,271		
NEW JERSEY			
NEW BRUNSWICK			
RUTGERS THE STATE UNIVERSITY NEW BRUNSWICK ZIP CODE 08903			
ABOU-SABE, MORAD A.....	GENETICS.....	5T32 GM07129-04	51,438
ORGANIZATION TOTAL	1 51,438		
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY--RUTGERS MEDICAL SCHOOL ZIP CODE 08854			
SCHLESINGER, R. WALTER.....	VIRAL AND CELLULAR GENOME FUNCTIONS IN CANCER.....	5T32 CA09069-04	145,965
ORGANIZATION TOTAL	1 145,965		
PRINCETON			
PRINCETON UNIVERSITY ZIP CODE 08540			
COALE, ANSLEY J.....	DEMOGRAPHY.....	5T01 HD00110-11	72,805
COX, EDWARD C.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07312-04	198,768
LEVINE, ARNOLD J.....	CANCER.....	5T32 CA09167-04	329,881
NEWTON, AUSTIN.....	GENETICS.....	5T32 GM07388-02	143,892
WORCEL, ABRAHAM.....	GENETICS.....	1T32 GM07625-01	98,236
ORGANIZATION TOTAL	5 843,582		
STATE TOTAL	7 1,040,985		
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF NEW MEXICO ZIP CODE 87131			
GRIEGO, RICHARD J.....	MATHEMATICAL MODELS AND CURRICULA IN BIOLOGY.....	5T32 GM07661-02	86,674
KELSEY, CHARLES A.....	BIOMEDICAL PHYSICS AND RADIOBIOLOGY.....	1T32 CA09278-01A1	21,233
WILLIAMS, RALPH C, JR.....	IMMUNE MECHANISMS IN THE CONNECTIVE TISSUE DISEASES.....	5T32 AM07173-03	58,374
ORGANIZATION TOTAL	3 166,281		
UNIVERSITY PARK			
NEW MEXICO STATE UNIVERSITY LAS CRUCES CAMPUS ZIP CODE 88001			
BERNSTEIN, MARVIN H.....	BIOMEDICAL SCIENCES.....	5T32 GM07667-02	68,927
ORGANIZATION TOTAL	1 68,927		
STATE TOTAL	4 235,208		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK			
ALBANY			
NEW YORK STATE DEPARTMENT OF HEALTH ZIP CODE 12237			
DODDS, W JEAN	COMPARATIVE HEMOSTASIS	5T32 HL07173-02	40,579
ORGANIZATION TOTAL 1	40,579		
UNION COLLEGE AND UNIVERSITY-ALBANY MEDICAL COLLEGE ZIP CODE 122D8			
ABRAHAM, RAJENDER	COMPARATIVE ENVIRONMENTAL TOXICOLOGY	1T32 ES07058-01	106,838
LEE, KYU T.	CARDIOVASCULAR DISEASE RESEARCH	5T32 HL07194-03	142,049
REINECKE, ROBERT D.	ACADEMIC OPHTHALMOLOGY	5T32 EY07037-03	44,521
SABA, THOMAS M.	TRAUMATOLOGY	5T32 GM07033-04	103,922
ORGANIZATION TOTAL 4	397,330		
BUFFALO			
NEW YORK STATE DEPARTMENT OF HEALTH-ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
GRAHAM, SAXON	MEDICAL SOCIOLOGY, EPIDEMIOLOGY AND CANCER CONTROL	5T32 CA09051-04	41,375
HIGBY, DONALD J.	CANCER CHEMOTHERAPY	5T32 CA09108-04	63,567
MIHICH, ENRICO	DRUG DEVELOPMENT AND CANCER THERAPEUTICS	2T32 CA09072-04	102,470
PAIGEN, KENNETH	MAMMALIAN BIOCHEMICAL GENETICS	5T32 GM07093-04	70,222
ORGANIZATION TOTAL 4	277,634		
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
GENCO, ROBERT J.	PERIODONTAL DISEASES	5T32 DE07034-04	245,789
MILGROM, FELIX	IMMUNOLOGY	5T32 AI07088-02	61,841
MURRAY, DANIEL H.	PHARMACOLOGICAL SCIENCES	5T32 GM07145-04	118,502
NOELL, WERNER K.	EYE PHYSIOLOGY AND BIOCHEMISTRY	5T32 EY07019-04	84,433
SOLO, ALAN J.	DEVELOPMENT OF ANTICANCER DRUGS	5T32 CA09166-04	110,122
ORGANIZATION TOTAL 5	620,687		
COLD SPRING HARBOR			
COLD SPRING HARBOR LABORATORY ZIP CODE 11724			
ZIPSER, DAVID	CANCER CELL BIOLOGY AND TUMOR VIROLOGY	1T32 CA09311-01	121,520
ORGANIZATION TOTAL 1	121,520		
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
EDELSTEIN, STUART J.	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07273-04	371,750
LEWIS, ROBERT M.	PATHOBIOLOGY OF AGING	1T32 AG00062-01	42,181
NESHEIM, MALDEN C.	NUTRITION	5T32 AM07158-03	61,108
SALPETER, MIRIAM M.	CELLULAR AND MOLECULAR NEUROBIOLOGY	5T32 GM07469-02	27,801
WILKINSON, CHRISTOPHER F.	ENVIRONMENTAL TOXICOLOGY	5T32 ES07052-02	150,927
ZILVERSMIT, DONALD B.	NUTRITIONAL ASPECTS OF ARTERIOSCLEROSIS	5T32 HL07245-02	51,991
ORGANIZATION TOTAL 6	705,758		
NEW YORK			
CITY UNIVERSITY OF NEW YORK-CITY COLLEGE OF NEW YORK ZIP CODE 10031			
FISHMAN, MYER M.	BIOMEDICAL SCIENCES	1T32 GM07639-01	62,583
ORGANIZATION TOTAL 1	62,583		
CITY UNIVERSITY OF NEW YORK-GRAUATE SCHOOL AND UNIVERSITY CENTER ZIP CODE 10036			
GLICK, JOSEPH A.	HUMAN DEVELOPMENT	5T01 HD00231-10	79,746
ORGANIZATION TOTAL 1	79,746		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
CITY UNIVERSITY OF NEW YORK—MEOGAR EVERS COLLEGE ZIP CODE 11225			
PAUL, DENIS F.....	SCIENCE CAREER OPPORTUNITIES.....	5T32 GM07641-02	130,100
ORGANIZATION TOTAL	1 130,100		
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029			
BEATTIE, DIANA S.....	PATHOBIOLOGY OF MEMBRANES AND THEIR FUNCTIONS.....	5T32 GM07036-04	99,455
GELLER, STEPHEN A.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00115-20	11,611
HERMAN, MICHAEL V.....	CARDIOVASOLOGY.....	1T32 HL07347-01	56,225
HIRSCHHORN, KURT.....	MENTAL RETARDATION AND DEVELOPMENTAL DISABILITIES.....	5T32 HD07105-02	105,748
HOLLAND, JAMES F.....	CHEMOTHERAPY AND CHEMOIMMUNOTHERAPY.....	5T32 CA09102-04	115,447
KILBOURNE, EDWIN D.....	MEDICAL MICROBIOLOGY AND IMMUNOLOGY.....	5T01 AI00439-05	58,728
KRIEGER, DOROTHY T.....	ENDOCRINOLOGY (INTERDISCIPLINARY).....	5T32 AM07027-02	76,636
KRULWICH, TERRY A.....	MEDICAL SCIENTIST.....	5T32 GM07280-02	74,383
MITTAG, THOMAS W.....	BIOMEDICAL SCIENCES—PHARMACOLOGY.....	5T32 GM07163-04	62,739
NICHOLSON, WILLIAM J.....	BIOLOGICAL EFFECTS OF ENVIRONMENTAL AGENTS.....	1T32 ES07010-01A1	33,880
SAFIR, ARAN.....	COMPUTERS AND MEDICINE.....	5T15 LM07008-04	209,366
SCOTT, WALTER N.....	MULTIDISCIPLINARY EYE DISEASES.....	5T32 EY07014-04	80,374
ORGANIZATION TOTAL	12 984,592		
COLUMBIA UNIVERSITY ZIP CODE 10027			
BALAZS, ENDRE A.....	OPHTHALMOLOGY.....	5T32 EY07002-04	101,603
BENDIXEN, HENRIK H.....	ANESTHESIOLOGY.....	1T32 GM07603-01	41,688
BEYCHOK, SHERMAN.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07216-04	131,596
BIGGER, JOHN T, JR.....	CARDIOVASCULAR RESEARCH.....	1T32 HL07406-01	62,277
BRASEL, JO ANNE.....	GROWTH AND DEVELOPMENT.....	5T32 HD07000-04	114,045
BUTLER, VINCENT P, JR.....	IMMUNOLOGY.....	5T32 AI07132-02	57,255
CALDWELL, PETER R.....	MECHANISMS OF LUNG INJURY AND RESPIRATORY FAILURE.....	5T32 HL07018-04	58,607
CHIEN, SHU.....	RHEOLOGY IN CARDIOVASCULAR DISEASES.....	5T32 HL07114-04	116,278
EDELMAN, ISIDORE S.....	STEROID HORMONES; BIOCHEMISTRY AND MOLECULAR BIOLOGY.....	1T32 AM07328-01	103,072
FRANTZ, ANDREW G.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07271-02	94,194
GERSHON, MICHAEL D.....	NEUROBIOLOGY.....	3T32 NS07062-02S1	3,593
GERSHON, MICHAEL D.....	NEUROBIOLOGY.....	5T32 NS07062-03	91,833
GERSONY, WELTON M.....	PEDIATRICS—CARDIOVASCULAR.....	1T32 HL07419-01	78,800
GINSBERG, HAROLD S.....	INFECTIOUS DISEASES—MICROBIOLOGY.....	1T32 AI07161-01	71,491
GLICKMAN, ROBERT M.....	GASTROENTEROLOGY.....	1T32 AM07330-01	79,956
GOODMAN, DE WITT S.....	ARTERIOSCLEROSIS RESEARCH.....	1T32 HL07343-01	96,397
GREENBAUM, LOWELL M.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07182-04	134,542
GREENBAUM, LOWELL M.....	MEDICAL SCIENTIST.....	5T32 GM07367-02	185,012
GREENBAUM, LOWELL M.....	MEDICAL SCIENTIST.....	5T32 GM07367-03	279,115
HARBER, LEONARD C.....	PHOTOBIOLOGIC & ENVIRONMENTAL FACTORS IN SKIN DISEASE.....	5T32 AM07171-03	37,873
HOFFMAN, BRIAN F.....	CARDIAC ARRHYTHMIAS: MECHANISMS AND TREATMENT.....	5T32 HL07271-02	112,307
JAGIELLO, GEORGIANA M.....	GENETIC AND HORMONE CONTROL OF GAMETOGENESIS.....	5T32 HD07093-03	53,898
JAMES, L STANLEY.....	PERINATAL MEDICINE AND RESEARCH.....	5T32 HD07017-04	118,182
KING, DONALD W.....	PATHOLOGY AND PATHOBIOLOGY.....	5T01 GM02050-10	87,813
KING, DONALD W.....	PATHOBIOLOGY.....	5T32 GM07161-04	101,948
KROOTH, ROBERT S.....	GENETICS, DEVELOPMENT AND NUTRITION.....	5T32 GM07088-04	181,620
KROOTH, ROBERT S.....	POSTDOCTORAL INSTITUTIONAL FELLOWSHIP AWARD.....	5T32 GM07419-02	119,761
LIEBERMAN, SEYMOUR.....	BIOCHEMISTRY OF REPRODUCTIVE ENDOCRINOLOGY.....	5T32 HD07061-03	34,720
MELLINS, ROBERT B.....	PEDIATRIC PULMONARY DISEASE.....	5T01 HL06012-05	92,856
ROSSI, HARALD H.....	RADIATION BIOPHYSICS.....	5T32 CA09053-04	21,084
STEIN, ZENA A.....	EPIDEMIOLOGY OF MENTAL RETARDATION RESEARCH.....	5T32 HD07040-03	153,612
WINICK, MYRON.....	NUTRITION.....	1T32 AM07268-01	59,055
WINTERS, ROBERT W.....	PEDIATRIC NEPHROLOGY, ALLIED FIELDS & RENAL IMMUNOLOGY.....	5T01 HD00440-05	114,180
ORGANIZATION TOTAL	33 3,190,263		
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021			
BEARN, ALEXANDER G.....	BIOMEDICAL SCIENCES.....	5T05 GM02243-05	162,670
BRISCOE, WILLIAM A.....	PULMONARY DISEASES.....	5T32 HL07233-03	78,896

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
ELLIS, JOHN T	PATHOLOGY	5T01 GM00078-20	43,35
JAVITT, NORMAN B	GASTROENTEROLOGY	5T32 AM07142-04	55,74
LARAGH, JOHN H	PATHOGENESIS OF HYPERTENSION AND VASCULAR DISEASE	1T32 HL07379-01	85,30
MAACK, THOMAS M	PHYSIOLOGY	5T01 GM01737-10	33,83
MC CRORY, WALLACE W	DEVELOPMENTAL NEPHROLOGY	5T01 HD00383-05	49,81
NACHMAN, RALPH L	HEMATOLOGY	5T32 HL07029-04	61,69
REIDENBERG, MARCUS M	CLINICAL PHARMACOLOGY	5T32 GM07488-02	37,13
REIS, DONALD J	CENTRAL NEURAL CONTROL OF THE CIRCULATION	1T32 HL07378-01	33,48
RIKER, WALTER F, JR	PHARMACOLOGICAL SCIENCES	5T32 GM07547-02	82,94
ROBERTS, RICHARD B	INFECTIOUS DISEASES	5T01 AI00465-05	49,14
ROBERTS, RICHARD B	VENEREAL DISEASES	5T32 AI07003-03	54,09
SHIRES, GEORGE T	TRAUMA AND BURN RESEARCH	5T32 GM07381-02	36,43
WINDHAGER, ERICH E	RENAL FUNCTION IN HEALTH AND DISEASE	5T32 AM07152-03	55,98
ORGANIZATION TOTAL	15 920,524		
HOSPITAL FOR SPECIAL SURGERY ZIP CODE 10021			
POSNER, AARON S	ORTHOPEDICS	1T32 AM07281-01	48,64
ORGANIZATION TOTAL	1 48,640		
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
SCHOTTENFELD, DAVID	CANCER EPIDEMIOLOGY	1T32 CA09192-01	34,32
ORGANIZATION TOTAL	1 34,323		
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
SPAET, THEODORE H	HEMATOLOGY	5T32 HL07080-04	56,39
SURKS, MARTIN I	INVESTIGATIVE ENDOCRINOLOGY	5T32 AM07004-04	56,36
ORGANIZATION TOTAL	2 112,758		
NEW YORK BLOOD CENTER ZIP CODE 10021			
MAZUR, ABRAHAM	BLOOD BANKING SCIENCES	1T32 HL07331-01	85,26
ORGANIZATION TOTAL	1 85,269		
NEW YORK UNIVERSITY ZIP CODE 10003			
ALBERT, ROY E	ENVIRONMENTAL ONCOLOGY	1T32 ES07081-01	82,84
COX, RODY P	MEDICAL SCIENTIST	5T32 GM07308-04	477,96
DEFENDI, VITTORIO	CANCER	5T32 CA09161-04	230,92
DEFENDI, VITTORIO	BASIC PATHOBIOLOGY	5T32 GM07552-02	91,35
FRANKLIN, EDWARD C	ARTHRITIS	5T32 AM07176-03	54,13
KAUFMAN, LLOYD	VISION RESEARCH	5T32 EY07003-04	49,35
KOPF, ALFRED W	IMMUNOLOGY, MICROBIOLOGY, DERMATOPATHOLOGY	5T32 AM07190-03	55,27
LAWRENCE, H SHERWOOD	CELLULAR IMMUNOLOGY	5T01 AI00005-19	60,80
MC FALL, ELIZABETH	MICROBIOLOGY	5T01 GM01290-15	52,21
SABATINI, DAVID D	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07238-04	100,59
SILBER, ROBERT	HEMATOLOGY	5T32 HL07151-04	118,23
VANDERBERG, JEROME P	PARASITOLOGY	5T01 AI00361-09	46,57
YEATES, DONOVAN B	PHYSIOLOGY OF LUNG CLEARANCE	5T32 HL07263-02	40,40
ZADUNAISKY, JOSE A	PHYSIOLOGY AND BIOCHEMISTRY OF THE EYE	5T32 EY07009-04	101,23
ORGANIZATION TOTAL	14 1,561,918		
ROCKEFELLER UNIVERSITY ZIP CODE 10021			
CHOPPIN, PURNELL W	MECHANISMS IN VIRUS INFECTION AND TRANSFORMATION	5T32 CA09256-03	129,26
MC CARTY, MACLYN	BASIC PATHOBIOLOGY	5T32 GM07245-04	135,13
PFAMMANN, CARL	BIOLOGICAL BASIS OF BEHAVIOR	5T32 GM07524-02	133,54
ORGANIZATION TOTAL	3 397,934		
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021			
BENNETT, DOROTHEA	DEVELOPMENTAL GENETICS	1T32 GM07718-01	63,88
BURCHENAL, JOSEPH H	CANCER CHEMOTHERAPY	5T32 CA09207-02	265,43

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
CHOI, YONG S	IMMUNOLOGY RESEARCH	5T32 CA09149-03	294,382
GOOD, ROBERT A	IMMUNOBIOLOGY OF AGING	1T32 AG00054-01	68,499
HUTCHISON, DORRIS J	CANCER	3T32 CA09055-03S1	48,970
LAUGHLIN, JOHN S	RADIATION ONCOLOGY	1T32 CA09022-01A1	44,965
MOORE, MALCOLM A	TUMOR BIOLOGY	1T32 CA09190-01	31,660
MURPHY, MARTIN J, JR	HEMATOLOGY	5T32 AM07266-02	92,465
SANDERS, F KINGSLEY	MOLECULAR BIOLOGY OF CELL REGULATION	1T32 CA09193-01A1	35,507
SONENBERG, MARTIN	ENDOCRINOLOGY	1T32 AM07313-01	37,282
ORGANIZATION TOTAL	10	983,051	
STATE UNIVERSITY OF NEW YORK—DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
FURCHGOTT, ROBERT F	PHARMACOLOGICAL SCIENCES	1T32 GM07615-01	66,652
MORSE, STEPHEN I	IMMUNOLOGY	5T32 AI07131-02	32,756
RIEDER, RONALD F	RESEARCH OF BLOOD DISEASES	1T32 AM07289-01	38,652
ORGANIZATION TOTAL	3	138,060	
YESHIVA UNIVERSITY ZIP CODE 10033			
ARIAS, IRWIN M	GASTROENTEROLOGY-HEPATOLOGY RESEARCH	5T32 AM07218-03	77,999
BARNETT, HENRY L	HUMAN DEVELOPMENTAL BIOLOGY	5T32 HD07053-04	141,813
BAUM, STEPHEN G	MEDICAL SCIENTIST	5T32 GM07288-04	612,466
EDER, HOWARD A	PLASMA LIPOPROTEINS AND APOPROTEINS	1T32 HL07383-01	56,676
GOLDFISCHER, SIDNEY L	PATHOBIOLOGY OF CONNECTIVE TISSUE	5T32 GM07168-04	75,313
HAYS, RICHARD M	NEPHROLOGY—MULTIDISCIPLINARY	5T32 AM07089-04	96,990
HORWITZ, SUSAN B	PHARMACOLOGICAL SCIENCES	5T32 GM07260-04	104,835
HURWITZ, JERARD	VIRAL ONCOLOGY & TUMOR BIOLOGY	5T32 CA09060-04	254,259
HURWITZ, JERARD	BIOMEDICAL SCIENCES	5T32 GM07491-02	161,396
JAFFE, ERNST R	RESEARCH IN RED BLOOD CELL DISEASES	1T32 AM07294-01	36,379
KLINGER, HAROLD P	MEDICAL GENETICS	2T32 GM07001-04	117,826
LILLY, FRANK	IMMUNOLOGY AND IMMUNOONCOLOGY	5T32 CA09173-04	291,402
MARCUS, DONALD M	ARTHRITIS & BONE DISEASES	5T32 AM07273-02	40,023
MARMUR, JULIUS	GENETICS AND BIOCHEMISTRY OF CELLULAR REGULATION	5T32 GM07128-04	126,160
RAINE, CEDRIC S	EXPERIMENTAL NEUROPATHOLOGY	1T32 NS07098-01A1	87,312
ROSEN, ORA M	DIABETES MELLITUS AND METABOLIC DISEASES	1T32 AM07329-01	49,715
SCARPELLI, EMILE M	MULTIDISCIPLINARY RESPIRATORY DISEASES	5T32 HL07060-04	124,007
SCHEUER, JAMES	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES	5T32 HL07071-04	239,110
SEIFTER, SAM	BIOCHEMISTRY OF CELLULAR AGING	1T32 AG00052-01	79,256
SPITZER, ADRIAN	DEVELOPMENTAL RENAL AND ELECTROLYTE PHYSIOLOGY	5T32 AM07110-03	58,387
STEIGBIGEL, NEAL H	MICROBIOLOGY AND IMMUNOLOGY	5T01 AI00405-08	93,415
TERRY, ROBERT D	SENILE DEMENTIA—BIOLOGICAL AND BEHAVIORAL	5T32 AG00004-04	95,720
ORGANIZATION TOTAL	22	3,020,459	
ROCHESTER			
EASTMAN DENTAL CENTER ZIP CODE 14620			
ZANDER, HELMUT A	PERIODONTAL DISEASE	5T32 DE07061-02	66,250
ORGANIZATION TOTAL	1	66,250	
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
CHAPMAN, ROBERT M	VISUAL SCIENCES	5T01 EY00086-05	51,292
DI STEFANO, VICTOR	PHARMACOLOGICAL SCIENCES	5T32 GM07141-04	187,949
HOROWICZ, PAUL	SYSTEMS & INTEGRATIVE BIOLOGY	5T32 GM07136-04	175,308
HYDE, RICHARD W	PULMONARY DISEASES—MULTIDISCIPLINARY	5T32 HL07216-03	104,889
KNIGGE, KARL M	ANATOMICAL SCIENCES	5T01 GM01782-10	55,018
LEDDY, JOHN P	ALLERGY, IMMUNOLOGY AND INFECTIOUS DISEASES	5T01 AI00028-20	107,311
LICHTMAN, MARSHALL A	HEMATOLOGY	5T32 HL07152-04	82,495
NEUMAN, WILLIAM F	CELLULAR AND MOLECULAR BIOLOGY	5T32 GM07230-04	216,053
ROWLEY, PETER T	GENETICS	5T32 GM07098-02	74,867
YOUNG, DONALD A	INVESTIGATIVE ENDOCRINOLOGY AND METABOLISM	5T32 AM07092-04	40,051

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NEW YORK—Con.			
YOUNG, FRANK E	PATHOBIOLOGY OF VENEREAL DISEASE	5T32 AI07137-02	146,127
YOUNG, FRANK E	GENETICS AND REGULATION	5T32 GM07102-04	244,326
YOUNG, FRANK E	MEDICAL SCIENTIST	5T32 GM07356-02	105,561
YOUNG, FRANK E	MEDICAL SCIENTIST	5T32 GM07356-03	337,965
YU, PAUL N	CARDIOLOGY	3T32 HL07220-01S1	4,471
YU, PAUL N	CARDIOLOGY	5T32 HL07220-02	63,361
ORGANIZATION TOTAL	16	1,994,044	

STONY BROOK

STATE UNIVERSITY OF NEW YORK AT STONY BROOK		ZIP CODE 11794		
ARNHEIM, NORMAN	MOLECULAR BIOLOGY	5T32 GM07212-04	80,010	
GROLLMAN, ARTHUR P.	PHARMACOLOGICAL SCIENCES	5T32 GM07518-02	50,153	
KANE, PHILIP B	ENVIRONMENTAL PATHOLOGY OF THE RESPIRATORY SYSTEM	1T32 ES07088-01	51,641	
KATES, JOSEPH R	VIRAL ONCOLOGY	5T32 CA09176-04	227,736	
WITKOVSKY, PAUL	SENSORY TRANSDUCTION AND NEURAL PROCESSING IN VISION	5T32 EY07039-03	63,017	
ORGANIZATION TOTAL	5	472,557		

SYRACUSE

STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER		ZIP CODE 13210		
STREETEN, DAVID H	ENDOCRINOLOGY	5T32 AM07146-04	30,945	
WEINER, IRWIN M	PHARMACOLOGICAL SCIENCES	5T32 GM07066-04	47,529	
ORGANIZATION TOTAL	2	78,474		

SYRACUSE UNIVERSITY		ZIP CODE 13210		
MEYER, WILLIAM J	DEVELOPMENT AND AGING	5T32 AG00040-02	78,000	
ORGANIZATION TOTAL	1	78,000		

TROY

RENSSELAER POLYTECHNIC INSTITUTE		ZIP CODE 12181		
KATZ, J LAWRENCE	DENTAL MATERIALS	5T32 DE07054-03	57,792	
ORGANIZATION TOTAL	1	57,792		

UPTON

ASSOCIATED UNIVERSITIES—BROOKHAVEN NATIONAL LABORATORY		ZIP CODE 11973		
SETLOW, RICHARD B	ENVIRONMENTAL AND GENETIC FACTORS IN NEOPLASIA	5T32 CA09121-04	166,458	
ORGANIZATION TOTAL	1	166,458		

UTICA

MASONIC FOUNDATION FOR MEDICAL RESEARCH AND HUMAN WELFARE		ZIP CODE 13501		
MOE, GORDON K	EXPERIMENTAL CARDIOLOGY	5T32 HL07254-02	34,387	
ORGANIZATION TOTAL	1	34,387		

STATE TOTAL 169 16,861,690

NORTH CAROLINA

CHAPEL HILL

UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL		ZIP CODE 27514		
BROMBERG, PHILIP A	RESPIRATORY DISEASES—MULTIDISCIPLINARY	5T32 HL07106-04	80,329	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NORTH CAROLINA—Con.			
CLYDE, WALLACE A, JR.....	CHILDHOOD AND ADULT INFECTIOUS DISEASES.....	1T32 AI07151-01	76,344
DAVIS, CLARENCE E.....	CARDIOVASCULAR DISEASE--STATISTICS AND EPIDEMIOLOGY.....	5T32 HL07005-04	102,052
GDTSCHALK, CARL W.....	KIDNEY AND MEMBRANE PHYSIOLOGY AND DISEASE.....	5T32 AM07047-04	103,519
GRAHAM, JOHN B.....	GENETICS.....	5T32 GM07092-04	125,631
GRAHAM, JOHN B.....	GENETICS.....	5T32 GM07121-04	100,528
GRAHAM, JOHN B.....	EXPERIMENTAL HEMATOLOGY.....	5T32 HL07255-02	73,972
GREGG, JOHN M.....	MECHANISMS AND CONTROL OF CRANIOFACIAL PAIN.....	5T32 DE07018-03	93,011
GRISHAM, JDE W.....	ENVIRONMENTAL PATHOLOGY.....	5T32 ES07017-04	72,900
GRISHAM, JDE W.....	PATHOLOGY.....	5T01 GM00092-20	44,988
HALL, THOMAS L.....	POPULATION.....	5T01 HD00193-10	166,056
KUPPER, LAWRENCE L.....	BIostatistical RESEARCH--ENVIRONMENTAL HEALTH.....	5T32 ES07018-02	88,840
MANIRE, G PHILIP.....	TUMOR BIOLOGY.....	5T32 CA09057-04	67,579
MC KINNEY, JAMES D.....	MENTAL RETARDATION & CHILD DEVELOPMENT.....	5T01 HD00424-05	78,364
PAGAND, JOSEPH S.....	BASIC MECHANISMS OF VIRAL AND CHEMICAL CARCINOGENESIS.....	5T32 CA09156-04	127,601
ROBERTS, HAROLD R.....	HEMATOLOGY.....	5T32 HL07149-04	49,523
STOVER, BETSY J.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07040-04	79,341
TYROLER, HERMAN A.....	ENVIRONMENTAL EPIDEMIOLOGY.....	5T32 ES07036-02	142,902
TYRDLER, HERMAN A.....	CARDIOVASCULAR EPIDEMIOLOGY AND STATISTICS.....	5T32 HL07055-04	83,137
VAN WYK, JUDSON J.....	ENDOCRINOLOGY AND METABOLISM.....	5T32 AM07129-04	94,661
WELLS, H BRADLEY.....	POPULATION STATISTICS.....	5T32 HD07102-02	66,141
ORGANIZATION TOTAL	21	1,917,419	
CHARLOTTE			
JOHNSON C. SMITH UNIVERSITY ZIP CODE 28216			
CHOPRA, BALDEO K.....	MICROBIOLOGY, BIOCHEMISTRY & BIOPHYSICS.....	5T32 GM07652-02	94,124
ORGANIZATION TOTAL	1	94,124	
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
AMOS, D BERNARD.....	TUMOR IMMUNOLOGY AND IMMUNOGENETICS.....	5T32 CA09058-04	178,866
AMOS, D BERNARD.....	MEDICAL GENETICS.....	5T32 GM07003-03	62,787
BUCKLEY, REBECCA H.....	ALLERGY AND CLINICAL IMMUNOLOGY.....	5T32 AI07062-02	78,932
GDLSMITH, LOWELL A.....	DERMATOLOGY.....	5T32 AM07093-04	58,586
GUILD, WALTER R.....	GENETICS.....	5T01 GM02007-10	86,855
HILL, ROBERT L.....	MEDICAL SCIENTIST.....	5T32 GM07171-04	549,465
HILL, ROBERT L.....	ORGANIZATION AND FUNCTIONS OF CELLULAR STRUCTURES.....	5T32 GM07184-04	338,427
JENNINGS, ROBERT B.....	EXPERIMENTAL PATHOLOGY.....	5T01 GM00726-18	60,459
JOKLIK, WOLFGANG K.....	BASIC MECHANISMS IN INFECTIOUS DISEASES.....	1T32 AI07148-01	79,153
JOKLIK, WOLFGANG K.....	VIRAL ONCOLOGY.....	5T32 CA09111-04	369,278
LASZLO, JOHN.....	CANCER CHEMOTHERAPY.....	1T32 CA09307-01	101,712
LEBOVITZ, HAROLD E.....	ENDOCRINOLOGY AND DIABETES.....	5T32 AM07012-04	38,618
MADDOX, GEORGE L.....	BEHAVIOR & PHYSIOLOGY IN AGING.....	5T32 AG00029-03	120,758
MENZEL, DANIEL B.....	TRANSFORMATION AND BIOLOGICAL EFFECTS OF TOXICANTS.....	5T32 ES07002-04	195,140
MODRE, JOHN W.....	BIOLOGICAL SYSTEMS.....	5T32 GM07046-04	148,889
MYERS, GEORGE C.....	DEMOGRAPHY AND ECOLOGY.....	5T01 GM01291-15	114,114
OTTOLENGHI, ATHOS.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07105-04	123,263
PILKINGTON, THEO C.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07063-03	109,054
ROBERTSON, J DAVID.....	BIOLOGICAL MEMBRANE STUDIES.....	5T32 GM07403-02	146,309
ROBINSON, ROSCOE R.....	KIDNEY STRUCTURE AND FUNCTION IN HEALTH AND DISEASE.....	1T32 AM07308-01	57,839
ROBINSON, ROSCOE R.....	NEPHROLOGY.....	3T01 HL05848-09S1	2,160
ROSATI, ROBERT A.....	BIOMEDICAL COMMUNICATIONS.....	2T15 LM07003-04	137,013
ROSSE, WENDELL F.....	BLOOD BANKING SCIENCES AND RELATED PROGRAMS.....	5T32 HL07057-04	76,845
TYDR, MALCOLM P.....	DIGESTIVE DISEASES.....	5T32 AM07166-03	58,618
VOGEL, F STEPHEN.....	BIOLOGICAL APPROACHES TO DEMENTIA.....	5T32 AG00007-04	73,792
WALLACE, ANDREW G.....	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES.....	5T32 HL07101-04	225,588
WOLBARSHT, MYRON L.....	BIO MEDICAL ENGINEERING.....	5T01 GM02286-05	37,922

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
NORTH CAROLINA—Con.			
WYNGAARDEN, JAMES B	METABOLIC AND RHEUMATIC DISEASES	5T32 AM07015-04	37,238
ORGANIZATION TOTAL	28 3,667,680		
RALEIGH			
NORTH CAROLINA DEPARTMENT OF ADMINISTRATION		ZIP CODE 27611	
SULLIVAN, RICHARD H	BIOMEDICAL SCIENCES	5T32 GM07672-02	73,964
ORGANIZATION TOTAL	1 73,964		
UNIVERSITY OF NORTH CAROLINA SYSTEM—NORTH CAROLINA STATE UNIVERSITY AT RALEIGH		ZIP CODE 27607	
GUTHRIE, FRANK E	MOLECULAR AND ENVIRONMENTAL TOXICOLOGY	5T32 ES07046-02	111,088
SCANDALIOS, JOHN G	GENETICS	5T01 GM00296-18	21,979
ORGANIZATION TOTAL	2 133,067		
WINSTON-SALEM			
WAKE FOREST UNIVERSITY		ZIP CODE 27109	
CLARKSON, THOMAS B	LABORATORY ANIMAL AND COMPARATIVE MEDICINE	5T32 RR07009-02	78,360
HUTCHINS, PHILLIP M	MINORITY HYPERTENSION RESEARCH DEVELOPMENT	5T32 HL07304-02	26,818
MYRVIK, QUENTIN N	MULTIDISCIPLINARY RESPIRATORY DISEASES	5T32 HL07117-04	92,860
ST CLAIR, RICHARD W	MULTIDISCIPLINARY HEART AND VASCULAR DISEASES	5T32 HL07115-04	108,833
ORGANIZATION TOTAL	4 306,871		
STATE TOTAL	57 6,193,125		
NORTH DAKOTA			
GRAND FORKS			
UNIVERSITY OF NORTH DAKOTA		ZIP CODE 58201	
FISCHER, ROBERT G	MICROBIOLOGY	5T01 GM01097-15	29,281
ORGANIZATION TOTAL	1 29,281		
STATE TOTAL	1 29,281		
OHIO			
CINCINNATI			
CHILDREN'S HOSPITAL MEDICAL CENTER		ZIP CODE 45229	
KAPLAN, SAMUEL	CARDIOVASCULAR DISEASE OF THE YOUNG	1T32 HL07417-01	40,833
WEST, CLARK D	PEDIATRIC NEPHROLOGY RESEARCH	5T32 AM07051-03	55,315
ZIMMERMAN, ERNEST F	TERATOLOGY	5T32 ES07051-02	52,043
ORGANIZATION TOTAL	3 148,191		
UNIVERSITY OF CINCINNATI		ZIP CODE 45221	
BUNCHER, CHARLES R	ENVIRONMENTAL EPIDEMIOLOGY AND BIostatISTICS	1T32 ES07053-01A1	78,263
SCHWARTZ, ARNOLD	CARDIOVASCULAR BIOLOGY	1T32 HL07382-01	77,549
SCHWARTZ, ARNOLD	CARDIOVASCULAR BIOLOGY	2T32 HL07382-02	131,769
ORGANIZATION TOTAL	3 287,581		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
OHIO—Con.			
CLEVELAND			
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
WILLIAR, REINHART B.....	BIOLOGY OF HUMAN REPRODUCTION.....	5T32 HD07120-02	57,981
HERNIACK, NEIL S.....	RESPIRATORY DISEASES.....	5T32 HL07288-02	62,845
COOPER, CECIL.....	MEDICAL SCIENTIST.....	5T32 GM07250-04	287,750
DE PALMA, RALPH G.....	GENERAL SURGERY.....	5T01 GM01588-12	52,355
EVANS, HELEN H.....	ENVIRONMENTAL BIOLOGY.....	1T32 ES07080-01	58,143
MANAROFF, AVROY A.....	NEONATAL RESPIRATORY RESEARCH.....	1T32 HD07132-01	17,066
BRAMPITZ, L O.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07225-04	249,700
WAKE, ROBIN B.....	COMPUTER TECHNOLOGY IN HEALTH SCIENCES.....	2T15 LM07001-04	130,150
WASEK, RAYMOND J.....	DEVELOPMENTAL NEUROLOGY.....	1T32 NS07118-01	41,400
WAHMOUD, ADEL A.....	GEOGRAPHIC MEDICINE.....	5T32 AI07024-02	47,523
WATTHEWS, LEROY W.....	PEDIATRIC PULMONARY DISEASES.....	5T01 HL06009-05	95,112
WILLER, CHARLES.....	MICROBIOLOGY.....	5T01 GM00171-20	143,450
WILSONSEY, ROBERT.....	BIOMEDICAL ENGINEERING.....	5T01 GM01090-16	109,928
WILSONSEY, ROBERT.....	BIOMEDICAL ENGINEERING/SYSTEMS & INTEGRATIVE BIOLOGY.....	5T32 GM07535-02	88,881
WITNHOFF, OSCAR D.....	HEMATOLOGY.....	5T32 HL07147-04	55,121
WINGLER, MARCUS.....	NORMAL AND ABNORMAL DEVELOPMENT.....	5T32 HD07104-02	200,566
WITTER, MERTON F.....	METABOLOGY.....	1T32 AM07319-01	79,013
WEBSTER, LESLIE T, JR.....	PHARMACOLOGY.....	5T32 GM07382-02	33,894
ORGANIZATION TOTAL	18	1,810,878	
COLUMBUS			
OHIO STATE UNIVERSITY ZIP CODE 43210			
WELLEN, JAMES N.....	BIOCHEMICAL NEUROPATHOLOGY.....	5T32 NS07091-03	53,688
WALCERZAK, STANLEY P.....	ONCOLOGY.....	7T32 CA09338-01	139,492
WALCERZAK, STANLEY P.....	HEMATOLOGY.....	7T32 HL07409-01	59,327
WASSAVA, ROY A.....	DEVELOPMENTAL BIOLOGY-INTERDISCIPLINARY.....	5T01 HD07174-02	60,224
WRZEBIATOWSKI, GREGORY L.....	BIOMEDICAL COMPUTING AND INFORMATION PROCESSING.....	7T01 LM07023-01	80,998
WYTIAK, DONALD T.....	MEDICINAL CHEMISTRY.....	1T32 GM07622-01	56,289
WYTIAK, DONALD T.....	MEDICINAL CHEMISTRY.....	7T01 GM07719-01	15,046
ORGANIZATION TOTAL	7	465,064	
TOLEDO			
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614			
WULFROW, PATRICK J.....	ENDOCRINOLOGY AND METABOLOGY.....	1T32 AM07316-01	38,833
WAPP, JOHN P.....	HYPERTENSION.....	1T32 HL07357-01	41,200
ORGANIZATION TOTAL	2	80,033	
STATE TOTAL	33	2,791,747	
OKLAHOMA			
OKLAHOMA CITY			
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
WOGERS, ROBERT M.....	PULMONARY DISEASES-MULTIDISCIPLINARY.....	5T32 HL07210-03	57,501
WICHECHTER, ELIOT.....	CARDIOVASCULOLOGY.....	5T01 HL05406-19	79,079
WYLLOR, FLETCHER B, JR.....	HEMATOLOGY.....	5T32 HL07207-03	50,738
ORGANIZATION TOTAL	3	187,318	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Doll
OKLAHOMA—Con.			
TAHLEQUAH			
NORTHEASTERN OKLAHOMA STATE UNIVERSITY		ZIP CODE 74464	
REED, LANNY J.....	PHYSICS & NATURAL SCIENCE.....	5T32 GM07694-02	4
ORGANIZATION TOTAL	1 47,414		
STATE TOTAL	4 234,732		
OREGON			
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY		ZIP CODE 97331	
TINSLEY, IAN J.....	MODE OF ACTION OF ENVIRONMENTAL TOXICANTS.....	1T32 ES07060-01A1	6
WEBER, LAVERN J.....	COMPARATIVE PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07148-04	2
ORGANIZATION TOTAL	2 91,785		
EUGENE			
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON		ZIP CODE 97403	
FERNALD, RUSSELL.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07257-04	8
HERSKOWITZ, IRA.....	GENETICS.....	5T32 GM07413-02	10
VON HIPPEL, PETER H.....	MOLECULAR BIOLOGY.....	5T01 GM00715-20	11
WICKELGREN, WAYNE A.....	HUMAN EXPERIMENTAL PSYCHOLOGY.....	5T01 GM02165-05	6
ORGANIZATION TOTAL	4 377,431		
PORTLAND			
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER		ZIP CODE 97201	
BISSONNETTE, JOHN M.....	PERINATAL BIOLOGY.....	1T32 HD07084-01A1	8
CONNOR, WILLIAM E.....	NUTRITION AND ATHEROSCLEROSIS.....	5T32 HL07295-02	7
CRITCHLOW, B VAUGHN.....	REPRODUCTIVE BIOLOGY—MULTIDISCIPLINARY.....	1T32 HD07133-01	4
GREER, MONTE A.....	ENDOCRINOLOGY AND METABOLOGY.....	1T32 AM07331-01	3
HALLUM, JULES V.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07336-02	4
MATARAZZO, JOSEPH D.....	CARDIOVASCULAR FUNCTION—BEHAVIORAL.....	1T32 HL07332-01	6
WUEPPER, KIRK D.....	MULTIDISCIPLINARY DERMATOLOGY.....	5T32 AM07153-03	7
ORGANIZATION TOTAL	7 417,036		
STATE TOTAL	13 886,252		
PENNSYLVANIA			
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER		ZIP CODE 17033	
LANG, C MAX.....	LABORATORY ANIMAL MEDICINE.....	5T32 RR07006-02	2
MORGAN, HOWARD E.....	CELLULAR BIOLOGY—HEART.....	5T32 HL07223-03	11
RAPP, FRED.....	VIRUSES AND CANCER.....	1T32 CA09124-01A1	4
ROHNER, THOMAS J, JR.....	UROLOGY.....	1T32 AM07287-01	11
ORGANIZATION TOTAL	4 200,294		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
PENNSYLVANIA—Con.			
PHILADELPHIA			
WOMEN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104			
WARTZ, ELIAS.....	HEMATOLOGY.....	5T32 HL07150-04	39,733
STANTON.....	MENTAL RETARDATION.....	5T32 HD07107-02	131,078
ORGANIZATION TOTAL 2	170,811		
WESMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
WILSON, THOMAS M.....	CLINICAL BIOCHEMISTRY.....	5T01 GM02198-05	59,656
ORGANIZATION TOTAL 1	59,656		
WOLFENBUTEL INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
WILSON, THOMAS F.....	CANCER RESEARCH.....	5T32 CA09035-04	62,969
ORGANIZATION TOTAL 1	62,969		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19129			
WILSON, LEONARD L.....	NEUROBIOLOGY OF DEVELOPMENT AND REGENERATION.....	1T32 NS07061-01A2	30,329
ORGANIZATION TOTAL 1	30,329		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19141			
WILSON, RICHARD C.....	CELLULAR AND MOLECULAR ASPECTS OF AGING.....	5T32 AG00034-02	34,657
ORGANIZATION TOTAL 1	34,657		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19122			
WILSON, HAROLD L.....	DIAGNOSTIC RADIOLOGY.....	5T01 GM01702-13	24,747
WILSON, PETER N.....	CANCER AND CANCER RELATED RESEARCH.....	1T32 CA09214-01	83,690
WILSON, GERHARD W.....	BIOCHEMICAL ENDOCRINOLOGY RELATED TO DIABETES.....	5T32 AM07162-02	89,143
WILSON, SOL.....	THROMBOSIS AND HEMOSTASIS.....	5T32 HL07248-02	75,673
WILSON, GERALD D.....	MICROBIOLOGY AND IMMUNOLOGY.....	1T32 AI07101-01A1	33,868
WILSON, JAMES F, JR.....	CARDIOLOGY.....	5T32 HL07198-03	60,040
ORGANIZATION TOTAL 6	367,161		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19107			
WILSON, C PAUL.....	ENVIRONMENTAL AND INDUSTRIAL TOXICOLOGY.....	1T32 ES07084-01	76,130
WILSON, ROBERT L.....	DEVELOPMENTAL BIOLOGY.....	5T32 HD07075-03	60,534
WILSON, ALLAN J.....	HEMATOLOGY.....	5T32 AM07084-04	82,231
WILSON, SIMON.....	RADIATION THERAPY.....	2T32 CA09137-04	78,593
WILSON, PAUL A.....	IMMUNOCHEMISTRY AND IMMUNOBIOLOGY.....	5T32 AI07043-03	35,499
WILSON, SANDOR S.....	HEMOSTASIS AND THROMBOSIS.....	1T32 HL07371-01	37,476
ORGANIZATION TOTAL 6	370,463		
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174			
WILSON, ANITA K.....	CANCER ETIOLOGY.....	1T32 ES07078-01	158,939
WILSON, CARL T.....	BONE AND CARTILAGE RESEARCH.....	5T32 AM07132-03	81,722
WILSON, RALPH L.....	VETERINARY MEDICINE.....	5T01 GM02051-10	157,429
WILSON, RALPH L.....	REPRODUCTIVE PHYSIOLOGY.....	5T01 HD00239-10	77,358
WILSON, JOHN R.....	PHYSIOLOGY.....	5T01 GM00205-20	53,136
WILSON, SIDNEY.....	GASTROENTEROLOGY.....	5T32 AM07066-04	79,299
WILSON, ROBERT W.....	THROMBOSIS.....	1T32 HL07177-01A2	36,715
WILSON, RICHARD A.....	HEMATOLOGY.....	5T01 HL06019-16	103,434
WILSON, JAMES J, JR.....	MEDICAL SCIENTIST.....	5T32 GM07170-04	667,192
WILSON, ALFRED P.....	MULTIDISCIPLINARY RESPIRATORY DISEASES.....	5T32 HL07000-04	83,813
WILSON, ROBERT E.....	INTEGRATIVE AND THEORETICAL BIOLOGY.....	1T32 GM07517-01A1	151,857
WILSON, ROBERT E.....	PULMONARY PHYSIOLOGY.....	5T32 HL07027-04	144,512
WILSON, BERG, MARTIN.....	RENAL PATHOPHYSIOLOGY IN CARDIAC AND RENAL DISEASE.....	5T32 AM07006-04	97,644
WILSON, HOWARD.....	CELL AND MOLECULAR BIOLOGY.....	5T32 GM07229-04	291,313
WILSON, HOWARD.....	PROGRAM IN CELL DIFFERENTIATION.....	1T32 HD07152-01	122,148
WILSON, SCH, LEO M.....	PSYCHOPHYSICS AND PHYSIOLOGY OF VISION.....	5T32 EY07035-03	120,638

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
PENNSYLVANIA—Con.			
KALLENBACH, NEVILLE R.....	GENETICS.....	5T32 GM07071-04	135,86
KARE, MORLEY R.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07068-03	68,93
KASTOR, JOHN A.....	CLINICAL AND EXPERIMENTAL CARDIAC ELECTROPHYSIOLOGY.....	1T32 HL07346-01	41,90
KLINMAN, NORMAN R.....	THE IMMUNOBIOLOGY OF NORMAL AND NEOPLASTIC LYMPHOCYTES.....	5T32 CA09140-04	196,31
KOELLE, GEORGE B.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07302-04	111,17
LASH, JAMES W.....	ANALYSIS OF DEVELOPMENT.....	5T32 HD07067-03	146,25
MELLMAN, WILLIAM J.....	HUMAN GENETICS.....	5T32 GM07511-02	88,88
SCHAD, GERHARD A.....	IMMUNOLOGY OF HOST PARASITE RELATIONSHIPS.....	5T32 AI07050-02	50,29
SHIP, IRWIN I.....	SOFT TISSUE DISEASES.....	5T32 DE07036-04	171,23
SPRAGUE, JAMES M.....	ANATOMICAL SCIENCES.....	5T01 GM00281-20	95,67
STELLAR, ELIOT.....	BEHAVIORAL & NEUROLOGICAL SCIENCES.....	5T01 GM01994-10	114,27
VAN DE WALLE, ETIENNE.....	DEMOGRAPHY.....	5T32 HD07113-02	44,40
WEISS, LEON P.....	EXPERIMENTAL HEMATOLOGY AND CELL BIOLOGY.....	5T32 AM07185-03	26,28
WINEGRAD, ALBERT I.....	DIABETES, ENDOCRINE AND METABOLIC DISEASES.....	1T32 AM07314-01	110,95
WOLLMAN, HARRY.....	DENTAL PAIN CONTROL.....	5T32 DE07009-03	100,65
WOLLMAN, HARRY.....	ANESTHESIOLOGY.....	1T32 GM07612-01	75,66
YAFFE, SUMNER J.....	PEDIATRIC CLINICAL PHARMACOLOGY AND ANESTHESIOLOGY.....	5T32 GM07514-02	72,44
YANOFF, MYRON.....	EXPERIMENTAL OPHTHALMIC PATHOLOGY.....	5T32 EY07041-02	40,13
ZWEIMAN, BURTON.....	ALLERGY AND IMMUNOLOGIC DISEASES.....	5T32 AI07031-03	28,91
ORGANIZATION TOTAL	35	4,147,406	
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
KOPROWSKI, HILARY.....	BASIC CANCER RESEARCH.....	5T32 CA09171-03	220,03
ORGANIZATION TOTAL	1	220,034	
PITTSBURGH			
ALLEGHENY HEALTH, EDUCATION AND RESEARCH CORPORATION—ALLEGHENY-SINGER RESEARCH CORPORATION ZIP CODE 15212			
CONCANNON, JOSEPH P.....	RADIATION ONCOLOGY.....	1T32 CA09231-01	42,92
LESHER, SAMUEL W.....	CANCER RESEARCH.....	1T32 CA09225-01	56,21
ORGANIZATION TOTAL	2	99,138	
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
JORDAN, ANGEL G.....	BIOTECHNOLOGY PROGRAM.....	5T32 GM07477-02	104,40
ORGANIZATION TOTAL	1	104,407	
EYE AND EAR HOSPITAL OF PITTSBURGH ZIP CODE 15213			
BROWN, STUART I.....	OCULAR CONNECTIVE TISSUES.....	5T32 EY07032-03	16,30
ORGANIZATION TOTAL	1	16,305	
MAGEE-WOMEN'S HOSPITAL ZIP CODE 15213			
HAYASHI, T TERRY.....	REPRODUCTION AND NEONATOLOGY.....	5T01 HD00227-10	28,75
ORGANIZATION TOTAL	1	28,754	
UNIVERSITY OF PITTSBURGH ZIP CODE 15260			
BENTLEY, RONALD.....	BIOCHEMISTRY.....	5T01 GM00149-20	55,36
BOGGS, DANE R.....	HEMATOLOGY AND ONCOLOGY.....	5T32 AM07040-02	39,20
FIELD, JAMES B.....	DIABETES AND ENDOCRINOLOGY.....	5T32 AM07052-04	25,70
GILL, THOMAS J, III.....	PATHOBIOLOGY.....	5T32 GM07349-02	88,02
KNOBIL, ERNST.....	PRIMATE REPRODUCTIVE PHYSIOLOGY.....	5T32 HD07116-02	36,51
KULLER, LEWIS H.....	CARDIOVASCULAR EPIDEMIOLOGY.....	5T32 HL07011-04	94,75
LESTER, ROGER.....	LIVER METABOLISM AND INTESTINAL TRANSPORT.....	5T32 AM07138-04	18,83
LESTER, ROGER.....	LIVER METABOLISM AND INTESTINAL TRANSPORT.....	2T32 AM07138-05	55,45
ORGANIZATION TOTAL	8	413,846	

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
PENNSYLVANIA—Con.			
UNIVERSITY PARK			
PENNSYLVANIA STATE UNIVERSITY	ZIP CODE 16802		
BAKER, PAUL T	ANTHROPOLOGY-HUMAN BIOLOGICAL ADAPTABILITY	5T01 GM01748-10	103,790
TAYLOR, CHARLES	GERONTOLOGY (INTERDISCIPLINARY)	5T32 AG00048-02	75,091
ORGANIZATION TOTAL	2 178,881		
STATE TOTAL	73 6,505,111		
RHODE ISLAND			
PROVIDENCE			
BROWN UNIVERSITY	ZIP CODE 02912		
FAIN, JOHN N	DIABETES, ENDOCRINOLOGY, AND METABOLOGY	5T32 AM07187-03	59,025
GOLDSTEIN, SIDNEY	POPULATION CHANGE, DISTRIBUTION, AND MODERNIZATION	5T32 HD07069-03	96,682
RIGGS, LORRIN A	VISUAL PSYCHOPHYSIOLOGY	5T32 EY07029-03	30,073
ORGANIZATION TOTAL	3 185,780		
STATE TOTAL	3 185,780		
SOUTH CAROLINA			
CHARLESTON			
MEDICAL UNIVERSITY OF SOUTH CAROLINA	ZIP CODE 29401		
BAGWELL, ERVINE E	PHARMACOLOGY	5T32 GM07404-02	55,085
FUDENBERG, H HUGH	BASIC IMMUNE MECHANISMS AND IMMUNOLOGIC DISEASES	1T32 AI07063-01A2	17,753
GAFFNEY, THOMAS E	CLINICAL PHARMACOLOGY	5T32 GM07534-02	32,665
LINDENMAYER, GEORGE E	IMPROVE CARDIOVASCULAR DRUG THERAPY	5T32 HL07260-02	70,382
MILLER, M CLINTON, III	CARDIOMETRICAL SCIENTIST	1T32 HL07384-01	30,423
ORGANIZATION TOTAL	5 206,308		
COLUMBIA			
BENEDICT COLLEGE	ZIP CODE 29204		
FINLAY, MARY F	BIOLOGY AND CHEMISTRY	5T32 GM07643-02	44,870
ORGANIZATION TOTAL	1 44,870		
STATE TOTAL	6 251,178		
TENNESSEE			
KNOXVILLE			
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE AT KNOXVILLE	ZIP CODE 37916		
BILLEN, DANIEL	CARCINOGENESIS	5T32 CA09104-04	56,514
BROWN, ARTHUR	MICROBIOLOGY RELATED TO INFECTIOUS DISEASES	1T32 AI07123-01A1	57,375
KENNEY, FRANCIS T	CARCINOGENESIS	5T01 CA05296-05	130,194
POPP, RAYMOND A	GENETICS	5T32 GM07438-02	80,443
STULBERG, MELVIN P	MOLECULAR CELLULAR AGING	5T32 AG00028-03	46,777
WALLACE, ROBIN A	MACROMOLECULES IN BIOLOGICAL REGULATORY MECHANISMS	5T32 GM07431-02	88,472
ORGANIZATION TOTAL	6 459,775		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
TENNESSEE—Con.			
MEMPHIS			
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES		ZIP CODE 38163	
KANG, ANDREW H	CONNECTIVE TISSUE DISEASES	1T32 AM07317-01	37,314
KAUKER, MICHAEL L	MINORITY HYPERTENSION RESEARCH DEVELOPMENT	1T32 HL07389-01	17,538
KITABCHI, ABBAS E	ENDOCRINOLOGY, METABOLOGY AND DIABETES	1T32 AM07088-01A1	33,961
MC GIFF, JOHN C	HYPERTENSION	1T32 HL07339-01	31,956
ROBERTSON, G GORDON	ANATOMICAL SCIENCES	5T01 GM00202-20	58,041
SABESIN, SEYMOUR M	LIVER DISEASES	1T32 AM07292-01	40,371
ORGANIZATION TOTAL	6 219,181		
NASHVILLE			
FISK UNIVERSITY		ZIP CODE 37203	
MC KELVEY, MARY E	BIOMEDICAL SCIENCES	1T32 GM07675-01	63,814
ORGANIZATION TOTAL	1 63,814		
GEORGE PEABODY COLLEGE FOR TEACHERS		ZIP CODE 37203	
BROOKS, PENELOPE H	MENTAL RETARDATION—BEHAVIORAL	5T32 HD07045-04	120,223
ORGANIZATION TOTAL	1 120,223		
MEHARRY MEDICAL COLLEGE		ZIP CODE 37208	
PROCTOR, CHARLES D	PHARMACOLOGY	5T02 GM05004-02	34,643
ORGANIZATION TOTAL	1 34,643		
VANDERBILT UNIVERSITY		ZIP CODE 37240	
BASS, ALLAN D	PHARMACOLOGY	5T01 GM00058-20	114,078
BRIGHAM, KENNETH L	RESPIRATORY DISEASES—MULTIDISCIPLINARY	5T32 HL07123-04	60,255
BROQUIST, HARRY P	NUTRITION AND GASTROENTEROLOGY	5T32 AM07083-04	87,700
CHAPMAN, JOHN E	MEDICAL SCIENTIST	5T32 GM07347-02	67,707
CROFFORD, OSCAR B	DIABETES AND ENDOCRINOLOGY	5T32 AM07061-04	71,784
ELLIOTT, JAMES H	VISUAL SCIENCES	5T32 EY07007-03	63,065
FRIESINGER, GOTTLIEB C	PHARMACOLOGY AND PHYSIOLOGY OF CARDIOVASCULAR DISEASES	1T32 HL07411-01	80,511
HARDMAN, JOEL G	PHARMACOLOGICAL SCIENCES	1T32 GM07628-01	39,651
KRANTZ, SANFORD B	HEMATOLOGY	5T32 AM07186-03	49,348
NEAL, ROBERT A	ENVIRONMENTAL TOXICOLOGY	5T32 ES07028-04	58,653
OATES, JOHN A	CLINICAL PHARMACOLOGY	5T32 GM07569-02	96,189
PUETT, J DAVID	REPRODUCTIVE BIOLOGY, BIOCHEMISTRY, AND ENDOCRINOLOGY	5T32 HD07043-04	82,254
SCOTT, H WILLIAM, JR	SURGERY	5T01 GM01742-12	87,049
SHAND, DAVID G	HYPERTENSION	1T32 HL07323-01	73,287
STAHLMAN, MILDRED T	NEWBORN PULMONARY DEVELOPMENT FUNCTION AND DISEASE	5T32 HL07256-02	82,696
TOUSTER, OSCAR	CELLULAR—MOLECULAR BIOLOGY	5T32 GM07319-04	222,377
ORGANIZATION TOTAL	16 1,336,604		
STATE TOTAL	31 2,234,240		
TEXAS			
AUSTIN			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN		ZIP CODE 78712	
GOUGH, PHILIP B	PSYCHOLINGUISTICS	5T01 HD00439-05	52,719
HARDESTY, BOYD A	MEMBRANE CHANGES IN CARCINOGENESIS	5T32 CA09182-04	127,367
JUDD, BURKE H	GENETIC MECHANISMS AND THE REGULATION OF GENE ACTIVITY	5T32 GM07126-04	128,894
POSTON, DUDLEY L, JR	SOCIAL DEMOGRAPHY	5T32 HD07081-02	48,010
ORGANIZATION TOTAL	4 356,990		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
TEXAS—Con.			
DALLAS			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS ZIP CODE 75235			
COMBES, BURTON.....	GASTROENTEROLOGY AND LIVER DISEASE.....	5T32 AM07100-04	70,991
FOSTER, DANIEL W.....	ENDOCRINOLOGY AND METABOLISM.....	1T32 AM07307-01	111,403
JOHNSON, ROBERT L, JR.....	PULMONARY PATHOPHYSIOLOGY.....	1T32 HL07362-01	86,720
KOKKO, JUHA P.....	RENAL CONTROL OF BODY COMPOSITION AND BLOOD PRESSURE.....	5T32 AM07257-02	42,485
MACDONALD, PAUL C.....	PHYSIOLOGY OF REPRODUCTION.....	5T01 HD00256-10	120,688
MC CANN, SAMUEL M.....	NEUROENDOCRINOLOGY.....	5T32 HD07062-03	62,325
MITCHELL, JERE H.....	CARDIOVASCULAR PATHOPHYSIOLOGY.....	1T32 HL07360-01	268,894
PETTINGER, WILLIAM A.....	CLINICAL PHARMACOLOGY.....	5T32 GM07247-02	73,263
PIERCE, ALAN K.....	PULMONARY MEDICINE.....	5T17 HL07128-04	273
STREILEIN, J WAYNE.....	CANCER IMMUNOLOGY.....	5T32 CA09082-04	169,099
WEISS, GEORGE B.....	PHARMACOLOGY.....	5T32 GM07062-04	58,473
ZIFF, MORRIS.....	RHEUMATOLOGY.....	5T32 AM07055-04	58,140
ORGANIZATION TOTAL	12	1,122,754	
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON ZIP CODE 77550			
BOWMAN, BARBARA H.....	GENETICS—MECHANISMS AND REGULATION.....	5T32 GM07204-04	74,033
REMMERS, JOHN E.....	RESPIRATORY DISEASES.....	5T32 HL07217-03	39,246
ORGANIZATION TOTAL	2	113,279	
HOUSTON			
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025			
ALLEN, JULIUS C.....	CARDIOVASCULAR SCIENCE.....	1T32 HL07282-01A1	47,631
ANDERSON, ROBERT E.....	VISUAL SCIENCES.....	3T32 EY07001-03S1	48,813
ANDERSON, ROBERT E.....	VISUAL SCIENCES.....	5T32 EY07001-04	82,198
APPEL, STANLEY H.....	BIOLOGICAL APPROACHES TO DEMENTIA.....	1T32 AG00061-01	54,289
CASKEY, CHARLES T.....	MEDICAL GENETICS RESEARCH FELLOWSHIP PROGRAM.....	1T32 GM07526-01A2	52,307
CLAYTON, GEORGE W.....	PEDIATRIC ENDOCRINOLOGY.....	5T32 HD07091-02	48,872
HORNING, EVAN C.....	ANALYTICAL METHODS FOR HUMAN STUDIES.....	5T01 GM02055-10	56,134
KNOX, JOHN M.....	VENEREOLOGY.....	5T01 A100462-05	45,509
MC NAMARA, DAN G.....	DEVELOPMENTAL CARDIAC PHARMACOLOGY AND PHYSIOLOGY.....	5T32 HL07190-02	37,923
O'MALLEY, BERT W.....	REPRODUCTIVE BIOLOGY: REGULATORY MECHANISMS.....	5T01 HD00444-05	67,120
WAKIL, SALIH J.....	MEDICAL SCIENTIST.....	5T32 GM07330-02	35,871
WILLIAMS, ROBERT P.....	MICROBIOLOGY OF INFECTIOUS DISEASES.....	1T32 A107145-01	30,099
ORGANIZATION TOTAL	12	606,766	
RICE UNIVERSITY ZIP CODE 77001			
STEWART, CHARLES R.....	DEVELOPMENTAL GENETICS.....	5T01 GM02221-05	47,148
ORGANIZATION TOTAL	1	47,148	
TEXAS SOUTHERN UNIVERSITY ZIP CODE 77004			
SESSION, JOHN J.....	IMMUNOBIOLOGY, BIOCHEMISTRY & PSYCHOLOGY.....	5T32 GM07659-02	88,604
ORGANIZATION TOTAL	1	88,604	
UNIVERSITY OF HOUSTON ZIP CODE 77004			
EVANS, RICHARD I.....	SOCIAL PSYCHOLOGY IN PREVENTING CARDIOVASCULAR DISEASE.....	1T32 HL07258-01A1	84,910
ORGANIZATION TOTAL	1	84,910	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025			
DE MOSS, JOHN A.....	MOLECULAR BASIS OF CELL FUNCTION.....	5T32 GM07542-02	53,232
LAVIS, VICTOR R.....	DIABETES.....	1T32 AM07282-01	39,145
LEVY, BARNET M.....	EXPERIMENTAL PERIODONTOLOGY/IMMUNOLOGY; BIOCHEMISTRY.....	5T32 DE07029-03	91,031
MURPHY, SHELDON D.....	TOXICOLOGY.....	1T32 ES07090-01	62,724

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
TEXAS—Con.			
PRESLOCK, JAMES P.....	HUMORAL REGULATION OF REPRODUCTIVE SYSTEMS.....	5T32 HD07119-02	33,950
ROBISON, GEORGE A.....	HOUSTON PHARMACOLOGICAL CENTER.....	5T32 GM07405-02	62,655
SHAW, MARGERY W.....	MEDICAL GENETICS.....	5T01 GM02237-05	49,336
SPERLING, HARRY G.....	SENSORY NEURAL SCIENCES.....	5T32 EY07024-04	35,600
ORGANIZATION TOTAL	8 427,673		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
ANDERSON, DAVID E.....	CANCER BIOLOGY.....	1T32 CA09299-01	49,288
FREIREICH, EMIL J.....	CLINICAL PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS.....	5T32 CA09189-03	169,465
HAYNIE, THOMAS P.....	CANCER CHEMOTHERAPY.....	5T32 CA09163-04	194,860
HUMPHREY, RONALD M.....	RADIATION ONCOLOGY.....	1T32 CA09191-01	68,436
VAN EYS, JAN.....	PEDIATRIC HEMATOLOGY-ONCOLOGY.....	5T32 CA09070-04	62,996
ORGANIZATION TOTAL	5 545,045		
LUBBOCK			
TEXAS TECH UNIVERSITY ZIP CODE 79409			
BARNES, CHARLES D.....	FACTORS MODIFYING CARDIOVASCULAR ACTIVITY.....	5T32 HL07289-02	49,085
ORGANIZATION TOTAL	1 49,085		
PRAIRIE VIEW			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—PRAIRIE VIEW AGRI. AND MECH. UNIVERSITY ZIP CODE 77445			
WASHINGTON, ARTHUR C.....	BIOMEDICAL SCIENCES.....	5T32 GM07695-02	54,887
ORGANIZATION TOTAL	1 54,887		
SAN ANTONIO			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284			
JOHANSON, WALDEMAR G, JR.....	LUNG DISEASES—MULTIDISCIPLINARY.....	5T32 HL07221-03	32,696
MC GUIRE, WILLIAM L.....	MECHANISMS OF BREAST CANCER GROWTH AND REGRESSION.....	5T32 CA09042-04	30,358
MC NAY, JOHN L, JR.....	CLINICAL PHARMACOLOGY.....	2T32 GM07014-04	40,909
O'ROURKE, ROBERT A.....	CARDIOVASOLOGY.....	1T32 HL07350-01	56,845
PAUERSTEIN, CARL J.....	REPRODUCTIVE BIOLOGY.....	1T32 HD07139-01	33,621
STEIN, JAY H.....	ACADEMIC NEPHROLOGY.....	5T32 AM07103-04	97,339
ORGANIZATION TOTAL	6 291,768		
STATE TOTAL	54 3,788,909		
UTAH			
LOGAN			
UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY ZIP CODE 84322			
STREET, JOSEPH C.....	TOXICOLOGY INTERDEPARTMENTAL PROGRAM.....	1T32 ES07097-01	87,018
ORGANIZATION TOTAL	1 87,018		
SALT LAKE CITY			
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112			
BROOM, ARTHUR D.....	CANCER CHEMOTHERAPY.....	1T32 CA09038-01A1	38,299
CARTWRIGHT, GEORGE E.....	HEMATOLOGY.....	5T32 AM07115-04	47,203
DETHLEFSEN, LYLE A.....	RADIATION BIOLOGY AND EXPERIMENTAL ONCOLOGY.....	5T32 CA09097-04	33,761
FRANKLIN, MICHAEL R.....	PHARMACOLOGICAL SCIENCES.....	1T32 GM07579-01	121,493
GLASGOW, LOWELL A.....	INFECTIOUS DISEASES.....	5T32 AI07011-03	95,554
VELICK, SIDNEY F.....	CELLULAR AND MOLECULAR BIOLOGY.....	1T32 GM07531-01A1	45,813

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
UTAH—Con.			
VICKERY, ROBERT K, JR.....	GENETICS.....	5T32 GM07464-02	65,862
ORGANIZATION TOTAL	7 447,985		
STATE TOTAL	8 535,003		
VERMONT			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
BRESNICK, EDWARD.....	CANCER BIOLOGY.....	1T32 CA09286-01	38,779
CRAIGHEAD, JOHN E.....	RESPIRATORY DISEASES.....	5T32 HL07206-03	90,433
KRAKOFF, IRWIN H.....	CANCER CHEMOTHERAPY.....	1T32 CA09324-01	15,066
PARSONS, RODNEY L.....	CARDIOVASOLOGY—MULTIDISCIPLINARY.....	5T32 HL07073-04	58,439
ORGANIZATION TOTAL	4 202,717		
STATE TOTAL	4 202,717		
VIRGINIA			
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
ATTINGER, ERNST O.....	BIOMEDICAL ENGINEERING.....	5T01 GM01919-10	69,412
AYERS, CARLOS R.....	HIGH BLOOD PRESSURE RESEARCH.....	1T32 HL07355-01	35,507
BASS, NORMAN H.....	DEVELOPMENTAL NEUROLOGY.....	5T32 NS07013-03	101,048
BERNE, ROBERT M.....	BASIC CARDIOVASCULAR RESEARCH.....	5T32 HL07284-02	134,169
DAVIS, JOHN S, IV.....	IMMUNOPATHOLOGY OF RHEUMATIC DISEASES.....	5T32 AM07156-03	55,808
EPSTEIN, ROBERT M.....	ANESTHESIOLOGY.....	1T32 GM07590-01	19,117
GILMAN, ALFRED.....	MEDICAL SCIENTIST.....	5T32 GM07267-02	63,680
KADNER, ROBERT J.....	GENETIC CONTROL OF BIOLOGICAL REGULATORY SYSTEMS.....	5T32 GM07082-04	47,115
KOMP, DIANE M.....	PEDIATRIC ONCOLOGY.....	5T32 CA09147-03	83,367
KONIGSBERG, IRWIN R.....	DEVELOPMENTAL BIOLOGY.....	5T01 HD00430-05	39,288
LANGMAN, JAN.....	CRANIOFACIAL DEVELOPMENT.....	5T32 DE07037-04	112,735
LARNER, JOSEPH.....	PHARMACOLOGY.....	5T32 GM07055-04	83,489
LAWLESS, KENNETH R.....	CHEMICAL AND PHYSICAL PROPERTIES OF DENTAL MATERIALS.....	5T32 DE07046-03	42,665
MANDELL, GERALD L.....	INFECTIOUS DISEASES.....	5T32 AI07046-02	102,881
MILLER, OSCAR L, JR.....	GENETICS.....	5T01 GM01450-10	52,159
MURAD, FERID.....	DIABETES AND HORMONE ACTION.....	1T32 AM07320-01	59,343
THOMPSON, THOMAS E.....	MEMBRANE AND MACROMOLECULAR STRUCTURE.....	5T32 GM07294-04	48,513
WAGNER, ROBERT R.....	CANCER RESEARCH—MOLECULAR BIOLOGY.....	5T32 CA09109-03	220,160
ORGANIZATION TOTAL	18 1,370,456		
RICHMOND			
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284			
BRADLEY, S GAYLEN.....	INFECTION AND IMMUNITY.....	5T01 AI00382-08	77,654
DEWEY, WILLIAM L.....	PHARMACOLOGY AND RELATED DISCIPLINES.....	5T32 GM07111-04	59,952
FARRAR, JOHN T.....	DIGESTIVE AND LIVER DISEASES.....	5T32 AM07150-03	53,008
GOLDMAN, I DAVID.....	CARDIOVASOLOGY—MULTIDISCIPLINARY.....	5T32 HL07110-04	82,652
KAPLAN, ALAN M.....	CANCER ETIOLOGY AND TREATMENT.....	1T32 CA09210-01A1	41,587
MORAHAN, PAGE S.....	CANCER ETIOLOGY AND TREATMENT.....	1T32 CA09036-01A1	36,989
MUNSON, ALBERT E.....	TOXICOLOGY.....	1T32 ES07087-01	77,928
NANCE, WALTER E.....	HUMAN GENETICS.....	5T32 GM07492-02	46,523
PHIBBS, PAUL V, JR.....	INFECTIOUS DISEASES.....	5T32 AI07086-02	46,424

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
VIRGINIA—Con.			
RICHARDSON, DAVID W.....	MINORITY HYPERTENSION RESEARCH DEVELOPMENT.....	5T32 HL07309-02	16,740
RUDDY, SHAUN.....	PATHOGENESIS AND TREATMENT OF RHEUMATIC DISEASES.....	5T32 AM07079-02	39,057
WGLICKI, WILLIAM B.....	MECHANISMS OF CARDIOVASCULAR INJURY.....	5T32 HL07244-02	97,958
ORGANIZATION TOTAL 12	676,472		
STATE TOTAL 30	2,046,928		
WASHINGTON			
PULLMAN			
WASHINGTON STATE UNIVERSITY ZIP CODE 99163			
KIRSCHNER, LEONARD B.....	ZOOPHYSIOLOGY.....	5T01 GM01276-15	52,067
MC GUIRE, TRAVIS C.....	IMMUNOLOGY.....	5T32 AI07025-02	72,624
ORGANIZATION TOTAL 2	124,691		
SEATTLE			
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ALEXANDER, E RUSSELL.....	EPIDEMIOLOGY OF INFECTIOUS DISEASES.....	5T32 AI07125-02	67,371
BASSINGTHWAIGHTE, JAMES B.....	CARDIOVASCULAR BIOENGINEERING.....	1T32 HL07403-01	63,397
BENDITT, EARL P.....	EXPERIMENTAL PATHOLOGY OF CARDIOVASCULAR DISEASE.....	1T32 HL07312-01	139,216
BIERMAN, EDWIN L.....	DIABETES, METABOLISM, AND ENDOCRINOLOGY.....	5T32 AM07247-02	117,172
BIERMAN, EDWIN L.....	NUTRITION, LIPID METABOLISM, AND ARTERIOSCLEROSIS.....	5T32 HL07028-03	60,657
BUTLER, JOHN.....	RESPIRATORY PHYSIOLOGY.....	1T32 HL07287-01A2	98,088
CARRICO, C JAMES.....	TRAUMA AND BURNS.....	5T32 GM07037-04	56,908
DE ROUEN, TIMOTHY A.....	CARDIOVASCULAR BIostatISTICS.....	5T32 HL07183-03	116,131
DODGE, HAROLD T.....	CARDIOVASCULAR RESEARCH.....	5T32 HL07278-02	84,716
FALKOW, STANLEY.....	BIOLOGIC BASIS OF INFECTION AND ITS CONTROL.....	1T32 AI07149-01	68,711
FEIGL, ERIC O.....	CARDIOVASCULOLOGY—MULTIDISCIPLINARY.....	5T32 HL07090-04	98,332
FINCH, CLEMENT A.....	HEMATOLOGY AND NUTRITIONAL ANEMIAS.....	5T32 AM07237-02	36,839
GALE, JAMES L.....	EPIDEMIOLOGY—EYE DISEASES.....	3T32 EY07017-03S1	3,600
GALE, JAMES L.....	EPIDEMIOLOGY—EYE DISEASES.....	5T32 EY07017-04	46,599
GORDON, MILTON P.....	MOLECULAR AND CELLULAR BIOLOGY.....	5T32 GM07270-04	344,733
HARKER, LAURENCE A.....	HEMATOLOGY.....	5T32 HL07093-04	98,617
HOLMES, KING K.....	VENEREAL DISEASE.....	1T32 AI07140-01	48,709
HORNBEIN, THOMAS.....	ANESTHESIOLOGY.....	3T01 GM01160-15S1	2,526
JACKSON, KENNETH L.....	RADIOLOGICAL SCIENCES.....	5T32 CA09081-03	67,344
KALINA, ROBERT E.....	VISION RESEARCH—MULTIDISCIPLINARY.....	5T32 EY07013-04	84,710
KELLER, PATRICIA J.....	ORAL BIOLOGY—SALIVARY SECRETIONS.....	5T32 DE07023-04	105,000
KLEBANOFF, SEYMOUR J.....	HOST DEFENSE IN ALLERGY AND INFECTIOUS DISEASE.....	5T32 AI07044-03	145,270
LAGUNOFF, DAVID.....	BASIC PATHOBIOLOGY.....	5T32 GM07187-04	104,500
LEE, JOHN A.....	CANCER EPIDEMIOLOGY AND BIostatISTICS.....	5T32 CA09168-04	133,011
MANNIK, MART.....	RHEUMATOLOGY.....	5T32 AM07108-04	77,424
MARTIN, GEORGE M.....	GENETIC APPROACHES TO AGING RESEARCH.....	1T32 AG00057-01	66,688
MOTULSKY, ARNO G.....	MEDICAL GENETICS.....	5T32 GM07454-02	82,512
NELSON, WENDEL.....	PHARMACOKINETICS AND BIOTRANSFORMATION.....	5T32 GM07348-02	31,641
NOWINSKI, ROBERT C.....	VIRAL ONCOLOGY.....	1T32 CA09229-01	63,465
ODLAND, GEORGE F.....	DERMATOLOGY.....	5T32 AM07019-04	58,048
PAGE, ROY C.....	PERIODONTAL DISEASES AND CHRONIC INFLAMMATION.....	5T32 DE07063-03	118,696
PATTON, HARRY D.....	SYSTEMS AND INTEGRATIVE BIOLOGY.....	5T32 GM07108-04	125,260
PATTON, HARRY D.....	NEUROBIOLOGY.....	1T32 NS07097-01A1	69,683
ROMAN, HERSCHEL L.....	CLINICAL PHARMACOLOGY.....	5T01 GM00182-20	169,541
STENCHEVER, MORTON A.....	ENDOCRINOLOGY OF REPRODUCTION.....	5T01 HD00272-13	108,231
STRIKER, GARY E.....	MEDICAL SCIENTIST.....	5T32 GM07266-04	204,031
TELLER, DAVIDA Y.....	VISUAL SCIENCES.....	5T32 EY07031-03	34,727

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
WASHINGTON—Con.			
THOMAS, E DONNALL.....	ONCOLOGY.....	1T32 CA09319-01	166,652
THOMPSON, DONOVAN J.....	BIOMETRY.....	5T01 GM01269-15	49,867
VOLWILER, WADE.....	GASTROENTEROLOGY.....	5T32 AM07113-04	39,049
WEDGWOOD, RALPH J.....	ABNORMAL BIOLOGIC DEVELOPMENT AND MENTAL RETARDATION.....	5T01 HD00404-05	118,318
WHITELEY, ARTHUR H.....	DEVELOPMENTAL BIOLOGY-INTERDISCIPLINARY.....	5T01 HD00266-10	105,283
ORGANIZATION TOTAL	42 3,881,273		
STATE TOTAL	44 4,005,964		
WEST VIRGINIA			
MORGANTOWN			
WEST VIRGINIA UNIVERSITY ZIP CODE 26506			
BURRELL, ROBERT G.....	PULMONARY IMMUNOLOGY.....	5T32 HL07170-03	34,551
FLEMING, WILLIAM W.....	PHARMACOLOGICAL SCIENCES.....	5T32 GM07039-04	89,544
HEDGE, GEORGE A.....	ENDOCRINOLOGY.....	1T32 AM07312-01	37,283
ORGANIZATION TOTAL	3 161,378		
STATE TOTAL	3 161,378		
WISCONSIN			
MADISON			
UNIVERSITY OF WISCONSIN SYSTEM-UNIVERSITY OF WISCONSIN-MADISON ZIP CODE 53706			
ALLEN, JAMES R.....	ENVIRONMENTAL PATHOLOGY.....	5T32 ES07071-02	72,320
ALLEN, JAMES R.....	PATHOBIOLOGY.....	5T32 GM07194-04	98,642
AUERBACH, ROBERT.....	DEVELOPMENTAL BIOLOGY.....	1T32 HD07118-01A1	107,748
BACH, FRITZ H.....	CELLULAR AND TUMOR IMMUNITY.....	5T32 CA09106-03	220,618
BASS, PAUL.....	PHARMACOLOGY AND TOXICOLOGY.....	5T32 GM07107-04	84,560
BEINERT, HELMUT.....	ENZYMOMETRY-MAMMALIAN METABOLISM.....	5T32 AM07049-04	50,829
BUMPASS, LARRY L.....	DEMOGRAPHY AND ECOLOGY.....	5T32 HD07014-04	111,985
CAMERON, JOHN R.....	RADIOLOGICAL SCIENCES.....	1T32 CA09206-01	66,341
HARPER, ALFRED E.....	METABOLIC REGULATION AND WEIGHT CONTROL.....	5T32 GM07058-02	65,852
HIND, JOSEPH E.....	SENSORY PHYSIOLOGY AND BIOPHYSICS.....	5T32 NS07026-03	73,393
HINS DILL, RONALD D.....	ENVIRONMENTAL TOXICOLOGY.....	5T32 ES07015-04	121,990
KALIL, RONALD E.....	NEUROSCIENCES.....	1T32 GM07507-01	72,354
LOEB, MARTIN B.....	AGING.....	5T01 AG00016-10	114,222
MILLER, ELIZABETH C.....	CARCINOGENESIS.....	2T32 CA09020-04	106,127
MUELLER, GERALD C.....	TUMOR BIOLOGY.....	5T32 CA09230-03	92,836
PITOT, HENRY C.....	EXPERIMENTAL ONCOLOGY.....	5T32 CA09135-04	282,867
RANKIN, JOHN H.....	PULMONARY MEDICINE.....	5T32 HL07016-04	101,808
ROWND, ROBERT H.....	MOLECULAR BIOLOGY.....	5T01 GM01874-10	80,829
SIMPSON, DAVID P.....	NEPHROLOGY.....	5T32 AM07238-02	36,987
SUSMAN, MILLARD.....	MEDICAL GENETICS.....	5T32 GM07131-04	175,502
SUSMAN, MILLARD.....	GENETICS.....	5T32 GM07133-04	425,413
SUTTIE, JOHN W.....	NUTRITION.....	5T32 DE07031-04	106,488
TEMIN, HOWARD M.....	VIRAL ONCOLOGY.....	5T32 CA09075-04	289,489
WILSON, JOE B.....	CELLULAR AND MOLECULAR BIOLOGY.....	5T32 GM07215-04	565,055
WOLF, RICHARD C.....	ENDOCRINOLOGY-REPRODUCTIVE PHYSIOLOGY.....	5T32 HD07007-02	145,379
ORGANIZATION TOTAL	25 3,669,634		

Table 3.—NIH Training Grants, by Area, Organization, and Program Director, Fiscal Year 1978—Continued

Program director	General area of training	Grant number	Dollars
WISCONSIN—Con.			
MILWAUKEE			
MEDICAL COLLEGE OF WISCONSIN	ZIP CODE 53233		
ASTER, RICHARD H.....	HEMATOLOGY AND BLOOD BANKING SCIENCES.....	5T32 HL07209-03	26,717
EDELHAUSER, HENRY F.....	EYE PHYSIOLOGY AND BIOCHEMISTRY.....	5T32 EY07016-04	27,821
FINK, JORDAN N.....	ALLERGIC DISEASES.....	5T32 AI07006-04	35,625
FUJIMOTO, JAMES M.....	PHARMACOLOGIC TOXICOLOGY OF ENVIRONMENTAL CHEMICALS.....	5T32 ES07043-02	62,400
LEMANN, JACOB, JR.....	RENAL PHYSIOLOGY, RENAL DISEASE AND HYPERTENSION.....	5T01 HL05949-05	24,493
RYTEL, MICHAEL W.....	INFECTIOUS DISEASES.....	5T01 AI00455-05	27,571
SOERGEL, KONRAD H.....	NATIONAL RESEARCH SERVICE INSTITUTIONAL GRANT.....	1T32 AM07267-01A1	18,227
ORGANIZATION TOTAL	7	222,854	
STATE TOTAL	32	3,892,488	

**Table 4.—Cancer Research Facilities Construction Grants,
By Area, Organization, and Responsible Official, Fiscal Year 1978**

Responsible official	Purpose of grant	Grant number	Dollars
TOTAL, 14 GRANTS.....			12,000,000

ALABAMA

BIRMINGHAM

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294

DURANT, JOHN R.....	NEW RESEARCH FACILITY.....	1C06 CA23735-01	2,244,000
ORGANIZATION TOTAL	1	2,244,000	
STATE TOTAL	1	2,244,000	

CALIFORNIA

LOS ANGELES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024

PARKER, ROBERT G.....	REMODEL CANCER FACILITY.....	1C06 CA23748-01	593,250
ORGANIZATION TOTAL	1	593,250	

PASADENA

CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125

MORRISROE, DAVID W.....	NEW CANCER RESEARCH FACILITY.....	1C06 CA23167-01	341,079
ORGANIZATION TOTAL	1	341,079	
STATE TOTAL	2	934,329	

DIST OF COL

WASHINGTON

GEORGETOWN UNIVERSITY ZIP CODE 20007

POTTER, JOHN F.....	NEW CANCER RESEARCH FACILITY.....	3C06 CA20440-01S1	947,434
ORGANIZATION TOTAL	1	947,434	
STATE TOTAL	1	947,434	

NOTE: For comments on organizations, see Appendix.

**Table 4.—Cancer Research Facilities Construction Grants, By Area,
Organization, and Responsible Official, Fiscal Year 1978—Continued**

Responsible official	Purpose of grant	Grant Number	Dollars
ILLINOIS			
CHICAGO			
NORTHWESTERN UNIVERSITY	ZIP CODE 60611		
BERLIN, NATHANIEL I.....	CANCER RESEARCH FACILITY.....	3C06 CA19774-01S3	1,174,414
ORGANIZATION TOTAL	1 1,174,414		
STATE TOTAL	1 1,174,414		
MARYLAND			
ROCKVILLE			
AMERICAN TYPE CULTURE COLLECTION	ZIP CODE 20852		
DONOVICK, RICHARD.....	EXPANSION OF EXISTING RESEARCH FACILITIES.....	1C06 CA23716-01	430,009
ORGANIZATION TOTAL	1 430,009		
STATE TOTAL	1 430,009		
MASSACHUSETTS			
BOSTON			
HARVARD UNIVERSITY	ZIP CODE 02138		
MEADOW, HENRY.....	NEW CANCER RESEARCH FACILITY.....	1C06 CA21125-01A1	1,907,323
ORGANIZATION TOTAL	1 1,907,323		
STATE TOTAL	1 1,907,323		
MICHIGAN			
DETROIT			
MICHIGAN CANCER FOUNDATION	ZIP CODE 48201		
PETTIT, JOHN W.....	CHEMICAL CARCINOGENESIS RESEARCH FACILITY.....	1C06 CA23764-01	350,000
ORGANIZATION TOTAL	1 350,000		
STATE TOTAL	1 350,000		
NEW YORK			
ITHACA			
CORNELL UNIVERSITY	ZIP CODE 14850		
CURRY, PETER.....	NEW CANCER RESEARCH FACILITY.....	1C06 CA21710-01A1	427,241
ORGANIZATION TOTAL	1 427,241		
NEW YORK			
YESHIVA UNIVERSITY	ZIP CODE 10033		
FRIEDMAN, EPHRAIM.....	CANCER FACILITY.....	3C06 CA15023-01S2	105,000

**Table 4.—Cancer Research Facilities Construction Grants, By Area,
Organization, and Responsible Official, Fiscal Year 1978—Continued**

Responsible official	Purpose of grant	Grant Number	Dollars
NEW YORK—Con.			
ORGANIZATION TOTAL	1	105,000	
ROCHESTER			
UNIVERSITY OF ROCHESTER	ZIP CODE 14627		
MC BRIDE, DAVID A.....	CANCER RESEARCH FACILITY.....	3C06 CA18841-01S3	290,481
ORGANIZATION TOTAL	1	290,481	
STATE TOTAL	3	822,722	
TEXAS			
HOUSTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER	ZIP CODE 77025		
HICKEY, ROBERT C.....	EXPANSION OF EXISTING FACILITY.....	1C06 CA24709-01	735,041
ORGANIZATION TOTAL	1	735,041	
STATE TOTAL	1	735,041	
WASHINGTON			
SEATTLE			
FRED HUTCHINSON CANCER RESEARCH CENTER	ZIP CODE 98104		
HUTCHINSON, WILLIAM B.....	CANCER RESEARCH FACILITY.....	3C06 CA14501-01S3	1,329,728
ORGANIZATION TOTAL	1	1,329,728	
STATE TOTAL	1	1,329,728	
WISCONSIN			
MADISON			
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN MADISON	ZIP CODE 53706		
PITOT, HENRY C.....	CHEMICAL HAZARD ANIMAL FACILITY.....	1C06 CA22506-01	1,125,000
ORGANIZATION TOTAL	1	1,125,000	
STATE TOTAL	1	1,125,000	

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978

Project director	Project title	Grant number	Dollars
TOTAL, 81 GRANTS			17,601,433
ALABAMA			
BIRMINGHAM			
UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294			
BUTTERWORTH, C E, JR.....	NUTRITIONAL SUPPORT & REHABILITATION FOR CANCER PATIENTS	5R18 CA17928-03	86,499
GAMS, RICHARD A	CANCER CONTROL-DEVELOPMENTAL AND SUPPORT GRANT	1R18 CA22842-01	431,728
ORGANIZATION TOTAL	2 518,227		
STATE TOTAL	2 518,227		
CALIFORNIA			
BERKELEY			
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
LAZARUS, RICHARD S.....	COPING AND CANCER: A PROCESS-ORIENTED APPROACH.....	5R18 CA19362-02	246,116
ORGANIZATION TOTAL	1 246,116		
LA JOLLA			
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
IGNELZI, RONALD J.....	ELECTRICAL ANALGESIA FOR INTRACTABLE PAIN	2R18 CA18866-03	68,797
ORGANIZATION TOTAL	1 68,797		
LOS ANGELES			
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
CULLEN, JOSEPH W.....	CANCER CONTROL DEVELOPMENTAL OUTREACH GRANT	1R18 CA23974-01	142,545
REEDER, LEO G.....	PROCESSES IN HEALTH BEHAVIOR AND CANCER CONTROL	5R18 CA18451-03	156,395
ORGANIZATION TOTAL	2 298,940		
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
MC KENNA, ROBERT J.....	SUPPORT FOR REGIONAL ACTIVITIES CANCER CENTER.....	5R18 CA16419-04	883,335
MORROW, C PAUL.....	GYNECOLOGIC ONCOLOGY PROGRAM	5R18 CA20501-02	51,785
MORROW, C PAUL.....	MODEL REGIONAL TROPHOBLASTIC DISEASE PROGRAM.....	5R18 CA20749-02	40,663
ORGANIZATION TOTAL	3 975,783		

NOTE: Grants are listed according to the State or country and city of the component part of the organization professionally responsible for the work (see Technical Note, p. vii). If an organization appears in more than one geographic location or requires a clarifying comment, appropriate annotations have been made in the Appendix.

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Project title	Grant number	Dollars
CALIFORNIA—Con.			
PALO ALTO			
NORTHERN CALIFORNIA CANCER PROGRAM, INC. ZIP CODE 94304			
CARTER, STEPHEN K.....	NO. CALIFORNIA CANCER CONTROL.....	1R18 CA22721-01	568,554
ORGANIZATION TOTAL	1 568,554		
SAN DIEGO			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—SAN DIEGO STATE UNIVERSITY ZIP CODE 92115			
SPINETTA, JOHN J.....	ADJUSTMENT AND ADAPTATION IN CHILDREN WITH CANCER.....	5R18 CA21254-02	213,887
ORGANIZATION TOTAL	1 213,887		
SAN FRANCISCO			
WEST COAST CANCER FOUNDATION ZIP CODE 94133			
ENELOW, ALLEN J.....	RESEARCH INTO THE PSYCHOSOCIAL ASPECTS OF CANCER CARE.....	3R18 CA17903-03S1	104,116
ORGANIZATION TOTAL	1 104,116		
STATE TOTAL	10 2,476,193		
COLORADO			
DENVER			
CHILDREN'S HOSPITAL ZIP CODE 80218			
ZWARTJES, WILLIAM J.....	SCHOOL PROBLEMS OF CHILDREN WITH MALIGNANT NEOPLASMS.....	5R18 CA19581-03	110,363
ORGANIZATION TOTAL	1 110,363		
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
KIRSCH, WOLFF M.....	PAIN CONTROL IN CANCER PATIENTS.....	5R18 CA20370-02	48,468
ORGANIZATION TOTAL	1 48,468		
STATE TOTAL	2 158,831		
CONNECTICUT			
NEW HAVEN			
YALE UNIVERSITY ZIP CODE 06520			
FISCHER, JAMES J.....	REGIONAL RADIATION THERAPY NETWORK DEMONSTRATION.....	5R18 CA17941-03	113,851
GENEL, MYRON.....	MONITORING FAMILIAL MEDULLARY CARCINOMA OF THE THYROID.....	5R18 CA18863-03	35,308
ORGANIZATION TOTAL	2 149,159		
STATE TOTAL	2 149,159		
DELAWARE			
WILMINGTON			
WILMINGTON MEDICAL CENTER ZIP CODE 19801			
WHITNEY, LESLIE W.....	A TUMOR CONTROL CENTER PROGRAM.....	3R18 CA18940-02S1	66,553
WHITNEY, LESLIE W.....	CANCER CONTROL DEVELOPMENTAL AND SUPPORT GRANT.....	5R18 CA22071-02	152,607

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Project title	Grant number	Dollars
DELAWARE—Con.				
ORGANIZATION TOTAL	2			219,160
STATE TOTAL	2			219,160
DIST OF COL				
WASHINGTON				
HOWARD UNIVERSITY ZIP CODE 20001				
WHITE, JACK E		CANCER CENTER COMMUNITY OUTREACH DEVELOPMENTAL GRANT	5R18 CA18510-02	277,357
ORGANIZATION TOTAL	1			277,357
STATE TOTAL	1			277,357
FLORIDA				
GAINESVILLE				
FLORIDA ASSOCIATION OF PEOIATRIC TUMOR PROGRAMS ZIP CODE 32610				
TALBERT, JAMES L		COMMUNITY CHILDHOOD CANCER CONTROL FOR FLORIDA	1R18 CA22049-01	69,914
ORGANIZATION TOTAL	1			69,914
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611				
ADAMS, CALVIN K		SIMULATED BREASTS FOR THE TRAINING OF LUMP DETECTION	1R18 CA20791-01A1	157,755
ORGANIZATION TOTAL	1			157,755
MIAMI				
UNIVERSITY OF MIAMI ZIP CODE 33152				
HEALEY, JOHN E, JR		CANCER CONTROL DEVELOPMENTAL AND SUPPORT GRANT	5R18 CA17910-04	187,399
LINN, MARGARET W		HUMANISTIC ONCOLOGY: THE OMEGA EXPERIENCE	5R18 CA19550-03	120,942
ROSOMOFF, HUBERT L		CANCER REHABILITATION THROUGH PAIN CONTROL	5R18 CA17935-03	124,262
ORGANIZATION TOTAL	3			432,603
STATE TOTAL	5			660,272
ILLINOIS				
CHICAGO				
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 60606				
KRAMER, SIMON		CLINICAL AND RESEARCH RADIATION THERAPY IN CANCER CARE	5R18 CA15978-05	1,774,074
ORGANIZATION TOTAL	1			1,774,074
CHILDREN'S MEMORIAL HOSPITAL ZIP CODE 60614				
SCHULMAN, JEROME L		COPING IN FAMILIES WITH A LEUKEMIC CHILD	5R18 CA19344-03	99,712
ORGANIZATION TOTAL	1			99,712
ILLINOIS CANCER COUNCIL ZIP CODE 60603				
STEINER, JAN W		DEVELOPMENT OF COORDINATED CANCER PROGRAM	5R18 CA20071-03	199,198
WARNECKE, RICHARD B		CANCER INFORMATION NEEDS IN ILLINOIS	5R18 CA21954-02	160,081
ORGANIZATION TOTAL	2			359,279

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Project title	Grant number	Dollars
ILLINOIS—Con.				
NORTHWESTERN UNIVERSITY ZIP CODE 60611				
LOGEMANN, JERILYN A.....		EVALUATION OF REHABILITATION OF OROPHARYNGEAL CANCER.....	2R18 CA18901-04	74,646
LOGEMANN, JERILYN A.....		PROSTHETIC REHABILITATION OF OROPHARYNGEAL CANCER.....	5R18 CA20876-02	76,353
ORGANIZATION TOTAL	2	150,999		
UNIVERSITY OF CHICAGO ZIP CODE 60637				
BIBBO, MARLUCE.....		ASSESSMENT OF TECHNIQS FOR ENDOMETRIAL CANCER DETECTION.....	1R18 CA22460-01	33,899
ROBSON, MARTIN C.....		REHABILITATION OF THE HEAD AND NECK CANCER PATIENT.....	1R18 CA20396-01A1	69,951
ORGANIZATION TOTAL	2	103,850		
STATE TOTAL	8	2,487,914		
IOWA				
IOWA CITY				
UNIVERSITY OF IDWA ZIP CODE 52242				
KISKER, C THOMAS.....		COMMUNITY BASED THERAPY FOR CHILDREN WITH CANCER.....	5R18 CA18139-04	120,835
ORGANIZATION TOTAL	1	120,835		
STATE TOTAL	1	120,835		
KANSAS				
KANSAS CITY				
UNIVERSITY OF KANSAS ZIP CODE 66103				
LANSKY, SHIRLEY B.....		CHILDHOOD CANCER: PSYCHOSOCIAL REHABILITATION.....	2R18 CA17806-04	179,739
LOWMAN, JAMES T.....		CANCER CONTROL DEVELOPMENT AND SUPPORT GRANT.....	1R18 CA22663-01	123,599
ORGANIZATION TOTAL	2	303,338		
STATE TOTAL	2	303,338		
KENTUCKY				
LEXINGTON				
EPHRAIM MC OOWELL COMMUNITY CANCER NETWORK ZIP CODE 40503				
GOLDENBERG, DAVID M.....		COMMUNITY OUTREACH DEVELOPMENT PROGRAM.....	5R18 CA22124-02	273,175
ORGANIZATION TOTAL	1	273,175		
STATE TOTAL	1	273,175		
MARYLAND				
BALTIMORE				
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218				
THOMAS, CAROLINE B.....		PSYCHOLOGICAL AND FAMILIAL PRECURSORS OF CANCER.....	1R18 CA24416-01	131,310
WAALKES, T PHILLIP.....		CANCER CONTROL DEVELOPMENTAL GRANT.....	3R18 CA17448-03S1	284,570
WAALKES, T PHILLIP.....		EXPLORATORY STUDIES FOR A STATE-WIDE CANCER NETWORK.....	5R18 CA20322-02	318,854

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Project title	Grant number	Dollars
MARYLAND—Con.			
ORGANIZATION TOTAL	3	734,734	
BETHESDA			
UNIVERSITIES ASSOCIATED FOR RESEARCH AND EDUCATION IN PATHOLOGY		ZIP CODE 20014	
HARTMANN, WILLIAM H.....	ATLAS OF TUMOR PATHOLOGY.....	2R18 CA08575-13	61,108
ORGANIZATION TOTAL	1	61,108	
STATE TOTAL	4	795,842	
MASSACHUSETTS			
BOSTON			
BOSTON UNIVERSITY		ZIP CODE 02215	
ALBERT, ARTHUR E.....	SCREENING AND CERVICAL CANCER: A MATHEMATICAL MODEL.....	3R18 CA17807-03S1	21,762
ALBERT, ARTHUR E.....	SCREENING FOR THE EARLY DETECTION OF CANCER.....	2R18 CA17807-04	107,827
ORGANIZATION TOTAL	2	129,589	
HARVARD UNIVERSITY		ZIP CODE 02138	
ATWOOD, DOUGLAS A.....	MAXILLOFACIAL PROSTHETIC REHABILITATION FOR CANCER.....	5R18 CA18870-03	156,847
ORGANIZATION TOTAL	1	156,847	
MASSACHUSETTS GENERAL HOSPITAL		ZIP CODE 02114	
WEISMAN, AVERY D.....	PSYCHOSOCIAL INTERVENTIONS IN CANCER CARE.....	5R18 CA19797-02	257,885
ORGANIZATION TOTAL	1	257,885	
NEW ENGLAND MEDICAL CENTER HOSPITAL		ZIP CODE 02111	
DESFORGES, JANE.....	COMPUTER ASSISTED EVALUATION OF PATIENTS WITH CANCER.....	5R18 CA19122-03	138,220
ORGANIZATION TOTAL	1	138,220	
SIONEY FARBER CANCER INSTITUTE		ZIP CODE 02115	
FRECHETTE, ALFRED L.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	3R18 CA16408-03S1	31,766
O'MALLEY, JOHN E.....	PSYCHOSOCIAL SEQUELAE OF CHILDHOOD CANCER.....	5R18 CA18429-04	260,654
PATTERSON, W BRADFORD.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	5R18 CA16408-04	1,491,855
STONBERG, MARION F.....	REGIONAL DEVELOPMENT OF ONCOLOGIC SOCIAL WORK SKILLS.....	1R18 CA20615-01A1	88,057
ORGANIZATION TOTAL	4	1,872,332	
UNIVERSITY HOSPITAL		ZIP CODE 02118	
FRIEDMAN, ROBERT H.....	CANCER CARE DATA MANAGEMENT SYSTEM.....	1R18 CA19134-01A1	320,026
ORGANIZATION TOTAL	1	320,026	
STATE TOTAL	10	2,874,899	
MICHIGAN			
EAST LANSING			
MICHIGAN STATE UNIVERSITY		ZIP CODE 48823	
POTCHEN, E JAMES.....	A COMMUNITY BASED STUDY OF COLORECTAL CANCER CONTROL.....	5R18 CA18871-03	114,978
ORGANIZATION TOTAL	1	114,978	
STATE TOTAL	1	114,978	

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Project title	Grant number	Dollars
MINNESOTA			
MINNEAPOLIS			
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS ZIP CODE 55455			
MARTINSON, IDA M.....	HOME CARE FOR CHILD WITH CANCER.....	5R18 CA19490-03	143,123
ORGANIZATION TOTAL	1 143,123		
STATE TOTAL	1 143,123		
MISSOURI			
COLUMBIA			
CANCER RESEARCH CENTER ZIP CODE 65201			
HALBROOK, CHARLES W.....	CLERGY COUNSELING OF THE CANCER PATIENT.....	5R18 CA20381-02	11,270
ORGANIZATION TOTAL	1 11,270		
KANSAS CITY			
MIDWEST RESEARCH INSTITUTE ZIP CODE 64110			
GRAHAM, CHARLES.....	EFFECTS OF BIOFEEDBACK AND HYPNOSIS ON CANCER PAIN.....	5R18 CA17936-03	147,964
ORGANIZATION TOTAL	1 147,964		
STATE TOTAL	2 159,234		
NEW YORK			
BUFFALO			
NEW YORK STATE DEPARTMENT OF HEALTH—ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
WALLACE, HAROLD J, JR.....	CANCER CONTROL OUTREACH PROGRAM.....	2R18 CA16411-04	307,588
WALLACE, HAROLD J, JR.....	DEMONSTRATION UNIT FOR ADOLESCENT CANCER PATIENTS.....	1R18 CA20617-01A1	207,408
ORGANIZATION TOTAL	2 514,996		
NEW YORK			
AMERICAN HEALTH FOUNDATION ZIP CODE 10017			
ARNOLD, CHARLES.....	CANCER CONTROL AND PREVENTION PROGRAM SUPPORT.....	3R18 CA17867-03S1	414,513
ORGANIZATION TOTAL	1 414,513		
COLUMBIA UNIVERSITY ZIP CODE 10027			
ROGERS, THERESA F.....	LAY GROUP SUPPORT IMPACT ON IMPAIRED'S RECOVERY/FUNCTION.....	5R18 CA22219-02	196,648
ORGANIZATION TOTAL	1 196,648		
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
ROBBINS, GUY F.....	CANCER CONTROL DEVELOPMENTAL GRANT.....	5R18 CA16402-04	647,102
SNYDER, RUTH E.....	DIGITAL COMPUTERIZED MAMMOGRAPHIC ENHANCEMENT.....	5R18 CA18309-02	71,855
ORGANIZATION TOTAL	2 718,957		
NEW YORK UNIVERSITY ZIP CODE 10003			
LEHNEIS, HANS R.....	ADVANCED PROSTHETICS/ORTHOTICS IN CANCER MANAGEMENT.....	5R18 CA20703-02	129,059
WOLFF, B BERTHOLD.....	EVALUATION AND CONTROL OF CHRONIC PAIN IN CANCER.....	5R18 CA20652-02	178,638
ORGANIZATION TOTAL	2 307,697		

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Project title	Grant number	Dollars
NEW YORK—Con.			
ROCHESTER			
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
HEMPELMANN, LOUIS H.....	HUMAN RADIATION CARCINOGENESIS STUDY.....	5R18 CA19764-02	122,480
SCHMALE, ARTHUR H.....	PSYCHOSOCIAL COLLABORATIVE GROUP FOR CANCER CONTROL.....	3R18 CA19681-02S1	232,737
ORGANIZATION TOTAL	2	355,217	
SYRACUSE			
STATE UNIVERSITY OF NEW YORK-UPSTATE MEDICAL CENTER ZIP CODE 13210			
COLTON, RAYMOND H.....	AN INVESTIGATION OF VOICE CHANGE AFTER RADIOTHERAPY.....	5R18 CA17962-04	66,768
ORGANIZATION TOTAL	1	66,768	
STATE TOTAL	11	2,574,796	
NORTH CAROLINA			
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
CLIPPINGER, FRANK W.....	SENSORY FEED-BACK LEG PROSTHESIS FOR CANCER PATIENTS.....	3R18 CA17945-03S1	48,087
HAMMOND, CHARLES B.....	REGIONAL TROPHOBLASTIC DISEASE CENTER.....	5R18 CA19272-03	88,595
NEWELL, JOSEPHINE E.....	BREAST EXAMINATION AND BREAST SELF EXAMINATION.....	5R18 CA19601-03	54,481
ORGANIZATION TOTAL	3	191,163	
STATE TOTAL	3	191,163	
OHIO			
COLUMBUS			
OHIO STATE UNIVERSITY ZIP CODE 43210			
BATTLES, JAMES B.....	A REGIONAL AMBULATORY CANCER CHEMOTHERAPY PROGRAM.....	2R18 CA17942-04	114,964
ORGANIZATION TOTAL	1	114,964	
STATE TOTAL	1	114,964	
OREGON			
PORTLAND			
MEDICAL RESEARCH FOUNDATION OF OREGON ZIP CODE 97225			
HUTCHINSON, ALFRED C.....	A CONCEPT FOR OPTIMAL CANCER CARE IN OREGON.....	5R18 CA21267-02	194,541
ORGANIZATION TOTAL	1	194,541	
STATE TOTAL	1	194,541	

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Project title	Grant number	Dollars
PENNSYLVANIA			
PHILADELPHIA			
FOX CHASE CANCER CENTER ZIP CODE 19111			
DONALDSON, MILTON H	CANCER CONTROL OUTREACH PROGRAM	5R18 CA23321-02	793,157
ORGANIZATION TOTAL	1 793,157		
WILKES-BARRE			
COMMUNITY CANCER CORPORATION OF LUZERNE COUNTY ZIP CODE 18703			
GRECO, VICTOR F	A PILOT DEMONSTRATION DETECTION PROGRAM.....	1R18 CA22190-01	121,746
ORGANIZATION TOTAL	1 121,746		
STATE TOTAL	2 914,903		
TENNESSEE			
MEMPHIS			
ST. JUOE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
GOFF, JOHN R	NEUROPSYCHOLOGICAL EFFECTS OF LEUKEMIA & ITS TREATMENT	1R18 CA24079-01	113,844
ORGANIZATION TOTAL	1 113,844		
STATE TOTAL	1 113,844		
TEXAS			
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON ZIP CODE 77550			
BAILEY, BYRON J	ELECTRONIC LARYNGEAL PROSTHESIS.....	2R18 CA17961-04	107,184
ORGANIZATION TOTAL	1 107,184		
HOUSTON			
BAYLOR COLLEGE OF MEDICINE ZIP CODE 77025			
SPIRA, MELVIN	FREE FLAP TRACHEA AND ESOPHAGEAL RECONSTRUCTION	1R18 CA23783-01	84,838
ORGANIZATION TOTAL	1 84,838		
UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
JACKSON, CARMAULT B, JR	CANCER CONTROL DEVELOPMENT.....	3R18 CA16413-03S1	112,375
JACKSON, CARMAULT B, JR	CANCER CONTROL PROGRAM FOR FAMILY PRACTITIONERS.....	5R18 CA19460-02	218,725
ORGANIZATION TOTAL	2 331,100		
STATE TOTAL	4 523,122		
VERMONT			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
YATES, JEROME W.....	CANCER CARE AND REHABILITATION IN A RURAL SETTING.....	3R18 CA17868-03S1	67,791
ORGANIZATION TOTAL	1 67,791		

Table 5.—Cancer Control Grants, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Project title	Grant number	Dollars
VERMONT—Con.				
STATE TOTAL	1			67,791
VIRGINIA				
RICHMOND				
VIRGINIA COMMONWEALTH UNIVERSITY		ZIP CODE 23284		
REGELSON, WILLIAM		COMPARATIVE USE OF SUPPORTIVE DRUGS IN CANCER PATIENTS.....	5R18 CA19378-03	103,898
ORGANIZATION TOTAL	1			103,898
STATE TOTAL	1			103,898
WASHINGTON				
SEATTLE				
FRED HUTCHINSON CANCER RESEARCH CENTER		ZIP CODE 98104		
HUTCHINSON, WILLIAM B.....		CANCER CONTROL DEVELOPMENT GRANT.....	5R18 CA16404-04	600,549
ORGANIZATION TOTAL	1			600,549
STATE TOTAL	1			600,549
WISCONSIN				
MADISON				
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MADISON		ZIP CODE 53706		
JOHNSON, ROBERT O.....		DEVELOPMENT OF REGIONAL CANCER CONTROL PROGRAM.....	5R18 CA16405-03	469,325
ORGANIZATION TOTAL	1			469,325
STATE TOTAL	1			469,325

**Table 6.—Medical Library Grants, by Area, Organization,
and Responsible Official, Fiscal Year 1978**

Responsible official	Grant No.	Dollars
TOTAL, 52 GRANTS.....		2,013,313

ALABAMA

TUSKEGEE INSTITUTE

TUSKEGEE INSTITUTE	ZIP CODE 36088			
JOHNSON, WILLIAM E, JR.....				1G08 LM03176-01 38,461
ORGANIZATION TOTAL	1	38,461		
STATE TOTAL	1	38,461		

ARKANSAS

PARAGOULD

COMMUNITY METHODIST HOSPITAL	ZIP CODE 72450			
PRATT, PATTY.....				1G07 LM03046-01 4,000
ORGANIZATION TOTAL	1	4,000		

SPRINGDALE

SPRINGDALE MEMORIAL HOSPITAL	ZIP CODE 72764			
CLEVENGER, VIRGINIA.....				5G08 LM02978-02 45,134
ORGANIZATION TOTAL	1	45,134		
STATE TOTAL	2	49,134		

CALIFORNIA

FULLERTON

SOUTHERN CALIFORNIA COLLEGE OF OPTOMETRY	ZIP CODE 92631			
CARLSON, PATRICIA T.....				1G08 LM03159-01 56,715
ORGANIZATION TOTAL	1	56,715		

MERCED

MERCED COMMUNITY MEDICAL CENTER	ZIP CODE 95340			
MADDALENA, BETTY.....				2G07 LM03107-02 14,000
ORGANIZATION TOTAL	1	14,000		

SAN DIEGO

CHILDREN'S HOSPITAL AND HEALTH CENTER	ZIP CODE 92123			
WOOD, CAROLYN R.....				1G07 LM03161-01 3,619

NOTE: For comments on organizations, see appendix.

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official			Grant No.	Dollars
CALIFORNIA—Con.				
ORGANIZATION TOTAL	1	3,619		
SAN JOSE				
MEDI-SHARE ZIP CODE 95128				
SKILLICORN, STANLEY.....			5G08 LM02733-02	4,479
ORGANIZATION TOTAL	1	4,479		
STATE TOTAL	4	78,813		
CONNECTICUT				
MIDDLETOWN				
CONNECTICUT STATE DEPARTMENT OF MENTAL HEALTH--CONNECTICUT VALLEY HOSPITAL ZIP CODE 06457				
ASBELL, MILDRED S.....			1G08 LM03064-01	14,590
ORGANIZATION TOTAL	1	14,590		
VERNON				
ROCKVILLE GENERAL HOSPITAL ZIP CODE 06066				
BOARDMAN, ROBERT C.....			1G08 LM02767-01A1	20,774
ORGANIZATION TOTAL	1	20,774		
STATE TOTAL	2	35,364		
DIST OF COL				
WASHINGTON				
GEORGETOWN UNIVERSITY ZIP CODE 20007				
BROERING, NAOMI C.....			5G08 LM02887-02	30,892
ORGANIZATION TOTAL	1	30,892		
STATE TOTAL	1	30,892		
FLORIDA				
TAMPA				
STATE UNIVERSITY SYSTEM OF FLORIDA--UNIVERSITY OF SOUTH FLORIDA ZIP CODE 33620				
BRYANT, FRED D.....			1G08 LM0304 1-01	40,546
ORGANIZATION TOTAL	1	40,546		
STATE TOTAL	1	40,546		
GEORGIA				
MACON				
MERCER UNIVERSITY ZIP CODE 31207				
RANKIN, JOCELYN A.....			3G07 LM03090-01S1	9,000

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official			Grant No.	Dollars
GEORGIA—Con.				
ORGANIZATION TOTAL	1	9,000		
STATE TOTAL	1	9,000		
IDAHO				
BOISE				
IOAHO STATE DEPARTMENT OF EDUCATION		ZIP CODE 83720		
MILLER, HELEN M.....			5G08 LM02880-02	38,000
ORGANIZATION TOTAL	1	38,000		
SALMON				
STEELE MEMORIAL HOSPITAL		ZIP CODE 83467		
BARSALOU, DONA.....			1G07 LM03202-01	2,207
ORGANIZATION TOTAL	1	2,207		
STATE TOTAL	2	40,207		
INDIANA				
INDIANAPOLIS				
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS		ZIP CODE 46202		
LAATZ, MARY J.....			5G08 LM02687-02	25,760
ORGANIZATION TOTAL	1	25,760		
WEST LAFAYETTE				
PURDUE UNIVERSITY		ZIP CODE 47907		
MEYER, KENNETH B.....			5G08 LM02883-02	48,493
ORGANIZATION TOTAL	1	48,493		
STATE TOTAL	2	74,253		
KENTUCKY				
MOREHEAD				
MOREHEAD STATE UNIVERSITY		ZIP CODE 40351		
ELLIS, JACK D.....			1G07 LM03158-01	21,000
ORGANIZATION TOTAL	1	21,000		
STATE TOTAL	1	21,000		
MAINE				
AUGUSTA				
MAINE HOSPITAL ASSOCIATION		ZIP CODE 04330		
HEGGIE, W GRANT, JR.....			5G08 LM02908-02	31,000

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official			Grant No.	Dollars
MAINE—Con.				
ORGANIZATION TOTAL	1	31,000		
STATE TOTAL	1	31,000		
MARYLAND				
BALTIMORE				
JOHNS HOPKINS UNIVERSITY		ZIP CODE 21218		
FRIED, RUTH L.....			5G08 LM02886-02	20,197
ORGANIZATION TOTAL	1	20,197		
STATE TOTAL	1	20,197		
MASSACHUSETTS				
CAMBRIDGE				
MOUNT AUBURN HOSPITAL		ZIP CODE 02138		
WITTE, LAWRENCE M.....			5G08 LM03024-02	47,917
ORGANIZATION TOTAL	1	47,917		
STATE TOTAL	1	47,917		
MINNESOTA				
MINNEAPOLIS				
FAIRVIEW COMMUNITY HOSPITALS		ZIP CODE 55454		
MC INTOSH, LINDA.....			5G08 LM02682-02	15,541
ORGANIZATION TOTAL	1	15,541		
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS		ZIP CODE 55455		
BRUDVIG, GLENN L.....			5G08 LM02586-02	61,635
ORGANIZATION TOTAL	1	61,635		
STATE TOTAL	2	77,176		
NEBRASKA				
LINCOLN				
LINCOLN MEDICAL EDUCATION FOUNDATION		ZIP CODE 68510		
BITNEY, ELIZABETH A.....			2G07 LM03103-02	41,500
ORGANIZATION TOTAL	1	41,500		
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA AT LINCOLN		ZIP CODE 68508		
JONES, GARY L.....			5G08 LM02911-02	139,378
ORGANIZATION TOTAL	1	139,378		

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official			Grant No.	Dollars
NEBRASKA—Con.				
OMAHA				
CREIGHTON UNIVERSITY	ZIP CODE 68178			
WANNARKA, MARJORIE B			5G08 LM02878-02	65,000
ORGANIZATION TOTAL	1	65,000		
STATE TOTAL	3	245,878		
NEW JERSEY				
ELIZABETH				
ELIZABETH GENERAL HOSPITAL AND DISPENSARY	ZIP CODE 07201			
BOSS, CATHERINE M.			1G08 LM02999-01	55,705
ORGANIZATION TOTAL	1	55,705		
NEWARK				
UNITED HOSPITALS OF NEWARK	ZIP CODE 07107			
GILHEANY, ROSARY S.			1G08 LM03142-01	32,069
ORGANIZATION TOTAL	1	32,069		
PLAINFIELD				
MUHLENBERG HOSPITAL	ZIP CODE 07061			
MC CARTHY, JANE C.			5G08 LM02859-02	15,723
ORGANIZATION TOTAL	1	15,723		
WOODBURY				
UNDERWOOD-MEMORIAL HOSPITAL	ZIP CODE 08096			
KESER, BLAIR T.			1G07 LM03128-01	2,450
ORGANIZATION TOTAL	1	2,450		
STATE TOTAL	4	105,947		
NEW YORK				
ALBANY				
UNION COLLEGE AND UNIVERSITY—ALBANY MEDICAL COLLEGE	ZIP CODE 12209			
POLAND, URSULA H.			5G08 LM02595-02	24,912
ORGANIZATION TOTAL	1	24,912		
BUFFALO				
STATE UNIVERSITY OF NEW YORK AT BUFFALO	ZIP CODE 14260			
HUANG, C K.			5G08 LM02575-02	34,474
ORGANIZATION TOTAL	1	34,474		
JOHNSON CITY				
CHARLES S. WILSON MEMORIAL HOSPITAL	ZIP CODE 13790			
EDSALL, SHIRLEY			1G08 LM03170-01	51,054
ORGANIZATION TOTAL	1	51,054		

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official	Grant No.	Dollars
NEW YORK—Con.		
NEW YORK		
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029		
GOLDSTEIN, RACHAEL K.....	5G08 LM02780-02	69,845
ORGANIZATION TOTAL 1 69,845		
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021		
MEYERHOFF, ERICH.....	5G08 LM02948-02	56,000
ORGANIZATION TOTAL 1 56,000		
SYRACUSE		
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER ZIP CODE 13210		
HOEY, EVELYN L.....	5G08 LM02584-02	38,924
ORGANIZATION TOTAL 1 38,924		
UTICA		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE—UTICA PSYCHIATRIC CENTER ZIP CODE 13502		
SMITH, TOMS E.....	1G08 LM03059-01	30,060
ORGANIZATION TOTAL 1 30,060		
STATE TOTAL 7 305,269		
NORTH CAROLINA		
GOLDSBORO		
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—CHERRY HOSPITAL ZIP CODE 27530		
TABORY, MAXIM.....	1G08 LM02983-01A1	28,766
ORGANIZATION TOTAL 1 28,766		
RALEIGH		
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES—OOROTHEA OIX HOSPITAL ZIP CODE 27611		
WALKER, PRESTON A.....	1G08 LM03125-01	36,623
ORGANIZATION TOTAL 1 36,623		
STATE TOTAL 2 65,389		
OHIO		
KENT		
NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE ZIP CODE 44240		
BREWER, KAREN L.....	1G08 LM03063-01	245,780
ORGANIZATION TOTAL 1 245,780		
STATE TOTAL 1 245,780		

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official	Grant No.	Dollars
OKLAHOMA		
BARTLESVILLE		
MEDICAL PRODUCTS SYSTEMS	ZIP CODE 74003	
LIBERTY, EILEEN J.....	1G07 LM03225-01	4,000
ORGANIZATION TOTAL	1	4,000
STATE TOTAL	1	4,000
OREGON		
PORTLAND		
OREGON STATE HIGHER EDUCATION SYSTEM--UNIVERSITY OF OREGON HEALTH SCIENCES CENTER	ZIP CODE 97201	
MORGAN, JAMES E.....	1G08 LM03115-01	76,023
ORGANIZATION TOTAL	1	76,023
STATE TOTAL	1	76,023
PENNSYLVANIA		
CHESTER		
CROZER-CHESTER MEDICAL CENTER	ZIP CODE 19013	
BROWN, LEE C.....	5G08 LM02996-02	34,734
POWERS, W CLINTON.....	1G08 LM03148-01	50,000
ORGANIZATION TOTAL	2	84,734
JOHNSTOWN		
CONEMAUGH VALLEY MEMORIAL HOSPITAL	ZIP CODE 15905	
BRICE, HEATHER W.....	2G07 LM03077-02	36,000
ORGANIZATION TOTAL	1	36,000
PHILADELPHIA		
PENNSYLVANIA HOSPITAL	ZIP CODE 19107	
MORRIS, CAROLINE S.....	5G08 LM02291-03	15,119
ORGANIZATION TOTAL	1	15,119
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE	ZIP CODE 19104	
CHASE, ELIZABETH W.....	5G08 LM03015-02	36,988
ORGANIZATION TOTAL	1	36,988
PITTSBURGH		
UNIVERSITY OF PITTSBURGH	ZIP CODE 15260	
STARK, LUCILE.....	1G08 LM03139-01	77,101
ORGANIZATION TOTAL	1	77,101
STATE TOTAL	6	249,942

Table 6.—Medical Library Grants, by Area, Organization, and Responsible Official, Fiscal Year 1978—Continued

Responsible official	Grant No.	Dollars
SOUTH DAKOTA		
VERMILLION		
UNIVERSITY OF SOUTH DAKOTA	ZIP CODE 57069	
BRENNEN, PATRICK W.....	5G08 LM02920-02	27,570
ORGANIZATION TOTAL	1	27,570
STATE TOTAL	1	27,570
TENNESSEE		
JOHNSON CITY		
STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE—EAST TENNESSEE STATE UNIVERSITY	ZIP CODE 37601	
BOLEF, DORIS.....	1G07 LM03183-01	12,000
ORGANIZATION TOTAL	1	12,000
STATE TOTAL	1	12,000
VIRGINIA		
RICHMOND		
VIRGINIA COMMONWEALTH UNIVERSITY	ZIP CODE 23284	
SHAFFER, MELVIN C.....	1G08 LM03057-01	66,605
ORGANIZATION TOTAL	1	66,605
STATE TOTAL	1	66,605
WEST VIRGINIA		
HUNTINGTON		
MARSHALL UNIVERSITY	ZIP CODE 25701	
HOWARD, ANNA L.....	2G07 LM03093-02	10,950
ORGANIZATION TOTAL	1	10,950
STATE TOTAL	1	10,950
WYOMING		
LANDER		
BISHOP RANDALL HOSPITAL	ZIP CODE 82520	
HEUER, JANE.....	1G07 LM03099-01A1	4,000
ORGANIZATION TOTAL	1	4,000
STATE TOTAL	1	4,000

APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetic sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization. The tables in which the organizations may be found are shown in parentheses following their locations.

United States

- Affiliated Hospitals Center--Boston (2 units), Mass. (2,3)
American Health Foundation--New York, Valhalla, N.Y. (2,5)
California State University and Colleges System--Los Angeles, San Diego, Calif. (3,5)
City University of New York--New York (4 units), N.Y. (2,3,6)
College of Medicine and Dentistry of New Jersey--Newark, Piscataway, N.J. (2,3)
Cornell University--Ithaca, New York, N.Y. (2-4,6)
Harvard University--Boston, Cambridge, Mass. (2-5)
Indiana University--Bloomington, Indianapolis, Ind. (2,3,6)
Louisiana State University--Baton Rouge, New Orleans, Shreveport, La. (2,3)
Mayo Foundation--Rochester (2 units), Minn. (2,3)
New York Medical College--New York, Valhalla, N.Y. (2)
New York State Department of Health (may include awards to Health Research, Inc.)--Albany, Buffalo, N.Y. (2,3,5)
New York State Department of Mental Hygiene (may include awards to New York State Research Foundation for Mental Hygiene, Inc.)--Buffalo, Utica, N.Y. (2,6)
North Carolina Department of Human Resources (may include awards to North Carolina Foundation for Mental Health Research Inc.)--Goldsboro, Raleigh, N.C. (6)
Northwestern University--Chicago, Evanston, Ill. (2-5)
Oregon State Higher Education System--Corvallis, Eugene, Portland, Oreg. (2,3,6)
Pennsylvania State University--Hershey, University Park, Pa. (2,3)
Rutgers The State University--New Brunswick, Newark, N.J. (2,3)
State University of New York--Buffalo, New York, Stony Brook, Syracuse (2 units), N.Y. (2,3,5,6)
State University System of Florida--Gainesville, Tallahassee, Tampa, Fla. (2,3,5,6)
Texas Agricultural and Mechanical University System--College Station, Prairie View, Texas (2,3)
Tulane University--Covington, New Orleans, La. (2,3)
U.S. Department of Agriculture--Gainesville, Fla.; Beltsville, Md. (2)
U.S. Department of Defense--Washington, D.C.; Bethesda, Md. (2)
U.S. Department of Health, Education, and Welfare--Washington, D.C.; Bethesda, Rockville (2 units), Md.; Research Triangle Park, N.C. (2)

University of Alabama System--Birmingham, University, Ala. (2-5)
 University of Arkansas--Fayetteville, Little Rock, Ark. (2)
 University of California--Berkeley, Davis, Irvine, La Jolla, Los Angeles, Riverside, San Francisco, Santa Barbara, Santa Cruz, Calif. The unit in La Jolla may include awards to the Friends of Psychiatric Research of San Diego. (2-5)
 University of Colorado--Boulder, Denver, Colo. (2,3,5)
 University of Connecticut--Farmington, Storrs, Conn. (2,3)
 University of Illinois--Chicago (2 units), Urbana, Ill. (2,3)
 University of Kansas--Kansas City, Lawrence, Kans. (2,3,5)
 University of Maryland System--Baltimore, Catonsville, College Park, Md. (2,3)
 University of Massachusetts--Amherst, Worcester, Mass. (2,3)
 University of Minnesota--Austin, Duluth, Minneapolis, Saint Paul, Minn. (2,3,5,6)
 University of Mississippi--Jackson, University, Miss. (2,3)
 University of Missouri--Columbia, Kansas City, Mo. (2,3)
 University of Nebraska System--Lincoln, Omaha, Nebr. (2,3,6)
 University of North Carolina System--Chapel Hill, Raleigh, N.C. (2,3)
 University of Puerto Rico--San Juan (2 units), P.R. (2)
 University of Tennessee System--Knoxville, Memphis, Tenn. (2,3)
 University of Texas System--Austin, Dallas, Galveston, Houston (2 units), Richardson, San Antonio, Tex. (2-5)
 University of Wisconsin System--Madison, Milwaukee, Wisc. (2-5)
 University System of Georgia--Athens, Atlanta (2 units), Augusta, Ga. (2,3)
 Utah State Higher Education System--Logan, Salt Lake City, Utah (2,3)
 Veterans Administration--San Diego, Calif.; Boston, Mass. (2)

Other Countries

Catholic University of Louvain--Brussels, Louvain, Belgium (2)
 Max Planck Society for the Advancement of Science--Frankfurt, Göttingen, Tübingen, Germany, Federal Republic of (2)
 Medical Research Council--Cambridge, London, United Kingdom (2)

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PREFACE

The mission of the National Institutes of Health is to protect and improve the health of the American people. To achieve this goal, NIH conducts biomedical research in its own laboratories; provides grants to nonprofit organizations and academic institutions for research; provides grants for the training of research investigators; supports biomedical communications through programs and activities of the National Library of Medicine; and provides grants for facilities and other resources required for cancer research. In addition, the research contract mechanism is used under appropriate circumstances.

Listings of NIH grants and research and development contracts are prepared annually by the Division of Research Grants. This book presents a list of the contracts awarded by NIH from fiscal year 1978 funds and which were reported to the NIH central record system (IMPAC) as of December 28, 1978. Contracts reported in other systems at NIH are excluded from the report.

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TECHNICAL NOTE

Explanation of the Contract Mechanism

The increasing importance of research contracts in the NIH extramural research programs has generated considerable analysis and discussion covering, among other aspects, the development of criteria for use of the contract mechanism. These criteria as listed in the NIH Guide for Grants and Contracts, Vol. 6, No. 13, July 1, 1977 are as follows:

BASIC CRITERIA Contracts are used for procurement of research and development when the following considerations obtain:

- a. the NIH procures a specific service or defined end product, including research, development, and related activities for identified NIH program needs, e. g., evaluation studies, technical assistance, surveys, consulting services, training projects where NIH selects the individuals or specifies the content of the program, planning for NIH use, production of publications or audiovisual materials (other than as results of R & D (research and development) projects or as proceedings of scientific conferences which are not being procured for use by the Government); and
- b. the NIH exercises direction or control under terms of the agreement by specifying the scope of the work and manner of performance and requires responsiveness by the performer in the event a change in direction of the effort is necessitated by program developments; and
- c. NIH staff closely monitors technical and administrative performance during the course of the activity to ensure that work on the project is accomplished in accordance with terms of the agreement.

MANDATORY USE OF CONTRACTS Notwithstanding any of the foregoing, selection of contracts is mandatory whenever:

- a. an award is made to a commercial, i.e., profit-making, organization; or
- b. material having a security classification is involved.

Organization Identification

In this presentation of research contracts, emphasis is placed on listing the organizations in the city and State of the unit in which professional responsibility of the project director lies. The major part of contractual activities are conducted by universities, research foundations, and commercial and industrial organizations across the Nation. Study of grantee organizations in the United States has led to the following qualifications in the listing of their names:

1. Within a given city, if an institution of higher education belonging to a system of higher education is comprised of two or more components, and each component has equal standing in the system, the name of the component is shown after the name of the institution.
2. If a foundation has been established for the purpose of receiving and administering funds, the name and location of the organization having professional responsibility for the contract are shown rather than the name and location of the foundation. The name of the foundation is indicated in the Appendix if it differs materially from the name of the organization.
3. In the listing of governmental organizations, Federal as well as non-Federal, the name of the parent department precedes that of the individual component, and there are as many listings within a given city as there are components of the organization receiving contracts.

In the case of industrial organizations and associations, professional responsibility is assumed to reside at the address of the contractor and not necessarily at the "site of performance." Divisions of parent organizations are shown if they are indicated on the contract, and subsidiaries are linked to parent organizations when the relationship is known.

These qualifications do not apply to foreign organizations or in all cases to organizations in the United States, either because of insufficient information or because of an organizational structure unique to a particular organization.

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed in the Appendix in alphabetic sequence.

ABBREVIATIONS

The component of NIH supporting a contract is indicated by the code letters in the left-hand column. These code letters form part of the identification of the research contract number in Table 2.

<i>Code for supporting component</i>		<i>Abbreviation of supporting component</i>
	Institutes and Research Divisions*.....	IRD
AG	National Institute on Aging.....	NIA
AI	National Institute of Allergy and Infectious Diseases.....	NIAID
AM	National Institute of Arthritis, Metabolism, and Digestive Diseases.....	NIAMDD
CA	National Cancer Institute.....	NCI
CB	Division of Cancer Biology and Diagnosis.....	DCBD
CM	Division of Cancer Treatment.....	DCT
CN	Division of Cancer Control and Rehabilitation....	DCCR
CO	Office of the Director, NCI.....	ODNCI
CP	Division of Cancer Cause and Prevention.....	DCCP
CL	Clinical Center.....	CLC
CT	Division of Computer Research and Technology.....	DCRT
DE	National Institute of Dental Research.....	NIDR
ES	National Institute of Environmental Health Sciences.....	NIEHS
EY	National Eye Institute.....	NEI
GM	National Institute of General Medical Sciences.....	NIGMS
HD	National Institute of Child Health and Human Development.....	NICHD
HL	National Heart, Lung, and Blood Institute.....	NHLBI
HB	Division of Blood Diseases and Resources.....	DBDR
HI	Division of Intramural Research.....	DIR
HO	Office of the Director, NHLBI.....	ODHLBI
HR	Division of Lung Diseases.....	DLD
HV	Division of Heart and Vascular Diseases.....	DHVD
NS	National Institute of Neurological and Communicative Disorders and Stroke.....	NINCDS
RG	Division of Research Grants.....	DRG
RR	Division of Research Resources.....	DRR
RS	Division of Research Services.....	DRS
LM	National Library of Medicine.....	NLM
OD	Office of the Director, NIH.....	OD
TW	Fogarty International Center.....	TW

*For convenience of presentation, includes the following service components: Clinical Center, Division of Computer Research and Technology, Division of Research Grants, Division of Research Resources, and Division of Research Services.

TABLE 1.--SUMMARY OF RESEARCH AND DEVELOPMENT CONTRACTS, BY SUPPORTING COMPONENT, FISCAL YEAR 1978

SUPPORTING COMPONENT		NUMBER	DOLLARS
TOTAL NATIONAL INSTITUTES OF HEALTH.....		2,099	451,598,351
TOTAL INSTITUTES AND RESEARCH DIVISIONS*.....		2,014	440,888,990
CLINICAL CENTER.....		4	4,097,180
DIVISION OF COMPUTER RESEARCH AND TECHNOLOGY.....		1	13,201
DIVISION OF RESEARCH GRANTS.....		2	113,091
DIVISION OF RESEARCH RESOURCES.....		35	5,200,307
DIVISION OF RESEARCH SERVICES.....		6	732,670
FOGARTY INTERNATIONAL CENTER.....		1	56,000
NATIONAL CANCER INSTITUTE.....		1,071	263,894,957
DIVISION OF CANCER BIOLOGY AND DIAGNOSIS.....		271	31,088,428
DIVISION OF CANCER CAUSE AND PREVENTION.....		403	89,545,229
DIVISION OF CANCER CONTROL AND REHABILITATION.....		126	44,268,518
DIVISION OF CANCER TREATMENT.....		233	57,883,623
OFFICE OF THE DIRECTOR, NCI.....		38	41,109,159
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE.....		298	82,745,264
DIVISION OF BLOOD DISEASES AND RESOURCES.....		45	6,107,485
DIVISION OF HEART AND VASCULAR DISEASES.....		203	69,928,758
DIVISION OF INTRAMURAL RESEARCH.....		4	688,491
DIVISION OF LUNG DISEASES.....		43	5,252,527
OFFICE OF THE DIRECTOR, NHLBI.....		3	768,003
NATIONAL EYE INSTITUTE.....		45	4,674,389
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES.....		120	17,758,760
NATIONAL INSTITUTE OF ARTHRITIS, METABOLISM, AND DIGESTIVE DISEASES.....		94	13,687,382
NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT.....		170	20,002,361
NATIONAL INSTITUTE OF DENTAL RESEARCH.....		45	3,929,522
NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES.....		27	3,681,814
NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES.....		2	637,755
NATIONAL INSTITUTE OF NEUROLOGICAL AND COMMUNICATIVE DISORDERS AND STROKE.....		78	17,909,437
NATIONAL INSTITUTE ON AGING.....		15	1,754,900
NATIONAL LIBRARY OF MEDICINE.....		73	8,553,855
OFFICE OF THE DIRECTOR.....		12	2,155,506

*For convenience of presentation, includes the following service components: Clinical Center, Division of Computer Research and Technology, Division of Research Grants, Division of Research Resources, and Division of Research Services.

**Table 2.—NIH Research and Development Contracts,
by Area, Organization, and Project Director,
Fiscal Year 1978**

Project director	Purpose of contract	Contract no.	Dollars
GRAND TOTAL, 2,099 CONTRACTS.....			451,598,351
UNITED STATES,* 1,963 CONTRACTS.....			437,313,559
OTHER COUNTRIES, 136 CONTRACTS.....			14,284,792

UNITED STATES

ALABAMA

BIRMINGHAM

SOUTHERN RESEARCH INSTITUTE ZIP CODE 35205

CHOPRA, DHARAM P.....	CULTURE EPITHELIAL TYPES FROM COLON OF THE RAT.....	5N01 CP75914-01	96,480
COWSAR, DONALD R.....	DEVELOPMENT OF MATERIALS FOR MAXILLOFACIAL PROSTHESIS.....	2N01 DE42435-07	84,781
COWSAR, DONALD R.....	FLUORIDE RELEASING SYSTEM FOR ORAL USE.....	3N01 DE42446-12	51,939
DENINE, E PAUL.....	PHARMACOLOGY OF POTENTIAL ANTILEUKEMIA DRUGS.....	5N01 CM57000-04	337,290
DENINE, E PAUL.....	STUDIES ON THE TOXICOLOGY OF RETINOLIDS.....	1N01 CP85615-00	337,393
HILL, DONALD L.....	PHARMACOLOGICAL STUDIES OF ANTITUMOR AGENTS.....	3N01 CM43780-10	209,592
HILL, DONALD L.....	PHARMACOLOGICAL STUDIES OF ANTITUMOR AGENTS.....	1N01 CM87162-00	161,300
HILL, DONALD L.....	METABOLISM OF CARCINOGENIC COMPOUNDS.....	5N01 CP55721-06	114,749
MONTGOMERY, JOHN A.....	SYNTHESIS OF POTENTIAL ANTICANCER AGENTS.....	5N01 CM43762-06	35,500
SCHABEL, FRANK M, JR.....	ANALYSIS, TESTING & EVALUATION OF ANTICANCER AGENTS.....	5N01 CM43756-05	2,300,000
SHEALY, Y FULMER.....	SYNTHESIS OF RETINOLIDS FOR LONG TERM ANIMAL STUDIES.....	1N01 CP85616-00	312,728
WILKOFF, LEE J.....	ORGAN CULTURE ASSAY OF VITAMIN A ANALOGS.....	5N01 CP22064-14	516,454
ORGANIZATION TOTAL	12 4,558,206		

UNIVERSITY OF ALABAMA SYSTEM—UNIVERSITY OF ALABAMA IN BIRMINGHAM ZIP CODE 35294

BUTTERWORTH, C E, JR.....	EFFECT OF ORAL CONTRACEPTIVE STEROIDS ON METABOLISM.....	5N01 HD42862-08	98,797
CURTISS, ROY, III.....	CONSTRUCT SAFER E COLI HOSTS FOR PHAGE & PLASMID VECTORS.....	2N01 AI62508-05	162,492
DISMUKES, WILLIAM E.....	ANTIBIOTIC THERAPY FOR CRYPTOCOCCAL MENINGITIS.....	1N01 AI82570-00	383,624
DURANT, JOHN R.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	3N01 CN55231-06	11,881
HAMILTON, VIRGINIA V.....	PREPARATION OF A BIOGRAPHIC MONOGRAPH.....	3N01 LM64703-03	19,480
HUNTER, ERIC.....	IN VITRO TRANSFORMING POTENTIAL OF MPMV.....	5N01 CP71013-02	74,117
LEGLER, DONALD.....	SALIVARY IMMUNOGLOBULIN A DEFICIENCY & DENTAL CRIES.....	2N01 DE52456-07	127,755
LINDSEY, J RUSSELL.....	OPERATION OF A PATHOLOGICAL MONITORING SERVICE CENTER.....	5N01 CM67083-02	110,048
MADDOX, WILLIAM A.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45129-06	127,386
NIEDERMEIER, WILLIAM.....	STUDY OF TRANSFORMED MAMMARY EPITHELIAL CELLS IN VITRO.....	5N01 CB74092-01	125,500
RUSSELL, RICHARD O, JR.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	5N01 HV62922-07	1,270,398
SCHNAPER, HAROLD W.....	INTERVENTION FOR PREVENTION OF CORONARY HEART DISEASE.....	5N01 HV33107-07	435,189
SHIOTA, TETSUO.....	CARIOGENIC STREPTOCOCCI MUTANTS TO PREVENT DENTAL CRIES.....	5N01 DE62491-05	130,295
WHITLEY, RICHARD J.....	CENTRAL FACILITY TO STUDY HERPES ZOSTER.....	2N01 AI22532-13	253,836
ORGANIZATION TOTAL	14 3,330,798		

* Includes Puerto Rico.

NOTE: For information on how this table is structured, see Technical Note, p. vii. Also, for comments on organizations, see appendix.

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ALABAMA—Continued			
HUNTSVILLE			
HUNTSVILLE HOSPITAL ZIP CODE 35801			
PLOUSSARD, J H.....	VACCINE FOR PREVENTION OF RECURRENT OTTIS MEDIA	5N01 AI52537-04	62,486
ORGANIZATION TOTAL	1 62,486		
MOBILE			
UNIVERSITY OF SOUTH ALABAMA ZIP CODE 36688			
MOHR, J P.....	DEVELOP PILOT STROKE DATA BANK NETWORK CENTER.....	1N01 NS82397-00	140,700
ORGANIZATION TOTAL	1 140,700		
MONTGOMERY			
ALABAMA STATE DEPARTMENT OF PUBLIC HEALTH ZIP CODE 36104			
CAIN, MAX G.....	EXPANSION OF ALABAMA CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN55090-06	92,302
ORGANIZATION TOTAL	1 92,302		
PRATTVILLE			
SOUTHERN ANIMAL FARMS ZIP CODE 36067			
CURLEE, JOSEPH.....	MAINTAIN RODENT PRODUCTION CENTER.....	2N01 CM53845-03	147,630
ORGANIZATION TOTAL	1 147,630		
STATE TOTAL	30 8,332,122		
ARIZONA			
PHOENIX			
ARIZONA STATE DEPARTMENT OF HEALTH SERVICES ZIP CODE 85007			
DANDY, SUZANNE.....	CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN65283-08	136,309
ORGANIZATION TOTAL	1 136,309		
TUCSON			
HILLHAVEN FOUNDATION--HILLHAVEN HOSPICE ZIP CODE 85712			
HACKLEY, JOHN A.....	IMPLEMENT HOSPICE CONCEPT FOR TERMINAL CANCER PATIENTS.....	1N01 CN85392-00	490,980
ORGANIZATION TOTAL	1 490,980		
UNIVERSITY OF ARIZONA ZIP CODE 85721			
GROSS, JOSEPH F.....	MICROCIRCULATION/MOLECULAR TRANSPORT IN MAMMARY CANCER.....	2N01 CB63981-02	99,000
OVITT, THERON W.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS	5N01 HV72931-02	207,232
PRESENT, ARTHUR J.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55097-06	229,925
SIPES, I GLENN.....	PHARMACOKINETICS OF XENOBIOTICS	5N01 ES82130-01	174,091
ORGANIZATION TOTAL	4 710,248		
STATE TOTAL	6 1,337,537		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ARKANSAS			
LITTLE ROCK			
UNIVERSITY OF ARKANSAS MEDICAL SCIENCES CAMPUS ZIP CODE 72201			
FLANIGAN, WILLIAM J.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52511-04	25,541
SUEN, JAMES Y.....	CANCER CONTROL PROJECT FOR HEAD AND NECK CANCER.....	2N01 CN55253-04	298,887
ORGANIZATION TOTAL	2 324,428		
STATE TOTAL	2 324,428		
CALIFORNIA			
BERKELEY			
ANOROS, INC. ZIP CODE 94710			
PORTNER, PEER M.....	DEVELOPMENT OF LEFT VENTRICULAR ASSIST SYSTEM.....	5N01 HV42914-13	641,141
PORTNER, PEER M.....	ELECTRICAL ENERGY TRANSMISSION TECHNIQUE DEVELOPMENT.....	5N01 HV72933-01	181,794
PORTNER, PEER M.....	DEVELOPMENT OF A LEFT HEART ASSIST BLOOD PUMP.....	5N01 HV72938-01	234,525
ORGANIZATION TOTAL	3 1,057,460		
UNIVERSITY OF CALIFORNIA AT BERKELEY ZIP CODE 94720			
HEATHCOCK, CLAYTON H.....	SYNTHESIS OF NEW RETINOIDS.....	3N01 CP75934-03	69,510
MARTIN, G STEVEN.....	TRANSFORMATION OF DIFFERENTIATING CELLS.....	2N01 CP53537-05	35,000
PAFFENBARGER, RALPH S, JR.....	EPIDEMIOLOGY OF PRE- AND POST-MENOPAUSAL BREAST CANCER.....	2N01 CB63998-04	79,700
VAN DEN BERG, BARBARA J.....	STUDIES ON THE ONE-CHILD FAMILY.....	1N01 HD82851-00	91,452
ORGANIZATION TOTAL	4 275,662		
CLAREMONT			
CLAREMONT COLLEGES SYSTEM—CLAREMONT GRADUATE SCHOOL ZIP CODE 91711			
MINDICK, BURTON.....	ATTITUDES OF ADOLESCENT CONTRACEPTORS.....	1N01 HD82842-00	49,492
ORGANIZATION TOTAL	1 49,492		
CLAREMONT COLLEGES SYSTEM—POMONA COLLEGE ZIP CODE 91711			
HANSCH, CORWIN H.....	STRUCTURE ACTIVITY STUDIES AMONG ANTICANCER AGENTS.....	5N01 CM67062-02	52,699
ORGANIZATION TOTAL	1 52,699		
CUPERTINO			
TYMSHARE, INC. ZIP CODE 95014			
NOT APPLICABLE.....	DATA COMMUNICATION SERVICES.....	3N01 LM44711-13	81,000
ORGANIZATION TOTAL	1 81,000		
DAVIS			
UNIVERSITY OF CALIFORNIA AT DAVIS ZIP CODE 95616			
BORHANI, NEMAT O.....	COOPERATIVE HYPERTENSION DETECTION & FOLLOW-UP STUOY.....	5N01 HV22945-11	327,206
BORHANI, NEMAT O.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22977-08	520,655
BORHANI, NEMAT O.....	CENTER FOR THE ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52916-03	108,675
BORHANI, NEMAT O.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72954-06	94,159
CARDIFF, ROBERT D.....	CULTIVATION OF HUMAN AND MOUSE MAMMARY TUMOR VIRUSES.....	2N01 CP61013-06	179,452
HENDRICKX, ANDREW G.....	NONHUMAN PRIMATE BREEDING COLONY.....	2N01 HD12088-14	209,018
JENSEN, HANNE M.....	CHARACTERIZE PREMALIGNANT HUMAN MAMMARY HYPERPLASIAS.....	1N01 CB84316-00	79,900

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
KAWAKAMI, THOMAS G	COMPARATIVE LEUKEMIA AND SARCOMA VIRAL STUDIES	2N01 CP33242-08	450,000
KILLAM, EVA K.....	SPECIAL ANIMAL COLONY (BABOON MODEL OF EPILEPSY).....	1N01 RR82133-00	27,035
RUEBNER, BORIS H.....	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE.....	5N01 CP65845-05	167,075
ORGANIZATION TOTAL	10 2,163,175		
DUARTE			
CITY OF HOPE NATIONAL MEDICAL CENTER ZIP CODE 91010			
MELNYK, JOHN H.....	SEMIAUTOMATED SYSTEM FOR CHROMOSOME PREPARATION.....	3N01 HD52843-07	147,345
ORGANIZATION TOTAL	1 147,345		
EMERYVILLE			
THORATEC LABORATORIES CORPORATION ZIP CODE 94662			
BUCK, KEITH S.....	FABRICATION OF IMPLANTABLE ARTIFICIAL HEART DEVICES.....	2N01 HV12035-23	287,173
BUCK, KEITH S.....	DEVELOP AND EVALUATE LEFT HEART ASSIST BLOOD PUMPS.....	5N01 HV72939-01	523,064
ORGANIZATION TOTAL	2 810,237		
FOLSOM			
GENERAL TIRE AND RUBBER COMPANY—AEROJET LIQUID ROCKET COMPANY ZIP CODE 95630			
MOISE, JOHN C.....	DEVELOP STIRLING CYCLE ENERGY-CONVERSION SYSTEM.....	2N01 HV32930-13	1,012,713
MOISE, JOHN C.....	DEVELOP ENERGY CONVERTERS TO CONTROL HEART ASSIST DEVICE.....	3N01 HV72971-02	490,695
ORGANIZATION TOTAL	2 1,503,408		
GENERAL TIRE AND RUBBER COMPANY—COROOVA CHEMICAL COMPANY ZIP CODE 95630			
OLSEN, ROBERT.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	1N01 CM87201-00	251,774
ORGANIZATION TOTAL	1 251,774		
FULLERTON			
CALIFORNIA STATE UNIVERSITY AND COLLEGES SYSTEM—CALIFORNIA STATE UNIVERSITY AT FULLERTON ZIP CODE 92634			
LINDER, MARIA C.....	CLINICAL EVALUATION OF IMMUNODIAGNOSTIC TESTS.....	2N01 CB74119-01	14,010
ORGANIZATION TOTAL	1 14,010		
GILROY			
SIMONSEN LABORATORIES ZIP CODE 95020			
RUSSELL, JAMES D.....	GENETIC CENTER FOR RODENTS IN BIOCONTAINMENT ENVIRONMENT.....	5N01 CM77166-01	600,330
SIMONSEN, HARRY C.....	MAINTAIN RODENT PRODUCTION CENTER.....	2N01 CM53847-04	250,003
ORGANIZATION TOTAL	2 850,333		
IRVINE			
UNIVERSITY OF CALIFORNIA AT IRVINE ZIP CODE 92664			
NICOLSON, GARTH L.....	CELL SURFACE IMMUNOBIOLOGY OF METASTATIC TUMORS.....	5N01 CB74153-04	199,228
PFEFFER, ROBERT I.....	ESTROGEN USAGE BY POSTMENOPAUSAL WOMEN—CORONARY RISK.....	3N01 AG62134-02	52,580
ORGANIZATION TOTAL	2 251,808		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
LA JOLLA			
CDP ASSOCIATES ZIP CODE 92037			
TAYLOR, CAROLYN A.....	STUDY TECHNOLOGY TRANSFER IN CANCER PATIENT MANAGEMENT.....	1N01 C085422-00	114,211
ORGANIZATION TOTAL	1 114,211		
LA JOLLA CANCER RESEARCH FOUNDATION ZIP CODE 92037			
GREEN, SIDNEY.....	STORAGE AND MAINTENANCE OF BIOLOGICAL MATERIALS.....	1N01 CP81061-00	3,540
KOHNE, DAVID E.....	DETECT VIRUSES IN DISEASED CENTRAL NERVOUS SYSTEM.....	1N01 NS82395-00	120,000
ORGANIZATION TOTAL	2 123,540		
SALK INSTITUTE FOR BIOLOGICAL STUDIES ZIP CODE 92037			
COHN, MELVIN.....	SUPPLY OF IMMUNE-RELATED CELL LINES.....	2N01 CB23886-09	74,660
FAN, HUNG Y.....	CELLULAR DIFFERENTIATION AND VIRAL ONCOGENESIS.....	3N01 CP71008-03	152,366
RIVIER, JEAN.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	1N01 HD82821-00	173,715
ORGANIZATION TOTAL	3 400,741		
SCIENCE APPLICATIONS ZIP CODE 92038			
REED, J H.....	ANALYZE ORGANIC CHLORINE AND BROMINE RESIDUES IN TISSUE.....	1N01 ES82105-00	58,285
ORGANIZATION TOTAL	1 58,285		
SCRIPPS CLINIC AND RESEARCH FOUNDATION ZIP CODE 92037			
CALLAHAN, GERALD N.....	DETECTION OF TUMOR SPECIFIC ANTIGENS IN CIRCULATION.....	2N01 CB74126-02	75,247
DIXON, FRANK J.....	IMMUNOLOGIC STUDY OF RNA (TYPE C) VIRUSES.....	5N01 CP71018-03	597,240
EDGINGTON, THOMAS S.....	IMMUNOHISTOCHEMICAL ASSAY OF HEPATITIS ANTIGENS.....	2N01 AI32509-07	30,496
FELDMAN, JOSEPH D.....	ROLE OF CIRCULATING TUMOR ANTIGENS IN IMMUNOTHERAPY.....	2N01 CB43874-04	124,707
KATZ, DAVID H.....	MOUSE TUMOR IMMUNOTHERAPY/HEPTEN REACTIVE T LYMPHOCYTES.....	2N01 CB74196-02	52,507
REISFELD, RALPH A.....	PURIFICATION OF HUMAN TUMOR ASSOCIATED ANTIGENS.....	2N01 CB53899-06	141,097
VANDER LAAN, WILLARD P.....	RESPONSIVENESS OF MAMMARY-GLAND CELLS TO HORMONES.....	2N01 CB43905-04	67,700
ORGANIZATION TOTAL	7 1,088,994		
UNIVERSITY OF CALIFORNIA AT SAN DIEGO ZIP CODE 92093			
MARSHALL, LAWRENCE F.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER.....	3N01 NS72370-01	18,043
SATO, GORDON H.....	GROWTH/PASSAGE OF MAMMARY EPITHELIAL CELLS IN CULTURE.....	5N01 CB74188-02	61,600
SHIMKIN, MICHAEL B.....	STUDY OF PULMONARY TUMORS FOR COCARCINOGENIC BIOASSAY.....	5N01 CP33232-18	163,542
STEINBERG, DANIEL.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV12160-15	1,184,480
TIMMS, RICHARD M.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	3N01 HR62946-05	161,040
TOYSTON, IVOR.....	PRODUCE MONOSPECIFIC LYMPHOMA ANTIBODIES.....	1N01 CB84250-00	164,812
ORGANIZATION TOTAL	6 1,753,517		
LOMA LINDA			
LOMA LINDA UNIVERSITY ZIP CODE 92354			
HODGKIN, JOHN E.....	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	2N01 HR72904-03	242,326
JUDKINS, MELVIN P.....	COLLABORATIVE STUDIES OF CORONARY ARTERY SURGERY.....	5N01 HV32975-08	112,661
ORGANIZATION TOTAL	2 354,987		
LOS ANGELES			
CEDARS-SINAI MEDICAL CENTER ZIP CODE 90048			
DANZER, HAL C.....	DEVELOPMENT AND TESTING OF VAGINAL CONTRACEPTIVES.....	1N01 HD82856-00	124,338
MAXWELL, MORTON H.....	SORBENT BASED REGENERATIVE PERITONEAL ANALYSIS.....	2N01 AM32225-07	20,627
SCHOENFIELD, LESLIE J.....	COOPERATIVE CLINICAL STUDY OF DISSOLUTION OF GALLSTONES.....	2N01 AM32216-10	2,045,504
WADE, MACLYN E.....	EFFICACY OF TWO METHODS OF NATURAL FAMILY PLANNING.....	3N01 HD62826-07	505,084

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	4	2,695,553	
CHILDREN'S HOSPITAL OF LOS ANGELES ZIP CODE 90027			
BENEDICT, WILLIAM F.....	FIBRINOLYSIS AS A PARAMETER OF IN VITRO TRANSFORMATION.....	2N01 CP55641-07	68,943
DUKES, PETER P.....	SOURCE OF HUMAN URINARY ERYTHROPOIETIN.....	1N01 HB82926-00	179,859
SIEGEL, STUART E.....	STUDIES OF NEW ANTICANCER AGENTS.....	3N01 CM43803-09	28,949
ORGANIZATION TOTAL	3	277,751	
COMMUNITY CANCER CONTROL ZIP CODE 90036			
PICK, RUTH ANN.....	COMMUNITY-BASED CANCER CONTROL PROGRAM.....	3N01 CN75400-03	1,976,000
ORGANIZATION TOTAL	1	1,976,000	
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY—UNIV OF SO CALIFORNIA MED CTR ZIP CODE 90033			
BERNSTEIN, GERALD S.....	HEALTH STATUS OF AMERICAN MEN.....	2N01 HD72802-02	358,058
BERNSTEIN, GERALD S.....	DEVELOPMENT AND TESTING OF VAGINAL CONTRACEPTIVES.....	1N01 HD82857-00	31,081
HODGMAN, JOAN E.....	DEVELOPMENTAL PHENOMENA AND THE OCCURRENCE OF SIDS.....	2N01 HD22777-18	91,229
HODGMAN, JOAN E.....	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42823-09	31,280
ORGANIZATION TOTAL	4	511,648	
UMF SYSTEMS ZIP CODE 90066			
JOYCE, PATRICK D.....	PRESERVATION MICROFILMING OF BIOMEDICAL JOURNALS.....	1N01 LM84721-00	140,400
NOT APPLICABLE.....	PRESERVATION MICROFILMING OF SELECTED BIOMEDICAL SERIALS.....	3N01 LM64726-04	3,034
ORGANIZATION TOTAL	2	143,434	
UNIVERSITY OF CALIFORNIA AT LOS ANGELES ZIP CODE 90024			
BABB, THOMAS L.....	CEREBELLAR STIMULATION FOR CONTROL OF SEIZURE.....	2N01 NS42331-05	129,000
BECKMAN, LINDA J.....	DECISION MAKING AND FERTILITY REGULATION.....	2N01 HD52807-05	142,463
BLAKE, JUDITH.....	SURVEY RESEARCH ON CHILDLESSNESS & ONE-CHILD FAMILIES.....	1N01 HD82802-00	55,602
BLAKE, JUDITH.....	AMERICAN ATTITUDES TOWARD ABORTION.....	1N01 HD82832-00	92,668
CHASE, MICHAEL H.....	INFORMATION CENTER—BRAIN/NEUROSCIENCES.....	2N01 NS32306-18	365,000
CHERRY, JAMES D.....	INFLUENZA STUDIES—VACCINE TRIALS, VIROLOGIC, CLINICAL.....	2N01 AI62510-05	150,000
COBURN, JACK W.....	CONTROLLED EVALUATION OF MAINTENANCE PERITONEAL DIALYSIS.....	2N01 AM52218-02	89,367
COBURN, JACK W.....	PROPHYLACTIC AGENT FOR RENAL OSTEODYSTROPHY IN DIALYSIS.....	2N01 AM72204-02	146,050
CULLEN, JOSEPH W.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN85397-01	166,142
DARLING, LOUISE.....	COOPERATIVE CATALOGING OF BIOMEDICAL PUBLICATIONS.....	1N01 LM84711-00	12,975
DIXON, WILFRED.....	SUPPORT OF THE BMD/BMDP PROGRAM.....	1N01 RR82107-00	451,500
EILBER, FREDERICK R.....	IMMUNOTHERAPY AS ADJUNCT TO CHEMOTHERAPY IN CARCINOMAS.....	2N01 CB53941-03	108,586
ELASHOFF, ROBERT M.....	MALIGNANT MELANOMA OF WOMEN ON CONTRACEPTIVE STEROIDS.....	1N01 HD82803-00	35,948
EYMAN, RICHARD K.....	FOSTER FAMILY CARE IMPACT ON MENTALLY RETARDED CHILDREN.....	5N01 HD72847-01	98,806
FAREED, GEORGE C.....	HUMAN PAPOVAVIRUS BK AND JC AND SIMIAN VIRUS 40.....	5N01 CP71009-01	46,055
GALE, ROBERT P.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62971-03	142,456
HOLMES, CARMACK.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	5N01 CM77151-04	99,085
KOPPLE, JOEL D.....	NITROGEN METABOLISM IN UREMIA.....	2N01 AM32210-09	108,496
MASSEY, FRANK J.....	HEALTH STATUS OF VASECTOMIZED MEN—COORDINATING CENTER.....	5N01 HD62807-02	289,000
MORTON, DONALD L.....	THERAPY OF CARCINOMA OF THE BREAST.....	2N01 CB43917-05	90,000
MORTON, DONALD L.....	HUMAN MELANOMA: EVALUATION OF BCG IMMUNOTHERAPY.....	2N01 CB64076-03	362,845
NEUMANN, CHARLOTTE G.....	EARLY MALNUTRITION AND IMMUNITY TO MEASLES.....	2N01 HD52851-06	20,000
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY SERVICES.....	3N01 LM34708-13	208,045
PORTER, DAVID D.....	RESPIRATORY SYNCYTIAL VIRUS INFECTION IN THE FERRET.....	2N01 AI52517-04	59,795
RAMMIRY, KENNETH.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67097-06	54,602
SPIVEY, GARY H.....	EPIDEMIOLOGY OF BENIGN BREAST DISEASE.....	5N01 CB74202-01	191,200
STERMAN, MAURICE B.....	DEVELOPMENTAL PHENOMENA & SIDS OCCURRENCE.....	2N01 HD42810-14	156,125
STRAATSMA, BRADLEY R.....	DIABETIC RETINOPATHY STUDY—CLINICAL CENTER.....	2N01 EY42173-05	65,134
TAKASUGI, MITSUO.....	NORMALS CELL MEDIATED REACTIVITY TO HUMAN TUMOR ANTIGENS.....	2N01 CB74133-01	72,464
TAKASUGI, MITSUO.....	VIRUSES, GENETICS & IMMUNITY IN HUMAN CANCER ETIOLOGY.....	3N01 CP43211-08	285,007
TERASAKI, PAUL I.....	HL-A TYPING FOR PLATELET & LEUKOCYTE TRANSFUSIONS.....	2N01 CM02092-11	398,057
ORGANIZATION TOTAL	31	4,692,473	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
UNIVERSITY OF SOUTHERN CALIFORNIA ZIP CODE 90007			
BATEMAN, JOSEPH R, III.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM53842-09	37,000
BLANKENHORN, DAVID H.....	ATHEROSCLEROSIS ASSESSMENT-ANGIOGRAPHY AND ULTRASOUND.....	5N01 HV72930-02	264,796
BOYLEN, C THOMAS.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	3N01 HR62947-06	105,850
CHAN, KENNETH K.....	DISPOSITION AND METABOLISM OF ANTINEOPLASTIC AGENTS.....	5N01 CM67065-03	127,495
DAVIS, KINGSLEY.....	STUDY OF CHILDLESSNESS AND ONE-CHILD FAMILIES.....	1N01 HD82801-00	67,653
DAVIS, KINGSLEY.....	EFFECT OF MOTHER'S AGE AND CIRCUMSTANCES ON CHILDREN.....	1N01 HD82806-00	95,058
GARDNER, MURRAY B.....	ETIOLOGY AND EPIDEMIOLOGY OF HUMAN CANCER.....	3N01 CP53500-08	465,000
GARDNER, MURRAY B.....	WILD MOUSE STUDIES.....	1N01 CP81032-00	400,000
GARDNER, MURRAY B.....	HUMAN SRC GENE AND IMMUNOPREVENTION.....	1N01 CP81033-00	155,000
GARDNER, MURRAY B.....	CANCER IMMUNOPREVENTION.....	1N01 CP81063-00	200,000
GUISS, LEWIS W.....	EARLY DETECTION OF BREAST CANCER.....	2N01 CN45098-07	105,473
HAMMOND, G DENMAN.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55235-05	211,684
HAYWOOD, L JULIAN.....	CLINICAL CENTER FOR PRONANDL DL HEART TRIAL.....	2N01 HV72970-04	93,559
HEIDELBERGER, CHARLES D.....	SYNTHESIS OF DNA AND ENZYME BINDING COMPOUNDS.....	5N01 CM67084-03	138,757
HEIDELBERGER, CHARLES D.....	CARCINOGENESIS IN VITRO: INITIATION AND PROMOTION.....	3N01 CP65831-04	73,947
MARMORSTON, JESSIE.....	STUDY OF CORONARY HEART DISEASE.....	5N01 HV42931-07	434,430
MARMORSTON, JESSIE.....	ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52934-04	110,764
MASSRY, SHAUL G.....	ROLE OF PARATHYROID AS A UREMIC TOXIN.....	5N01 AM72218-01	75,699
MASSRY, SHAUL G.....	SEXUAL DYSFUNCTION IN END-STAGE RENAL DISEASE.....	2N01 AM72225-02	149,999
MEDNICK, BIRGITTE R.....	STUDY FAMILY STRUCTURE AND MATERNAL STATE.....	1N01 HD82807-00	174,357
MOSLEY, JAMES W.....	PROSPECTIVE STUDY OF POST TRANSFUSION HEPATITIS.....	5N01 HB42972-14	2,076,202
PORTNOY, BERNARD.....	EVALUATION OF H1N1 INFLUENZA VACCINE.....	1N01 A182562-00	64,151
RASHEED, SURAIYA.....	INFLUENCE OF INTERACTION BETWEEN ENVIRONMENTAL FACTORS.....	5N01 CP61041-02	129,378
RYAN, STEPHEN J.....	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52141-02	74,960
SOBIN, SIDNEY S.....	FIBROPROTEIN NETWORKS OF THE PULMONARY ALVEOLAR WALL.....	5N01 HR62910-02	92,908
VOGT, PETER K.....	CONDITIONAL LETHAL MUTANTS OF RNA TUMOR VIRUSES.....	5N01 CP53518-05	160,000
ORGANIZATION TOTAL	26	6,084,120	
MENLO PARK			
SRI INTERNATIONAL ZIP CODE 94025			
BRAUMAN, SHARON K.....	DEVELOPMENT OF MATERIALS FOR HEART-ASSIST DEVICES.....	2N01 HV32959-10	59,052
CHEUNG, ANDREW P.....	DETECT AND IDENTIFY MUTAGENS IN HUMAN BODY FLUIDS.....	5N01 CP75917-02	91,270
DAWSON, MARCIA I.....	SYNTHESIS OF NEW RETINOIDS.....	5N01 CP75931-01	139,161
DAWSON, MARCIA I.....	POLYMERIC INTRAVAGINAL CONTRACEPTIVES.....	5N01 HD72828-01	28,871
DE GRAW, JOSEPH I.....	SYNTHESIS AND TESTING OF MALE CONTRACEPTIVE AGENTS.....	1N01 HD82817-00	22,450
FREEMAN, GUSTAVE.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	2N01 CP55701-07	103,664
GREEN, PHILIP S.....	DEVELOP ULTRASONIC ENDOSCOPIC PROBES.....	2N01 CB74136-01	384,154
HELLER, JDRGE.....	DEVELOP AND TEST NEW BIODEGRADABLE DRUG DELIVERY SYSTEMS.....	5N01 HD72826-01	237,555
LEAFFER, MORRIS.....	PREPARATION OF RADIOLABELED MATERIALS.....	5N01 CM63776-03	230,000
LEE, WILLIAM W.....	SYNTHESIS OF RADIOSENSITIZING AGENTS.....	1N01 CM87207-00	194,000
LIM, PETER.....	ANALYSIS OF CHEMICALS AND PHARMACEUTICAL FORMULATIONS.....	3N01 CM33723-10	119,834
LIM, PETER.....	ANALYSIS OF CHEMICAL AND PHARMACEUTICAL FORMULATIONS.....	1N01 CM87183-00	357,981
MC CALEB, KIRTLAND E.....	STUDY OF CHEMICALS THAT AFFECT MAN AND HIS ENVIRONMENT.....	3N01 CP33285-20	852,011
MITCHELL, ANN D.....	MUTAGENESIS SYSTEM FOR CARCINOGENESIS SCREENING.....	2N01 CP65854-03	242,667
PETERS, JOHN H.....	ASSESS DIET EFFECTS ON CARCINOGENIC POTENTIAL DISCHARGE.....	1N01 CP85620-00	146,591
PRYOR, GORDON T.....	NEUROBEHAVIORAL ASSESSMENT OF POTENTIAL NEUROTOXINS.....	1N01 ES82154-00	99,255
REIST, ELMER J.....	PREPARATION OF 7 COMPOUNDS—TASK 2.....	3N01 CP75904-03	1,647
REIST, ELMER J.....	SYNTHESES OF HETERO-SUBSTITUTED POLYAROMATIC HYDROCARBON.....	1N01 CP85612-00	124,778
REIST, ELMER J.....	PREPARATION OF 14 CHEMICAL COMPOUNDS.....	1N01 CP85647-00	22,246
REIST, ELMER J.....	PREPARATION OF N-NITROSOMETHYLUREA.....	1N01 CP85649-00	1,981
REIST, ELMER J.....	PREPARATION OF 11 CHEMICAL COMPOUNDS—TASK 3.....	1N01 CP85667-00	46,532
SIMMON, VINCENT F.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	3N01 CP65857-03	37,014
TANABE, MASATO.....	ABEO STEROIDS AS CONTRACEPTIVE AGENTS.....	5N01 HD72817-01	79,720
TANABE, MASATO.....	ANTIPIGESTATIONAL AGENTS.....	1N01 HD82810-00	165,813
TANABE, MASATO.....	SYNTHESIS AND TESTING OF MALE CONTRACEPTIVE AGENTS.....	1N01 HD82816-00	42,271
WEAVER, CHARLES S.....	DEVELOP WEARABLE 4 CHANNEL EEG CASSETTE RECORDING SYSTEM.....	3N01 NS32322-15	135,130

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	26	3,965,648	
MOUNTAIN VIEW			
TECHNICON CORPORATION—TECHNICON MEDICAL INFORMATION SYSTEMS CORPORATION		ZIP CODE 94040	
TO BE APPOINTED	COMPUTER BASED HOSPITAL INFORMATION SYSTEM	3N01 CL52154-17	2,443,172
ORGANIZATION TOTAL	1	2,443,172	
OAKLAND			
CHILDREN'S HOSPITAL MEDICAL CENTER OF NORTHERN CALIFORNIA		ZIP CODE 94609	
LUBIN, BERTRAM H	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE	3N01 HB73004-02	52,803
ORGANIZATION TOTAL	1	52,803	
KAISER FOUNDATION HOSPITALS—KAISER FOUNDATION RESEARCH INSTITUTE		ZIP CODE 94612	
BAKER, T HART	HOSPICE CONCEPT FOR TERMINAL CANCER PATIENTS	1N01 CN85375-00	585,594
COOPER, J FENIMORE	CLINICAL EVALUATION OF IMMUNODIAGNOSTIC TESTS FOR CANCER	2N01 CB74169-01	77,613
FRIEDMAN, GARY D	DETERMINE RENAL DISEASE PREVALENCE AND RISK FACTORS	2N01 AM62201-03	105,860
FRIEDMAN, GARY D	LIPID AND CHOLESTEROL RELATION TO BREAST CANCER RISK	1N01 CB84238-00	67,000
FRIEDMAN, GARY D	STUDY ENVIRONMENTAL CANCER—PREPAID HEALTH PLAN	1N01 CP81047-00	116,420
GROVER, JOHN	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL	2N01 HV82905-02	123,048
RAMCHARAN, SAVITRI	STUDY OF CONTRACEPTIVE DRUGS	2N01 HD32710-14	366,964
RAMCHARAN, SAVITRI	CONTRACEPTIVE AGENTS ON BIRTH DEFECT FREQUENCY	2N01 HD42861-05	266,201
WILD, J E	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE	5N01 HV33105-09	556,110
ORGANIZATION TOTAL	9	2,264,810	
SAMUEL MERRITT HOSPITAL		ZIP CODE 94609	
SCHWEITZER, ROBERT	SCREENING FOR EARLY DETECTION OF CANCER OF THE BREAST	2N01 CN45068-09	252,152
ORGANIZATION TOTAL	1	252,152	
OXNARD			
GDULD, INC.—STATHAM INSTRUMENTS DIVISION		ZIP CODE 93030	
CHAMBERS, JACK A	ELECTRICAL ENERGY CONVERTER DEVELOPMENT	5N01 HV82916-01	426,750
ORGANIZATION TOTAL	1	426,750	
PALO ALTO			
ALZA CORPORATION		ZIP CODE 94304	
PHARRISS, BRUCE B	DEVELOP AND TEST NEW BIODEGRADABLE DRUG DELIVERY SYSTEM	3N01 HD72825-01	204,284
ORGANIZATION TOTAL	1	204,284	
OYNAPOL		ZIP CODE 94304	
CROSBY, GUY	STUDY SENSORY PROPERTIES OF NEW DIHYDROCHALCONE ANALOGS	2N01 DE62479-05	285,270
ORGANIZATION TOTAL	1	285,270	
NORTHERN CALIFORNIA CANCER PROGRAM, INC.		ZIP CODE 94304	
CARTER, STEPHEN K	ADJUVANT CHEMOTHERAPY IN HEAD AND NECK CARCINOMA	1N01 CM87154-00	177,814
SILVERMAN, SOL, JR	NETWORK DEMONSTRATION PROJECT IN HEAD AND NECK CANCER	2N01 CN55180-04	324,585
ORGANIZATION TOTAL	2	502,399	
PALO ALTO MEDICAL RESEARCH FOUNDATION		ZIP CODE 94301	
DONCH, JOHN J	VERIFICATION OF GENETIC CONSTRUCTION OF E. COLI HOSTS	2N01 AI62519-02	76,555

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	1	76,555	
PASADENA			
CALIFORNIA INSTITUTE OF TECHNOLOGY ZIP CODE 91125			
DAVIDSON, NORMAN R	ELECTRON MICROSCOPIC STUDY OF TUMOR VIRUS NUCLEIC ACIDS.....	3N01 CP43306-06	136,383
DAVIDSON, NORMAN R	RESTRICTION ENDONUCLEASE ANALYSIS.....	5N01 CP71004-01	115,940
RICHARDS, JOHN H.....	SPECIAL ANIMAL COLONY (INBRED GUINEA PIG).....	1N01 RR82131-00	23,090
ORGANIZATION TOTAL	3	275,413	
HUNTINGTON MEMORIAL HOSPITAL ZIP CODE 91105			
AGNEW, WILLIAM F	STUDY OF FEASIBILITY OF A SENSORY PROSTHESIS.....	2N01 NS02275-11	193,958
ORGANIZATION TOTAL	1	193,958	
PASADENA FOUNDATION FOR MEDICAL RESEARCH ZIP CODE 91101			
KAIGHN, M EDWARD.....	NORMAL, HUMAN PROSTATIC EPITHELIAL CELL-PRIMARY CULTURE.....	5N01 CP65850-02	109,643
ORGANIZATION TOTAL	1	109,643	
XEROX CORPORATION ZIP CODE 91107			
EIN-GAL, MOSHE.....	DEVELOP SOLID STATE IMAGE RECEPTORS FOR X-RAY IMAGING.....	2N01 CB74211-02	834,384
ORGANIZATION TOTAL	1	834,384	
SACRAMENTO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY ZIP CODE 95814			
AUSTIN, DONALD F	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81012-00	174,728
AUSTIN, DONALD F	SAN FRANCISCO RESOURCE FOR CANCER EPIDEMIOLOGY.....	2N01 CP81018-02	1,418,421
ORGANIZATION TOTAL	2	1,593,149	
PLANNED PARENTHOOD ASSOCIATION OF SACRAMENTO ZIP CODE 95814			
STEWART, GARY K.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	2N01 HD72808-04	90,700
ORGANIZATION TOTAL	1	90,700	
SAN DIEGO			
DATA/WARE DEVELOPMENT ZIP CODE 92121			
MURRAY, G GRAHAM.....	THEORETICAL STUDY OF MULTIMODE VIDEO COMMUNICATIONS.....	1N01 LM84722-00	32,980
ORGANIZATION TOTAL	1	32,980	
GENERAL ATOMIC COMPANY ZIP CODE 92138			
HAUBOLD, A D.....	DESIGN OF CARBON FILM DEPOSITS FOR PROSTHETIC DEVICES.....	5N01 HV42928-07	148,903
ORGANIZATION TOTAL	1	148,903	
WSA, INC. ZIP CODE 92121			
DOBSON, JACK.....	ASSESSMENT OF RADIATION THERAPY EQUIPMENT NEEDS.....	1N01 C085406-00	59,630
ORGANIZATION TOTAL	1	59,630	
SAN FRANCISCO			
CALIFORNIA STATE HEALTH AND WELFARE AGENCY-DEPARTMENT OF HEALTH ZIP CODE 94118			
LEONARD, ALVIN R.....	HIGH BLOOD PRESSURE CONTROL PROGRAM.....	3N01 HV72985-03	603,332
ORGANIZATION TOTAL	1	603,332	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
INSTITUTES OF MEDICAL SCIENCES ZIP CODE 94120			
FALLAT, ROBERT J.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	3N01 HR72912-01	14,600
HULLEY, STEPHEN B.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22981-10	1,506,578
WIDDOWSON, GRAHAM.....	SUPPORT FOR CENTRAL LABORATORY.....	5N01 HV33101-06	378,112
ORGANIZATION TOTAL	3 1,899,290		
PACIFIC MEDICAL CENTER ZIP CODE 94115			
CAVENDER, JOHN C.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	5N01 EY82101-01	135,394
ORGANIZATION TOTAL	1 135,394		
RALPH K. DAVIES MEDICAL CENTER-FRANKLIN HOSPITAL ZIP CODE 94114			
GOTCH, FRANK A.....	EVALUATION OF HOLLOW-FIBER DIALYZERS.....	2N01 AM42202-12	137,585
ORGANIZATION TOTAL	1 137,585		
SAN FRANCISCO CORONER'S OFFICE ZIP CODE 94103			
STEPHENS, BOYD G.....	PATHOLOGICAL COORDINATING LABORATORY.....	1N01 HD82845-00	199,341
ORGANIZATION TOTAL	1 199,341		
SAN FRANCISCO MEDICAL SOCIETY ZIP CODE 94118			
PERKINS, HERBERT A.....	REFERENCE HLA LABORATORIES.....	1N01 AI82547-00	24,813
ORGANIZATION TOTAL	1 24,813		
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO ZIP CODE 94143			
ARIEFF, ALLEN I.....	ABNORMALITIES OF NERVOUS SYSTEM FUNCTION IN UREMIA.....	2N01 AM52204-05	97,005
ELASHOFF, ROBERT M.....	DEVELOPMENT OF GROUP-TESTING FOR SCREENING CARCINOGENS.....	2N01 CP33327-06	50,000
EPSTEIN, CHARLES J.....	DEVELOP MODELS FOR GENETIC DISORDERS ON TRISOMY 21.....	1N01 HD82858-00	171,605
GALIN, DAVID.....	NEUROPSYCHOLOGICAL STUDIES ON READING DISABILITIES.....	1N01 HD82824-00	323,654
GOODMAN, JOEL W.....	CHARACTERIZATION OF ANTIGEN BINDING T-CELL RECEPTORS.....	2N01 CB74178-01	89,825
GREENSPAN, JOHN S.....	RECURRENT APHTHOUS STOMATITIS AND BEHCET'S SYNDROME.....	1N01 DE82415-00	109,802
HOPEWELL, PHILIP C.....	INTERMITTENT POSITIVE PRESSURE BREATHING CLINICAL STUDY.....	2N01 HR72906-03	251,066
IRVINE, ALEXANDER R.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62139-02	56,000
KING, MARY CLAIRE.....	ANALYZE FAMILIES WITH HIGH INCIDENCE OF BREAST CANCER.....	1N01 CB84274-00	7,009
LEVY, JAY A.....	ISOLATION OF HUMAN XENOTROPIC VIRUSES.....	3N01 CP43381-05	49,740
MARTIN, DAVID W, JR.....	PROPAGATION OF MUTANT SOMATIC CELLS.....	5N01 CP43239-08	117,721
MERZENICH, MICHAEL M.....	DEVELOP MULTICHANNEL ELECTRODES FOR AUDITORY PROSTHESIS.....	2N01 NS72367-01	79,500
MICHAELI, DOV.....	INTERACTIONS OF MODIFIED BIOPOLYMERS WITH BLOOD.....	2N01 HV42984-05	134,386
NEWBRUN, ERNEST.....	DENTAL PLAQUE OF FRUCTOSE-INTOLERANT PATIENTS.....	2N01 DE62498-02	22,799
PETERS, ROBERT W.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82901-02	101,306
PETRAKIS, NICHOLAS L.....	BENIGN BREAST LESIONS IN RISK FOR BREAST CANCER.....	1N01 CB84319-00	30,000
POTTER, DONALD E.....	CHRONIC PERITONEAL DIALYSIS AND HEMODIALYSIS IN CHILDREN.....	2N01 AM52219-02	25,180
TANAGHO, EMIL A.....	STUDY OF URINARY BLADDER EVACUATION.....	2N01 NS32307-06	85,833
WARA, WILLIAM M.....	IMMUNO-STIMULANTS IN LOCALIZED RADIATION THERAPY.....	2N01 CB64004-02	101,577
ZIPPIN, CALVIN.....	TUMOR REGISTRY TRAINING PROGRAM AND ALLIED ACTIVITIES.....	2N01 CP43383-07	159,748
ORGANIZATION TOTAL	20 2,063,756		
SAN JOSE			
SANTA CLARA VALLEY MEDICAL CENTER ZIP CODE 95128			
KRAUT, JOSEPH W.....	CLINICAL ONCOLOGY PROGRAM.....	5N01 CN65378-01	78,684
ORGANIZATION TOTAL	1 78,684		
SANTA BARBARA			
SYSTEMETRICS, INC. ZIP CODE 93105			
LUBALIN, JAMES S.....	NAT'L COMM ON DIGESTIVE DISEASES SUPPORT SERVICE.....	3N01 AM72216-03	581,422

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
ORGANIZATION TOTAL	1	581,422	
SANTA CRUZ			
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ		ZIP CODE 95064	
TALAMANTES, FRANK J, JR	ESTROGEN/PROGESTIN EFFECTS ON BREAST IN NEONATAL PERIOD.....	2N01 CB74091-01	92,400
WIPKE, W TODD	PREDICTION OF METABOLITES FOR CARCINOGENICITY.....	3N01 CP75816-03	28,265
ORGANIZATION TOTAL	2	120,665	
SANTA MONICA			
CUAORA ASSOCIATES		ZIP CODE 90401	
WANGER, JUDITH	EVALUATION OF ON-LINE ANALYSTS	1N01 LM84734-00	71,103
ORGANIZATION TOTAL	1	71,103	
RAND CORPORATION		ZIP CODE 90406	
CARTER, GRACE	NIH POLICIES FOR THE SUPPORT OF EXTRAMURAL RESEARCH.....	3N01 OD52127-05	13,011
GRONER, GABRIEL F.....	PROTOTYPE CLINICAL RESEARCH DATA.....	2N01 RR52111-14	143,370
HOPWOOD, MARSHA	EVALUATE CLINICAL INFORMATION PROCESSING.....	1N01 RR82122-00	100,000
MORRISON, PETER A.....	CONSEQUENCES OF LATE ADOLESCENT CHILDBEARING.....	5N01 HD72819-01	131,130
ORGANIZATION TOTAL	4	387,511	
SIMI VALLEY			
PHARM-ECO LABORATORIES		ZIP CODE 93065	
DRAPER, MARSHALL D.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	1N01 CM87200-00	258,223
ORGANIZATION TOTAL	1	258,223	
STANFORD			
STANFORD UNIVERSITY		ZIP CODE 94305	
ALDERMAN, EDWIN L.....	CORONARY ARTERY SURGERY COLLABORATIVE STUDIES.....	5N01 HV32974-09	223,628
BERNFELD, MERTON R.....	STROMA IN NEOPLASTIC AND PRENEOPLASTIC MAMMARY GLAND.....	2N01 CB53903-03	95,000
DONALDSON, SARAH S.....	OPTIMAL NUTRITIONAL SUPPORT TO CANCER THERAPY.....	3N01 CP65825-05	16,000
ENGLEMEN, EDGAR G.....	ACQUISITION OF HOMOZYGOUS TYPING CELLS.....	1N01 AI82551-00	93,422
FRIES, JAMES F.....	PILOT DATA BANK NETWORK IN STROKE.....	1N01 NS82390-00	114,728
GRUMET, F CARL.....	ACQUISITION OF HLA-A, B AND C LOCI AND B CELL ANTISERA.....	1N01 AI82558-00	54,585
KAPLAN, HENRY S.....	HODGKIN'S DISEASE AND OTHER HUMAN MALIGNANT LYMPHOMAS.....	5N01 CP43228-10	518,200
KAPLAN, HENRY S.....	RADLV INFECTION AND LYMPHOCYTE DIFFERENTIATION IN MICE.....	5N01 CP71052-01	132,502
LOEW, GILDA H.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	2N01 CP75928-02	136,760
LUCAS, ZOLTAN J.....	DIRECT ASSAY FOR LYMPHOKINE.....	1N01 CB84263-00	137,231
MERIGAN, THOMAS C.....	EVALUATION OF THERAPEUTIC EFFICACY OF HUMAN INTERFERON.....	2N01 AI42527-12	155,065
MISFELDT, DAYTON S.....	GROWTH/PASSAGE OF MAMMARY EPITHELIAL CELLS IN CULTURE.....	5N01 CB74094-01	66,500
ROSENBERG, LEON T.....	CYTOTOXIC ACTIVITY OF SYNGENEIC COMPLEMENT.....	1N01 CB84245-00	83,531
ROSENBERG, SAUL A.....	NONHODGKIN'S LYMPHOMAS CLASSIFICATION CENTER.....	2N01 CM67072-03	31,240
SUSSMAN, HOWARD H.....	BIOLOGIC MARKERS IN BREAST CANCER PATIENTS.....	5N01 CB74086-01	117,500
SWENSON, ROBERT S.....	NUTRITION-ACUTE RENAL FAILURE AFTER HEART SURGERY.....	1N01 AM82207-00	15,000
WEINER, MICHAEL W.....	ROLE OF ACETATE IN DIALYSATE FOR HEMODIALYSIS.....	2N01 AM52210-03	131,064
WHITE, ROBERT L.....	TRANSDERMAL ELECTRONICS FOR AUDITORY PROSTHESIS.....	2N01 NS52306-04	110,370
WHITE, ROBERT L.....	DEVELOP ELECTRODES FOR AUDITORY PROSTHESIS.....	2N01 NS72366-01	134,000
ORGANIZATION TOTAL	19	2,366,326	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CALIFORNIA—Continued			
SUNNYVALE			
RASOR ASSOCIATES ZIP CODE 94086			
RASOR, N S.....	NONINVASIVE ASSESSMENT OF PULMONARY HYPERTENSION.....	2N01 HR62917-02	85,450
ORGANIZATION TOTAL	1 85,450		
TORRANCE			
LOS ANGELES COUNTY HEALTH SERVICES DEPARTMENT—LOS ANGELES COUNTY HARBOR GENERAL HOSPITAL ZIP CODE 90509			
DAVIDSON, WARREN D.....	ROLE OF ACETATE IN DIALYSATE FOR HEMODIALYSIS.....	2N01 AM52209-03	121,770
ODELL, WILLIAM D.....	STUDY OF HORMONE MARKERS FOR DETECTING CANCER.....	2N01 CB43903-05	30,000
PARLOW, ALBERT F.....	ISOLATE PURITY AND HUMAN PITUITARY HORMONES.....	3N01 AM72220-01	37,377
PARLOW, ALBERT F.....	EXTRACTION OF RAT PITUITARY HORMONES.....	3N01 AM72221-01	36,930
PARLOW, ALBERT F.....	ISOLATE AND PURIFY OVINE PITUITARY HORMONES.....	1N01 AM82212-00	183,331
SWERDLOFF, RONALD S.....	BIOLOGIC ACTIVITY OF LH IN CHRONIC RENAL FAILURE.....	1N01 AM82210-00	15,000
SWERDLOFF, RONALD S.....	TESTOSTERONE ENANTHATE—INDUCED REVERSIBLE AZOOSPERMIA.....	3N01 HD62817-05	87,750
SWERDLOFF, RONALD S.....	PHARMACOKINETICS OF TESTOSTERONE ENANTHATE.....	1N01 HD82830-00	66,875
WEITZMAN, RICHARD E.....	MECHANISM OF HYPOTENSION OCCURRING DURING DIALYSIS.....	1N01 AM82209-00	15,000
ORGANIZATION TOTAL	9 594,033		
UNIVERSAL CITY			
MCA, INC. ZIP CODE 91608			
NOT APPLICABLE.....	PURCHASE INDUSTRIAL VIDEODISC PLAYERS FOR NLM.....	1N01 LM84704-00	40,000
ORGANIZATION TOTAL	1 40,000		
VAN NUYS			
BIO-SCIENCE LABORATORIES ZIP CODE 91405			
GLUECK, CHARLES J.....	FOLLOW-UP & TOXICITY BLOOD DETERMINATIONS—LRC PATIENTS.....	3N01 HV32961-08	250,930
IBBOTT, FRANK A.....	CENTRAL LABORATORY FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72950-02	67,884
ORGANIZATION TOTAL	2 318,814		
STATE TOTAL	250 51,562,002		
COLORADO			
DENVER			
COLORADO REGIONAL CANCER CENTER ZIP CODE 80262			
SEMPLER, MARTIN.....	COMPREHENSIVE CANCER CENTERS COMMUNICATIONS NETWORK.....	3N01 CN55236-05	56,315
ORGANIZATION TOTAL	1 56,315		
COLORADO STATE DEPARTMENT OF HEALTH ZIP CODE 80220			
REGER, ROY H.....	COMMUNITY CRIES PREVENTION DEMONSTRATION PROJECT.....	3N01 DE52472-04	4,884
ORGANIZATION TOTAL	1 4,884		
DAVIS INSTITUTE FOR THE CARE AND STUDY OF THE AGING ZIP CODE 80204			
THOMPSON, HORACE E.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	3N01 HD72811-02	88,000
ORGANIZATION TOTAL	1 88,000		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
COLORADO—Continued			
NATIONAL ASTHMA CENTER ZIP CODE 80204			
CREER, THOMAS.....	SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	5N01 HR72972-01	72,891
ORGANIZATION TOTAL	1	72,891	
NATIONAL JEWISH HOSPITAL AND RESEARCH CENTER ZIP CODE 80206			
MC CLATCHY, J KENNETH.....	SEROLOGY OF ATYPICAL MYCOBACTERIA.....	5N01 AI02079-12	56,008
ORGANIZATION TOTAL	1	56,008	
UNIVERSITY OF COLORADO MEDICAL CENTER ZIP CODE 80262			
ALFREY, ALLEN C.....	TRACE ELEMENT ABNORMALITIES IN CHRONIC UREMIA.....	2N01 AM42217-06	119,392
BARKEN, ROGER.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	5N01 AI22501-15	103,089
CUNHA, GERALD R.....	TISSUE INTERACTIONS--HORMONALLY INDUCED CELLULAR CHANGE.....	5N01 CP75875-01	145,051
HATHAWAY, WILLIAM E.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	2N01 HB53023-04	19,156
HENDEE, WILLIAM R.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	5N01 CN45160-11	110,222
PETTY, THOMAS L.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	3N01 HR62942-05	137,177
REEVES, JOHN T.....	NONINVASIVE ASSESSMENT OF PULMONARY HYPERTENSION.....	5N01 HR62920-02	91,870
STEWART, JOHN M.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	3N01 HD62843-04	45,839
STEWART, JOHN M.....	SPECIFIC IMMUNIZATION AGAINST FSH AS MALE CONTRACEPTIVE.....	1N01 HD82814-00	63,744
STEWART, JOHN M.....	DEVELOPMENT OF KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	5N01 HV72946-02	51,142
WEBBER, MUKTA M.....	IN VITRO CULTIVATION OF HUMAN PROSTATIC CELLS.....	5N01 CP65849-03	140,405
ORGANIZATION TOTAL	11	1,027,087	
STATE TOTAL	16	1,305,185	
CONNECTICUT			
FARMINGTON			
UNIVERSITY OF CONNECTICUT HEALTH CENTER ZIP CODE 06032			
BIGAZZI, PIERLUIGI E.....	IMMUNOLOGIC STUDIES OF VASECTOMY.....	3N01 HD52842-07	42,063
DOHERTY, NEVILLE.....	COST EFFECTIVENESS OF VARIOUS CARIES PREVENTIVE AGENTS.....	3N01 DE52449-09	82,907
GOLD, RONALD.....	CLINICAL EVALUATION OF BACTERIAL POLYSACCHARIDE VACCINES.....	2N01 AI22502-09	61,744
LINDQUIST, RICHARD R.....	EFFECT OF MAMMARY CANCER CELLS ON VASCULAR ENDOTHELIUM.....	5N01 CB74089-01	68,700
MAHER, JOHN F.....	PERITONEAL PERMEABILITY AND DRUG ENHANCEMENT IN UREMIA.....	2N01 AM52220-02	88,233
MUNDY, GREGORY R.....	OSTEOTROPISM OF MAMMARY CARCINOMA METASTASIS.....	2N01 CB63980-03	109,300
RULE, JAMES T.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECT.....	3N01 DE52459-05	2,030
ORGANIZATION TOTAL	7	454,977	
HARTFORD			
CONNECTICUT STATE DEPARTMENT OF HEALTH ZIP CODE 06115			
HONEYMAN, MERTON S.....	CANCER END RESULTS EVALUATION.....	2N01 CP61002-06	442,207
OSTFELD, ADRIAN M.....	HIGH BLOOD PRESSURE CONTROL PROGRAM.....	5N01 HV72984-03	474,198
ORGANIZATION TOTAL	2	916,405	
NEW HAVEN			
HASKINS LABORATORIES ZIP CODE 06510			
LIBERMAN, ALVIN M.....	STUDY OF LANGUAGE DEVELOPMENT IN CHILDREN.....	2N01 HD12420-08	87,189
ORGANIZATION TOTAL	1	87,189	
YALE UNIVERSITY ZIP CODE 06520			
COHEN, LAWRENCE S.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	2N01 HV62925-03	95,790

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CONNECTICUT—Continued			
COLE, JACK W.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55232-07	227,149
COLLINS, WILLIAM F, JR.....	DEVELOP ACUTE SPINAL CORD INJURY DATA PROTOCOLS.....	5N01 NS72361-01	63,000
FELIG, PHILIP.....	GLUCAGON AND AMINO ACIDS IN CARBOHYDRATE METABOLISM.....	3N01 AM42221-04	61,571
FURTHMAYR, HEINZ.....	ISOLATE/CHARACTERIZE ANTIBODIES TO COLLAGEN, PROCOLLAGEN.....	1N01 CB84225-00	101,100
MATTHAY, RICHARD A.....	INTRATUMORAL BCG IMMUNOTHERAPY.....	2N01 CB74191-01	61,894
MEIGS, J WISTER.....	SUPPORT FOR CANCER EPIDEMIOLOGY PROGRAM.....	3N01 CP33235-11	594,824
PEARSON, HOWARD A.....	STUDIES IN SICKLE CELL DISEASE.....	3N01 HB22950-12	21,165
PEARSON, HOWARD A.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72996-02	35,834
RUDDLE, FRANK H.....	PROPAGATION OF HAPLOID AND PARTIAL MONOSOMIC CELL LINES.....	5N01 CP55673-08	131,804
RUDDLE, FRANK H.....	STUDY INTEGRATION SITES OF SARC GENE OF MOLONEY VIRUS.....	5N01 CP71060-02	74,850
SPIRO, HOWARD M.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	5N01 CM43797-09	144,900
SPIRO, HOWARD M.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM53843-08	105,000
ORGANIZATION TOTAL	13	1,718,881	
STORRS			
UNIVERSITY OF CONNECTICUT		ZIP CODE 06268	
FOX, MARTIN D.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM-DATA CENTER.....	5N01 HV72929-01	157,402
MAXSON, STEPHEN C.....	DEVELOP MODELS OF FEARILE CONVULSIONS IN MAN.....	1N01 RR82149-00	21,253
ORGANIZATION TOTAL	2	178,655	
STATE TOTAL	25	3,356,107	
DELAWARE			
WILMINGTON			
WILMINGTON MEDICAL CENTER		ZIP CODE 19801	
WHITNEY, LESLIE W.....	SERUM FROM PATIENTS WITH BREAST LESIONS.....	5N01 CB74137-01	24,000
WHITNEY, LESLIE W.....	SCREENING FOR DETECTION OF BREAST CANCER.....	2N01 CN45047-05	256,501
WHITNEY, LESLIE W.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45151-04	199,967
ORGANIZATION TOTAL	3	480,468	
STATE TOTAL	3	480,468	
DIST OF COL			
WASHINGTON			
AMERICAN INSTITUTES FOR RESEARCH		ZIP CODE 20007	
CLAUDY, JOHN G.....	CONSEQUENCES OF BEING AN ONLY CHILD.....	1N01 HD82854-00	85,669
MILLER, WARREN B.....	PSYCHOLOGICAL FACTORS AND FERTILITY REGULATION IN WOMEN.....	1N01 HD82831-00	110,569
MILLER, WARREN B.....	VOLUNTARY AND INVOLUNTARY CHILDLESSNESS.....	1N01 HD82853-00	47,981
SHANNER, WILLIAM M.....	CONTINUING EDUCATION PROGRAMS IN PULMONARY MEDICINE.....	3N01 HR62932-02	58,981
SHANNER, WILLIAM M.....	SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	5N01 HR72974-01	156,670
WEISS, ROBERT S.....	ONE-PARENT/ONE-CHILD FAMILY.....	1N01 HD82852-00	47,235
ORGANIZATION TOTAL	6	507,105	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES		ZIP CODE 20036	
JOLLY, H PAUL, JR.....	MAINTAINING THE MEDICAL COLLEGE FACULTY ROSTER.....	1N01 OD82116-00	211,000
SUTER, EMANUEL.....	DEVELOP A RESOURCE FOR EDUCATING HEALTH PROFESSIONALS.....	2N01 LM64711-04	354,111
ORGANIZATION TOTAL	2	565,111	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
DIST OF COL—Continued			
CHILDREN'S HOSPITAL NATIONAL MEDICAL CENTER ZIP CODE 20010			
PARROTT, ROBERT H.....	STUDY OF RESPIRATORY DISEASE.....	2N01 AI12091-15	178,500
PARROTT, ROBERT H.....	ESTABLISH AN INFECTIOUS ENTERIC DISEASE STUDY CENTER.....	5N01 AI72535-02	236,955
ORGANIZATION TOTAL	2 415,455		
COUNCIL ON LIBRARY RESOURCES ZIP CODE 20036			
COLE, FRED.....	MEDICAL LIBRARY MANAGEMENT INTERN PROGRAM.....	2N01 LM74715-01	98,800
ORGANIZATION TOTAL	1 98,800		
EBON RESEARCH SYSTEMS ZIP CODE 20001			
HICKS, FLORENCE J.....	EVALUATION OF SICKLE CELL EDUCATION.....	1N01 HB82935-00	149,377
ORGANIZATION TOTAL	1 149,377		
GEORGE WASHINGTON UNIVERSITY ZIP CODE 20006			
DAVIS, DAVID O.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5N01 CB43981-06	34,513
KOERING, MARILYN J.....	FOLLICULOGENESIS DURING THE MENSTRUAL CYCLE.....	5N01 HD72835-02	22,204
KRUEGER, DEAN E.....	MYOCARDIAL INFARCTION & THE ROLE OF ORAL CONTRACEPTIVES.....	2N01 HD62808-06	465,779
KRUEGER, DEAN E.....	INTERMITTENT POSITIVE PRESSURE BREATHING—DATA STUDY.....	2N01 HR72901-02	162,219
LESSIN, LAWRENCE S.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72994-02	60,675
MATHESON, NINA W.....	ESTABLISHMENT OF REGION IV JOURNAL CLEARINGHOUSE.....	2N01 LM64719-04	17,098
MC GOWAN, LAWRENCE.....	STUDY OF OVARIAN CANCER IN GREATER WASHINGTON, D C.....	1N01 CP81051-00	89,385
POPPEN, PAUL J.....	PSYCHOSOCIAL ASPECTS OF ADOLESCENT CONTRACEPTIVE USE.....	1N01 HD82847-00	31,218
RIOS, JORGE.....	ECG CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52941-04	79,126
SHAW, LAWRENCE W.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD52852-07	265,969
WAXMAN, BENNY.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD62806-03	53,250
ORGANIZATION TOTAL	11 1,281,436		
GEORGETOWN UNIVERSITY ZIP CODE 20007			
ABERNATHY, MARGARET R.....	MAMMOGRAPHY TRAINING FOR DETECTION OF BREAST CANCER.....	2N01 CN65251-07	31,000
GERIN, JOHN L.....	OPERATE MOLECULAR ANATOMY LABORATORIES.....	1N01 AI82572-00	812,520
HENKIN, ROBERT I.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENT.....	5N01 CP65836-04	23,028
MUSHKIN, SELMA J.....	TRENDS IN COST OF DISEASE RELATED TO BIOMEDICAL RESEARCH.....	3N01 OD52121-09	367,237
RIDLEY, JEANNE C.....	A STUDY OF LOW FERTILITY COHORTS IN THE UNITED STATES.....	5N01 HD62818-03	167,227
SCHEIN, PHILIP S.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67094-04	94,698
SCHEIN, PHILIP S.....	GASTROINTESTINAL CANCER RESEARCH PROGRAM.....	5N01 CM67110-07	234,885
SHNIDER, BRUCE I.....	SUPPORT SERVICES FOR NCI EXTRAMURAL CLINICAL TRIALS.....	1N01 CM87194-00	174,985
SHNIDER, BRUCE I.....	EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45062-07	265,293
SLOTKOFF, LAWRENCE M.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	2N01 HV72915-02	382,661
ORGANIZATION TOTAL	10 2,553,534		
HERNER & COMPANY ZIP CODE 20037			
NOT APPLICABLE.....	INDEXING JOURNAL ARTICLES IN THE BIOMEDICAL SCIENCES.....	1N01 LM84701-00	58,000
ORGANIZATION TOTAL	1 58,000		
HOWARD UNIVERSITY ZIP CODE 20001			
JENKINS, RENEE R.....	SOCIOSEXUAL DEVELOPMENT OF BLACK ADOLESCENTS.....	1N01 HD82840-00	99,499
KAPADIA, GOVIND J.....	POTENTIAL CARCINOGENS FROM PLANTS.....	3N01 CP33266-12	55,838
SCOTT, ROLAND B.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72991-02	41,001
WHITE, JACK E.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55230-08	218,736
ORGANIZATION TOTAL	4 415,074		
MARKET FACTS ZIP CODE 20006			
WEBER, STEPHEN J.....	IMPACT OF TWO CLINICAL TRIALS ON MEDICAL PRACTICE.....	1N01 HV82940-00	43,892
ORGANIZATION TOTAL	1 43,892		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
DIST OF COL—Continued			
NATIONAL ACADEMY OF SCIENCES ZIP CODE 20418			
BROWN, MYRTLE L.....	EVALUATION OF HUMAN NUTRIENT REQUIREMENTS.....	2N01 AM42209-07	59,480
BROWN, SARAH S.....	CRITICAL REVIEW OF THE DHEW HEALTH RESEARCH PRINCIPLES.....	1N01 OD82143-00	71,500
GARDNER, PHYLLIS A.....	SUPPORT ISCP AND WHO INTERNATIONAL REFERENCE CENTERS.....	2N01 C075279-01	130,820
GARDNER, PHYLLIS A.....	SUPPORT U.S. COMMITTEE FOR THE IUAC.....	2N01 C075384-03	24,563
GROGAN, EARL W.....	SURVEY OF ANIMAL MODELS FOR RESEARCH ON AGING.....	5N01 AG72118-01	99,400
HRUBEC, ZDENEK.....	NAS-NRC TWIN REGISTRY.....	2N01 HV53010-03	81,846
JABLON, SEYMOUR.....	EPIDEMIOLOGICAL STUDIES.....	2N01 CP53573-04	65,400
JABLON, SEYMOUR.....	VIETNAM REGISTRY OF HEAD AND SPINAL CORD INJURIES.....	3N01 NS62346-05	10,330
JABLON, SEYMOUR.....	CONTINUATION OF THE MEDICAL FOLLOW-UP AGENCY STUDIES.....	2N01 OD52138-04	150,000
KELLY, WILLIAM C.....	NEED FOR BIOMEDICAL AND BEHAVIORAL RESEARCH PERSONNEL.....	2N01 OD52109-11	854,641
KIESLER, SARA.....	COMMITTEE ON AGING FOCUS ON THE ELDERLY FAMILY.....	1N01 AG82111-00	186,700
MORGAN, COUNCIL.....	SUPPORT WORK OF INSTITUTE OF LABORATORY ANIMAL RESOURCES.....	5N01 RR52128-05	90,000
NOT APPLICABLE.....	ADVISORY SERVICE TO NLM TOXICOLOGY INFORMATION PROGRAM.....	2N01 LM64714-05	44,600
NOT APPLICABLE.....	REVIEW AND EVALUATION REPORTS OF ANIMAL DATA BANK.....	2N01 LM64720-05	28,265
SINGER, ALLEN.....	ANALYZE RECORDS OF APPLICANTS AND AWARDEES.....	1N01 RG82125-00	53,091
YAGER, ROBERT H.....	SUPPORT OF INSTITUTE OF LABORATORY ANIMAL RESOURCES.....	5N01 CM53850-04	20,000
YAGER, ROBERT H.....	CONFERENCES ON LABORATORY ANIMAL RESOURCES.....	5N01 CM57013-08	25,000
ORGANIZATION TOTAL	17	1,995,636	
PAN AMERICAN HEALTH ORGANIZATION ZIP CODE 20037			
KLEIN, ROBERT E.....	A STUDY OF NUTRITION AND DEVELOPMENT.....	3N01 HD50640-32	148,024
LITVAK, JORGE.....	LATIN AMERICAN CANCER RESEARCH INFORMATION PROJECT.....	2N01 C065332-06	421,414
MORO, MANUEL.....	PLANNING/CONSULTATION SERVICE FOR NONHUMAN PRIMATE PROG.....	2N01 RS52151-08	252,850
ORGANIZATION TOTAL	3	822,288	
PORTER, NOVELLI AND ASSOCIATES ZIP CODE 20007			
NOVELLI, WILLIAM.....	OFFICE OF CANCER COMMUNICATIONS PROGRAM SUPPORT SERVICES.....	5N01 C075360-03	946,783
ORGANIZATION TOTAL	1	946,783	
RESOURCES FOR THE FUTURE ZIP CODE 20036			
RIDKER, RONALD G.....	ENVIRONMENTAL CONSEQUENCES OF POPULATION GROWTH.....	3N01 HD72815-04	25,334
ORGANIZATION TOTAL	1	25,334	
TECHNASSOCIATES, INC. ZIP CODE 20005			
GOROMBAY, GABRIEL.....	ANNOTATE CANCER DOCUMENTS FOR THE ICRDB PROGRAM, NCI.....	1N01 C085416-00	19,020
ORGANIZATION TOTAL	1	19,020	
TELE SEC ZIP CODE 20006			
TARVER, HELGA.....	NLM SERIAL AND MONOGRAPH BINDING PREPARATION.....	1N01 LM84718-00	144,531
ORGANIZATION TOTAL	1	144,531	
TELENET COMMUNICATIONS CORPORATION ZIP CODE 20036			
NOT APPLICABLE.....	TELECOMMUNICATIVE SERVICE.....	3N01 LM74722-03	59,451
ORGANIZATION TOTAL	1	59,451	
THOMAS BUFFINGTON AND ASSOCIATES ZIP CODE 20007			
BUFFINGTON, THOMAS.....	DEVELOP NCP COMMUNICATION ACTIVITIES.....	1N01 C085420-00	78,507
ORGANIZATION TOTAL	1	78,507	
U.S. SMALL BUSINESS ADMINISTRATION ZIP CODE 20416			
TING, ROBERT C.....	SUPPORTIVE SERVICES IN VIROLOGY AND TISSUE CULTURE.....	5N01 CM43719-08	159,895
ORGANIZATION TOTAL	1	159,895	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
DIST OF COL—Continued			
U.S. SMALL BUSINESS ADMINISTRATION WASHINGTON DISTRICT OFFICE ZIP CODE 20417			
CARTER, JOHN.....	SUPPORT CONFERENCE ON HEALTH RESEARCH PLANNING.....	1N01 OD82141-00	149,625
GLASS, LARRY.....	DATA MANAGEMENT FOR TREATMENT AND REHABILITATION.....	1N01 CN85415-00	139,136
HOUWEN, CORNELIUS M.....	STORE AND DISTRIBUTE BIOASSAY TECHNICAL PUBLICATIONS.....	1N01 CP85678-00	6,586
LITTLETON, ARTHUR C.....	HIGH BLOOD PRESSURE SURVEY.....	1N01 H082939-00	317,605
STEUER, ANTON F.....	PROVIDE SPECIAL TISSUE CULTURE CELLS TO NINCDS.....	1N01 NS82388-00	45,000
ORGANIZATION TOTAL	5	657,952	
U.S. SMITHSONIAN INSTITUTION ZIP CODE 20560			
HOPE, W DUANE.....	REGISTRY OF TUMORS IN LOWER ANIMALS.....	2N01 CB33874-06	143,112
SORENSEN, E RICHARD.....	RESEARCH FILM OF THE HUNZA IN PAKISTAN.....	1N01 CP85631-00	14,985
ORGANIZATION TOTAL	2	158,097	
U.S. SMITHSONIAN INSTITUTION—SMITHSONIAN SCIENCE INFORMATION EXCHANGE ZIP CODE 20036			
NOT APPLICABLE.....	DEVELOP INFO. SYSTEM FOR TOXICOLOGY & RELATED PROGRAMS.....	1N01 LM84723-00	106,017
ORGANIZATION TOTAL	1	106,017	
URBAN INSTITUTE ZIP CODE 20037			
HOFFERTH, SANDRA L.....	CONSEQUENCES OF REMAINING CHILDLESS OR HAVING ONE CHILD.....	1N01 HD82850-00	88,268
MOORE, KRISTIN A.....	FACTORS OF ADOLESCENT PREGNANCY AND CHILDBEARING.....	1N01 HD82843-00	64,253
ORGANIZATION TOTAL	2	152,521	
STATE TOTAL	76	11,413,816	
FLORIDA			
FORT LAUDERDALE			
LED GODDWIN INSTITUTE FOR CANCER RESEARCH ZIP CODE 33314			
SACKSTEDER, MIRIAM R.....	RESOURCE FOR SYRIAN HAMSTERS.....	5N01 CP65804-04	65,428
WARREN, JOEL.....	OPERATE A PRIMARY GENETIC CENTER FOR GERMFREE RODENTS.....	5N01 CM77165-01	525,189
ORGANIZATION TOTAL	2	590,617	
GAINESVILLE			
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF FLORIDA ZIP CODE 32611			
DAWSON, WILLIAM W.....	STUDY OF MATERIALS FOR A SENSORY PROSTHESIS.....	3N01 NS12286-09	22,000
LOTZKAR, STANLEY.....	USE OF MOUTHRINSE AS A DENTAL CARIES PREVENTION.....	5N01 DE72404-02	56,901
TEAS, DONALD C.....	AUDITORY SENSITIVITY & DISCRIMINATION IN YOUNG CHILDREN.....	5N01 NS52313-07	105,924
WEINER, ROY S.....	CRYOPRESERVATION OF HUMAN MONOCYTES.....	2N01 CB74131-01	92,684
ORGANIZATION TOTAL	4	277,509	
JACKSONVILLE			
ST. VINCENT'S MEDICAL CENTER ZIP CODE 32204			
MC CLAW, MARVIN V.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55210-04	270,000
ORGANIZATION TOTAL	1	270,000	
MIAMI			
FLORIDA DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES—DADE COUNTY HEALTH DEPARTMENT ZIP CODE 33125			
CHRISTAKIS, GEORGE.....	STUDY OF MULTIPLE-RISK FACTOR IN CORONARY HEART DISEASE.....	5N01 HV42933-09	419,867

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
FLORIDA—Continued			
ORGANIZATION TOTAL	1	419,867	
PAPANICOLAOU CANCER RESEARCH INSTITUTE ZIP CODE 33136			
ALTMAN, NORMAN H.....	OPERATION OF AN ANIMAL DISEASE DIAGNOSTIC LABORATORY	1N01 CM87230-00	107,243
ALTMAN, NORMAN H.....	BREEDING RHESUS AND SQUIRREL MONKEYS.....	5N01 RS52131-08	193,959
ORGANIZATION TOTAL	2	301,202	
UNIVERSITY OF MIAMI ZIP CODE 33152			
BLANKENSHIP, GEORGE.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY	5N01 EY82102-01	183,352
DAVIES, JOHN E.....	STUDY ETIOLOGIC FACTORS FOR LUNG CANCER.....	1N01 CP81000-00	67,981
HAINES, HAROLD G.....	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION	5N01 CB74096-01	58,050
HARKNESS, DONALD R.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72992-02	68,309
KALSER, MARTIN H.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	5N01 CM43800-13	183,741
LAZZARA, RALPH.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52928-04	50,960
LESSNER, HOWARD E.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67093-04	112,724
LOPEZ, D M.....	IMMUNOLOGICAL STUDIES ON ANIMAL BREAST CARCINOMA.....	3N01 CP53532-06	167,360
MACHEMER, ROBERT.....	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52142-02	86,935
MANSELL, PETER W.....	A COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55243-03	234,842
MC GUIRE, CHRISTINE.....	CARDIOLOGY PATIENT SIMULATOR EVALUATION	3N01 HV62969-04	141,580
NORTON, EDWARD W.....	STUDY OF DIABETIC RETINOPATHY	2N01 EY32118-07	83,572
ROSOMOFF, HUBERT L.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS	3N01 NS72368-01	27,044
SIGEL, M MICHAEL.....	IMMUNODEPRESSANT ACTIVITY OF ANTICANCER DRUGS.....	5N01 CM57041-03	61,600
SIGEL, M MICHAEL.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67077-03	137,508
WEINSTEIN, GERALD D.....	CLINICAL EVALUATION OF TOPICAL DRUGS FOR PSORIASIS.....	2N01 AM52223-03	86,866
ORGANIZATION TOTAL	16	1,752,424	
MIAMI BEACH			
MIAMI HEART INSTITUTE ZIP CODE 33140			
CANOSA, FRANK L.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82907-02	100,247
GOSSELIN, ARTHUR J.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	5N01 HV32979-09	65,556
ORGANIZATION TOTAL	2	165,803	
MOUNT SINAI MEDICAL CENTER ZIP CODE 33140			
BERNSTEIN, WILLIAM H.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52933-03	133,392
ORGANIZATION TOTAL	1	133,392	
SAINT PETERSBURG			
LIFE SCIENCES, INC. ZIP CODE 33710			
BEARD, JOSEPH W.....	STUDY OF AVIAN LEUKOSIS VIRUSES.....	2N01 CP33291-07	560,000
FARROW, WENDALL M.....	PRODUCE & MAINTAIN GERMFREE ANIMALS	2N01 CP61005-03	404,307
NONOYAMA, MEIHAN.....	STUDY OF THE MAREK'S DISEASE HERPES VIRUS.....	2N01 CP33205-11	500,000
NONOYAMA, MEIHAN.....	PRODUCE POTENTIAL ONCOGENIC DNA VIRUSES	1N01 CP81023-00	260,709
ORGANIZATION TOTAL	4	1,725,016	
TAMPA			
ST. JOSEPH'S HOSPITAL ZIP CODE 33607			
SZAKACS, JENO E.....	STUDY OF HUMAN SARCOMA AND THEIR POSSIBLE VIRAL ETIOLOGY.....	2N01 CP33393-08	66,089
ORGANIZATION TOTAL	1	66,089	
STATE UNIVERSITY SYSTEM OF FLORIDA—UNIVERSITY OF SOUTH FLORIDA ZIP CODE 33620			
ENDICOTT, JAMES N.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87220-00	70,002
MASON, REGINALD G, JR.....	ANTITHROMBOGENIC SURFACES: PLATELET-INTERFACE REACTIONS.....	2N01 AM72237-01	28,790

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
FLORIDA—Continued			
ORGANIZATION TOTAL	2	98,792	
STATE TOTAL	36	5,800,711	
GEORGIA			
ATHENS			
UNIVERSITY SYSTEM OF GEORGIA—UNIVERSITY OF GEORGIA ZIP CODE 30601			
MC CALL, JOHN W.....	FILARIASIS REPOSITORY RESEARCH SERVICE.....	2N01 A152519-03	88,283
MC CALL, JOHN W.....	CRYOPRESERVATION OF FILARIAE.....	5N01 A162503-03	22,722
PRICE, JAMES C.....	RETINOIDS ENCAPSULATION FOR LABORATORY DIETS.....	1N01 CP85663-00	70,245
ORGANIZATION TOTAL	3	181,250	
ATLANTA			
CYSTIC FIBROSIS FOUNDATION ZIP CODE 30326			
CHERNOFF, AMOZ I.....	REPORTS FOR ASSESSING DIRECTIONS OF CYSTIC FIBROSIS.....	3N01 AM72205-03	62,247
ORGANIZATION TOTAL	1	62,247	
EMORY UNIVERSITY ZIP CODE 30322			
BROWN, ROBERT L.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55277-05	152,097
CHAWLA, RAJENDA K.....	IMMUNODIAGNOSTIC MARKERS FOR BREAST CARCINOMA.....	1N01 CB84308-00	88,395
CHILD, MARGARET A.....	METROPOLITAN ATLANTA SEER PROGRAM.....	2N01 CP61027-05	647,342
CHILD, MARGARET A.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71034-01	2,191
CHILD, MARGARET A.....	ROLE OF SACCHARIN IN BLADDER CANCER.....	3N01 CP81014-01	70,124
HALL, DALLAS W.....	RISK OF DIABETES FROM STEROID CONTRACEPTIVES.....	1N01 HD82818-00	53,400
HATCHER, ROBERT.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD72812-03	63,500
HEYMSFIELD, STEVEN.....	ASSESS PROTEIN CALORIC UNDERNUTRITION IN CANCER PATIENTS.....	1N01 CP85651-00	132,774
HUGULEY, CHARLES M, JR.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN55131-05	245,000
LIBBEY, MIRIAM.....	REGIONAL MEDICAL LIBRARY FOR THE SOUTHEASTERN REGION.....	3N01 LM24712-09	201,634
MC CLURE, HAROLD M.....	SUPPORT FOR COLONY OF MONKEYS.....	2N01 CP33343-05	29,047
MC CLURE, HAROLD M.....	INDUCE ORAL FACIAL MALFORMATIONS IN THE RHESUS MONKEY.....	2N01 DE52452-07	57,000
MC LAREN, JOHN R.....	STUDY IMMUNE STIMULANTS IN RADIATION THERAPY.....	2N01 CB64061-02	122,981
MURRAY, DOUGLAS R.....	SUPPLY HUMAN TUMOR SPECIMENS AND RELATED MATERIALS.....	3N01 CP61051-04	29,005
NIXON, DANIEL W.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	3N01 CP65873-04	45,158
PREEDY, JOHN R.....	ENDOCRINE EVENTS AT THE TIME OF FIRST PREGNANCY.....	5N01 CB74101-01	121,500
SCHLANT, ROBERT C.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52917-04	91,015
SCHLANT, ROBERT C.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82902-02	110,683
ORGANIZATION TOTAL	18	2,262,846	
GEORGIA DEPARTMENT OF HUMAN RESOURCES ZIP CODE 30334			
STEINER, CAROL B.....	EXPANSION OF GEORGIA CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55204-06	256,184
ORGANIZATION TOTAL	1	256,184	
UNIVERSITY SYSTEM OF GEORGIA—GEORGIA STATE UNIVERSITY ZIP CODE 30303			
IBRAHIM, ADLY N.....	DEVELOPMENT OF IMMUNODIAGNOSTIC TESTS FOR CANCER.....	1N01 CB84267-00	70,601
ORGANIZATION TOTAL	1	70,601	
AUGUSTA			
UNIVERSITY SYSTEM OF GEORGIA—MEDICAL COLLEGE OF GEORGIA ZIP CODE 30902			
BLACK, OWEN, JR.....	POTENTIAL FOR METABOLIC ACTIVATION IN ANIMAL PANCREAS.....	2N01 CP55656-05	71,513
BURNETT, GEORGE A.....	SCREENING ANTIPLAQUE AGENTS AND FOOD ADDITIVES.....	3N01 DE52483-07	9,795

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
GEORGIA—Continued			
GREEN, JOSEPH B	COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS62340-07	552,295
MAHESH, VIRENDRA B.....	STUDY OF STEROIDAL ORAL CONTRACEPTIVES.....	5N01 HD12297-15	69,988
MILNER, PAUL F.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73000-02	18,556
ORGANIZATION TOTAL	5 722,147		
CLAXTON			
EVANS COUNTY HEALTH DEPARTMENT ZIP CODE 30417			
HAMES, CURTIS G.....	EFFECTS OF CONTRACEPTIVE STEROIDS ON BLOOD PRESSURE.....	5N01 HD52830-05	162,038
HAMES, CURTIS G.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12434-11	381,690
ORGANIZATION TOTAL	2 543,728		
DORAVILLE			
MACMILLAN, INC.—ASSOCIATION FILMS ZIP CODE 30340			
FLY, WILLIAM O.....	FILM DISTRIBUTION PROGRAM-NLM.....	1N01 LM84712-00	63,000
ORGANIZATION TOTAL	1 63,000		
STATE TOTAL	32 4,162,003		
HAWAII			
HONOLULU			
HAWAII DEPARTMENT OF HEALTH ZIP CODE 96813			
RIGNEY, KLEONA.....	CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN65369-02	232,117
ORGANIZATION TOTAL	1 232,117		
KAPILANI-CHILDREN'S MEDICAL CENTER ZIP CODE 96826			
HALE, RALPH W.....	WOMEN'S HEALTH SURVEY (IUD COLLABORATIVE PROJECT).....	5N01 HD72809-03	71,782
ORGANIZATION TOTAL	1 71,782		
KUAKINI MEDICAL CENTER ZIP CODE 96817			
NOMURA, ABRAHAM M.....	JAPAN-HAWAII CANCER STUDY.....	2N01 CP61060-04	329,553
STEMMERMANN, GRANT N.....	DATA COLLECTION IN CLINICAL PATHOLOGY AND MORBID ANATOMY.....	5N01 HV62955-04	183,350
ORGANIZATION TOTAL	2 512,903		
PACIFIC HEALTH RESEARCH INSTITUTE ZIP CODE 96813			
GILBERT, FRED I, JR.....	SCREENING FOR DETECTION OF BREAST CANCER.....	2N01 CN45046-05	247,089
MC NAMARA, J JUDSON.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72956-02	81,763
ORGANIZATION TOTAL	2 328,852		
QUEEN'S MEDICAL CENTER ZIP CODE 96813			
OISHI, NOBORU.....	DEVELOP AND EVALUATE CANCER CARE COORDINATING TEAM.....	5N01 CN65197-04	124,641
ORGANIZATION TOTAL	1 124,641		
UNIVERSITY OF HAWAII SYSTEM—UNIVERSITY OF HAWAII AT MANA ZIP CODE 96822			
CHUNG, CHIN S.....	ABORTION—SUBSEQUENT REPRODUCTIVE FUNCTION/PREGNANCY.....	2N01 HD62801-04	175,523
DEAN, ANDREW G.....	EPIDEMIOLOGY AND MICROBIOLOGY OF INFECTIOUS DISEASE.....	1N01 AI82560-00	439,654
LIU, ROBERT S.....	SYNTHESIS OF NEW RETINOIDS.....	5N01 CP75933-02	41,520
MATSUMOTO, HIROMU.....	CYCASIN AND MACROZAMIN AS POTENTIAL CARCINOGENS.....	2N01 CP75915-02	36,803
MI, MING PI.....	OCCUPATIONAL CANCER RISK IN HAWAII.....	5N01 CP71006-01	70,664
NOMURA, ABRAHAM M.....	DIET AND NONCONTRACEPTIVE ESTROGENS IN BREAST CANCER.....	2N01 CB53884-05	84,900

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
HAWAII—Continued			
PIETTE, LAWRENCE H.....	COMMUNITY BASED CANCER CONTROL PROGRAM.....	5N01 CN75399-02	2,530,900
PIETTE, LAWRENCE H.....	OPERATION OF A GERMFREE RODENT COLONY.....	2N01 CP53511-08	461,318
SAGAWA, YONEO.....	COLLECTION OF INDIGENOUS AND EXOTIC PLANTS.....	5N01 CM33747-12	86,360
ORGANIZATION TOTAL	9 3,927,642		
STATE TOTAL	16 5,197,937		
IDAHO			
BOISE			
ST. LUKE'S HOSPITAL ZIP CODE 83702			
WARD, ELIZABETH.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55305-04	204,372
ORGANIZATION TOTAL	1 204,372		
STATE TOTAL	1 204,372		
ILLINOIS			
CHICAGO			
AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE ZIP CODE 60601			
BATES, LLOYD.....	COORD. COMTTE FOR CANCER CONTROL RADIOL. PHYSICS CENTER.....	5N01 CN45162-07	212,918
ORGANIZATION TOTAL	1 212,918		
AMERICAN COLLEGE OF RADIOLOGY ZIP CODE 60606			
DAVIS, LAWRENCE W.....	REGISTRY OF RADIATION THERAPY COMPLICATIONS.....	1N01 CM87175-00	148,547
KRAMER, SIMON.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87219-00	210,070
KRAMER, SIMON.....	CANCER CONTROL PROGRAM—RADIATION THERAPY GROUP.....	5N01 CN75355-01	827,088
LESTER, RICHARD G.....	COORDINATION OF MAMMOGRAPHY EDUCATION PROGRAMS.....	3N01 CN55177-07	46,207
ORGANIZATION TOTAL	4 1,231,912		
AMERICAN COLLEGE OF SURGEONS ZIP CODE 60611			
MAYER, ANDREW.....	NATIONAL CANCER CONSULTATIVE PROGRAMS FOR HOSPITALS.....	5N01 CN65282-08	277,094
ORGANIZATION TOTAL	1 277,094		
AMERICAN DENTAL ASSOCIATION HEALTH FOUNDATION ZIP CODE 60611			
SIEW, CHAKWAN.....	PHENYTOIN GINGIVAL HYPERPLASIA IN THE FERRET.....	1N01 RR82147-00	38,620
ORGANIZATION TOTAL	1 38,620		
BLUE CROSS ASSOCIATION ZIP CODE 60611			
KLEIN, DAVID H.....	DEMONSTRATION FOR REIMBURSEMENT IN CANCER CONTROL.....	2N01 CN65371-05	444,239
ORGANIZATION TOTAL	1 444,239		
HEKTDEN INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 60612			
SZANTO, PAUL B.....	SUPPLY OF MATERIALS FROM NEOPLASTIC SUBJECTS.....	2N01 CP43344-05	140,000
ORGANIZATION TOTAL	1 140,000		
IIT RESEARCH INSTITUTE ZIP CODE 60616			
BAXTER, DAVID W.....	SUPPLY HAMSTERS TREATED WITH RESPIRATORY CARCINOGENS.....	5N01 CP43289-04	173,735
GRAY, ALLAN P.....	PREPARATION OF A CHEMICAL.....	1N01 CP85641-00	24,739
GRAY, ALLAN P.....	PREPARATION OF 3-METHYLFLUORANTHENE.....	1N01 CP85668-00	3,042

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ILLINOIS—Continued			
GRAY, ALLAN P.....	POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS.....	1N01 CP85945-00	50,025
GRAY, ALLAN P.....	SYNTHESIS OF RADIO TETRACHLORODIBENZOFURAN.....	1N01 ES82115-00	30,000
HENRY, MARY C.....	INGESTED ASBESTOS EFFECTS.....	5N01 ES52157-08	220,520
KEITH, JAMES N.....	DEVELOP SHORT TRAINING COURSE—SAFE CHEMICAL HANDLING.....	2N01 C065278-06	47,868
KEITH, JAMES N.....	CHEMICAL REPOSITORY.....	5N01 CP55646-09	185,328
MOON, RICHARD C.....	PREVENTION OF PRENEOPLASTIC LESIONS OF THE MAMMARY GLAND.....	5N01 CB74207-01	85,700
MOON, RICHARD C.....	STUDY OF MODULATING FACTORS IN CARCINOGENESIS.....	5N01 CP23292-08	478,648
MOON, RICHARD C.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	5N01 CP75939-01	119,819
REED, JOSEPHINE M.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM63832-02	82,150
SCHIFF, LEONARD J.....	COLON CARCINOGENESIS IN ORGAN CULTURE.....	5N01 CP75953-01	75,175
SHEFNER, ALAN M.....	SERVICES IN SUPPORT OF DRUG-SCREENING PROGRAM.....	5N01 CM43755-08	302,151
SHEFNER, ALAN M.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	3N01 CM57004-07	814,100
ORGANIZATION TOTAL	15	2,693,000	
ILLINOIS CANCER COUNCIL ZIP CODE 60603			
STEINER, JAN W.....	DEMONSTRATION PROJECT FOR HEAD & NECK CANCER.....	2N01 CN65256-05	653,496
TAYLOR, SAMUEL G, III.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55245-06	194,313
ORGANIZATION TOTAL	2	847,809	
JOHN CRERAR LIBRARY ZIP CODE 60616			
PLETZKE, CHESTER J.....	SUPPORT FOR REGIONAL MEDICAL LIBRARY.....	3N01 LM14709-25	17,873
PLETZKE, CHESTER J.....	REGIONAL MEDICAL LIBRARY SERVICES.....	3N01 LM84713-01	338,104
ORGANIZATION TOTAL	2	355,977	
MICHAEL REESE HOSPITAL AND MEDICAL CENTER ZIP CODE 60616			
DMOWSKI, W PAUL.....	INTRAUTERINE RELEASE OF ESTRIOL FOR CONTRACEPTION.....	2N01 HD32739-11	143,154
KOSHY, MABEL.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72998-02	87,489
ORGANIZATION TOTAL	2	230,643	
NORTHWESTERN UNIVERSITY ZIP CODE 60611			
DE WYS, WILLIAM D.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENTS.....	5N01 CP65779-02	86,080
HARING, OLGA M.....	CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52929-04	107,083
HARING, OLGA M.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72963-02	126,556
HSU, CLEMENT C.....	ASSAYS FOR TUMOR ASSOCIATED ANTIGENS.....	2N01 CB74132-01	65,514
MARTIN, ALICE O.....	FIELD TEST CHROMOSOME PREPARATION AND KARYOTYPING DEVICE.....	1N01 HD82855-00	233,283
MOLTENI, AGOSTINO.....	SUPPORT FOR LABORATORY TO DETECT HYPERTENSION.....	5N01 HV32933-07	444,420
ROXE, DAVID M.....	COMPARISONS OF MAINTENANCE PERITONEAL AND HEMODIALYSIS.....	2N01 AM52208-03	48,905
STAMLER, JEREMIAH.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22978-14	1,031,924
ORGANIZATION TOTAL	8	2,143,765	
PDS CUSTOM SYSTEMS ZIP CODE 60611			
CONSTANTIN, E J.....	COMPLETE ENLARGER-REPRODUCER SYSTEM.....	1N01 LM84728-00	113,650
ORGANIZATION TOTAL	1	113,650	
PLANNED PARENTHOOD ASSOCIATION-CHICAGO AREA ZIP CODE 60604			
MEARA, HANNAH.....	INTERACTIVE PROCESSES IN NEVER-MARRIED FEMALE AND MALE.....	1N01 HD82836-00	91,224
ORGANIZATION TOTAL	1	91,224	
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER--RUSH UNIVERSITY ZIP CODE 60612			
BACUS, JAMES W.....	APPLY DIGITAL IMAGE PROCESSING TO CYTOLOGY AUTOMATION.....	5N01 CB74190-02	335,990
SCHOENBERGER, JAMES A.....	STUDY OF CORONARY HEART DISEASE.....	5N01 HV42930-09	1,174,444
SCHOENBERGER, JAMES A.....	CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52919-03	113,736
SCHOENBERGER, JAMES A.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72967-02	110,500
WOLFE, LAUREN G.....	MARMOSET COLONY FOR CANCER RESEARCH.....	5N01 CP71014-01	375,527
ORGANIZATION TOTAL	5	2,110,197	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ILLINOIS—Continued			
ST. JOSEPH HOSPITAL ZIP CODE 60657			
BERKSON, DAVID M.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52927-03	88,128
ORGANIZATION TOTAL	1	88,128	
UNIVERSITY OF CHICAGO ZIP CODE 60637			
BIBBO, MARLUCE.....	NEOPLASTIC RISK FROM SYNTHETIC ESTROGEN DURING PREGNANCY.....	3N01 HD42850-14	62,103
COHEN, EDWARD P.....	IMMUNOTHERAPY OF MURINE LEUKEMIA USING HYBRID CELLS.....	2N01 CB74195-02	79,128
ENKER, WARREN E.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67095-06	46,262
FITCH, FRANK W.....	CHARACTERIZATION OF ANTIGEN-BINDING T-CELL RECEPTORS.....	2N01 CB74149-03	78,325
FRIED, JOSEF.....	SYNTHESIS OF LUTEOLYTIC PROSTAGLANDIN ANALOGS.....	5N01 HD72816-02	134,539
HARVEY, RONALD G.....	DERIVATIVES OF CARCINOGENIC POLYCYCLIC HYDROCARBONS.....	5N01 CP33385-12	106,500
HERBST, ARTHUR L.....	LONG-TERM EFFECTS OF DIETHYLSTILBESTROL DURING PREGNANCY.....	1N01 HD82829-00	295,157
HUNTER, ROBERT L.....	REAGENTS TO CHARACTERIZE HUMAN CELL SUBPOPULATIONS.....	1N01 CB84287-00	75,588
JENSEN, ELWOOD V.....	PREDICTION OF RESPONSE TO ADRENALECTOMY.....	2N01 CB43969-06	100,000
KELLAM, SHEPPARD G.....	CONSEQUENCES OF TEENAGE MOTHERHOOD IN A BLACK COMMUNITY.....	5N01 HD72821-02	247,963
MATHEWS, MARTIN B.....	PREPARE ACID MUCOPOLYSACCHARIDE STANDARDS.....	5N01 AM52205-03	4,822
MEDOF, M EDWARD.....	DETECT ANTIGEN-ANTIBODY COMPLEXES IN BREAST CANCER.....	1N01 CB84224-00	46,300
MOOSSA, A R.....	IMAGING IN DETECTION OF EARLY PANCREATIC CANCER.....	1N01 CB84232-00	203,311
NEWCOMB, RICHARD W.....	PRODUCTION OF SPECIFIC ANTISERA.....	5N01 DE72406-02	25,263
STRAUSS, BERNARD S.....	IDENTIFY HETEROZYGOUS CARRIERS OF DNA REPAIR DEFECTS.....	1N01 CP85669-00	136,438
WIED, GEORGE L.....	DEVELOPMENT OF AUTOMATED CELL RECOGNITION SYSTEM.....	2N01 CB33873-09	196,519
WIED, GEORGE L.....	EVALUATE PRENEOPLASTIC LESIONS IN THE RESPIRATORY TRACT.....	5N01 CP65777-03	141,885
ORGANIZATION TOTAL	17	1,980,103	
UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER ZIP CODE 60612			
CHATTERTON, ROBERT T, JR.....	DETECTION OF OVULATION BY A STEROID INDICATOR.....	2N01 HD52849-03	48,549
CHEN, EDWIN H.....	STATISTICAL COORDINATING CENTER FOR SICKLE CELL DISEASE.....	5N01 HB72982-03	128,000
DAS GUPTA, TAPAS K.....	CHEMOTHERAPY-INDUCED ENDOCRINE CHANGES ON BREAST CANCER.....	1N01 CB84221-00	117,700
DI MAYORCA, GIAMPIERO.....	TEMPERATURE-SENSITIVE MUTANTS IN CARCINOGENESIS.....	2N01 CP23303-09	92,418
DI MAYORCA, GIAMPIERO.....	MOLECULAR MECHANISM OF CARCINOGENESIS BY ONCOGENIC VIRUS.....	2N01 CP43318-07	301,659
FARNSWORTH, NORMAN R.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	5N01 CM67090-05	120,656
HUAMONTE, FELIPE U.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32125-05	53,921
JONASSON, OLGA.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22529-09	144,452
PEYMAN, GHOLAM A.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62142-02	83,946
SADOWSKY, CYRIL.....	LONG-TERM EFFECTS OF ORTHODONTIC TREATMENT.....	5N01 DE72401-03	84,830
SCHLESINGER, DAVID H.....	PREPARE AND ANALYZE CELL SURFACE PROTEIN FRACTION.....	2N01 CB74214-01	49,000
TEODORESCU, MARIUS C.....	REAGENTS TO CHARACTERIZE CELL SUBPOPULATIONS.....	1N01 CB84268-00	137,411
ORGANIZATION TOTAL	12	1,362,542	
DECATUR			
LINCOLN LABORATORIES ZIP CODE 62525			
HEIN, GARY L.....	ASSAY DELAYED HYPERSENSITIVITY VIA-SKIN TEST.....	2N01 CB43954-09	3,822
ORGANIZATION TOTAL	1	3,822	
EVANSTON			
EVANSTON HOSPITAL ZIP CODE 60201			
KILLIP, THOMAS.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52935-03	104,963
SCANLON, EDWARD F.....	THERAPY OF STAGE II & STAGE III OF BREAST CARCINOMA.....	2N01 CB53917-04	99,400
WILNER, GARY N.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72955-02	97,981
ORGANIZATION TOTAL	3	302,344	
NORTHWESTERN UNIVERSITY ZIP CODE 60201			
CUGELL, DAVID W.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	3N01 HR62945-05	177,745
EPSTEIN, MAX.....	INNOVATIVE TECHNIQUES FOR COLONOSCOPE PASSAGE INTO CECUM.....	2N01 CB74114-01	105,844

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Purpose of contract	Contract no.	Dollars
ILLINOIS—Continued				
ORGANIZATION TOTAL	2	283,589		
JOLIET				
AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE ZIP CODE 60435				
GARVEY, JOSEPH J.....		ACCREDITATION PROGRAM FOR LABORATORY ANIMAL CARE.....	2N01 RR52114-03	10,000
ORGANIZATION TOTAL	1	10,000		
NORTHBROOK				
BIOLABS, INC. ZIP CODE 60062				
CASTO, BRUCE C.....		IN VITRO INTERACTION BETWEEN CHEM. & VIRAL CARCINOGENS.....	2N01 CP45615-10	155,621
ORGANIZATION TOTAL	1	155,621		
NORTH CHICAGO				
ABBOTT LABORATORIES ZIP CODE 60064				
BULLOCK, FRANK J.....		STUDY OF HUMAN GRANULOCYTE CONDITIONING FACTOR.....	3N01 CM43704-11	28,064
ORGANIZATION TOTAL	1	28,064		
URBANA				
ASSOCIATION OF VETERINARY MEDICAL DATA PROGRAM PARTICIPANTS ZIP CODE 61801				
HELPER, LLOYD.....		MORBIDITY/MORTALITY SURVEY OF VETERINARY COLLEGES.....	1N01 CP81028-00	108,000
ORGANIZATION TOTAL	1	108,000		
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN ZIP CODE 61801				
BILGER, ROBERT C.....		SPEECH PERCEPTION IN NOISE BY HEARING IMPAIRED SUBJECTS.....	5N01 NS72380-01	90,000
VISEK, WILLARD J.....		EFFECT OF DIETARY PROTEIN ON CARCINOGENESIS.....	5N01 CP75899-01	675,365
ORGANIZATION TOTAL	2	765,365		
STATE TOTAL	87	16,018,626		
INDIANA				
CUMBERLAND				
HARLAN INDUSTRIES ZIP CODE 46229				
HARLAN, HAL P.....		PRODUCTION OF ATHYMIC NUDE MICE.....	5N01 CM67079-02	172,420
HARLAN, HAL P.....		PRIMARY GENETIC CENTER FOR GERMFREE RODENTS.....	5N01 CM77168-01	259,190
HARLAN, HAL P.....		PRODUCTION OF AGED RATS.....	5N01 CP55647-06	189,819
HARLAN, HAL P.....		ESTABLISHMENT OF A RODENT PRODUCTION COLONY.....	2N01 CP65737-07	774,416
HARLAN, HAL P.....		ESTABLISH SPECIFIC PATHOGEN FREE RODENT STOCKS.....	1N01 ES82152-00	383,230
TO BE APPOINTED.....		BARRIER-REARED AND MAINTAINED, AGED SPRAGUE-DAWLEY RATS.....	5N01 AG62136-03	102,710
ORGANIZATION TOTAL	6	1,881,785		
INDIANAPOLIS				
INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS ZIP CODE 46202				
MEALEY, JOHN, JR.....		THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67057-06	113,043
ROESKE, ROGER W.....		PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	3N01 HD62844-02	9,594
ORGANIZATION TOTAL	2	122,637		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
INDIANA—Continued			
LABORATORY SUPPLY COMPANY ZIP CODE 46241			
COX, ELDON J.....	CONVENTIONAL ENVIRONMENT RODENT PRODUCTION CENTER.....	2N01 CM53775-07	146,739
ORGANIZATION TOTAL	1 146,739		
METHODIST HOSPITAL OF INDIANA ZIP CODE 46202			
DUGAN, WILLIAM M, JR.....	CLINICAL ONCOLOGY PROGRAM.....	5N01 CN75393-01	161,530
ORGANIZATION TOTAL	1 161,530		
WEST LAFAYETTE			
PURDUE UNIVERSITY ZIP CODE 47907			
CASSADY, JOHN M.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	5N01 CM67091-07	125,773
ORGANIZATION TOTAL	1 125,773		
STATE TOTAL	11 2,438,464		
IOWA			
AMES			
IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY ZIP CODE 50010			
BALINSKY, DORIS.....	ISOPROTEINS IN NORMAL AND MALIGNANT BREAST TISSUES.....	1N01 CB84222-00	79,800
ORGANIZATION TOTAL	1 79,800		
DES MOINES			
IOWA LUTHERAN HOSPITAL ZIP CODE 50316			
YOUNG, DONALD C.....	SCREENING FOR EARLY DETECTION OF CANCER.....	2N01 CN45067-07	131,296
ORGANIZATION TOTAL	1 131,296		
IOWA CITY			
UNIVERSITY OF IOWA ZIP CODE 52242			
CULP, DAVID A.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81011-00	180,459
ISACSON, PETER.....	POPULATION-BASED CANCER EPIDEMIOLOGY RESEARCH CENTER.....	2N01 CP43200-11	1,103,279
ROSAZZA, JOHN P.....	PRODUCTION OF NOVEL ANTINEOPLASTIC COMPOUNDS.....	5N01 CM77176-02	99,991
STRAUSS, RONALD G.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62973-05	103,829
THOMPSON, JOHN S.....	PROCURE HLA-A, B AND C LOCI AND B CELL ANTISERA.....	1N01 AI82554-00	32,287
WATZKE, ROBERT C.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32123-07	64,370
WURSTER, DALE E.....	DEVELOPMENT OF PARENTERAL DOSAGE FORMS.....	3N01 CM43743-06	241,032
ORGANIZATION TOTAL	7 1,825,247		
STATE TOTAL	9 2,036,343		
KANSAS			
KANSAS CITY			
UNIVERSITY OF KANSAS ZIP CODE 66103			
AZARNOFF, DANIEL L.....	PHARMACOKINETICS OF ANTICANCER DRUGS.....	2N01 CM12184-08	50,000
BAKER, LARRY.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55303-04	268,614

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
KANSAS—Continued			
BRACKETT, CHARLES E, JR	STUDY OF POST-TRAUMATIC EPILEPSY FOLLOWING HEAD INJURY.....	5N01 NS22313-09	63,230
DIEDERICH, DENNIS A.....	ROLE OF HEMOGLOBIN CARBAMYLATION IN SICKLE CELL ANEMIA.....	2N01 HB22919-08	115,184
EBNER, KURT E.....	PROLACTIN INTERACTIONS IN MAMMARY GLAND CELLS.....	5N01 CB63985-02	86,200
HOOGSTRATEN, BARTH.....	STUDY OF NEW ANTICANCER AGENTS.....	3N01 CM43802-08	27,826
MAKLAD, NABIL F.....	DEVELOP CONTRAST AGENTS FOR ULTRASONIC DIAGNOSIS.....	1N01 CB84236-00	199,944
ORGANIZATION TOTAL	7	810,998	
LAWRENCE			
INTEREX RESEARCH CORPORATION ZIP CODE 66044			
BODOR, NICHOLAS.....	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS.....	3N01 HD72833-01	140,834
ORGANIZATION TOTAL	1	140,834	
UNIVERSITY OF KANSAS ZIP CODE 66045			
HIGUCHI, TAKERU.....	DEVELOPMENT OF PARENTERAL DOSAGE FORMS.....	5N01 CM23217-10	62,265
ORGANIZATION TOTAL	1	62,265	
STATE TOTAL	9	1,014,097	
KENTUCKY			
LEXINGTON			
UNIVERSITY OF KENTUCKY ZIP CODE 40506			
BROOKS, WILLIAM H.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67058-06	3,884
COLEMAN, MARY S.....	TERMINAL TRANSFERASE LEVEL IN ACUTE LYMPHOCTIC LEUKEMIA.....	5N01 CM67038-02	158,569
GOLD, DAVID V.....	PURIFICATION OF HUMAN TUMOR ASSOCIATED ANTIGENS.....	1N01 CB84259-00	91,502
GOLDENBERG, DAVID M.....	SPECIFIC LABELLED IMMUNOGLOBULINS FOR TUMORS DETECTION.....	3N01 CB64011-03	186,741
HUSSAIN, ANWAR A.....	DEVELOPMENT OF SUSTAINED RELEASE ORAL DOSAGE FORMS.....	5N01 HD72830-01	102,000
PRIMUS, F JAMES.....	IMMUNOHISTOCHEMISTRY OF TUMOR ASSOCIATED ANTIGENS.....	1N01 CB84257-00	75,503
SWIM, H E.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUES.....	5N01 CP75954-01	117,025
ORGANIZATION TOTAL	7	735,224	
LOUISVILLE			
UNIVERSITY OF LOUISVILLE ZIP CODE 40208			
CHRISTOPHERSON, WILLIAM M.....	EVALUATION OF MASS SCREENING FOR UTERINE CANCER.....	5N01 CN45059-04	28,662
MOORE, CONDUCT.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55307-06	173,461
SPATOLA, ARNO F.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	1N01 HD82822-00	118,956
TAMBURRO, CARLO H.....	DEMONSTRATION CANCER CONTROL PROGRAM IN INDUSTRY.....	3N01 CN55212-07	328,930
ORGANIZATION TOTAL	4	650,009	
MURRAY			
MURRAY STATE UNIVERSITY ZIP CODE 42071			
WILLIAMS, ARTHUR.....	PURIFY ANTITHYROID SUBSTANCE(S) FROM ESCHERICHIA COLI.....	1N01 AM82200-00	24,078
ORGANIZATION TOTAL	1	24,078	
STATE TOTAL	12	1,409,311	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
LOUISIANA			
BATON ROUGE			
GULF SOUTH RESEARCH INSTITUTE ZIP CODE 70808			
EHRlich, KENNETH C.....	TOXIC POLYPEPTIDES AND UREMIA.....	1N01 AM82205-00	14,937
GREER, WILLIAM E.....	SUPPORTING SERVICES ON VIRAL RESEARCH PROJECT.....	2N01 NS80993-24	550,000
KLEIN, ELIAS.....	EVALUATION OF MEMBRANES AND MATERIALS.....	2N01 AM22221-12	125,871
KLEIN, ELIAS.....	REVISE PUBLICATIONS ON EVALUATION OF HEMODIALYZERS.....	3N01 AM62216-02	358
KLEIN, ELIAS.....	HOLLOW FIBER DEVICE FOR TREATMENT OF UREMIA.....	1N01 AM82204-00	99,940
MONTALVO, JOSEPH G.....	SIMPLIFIED UREA SENSOR FOR MONITORING DIALYSIS.....	1N01 AM82211-00	14,993
ORGANIZATION TOTAL	6	806,099	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AT BATON ROUGE ZIP CODE 70803			
CHANG, RAMSAY L.....	USE OF ANIONIC MEMBRANES FOR HEMOFILTRATION.....	3N01 AM72238-01	500
ORGANIZATION TOTAL	1	500	
COVINGTON			
TULANE UNIVERSITY ZIP CODE 70433			
LOWRIE, ROBERT C, JR.....	CRYOPRESERVATION OF FILARIAE.....	5N01 AI62504-02	25,449
MARTIN, LOUIS N.....	EFFECTS OF VACCINES IN PREGNANT FEMALES AND OFFSPRING.....	1N01 AI82573-00	373,754
RANGAN, S R.....	ROLE OF IMMUNITY IN OUTCOME OF INFECTION.....	2N01 CP33396-06	34,000
SOIKE, KENNETH F.....	STUDY OF HEPATITIS IN CHIMPANZEES.....	2N01 AI12197-09	15,959
SOIKE, KENNETH F.....	EVALUATION OF ANTIVIRAL SUBSTANCES IN ANIMALS.....	2N01 AI52525-06	44,910
ORGANIZATION TOTAL	5	494,072	
NEW IBERIA			
GULF SOUTH RESEARCH INSTITUTE-ATCHAFALAYA BASIN LABORATORIES ZIP CODE 70560			
GREER, WILLIAM E.....	MAINTAINING BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RS42181-07	123,400
ORGANIZATION TOTAL	1	123,400	
NEW ORLEANS			
ALTON OCHSNER MEDICAL FOUNDATION ZIP CODE 70121			
SEGALOFF, ALBERT.....	INFLUENCE OF IRRADIATION ON CARCINOGENESIS.....	5N01 CP65764-02	190,103
ORGANIZATION TOTAL	1	190,103	
LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION-CHARITY HOSPITAL OF LOUISIANA ZIP CODE 70140			
DE JONGH, DAVID S.....	PROCURE HLA-A, B AND C LOCI AND B CELL ANTISERA.....	1N01 AI82556-00	50,071
KREMENTZ, EDWARD T.....	SUPPORT FOR LOUISIANA TUMOR REGISTRY.....	2N01 CP43262-09	396,463
ORGANIZATION TOTAL	2	446,534	
LOUISIANA STATE UNIVERSITY MEDICAL CENTER AT NEW ORLEANS ZIP CODE 70119			
CORREA, PELAYO.....	EPIDEMIOLOGY AND GEOGRAPHIC PATHOLOGY OF CANCER.....	2N01 CP53521-08	308,458
GANZALEZ, FRANCISCO M.....	MECHANISMS OF VASCULAR ACCESS PROBLEMS IN HEMODIALYSIS.....	3N01 AM72226-01	10,000
LILLIE, RALPH D.....	DEVELOP HEMATOXYLIN SUBSTITUTES FOR TISSUE STAINING.....	5N01 CB43912-06	13,500
SULLIVAN, J W.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81013-00	69,679
ORGANIZATION TOTAL	4	401,637	
TULANE UNIVERSITY ZIP CODE 70118			
KADOWITZ, PHILIP J.....	EVALUATE PROSTAGLANDIN ANTAGONISTS.....	1N01 HV82932-00	85,346
KREMENTZ, EDWARD T.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71037-01	7,061
SCHALLY, ANDREW V.....	SYNTHESIS OF LH-RH ANALOGS AS OVULATION INHIBITORS.....	1N01 HD82819-00	156,691
ORGANIZATION TOTAL	3	249,098	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
LOUISIANA—Continued			
RUSTON			
LOUISIANA TECHNOLOGICAL UNIVERSITY ZIP CODE 71270			
CRUMP, KENNY S.....	STATISTICAL DEVELOPMENT OF CARCINOGENESIS MODELS.....	1N01 ES82123-00	46,113
ORGANIZATION TOTAL	1 46,113		
STATE TOTAL	24 2,757,556		
MAINE			
BAR HARBOR			
JACKSON LABORATORY ZIP CODE 04609			
CHAI, CHEN K.....	GENETIC CONTROL OF SUSCEPTIBILITY TO TUMORS.....	5N01 CB74181-03	99,397
CHERRY, MARIANNA.....	MOUSE ALLOANTISERA PRODUCTION, STORAGE AND DISTRIBUTION.....	3N01 AI12257-10	12,188
MEIER, HANS.....	NATURAL OCCURRENCE OF RNA TUMOR VIRUSES.....	2N01 CP33255-07	431,000
MURPHY, EDWIN D.....	DEVELOP AND MAINTAIN NEW CONGENIC MOUSE STRAINS.....	2N01 CB74174-01	37,253
ORGANIZATION TOTAL	4 579,838		
STATE TOTAL	4 579,838		
MARYLAND			
BALTIMORE			
BECTON, DICKINSON AND COMPANY—HUNTINGDON RESEARCH CENTER ZIP CODE 21209			
WILSNACK, ROGER E.....	PREPARATION OF ANTISERA TO ONCOGENIC VIRAL ANTIGENS.....	2N01 CP33223-07	497,631
ORGANIZATION TOTAL	1 497,631		
FEIN-MARQUART ASSOCIATES ZIP CODE 21212			
MC GILL, JAMES R.....	CHEMICAL STRUCTURES.....	1N01 CP85611-00	4,533
ORGANIZATION TOTAL	1 4,533		
IPCO HOSPITAL SUPPLY CORPORATION—COMMUNITY BLOOD AND PLASMA SERVICES DIVISION ZIP CODE 21231			
SCHMIDT, PAUL J.....	SUPPLY OF PLATELETHESIS.....	5N01 CL42150-15	602,405
ORGANIZATION TOTAL	1 602,405		
JOHN F. KENNEDY INSTITUTE ZIP CODE 21205			
SEITZ, RACHEL E.....	SENSORY & PERCEPTUAL FUNCTIONS IN LANGUAGE DEVELOPMENT.....	5N01 NS52323-05	225,488
ORGANIZATION TOTAL	1 225,488		
JOHNS HOPKINS UNIVERSITY ZIP CODE 21218			
AUGUST, J THOMAS.....	STUDIES OF THE MOLECULAR BASIS OF VIRAL CARCINOGENESIS.....	3N01 CP71027-03	91,320
AUGUST, J THOMAS.....	MOLECULAR BIOLOGY OF ONCORNAVIRAL PROTEINS.....	1N01 CP81053-00	242,320
AURELIAN, LAURE.....	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION.....	5N01 CB74170-01	79,500
BURKMAN, RONALD T.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	2N01 HD62804-05	33,306
COHEN, BERNICE H.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	3N01 HR72910-01	25,165
EWING, LARRY L.....	CONTRACEPTIVE EFFICACY OF ANDROGEN-ESTROGEN IMPLANTS.....	1N01 HD82805-00	70,937
FROST, JOHN K.....	STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS.....	3N01 CN45037-07	930,586
GROSSMAN, LAWRENCE.....	IDENTIFY HETEROZYGOUS CARRIERS OF DNA REPAIR DEFECTS.....	1N01 CP85670-00	181,982
HARDY, JANET B.....	STUDY REPEATED ADOLESCENT PREGNANCY AND CHILDBEARING.....	1N01 HD82838-00	52,752
HARDY, JANET B.....	EVALUATE CONTINUING EDUCATION IN PULMONARY MEDICINE.....	5N01 HR62934-02	135,155

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
HAYWARD, GARY S.....	STUDIES OF CELLULAR TRANSFORMATION BY HSV-2.....	5N01 CP71022-02	113,530
KAIZER, HERBERT.....	PEDIATRIC TUMOR RESOURCE.....	2N01 CP33245-05	27,904
KAUFMAN, JOYCE J.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	2N01 CP75929-01	104,599
KWITEROVICH, PETER O.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	3N01 HV12158-13	177,860
LAMBERG, STANFORD I.....	DEVELOP CHEMOTHERAPEUTIC AGENTS FOR MYCOSIS FUNGOIDES.....	3N01 CB63927-05	80,916
LEHNINGER, ALBERT L.....	STUDY OF MAMMALIAN CELL TRANSPORT SYSTEMS.....	5N01 CP45610-07	164,020
MATANOSKI, GENEVIEVE M.....	EPIDEMIOLOGY OF INFANT MORTALITY IN A HIGH RISK AREA.....	5N01 HD72845-01	135,382
MC DONALD, DANIEL F.....	COMPREHENSIVE STUDY OF DISEASED SKELETAL SYSTEMS.....	1N01 AM82202-00	348,592
MICHELS, RONALD G.....	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	3N01 EY52145-02	30,807
NIEBYL, JENNIFER.....	SELECTED FACTORS INFLUENCING INCIDENCE OF ORAL CLEFTS.....	5N01 DE62486-03	187,040
PATZ, ARNALL.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32127-07	85,699
PIERCE, NATHANIEL F.....	ADDITIONAL STUDIES OF ANTITOXIC IMMUNITY IN CHOLERA.....	2N01 AI02051-18	102,027
PRICE, DONALD L.....	HEREDITARY SPINAL MUSCULAR ATROPHY.....	1N01 RR82145-00	45,042
SHAPER, JOEL H.....	IMMUNE ASSAYS FOR ENZYMES AND ISOZYMES IN CANCER.....	1N01 CB84260-00	59,412
STRANDBERG, JOHN D.....	ANIMAL PATHOLOGY SUPPORT.....	5N01 CP65768-04	164,117
TOCHMAN, MELVYN S.....	BALTIMORE LONGITUDINAL STUDY OF HUMAN AGING.....	1N01 AG82129-00	30,970
TS'0, PAUL O.....	SIGNIFICANCE OF MUTATION IN CARCINOGENESIS.....	3N01 CP55713-06	183,289
WAALKES, T PHILLIP.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55241-05	178,094
WEISFELDT, MYRON L.....	NON-INVASIVE ASSESSMENT OF CARDIAC FUNCTION IN AGING.....	5N01 AG72129-02	148,000
ZELNIK, MELVIN.....	FERTILITY BEHAVIOR AMONG U.S. FEMALES AGED 15-19.....	1N01 HD82848-00	109,576
ORGANIZATION TOTAL	30	4,319,899	
MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE ZIP CODE 21201			
SAWADA, EDWARD A.....	EXPANSION OF MARYLAND CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN55166-07	233,042
SOUTHARD, JOHN W.....	STATE-WIDE COORDINATION OF HIGH BLOOD PRESSURE CONTROL.....	5N01 HV72986-02	664,525
ORGANIZATION TOTAL	2	897,567	
SINAI HOSPITAL OF BALTIMORE ZIP CODE 21215			
NAIR, PADMANABHAN P.....	DIETARY PATTERNS AND CANCER OF AMERICAN VEGETARIANS.....	1N01 CP85602-00	208,909
ORGANIZATION TOTAL	1	208,909	
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND AT BALTIMORE ZIP CODE 21201			
ELIAS, E GEORGE.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87223-00	83,740
ENTWISLE, GEORGE.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12439-16	548,525
FERENCZ, CHARLOTTE.....	RELATE MATERNAL HORMONE THERAPY TO CARDIAC DEVELOPMENT.....	2N01 HD62800-06	40,146
GUTH, LLOYD.....	FUNCTIONAL RECOVERY IN RATS AFTER SPINAL CORD LESION.....	2N01 NS72358-02	86,337
HINTON, DAVID E.....	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE.....	5N01 CP65752-08	71,450
JONES, RAYMOND T.....	CULTURE EPITHELIAL CELL TYPES OF EXPERIMENTAL ANIMALS.....	5N01 CP75947-01	48,760
KNATTERUD, GENELL L.....	STUDY OF RETINOPATHY.....	3N01 EY32129-09	276,355
KNATTERUD, GENELL L.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	2N01 EY72147-01	106,175
KROL, WILLIAM F.....	COORDINATING CENTER—ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	2N01 HV52901-06	493,494
LEVINE, MYRON M.....	STUDY OF INFECTIOUS AGENTS IN ADULT VOLUNTEERS.....	2N01 AI42553-14	1,200,504
MC DILL, MARY S.....	HYPERTENSION CONTROL IN THE WORK SETTING.....	1N01 HV82912-00	175,324
MEINERT, CURTIS L.....	COORDINATING CENTER MODEL FOR NHLI CLINICAL TRIALS.....	5N01 HV62957-05	56,235
RAITI, SALVATORE.....	PITUITARY GLAND STORAGE BANK.....	2N01 AM71153-20	513,046
RAITI, SALVATORE.....	STORE, PACKAGE, AND DISTRIBUTE HORMONES.....	2N01 HD72838-01	4,000
SHERWIN, ROGER W.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22980-06	469,372
TRUMP, BENJAMIN F.....	STUDY OF TRACHEOBRONCHIAL EPITHELIUM.....	3N01 CP43237-12	337,832
TRUMP, BENJAMIN F.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUES.....	5N01 CP75909-01	32,303
YOUNG, JOHN D, JR.....	COMBINATION DRUG & COMBINED MODALITIES CANCER TREATMENT.....	3N01 CM43748-20	4,488,000
ORGANIZATION TOTAL	18	9,031,598	
WESTINGHOUSE ELECTRIC CORPORATION—WESTINGHOUSE DEFENSE AND ELECTRONIC SYSTEMS DIVISION ZIP CODE 21203			
PECKERAR, M C.....	CHARGE-COUPLED DEVICE FOR X-RAYS.....	1N01 AM82220-00	49,312
ORGANIZATION TOTAL	1	49,312	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
BELTSVILLE			
INFORMATION DEVELOPMENT AND APPLICATIONS		ZIP CODE 20705	
MATHESON, RODERICK.....	LEARNING RESOURCE CENTER SUPPORT.....	3N01 LM64705-04	32,324
NOT APPLICABLE.....	TECHNICAL SERVICES FOR THE LHNCBC RESOURCE.....	1N01 LM84707-00	60,722
ORGANIZATION TOTAL	2 93,046		
BETHESDA			
AMERICAN SOCIETY OF HOSPITAL PHARMACISTS		ZIP CODE 20014	
TOUSIGNAUT, DWIGHT R.....	ASSIGN CHEMICAL ABSTRACT SERVICES REGISTRY NUMBERS.....	1N01 LM84705-00	23,360
ORGANIZATION TOTAL	1 23,360		
COMPUTER DATA SYSTEMS		ZIP CODE 20014	
BAILY, JAMES T.....	ANALYSES OF NINCDS PERINATAL PROJECT DATA.....	2N01 NS72374-04	249,824
ORGANIZATION TOTAL	1 249,824		
ELECTRO-NUCLEONICS LABORATORIES		ZIP CODE 20014	
LEMP, JOHN F, JR.....	PRODUCTION OF ONCOGENIC VIRUSES.....	2N01 CP23249-11	650,000
LEMP, JOHN F, JR.....	VIRUS PROCESSING AND PRODUCTION FACILITY.....	2N01 CP43334-04	559,247
ORGANIZATION TOTAL	2 1,209,247		
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY		ZIP CODE 20014	
FISHER, KENNETH D.....	DEVELOPMENT AND REVIEW OF DATA STANDARDS.....	1N01 LM84736-00	155,544
ORGANIZATION TOTAL	1 155,544		
INFORMATION MANAGEMENT SERVICES		ZIP CODE 20014	
BEACH, JANIS A.....	COMPUTING SERVICES—CLINICAL AND DIAGNOSTIC TRIALS.....	2N01 CP71010-03	252,445
ORGANIZATION TOTAL	1 252,445		
INTERNATIONAL BUSINESS MACHINES CORPORATION		ZIP CODE 20034	
CONLON, M CLARK.....	CONVERSION OF LEASED COMPUTER EQUIPMENT TO PURCHASE.....	5N01 LM74709-05	568,769
NOT APPLICABLE.....	PROVIDE SYSTEMS ENGINEERING SUPPORT.....	2N01 LM64751-02	20,363
TO BE APPOINTED.....	MAINTENANCE OF AN IBM 370/168 MPO SYSTEM.....	1N01 CT82156-00	13,201
ORGANIZATION TOTAL	3 602,333		
TRANSNATIONAL FAMILY RESEARCH INSTITUTE		ZIP CODE 20034	
DAVID, HENRY P.....	ADOLESCENT CONTRACEPTIVE USE/PREGNANCY RESOLUTION.....	1N01 HD82839-00	77,561
ORGANIZATION TOTAL	1 77,561		
UNIVERSITIES ASSOCIATED FOR RESEARCH AND EDUCATION IN PATHOLOGY		ZIP CODE 20014	
CASEY, HAROLD W.....	TISSUE EVALUATION OF CONTRACEPTIVE STEROIDS.....	5N01 HD22729-13	125,707
ORGANIZATION TOTAL	1 125,707		
WHITTAKER CORPORATION—MICROBIOLOGICAL ASSOCIATES		ZIP CODE 20016	
ATHEY, W L.....	GENETIC CENTER OF RODENTS—BIOCONTAINMENT ENVIRONMENT.....	3N01 CM53818-14	80,000
BERMAN, JAY.....	CANCER CHEMOTHERAPY CHEMICALS/DRUGS STORAGE/DISTRIBUTION.....	3N01 CM43793-14	425,750
CASTELLANO, GABRIEL A.....	PROVIDE VIRAL DIAGNOSTIC REAGENTS.....	3N01 NS62338-07	387,500
COLLINS, MICHAEL J, JR.....	OPERATION OF AN ANIMAL VIROLOGICAL DIAGNOSTIC LABORATORY.....	5N01 CM67069-04	200,150
COLLINS, MICHAEL J, JR.....	VIRUS TYPING AND DIAGNOSTIC REAGENTS.....	2N01 CP33288-10	520,538
DINOWITZ, MARSHALL.....	BIOASSAYS OF ANIMAL TUMOR VIRUSES.....	5N01 CP33248-12	498,100
NIMS, ROBERT M.....	PROVIDE SERVICES IN SUPPORT OF CARCINOGENESIS BIOASSAYS.....	3N01 CP02199-21	823,873
PARKER, JOHN C.....	VIRAL STUDIES OF CANCER CHEMOTHERAPY PATIENTS.....	3N01 CM77131-02	43,469
PARKER, JOHN C.....	PREPARE AND DELIVER VARIOUS CELL CULTURES.....	3N01 NS62334-07	12,000

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
PARKER, NORMA L.....	PREPARE SPECIAL TISSUE CULTURE CELLS.....	1N01 NS82389-00	98,800
PRICE, PAUL J.....	STUDY OF ETIOLOGY OF CANCER.....	5N01 CP43240-11	448,410
PRICE, PAUL J.....	DEVELOPMENT OF MAMMALIAN CELL LINES.....	3N01 CP61045-03	77,260
REDDY, PREMKUMAR.....	STUDIES OF TYPE C RNA TUMOR VIRUSES.....	2N01 CP43254-11	336,557
SCHECHTMAN, LEONARD M.....	ASSAY TO SCREEN CHEMICALS FOR CARCINOGENIC POTENTIAL.....	1N01 CP85617-00	543,129
TRAPANI, ROBERT J.....	EVALUATE HUMAN HISTOCOMPATIBILITY OF TYPING TRAYS.....	2N01 A112443-12	97,609
TRAPANI, ROBERT J.....	HEMATOLOGY SUPPORT CARE.....	2N01 CM63810-05	199,923
VERNON, MINA L.....	TYPE-C RNA TUMOR VIRUSES AND DIAGNOSTIC TESTING.....	3N01 CP53519-10	491,450
ORGANIZATION TOTAL	17 5,284,518		
COLLEGE PARK			
UNIVERSITY OF MARYLAND SYSTEM—UNIVERSITY OF MARYLAND COLLEGE PARK CAMPUS ZIP CODE 20742			
PRESSER, HARRIET B.....	CONSEQUENCE OF TEENAGE CHILDBEARING FOR URBAN WOMEN.....	3N01 HD62836-02	9,912
ORGANIZATION TOTAL	1 9,912		
COLUMBIA			
BENDIX CORPORATION—BENDIX FIELD ENGINEERING CORPORATION ZIP CODE 21045			
REYNOLDS, WILLIAM K.....	TECHNICAL SERVICES FOR LHNCBC.....	1N01 LM84716-00	116,391
ORGANIZATION TOTAL	1 116,391		
W. R. GRACE AND COMPANY—WASHINGTON RESEARCH CENTER ZIP CODE 21044			
NICKELL, LOUIS G.....	ISOLATION OF NOVEL ANTINEOPLASTIC COMPONENTS.....	2N01 CM67074-05	200,000
ORGANIZATION TOTAL	1 200,000		
WESTINGHOUSE ELECTRIC CORPORATION—HEALTH SYSTEMS DIVISION ZIP CODE 21044			
SMITH, LAWRENCE, JR.....	HYPERTENSION CONTROL IN THE WORK SETTING.....	1N01 HV82911-00	180,780
ORGANIZATION TOTAL	1 180,780		
GAITHERSBURG			
GEOMET, INC. ZIP CODE 20760			
BERGMAN, LEWIS.....	DESIGN AND IMPLEMENT COMPUTER PROGRAMS AND SYSTEMS.....	1N01 CP81019-00	583,246
GOCHENOUER, JOHN.....	THIRD NATIONAL CANCER SURVEY DATA PROCESSING SERVICES.....	3N01 CP53522-11	192,395
ROWLEY, RICHARD M.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	2N01 CP71045-04	81,970
ORGANIZATION TOTAL	3 857,611		
INFORMATION PLANNING ASSOCIATES ZIP CODE 20760			
ICHNIOWSKI, FRANCIS C.....	SUPPORT SERVICES—CARCINOGENESIS RESEARCH PROGRAM.....	2N01 CP75896-01	43,659
VIT, ROBERT F.....	SUPPORT SERVICES FOR INVESTIGATIONAL NEW DRUG REPORTS.....	2N01 CM77104-02	150,000
WILLIAMS, WILLIAM L.....	ASSEMBLY AND DISTRIBUTION OF COMMITTEE BOOKS.....	1N01 C085412-00	19,624
ORGANIZATION TOTAL	3 213,283		
OLD DOMINION SYSTEMS ZIP CODE 20760			
BROWN, ROBERT J.....	TECHNICAL SUPPORT FOR OPERATING SYSTEMS & SOFTWARE.....	1N01 LM84735-00	100,000
ORGANIZATION TOTAL	1 100,000		
GERMANTOWN			
FAIRCHILD INDUSTRIES ZIP CODE 20767			
WAGNER, RICHARD.....	INSTALL 5 CTS GROUND TERMINAL COMMUNICATIONS SYSTEMS.....	3N01 LM74707-01	33,306
ORGANIZATION TOTAL	1 33,306		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
KENSINGTON			
LITTON INDUSTRIES—LITTON BIONETICS ZIP CODE 20795			
BRUSICK, DAVID J.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	3N01 CP65856-03	64,716
CANNON, GRACE B.....	REACTIONS BETWEEN BREAST CANCER AND MAMMARY TUMOR VIRUS.....	5N01 CB74087-01	132,225
CICMANEC, JOHN L.....	FACILITY FOR SUBHUMAN PRIMATES FOR CANCER RESEARCH.....	5N01 CP61006-07	249,979
DARROW, CLEMENT C, II.....	BREEDING COLONY OF RHESUS MONKEYS MACACA MULATTA.....	5N01 RR52155-06	294,153
DARROW, CLEMENT C, II.....	MAINTAIN A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RR62151-02	81,341
DEALY, JEAN.....	STUDY PLASMA CELL TUMORS IN MICE.....	2N01 CB92142-25	495,045
DEAN, JACK H.....	MEASUREMENT OF IMMUNOLOGICAL REACTIVITY TO HUMAN CANCER.....	2N01 CB63975-08	671,343
DEAN, JACK H.....	BIOLOGIC STUDIES OF SOLUBILIZED TUMOR ANTIGENS.....	2N01 CB63987-05	266,627
DEAN, JACK H.....	IMMUNOLOGIC ASSESSMENT OF HIGH RISK CANCER FAMILIES.....	2N01 CP61016-03	162,296
DJEU, JULIE Y.....	CELL MEDIATED IMMUNITY TO RODENT TUMORS.....	2N01 CB74093-01	279,995
FUCCILLO, DAVID A.....	IMMUNOLOGICAL ASSAY FOR DNA AND RNA VIRUS.....	5N01 CP43333-10	425,135
GARD, ELIZABETH.....	NONHUMAN PRIMATE MODELS OF ATHEROSCLEROSIS/HYPERTENSION.....	2N01 HV53031-04	830,181
GOLWAY, PETER L.....	MAINTAIN TUMORED LABORATORY ANIMAL MODELS.....	1N01 CM87169-00	250,000
GOLWAY, PETER L.....	HOLDING FACILITY FOR SMALL LABORATORY ANIMALS.....	2N01 CP61039-04	250,905
GOLWAY, PETER L.....	HOLDING FACILITY FOR SMALL LABORATORY ANIMALS.....	1N01 CP81025-00	258,215
MARTIN, DAVID P.....	SJOGREN'S SYNDROME, APHTHOUS ULCERS & BEHCET'S SYNDROME.....	5N01 DE72405-02	23,909
MATHESON, DALE.....	IN VITRO MUTAGENESIS SYSTEM FOR CARCINOGENESIS SCREENING.....	2N01 CP65853-03	231,140
MATTHEWS, EDWIN J.....	MELANOMA CELL VACCINE—ASSAYS FOR CYTOTOXICITY.....	2N01 CB53916-09	226,026
MAURER, BRUCE A.....	RHESUS MONKEY HISTOCOMPATIBILITY STUDIES.....	2N01 CB64016-02	161,215
REITZ, MARVIN.....	MOLECULAR TRANSFORMATION BY RNA ONCOGENIC VIRUSES.....	3N01 CP61029-07	247,094
RUSCETTI, FRANCIS.....	PROCUREMENT OF EMBRYONIC CELL LINES.....	3N01 CM22062-21	107,005
SARNGADHARAN, M G.....	DEVELOP NEW APPROACHES TO CANCER CHEMOTHERAPY.....	3N01 CM12340-22	97,286
SARNGADHARAN, M G.....	PROVIDE FACILITIES FOR VIRAL CANCER RESEARCH.....	3N01 CM77134-04	825,414
SARNGADHARAN, M G.....	DEVELOP PROGNOSIS BASED ON CELL TRANSFORMATION.....	1N01 CM87187-00	623,796
SIBINOVIC, KYLE H.....	OPERATION OF ANIMAL DISEASE DIAGNOSTIC LABORATORY.....	2N01 CM53778-03	51,000
STEVENSON, ROBERT E.....	OPERATE THE FREDERICK CANCER RESEARCH CENTER (FCRC).....	3N01 C075380-12	31,455,555
TONDREAU, SUE C.....	MONITORING OF IMMUNOLOGIC COMPETENCE IN CANCER PATIENTS.....	5N01 CM67067-05	65,498
VALERIO, MARION G.....	STUDY OF CARCINOGENESIS IN HUMAN BRONCHIAL TISSUES.....	3N01 CP43274-15	89,192
WEISLOGEL, P O.....	STUDY OF CANCER OF THE BREAST.....	3N01 CP43249-15	352,017
ORGANIZATION TOTAL	29 39,268,303		
LAUREL			
PHARMACOPATHICS RESEARCH LABORATORIES ZIP CODE 20810			
TEGERIS, ANDREW S.....	MAINTAIN ANIMAL HOLDING FACILITY/PROVIDE RESEARCH SERV.....	2N01 CB33887-07	77,837
ORGANIZATION TOTAL	1 77,837		
RIVERDALE			
INFORMATICS, INC. ZIP CODE 20840			
MYATT, CECIL A, JR.....	KEYBOARDING SERVICES.....	2N01 LM74711-05	320,135
ORGANIZATION TOTAL	1 320,135		
ROCKVILLE			
AMERICAN TYPE CULTURE COLLECTION ZIP CODE 20852			
ALDRICH, CHARLES D.....	PRESERVE & DEVELOP REFERENCE-GRADE TUMOR VIRUSES.....	5N01 CP61047-02	102,303
DONOVICK, RICHARD.....	PREPARE AND DISTRIBUTE VIRAL REFERENCE REAGENTS.....	5N01 A152526-08	141,240
DONOVICK, RICHARD.....	COLLECTION OF LIVING REFERENCE STRAINS.....	3N01 RR42158-09	512,483
HAY, ROBERT J.....	PREPARE AND ANALYZE FRESH AND CULTURED MAMMALIAN CELLS.....	1N01 CM87158-00	180,847
HAY, ROBERT J.....	CELLS FROM DUCTAL AND EXOCRINE PORTION OF THE PANCREAS.....	5N01 CP65751-03	88,851
HAY, ROBERT J.....	LUNG CELL RESOURCE FACILITY.....	5N01 HR62930-03	150,100
ORGANIZATION TOTAL	6 1,175,824		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
BIOSPHERICS, INC. ZIP CODE 20852			
LEVIN, M K.....	INFORMATION SERVICES FOR CANCER-RELATED INQUIRIES.....	3N01 C065329-06	834,820
ORGANIZATION TOTAL	1 834,820		
BIOTECH RESEARCH LABORATORIES ZIP CODE 20852			
TAI, CHANG-CHI.....	CYTOGENETIC EVALUATION OF HIGH RISK CANCER FAMILIES.....	2N01 CP61011-07	84,345
ORGANIZATION TOTAL	1 84,345		
CAPITAL SYSTEMS GROUP ZIP CODE 20852			
SCHICK, RENEE.....	NATIONAL CLEARINGHOUSE FOR RHEUMATIC DISEASES.....	1N01 AM82215-00	146,594
SPARGUR, JON L.....	SUPPORT SERVICES FOR DCRRRC-NCI.....	1N01 C085386-00	223,067
ORGANIZATION TOTAL	2 369,661		
COP ASSOCIATES ZIP CODE 20852			
BROWN, MICHAEL G.....	SUPPORT SERVICES FOR UPDATING THE NATIONAL NHLBI PLAN.....	1NG1 H082918-00	330,622
LEWIS, GREGORY W.....	DEVELOP NINCDS NATIONAL RESEARCH STRATEGY.....	3N01 NS82382-04	573,438
TAYLOR, RICHARD B.....	ANALYTICAL SERVICES FOR DCRRRC CANCER CENTERS PROGRAM.....	3N01 C075350-04	983,058
ORGANIZATION TOTAL	3 1,887,118		
CONTROL DATA CORPORATION ZIP CODE 20852			
LEIBY, NANCY J.....	PROCESSING OF CLINICAL PATIENT RESEARCH DATA.....	2N01 CM67107-04	50,000
NOT APPLICABLE.....	EQUIPMENT PURCHASE 3340 DATA MODULES.....	1N01 LM84706-00	29,350
ORGANIZATION TOTAL	2 79,350		
COR BEL LABORATORIES ZIP CODE 20852			
DINKEL, H DOUGLAS.....	MAINTAIN AN ANIMAL HOLDING FACILITY.....	2N01 CB64024-07	175,200
ORGANIZATION TOTAL	1 175,200		
E G & G, INC.—MASON RESEARCH INSTITUTE ZIP CODE 20852			
GLADSTONE, MARK B.....	COMPUTER SUPPORT EFFORT FOR RESOURCES MANAGEMENT.....	2N01 CP71001-02	294,765
KRAMER, ANNE W.....	DATA ANALYSES FOR BREAST CANCER TREATMENT PROGRAM.....	3N01 CB74140-04	91,168
PATEL, K.....	DATA-PROCESSING SERVICES FOR CANCER BIOASSAY SYSTEM.....	2N01 CP43257-30	629,450
STROEMER, GRETCHEN.....	PROCESSING VIABLE HUMAN SPECIMEN MATERIALS.....	3N01 CP71000-04	186,567
ORGANIZATION TOTAL	4 1,201,950		
ENVIRO CONTROL ZIP CODE 20852			
ELLIS, RICHARD L.....	LITERATURE SURVEY OF XENOBIOTIC MATERIALS—METABOLISM.....	1N01 CP85607-00	5,354
FENSTERSTOCK, JACK.....	SERVICES TO THE DIET, NUTRITION AND CANCER PROGRAM.....	3N01 CP65759-11	718,972
LYNCH, NEAL.....	SMOKING AND HEALTH.....	3N01 CP55666-21	5,629,075
WILLIAMS, ELIZABETH.....	STUDY OF SCIENCE PROGRAM INFORMATION SYSTEMS.....	1N01 C085414-00	75,000
ORGANIZATION TOTAL	4 6,428,401		
FLOW LABORATORIES—FLOW RESEARCH INSTITUTE ZIP CODE 20852			
POTASH, LOUIS.....	SUPPORT FOR VIRUS AND TISSUE-CULTURE LABORATORIES.....	2N01 A132521-17	323,583
ORGANIZATION TOTAL	1 323,583		
HEM RESEARCH, INC. ZIP CODE 20852			
WHITMAN, JAMES E.....	SUPPLY PRIMATE RNA TUMOR VIRUSES & VIRUS-INFECTED CELLS.....	5N01 CM67066-04	26,106
ORGANIZATION TOTAL	1 26,106		
HEWLETT-PACKARD COMPANY ZIP CODE 20850			
TO BE APPOINTED.....	MONITORING UNITS FOR MEDICAL & SURGICAL INTENSIVE CARE.....	1N01 CL82119-00	752,000
ORGANIZATION TOTAL	1 752,000		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
INFORMATICS, INC. ZIP CODE 20852			
WOLFE, MOLLY A.....	REGISTRIES OF HUMAN CLINICAL PROTOCOLS IN CANCER THERAPY.....	2N01 CB53888-03	74,300
ORGANIZATION TOTAL	1 74,300		
KING RESEARCH ZIP CODE 20852			
RODERER, NANCY K.....	STUDY EXPENDITURES ON SCIENTIFIC/TECHNICAL COMMUNICATION.....	1N01 LM84731-00	24,809
RODERER, NANCY K.....	EVALUATE INFORMATION TRANSFER SYSTEM.....	1N01 LM84733-00	56,002
ORGANIZATION TOTAL	2 80,811		
SIGMA DATA COMPUTING CORPORATION ZIP CODE 20852			
DOUBROFF, DENNIS.....	PROGRAMMING SERVICES FOR THE CONTRACT MANAGEMENT SYSTEM.....	2N01 C075385-04	155,083
ORGANIZATION TOTAL	1 155,083		
TRACOR, INC.—TRACOR JITCO ZIP CODE 20852			
SEXTON, THOMAS B.....	RESEARCH RESOURCES INFORMATION CENTER.....	5N01 RR62155-06	385,647
TO BE APPOINTED.....	LITERATURE SEARCH AND XEROXING SERVICES.....	1N01 CP85605-00	1,000
TO BE APPOINTED.....	LITERATURE SEARCH AND XEROXING SERVICES.....	1N01 CP85608-00	1,259
WESSELL, CARL.....	BIOASSAY PRIME CONTRACT.....	3N01 CP43350-30	4,728,805
ORGANIZATION TOTAL	4 5,116,711		
WESTAT RESEARCH, INC ZIP CODE 20852			
BERLIN, MARTHA.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71044-02	12,992
BRYANT, E.....	HOW EMPLOYMENT MARKET ABSORBS NEW BIOMEDICAL SCIENTISTS.....	3N01 OD52107-10	49,846
ELDRED, CAROLYN.....	INCIDENCE, PREVALENCE & COSTS OF INTRACRANIAL NEOPLASMS.....	3N01 NS42336-09	29,734
MC KENNA, THOMAS W.....	ROLE OF SACCHARIN IN BLADDER CANCER.....	3N01 CP81017-01	486,455
TOLEDO, ANNE.....	SUPPORT SERVICES FOR FIELD STUDIES.....	5N01 CP61034-07	853,646
ORGANIZATION TOTAL	5 1,432,673		
SILVER SPRING			
APPLIED MANAGEMENT SCIENCES ZIP CODE 20910			
LEVINE, JACQUELYN.....	COMPARISON OF FLUORIDES IN CARIES PREVENTION.....	5N01 DE72411-03	71,380
ORGANIZATION TOTAL	1 71,380		
COMPUTER PERFORMANCE ASSOCIATES ZIP CODE 20910			
WANG, BETTY C.....	STUDY INTERLIBRARY LOAN REQUESTS FOR CONGRESSES' PAPERS.....	1N01 LM84730-00	11,672
ORGANIZATION TOTAL	1 11,672		
EBON RESEARCH SYSTEMS ZIP CODE 209D1			
RICHMAN, LEE.....	STATISTICAL SUPPORT FOR NCI SERUM PANEL.....	2N01 CB74210-01	57,362
ORGANIZATION TOTAL	1 57,362		
EXPAND ASSOCIATES ZIP CODE 20910			
GIGLIO, JAMES C.....	DISTRIBUTION AND ASSEMBLY OF COMMITTEE BOOKS.....	1N01 C085408-00	116,000
ORGANIZATION TOTAL	1 116,000		
OPERATIONS RESEARCH ZIP CODE 20910			
SHUSTERMAN, NORMAN.....	DESIGN AND IMPLEMENT COMPUTER PROGRAMS AND SYSTEMS.....	1N01 CP81060-00	312,741
ORGANIZATION TOTAL	1 312,741		
DRKANO CORPORATION ZIP CODE 20910			
ISBISTER, JAMES D.....	NICHD CENTERS EVALUATION STUDY.....	3N01 HD72850-03	119,807
ORGANIZATION TOTAL	1 119,807		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MARYLAND—Continued			
TEMPLE HILLS			
ENVIRO CONTROL-BORRISTON RESEARCH LABORATORIES ZIP CODE 20031			
MANUS, A.....	ESTABLISH AND MAINTAIN A RABBIT HOLDING FACILITY.....	5N01 AI72526-03	139,152
ORGANIZATION TOTAL	1 139,152		
TOWSON			
GREATER BALTIMORE MEDICAL CENTER ZIP CODE 21204			
PROUT, THADDEUS E.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82904-02	85,453
ORGANIZATION TOTAL	1 85,453		
STATE TOTAL	177 86,399,988		
MASSACHUSETTS			
AMHERST			
CARKHUFF ASSOCIATES ZIP CODE 01002			
CARKHUFF, ROBERT R.....	VIDEOTAPE TECHNOLOGY.....	3N01 LM64746-02	22,000
CARKHUFF, ROBERT R.....	COMPREHENSIVE EVALUATION OF NMAC TRAINING PROGRAM.....	1N01 LM84719-00	73,224
ORGANIZATION TOTAL	2 95,224		
BEDFORD			
MITRE CORPORATION ZIP CODE 01730			
SHARPE, EDWARD G.....	TECHNICAL SUPPORT FOR A SYSTEMS PLANNING BRANCH.....	5N01 C055421-13	121,297
ORGANIZATION TOTAL	1 121,297		
BOSTON			
AFFILIATED HOSPITALS CENTER—PETER BENT BRIGHAM HOSPITAL ZIP CODE 02115			
ADAMS DOUGLASS F.....	DETECT LIVER METASTASES WITH X-RAY TOMOGRAPHY.....	1N01 CB84234-00	182,558
CARPENTER, CHARLES B.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	3N01 AI42552-08	96,914
DALEN, JAMES E.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22979-07	581,889
KASS, EDWARD H.....	HYPERTENSION DETECTION AND FOLLOW-UP PROGRAM.....	5N01 HV82915-01	1,100,695
SPEIZER, FRANK E.....	DEVELOP RISK INDEX FOR CHRONIC OBSTRUCTIVE LUNG DISEASE.....	1N01 HR82928-00	57,368
ORGANIZATION TOTAL	5 2,019,424		
AFFILIATED HOSPITALS CENTER—ROBERT BRECK BRIGHAM HOSPITAL ZIP CODE 02120			
CHURCHILL, WINTHROP H, JR.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64036-02	74,274
ORGANIZATION TOTAL	1 74,274		
BETH ISRAEL HOSPITAL ZIP CODE 02215			
FREEDBERG, IRWIN M.....	RESPONSE TO THERAPY OF CUTANEOUS HERPES SIMPLEX.....	2N01 AI52530-04	84,548
FRIEDMAN, EMANUEL A.....	STUDY LABOR AND DELIVERY EFFECTS ON OFFSPRING.....	5N01 NS82381-01	210,919
INGBAR, SIDNEY H.....	ANALYZE RESEARCH PRIORITIES IN ENDOCRINOLOGY.....	2N01 AM72236-06	176,858
ORGANIZATION TOTAL	3 472,325		
BOSTON HEALTH AND HOSPITALS DEPARTMENT ZIP CODE 02118			
KLEIN, JEROME O.....	VACCINE FOR PREVENTION OF OTITIS MEDIA.....	5N01 AI52536-04	228,684
ROMAN, STANFORD A, JR.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73003-03	29,966

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
VOKONAS, PANTEL S.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52937-04	107,239
ORGANIZATION TOTAL	3 365,889		
BOSTON HEALTH AND HOSPITALS DEPARTMENT—BOSTON CITY HOSPITAL ZIP CODE 02118			
KASS, EDWARD H.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	3N01 HV12433-11	319,133
SARAVIS, CALVIN A.....	HUMAN OR ORGAN-ASSOCIATED ANTIGEN DIAGNOSTIC APPLICATION.....	2N01 CB64071-03	104,892
ORGANIZATION TOTAL	2 424,025		
BOSTON UNIVERSITY ZIP CODE 02215			
BLANCHARD, GORDON C.....	A GUINEA PIG MODEL OF ASTHMA TO RAGWEED POLLEN.....	1N01 RR82148-00	29,140
DAWBER, THOMAS R.....	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	5N01 HV33106-06	483,721
DAWBER, THOMAS R.....	REEXAMINATION OF FRAMINGHAM HEART STUDY COHORT.....	3N01 HV52971-09	400,465
GOULD, JEFFREY B.....	TWINS STUDY FOR NEUROPHYSIOLOGIC FACTORS IN SIDS.....	2N01 HD32789-11	373,539
LEIBOWITZ, HAROLD M.....	OPHTHALMIC STUDY.....	2N01 EY22112-11	79,803
SHAPIRO, SAMUEL.....	ESTROGEN REPLACEMENT AFTER PREMENOPAUSAL OOPHORECTOMY.....	5N01 CB74099-01	39,550
SHAPIRO, SAMUEL.....	CASE CONTROL STUDY OF CARCINOMA OF ENDOMETRIUM.....	3N01 CP71029-02	65,842
SLONE, DENNIS.....	MYOCARDIAL INFARCTION AND ROLE OF ORAL CONTRACEPTIVES.....	5N01 HD62849-05	347,950
VOKONAS, PANTEL S.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72951-03	101,777
WOLF, PHILIP A.....	DEVELOP PILOT STROKE DATA BANK NETWORK CENTER.....	1N01 NS82398-00	113,436
ORGANIZATION TOTAL	10 2,035,223		
CHILDREN'S HOSPITAL MEDICAL CENTER ZIP CODE 02115			
BERNHARD, WILLIAM F.....	CLINICAL EVALUATION OF LEFT VENTRICULAR ASSIST DEVICE.....	2N01 HV53007-05	101,466
LEVITON, ALAN.....	EPIDEMIOLOGY OF LEARNING HANDICAPS IN SCHOOL CHILDREN.....	5N01 NS72377-03	198,644
WATKINS, JOHN B.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65826-06	12,500
ORGANIZATION TOTAL	3 312,610		
EYE RESEARCH INSTITUTE OF RETINA FOUNDATION ZIP CODE 02114			
HOLLY, FRANK J.....	TRANSFORMATION SENSITIVE CELL SURFACE GLYCOPROTEIN STUDY.....	3N01 CB74209-01	10,435
ORGANIZATION TOTAL	1 10,435		
FORSYTH DENTAL CENTER ZIP CODE 02115			
DE PAOLA, PAUL F.....	COMMUNITY CARIES PREVENTIVE DEMONSTRATION PROGRAM.....	3N01 DE52461-07	87,682
ORGANIZATION TOTAL	1 87,682		
HARVARD UNIVERSITY ZIP CODE 02138			
BRAUNWALD, EUGENE B.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM.....	2N01 HV72940-02	1,691,529
DOGON, I LEON.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECT.....	3N01 DE52475-04	21,602
ESSEX, MYRON E.....	IMMUNOTHERAPY IN OUTBRED ANIMAL LYMPHOMA AND LEUKEMIAS.....	2N01 CB64001-02	87,060
ESSEX, MYRON E.....	BIOCHEMICAL CHARACTERIZATION OF FOCMA.....	1N01 CP81004-00	130,480
FLECKENSTEIN, BERNHARD.....	BIOMOLECULAR STUDIES OF HERPESVIRUS SAIMIRI.....	1N01 CP81005-00	191,970
HERD, JAMES A.....	DEVELOP NONHUMAN PRIMATE MODELS OF HYPERTENSION.....	5N01 HV72980-02	205,677
LESUEUR, C ROBIN.....	REGIONAL MEDICAL LIBRARY SERVICES FOR REGION I.....	3N01 LM84715-01	389,320
LITTLE, JOHN B.....	STUDY OF RESPIRATORY CARCINOGENESIS.....	3N01 CP33273-06	92,412
LOWRIE, EDMUND G.....	NATIONAL COOPERATIVE DIALYSIS STUDY.....	5N01 AM62207-06	1,590,000
MONSON, RICHARD R.....	FOLLOW-UP FLUOROSCOPICALLY EXAMINED TUBERCULOSIS PATIENT.....	1N01 CP81058-00	113,380
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES.....	5N01 LM54724-14	123,242
ROTHMAN, KENNETH J.....	LARYNGEAL CARCINOMA—HIGH RISK FACTORS.....	5N01 NS82399-01	180,000
SALHANICK, HILTON A.....	PROCEDURES FOR INHIBITORS OF PROGESTERONE SYNTHESIS.....	2N01 HD02319-14	68,977
ORGANIZATION TOTAL	13 4,885,649		
JOSLIN DIABETES FOUNDATION ZIP CODE 02215			
AIELLO, LLOYD M.....	DIABETIC RETINOPATHY—CLINICAL CENTER.....	2N01 EY42170-05	91,697
ORGANIZATION TOTAL	1 91,697		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
LAHEY CLINIC FOUNDATION ZIP CODE 02215			
COLLER, JOHN A.....	INNOVATIVE TECHNIQUES FOR COLONOSCOPE PASSAGE INTO CECUM.....	2N01 CB74212-01	135,156
ORGANIZATION TOTAL	1 135,156		
MASSACHUSETTS EYE AND EAR INFIRMARY ZIP CODE D2114			
MC MEEL, J WALLACE.....	DIABETIC RETINOPATHY STUDY.....	2N01 EY42172-05	55,134
MC MEEL, J WALLACE.....	EVALUATION OF VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52144-01	55,164
ORGANIZATION TOTAL	2 110,298		
MASSACHUSETTS GENERAL HOSPITAL ZIP CODE 02114			
AXELROD, LLOYD.....	FAT LOSS CONTRIBUTION TO WEIGHT LOSS IN CANCER PATIENTS.....	1N01 CP85657-00	96,382
BLACK, PAUL H.....	STUDY OF ACTIVATION OF ONCOGENIC VIRUSES.....	5N01 CP43222-07	185,410
FITZPATRICK, THOMAS B.....	ORAL PSORALEN PHOTOCHEMOTHERAPY OF PSORIASIS.....	3N01 AM72200-03	325,649
KAPLAN, EDWARD M.....	DATA COORDINATING CENTER FOR ANGINA PECTORIS STUDY.....	2N01 HV53027-05	14,592
MALOOF, FARAHE.....	RELATIONSHIP BETWEEN THYROID DISEASES AND BREAST CANCER.....	1N01 CB84230-00	141,400
MUNDTH, ELDRED D.....	STUDY OF CORONARY ARTERY SURGERY.....	5N01 HV32985-11	104,494
NEW, PAUL J.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5N01 CB43983-06	23,734
ZAMECNIK, PAUL C.....	SEQUENCING OF RSV 35S RNA.....	2N01 CP71007-02	99,850
ORGANIZATION TOTAL	8 991,511		
NEW ENGLAND DEACONESS HDSPITAL ZIP CODE 02215			
BLACKBURN, GEORGE L.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65870-05	34,985
ORGANIZATION TOTAL	1 34,985		
NEW ENGLAND MEDICAL CENTER HDSPITAL ZIP CODE D2111			
GORBACH, SHERWOOD L.....	RELATION OF INTESTINAL FLORA TO BREAST CANCER IN HUMANS.....	5N01 CB74104-01	102,500
MARCHANT, DOUGLAS J.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45054-06	235,294
SCHWARTZ, ROBERT S.....	IMMUNOLOGY OF MURINE LEUKEMIA VIRUS INFECTION.....	5N01 CP61046-02	91,244
ORGANIZATION TOTAL	3 429,038		
NEW ENGLAND NUCLEAR CORPDRATION ZIP CODE D2118			
AHERN, DAVID G.....	SYNTHESIS OF RADIOACTIVE RETINOIDS.....	5N01 CP75937-01	185,020
ORGANIZATION TOTAL	1 185,020		
PACIFIC CDNSULTANTS ZIP CODE 02116			
BOYD, RONALD.....	SERVICES FOR NATIONAL NONMELANOMA SKIN CANCER STUDY.....	1N01 CP81041-00	127,221
ORGANIZATION TOTAL	1 127,221		
SIDNEY FARBER CANCER INSTITUTE ZIP CODE D2115			
BAST, ROBERT C.....	IMMUNOTHERAPY OF MOUSE OVARIAN CANCER.....	2N01 CB74194-01	110,015
CANELLOS, GEORGE P.....	STUDIES OF PATIENTS WITH DISSEMINATED SOLID TUMORS.....	5N01 CM67037-10	347,372
CANTOR, HARVEY I.....	HYBRIDIZATION TECHNIQUES TO OBTAIN FUNCTIONAL T-CELLS.....	5N01 CB74147-04	187,424
GREENBERGER, JOEL S.....	BALB-1 VIRUS AND MYELOID CELL DIFFERENTIATION.....	5N01 CP71051-01	79,500
HASELTINE, WILLIAM A.....	STUDIES ON THE INTEGRATION SITES OF ONCOGENIC VIRUSES.....	5N01 CP71057-01	92,910
LIVINGSTON, DAVID M.....	ISOLATE TYPE C VIRUSES FROM HUMAN LEUKEMIC CELLS.....	2N01 CP71028-01	99,970
LOKICH, JACOB.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM43781-12	55,846
LOKICH, JACOB.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57035-07	3,909
PATTERSON, W BRADFORD.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55229-09	223,865
YUNIS, EDMOND J.....	REFERENCE HLA LABORATORIES.....	1N01 AI82548-00	24,090
YUNIS, EDMOND J.....	PROCURE HLA-A, B AND C LOCI AND B CELL ANTISERA.....	1N01 AI82557-00	53,782
ORGANIZATION TOTAL	11 1,278,683		
ST. ELIZABETH'S HDSPITAL DF BDSTON ZIP CODE D2135			
DALY, BENEDICT D.....	DEVELOPMENT OF PERCUTANEOUS ENERGY TRANSMISSION SYSTEMS.....	1N01 HV82919-00	133,014
ORGANIZATION TOTAL	1 133,014		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
TUFTS UNIVERSITY ZIP CODE 02111			
BLAIR, HENRY E.....	PREPARE GLUCOCEREBROSIDASE FROM HUMAN PLACENTAL TISSUE.....	5N01 NS52321-09	598,467
STOLBACH, LEO L.....	IMMUNODIAGNOSIS FOR EARLY DETECTION OF OVARIAN CANCER.....	5N01 CB64028-02	111,931
WAKSAL, SAMUEL D.....	INDUCTION OF FUNCTIONAL DIFFERENTIATION OF T-CELLS.....	5N01 CB74150-03	178,085
WHITE, GEORGE E.....	SYSTEM FOR EARLY DETECTION OF DENTAL CARIES.....	3N01 DE52476-10	86,061
ORGANIZATION TOTAL	4 974,544		
UNIVERSITY HOSPITAL ZIP CODE 02118			
RYAN, THOMAS J.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	2N01 HV62923-04	253,765
STEFFEE, WILLIAM P.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65869-05	57,538
ORGANIZATION TOTAL	2 311,303		
BURLINGTON			
RAYTHEON COMPANY—RAYTHEON SERVICE COMPANY ZIP CODE 01803			
NOT APPLICABLE.....	INDEXING JOURNAL ARTICLES IN THE BIOMEDICAL SCIENCES.....	1N01 LM84702-00	56,400
ORGANIZATION TOTAL	1 56,400		
CAMBRIDGE			
ABT ASSOCIATES, INC. ZIP CODE 02138			
KERPELMAN, LARRY.....	EVALUATION OF THE NMAC DISTRIBUTION PROGRAM.....	3N01 LM74723-02	2,371
TO BE APPOINTED.....	MEASUREMENT OF THE COST OF CANCER CARE.....	3N01 CN65216-06	64,626
ORGANIZATION TOTAL	2 66,997		
AMERICAN SCIENCE AND ENGINEERING ZIP CODE 02139			
STEIN, JAY A.....	COMPUTERIZED TRANSAXIAL X-RAY RECONSTRUCTION.....	3N01 C853858-08	223,000
ORGANIZATION TOTAL	1 223,000		
ARTHUR D. LITTLE, INC. ZIP CODE 02140			
JOHNSON, RANDALL K.....	EVALUATION OF COMBINED CHEMOTHERAPY AND MODALITY STUDIES.....	5N01 CM53765-06	750,000
JOHNSON, RANDALL K.....	MOLECULAR BIOLOGICAL CHARACTERIZATION OF ANTITUMOR DRUGS.....	1N01 CM87186-00	146,923
MILLER, IRWIN.....	COORDINATED PROGRAM IN CANCER CHEMOTHERAPY.....	5N01 CM33727-14	189,000
ROHOVSKY, MICHAEL W.....	CHEMOTHERAPY OF CENTRAL NERVOUS SYSTEM SOLID TUMORS.....	5N01 CM67047-03	129,771
SIDMAN, KENNETH R.....	STUDY OF CONTRACEPTIVE DRUGS.....	2N01 HD42802-10	153,784
SIVAK, ANDREW.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	2N01 CP55711-04	281,439
SIVAK, ANDREW.....	ASSAY TO SCREEN CHEMICALS FOR CARCINOGENIC POTENTIAL.....	1N01 CP85677-00	404,701
WODINSKY, I.....	PRIMARY IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM57006-06	616,882
YESAIR, DAVID W.....	PHARMACOLOGY AND TUMOR BANK.....	3N01 CM53849-05	332,522
YESAIR, DAVID W.....	PHARMACOLOGY AND RADIOAUTOGRAPHY OF ANTITUMOR AGENTS.....	1N01 CM87163-00	660,912
YESAIR, DAVID W.....	IMPROVE EFFICACY OF ORAL NATURAL STEROIDS.....	2N01 HD62847-04	272,544
ORGANIZATION TOTAL	11 3,938,478		
BLOCK ENGINEERING ZIP CODE 02139			
SCHILDKRAUT, E ROBERT.....	DEVELOPMENT OF NEW METHODS OF SINGLE CELL SEPARATION.....	5N01 CB74095-01	318,285
ORGANIZATION TOTAL	1 318,285		
BOLT BERANEK AND NEWMAN ZIP CODE 02138			
BILOFSKY, HOWARD.....	IMMUNOGLOBULIN SEQUENCE DATA.....	1N01 RR82158-00	104,800
CASTLEMAN, PAUL A.....	DEVELOPMENT OF SOFTWARE FOR DATA-PROCESSING PROGRAMS.....	3N01 RR42147-17	340,254
CASTLEMAN, PAUL A.....	TECHNICAL ASSISTANCE FOR THE PROPHET SYSTEM.....	5N01 RR82118-02	778,786
CASTLEMAN, PAUL A.....	DEVELOP AND MODIFY PROTOTYPE CLINFO SYSTEM.....	1N01 RR82120-00	147,916
RICHER, IRA.....	COMMUNICATIONS TECHNOLOGY FORECAST.....	1N01 LM84726-00	66,555
SWETS, JOHN A.....	EVALUATE IMAGING TECHNIQUES IN CANCER DIAGNOSIS.....	2N01 CB64010-04	74,612
ORGANIZATION TOTAL	6 1,512,923		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
CAMBRIDGE COLLABORATIVE ZIP CODE 02142			
FREDBERG, JEFFREY J.....	MEASURE PULMONARY FUNCTION IN INFANTS AND CHILDREN.....	5N01 HR62901-04	151,450
ORGANIZATION TOTAL	1	151,450	
HARVARD UNIVERSITY ZIP CODE 02138			
CERNY, JAN.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64035-02	73,664
ORGANIZATION TOTAL	1	73,664	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY ZIP CODE 02139			
BALTIMORE, DAVID.....	STUDIES OF LEUKEMIA VIRUS DNA POLYMERASE.....	2N01 CP53562-05	190,850
CORKIN, SUZANNE H.....	EVALUATION OF THE SAFETY AND EFFICACY OF PSYCHOSURGERY.....	3N01 NS62116-16	30,671
ROGERS, ADRIANNE E.....	DIET AND CHEMICAL CARCINOGENESIS STUDY.....	5N01 CP33238-09	166,560
TANNENBAUM, STEVEN R.....	STUDY OF ENVIRONMENTAL OCCURRENCE OF N-NITROSO COMPOUNDS.....	5N01 CP33315-09	113,063
WOGAN, GERALD N.....	STUDY OF TOXICITY OF FUNGAL GROWTH ON FOODSTUFFS.....	5N01 CP43265-05	252,078
WORDEN, FREDERIC G.....	NEUROSCIENCES RESEARCH PROGRAM SUPPORT.....	2N01 NS62343-04	360,981
YANNAS, IOANNIS V.....	INTERACTION OF NATURAL & MODIFIED BIOPOLYMERS WITH BLOOD.....	5N01 HV42969-06	84,318
ORGANIZATION TOTAL	7	1,198,521	
EVERETT			
AVCO CORPORATION—EVERETT RESEARCH LABORATORY ZIP CODE 02149			
NYILAS, EMERY.....	MATERIALS DEVELOPMENT AND TESTING.....	5N01 HV32917-08	146,069
NYILAS, EMERY.....	EVALUATION OF BIOMATERIALS IN CONTACT WITH BLOOD.....	5N01 HV42961-06	162,740
ORGANIZATION TOTAL	2	308,809	
LOWELL			
UNIVERSITY OF LOWELL ZIP CODE 01854			
BRUCE, JOHN I.....	SUPPLY SCHISTOSOME INFECTED SNAILS AND MAMMALS.....	5N01 AI72524-01	118,080
ORGANIZATION TOTAL	1	118,080	
NEWTON			
EIC CORPORATION ZIP CODE 02158			
BRUMMER, S BARRY.....	STUDY OF ELECTRICAL STIMULATION OF THE NERVOUS SYSTEM.....	2N01 NS32313-08	87,750
MC HARDY, JOHN.....	DEVELOP IMPROVED CAPACITOR STIMULATING ELECTRODES.....	1N01 NS82392-00	99,735
ORGANIZATION TOTAL	2	187,485	
SHREWSBURY			
WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ZIP CODE 01545			
FAIRBANKS, GRANT.....	CHARACTERIZATION OF MAMMARY EPITHELIAL CELL MEMBRANE.....	2N01 CB33908-05	59,700
WELSCH, FEDERICO.....	STUDY OF ESTROGEN-BINDING AND ESTROPHILE PROTEINS.....	2N01 CB43867-08	125,300
ORGANIZATION TOTAL	2	185,000	
WALTHAM			
BRANDEIS UNIVERSITY ZIP CODE 02154			
STOUT, ROBERT D.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64034-02	37,642
VAN VUNAKIS, HELEN.....	PRODUCTION OF ANTIBODIES TO CHEMICAL CARCINOGENS.....	2N01 CP23243-06	126,421
ORGANIZATION TOTAL	2	164,063	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
COLLABORATIVE RESEARCH, INC. ZIP CODE 02154			
FRIEDMAN, ORRIE M.....	SYNTHESIS OF VARIOUS PHOSPHORAMIDES	5N01 CM77071-02	94,271
ORGANIZATION TOTAL	1 94,271		
FIRST DATA CORPORATION ZIP CODE 02154			
FRIESEN, DAVID D.....	COMPUTER FACILITY FOR CHEMICAL/BIOLOGICAL INFORMATION	3N01 RR62118-10	135,578
ORGANIZATION TOTAL	1 135,578		
GINER, INC. ZIP CODE 02154			
LERNER, HARRY.....	DEVELOP IMPROVED CAPACITOR STIMULATING ELECTRODES	1N01 NS82300-00	102,370
ORGANIZATION TOTAL	1 102,370		
GULF AND WESTERN INDUSTRIES—SPACE SCIENCES DIVISION ZIP CODE 02154			
AISENBERG, SOL.....	MATERIAL DEVELOPMENT & TESTING HEPARINIZATION PROCESS	2N01 HV32919-12	79,095
ORGANIZATION TOTAL	1 79,095		
THERMO ELECTRON CORPORATION ZIP CODE 02154			
KEISER, JOHN M.....	LEFT VENTRICULAR ASSIST DEVICE: CLINICAL EVALUATION.....	2N01 HV53008-07	205,222
KEISER, JOHN M.....	DEVELOP ENERGY CONVERTERS TO CONTROL HEART ASSIST DEVICE	5N01 HV72976-02	480,755
POIRIER, VICTOR C.....	IMPLANTABLE ARTIFICIAL HEART DEVICES.....	2N01 HV12065-16	296,432
SZYCHER, MICHAEL S.....	DEVELOPMENT OF FLOCKING MATERIALS.....	2N01 HV32915-11	220,967
WHALEN, ROBERT L.....	DEVELOPMENT OF A LEFT HEART ASSIST BLOOD PUMP.....	5N01 HV72934-01	399,373
ORGANIZATION TOTAL	5 1,602,749		
WELLESLEY			
E G & G, INC. ZIP CODE 02181			
BRYAN, NANCY.....	CLINICAL DATA RETRIEVAL SERVICES.....	5N01 CM67011-09	447,386
ORGANIZATION TOTAL	1 447,386		
WILMINGTON			
CHARLES RIVER BREEDING LABORATORIES ZIP CODE 01887			
FOSTER, HENRY L.....	SUPPORT FOR LONG-TERM RAT COLONY	2N01 AG32725-18	370,912
FOSTER, HENRY L.....	SUPPLY OF MICE	3N01 AG42811-19	151,655
FOSTER, HENRY L.....	RODENT PRODUCTION CENTER IN MODIFIED ENVIRONMENT.....	3N01 CM53848-05	292,050
FOSTER, SUMNER.....	MAINTAIN COLONY OF AGED SPRAGUE-DAWLEY RATS.....	2N01 AG72127-02	33,172
FOSTER, SUMNER.....	GENETIC CENTER FOR RODENTS IN BIOCONTAINMENT ENVIRONMENT	3N01 CM77141-03	1,750,888
ORCUTT, ROGER P.....	MONITOR MICROORGANISMS IN ISOLATOR COLONIES	1N01 CM87212-00	58,276
OTIS, ALBERT P.....	DEVELOP COLONY OF MULTIGENOTYPIC AGED MOUSE STRAINS.....	5N01 AG72128-01	201,763
OTIS, ALBERT P.....	PRIMARY GENETIC CENTER.....	1N01 CM87199-00	63,890
TO BE APPOINTED.....	INBRED STRAINS AND SELECTED HYBRID CROSSES IN RATS.....	5N01 AG62135-03	73,000
ORGANIZATION TOTAL	9 2,995,606		
KDCH INDUSTRIES-ABCDR, INC. ZIP CODE 01887			
NUWAYSER, ELIE S.....	STUDY OF DELIVERY OF DRUGS TO THE CERVIX.....	5N01 HD32738-08	238,681
POLIDORO, JOHN P.....	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS.....	3N01 HD72832-02	24,628
WILLIAMS, DAVID L.....	ENZYMATIC PREVENTION OF DENTAL PLAQUE FORMATION	5N01 DE62493-02	147,575
ORGANIZATION TOTAL	3 410,884		
WORCESTER			
E G & G, INC.—MASON RESEARCH INSTITUTE ZIP CODE 01608			
BOGDEN, ARTHUR E.....	EVALUATION OF CANCER THERAPEUTIC AGENTS	2N01 CB43914-08	149,673

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MASSACHUSETTS—Continued			
BOGDEN, ARTHUR E.....	BIOLOGICAL CHARACTERIZATION STUDIES OF MAMMARY TUMORS.....	2N01 CB74175-01	170,200
BOGDEN, ARTHUR E.....	DEVELOPMENT OF NEW IN VIVO TUMOR SYSTEMS.....	3N01 CM57030-08	173,700
BOGDEN, ARTHUR E.....	FROZEN TUMOR BANK.....	1N01 CM87164-00	125,430
BOGDEN, ARTHUR E.....	ROLE OF HORMONAL FACTORS ON MAMMARY TUMORS.....	3N01 CP61052-07	118,014
COBB, WILLIAM.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM57003-06	678,023
NAQVI, REHAN H.....	FACILITY TO EVALUATE NEW ANTIFERTILITY DRUGS & DEVICES.....	3N01 HD82813-01	703,727
ROSENKRANTZ, HARRIS.....	TOXICOLOGICAL EVALUATION OF IRON CHELATORS.....	3N01 AM82201-02	62,002
ORGANIZATION TOTAL	8	2,180,769	
MEMORIAL HOSPITAL ZIP CODE 01605			
LEVINE, PETER H.....	STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	2N01 HB53019-06	14,289
ORGANIZATION TOTAL	1	14,289	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER ZIP CODE 01605			
HUMPHREYS, ROBERT E.....	DIAGNOSIS OF HUMAN LEUKEMIAS.....	2N01 CB64072-03	79,250
ORGANIZATION TOTAL	1	79,250	
STATE TOTAL	153	32,351,929	
MICHIGAN			
ANN ARBOR			
UNIVERSITY OF MICHIGAN ZIP CODE 48109			
BREWER, GEORGE J.....	CRISIS AND PAIN SYMPTOM PROPHYLAXIS BY ZINC THERAPY.....	2N01 HB72916-02	24,968
BURKEL, WILLIAM E.....	DEVELOP INTIMAL LININGS.....	5N01 HV12054-14	137,978
ERFURT, JOHN C.....	HYPERTENSION CONTROL IN THE WORK SETTING.....	1N01 HV82913-00	283,603
FRETER, ROLF G.....	TESTING OF VECTOR-HOST SYSTEMS IN MAMMALS.....	2N01 AI62518-02	95,707
HIGGINS, MILLICENT W.....	PROSPECTIVE STUDY OF BREAST CANCER IN TECUMSEH WOMEN.....	1N01 CB84317-00	66,250
HIGGINS, MILLICENT W.....	DEVELOP RISK INDEX FOR CHRONIC OBSTRUCTIVE LUNG DISEASE.....	1N01 HR82927-00	90,225
HISS, ROLAND.....	CONTINUING EDUCATION IN PULMONARY MEDICINE.....	5N01 HR62931-02	178,070
KRAUSE, CHARLES.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87225-00	133,680
MAASSAB, H F.....	STUDY OF LIVE INFLUENZA VIRUS VACCINE CANDIDATES.....	2N01 AI72521-03	148,660
MC NAMARA, JAMES A, JR.....	MECHANISMS OF MUSCLE REATTACHMENT AND MIGRATION.....	2N01 DE52478-04	91,177
MONTO, ARNOLD S.....	EVALUATION OF OCCURRENCE OF INFLUENZA & VACCINE EFFICACY.....	2N01 AI62514-04	230,252
MONTO, ARNOLD S.....	ESTABLISH AN INFECTIOUS ENTERIC DISEASE STUDY CENTER.....	5N01 AI72536-02	255,787
SCHOCH, HENRY K.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52913-04	84,000
SCHULTZ, JEROME S.....	EVALUATE COMPATIBILITY-MATERIALS IN CONTACT WITH BLOOD.....	2N01 HV42962-06	115,499
THREATT, BARBARA.....	EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45049-06	333,934
ORGANIZATION TOTAL	15	2,269,790	
DETROIT			
ASH STEVENS, INC. ZIP CODE 48202			
ASH, ARTHUR B.....	RESYNTHESIS OF BULK CHEMICALS AND DRUGS.....	3N01 CM57012-05	246,505
MARKOVAC, A.....	PREPARATION OF BULK CHEMICALS AND DRUGS.....	1N01 CM87204-00	196,805
ORGANIZATION TOTAL	2	443,310	
CHILDREN'S HOSPITAL OF MICHIGAN ZIP CODE 48201			
PETERSON, WARD D.....	STUDY OF IDENTIFICATION OF CANCER CELLS IN VITRO.....	2N01 CP33333-06	126,036
ORGANIZATION TOTAL	1	126,036	
HENRY FORD HOSPITAL ZIP CODE 48202			
BRENNEMAN, GERALD M.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72957-02	99,698

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MICHIGAN—Continued			
GOLDSTEIN, SIDNEY.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52925-03	95,577
KVALE, PAUL A.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	3N01 HR62944-05	306,058
NIELSEN, DONALD.....	SQUIRREL MONKEY MODEL FOR EFFECTS OF NOISE ON HEARING.....	1N01 RR82140-00	33,416
ORGANIZATION TOTAL	4 534,749		
MICHIGAN CANCER FOUNDATION ZIP CODE 48201			
BRENNAN, MICHAEL J.....	A COMMUNITY BASED CANCER CONTROL PROGRAM.....	3N01 CN65252-08	2,822,000
BRENNAN, MICHAEL J.....	DETROIT SSMA POPULATION-BASED CANCER REGISTRY.....	3N01 CP61028-05	936,553
MC GRATH, CHARLES M.....	EFFECT OF ENVIRONMENTAL FACTORS ON MMTV EXPRESSION.....	1N01 CP81001-00	109,214
RICH, MARVIN A.....	STUDY OF HIGH-RISK BREAST-CANCER FAMILIES.....	2N01 CP33347-11	178,000
RICH, MARVIN A.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71040-01	15,000
SCHERR, PAUL.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81049-00	218,729
ORGANIZATION TOTAL	6 4,279,496		
SINAI HOSPITAL OF DETROIT ZIP CODE 48235			
KANTROWITZ, ADRIAN.....	DEVELOPMENT OF PERCUTANEOUS ENERGY TRANSMISSION SYSTEMS.....	1N01 HV82921-00	176,302
ORGANIZATION TOTAL	1 176,302		
WARNER-LAMBERT COMPANY-PARKE, DAVIS AND COMPANY ZIP CODE 48232			
DION, HENRY W.....	NEW ANTINEOPLASTIC DRUGS.....	3N01 CM77146-03	665,000
MC MILLAN, F.....	PRODUCTION OF BULK CHEMICALS & DRUGS.....	3N01 CM87124-03	441,905
ORGANIZATION TOTAL	2 1,106,905		
WAYNE STATE UNIVERSITY ZIP CODE 48202			
BAKER, LAURENCE H.....	STUDY PATIENTS WITH DISSEMINATED SOLID TUMORS.....	5N01 CM67105-08	348,450
BLISS, LYNN S.....	PRESCHOOL SCREENING FOR IMPAIRED LANGUAGE DEVELOPMENT.....	5N01 NS62353-06	304,521
FRANK, ROBERT N.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	5N01 EY82104-01	155,259
LUSHER, JEANNE M.....	COOPERATIVE STUDY OF FACTOR VIII IN HEMOPHILIA.....	2N01 HB53025-05	28,443
MARGHERIO, RAYMOND R.....	DIABETIC RETINOPATHY STUDY—CLINICAL CENTER.....	2N01 EY42171-05	64,845
MARGHERIO, RAYMOND R.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62143-02	107,996
NOT APPLICABLE.....	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES.....	3N01 LM54715-04	241,309
ROSE, NOEL R.....	IMMUNOLOGIC STUDIES OF VASECTOMY.....	5N01 HD52841-04	140,028
ORGANIZATION TOTAL	8 1,390,851		
EAST LANSING			
MICHIGAN STATE UNIVERSITY ZIP CODE 48823			
MAYOR, GILBERT H.....	STUDY OF DIALYSIS ENCEPHALOPATHY.....	1N01 AM82206-00	98,982
WELSCH, CLIFFORD W.....	PREVENTION OF MAMMARY PRENEOPLASTIC LESIONS.....	5N01 CB74090-01	83,700
ORGANIZATION TOTAL	2 182,682		
GRAND RAPIDS			
BUTTERWORTH HOSPITAL ZIP CODE 49503			
BOWMAN, HAROLD E.....	SERUM FROM PATIENTS WITH BREAST LESIONS.....	5N01 CB74213-01	24,950
MOORHEAD, EDWARD L, II.....	CLINICAL ONCOLOGY PROGRAM.....	2N01 CN75347-03	163,910
ORGANIZATION TOTAL	2 188,860		
KALAMAZOO			
UPJOHN COMPANY ZIP CODE 49002			
NEIL, GARY L.....	NEW ANTINEOPLASTIC DRUG SCREENING.....	3N01 CM77100-02	963,370
ORGANIZATION TOTAL	1 963,370		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MICHIGAN—Continued			
LANSING			
MICHIGAN DEPARTMENT OF PUBLIC HEALTH ZIP CODE 48906			
SCHUURMANS, DAVID M.....	TISSUE CULTURE ASSAY—ANTIBIOTICS & PURIFIED COMPOUNDS	2N01 CM33702-08	64,000
SZWEJDA, LOUIS F.....	COMMUNITY CARIES PREVENTION DEMONSTRATION PROJECTS	3N01 DE52466-01	10,601
ORGANIZATION TOTAL	2 74,601		
STATE TOTAL	46 11,736,952		
MINNESOTA			
AUSTIN			
UNIVERSITY OF MINNESOTA AT AUSTIN ZIP CODE 55912			
JENKIN, HOWARD M.....	IN VITRO CULTIVATION OF TREPONEMA PALLIDUM.....	3N01 AI42537-06	16,000
ORGANIZATION TOTAL	1 16,000		
DULUTH			
UNIVERSITY OF MINNESOTA AT DULUTH ZIP CODE 55812			
CARTER, ROBERT E.....	STUDY OF EFFECT OF ASBESTOS FIBERS ON TISSUES.....	2N01 ES42149-11	19,987
ORGANIZATION TOTAL	1 19,987		
MINNEAPOLIS			
HENNEPIN COUNTY MEDICAL CENTER ZIP CODE 55415			
KESHAVIAH, PRAHASH	MECHANISMS OF FLUID REMOVAL BY ULTRAFILTRATION	3N01 AM72239-01	750
RUBENS, ALAN B.....	LANGUAGE RECOVERY PROCESS IN ADULTS WITH APHASIA	5N01 NS72378-01	272,400
SHAPIRO, FRED L.....	DEVELOP IMPLANTABLE SUBCUTANEOUS BLOOD ACCESS DEVICE.....	2N01 AM72208-03	10,399
ORGANIZATION TOTAL	3 283,549		
HONEYWELL ZIP CODE 55408			
TO BE APPOINTED	CLINICAL LABORATORY INFORMATION SYSTEM.....	3N01 CL42174-10	299,603
ORGANIZATION TOTAL	1 299,603		
MINNESOTA DEPARTMENT OF HEALTH ZIP CODE 55440			
GIBBS, ARLENE E.....	CERVICAL CANCER SCREENING PROGRAM	2N01 CN55264-04	350,112
ORGANIZATION TOTAL	1 350,112		
MDUNT SINAI HOSPITAL ZIP CODE 55404			
BERMAN, REUBEN.....	THERAPY FOR HYPERTENSION IN GENERAL POPULATION.....	5N01 HV22937-07	378,171
RANHEIM, PHILLIP J.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72961-03	78,710
SEGAL, MARVIN S.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52926-03	77,592
ORGANIZATION TOTAL	3 534,473		
UNIVERSITY OF MINNESOTA AT MINNEAPOLIS ZIP CODE 55455			
BANTLI, HEINRICH	ELECTRICAL STIMULATION OF THE CEREBELLUM.....	3N01 NS42332-04	17,855
BARBOSA, JOSE J.....	GENETIC LINKAGE ANALYSIS OF JUVENILE DIABETES MELLITUS	1N01 HD82846-00	194,542
BARTSCH, GLENN.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52147-02	316,428
BERLINGER, NORMAN T.....	SUPPRESSOR MONOCYTES IN CANCER PATIENTS.....	2N01 CB74160-01	63,530
BLACKSHEAR, PERRY L, JR.....	STUDY OF FLUID DYNAMICS OF BLOOD CELLS.....	2N01 AM22207-10	49,883
BUCHWALD, HENRY.....	OPEN LOOP INSULIN DELIVERY DEVICE	1N01 AM82217-00	344,897
CROW, RICHARD S.....	ECG CENTER FOR PROPRANOLOL HEART TRIAL	2N01 HV72949-03	103,477

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MINNESOTA—Continued			
EATON, JOHN W.....	ERYTHROCYTE DESTRUCTION IN CHRONIC RENAL DISEASE.....	2N01 AM62214-01	117,421
FARAS, ANTHONY J.....	RNA TUMOR VIRUS GENE EXPRESSION IN MAMMALIAN CELLS.....	5N01 CP61055-02	61,557
FOREMAN, HARRY.....	RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	2N01 HD62805-03	17,954
FRANTZ, IVAN D, JR.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22915-11	1,071,098
GILBERTSON, VICTOR A.....	SCREENING TECHNIQUE FOR DETECTING EARLY CANCER OF BOWEL.....	2N01 CB53862-03	550,000
GUMMIT, ROBERT J.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS52327-10	2,177,800
HALBERG, FRANZ.....	RHYTHMOMETRY ON FEMALE VOLUNTEERS OF DIFFERENT AGES.....	3N01 CP55702-06	112,115
HARRIS, JOHN E.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32126-08	88,204
KERSEY, JOHN H.....	IMMUNODIAGNOSIS OF LEUKEMIAS AND LYMPHOMAS.....	1N01 CB84261-00	123,552
KERSEY, JOHN H.....	IMMUNODEFICIENCY-CANCER REGISTRY.....	2N01 CP43384-07	51,526
KIANG, DAVID T.....	ENDOCRINE AND CHEMOTHERAPY IN BREAST CANCER.....	2N01 CB64000-03	90,000
KJELSBURG, MARCUS O.....	STUDY OF PREVENTION OF CORONARY HEART DISEASE.....	2N01 HV22971-07	2,031,531
MAXWELL, ROBERT E.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS.....	3N01 NS72369-02	24,936
MC CULLOUGH, JEFFREY.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62972-05	256,781
NAJARIAN, JOHN S.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22530-08	103,328
QUIE, PAUL G.....	PNEUMOCOCCAL OTITIS MEDIA IN ANIMAL MODEL.....	5N01 AI52533-06	106,426
SCHOENER, WALTER.....	PREPARE DIABETES-RELATED LITERATURE INDEX.....	5N01 AM70663-19	124,798
SCHUMAN, LEONARD M.....	STUDY OF CANCER MORTALITY.....	5N01 CP33325-08	76,519
SCHUMAN, LEONARD M.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71043-02	15,000
SCHUMAN, LEONARD M.....	HEALTH STATUS OF AMERICAN MEN.....	2N01 HD72803-03	275,938
VESLEY, DONALD.....	COURSES ON PRINCIPLES OF BIOHAZARD AND INJURY CONTROL.....	5N01 CP61033-02	95,428
WATTENBERG, LEE W.....	STUDY OF POLYCYCLIC HYDROCARBON METABOLISM.....	5N01 CP33364-10	136,906
WATTENBERG, LEE W.....	STUDY OF NATURAL INHIBITORS OF CHEMICAL CARCINOGENS.....	1N01 CP85613-00	199,035
ORGANIZATION TOTAL	30	8,998,465	
ROCHESTER			
MAYO FOUNDATION ZIP CODE 55901			
AHMANN, DAVID L.....	CHEMOTHERAPY UTILIZING 5-FU, CYTOXAN AND PREDNISONE.....	2N01 CB33899-05	95,000
AHMANN, DAVID L.....	CHEMOTHERAPY STUDIES OF PATIENTS WITH BEAST CANCER.....	2N01 CM53772-10	189,446
BAKER, HILLIER L, JR.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5N01 CB43982-04	42,905
CARR, D T.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NEWTORK.....	2N01 CN55242-06	233,970
DAVID, CHELLA S.....	PROCESS AND PREPARE SPECIFIC ALLOANTISERA.....	1N01 AI82564-00	61,170
DECKER, DAVID G.....	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67123-03	35,730
DYCK, PETER J.....	ORAL-FACIAL EVALUATION OF UNTREATED TRIGEMINAL NEURALGIA.....	5N01 DE62497-03	85,419
EAGAN, ROBERT.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	5N01 CM77150-02	94,805
EDMONSON, JOHN H.....	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS.....	3N01 CM57044-14	693,016
EVANS, TITUS C.....	DEVELOP HIGH RESOLUTION ULTRASONIC IMAGING TECHNIQUES.....	3N01 HV72928-05	699,889
FONTANA, R S.....	DETECTION AND LOCALIZATION OF BRONCHOGENIC CARCINOMA.....	2N01 CB53886-05	796,795
FRYE, ROBERT C.....	COLLABORATIVE STUDIES OF CORONARY ARTERY SURGERY.....	5N01 HV32984-10	89,760
GLEICH, GERALD J.....	ESTABLISH ALLERGEN CERTIFICATION LABORATORY.....	5N01 AI42546-07	41,145
GO, VAY L.....	DIAGNOSTIC STUDY OF CARCINOMA OF THE BOWEL.....	2N01 CB23854-07	59,000
GREENLEAF, JAMES F.....	BREAST DIAGNOSIS: QUANTITATIVE IMAGING BY ULTRASOUND.....	2N01 CB64041-03	40,000
KURLAND, LEONARD T.....	HEALTH STATUS OF AMERICAN MEN.....	2N01 HD72801-02	170,000
MOERTEL, CHARLES G.....	NEW DRUGS FOR TREATMENT OF GASTROINTESTINAL CANCER.....	3N01 CM02066-19	61,000
MOERTEL, CHARLES G.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	5N01 CM43796-08	181,000
MOERTEL, CHARLES G.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	3N01 CM53838-13	20,000
MOERTEL, CHARLES G.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57033-06	163,820
ROBB, RICHARD A.....	DOSE REDUCTION X-RAY COMPUTED TOMOGRAPHY.....	1N01 CB84235-00	102,826
ROGERS, ROY S.....	INVESTIGATE RECURRENT APHTHOUS STOMATITIS AND BEHCET'S S.....	1N01 DE82414-00	107,720
SCHUTT, ALLAN J.....	ESTABLISHMENT AND MAINTENANCE OF BLOOD SERUM BANK.....	3N01 CB23879-08	60,609
SCHUTT, ALLAN J.....	MAINTENANCE OF THE NCI SERUM BANK.....	1N01 CB84258-00	381,855
SCHUTT, ALLAN J.....	NCI SERA BANK FACILITY FOR BREAST CANCER TASK FORCE.....	1N01 CB84296-00	134,850
SCHUTT, ALLAN J.....	THERAPY OF PATIENTS WITH GASTRIC CANCER.....	5N01 CM43783-08	124,000
SERVICE, F JOHN.....	DEVICES FOR IMPROVED MANAGEMENT OF DIABETES.....	1N01 AM82218-00	264,119
ORGANIZATION TOTAL	27	5,029,849	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MINNESOTA—Continued			
SAINT PAUL			
UNIVERSITY OF MINNESOTA AT SAINT PAUL ZIP CODE 55455			
MUSCOPLAT, CHARLES C.....	IMMUNOLOGIC MECHANISMS OF CATTLE.....	1N01 CB84244-00	62,559
ORGANIZATION TOTAL	1 62,559		
STATE TOTAL	68 15,594,597		
MISSISSIPPI			
JACKSON			
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER ZIP CODE 39216			
HAERER, ARMIN F.....	SURVEY NEUROLOGICAL DISORDERS IN COPIAH COUNTY, MISS.....	5N01 NS72357-04	37,000
HUTCHINSON, RICHARD G.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52912-04	70,656
LANGFORD, HERBERT G.....	THERAPY FOR HYPERTENSION IN THE GENERAL POPULATION.....	5N01 HV12437-13	430,508
STEINBERG, MARTIN H.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73005-02	23,377
ORGANIZATION TOTAL	4 561,541		
STATE TOTAL	4 561,541		
MISSOURI			
COLUMBIA			
CANCER RESEARCH CENTER ZIP CODE 65201			
RODES, NED D.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	3N01 CB74138-03	104,625
RODES, NED D.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45095-06	314,182
ORGANIZATION TOTAL	2 418,807		
UNIVERSITY OF MISSOURI-COLUMBIA ZIP CODE 65201			
GEHRKE, CHARLES W.....	DEVELOPMENT & APPLIC OF GAS CHROMATOGRAPHIC TECHNIQUE.....	3N01 CM12323-13	45,664
GRANBERG, DONALD O.....	ABORTION AS SOCIAL ISSUE IN THE UNITED STATES, 1965-1978.....	1N01 HD82834-00	45,714
HAHN, ALLEN W.....	DEVELOP BIOMATERIALS FOR NEURAL PROSTHESES.....	1N01 NS82393-00	169,344
LOEPPKY, RICHARD N.....	RETROALDOL TYPE FRAGMENTATION OF B-HYDROXY-NITROSAMINES.....	5N01 CP75946-01	30,453
MILLER, FREDERICK N.....	EFFECTS OF PERITONEAL DIALYSIS ON MICROCIRCULATION.....	5N01 AM72217-01	55,122
NOLPH, KARL D.....	EFFECTS OF INTRA-PERITONEAL VASODILATORS.....	2N01 AM52216-02	49,863
WAGNER, JOSEPH E.....	OPERATION OF ANIMAL DISEASE DIAGNOSTIC LABORATORY.....	1N01 CM87157-00	76,015
ORGANIZATION TOTAL	7 472,175		
KANSAS CITY			
AMERICAN ACADEMY OF FAMILY PHYSICIANS ZIP CODE 64114			
JOHNSTON, JOSEPH E.....	FAMILY PHYSICIAN ROLE IN CANCER DIAGNOSIS & MANAGEMENT.....	2N01 CN65060-05	61,007
ORGANIZATION TOTAL	1 61,007		
AMERICAN ASSOCIATION FOR CLINICAL HISTOCOMPATIBILITY TESTING ZIP CODE 64153			
DUQUESNOY, RENE J.....	THIRD AMERICAN HISTOCOMPATIBILITY WORKSHOP.....	1N01 TW82110-00	56,000
ORGANIZATION TOTAL	1 56,000		
MIDWEST ORGAN BANK ZIP CODE 64111			
CROSS, DONALD.....	REFERENCE HLA LABORATORIES.....	1N01 AI82546-00	20,131

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MISSOURI—Continued			
ORGANIZATION TOTAL	1	20,131	
MIOWEST RESEARCH INSTITUTE ZIP CODE 64110			
CARSON, BONNIE.....	APPRAISAL OF ENVIRONMENTAL EXPOSURE TO HEAVY METALS	1N01 ES82153-00	80,946
EL HAWARI, MONAEM.....	METABOLISM OF PAH IN THE INDUCTION OF MAMMARY TUMORS.....	1N01 CB84227-00	152,700
ENGLER, JAMES F.....	SYNTHESIS OF POLYCYCLIC HYDROCARBON DERIVATIVES.....	2N01 CP33387-13	497,120
FOTOPOULOS, SOPHIA S.....	TREATMENT OF ANOREXIA IN CANCER PATIENTS	2N01 CP65787-04	129,939
HAGGERTY, JAMES.....	ANALYSIS OF CHEMICALS AND PHARMACEUTICAL FORMULATIONS.....	3N01 CM33722-10	76,269
HELTON, DANIEL O.....	ANALYSIS OF CHEMICAL AND PHARMACEUTICAL FORMULATIONS.....	1N01 CM87234-00	127,234
HEYS, J RICHARD.....	PREPARATION OF A CHEMICAL COMPOUND.....	1N01 CP85643-00	13,970
HEYS, J RICHARD.....	PREPARATION OF 3 MEHTYL-2-NAPHYLAMINE.....	1N01 CP85648-00	2,520
HEYS, J RICHARD.....	PREPARATION OF 28 CHEMICAL COMPOUNDS.....	1N01 CP85666-00	75,455
KAEGI, HANS H.....	SYNTHESIS OF RADIOACTIVE RETINOIDS.....	5N01 CP75911-02	189,828
MEINERS, AL.....	PREPARATION OF CARCINOGEN SAFETY MONOGRAPHS.....	2N01 CO65331-03	58,418
SMITH, I C.....	APPRAISAL OF ENVIRONMENTAL EXPOSURE TO HEAVY METALS.....	3N01 ES22090-08	7,810
ORGANIZATION TOTAL	12	1,412,209	
SAINT LOUIS			
ST. LOUIS HEART ASSOCIATION ZIP CODE 63108			
ZIMMERMAN, HERBERT B.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22982-07	1,231,175
ORGANIZATION TOTAL	1	1,231,175	
ST. LOUIS UNIVERSITY ZIP CODE 63103			
GREEN, MAURICE.....	STUDY OF ONCOGENESIS.....	2N01 CP43359-08	499,999
GREEN, MAURICE.....	SEARCH FOR RNA VIRUS-SPECIFIC GENETIC MATERIAL.....	2N01 CP61049-03	80,000
KAISER, GEORGE C.....	COLLABORATIVE STUDIES OF CORONARY ARTERY SURGERY.....	5N01 HV32980-07	295,208
SMITH, KENNETH R, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM57020-04	68,247
ORGANIZATION TOTAL	4	943,454	
WASHINGTON UNIVERSITY ZIP CODE 63130			
BRUCE, ROBERT M.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	3N01 HR72909-01	19,987
COMMONER, BARRY.....	EFFECT OF DIET ON CARCINOGENIC POTENTIAL OF SECRETIONS.....	1N01 CP85662-00	111,444
GOLDBERG, ANDREW P.....	EFFECTS OF EXERCISE ON LIPID AND CARBOHYDRATE METABOLISM.....	1N01 AM82208-00	15,000
HERZIG, GEOFFREY P.....	COLLECTION, FUNCTION AND TRANSFUSION OF GRANULOCYTES.....	5N01 HB62970-02	69,220
KARDOS, J L.....	TEST POLYMERS FOR CIRCULATORY ASSIST DEVICES.....	5N01 HV72919-01	141,735
MARSHALL, GARLAND R.....	PROSTAGLANDIN AND KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	5N01 HV72944-02	73,254
NEEDLEMAN, PHILIP.....	DEVELOP PROSTAGLANDIN SYNTHESIS AND RECEPTOR ANTAGONISTS.....	5N01 HV72945-03	70,222
SCHONFELD, GUSTAV.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22916-16	1,805,276
SHREFFLER, DONALD C.....	PREPARE SPECIFIC ALLOANTISERA.....	5N01 AI62502-02	70,194
SHREFFLER, DONALD C.....	DEVELOPMENT OF H-2 RECOMBINANT AND MUTANT STRAINS.....	2N01 CB74154-01	78,585
SOBEL, BURTON E.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM/CLINICAL TESTS.....	2N01 HV72941-02	1,065,682
ZARKOWSKY, HAROLD S.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73001-02	37,618
ORGANIZATION TOTAL	12	3,558,217	
STATE TOTAL	41	8,173,175	
MONTANA			
HAMILTON			
HAMILTON BIOCHEMICAL RESEARCH LABORATORY ZIP CODE 59840			
PARKER, RENO.....	PRODUCTION OF LIPOPOLYSACCHARIDES (ENDOTOXINS).....	2N01 AI72525-03	56,347
ORGANIZATION TOTAL	1	56,347	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
MONTANA—Continued			
STATE TOTAL	1	56,347	
NEBRASKA			
OMAHA			
CREIGHTON UNIVERSITY ZIP CODE 68178			
HILGERS, THOMAS W.....	CORRELATE CERVICAL MUCUS CHANGE WITH SERUM HORMONE LEVEL.....	1N01 HD82825-00	22,564
LYNCH, HENRY T.....	STUDY FAMILIAL ASPECTS OF COLON/RECTAL CANCER.....	3N01 CP71041-01	24,742
ORGANIZATION TOTAL	2	47,306	
UNIVERSITY OF NEBRASKA SYSTEM—UNIVERSITY OF NEBRASKA MEDICAL CENTER ZIP CODE 68105			
BRAUDE, ROBERT M.....	REGIONAL MEDICAL LIBRARY PROGRAM.....	3N01 LM54717-04	139,789
CLAYSON, DAVID B.....	BIOASSAYS OF ENVIRONMENTAL CARCINOGENESIS.....	2N01 CP33278-13	3,630,910
FRIEDLANDER, WALTER J.....	SUPPORT FOR CLINICAL NEUROLOGY INFORMATION CENTER.....	2N01 NS22300-07	160,000
POUR, PARVIZ M.....	PREVENT PANCREATIC CANCER BY RETINOIDS.....	1N01 CP85674-00	65,496
ORGANIZATION TOTAL	4	3,996,195	
STATE TOTAL	6	4,043,501	
NEVADA			
CARSON CITY			
NEVADA STATE DEPARTMENT OF HUMAN RESOURCES ZIP CODE 89701			
HOLDERMAN, MELBA.....	CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN65262-06	224,416
ORGANIZATION TOTAL	1	224,416	
STATE TOTAL	1	224,416	
NEW HAMPSHIRE			
DURHAM			
UNIVERSITY SYSTEM OF NEW HAMPSHIRE—UNIVERSITY OF NEW HAMPSHIRE ZIP CODE 03824			
JONES, PAUL R.....	PREPARATION OF VARIOUS N-NITROSO COMPOUNDS.....	3N01 CP55675-03	2,544
ORGANIZATION TOTAL	1	2,544	
HANOVER			
DARTMOUTH COLLEGE ZIP CODE 03755			
LONGNECKER, DANIEL S.....	DELIVERY OF SYNTHETIC NITROSO COMPOUNDS TO THE PANCREAS.....	3N01 CP33378-06	829
LONGNECKER, DANIEL S.....	PREVENTION OF PANCREATIC CANCER IN ANIMALS BY RETINOIDS.....	1N01 CP85675-00	152,992
MATHEWS, LOUIS B.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72953-04	55,539
MAURER, L HERBERT.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45146-04	199,380
SMITH, KENDALL A.....	CULTURE TUMOR-SPECIFIC CYTOTOXIC LYMPHOCYTES.....	2N01 CB74141-01	99,046
SORENSEN, GEORGE D.....	MODEL FOR OAT-CELL CARCINOMA OF THE LUNG.....	5N01 CP65776-03	157,810
ORGANIZATION TOTAL	6	665,596	
MARY HITCHCOCK MEMORIAL HOSPITAL ZIP CODE 03755			
LANE, FRANK W, JR.....	CONDUCT RADIATION THERAPY TREATMENT.....	2N01 CB12087-10	118,790

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW HAMPSHIRE—Continued			
ORGANIZATION TOTAL	1	118,790	
STATE TOTAL	8	786,930	
NEW JERSEY			
BOONTON			
RIVERSIDE HOSPITAL ZIP CODE 07005			
EDWARDS, CHARLES H.....	HOSPICE CONCEPT FOR THE CARE OF TERMINAL CANCER PATIENTS	5N01 CN75391-01	108,019
ORGANIZATION TOTAL	1	108,019	
BOUND BROOK			
UNION CARBIDE CORPORATION—BOUND BROOK TECHNICAL CENTER ZIP CODE 08805			
BEACH, WILLIAM F.....	IMPROVED ULTRATHIN WEB STRUCTURES	2N01 HV81388-20	79,458
KWIATKOWSKI, G T.....	BLOOD COMPATIBLE POLY-ELECTROLYTES.....	5N01 HV32950-08	43,064
ORGANIZATION TOTAL	2	122,522	
CAMDEN			
INSTITUTE FOR MEDICAL RESEARCH ZIP CODE 08103			
CORIELL, LEWIS L.....	OPERATION OF A REPOSITORY FOR HUMAN MUTANT CELL LINES	3N01 GM62119-06	613,854
DION, ARNOLD S.....	STUDY OF COMMON ANTIGENS	1N01 CP81003-00	100,000
HOLBEN, JANE A.....	SPECIAL ANIMAL COLONY (INBRED MOUSE STRAINS)	1N01 RR82132-00	3,051
LASFARGUES, ETIENNE Y.....	IMMUNOPREVENTION OF SPONTANEOUS MAMMARY TUMORS	2N01 CB74201-01	85,432
MC GARRITY, GERALD J.....	MYCOPLASMA CONTAMINATION TESTING SERVICE.....	1N01 AG82117-00	44,572
NICHOLS, WARREN W.....	GENETICALLY MARKED CELLS FOR AGING RESEARCH.....	5N01 AG42865-11	178,657
ORGANIZATION TOTAL	6	1,025,566	
RCA CORPORATION ZIP CODE 08102			
CUMMINGS, MARTIN M.....	MAINTAIN PHS-CTS COMMUNICATIONS GROUND TERMINALS.....	5N01 LM74704-04	555,704
ORGANIZATION TOTAL	1	555,704	
CEDAR KNOLLS			
XYBION CORPORATION ZIP CODE 07927			
LICHTENBERGER, GERALD B.....	CLINFO III-DIFFUSION.....	1N01 RR82121-00	273,298
ORGANIZATION TOTAL	1	273,298	
CHERRY HILL			
COMPUTER HORIZONS ZIP CODE 08034			
NARIN, FRANCIS.....	EVALUATE PROGRESS IN PULMONARY AND HYPERTENSION RESEARCH.....	1N01 H082938-00	119,776
NARIN, FRANCIS.....	LINKAGE BETWEEN RESEARCH PUBLICATIONS AND NIH FUNDING.....	2N01 OD32109-13	128,271
ORGANIZATION TOTAL	2	248,047	
HIGHLAND PARK			
UNIVERSITY LABORATORIES ZIP CODE 08904			
BERNSTEIN, EUGENE H.....	PRODUCTION OF ONCOGENIC VIRUSES AND ANTISERA.....	2N01 CP33222-09	341,820
ORGANIZATION TOTAL	1	341,820	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW JERSEY—Continued			
MAYWOOD			
PFIZER, INC. ZIP CODE 07607			
AHMED, MUMTAZ.....	VIRAL INVOLVEMENT IN MAMMARY CARCINOMA.....	2N01 CP61054-03	195,000
HAREWOOD, KEN.....	PREPARATION AND PURIFICATION OF VIRAL COMPONENTS.....	5N01 CM53805-09	289,000
MAYYASI, SAMI.....	DEVELOPMENT OF VIRUS-CANCER TEST SYSTEM.....	2N01 CP33234-17	1,818,317
WOLFF, JOHN S, III.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	2N01 CP55703-06	164,212
ORGANIZATION TOTAL	4	2,466,529	
NEWARK			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY ZIP CODE 07103			
LASSER, NORMAN L.....	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	5N01 HV33104-10	513,873
RUSH, BENJAMIN F, JR.....	PROGRAM FOR EARLY DETECTION OF BREAST CANCER.....	3N01 CN35006-10	300,000
ORGANIZATION TOTAL	2	813,873	
NEWARK BETH ISRAEL MEDICAL CENTER ZIP CODE 07112			
KIRSCHNER, MARVIN A.....	DIET, STEROID HORMONE METABOLISM AND BREAST CANCER.....	1N01 CB84229-00	160,800
ORGANIZATION TOTAL	1	160,800	
PISCATAWAY			
COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY-RUTGERS MEDICAL SCHOOL ZIP CODE 08854			
JACOBSON, HOWARD N.....	STUDY OF CORONARY HEART DISEASE.....	5N01 HV42929-08	1,411,466
KUO, PETER T.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72968-03	96,495
ORGANIZATION TOTAL	2	1,507,961	
PRINCETON			
EDUCATIONAL TESTING SERVICE ZIP CODE 08540			
LEWIS, MICHAEL.....	SOCIAL-COGNITIVE DEVELOPMENT OF ONLY CHILDREN.....	1N01 HD82849-00	92,576
ORGANIZATION TOTAL	1	92,576	
EXCERPTA MEDICA FOUNDATION ZIP CODE 08540			
VINKEN, PIERRE J.....	SUPPORT FOR PUBLICATION OF EPILEPSY ABSTRACTS.....	2N01 NS32303-08	41,996
ORGANIZATION TOTAL	1	41,996	
MATHEMATICA, INC. ZIP CODE 08540			
DEVANEY, BARBARA.....	DETERMINANTS OF U S FERTILITY TREND VARIATION-1940-45.....	1N01 HD82835-00	102,443
DEVANEY, BARBARA.....	DETERMINANTS OF ADOLESCENT PREGNANCY AND CHILDBEARING.....	1N01 HD82841-00	83,695
ORGANIZATION TOTAL	2	186,138	
OPINION RESEARCH CORPORATION ZIP CODE 08540			
ZDEP, STAN.....	SURVEY OF PUBLIC ATTITUDES, RELATED TO BREAST CANCER.....	1N01 C085407-00	189,139
ORGANIZATION TOTAL	1	189,139	
PRINCETON UNIVERSITY ZIP CODE 08540			
COALE, ANSLEY J.....	SUPPORT FOR PUBLICATION OF POPULATION INDEX.....	2N01 HD12138-10	110,193
ORGANIZATION TOTAL	1	110,193	
TOTAL RESEARCH CORPORATION ZIP CODE 08540			
ZISSMAN, LORIN.....	BREAST CANCER DEMONSTRATION PROJECT INTERVIEW CONTRACT.....	2N01 CN65178-06	479,765
ORGANIZATION TOTAL	1	479,765	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW JERSEY—Continued			
RAHWAY			
MERCK AND COMPANY ZIP CODE 07065			
HILLEMANN, MAURICE R.....	ONCOGENIC VIRUS RESEARCH AND VACCINE DEVELOPMENT.....	3N01 CP12059-22	266,000
ORGANIZATION TOTAL	1 266,000		
SUMMIT			
OVERLOOK HOSPITAL ZIP CODE 07901			
GREGORY, JOHN J.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72964-02	93,550
ORGANIZATION TOTAL	1 93,550		
TRENTON			
NEW JERSEY GOVERNOR'S CABINET COMMITTEE ON CANCER CONTROL ZIP CODE 08625			
POLLACK, STEWART G.....	FEASIBILITY OF A STATE-WIDE CANCER CONTROL ACTIVITY.....	1N01 C085418-00	276,110
ORGANIZATION TOTAL	1 276,110		
NEW JERSEY STATE DEPARTMENT OF HEALTH ZIP CODE 08625			
ALTMAN, RONALD.....	ETIOLOGIC STUDIES OF CANCER IN NEW JERSEY.....	3N01 CP61031-09	469,466
KWALICK, DONALD S.....	IMPLEMENT CERVICAL CANCER SCREENING PROGRAM.....	1N01 CN85424-00	465,229
ORGANIZATION TOTAL	2 934,695		
WESTMONT			
KESSLER COMMUNICATIONS ZIP CODE 08108			
NOT APPLICABLE.....	INDEXING JOURNAL ARTICLES OF THE BIOMEDICAL SCIENCES.....	1N01 LM84703-00	59,000
ORGANIZATION TOTAL	1 59,000		
STATE TOTAL	36 10,353,301		
NEW MEXICO			
ALBUQUERQUE			
UNIVERSITY OF NEW MEXICO ZIP CODE 87131			
BARTOW, SUE A.....	BENIGN BREAST LESIONS IN RISK FOR BREAST CANCER.....	1N01 CB84231-00	87,200
KEY, CHARLES R.....	SUPPORT FOR TUMOR REGISTRY.....	2N01 CP33344-13	431,789
KEY, CHARLES R.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71036-01	8,110
KEY, CHARLES R.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81016-00	52,568
KLIGERMAN, MORTON M.....	A COMMUNITY-BASED CANCER CONTROL PROGRAM.....	3N01 CN65173-07	1,880,552
TUNG, KENNETH S.....	IMMUNOPATHOLOGIC CONSEQUENCES OF VASECTOMY.....	5N01 HD32717-09	111,616
WARNER, NOEL L.....	REAGENTS TO CHARACTERIZE HUMAN CELL SUBPOPULATIONS.....	1N01 CB84288-00	93,580
YUHAS, JOHN M.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	2N01 CB74203-01	94,000
ORGANIZATION TOTAL	8 2,759,415		
STATE TOTAL	8 2,759,415		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK			
ALBANY			
NEW YORK STATE DEPARTMENT OF HEALTH ZIP CODE 12237			
DOUGLASS, HAROLD O, JR.....	THERAPY OF PATIENTS WITH PANCREATIC CARCINOMA.....	3N01 CM43794-10	89,456
HOLYOKE, EDWARD D.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM43782-09	19,156
LOGRILLO, VITO M.....	EFFECTS OF INDUCED ABORTION ON SUBSEQUENT REPRODUCTION.....	5N01 HD62802-05	113,375
PICKREN, JOHN W.....	SUPPLY BLOOD & TISSUE SPECIMENS FROM CANCER PATIENTS.....	2N01 CP43392-05	38,251
ORGANIZATION TOTAL	4 260,238		
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE ZIP CODE 12229			
VESTERGAARD, PER B.....	STUDY OF STEROID EXCRETION IN BREAST CANCER PATIENTS.....	3N01 CB71465-20	13,930
ORGANIZATION TOTAL	1 13,930		
STATE UNIVERSITY OF NEW YORK ZIP CODE 12210			
HAPEMAN, KENNETH.....	OPERATION OF MEDLINE BACK-UP COMPUTER SYSTEM.....	2N01 LM64712-08	104,305
ORGANIZATION TOTAL	1 104,305		
UNION COLLEGE AND UNIVERSITY-ALBANY MEDICAL COLLEGE ZIP CODE 12208			
COULSTON, FREDERICK.....	MAINTENANCE OF CHIMPANZES FOR CANCER RESEARCH.....	1N01 CP81027-00	150,027
GOODMAN, A DAVID.....	RELATION OF THYROID FUNCTION TO MAMMARY TUMOR GROWTH.....	2N01 CB74107-01	37,000
HORTON, JOHN.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57032-08	115,711
HORTON, JOHN.....	DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45140-05	169,000
LEMPERT, NEIL.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52510-05	23,820
MC KNEALLY, MARTIN F.....	INTRAPLEURAL BCG AFTER PRIMARY SURGERY FOR LUNG CANCER.....	2N01 CB53940-06	231,486
SOSA, JULIO.....	COLLABORATIVE STUDIES IN CORONARY ARTERY SURGERY.....	2N01 HV62921-07	117,502
VAN HEUVEN, WICHARD A.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32124-07	72,967
VAN HEUVEN, WICHARD A.....	EVALUATION OF EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52146-02	31,526
ORGANIZATION TOTAL	9 949,039		
AMHERST			
FRONTIER SCIENCE AND TECHNOLOGY RESEARCH FOUNDATION ZIP CODE 14226			
COSTELLO, WILLIAM G.....	STATISTICAL SUPPORT FOR THE GASTROINTESTINAL TUMOR STUDY.....	3N01 CM77136-07	262,952
ZELEN, MARVIN.....	CANCER CONTROL PROGRAM FOR CLINICAL COOPERATIVE GROUPS.....	2N01 CN75348-03	835,000
ORGANIZATION TOTAL	2 1,097,952		
ARMONK			
INTERNATIONAL BUSINESS MACHINES CORPORATION ZIP CODE 10504			
PETERS, ARTHUR C.....	CARCINOGENICITY AND TOXICITY OF ENVIRONMENTAL CHEMICALS.....	1N01 ES82151-00	318,954
ORGANIZATION TOTAL	1 318,954		
BUFFALO			
ASSOCIATED BIOMEDIC SYSTEMS ZIP CODE 14202			
GLICK, J LESLIE.....	STUDY OF LYMPHOBLASTOID CELLS.....	2N01 CM02271-15	250,055
ORGANIZATION TOTAL	1 250,055		
NEW YORK STATE DEPARTMENT OF HEALTH-ROSWELL PARK MEMORIAL INSTITUTE ZIP CODE 14263			
BARLOW, JOSEPH.....	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67117-04	61,699
CHU, TSANN M.....	STUDY OF CARCINOEMBRYONIC ANTIGENS.....	2N01 CB33858-04	66,081
DAO, THOMAS L.....	STUDY OF STEROID SULFATION AND ESTROGEN-BINDING.....	2N01 CB43900-04	23,200
DAO, THOMAS L.....	CHEMOTHERAPY STUDIES OF PATIENTS WITH BREAST CANCER.....	5N01 CM53834-07	78,249
EVANS, JAMES T.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM57034-10	112,448

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
GUTAI, MARY W.....	BIOCHEMICAL MAPPING OF THE INTEGRATION SITE OF SV-40.....	5N01 CP71062-01	75,540
HELMSTETTER, CHARLES E.....	ISO-ANTIGENIC TYPING OF MOUSE STRAINS AND TUMORS.....	5N01 CM77101-01	90,267
MIHICH, ENRICO.....	IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM57039-03	104,515
MINOWADA, JUN.....	DIAGNOSTIC USE OF LEUKEMIA-ASSOCIATED ANTIGENS.....	2N01 CB74165-02	67,376
MURPHY, GERALD P.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55174-08	207,756
PAIGEN, BEVERLY J.....	METHODS OF ASSAYING ARYL HYDROCARBON HYDROXLAISE IN BLOOD.....	2N01 CP55629-09	42,745
PAPAHADJOPOULOS, P D.....	LIPOSOMAL ENCAPSULATION OF ANTITUMOR AGENTS.....	5N01 CM77118-01	156,159
SAKO, KUMAO.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65867-03	9,563
SHEDD, DONALD P.....	DEMONSTRATION PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55257-03	281,819
SINHA, DILIP K.....	CHANGING SENSITIVITY TO CARCINOGENESIS OF MAMMARY GLAND.....	5N01 CB74105-01	55,300
TAKITA, HIROSHI.....	IMMUNOTHERAPY OF SQUAMOUS CELL CARCINOMA.....	2N01 CB64007-03	122,641
WALLACE, H JAMES.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	3N01 CN55299-04	136,848
ORGANIZATION TOTAL	17	1,692,206	
STARKS ASSOCIATES ZIP CODE 14213			
PARSON, JACK.....	PRODUCTION OF BULK CHEMICALS AND DRUGS.....	3N01 CM87203-02	505,248
PAULL, KENNETH D.....	CHEMICAL AND DRUG EVALUATION IN CANCER CHEMOTHERAPY.....	3N01 CM53745-08	212,288
SCHULTZ, ROBERT J.....	RESYNTHESIS OF BULK CHEMICALS AND DRUGS.....	3N01 CM53769-06	195,823
STARKS, FRED W.....	ACQUIRE CHEMICALS & DRUGS FOR CANCER CHEMOTHERAPY.....	3N01 CM87206-02	200,988
ORGANIZATION TOTAL	4	1,114,347	
STATE UNIVERSITY OF NEW YORK AT BUFFALO ZIP CODE 14260			
ALBINO, JUDITH E.....	METHODOLOGIES TO MEASURE SOCIAL & PSYCHOLOGICAL FACTORS.....	2N01 DE72499-03	167,019
BATES, THEODORE R.....	IMPROVE EFFICACY OF ORAL NATURAL STEROIDS.....	3N01 HD62848-02	13,942
COSTA, GIOVANNI.....	ANOREXIA IN ADULT AND PEDIATRIC CANCER PATIENTS.....	5N01 CP65834-02	54,560
GUSTAVO, CUDKOWICS.....	IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM53766-04	151,164
KANO, KYOICHI.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52514-04	11,727
KOHN, ROBERT M.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72952-02	92,341
LORE, JOHN M, JR.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65868-06	29,282
NISENGARD, RUSSELL J.....	IMMUNOLOGIC CROSS-REACTIVITY OF ORAL STREPTOCOCCI.....	3N01 DE62488-05	161,253
STINSON, MURRAY W.....	CROSS-REACTING ANTIGENS/ORAL FLORA ACIDOGENIC BACTERIA.....	5N01 DE72408-01	69,767
ORGANIZATION TOTAL	9	751,055	
CHEEKTOWAGA			
CALSPAN CORPORATION ZIP CODE 14225			
BAIER, ROBERT E.....	MATERIALS COMPATIBLE WITH BLOOD.....	5N01 HV32953-10	142,402
ORGANIZATION TOTAL	1	142,402	
FARMINGDALE			
ARTEK SYSTEMS CORPORATION ZIP CODE 11735			
KITCHENER, WILLIAM R.....	T V CELL SCANNING AND DISPLAY SYSTEMS.....	3N01 CM77128-01	6,000
ORGANIZATION TOTAL	1	6,000	
ITHACA			
CORNELL UNIVERSITY ZIP CODE 14850			
COCKERELL, GARY L.....	STUDY OF COLON TUMORS.....	5N01 CP65744-04	166,810
HAAS, JERE D.....	ULTRASONIC ASSESSMENT OF NUTRITIONAL STATUS.....	1N01 CP85652-00	26,883
HANSEL, WILLIAM.....	STUDY OF CONTRACEPTIVE STEROIDS.....	2N01 HD22725-11	115,000
KALLFELZ, FRANCIS A.....	BIOLOGICAL EFFECTS OF IMPLANTED NUCLEAR ENERGY SOURCES.....	1N01 HV82917-00	37,958
SCOTT, FREDRIC W.....	ANIMAL MODEL FOR ANTIVIRAL EVALUTAION.....	2N01 AI52527-04	168,208
VAN SOEST, PETER J.....	ANALYSIS OF SAMPLES FROM A DIETARY FIBER STUDY.....	1N01 CP85633-00	20,998
ORGANIZATION TOTAL	6	535,857	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
LAKE PLACID			
TISSUE CULTURE ASSOCIATION—W. ALTON JONES CELL SCIENCE CENTER ZIP CODE 12946			
DOUGLAS, WILLIAM H.....	DIPLOID CHIMPANZEE AND HUMAN HEPATOCYTE CELL STRAINS.....	5N01 AI72500-02	111,001
DOUGLAS, WILLIAM H.....	CULTIVATION OF NORMAL PROSTATIC EPITHELIAL CELLS.....	5N01 CP65762-02	118,772
SMITH, JAMES R.....	IN VITRO ASSESSMENT OF HUMAN CELLULAR AGING.....	5N01 AG72117-01	42,366
ORGANIZATION TOTAL	3 272,139		
MELVILLE			
LONG ISLAND CANCER COUNCIL ZIP CODE 11746			
CRAMPTON, RAY.....	A COMMUNITY-BASED CANCER CONTROL PROGRAM.....	5N01 CN75389-07	802,666
ORGANIZATION TOTAL	1 802,666		
NEW YORK			
AMERICAN DIABETES ASSOCIATION ZIP CODE 10020			
WARD, CATHERINE.....	EVALUATE INSTRUCTION DATA FOR ADULT DIABETES DETECTION.....	1N01 LM84725-00	28,928
ORGANIZATION TOTAL	1 28,928		
AMERICAN HEALTH FOUNDATION ZIP CODE 10017			
FIALA, EMERICH.....	METABOLIC CAPACITY OF INTESTINAL MUCOSA.....	5N01 CP75948-02	100,880
REDDY, B S.....	STUDIES OF NATURAL INHIBITORS OF CHEMICAL CARCINOGENS.....	1N01 CP85659-00	147,237
SAN, RICHARD H.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	2N01 CP55705-10	158,209
WEISBURGER, JOHN H.....	METABOLISM OF CARCINOGENIC COMPOUNDS.....	5N01 CP55639-07	71,500
WEISBURGER, JOHN H.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	5N01 CP75940-02	148,880
WILLIAMS, GARY M.....	STUDIES OF COLON CARCINOGENESIS.....	5N01 CP75952-02	93,731
WYNDER, ERNST L.....	CORRELATION OF EPIDEMIOLOGIC AND METABOLIC PARAMETERS.....	5N01 CP65818-03	77,206
WYNDER, ERNST L.....	STUDY OF ARRHYTHMIAS IN CORONARY HEART DISEASE.....	5N01 HV22983-07	1,245,690
ORGANIZATION TOTAL	8 2,043,333		
AMRAM NOWAK ASSOCIATES ZIP CODE 10019			
NOWAK, AMRAM.....	PATIENT EDUCATION FILM WITH FACULTY & LEARNER GUIDES.....	3N01 LM74720-04	9,330
ORGANIZATION TOTAL	1 9,330		
CAROLYN HORTON AND ASSOCIATES ZIP CODE 10011			
NOT APPLICABLE.....	REPAIR, RESTORE AND REBIND RARE BOOKS.....	1N01 LM84708-00	6,000
ORGANIZATION TOTAL	1 6,000		
CATHOLIC MEDICAL CENTER OF BROOKLYN AND QUEENS ZIP CODE 11432			
MARTIN, DANIEL S.....	SCREENING AGAINST SPONTANEOUS MURINE MAMMARY TUMORS.....	2N01 CM67081-05	552,000
ORGANIZATION TOTAL	1 552,000		
CITY UNIVERSITY OF NEW YORK—MOUNT SINAI SCHOOL OF MEDICINE ZIP CODE 10029			
ALEDORT, LOUIS M.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	2N01 HB53020-04	47,890
AUFSES, ARTHUR H, JR.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM67096-04	110,002
BRUCKNER, HOWARD W.....	THERAPY OF PATIENTS WITH GASTRIC CARCINOMA.....	5N01 CM53841-09	178,045
HOLLAND, JAMES F.....	CHEMOIMMUNOTHERAPY OF ACUTE MYELOCYTIC LEUKEMIA.....	2N01 CB43879-06	139,621
HOLLAND, JAMES F.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	2N01 CM53837-10	89,997
HOLLAND, JAMES F.....	STUDY OF ETIOLOGY AND CONTROL OF LEUKEMIA.....	5N01 CP43225-11	401,323
NEFF, MARTIN S.....	ANDROGENS FOR TREATING ANEMIA IN CHRONIC HEMODIALYSIS.....	3N01 AM62213-04	266,916
NORTON, LARRY.....	NORTON-SIMON MODEL FOR PREDICTING TUMOR RESPONSE.....	1N01 CM87197-00	59,726
PAPATESTAS, ANGELOS E.....	DIET AND CHOLESTEROL METABOLISM IN BREAST CANCER.....	1N01 CB84318-00	198,000
ORGANIZATION TOTAL	9 1,491,520		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
COLUMBIA UNIVERSITY ZIP CODE 10027			
CANFIELD, ROBERT E.....	STUDY OF HUMAN CHORIONIC GONADOTROPIN.....	3N01 HD02251-13	46,337
FELDMAN, CHARLES H.....	EVALUATE SELF-MANAGEMENT SYSTEMS FOR ASTHMATIC CHILDREN.....	5N01 HR72973-01	202,914
GUNTAKA, RAMAREDDY V.....	PHYSICAL/BIOCHEMICAL MAPPING OF AVIAN SARCOMA VIRUS.....	5N01 CP71055-01	105,180
HILAL, SADEK K.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5N01 CB43910-04	44,721
JAFFE, ISRAELI A.....	CLINICAL TRIAL OF PENICILLAMINE IN RHEMATOID ARTHRITIS.....	1N01 AM82216-00	200,367
MARKS, PAUL A.....	REGULATION OF EUKARYOTIC GENE SEQUENCES.....	2N01 CP61008-02	34,896
MELLINS, ROBERT B.....	EVALUATION & FOLLOW-UP OF SELECTED PARAMETERS IN INFANTS.....	2N01 HD52856-08	420,369
NAKANISHI, KOJI.....	SYNTHESIS OF NEW RETINOIDS.....	5N01 CP75897-02	78,835
SPIEGELMAN, SOL.....	REPLICATION OF ONCOGENIC RNA VIRUSES.....	5N01 CP71016-01	1,307,100
SUCIU-FOCA, NICOLE.....	ACQUISITION OF HOMOZYGOUS TYPING CELLS.....	1N01 AI82552-00	121,660
ORGANIZATION TOTAL	10 2,562,379		
CORNELL UNIVERSITY MEDICAL CENTER ZIP CODE 10021			
KARLIN, DAVID.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62140-02	30,642
POTTS, D GORDON.....	CLINICAL EVAL. OF COMPUTERIZED TRANSAXIAL TOMOGRAPHY.....	5N01 CB43980-05	55,778
SCHEIDT, STEPHEN.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52931-05	96,981
SILVER, RICHARD T.....	SUPPORT FOR CLINICAL CANCER CHEMOTHERAPY PROGRAM.....	2N01 CN35025-09	76,035
WEKSLER, MARC E.....	LYMPHOCYTE AND SERUM IMMUNOGLOBULIN DURING LIFE OF MICE.....	5N01 AG62122-05	38,443
ORGANIZATION TOTAL	5 297,879		
HEALTH INSURANCE PLAN OF GREATER NEW YORK ZIP CODE 10022			
FINK, RAYMOND.....	STUDY OF VALUE OF MAMMOGRAPHY.....	2N01 CP43278-08	241,167
ORGANIZATION TOTAL	1 241,167		
INDIVIDUAL AWARD—WEISMAN, ABNER I. ZIP CODE 10028			
WEISMAN, ABNER I.....	PROVIDE PRECOLUMBIAN MEDICAL SCULPTURE ITEMS.....	1N01 LM84724-00	29,380
ORGANIZATION TOTAL	1 29,380		
JAMES MACDONALD COMPANY ZIP CODE 10023			
NOT APPLICABLE.....	REPAIR, RESTORE AND REBIND RARE BOOKS.....	1N01 LM84709-00	8,000
ORGANIZATION TOTAL	1 8,000		
JEWISH HOSPITAL AND MEDICAL CENTER OF BROOKLYN ZIP CODE 11238			
DOSIK, HARVEY.....	CYTOGENETIC STUDY OF VIRAL TRANSFORMATION.....	2N01 CP43251-10	150,000
DOSIK, HARVEY.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73002-02	116,642
ORGANIZATION TOTAL	2 266,642		
LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER ZIP CODE 11040			
KRAMER, ROBERT J.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72959-04	83,418
LIPSITZ, PHILIP.....	STUDY OF PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42821-09	8,750
SAMUEL, PAUL.....	ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52915-03	101,271
ORGANIZATION TOTAL	3 193,439		
MAIMONIDES MEDICAL CENTER ZIP CODE 11219			
LICHSTEIN, EDGAR.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72960-02	99,264
ORGANIZATION TOTAL	1 99,264		
MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES ZIP CODE 10021			
BURCHENAL, JOSEPH H.....	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS.....	5N01 CM57043-11	381,107
FEIT, CARL.....	COLLECTION OF SERIAL SERUM SAMPLES FROM CANCER PATIENTS.....	2N01 CB74124-01	83,610
HIRSHAUT, YASHAR.....	ACQUISITION OF HUMAN TUMOR SPECIMENS FOR VIRUS STUDIES.....	2N01 CP61038-04	242,700
LAUGHLIN, JOHN S.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	5N01 CN45057-12	271,237
LIPKIN, MARTIN.....	ANALYSIS OF CELL PROLIFERATION IN FAMILIAL POLYPOSIS.....	2N01 CP43366-07	220,619
MELAMED, MYRON R.....	STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS.....	2N01 CN45007-08	850,000

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
SCHWARTZ, MORTON K.....	BIOLOGIC MARKERS IN BREAST CANCER PATIENTS.....	5N01 CB74206-02	108,300
SHAPIRO, WILLIAM R.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM57019-04	104,413
STEARNS, MAUS W, JR.....	THERAPY OF PATIENTS WITH LARGE BOWEL CARCINOMA.....	5N01 CM53844-07	65,453
STRONG, ELLIOT.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87224-00	81,662
YOUNG, CHARLES W, JR.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	3N01 CM43804-08	29,712
ORGANIZATION TOTAL	11 2,438,813		
MONTEFIORE HOSPITAL AND MEDICAL CENTER ZIP CODE 10467			
HOLLAND, JIMMIE.....	PSYCHOLOGICAL ASPECTS OF BREAST CANCER.....	2N01 CN55214-05	131,667
KOSS, LEOPOLD G.....	SCREENING FOR EARLY ENDOMETRIAL CANCERS.....	1N01 CB84233-00	203,232
WEITZMAN, ELLIOT D.....	EVALUATION & FOLLOW-UP OF SELECTED PARAMETERS IN INFANTS.....	2N01 HD52855-04	162,502
ORGANIZATION TOTAL	3 497,401		
NEW YORK ACADEMY OF MEDICINE ZIP CODE 10029			
BRANDON, ALFRED N.....	REGIONAL MEDICAL LIBRARY SERVICES—REGION II.....	3N01 LM64722-07	473,530
ORGANIZATION TOTAL	1 473,530		
NEW YORK BLOOD CENTER ZIP CODE 10021			
PRINCE, ALFRED M.....	EVALUATE POLYVALENT HEPATITIS B VACCINE IN CHIMPANZEES.....	3N01 AI62500-06	84,927
SZMUNESS, WOLF.....	EPIDEMIOLOGY OF VIRAL HEPATITIS IN HEMODIALYSIS UNITS.....	2N01 AI62512-10	391,686
SZMUNESS, WOLF.....	INTERRUPT MATERNAL-INFANT TRANSMISSION OF HEPATITIS B.....	1N01 AI82561-00	80,750
SZMUNESS, WOLF.....	MATERNAL TO INFANT TRANSMISSION OF HEPATITIS B.....	2N01 HB62908-07	20,000
ORGANIZATION TOTAL	4 577,363		
NEW YORK CITY HEALTH SERVICES ADMINISTRATION—PUBLIC HEALTH RESEARCH INSTITUTE OF CITY OF N Y ZIP CODE 10016			
HIRST, GEORGE K.....	HUMAN CENTRAL NERVOUS SYSTEM SLOW VIRUS INFECTIONS STUDY.....	2N01 NS70082-21	89,245
ORGANIZATION TOTAL	1 89,245		
NEW YORK MEDICAL COLLEGE ZIP CODE 10029			
BLACK, MAURICE M.....	STUDY OF IMMUNOLOGICAL MEASUREMENTS.....	2N01 CP33398-07	168,000
ORGANIZATION TOTAL	1 168,000		
NEW YORK STATE OFFICE OF DRUG ABUSE SERVICES ZIP CODE 10047			
FORREST, JACQUELINE D.....	FAMILY PLANNING EFFECT ON ADOLESCENT FERTILITY.....	1N01 HD82844-00	74,546
ORGANIZATION TOTAL	1 74,546		
NEW YORK UNIVERSITY ZIP CODE 10003			
BASCH, ROSS S.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	2N01 CB74176-01	70,199
BASILICO, CLAUDIO.....	STUDY OF MUTANT VERTEBRATE CELLS.....	2N01 CP33279-07	161,332
DILLER, LEONARD.....	EARLY INTERVENTION IN REHABILITATION OF CANCER PATIENTS.....	5N01 CN55188-05	202,464
FRIEDMAN-KIEN, ALVIN E.....	STUDY OF INTERFERON AND VIRUS-INDUCED SKIN LESIONS.....	2N01 AI02131-12	184,421
GLASSMAN, EPHRAIM.....	COLLABORATIVE STUDIES OF CORONARY ARTERY SURGERY.....	5N01 HV32976-09	118,466
GOLDBERG, BURTON D.....	ISOLATE/CHARACTERIZE ANTIBODIES TO COLLAGEN/PROCOLLAGEN.....	1N01 CB84314-00	74,100
KUSCHNER, MARVIN.....	STUDY OF PULMONARY CARCINOGENESIS.....	2N01 CP33260-11	395,975
MOOR-JANKOWSKI, JAN.....	ACQUISITION, BREEDING, AND MAINTENANCE OF CHIMPANZEES.....	5N01 HB42971-12	374,456
MOOR-JANKOWSKI, JAN.....	NONHUMAN PRIMATE COLONIES FOR NIH RESEARCH PROGRAMS.....	5N01 RR62132-02	364,464
PASTERNAK, BERNARD S.....	BREAST CANCER IN INITIALLY ASYMPTOMATIC WOMEN.....	5N01 CB74103-02	112,400
RANSDOFF, JOSEPH M.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	3N01 CM67059-04	254,420
VILCEK, JAN T.....	METHODS OF PRODUCING HUMAN INTERFERON.....	2N01 AI02169-15	62,145
ORGANIZATION TOTAL	12 2,374,842		
PLANEO PARENTHOOD-WORLD POPULATION ZIP CODE 10019			
DRYFOOS, JOY G.....	BEHAVIORAL STATUS OF CHILDREN BORN TO ADOLESCENT MOTHERS.....	5N01 HD72805-01	45,720
ORGANIZATION TOTAL	1 45,720		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
POPULATION COUNCIL ZIP CODE 10017			
GUPTA, GOPI N.....	DEVELOPMENT OF BIO-ERODABLE CONTRACEPTIVE IMPLANTS.....	3N01 HD72827-02	15,565
ORGANIZATION TOTAL	1 15,565		
ROCKEFELLER UNIVERSITY ZIP CODE 10021			
GOTSCHLICH, EMIL C.....	STUDIES ON MENINGOCOCCAL POLYSACCHARIDE VACCINES.....	2N01 A112502-09	63,644
KING, TE PIAO.....	PRODUCTION OF RAGWEED ANTIGENS E, K, RA3 AND RA5.....	1N01 A182567-00	271,927
ORGANIZATION TOTAL	2 335,571		
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH ZIP CODE 10021			
ANDERSON, LUCY.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	5N01 CP75951-03	90,535
BALIS, M EARL.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	5N01 CP75950-01	88,685
BOYSE, EDWARD A.....	PREPARE BULK SUPPLIES OF ALLOANTISERA.....	5N01 A182541-01	419,346
BOYSE, EDWARD A.....	INFLUENCE OF VIRUS-RELATED GENES TO CANCER.....	5N01 CP71003-01	128,156
CHAGANTI, RAJU S.....	IDENTIFY HETEROZYGOUS CARRIERS OF DNA REPAIR DEFECTS.....	1N01 CP85665-00	81,728
CUNNINGHAM-RUNDLES, SUSANNA.....	IMMUNOLOGIC RESPONSE OF REGIONAL LYMPH NODE CELLS.....	1N01 CB84228-00	100,160
DUPONT, BO.....	ACQUISITION OF HOMOZYGOUS TYPING CELLS.....	1N01 A182550-00	90,492
FOGH, JORGEN.....	ISOLATE AND TISSUE CULTURE HUMAN TUMOR CELLS.....	2N01 CB43854-06	91,035
HIRSHAUT, YASHAR.....	EFFORTS OF IMMUNE STIMULANTS ON HUMAN IMMUNE RESPONSE.....	2N01 CB53970-04	66,310
KASSEL, ROBERT L.....	PLASMA THERAPY OF MOUSE TUMORS.....	2N01 CB74197-01	100,300
LLOYD, KENNETH O.....	TUMOR OR ORGAN-ANTIGENS-DIAGNOSTIC APPLICATION.....	2N01 CB64021-02	23,109
LLOYD, KENNETH O.....	SEROLOGIC ASSAYS WITH MELANOMA ASSOCIATED ANTIGENS.....	2N01 CB74127-01	56,562
MOORE, MALCOLM A.....	STUDY MULV INFECTION AND MYELOID CELL DIFFERENTIATION.....	5N01 CP71053-01	153,900
MURPHY, MARTIN J, JR.....	SOURCE OF HUMAN URINARY ERYTHROPOIETIN.....	1N01 HB82924-00	90,024
OETTGEN, HERBERT F.....	IMMUNOTHERAPY WITH TUMOR PREPARATIONS IN MAN.....	2N01 CB64062-03	36,193
OETTGEN, HERBERT F.....	IMMUNIZATION WITH BCG AND ALLOGENEIC RENAL CANCER CELLS.....	2N01 CB74145-01	116,228
OLD, LLOYD J.....	THERAPY IN MICE WITH TUMOR NECROSIS FACTOR (TNF).....	2N01 CB64051-02	89,000
OLD, LLOYD J.....	STUDY LEUKEMOGENESIS IN THE AKR MOUSE.....	1N01 CP81054-00	225,000
PINSKY, CARL M.....	C. PARVUM AS A THERAPEUTIC ADJUNCT TO BREAST CARCINOMA.....	2N01 CB53873-04	54,834
PINSKY, CARL M.....	BCG BEFORE RADIATION & CYSTECTOMY IN BLADDER CANCER.....	2N01 CB74142-01	50,525
PINSKY, CARL M.....	BCG IMMUNOTHERAPY-RECURRENT SUPERFICIAL BLADDER CANCER.....	2N01 CB74146-01	46,451
POLLACK, MARILYN.....	REFERENCE HLA LABORATORIES.....	1N01 A182545-00	19,270
POLLACK, MARILYN.....	HLA TYPING OF HUMAN TISSUE CULTURE CELL LINES.....	1N01 CB84255-00	26,786
PRENSKY, WOLF.....	MOLECULAR HYBRIDIZATION STUDIES WITH ACTIVE RNA.....	2N01 CM53820-04	72,366
PRENSKY, WOLF.....	STRUCTURE-DISTRIBUTION OF ONCORNAVIRUSES.....	5N01 CP71059-01	135,360
ROSEN, PAUL P.....	EPIDEMIOLOGY OF MEDULLARY AND LOBULAR BREAST CANCER.....	2N01 CB63997-04	84,750
ROSEN, PAUL P.....	DISSEMINATED CANCER IN INVASIVE MAMMARY CARCINOMA.....	5N01 CB74097-02	73,738
SCHWARTZ, MORTON K.....	BIOCHEMICAL ANALYSIS OF HUMAN BREAST CYST FLUID.....	2N01 CB53853-05	8,347
SHEN, FUNG-WIN.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64031-02	27,733
SHIKU, HIROSHI.....	IN VITRO AUGMENTATION OF CELL MEDIATED CYTOTOXICITY.....	2N01 CB74130-01	91,908
STRONG, ELLIOT W.....	LEVAM AS THERAPEUTIC ADJUNCT IN SQUAMOUS CARCINOMA.....	2N01 CB53875-03	82,772
ORGANIZATION TOTAL	31 2,821,603		
ST. LUKE'S HOSPITAL CENTER ZIP CODE 10025			
KEMP, HARVEY G.....	COLLABORATIVE STUDIES ON CORONARY ARTERY SURGERY.....	5N01 HV32978-08	86,915
WETHERS, DORIS L.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB73006-02	99,645
ORGANIZATION TOTAL	2 186,560		
STATE UNIVERSITY OF NEW YORK-DOWNSTATE MEDICAL CENTER ZIP CODE 11203			
BROWN, AUDREY K.....	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42819-09	24,585
CARTER, ANNE C.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45139-06	292,687
CRAIG, JOHN P.....	ESTABLISH LAB FOR TITRATION OF CHOLERA SKIN TOXINS.....	2N01 A102091-13	84,251
FRIEDMAN, ELI A.....	DETERMINE CLINICAL EFFICACY OF OXIDIZED STARCH IN UREMIA.....	2N01 AM42206-06	87,422
HALPERN, MIMI N.....	MODEL OF NEURONAL DIFFERENTIATION DEVELOPMENT AND AGING.....	1N01 RR82139-00	37,428
PARSA, ISMAIL.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 A142551-06	121,051
SCHIFFMAN, GERALD.....	OPERATION OF PNEUMOCAL POLYSACCHARIDE REFERENCE LAB.....	5N01 A142541-06	160,795
TOLLES, WALTER E.....	CELL PREPARATIONS OF GYNECOLOGIC CYTOPATHOLOGY SPECIMENS.....	5N01 CB43955-08	45,296

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
ORGANIZATION TOTAL	8	853,515	
YESHIVA UNIVERSITY ZIP CODE 10033			
BLAUFOX, MORTON D.....	STUDY OF HYPERTENSION THERAPY.....	5N01 HV22931-14	804,204
EDER, HOWARD A.....	DETERMINE SUBCLASSES OF PLASMA HIGH DENSITY LIPOPROTEINS.....	1N01 HV82925-00	58,614
JAFFE, ERNST R.....	EVALUATE RESEARCH NEED IN HEMATOLOGY.....	1N01 AM82219-00	99,984
LILLY, FRANK.....	GENETIC AND IMMUNOLOGIC FACTORS IN VIRAL LEUKEMOGENESIS.....	5N01 CP71017-01	137,149
NAGEL, RONALD L.....	EVALUATE THERAPEUTIC AGENTS FOR SICKLE CELL DISEASE.....	1N01 HB82937-00	334,900
ROMNEY, SEYMOUR L.....	CORRELATION OF EPIDEMIOLOGIC AND METABOLIC PARAMETERS.....	2N01 CP65788-05	139,239
SHULMAN, KENNETH M.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER.....	3N01 NS72371-01	28,729
SOEIRO, RUY.....	HOST RESTRICTION OF FRIEND LEUKEMIA VIRUS.....	2N01 CP43380-06	109,170
ORGANIZATION TOTAL	8	1,711,989	
ROCHESTER			
EASTMAN DENTAL CENTER ZIP CODE 14620			
CURZON, MARTIN E.....	STRONTIUM, LITHIUM, & FLUORINE EFFECT ON DENTAL PLAQUE.....	3N01 DE72409-03	81,090
LEVERETT, DENNIS H.....	EFFECT OF TOOTH-CLEANING ON SODIUM FLUORIDE RINSE.....	5N01 DE72407-01	50,741
LEVERETT, DENNIS H.....	EFFECT OF DAILY MOUTHRINSING WITH FLUORIDES.....	1N01 DE82417-00	176,534
POLDON, ALAN M.....	LONG-TERM EFFECT OF ORTHODONTIC TREATMENT.....	1N01 DE82413-00	153,822
ORGANIZATION TOTAL	4	462,187	
UNIVERSITY OF ROCHESTER ZIP CODE 14627			
BARTLETT, JOHN R.....	STUDY OF FEASIBILITY OF A SENSORY PROSTHESIS.....	2N01 NS02279-11	89,770
DOUGLAS, R GORDON, JR.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	5N01 AI22503-13	324,202
FEIBEL, JOHN H.....	COMPREHENSIVE STROKE CENTER.....	1N01 NS82385-00	450,470
HARE, JOHN D.....	TRANSPORT SYSTEMS IN NEOPLASTIC CELLS.....	2N01 CP45611-07	67,500
HILF, RUSSELL.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	5N01 CB74204-02	88,200
MAY, ALLYN G.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22539-12	18,174
RUBIN, PHILIP.....	DEVELOPMENT OF RADIATION ONCOLOGY RESEARCH.....	3N01 CM77159-01	14,000
SMITH, DAVID H.....	STUDIES OF HEMOPHILUS INFLUENZAE B VACCINE.....	2N01 AI72523-01	317,849
WHEELLESS, LEON L, JR.....	STUDY A SLIT-SCAN TECHNIQUE FOR CANCER DETECTION.....	2N01 CB33862-07	357,062
YU, PAUL N.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72966-03	112,606
ORGANIZATION TOTAL	10	1,839,833	
SARANAC LAKE			
TRUOEU INSTITUTE ZIP CODE 12983			
LEFFORD, MAURICE J.....	MAINTAIN A MYCOBACTERIAL CULTURE COLLECTION.....	5N01 AI52529-03	77,965
ORGANIZATION TOTAL	1	77,965	
SCHENECTADY			
GENERAL ELECTRIC COMPANY—CORPORATE RESEARCH AND DEVELOPMENT CENTER ZIP CODE 12301			
SWANK, R K.....	DEVELOPMENT OF LARGE AREA SOLID STATE IMAGE RECEPTORS.....	2N01 CB74112-01	279,185
ORGANIZATION TOTAL	1	279,185	
STONY BROOK			
STATE UNIVERSITY OF NEW YORK AT STONY BROOK ZIP CODE 11794			
LANE, BERNARD P.....	STUDY OF CARCINOGENESIS IN ORGAN CULTURE.....	5N01 CP33361-07	129,385
LERNER, RAYMOND C.....	OUTCOME OF PREGNANCY FOLLOWING PREVIOUS INDUCED ABORTION.....	5N01 HD62803-03	120,000
ORGANIZATION TOTAL	2	249,385	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NEW YORK—Continued			
SYRACUSE			
BRISTOL-MYERS COMPANY—BRISTOL LABORATORIES ZIP CODE 13201			
BRADNER, WILLIAM T.....	NEW ANTINEOPLASTIC DRUG EVALUATION.....	5N01 CM77147-01	333,000
CLARIDGE, CHARLES A.....	PRODUCTION OF NOVEL ANTINEOPLASTIC COMPOUNDS.....	5N01 CM77138-03	260,000
DOYLE, TERENCE W.....	SYNTHESIS POTENTIAL ANTICANCER AGENTS.....	1N01 CM87180-00	226,324
ORGANIZATION TOTAL	3 819,324		
STATE UNIVERSITY OF NEW YORK—UPSTATE MEDICAL CENTER ZIP CODE 13210			
HENNING, LOIS B.....	STUDYING SLEEP APNEA AND SIDS: DEVELOPMENTAL CORRELATES.....	3N01 HD52853-03	11,500
HENRY, JOHN B.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52513-05	18,133
HOLTZAPPLE, PHILIP G.....	DETERMINE NEOPLASTIC CELL BODY COMPOSITION BY ULTRASOUND.....	1N01 CP85653-00	106,240
SPRING-MILLS, ELINOR J.....	STUDY MORPHOLOGY OF NORMAL/ABNORMAL MAMMARY TISSUE.....	1N01 CB84239-00	76,100
ORGANIZATION TOTAL	4 211,973		
VALHALLA			
NEW YORK MEDICAL COLLEGE ZIP CODE 10595			
ROSENKRANZ, HERBERT S.....	MUTAGENESIS SYSTEMS FOR CARCINOGENESIS SCREENING.....	3N01 CP65855-06	58,525
ROSENKRANZ, HERBERT S.....	STUDIES OF METABOLIC CAPACITY IN INTESTINAL MUCOSA.....	3N01 CP75949-01	84,016
ROSENKRANZ, HERBERT S.....	TIER ONE MICROSOMAL ASSAY FOR MUTAGENESIS.....	2N01 ES62124-03	186,252
ORGANIZATION TOTAL	3 328,793		
STATE TOTAL	221 33,073,314		
NORTH CAROLINA			
CHAPEL HILL			
NORTH CAROLINA HEART ASSOCIATION ZIP CODE 27514			
HIRSCHAUER, PAUL E.....	COMPREHENSIVE STROKE CENTER.....	1N01 NS82386-00	356,917
ORGANIZATION TOTAL	1 356,917		
UNIVERSITY OF NORTH CAROLINA SYSTEM—UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ZIP CODE 27514			
COGSWELL, BETTY E.....	ADOLESCENTS' PERSPECTIVES ON THE HEALTH CARE SYSTEM.....	1N01 HD82837-00	105,786
DENNY, FLOYD W.....	CLINICAL EVALUATION OF RESPIRATORY VACCINES.....	3N01 AI22505-12	66,331
GRISHAM, JOE W.....	CARCINOGENESIS SCREENING USING CELL CULTURE ASSAYS.....	2N01 CP55707-04	105,541
GRIZZLE, JAMES E.....	STUDY OF HYPERLIPOPROTEINEMIA.....	3N01 HV12243-13	119,370
HAUGHTON, GEOFFREY.....	GENETIC CONTROL OF SUSCEPTIBILITY TO CANCER.....	2N01 CB74182-01	77,319
KAUFMAN, DAVID G.....	STUDIES OF CARCINOGENESIS IN HUMAN TISSUE.....	3N01 CP75956-02	107,528
MC MILLAN, CAMPBELL W.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	2N01 HB53016-05	43,960
ROBERTS, HAROLD R.....	STANDARDS FOR THROMBOSIS AND HEMOSTASIS.....	1N01 HB82934-00	146,438
RUSSELL, STEPHEN W.....	DEPLETION OF MONONUCLEAR PHAGOCYTES IN VIVO.....	1N01 CB84271-00	139,557
SCHEFFLER, RICHARD M.....	STUDY OF ECONOMIC VALUE OF TRAINING IN BIOSCIENCE.....	3N01 OD42152-10	2,265
ORGANIZATION TOTAL	10 914,095		
DURHAM			
DUKE UNIVERSITY ZIP CODE 27706			
BOLOGNESI, DANI P.....	STUDIES OF EXPRESSION OF RNA TUMOR VIRUS GENOME.....	2N01 CP33308-08	579,370
DEUBNER, DAVID C.....	EPIDEMIOLOGY OF PRE- AND POST-MENOPAUSAL BREAST CANCER.....	2N01 CB63996-02	169,700
GRANT, J P.....	NUTRITIONAL PARAMETERS IN CANCER PATIENTS.....	1N01 CP85656-00	144,589
HEYMAN, ALBERT.....	DEVELOP PILOT STROKE DATA BANK NETWORK CENTER.....	5N01 NS82396-01	127,516
JOHNSON, ARMEAD H.....	NCI HISTOCOMPATIBILITY TESTING CENTER.....	2N01 CB53890-06	244,943

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NORTH CAROLINA—Continued			
MC CARTY, KENNETH S.....	PREMALIGNANT HUMAN MAMMARY EPITHELIAL HYPERPLASIAS.....	1N01 CB84223-00	69,725
MC GRATH, DIANE.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	5N01 CN55234-07	188,190
MC LELLAND, ROBERT.....	EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45064-05	287,177
ODOM, GUY L.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67010-07	204,817
ROSSE, WENDELL F.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72993-02	40,286
SNYDERMAN, RALPH.....	DIAGNOSTIC APPLICATION OF MONOCYTE FUNCTION IN CANCER.....	2N01 CB74121-01	63,271
SPOCK, ALEXANDER.....	PULMONARY CHANGES IN CYSTIC FIBROSIS.....	1N01 HR82929-00	147,495
WELLS, SAMUEL A, JR.....	SCREENING RELATIVES OF PATIENTS WITH MEDULLARY CARCINOMA.....	5N01 CB63994-03	98,733
WHISNANT, CAROL C.....	MOLECULAR STUDIES OF T-CELL MEDIATED CYTOTOXICITY.....	2N01 CB74152-01	56,671
ORGANIZATION TOTAL	14	2,422,483	
RESEARCH TRIANGLE PARK			
BECTON, DICKINSON AND COMPANY—RESEARCH CENTER ZIP CODE 27709			
CAVENDER, F L.....	EFFECT OF EXPOSURE TO AIRBORNE ENVIRONMENTAL AGENTS.....	2N01 ES42164-11	514,341
ORGANIZATION TOTAL	1	514,341	
RESEARCH TRIANGLE INSTITUTE ZIP CODE 27709			
CARROLL, F I.....	SYNTHESIS OF NEW RETINOLIDS.....	5N01 CP75932-03	116,457
COOK, CLARENCE E.....	CHEMICAL CONTRACEPTIVES FOR THE MALE AND FEMALE.....	3N01 HD62814-07	118,558
COOK, CLARENCE E.....	SYNTHESIS AND TESTING OF CONTRACEPTIVE AGENTS.....	5N01 HD72818-01	64,292
COOK, CLARENCE E.....	PREPARE ANTIOVULATORY AND POSTOVULATORY AGENTS.....	1N01 HD82811-00	152,781
HARRIS, BENJAMIN S.....	PILOT STUDY FOR A NATIONAL SURVEY OF EPILEPSY.....	3N01 NS82383-01	421,455
KEPLER, JOHN A.....	PREPARATION OF RADIOLABELED MATERIALS.....	5N01 CM67121-02	190,000
KOO, HELEN P.....	RELATION BETWEEN FERTILITY, MARRIAGE AND REMARRIAGE.....	3N01 HD52838-02	14,634
MARKS, T.....	TERATOGENIC POTENTIAL OF ENVIRONMENTAL AGENTS.....	5N01 ES62127-06	213,454
PITT, COLIN G.....	SYNTHESIS OF IRON CHELATING AGENTS FOR COOLEY'S ANEMIA.....	5N01 AM72231-02	116,704
PITT, COLIN G.....	BIODEGRADABLE POLYMERS AND CONTRACEPTIVE DRUGS.....	5N01 HD32741-09	210,081
POOLE, KENNETH W.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM—DATA CENTER.....	2N01 HV72979-01	173,471
WALL, MONROE E.....	ISOLATION OF ANTINEOPLASTIC AGENTS FROM PLANTS.....	5N01 CM67089-04	194,010
YASUDA, HIROTSUGU K.....	STUDY OF ELECTRODELESS GLOW DISCHARGE & POLYMER SURFACES.....	5N01 HV32913-11	120,047
ORGANIZATION TOTAL	13	2,105,944	
WINSTON-SALEM			
WAKE FOREST UNIVERSITY ZIP CODE 27109			
ALEXANDER, EBEN, JR.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67054-04	41,879
CLARKSON, THOMAS B.....	NONHUMAN PRIMATE MODELS OF ATHEROSCLEROSIS.....	3N01 HV53029-05	310,896
CLARKSON, THOMAS B.....	PRIMATE MODELS OF ATHEROSCLEROSIS AND HYPERTENSION.....	5N01 HV72978-02	251,128
CLARKSON, THOMAS B.....	DOMESTIC SQUIRREL MONKEY PRODUCTION.....	5N01 RR52149-05	96,541
MC HENRY, LAWRENCE C.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS.....	3N01 HV72925-06	308,403
ORGANIZATION TOTAL	5	1,008,847	
STATE TOTAL	44	7,322,627	
OHIO			
BEDFORD			
BEN VENUE LABORATORIES ZIP CODE 44146			
WICKES, GLENN.....	DEVELOP AND PRODUCE CLINICAL DOSES OF ANTITUMOR AGENTS.....	5N01 CM67109-03	1,149,950
ORGANIZATION TOTAL	1	1,149,950	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
OHIO—Continued			
BOWLING GREEN			
BOWLING GREEN STATE UNIVERSITY ZIP CODE 43404			
NEAL, ARTHUR G.....	ALIENATION AND FERTILITY CONTROL IN EARLY MARRIAGE YEARS.....	2N01 HD62833-03	111,309
ORGANIZATION TOTAL	1 111,309		
CINCINNATI			
UNIVERSITY OF CINCINNATI ZIP CODE 45221			
KASHYAP, MOTI L.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV22914-08	1,005,240
MOSKOWITZ, MYRON.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55310-05	198,389
OLINGER, CHARLES P.....	NONINVASIVE DETECTION OF ATHEROSCLEROTIC LESIONS.....	3N01 HV72924-07	504,218
ROMHILT, DONALD W.....	CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52930-04	84,477
SHUMRICK, DONALD A.....	CHEMOTHERAPY IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87222-00	44,319
SUTHERLAND, JAMES M.....	PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42818-11	15,975
ORGANIZATION TOTAL	6 1,852,618		
CLEVELAND			
CANCER CENTER, INC. ZIP CODE 44106			
BANISTER, OLIVE K.....	DEVELOP AND IMPLEMENT AT-HOME REHABILITATION PROGRAMS.....	2N01 CN65302-05	373,171
ORGANIZATION TOTAL	1 373,171		
CASE WESTERN RESERVE UNIVERSITY ZIP CODE 44106			
BOAT, THOMAS F.....	COMPOSITION OF RESPIRATORY MUCUS.....	5N01 HR52957-02	46,000
CAPLAN, ARNOLD I.....	PREPARE CULTURES OF EMBRYONIC CHICK LIMB CHONDROCYTES.....	5N01 DE72403-01	27,192
DEARBORN, DORR G.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	5N01 HR72920-01	89,978
HOPFINGER, ANTON J.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	2N01 CP75927-01	120,548
HOUSER, HAROLD B.....	DIABETES MELLITUS IN THE GILA RIVER INDIAN COMMUNITY.....	2N01 AM62221-03	65,454
HUBAY, CHARLES A.....	THERAPY OF CARCINOMA OF BREAST.....	2N01 CB43990-09	204,700
MORTIMER, EDWARD A, JR.....	STUDY OF CANCER SUBJECTS INOCULATED WITH SV40 VIRUS.....	2N01 CP43201-09	40,959
MORTIMER, J THOMAS.....	STUDY OF INTRAMUSCULAR STIMULATION OF PARALYZED MUSCLE.....	2N01 NS22314-07	225,060
ORGANIZATION TOTAL	8 819,891		
CLEVELAND CLINIC HOSPITAL ZIP CODE 44106			
BRAUN, WILLIAM E.....	HISTOCOMPATIBILITY-MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI22536-07	34,096
BRAUN, WILLIAM E.....	TYPING OF HUMAN TISSUES.....	3N01 AI81298-19	10,000
BRAUN, WILLIAM E.....	REFERENCE HLA LABORATORIES.....	1N01 AI82544-00	11,737
BRAUN, WILLIAM E.....	PROCURE HLA-A, B AND C LOCI AND B CELL ANTISERA.....	1N01 AI82555-00	46,832
NOSE, YUKIHIKO.....	DEVELOPMENT AND EVALUATION OF CARDIAC PROSTHESES.....	5N01 HV42960-07	352,434
ORGANIZATION TOTAL	5 455,099		
UNIVERSITY HOSPITALS OF CLEVELAND ZIP CODE 44106			
GROSS, SAMUEL.....	PEDIATRIC SPECIMEN MATERIAL FROM NEOPLASTIC DISEASE.....	2N01 CP61007-05	30,000
ORGANIZATION TOTAL	1 30,000		
COLUMBUS			
AMERICAN CHEMICAL SOCIETY—CHEMICAL ABSTRACTS SERVICE ZIP CODE 43202			
BROWN, CARTER N.....	CHEMICAL ABSTRACTS SERVICE REGISTRY-BASED SERVICES.....	2N01 LM54739-07	64,352
BROWN, CARTER N.....	CHEMICAL-BIOLOGICAL ACTIVITIES COMPUTER-READABLE FILE.....	1N01 LM84717-00	8,214
SEALS, JAMES V.....	DRUG RES. DEVELOPMENT OF CHEMICAL INFORMATION SYST.....	2N01 CM43722-06	449,600
ORGANIZATION TOTAL	3 522,166		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
OHIO—Continued			
BATTELLE MEMORIAL INSTITUTE ZIP CODE 43201			
FOLK, ROGER M.....	STUDY OF TOXICOLOGY OF COMPOUNDS.....	3N01 CM43746-26	2,520,973
GARDNER, DAVID L.....	DEVELOPMENT OF ORALLY ACTIVE DOSAGE FORMS FOR STEROIDS.....	3N01 HD72849-01	8,334
HOUCHEMS, DAVID P.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM57005-07	673,142
KURTZ, PERRY J.....	STUDY THE TOXICOLOGY OF RETINOIDS.....	1N01 CP85650-00	326,010
OVEJERA, ARTEMIO.....	SCREENING COMPOUNDS USING HUMAN TUMORS IN ATHYMIC MICE.....	5N01 CM67099-04	472,230
SIMON, R.....	DEVELOP AND IMPLEMENT THE LABORATORY ANIMAL DATA BANK.....	3N01 LM54747-17	440,575
ORGANIZATION TOTAL	6	4,441,264	
NORTH AMERICAN PHILIPS CORPORATION—PHILIPS ROXANE LABORATORIES ZIP CODE 43215			
MARINE, MICHAEL D.....	DEVELOPMENT AND PRODUCTION OF SOLID ORAL DOSE FORMS.....	5N01 CM67053-04	105,594
ORGANIZATION TOTAL	1	105,594	
OHIO STATE UNIVERSITY ZIP CODE 43210			
BALCERZAK, STANLEY P.....	DEVELOPMENT OF THERAPY FOR SICKLE CELL DISEASE.....	2N01 HB22922-08	106,482
GLASER, RONALD.....	EPSTEIN-BARR VIRUS AND NASOPHARYNGEAL CARCINOMA.....	1N01 CP81021-00	182,470
HART, RONALD W.....	ASSAY FOR GENETIC DAMAGE TO MAMMARY GLAND CELLS.....	1N01 CB84226-00	119,900
HORTON, DEREK.....	DESIGN/SYNTHESIS—DAUNOSAMINE RELATED FRAUDULENT SUGARS.....	3N01 CM57015-03	2,000
HUDSDETH, DE LAYNE.....	REGIONAL EDUCATIONAL CENTER.....	2N01 LM64715-09	265,530
HUGHES, JOHN H.....	ESTABLISH VIRAL REAGENT TESTING LABORATORY.....	5N01 AI62513-03	17,313
HUNT, WILLIAM E.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67060-04	48,488
MALSPEIS, LOUIS.....	CLINICAL PHARMACOLOGY OF POTENTIAL ANTICANCER AGENTS.....	5N01 CM53828-04	52,264
MALSPEIS, LOUIS.....	STUDY OF PHARMACOKINETICS OF ANTICANCER DRUGS.....	1N01 CM87161-00	102,158
OLSEN, RICHARD G.....	ANTIGENICITY OF PRECANCEROUS LESIONS IN ANIMAL MODELS.....	2N01 CB74159-01	73,079
OLSEN, RICHARD G.....	IMMUNOBIOLOGIC RESPONSES TO ONCORNAVIRUSES.....	3N01 CP53571-04	45,800
SPRECHER, HOWARD W.....	DEVELOPMENT OF PROSTAGLANDIN ANTAGONISTS.....	1N01 HV82930-00	67,121
YOHN, DAVID S.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	1N01 CN85398-00	192,618
ORGANIZATION TOTAL	13	1,275,223	
DAYTON			
MONSANTO COMPANY—DAYTON LABORATORY ZIP CODE 45407			
ELLARD, JAMES A.....	PRODUCTION OF BULK CHEMICALS AND DRUGS.....	5N01 CM67046-07	1,131,994
MC MILLIN, CARL R.....	TEST POLYMERS FOR CIRCULATORY ASSIST DEVICES.....	5N01 HV72918-01	117,572
ORGANIZATION TOTAL	2	1,249,566	
TOLEDO			
MEDICAL COLLEGE OF OHIO AT TOLEDO ZIP CODE 43614			
SOLOFF, MELVYN S.....	IDENTIFICATION OF MAMMARY TISSUE.....	2N01 CB63983-02	88,300
ORGANIZATION TOTAL	1	88,300	
STATE TOTAL	49	12,474,151	
OKLAHOMA			
ADA			
VALLEY VIEW HOSPITAL ZIP CODE 74820			
MORGAN, JERRY S.....	CLINICAL ONCOLOGY PROGRAM.....	3N01 CN85413-01	148,536
ORGANIZATION TOTAL	1	148,536	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
OKLAHOMA—Continued			
OKLAHOMA CITY			
OKLAHOMA MEDICAL RESEARCH FOUNDATION ZIP CODE 73104			
ACKER, STEPHEN E.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45137-05	272,623
ORGANIZATION TOTAL	1 272,623		
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER ZIP CODE 73190			
HABERMAN, JO ANN D.....	DEVELOPMENT OF INFRARED SCANNING SYSTEM.....	2N01 CB43869-07	117,200
HABERMAN, JO ANN O.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55309-04	299,410
LEVIN, DAVID C.....	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	2N01 HR72903-05	271,652
OLEINICK, SAMUEL R.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52512-05	9,505
PATTERSON, C DOWELL.....	PULMONARY DISEASE RISK—INDIVIDUALS WITH MZ PHENOTYPES.....	3N01 HR72908-01	19,932
RENNERT, OWEN M.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	5N01 HR72923-01	79,000
ORGANIZATION TOTAL	6 796,699		
STILLWATER			
OKLAHOMA STATE UNIVERSITY AT STILLWATER ZIP CODE 74074			
EISENBRAUN, EOMUNO J.....	SYNTHESIS OF ANTIFERTILITY COMPOUNDS.....	3N01 HD42846-07	28,558
ORGANIZATION TOTAL	1 28,558		
STATE TOTAL	9 1,246,416		
OREGON			
CORVALLIS			
OREGON STATE HIGHER EDUCATION SYSTEM—OREGON STATE UNIVERSITY ZIP CODE 97331			
MAY, GENE.....	STUDY OF METABOLISM OF ANTINEOPLASTIC AGENTS.....	5N01 CM23201-10	46,520
SINNHUBER, RUSSELL O.....	STUDIES OF NATURAL INHIBITORS OF CHEMICAL CARCINOGENS.....	1N01 CP85660-00	41,100
ORGANIZATION TOTAL	2 87,620		
PORTLAND			
EMANUEL HOSPITAL ZIP CODE 97227			
STANWOOD, JOHN E.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	2N01 CN55182-03	277,717
ORGANIZATION TOTAL	1 277,717		
GOOD SAMARITAN HOSPITAL AND MEDICAL CENTER ZIP CODE 97210			
CHENOWETH, R G.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62141-02	85,198
GOOMAN, MORTON J.....	SUPPORT FOR CANCER-DETECTION PROGRAM.....	2N01 CN45088-07	175,710
SCHIMSCHOCK, JAMES R.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS52328-08	955,521
ORGANIZATION TOTAL	3 1,216,429		
KAISER FOUNDATION HOSPITALS—KAISER FOUNDATION RESEARCH INSTITUTE ZIP CODE 97215			
GLASS, ANDREW G.....	STUDY ENVIRONMENTAL CANCER—PREPAID HEALTH PLAN.....	1N01 CP81046-00	153,049
ORGANIZATION TOTAL	1 153,049		
MEDICAL RESEARCH FOUNDATION OF OREGON ZIP CODE 97225			
ALEXANDER, NANCY J.....	LONG-TERM EFFECTS OF VASECTOMY.....	5N01 HD42866-08	83,694
ALEXANDER, NANCY J.....	EFFECT OF BILATERAL VASECTOMY ON ATHEROSCLEROSIS.....	1N01 HD82827-00	137,505
ORGANIZATION TOTAL	2 221,199		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
OREGON—Continued			
OREGON STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF OREGON HEALTH SCIENCES CENTER ZIP CODE 97201			
BUIST, A SONIA	STUDY TO STANDARDIZE MEASUREMENT OF CLOSING VOLUME	5N01 HR32900-09	42,975
CREAMER, HOWARD R.....	PERIODONTAL DISEASE IN PATIENTS WITH IMMUNE DISORDERS.....	3N01 DE52455-07	27,084
GOODNIGHT, SCOTT H.....	COOPERATIVE STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA.....	2N01 HB53024-04	25,156
LU, KUO HWA.....	FLUORIDE ADMINISTRATION IN CONTROLLING DENTAL CARIES.....	3N01 DE42444-05	142,600
LYNN, ROBERT K.....	ANALYZE PCB'S AND DDE IN HUMAN FLUIDS AND TISSUE	5N01 ES72126-02	180,482
PRESCOTT, GERALD H.....	COORDINATION OF REGIONAL CYTOGENETIC REGISTRIES	2N01 HD32713-13	222,805
YATSU, FRANK M.....	COMPREHENSIVE STROKE CENTER.....	1N01 NS82387-00	726,015
ORGANIZATION TOTAL	7	1,367,117	
PROVIDENCE MEDICAL CENTER ZIP CODE 97213			
MAURICE, GORDON L.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72965-02	120,575
ORGANIZATION TOTAL	1	120,575	
STATE TOTAL	17	3,443,706	
PENNSYLVANIA			
ALLENTOWN			
ALLENTOWN HOSPITAL ASSOCIATION ZIP CODE 18102			
PRAGER, DAVID	CLINICAL ONCOLOGY PROGRAM.....	3N01 CN75394-02	110,979
ORGANIZATION TOTAL	1	110,979	
BETHLEHEM			
LEHIGH UNIVERSITY ZIP CODE 18015			
HERRENKOHL, ROY C.....	EPIDEMIOLOGIC STUDIES OF LUNG CANCER.....	1N01 CP81038-00	122,900
ORGANIZATION TOTAL	1	122,900	
DANVILLE			
INSTITUTE FOR MEDICAL EDUCATION AND RESEARCH ZIP CODE 17821			
LAUBACH, CHARLES A.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52920-04	88,549
LAUBACH, CHARLES A.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82903-02	74,630
ORGANIZATION TOTAL	2	163,179	
HERSHEY			
PENNSYLVANIA STATE UNIVERSITY MILTON S. HERSHEY MEDICAL CENTER ZIP CODE 17033			
BARDIN, C WAYNE.....	COMPARATIVE STUDY OF PROGESTIN METABOLISM	3N01 HD22730-14	248,475
BARTLETT, GERALD L.....	STUDY OF CANCER IMMUNOTHERAPY.....	2N01 CB33891-06	151,373
BARTLETT, GERALD L.....	IMMUNOGENICITY OF 'SPONTANEOUS' ANIMAL TUMORS	2N01 CB64039-02	64,903
DAVIDSON, EUGENE A.....	GLYCOPROTEINS OF MAMMARY CELL SURFACE	2N01 CB63984-03	103,000
EYSTER, M ELAINE.....	STUDY OF FACTOR VIII INHIBITOR IN HEMOPHILIA	2N01 HB53021-05	21,757
KREIDER, JOHN W.....	TUMOR IMMUNOPREVENTION	2N01 CB74158-01	78,448
RAPP, FRED.....	ONCOGENIC POTENTIAL OF DEFECTIVE HUMAN VIRUSES.....	2N01 CP53516-06	713,090
RAPP, FRED.....	IN VITRO MALIGNANT TRANSFORMATION.....	5N01 CP61063-02	90,368
SANTEN, RICHARD J.....	SUPPRESSION OF ENDOCRINE FUNCTION IN HUMAN BREAST CANCER.....	2N01 CB53851-04	224,000
ORGANIZATION TOTAL	9	1,695,414	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
PENNSYLVANIA—Continued			
MARCUS HOOK			
SUN DIL COMPANY—SUNTECH, INC. ZIP CODE 19061			
MOORE, ROBERT E.....	FLUOROCARBON COMPOUNDS AS ARTIFICIAL BLOOD SUBSTITUTES.....	3N01 HB62927-02	69,295
ORGANIZATION TOTAL	1 69,295		
PHILADELPHIA			
ALBERT EINSTEIN MEDICAL CENTER ZIP CODE 19141			
ISARD, HAROLD J.....	PROGRAM FOR DETECTING CANCER OF THE BREAST.....	2N01 CN45058-05	232,880
ORGANIZATION TOTAL	1 232,880		
BIOLOGICAL ABSTRACTS ZIP CODE 19103			
NOT APPLICABLE.....	TOXLINE COMPONENT-NLM.....	1N01 LM84714-00	32,597
ORGANIZATION TOTAL	1 32,597		
CHILDREN'S HOSPITAL OF PHILADELPHIA ZIP CODE 19104			
CRILL, FRANCES M.....	COOPERATIVE STUDY-CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72997-02	49,152
D'ANGIO, GIULIO J.....	STUDY ONCOGENESIS AND LATE EFFECTS OF CANCER THERAPY.....	5N01 CP65803-02	122,500
HENLE, GERTRUDE.....	PROPAGATION AND SEROEPIDEMIOLOGY OF EB VIRUS.....	5N01 CP33272-06	208,983
ORGANIZATION TOTAL	3 380,635		
COLLEGE OF PHYSICIANS OF PHILADELPHIA ZIP CODE 19103			
FULTON, JUNE.....	REGIONAL MEDICAL LIBRARY SERVICES—REGION III.....	3N01 LM64723-07	376,343
ORGANIZATION TOTAL	1 376,343		
FRANKLIN INSTITUTE OF THE STATE OF PENNSYLVANIA ZIP CODE 19103			
CAMPBELL, GRAHAM L.....	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER.....	5N01 C085404-01	388,173
CRAIG, PAUL N.....	INFORMATION SUPPORT TO THE LUNG CANCER PROGRAM.....	3N01 CP65812-05	10,000
CRAIG, PAUL N.....	ESTIMATING TOXICOLOGIC ENDPOINTS OF CHEMICALS.....	1N01 CP85632-00	49,036
KLEINSTEIN, BRUCE H.....	PREPARATION OF GASTROENTEROLOGY ABSTRACTS AND CITATIONS.....	5N01 AM42204-11	153,895
KLEINSTEIN, BRUCE H.....	INDEXING OF CANCER-RELATED LITERATURE.....	3N01 C075387-04	344,998
KLEINSTEIN, BRUCE H.....	PREPARATION OF CARCINOGENESIS ABSTRACTS.....	3N01 CP75885-02	11,417
KLEINSTEIN, BRUCE H.....	SURVEY COMPOUNDS TESTED FOR CARCINOGENICITY.....	1N01 CP85644-00	99,146
KRONICK, PAUL L.....	APPLICATION OF HYDROGELS TO POLYMERIC SURFACES.....	5N01 HV12017-15	49,092
NOT APPLICABLE.....	INDEX JOURNAL ARTICLES OF THE BIOMEDICAL SCIENCES.....	1N01 LM84700-00	81,900
PARCHMAN, GERALD.....	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER.....	3N01 C085403-01	283,847
TAUBER, STEPHEN.....	TECHNICAL SUPPORT SERVICES FOR THE ICRDB PROGRAM.....	3N01 C055193-09	24,950
ORGANIZATION TOTAL	11 1,496,454		
HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA ZIP CODE 19102			
ANGELAKOS, EVANGELOS T.....	NONHUMAN PRIMATE MODELS OF ARTERIOSCLEROSIS.....	3N01 HV62905-03	264,682
BRADY, LUTHER W.....	NETWORK DEMONSTRATION PROJECT IN HEAD AND NECK CANCER.....	2N01 CN55255-05	375,252
MOORE, DAN H.....	MAMMARY TUMOR VIRUSES STUDIES.....	1N01 CP81007-00	113,809
ORGANIZATION TOTAL	3 753,743		
INSTITUTE FOR CANCER RESEARCH ZIP CODE 19111			
DONALDSON, MILTON H.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55237-06	215,030
ENGSTROM, PAUL F.....	PROTOTYPE NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN45055-04	218,923
GROVER, PRAKASH L.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	5N01 CN45126-09	241,219
ORGANIZATION TOTAL	3 675,172		
INSTITUTE FOR SCIENTIFIC INFORMATION ZIP CODE 19106			
SMALL, HENRY G.....	BIBLIOMETRIC ANALYSIS OF SCIENTIFIC DISCOVERIES.....	1N01 GM82126-00	23,901

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
PENNSYLVANIA—Continued			
ORGANIZATION TOTAL	1	23,901	
LANKENAU HOSPITAL ZIP CODE 19151			
DREIFUS, LEONARD S.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52938-03	77,859
HOLMES, WILLIAM L.....	SUPPORT FOR CLINICAL CENTER FOR HEART DISEASE.....	5N01 HV33110-04	862,873
HOLMES, WILLIAM L.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72958-02	91,268
ORGANIZATION TOTAL	3	1,032,000	
MEDICAL COLLEGE OF PENNSYLVANIA ZIP CODE 19129			
PAUCKER, KURT.....	PRODUCTION OF PURE ANTIBODY TO INTERFERON.....	2N01 A152520-06	59,142
PAUCKER, KURT.....	PRODUCTION OF ANTI-SERA TO INTERFERONS.....	1N01 A182568-00	229,545
ORGANIZATION TOTAL	2	288,687	
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC WELFARE—EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE ZIP CODE 19129			
MARACEK, JEANNE A.....	CONSEQUENCES OF ADOLESCENT CHILDBEARING.....	2N01 HD72806-02	77,674
ORGANIZATION TOTAL	1	77,674	
PHILADELPHIA GERIATRIC CENTER ZIP CODE 19141			
ALTSCHULER, HENRY.....	COLLECTION OF SERA FROM HIGH-CANCER-RISK POPULATIONS.....	2N01 CB33914-04	58,568
ORGANIZATION TOTAL	1	58,568	
PHILADELPHIA HEALTH MANAGEMENT CORPORATION ZIP CODE 19106			
FLAHERTY, EUGENIE W.....	PSYCHOLOGICAL FACTORS IN FERTILITY REGULATION.....	1N01 HD82833-00	85,585
ORGANIZATION TOTAL	1	85,585	
TEMPLE UNIVERSITY ZIP CODE 19122			
FORBES, PAUL D.....	UV PHOTOCARCINOGENESIS.....	2N01 CP43271-08	15,000
FORBES, PAUL D.....	HAIRLESS MICE FOR UV CARCINOGENESIS STUDIES.....	1N01 CP85603-00	255,964
LO SCIUTO, LEONARD A.....	FERTILITY VALUES AND FAMILY GROWTH.....	2N01 HD62834-06	30,049
ORGANIZATION TOTAL	3	301,013	
THOMAS JEFFERSON UNIVERSITY ZIP CODE 19107			
GOLDBERG, BARRY B.....	USE OF ULTRASOUND IN DIAGNOSIS OF BREAST CANCER.....	1N01 CB84273-00	200,000
LEWIS, GEORGE C, JR.....	CANCER CONTROL PROGRAM—GYNECOLOGIC ONCOLOGY GROUP.....	5N01 CN75338-01	592,704
SHAPIRO, SANDOR S.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	2N01 HB53018-04	31,159
SHAPIRO, SANDOR S.....	FACTOR VIII INHIBITORS IN HEMOPHILIA.....	2N01 HB53035-04	169,457
SMITH, HARRY L, JR.....	SUPPORT FOR CHOLERA VIBRIO REFERENCE LABORATORY.....	2N01 A132502-09	120,047
YU, FU-LI.....	RNA POLYMERASE INHIBITION ACTIVITY INDICATION.....	1N01 CP85673-00	58,299
ORGANIZATION TOTAL	6	1,171,666	
UNIVERSITY CITY SCIENCE CENTER ZIP CODE 19104			
FORADORI, GEORGE.....	DATA MANAGEMENT CENTER FOR BREAST CANCER DETECTION.....	2N01 CN65376-08	2,782,481
ORGANIZATION TOTAL	1	2,782,481	
UNIVERSITY OF PENNSYLVANIA ZIP CODE 19174			
HUGGINS, GEORGE R.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD72807-03	88,000
JIMENEZ, SERGIO A.....	NATURAL & MODIFIED COLLAGEN INTERACTION WITH PLATELETS.....	3N01 HV42982-07	16,539
KARE, MORLEY.....	GUSTATORY (TASTE) EVALUATION OF CANCER PATIENTS.....	2N01 CP65791-06	35,569
KENYON, SIMON J.....	IMMUNOPROPHYLAXIS OF BOVINE LYMPHOSARCOMA.....	1N01 CB84243-00	177,997
LATIES, ALAN M.....	ANIMAL MODELS OF HEREDITARY RETINAL DEGENERATION.....	1N01 EY82142-00	311,302
LEBOY, PHOEBE S.....	METHYLATION OF TRNA IN NORMAL NEOPLASTIC MAMMARY TISSUE.....	5N01 CB74108-01	99,600
MULLEN, JAMES L.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	3N01 CP65802-04	74,011
MULLEN, JAMES L.....	WHOLE BODY IMPEDENCE TO PREDICT TOTAL BODY WATER.....	1N01 CP85654-00	98,892
MULLEN, JAMES L.....	CHANGES IN BODY COMPOSITION IN CANCER PATIENTS.....	1N01 CP85658-00	398,373
NICOLAOU, KYRIACOS C.....	DEVELOPMENT OF PROSTAGLANDIN SYSTEM ANTAGONIST.....	1N01 HV82931-00	88,564

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
PENNSYLVANIA—Continued			
SCHWARTZMAN, ROBERT M.....	ANIMAL COLONY FOR ALLERGY STUDIES.....	5N01 AI72537-02	142,302
TSOU, KWAN C.....	5'-NUCLEOTIDE PHOSPHODIESTERASE SERUM ISOZYME TEST.....	3N01 CB64029-03	13,600
YANKELL, SAMUEL L.....	SCREENING OF ANTIPLAQUE AND ANTIMICROBIAL AGENTS.....	3N01 DE52484-03	2,500
ORGANIZATION TOTAL	13 1,547,249		
WILLS EYE HOSPITAL ZIP CODE 19130			
FEDERMAN, JAY L.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY62144-02	74,952
FEDERMAN, JAY L.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	5N01 EY72150-02	75,903
TASMAN, WILLIAM S.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32119-07	65,029
ORGANIZATION TOTAL	3 215,884		
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY ZIP CODE 19104			
BUCK, CLAYTON A.....	GLYCOPROTEINS OF THE MAMMARY CELL SURFACE.....	2N01 CB64069-03	89,300
DIAMOND, LEILA.....	STUDY SIGNIFICANCE OF MUTATION IN CARCINOGENESIS.....	3N01 CP55655-04	50,064
ORGANIZATION TOTAL	2 139,364		
PITTSBURGH			
ALLEGHENY HEALTH, EDUCATION AND RESEARCH CORPORATION—ALLEGHENY GENERAL HOSPITAL ZIP CODE 15212			
SCHIFFER, LEWIS M.....	STUDY OF CELL KINETICS OF BREAST CANCER.....	2N01 CB43899-05	116,000
SCHIFFER, LEWIS M.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	5N01 CB74083-01	118,500
SHRIVASTAVA, P N.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	5N01 CN45148-07	228,075
ORGANIZATION TOTAL	3 462,575		
CARNEGIE-MELLON UNIVERSITY ZIP CODE 15213			
BERRY, GUY C.....	MODIFICATION OF SILICONE ELASTOMERS FOR MEDICAL DEVICES.....	5N01 HV32949-11	61,784
OLSON, KENNETH B.....	EFFECT OF REGULATION ON CANCER TREATMENT RESEARCH.....	1N01 CM87173-00	145,456
ORGANIZATION TOTAL	2 207,240		
CHILDREN'S HOSPITAL OF PITTSBURGH ZIP CODE 15213			
BLUESTONE, CHARLES D.....	EVALUATE DECONGESTANT THERAPY—EFFUSED OTITIS MEDIA.....	1N01 NS82384-00	100,746
ORGANIZATION TOTAL	1 100,746		
MONTEFIORE HOSPITAL ZIP CODE 15213			
SELKER, ROBERT G.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	3N01 CM67061-05	218,499
ORGANIZATION TOTAL	1 218,499		
UNIVERSITY OF PITTSBURGH ZIP CODE 15260			
DETRE, KATHERINE M.....	COORDINATING CENTER—CORONARY INTERVENTION STUDY.....	5N01 HI72947-01	70,443
FISHER, BERNARD.....	PRIMARY BREAST CANCER THERAPY GROUP.....	3N01 CB23876-09	836,001
FISHER, BERNARD.....	IMMUNOTHERAPY OF C3H MURINE MAMMARY CARCINOMAS.....	2N01 CB64044-04	80,929
FISHER, BERNARD.....	THERAPY OF PATIENTS WITH COLORECTAL CANCER.....	2N01 CM77177-04	360,333
FISHER, BERNARD.....	SCREENING FOR EARLY DETECTION OF CANCER OF THE BREAST.....	2N01 CN45065-07	204,550
FISHER, BERNARD.....	NATIONAL SURGICAL ADJUVANT BREAST PROJECT.....	1N01 CN85335-00	481,300
GRIECO, PAUL A.....	SYNTHESIS AND BIOLOGICAL EVALUATION OF LUTEOLYTIC AGENTS.....	1N01 HD82809-00	99,740
HOLLAND, AUDREY L.....	APHASIC PATIENTS' COMMUNICATIVE PERFORMANCE.....	2N01 NS52317-05	99,777
PASCASIO, ANNE.....	DEMONSTRATION OF CANCER REHABILITATION FACILITIES.....	5N01 CN55298-04	174,540
PECKHAM, WILLIAM D.....	DEVELOPMENT OF RADIOIMMUNOASSAY FOR RHESUS MONKEY LH.....	5N01 HD72829-02	65,160
ORGANIZATION TOTAL	10 2,472,773		
UNIVERSITY PARK			
PENNSYLVANIA STATE UNIVERSITY ZIP CODE 16802			
DOCHERTY, JOHN J.....	IMMUNOLOGICAL MARKERS APPLICABLE TO CYTOLOGY AUTOMATION.....	5N01 CB74171-01	85,000
JURS, PETER C.....	STRUCTURE-ACTIVITY OF CANCER RELATED ENDPOINTS.....	2N01 CP75926-01	57,642

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Purpose of contract	Contract no.	Dollars
PENNSYLVANIA—Continued				
ORGANIZATION TOTAL	2			142,642
WARRINGTON				
POLYSCIENCES, INC. ZIP CODE 18976				
BOETTNER, FRED.....		LARGE SCALE EXTRACTION AND ISOLATION OF PLANT PRODUCTS.....	3N01 CM77070-02	282,982
ORGANIZATION TOTAL	1			282,982
STATE TOTAL	94			17,721,120
RHODE ISLAND				
PROVIDENCE				
RHODE ISLAND DEPARTMENT OF HEALTH ZIP CODE 02908				
SIMEONE, FIORINDO A.....		COMMUNITY-BASED CANCER CONTROL PROGRAM.....	5N01 CN75215-03	1,925,000
ORGANIZATION TOTAL	1			1,925,000
RHODE ISLAND HOSPITAL ZIP CODE 02902				
CAPONE, ROBERT J.....		CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82908-02	114,777
CONSTANTINE, HERBERT P.....		BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN45096-07	231,186
ORGANIZATION TOTAL	2			345,963
STATE TOTAL	3			2,270,963
SOUTH CAROLINA				
CHARLESTON				
MEDICAL UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29401				
GAZES, PETER C.....		CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82909-02	86,456
KNAPP, DANIEL R.....		GAS CHROMATOGRAPH-MASS SPECTROMETRY RESOURCE.....	1N01 RR82112-00	44,691
MOSELEY, VINCE.....		SATELLITE TECHNOLOGY IN BIOMEDICAL COMMUNICATION.....	1N01 OD82113-00	99,438
ORGANIZATION TOTAL	3			230,585
COLUMBIA				
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL ZIP CODE 29201				
MC CALLUM, DAVID B.....		STATE-WIDE COORDINATION OF HIGH BLOOD PRESSURE CONTROL.....	5N01 HV72987-02	766,320
ORGANIZATION TOTAL	1			766,320
UNIVERSITY OF SOUTH CAROLINA ZIP CODE 29208				
GIESE, WARREN K.....		STUDY OF CORONARY HEART DISEASE.....	5N01 HV42932-05	457,338
WEEKS, BEVERLY A.....		IMMUNOPREVENTION OF MALIGNANT TUMORS IN THE GUINEA PIG.....	1N01 CB84242-00	72,816
ORGANIZATION TOTAL	2			530,154
STATE TOTAL	6			1,527,059

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
TENNESSEE			
MEMPHIS			
ST. JUDE CHILDREN'S RESEARCH HOSPITAL ZIP CODE 38101			
HINSHAW, VIRGINIA	SURVEILLANCE AND ECOLOGY OF ANIMAL INFLUENZA.....	3N01 AI52524-07	237,948
JOHNSON, WARREN W	HUMAN SPECIMEN ACQUISITION FOR CANCER RESEARCH.....	3N01 CP71030-02	14,648
WEBSTER, ROBERT G.....	SUPPLY OF POLYPEPTIDE ANTIGENS OF INFLUENZA VIRUS.....	2N01 AI42510-10	132,401
WELCH, ARNOLD D.....	SYNTHESIZE POTENTIAL INHIBITORS OF PYRIMIDINES.....	5N01 CM77127-02	94,000
ORGANIZATION TOTAL	4	478,997	
UNIVERSITY OF TENNESSEE SYSTEM—UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES ZIP CODE 38163			
AUTIAN, JOHN	CHEMICAL PURITY LEVELS FOR SURGICAL BIPOLYMER IMPLANTS	1N01 HV82914-00	93,980
KORONES, SHELDON B.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS	5N01 HR62953-05	201,848
KRAUS, ALFRED P.....	COOPERATIVE STUDY—CLINICAL COURSE OF SICKLE CELL DISEASE.....	3N01 HB72995-02	63,315
ROBERTSON, JAMES T.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	3N01 CM57021-06	141,367
ROBERTSON, JAMES T.....	DIFFERENTIAL NUTRITIONAL REQUIREMENTS BY HOST AND TUMOR.....	5N01 CP65786-06	165,929
STADLAN, EMANUEL M.....	FRESH AND FROZEN BRAIN TISSUES FOR CANCER RESEARCH.....	5N01 CP61020-03	40,000
ORGANIZATION TOTAL	6	706,439	
NASHVILLE			
GEORGE PEABODY COLLEGE FOR TEACHERS ZIP CODE 37203			
SANDLER, HOWARD M.....	EFFECTS OF ADOLESCENT PREGNANCY ON MOTHER-INFANT.....	5N01 HD62860-02	61,569
ORGANIZATION TOTAL	1	61,569	
VANDERBILT UNIVERSITY ZIP CODE 37240			
GINN, H EARL.....	NEUROBEHAVIORAL AND CLINICAL RESPONSES TO HEMODIALYSIS.....	3N01 AM22211-15	87,059
GUENGERICH, F PETER.....	ISOLATE AND PURIFY HUMAN POLYCYCLIC HYDROCARBONS.....	1N01 CP85672-00	72,669
HARTMANN, WILLIAM H.....	BREAST CANCER DETECTION DEMONSTRATION PROJECTS.....	5N01 CN65373-05	138,063
HNILICA, LUBOMIR S.....	NONHISTONE DNA BINDING PROTEINS.....	5N01 CP65730-04	107,638
INGRAM, M DEE, JR.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55099-05	214,612
KARZON, DAVID T.....	RESPIRATORY VACCINES IN CHILDREN AND INFANTS	5N01 AI22507-20	361,078
OLDHAM, ROBERT K.....	PURIFICATION OF BREAST TUMOR ASSOCIATED ANTIGENS	2N01 CB74162-01	91,388
OLDHAM, ROBERT K.....	NORMALS CELL MEDIATED REACTIVITY TO HUMAN TUMOR ANTIGENS	2N01 CB74166-01	60,432
OLDHAM, ROBERT K.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	5N01 CM77122-03	98,023
PAGE, DAVID L.....	RISK IN DIAGNOSIS OF NON-INVASIVE MAMMARY CARCINOMA.....	5N01 CB74098-01	104,100
SELL, SARAH H.....	ANTIBODY RESPONSE TO PNEUMOCOCCAL POLYSACCHARIDES	2N01 AI52538-04	163,142
ORGANIZATION TOTAL	11	1,498,204	
STATE TOTAL	22	2,745,209	
TEXAS			
AUSTIN			
RADIAN CORPDRATION ZIP CODE 78758			
KEITH, L H.....	CHEMICAL REPOSITORY FOR MUTAGENICITY SCREENING.....	5N01 ES82144-01	195,792
ORGANIZATION TOTAL	1	195,792	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT AUSTIN ZIP CODE 78712			
FOLKERS, KARL.....	PEPTIDE ANTAGONISTS OF LH-RH AS OVULATION INHIBITORS.....	3N01 HD62846-03	34,106
FOLKERS, KARL.....	PEPTIDE ANTAGONISTS OF LHRH AS OVULATION INHIBITORS.....	1N01 HD82820-00	196,973
POPOVICH, ROBERT P.....	STUDY OF PHYSIOLOGICAL TRANSPORT PARAMETERS.....	2N01 AM32205-09	38,991
POPOVICH, ROBERT P.....	DEVELOPMENT OF LOW DIALYSIS CLEARANCE HYPOTHESIS.....	3N01 AM62211-03	140,297
ORGANIZATION TOTAL	4	410,367	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
TEXAS—Continued			
COLLEGE STATION			
TEXAS AGRICULTURAL AND MECHANICAL UNIVERSITY SYSTEM—TEXAS AGRICULTURAL AND MECHANICAL UNIVERSI		ZIP CODE 77843	
MARTELL, ARTHUR E.....	DEVELOPMENT OF IRON CHELATORS FOR COOLEY'S ANEMIA.....	5N01 AM72232-01	48,450
ORGANIZATION TOTAL	1 48,450		
DALLAS			
AMERICAN HEART ASSOCIATION		ZIP CODE 75231	
OLIVER, CHARLES G.....	DEVELOP DATA BASE FOR ARRHYTHMIA DETECTOR EVALUATION.....	5N01 HV72989-02	100,990
ORGANIZATION TOTAL	1 100,990		
DALLAS NEPHROLOGY ASSOCIATES		ZIP CODE 75235	
PARKER, THOMAS F, III.....	STUDY OF TRANS-MEMBRANE MUSCLE POTENTIAL.....	1N01 AM82214-00	15,000
ORGANIZATION TOTAL	1 15,000		
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS		ZIP CODE 75235	
HEARTWELL, STEPHEN F.....	EVALUATE RISK OF SERIOUS COMPLICATIONS IN IUD WEARERS.....	5N01 HD72810-03	89,184
JOHNSTON, KENNETH H.....	SEROTYPING SYSTEM FOR NEISSERIA GONORRHOEAE.....	5N01 AI52534-04	47,089
MC CORD, S JOE.....	REGIONAL MEDICAL LIBRARY PROGRAM.....	3N01 LM54705-09	275,610
PROUGH, RUSSELL A.....	STUDY OF POLYCYCLIC HYDROCARBON METABOLISM.....	5N01 CP33362-05	53,759
ROSENBERG, ROGER N.....	BIOLOGICAL SYSTEMS FOR EVALUATION OF ANTITUMOR AGENTS.....	5N01 CM53767-05	84,357
STASTNY, PETER.....	EVALUATION OF HISTOCOMPATIBILITY-MATCHING.....	2N01 AI22531-08	24,393
WILLERSON, JAMES T.....	THERAPY TO PROTECT ISCHEMIC MYOCARDIUM/CLINICAL TESTS.....	2N01 HV72942-02	392,026
ORGANIZATION TOTAL	7 966,418		
GALVESTON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON		ZIP CODE 77550	
ALBRECHT, THOMAS B.....	TRANSFORMATION OF MAMMALIAN CELLS.....	5N01 CP61042-02	120,466
BAILEY, BYRON J.....	CHEMOTHERAPY TRIAL IN HEAD AND NECK SQUAMOUS CARCINOMA.....	1N01 CM87221-00	95,072
BOWMAN, BARBARA H.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	5N01 HR72922-01	96,535
BUFFLER, PATRICIA A.....	DATA ON LIVER CANCER IN SELECTED COUNTIES OF TEXAS.....	5N01 CP71005-01	112,557
GROSSMAN, ROBERT G.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTER.....	3N01 NS72372-01	25,450
PETERSON, JOHNNY W.....	STUDY OF CHOLERA TOXOIDS IN HUMAN VOLUNTEERS.....	2N01 AI02101-10	72,415
SARLES, HARRY E.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52504-06	22,258
ORGANIZATION TOTAL	7 544,753		
HOUSTON			
BAYLOR COLLEGE OF MEDICINE		ZIP CODE 77025	
BUTEL, JANET S.....	NUCLEIC ACID PREPARATION EFFECTS ON MAMMARY CARCINOMAS.....	2N01 CB53904-04	85,500
BUTEL, JANET S.....	EFFECT OF ENVIRONMENTAL FACTORS ON MMTV EXPRESSION.....	1N01 CP81006-00	135,000
COUCH, ROBERT B.....	EVALUATION OF RESPIRATORY VIRUS VACCINES.....	5N01 AI32506-13	1,445,000
COUCH, ROBERT B.....	ESTABLISHMENT OF AN INFLUENZA RESEARCH CENTER.....	3N01 AI42528-11	965,118
GARBER, ALAN J.....	ABNORM. OF CARBOHYDRATE METABOLISM IN CHRONIC UREMIA.....	3N01 AM42215-04	38,849
GREENBERG, S DONALD.....	EVALUATE PRENEOPLASTIC LESIONS IN THE RESPIRATORY TRACT.....	5N01 CP65837-03	85,370
INSULL, WILLIAM, JR.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV12156-10	972,550
KIT, SAUL.....	HERPES SIMPLEX VIRUS THYMIDINE KINASE GENE.....	5N01 CP71058-01	85,150
MELNICK, JOSEPH L.....	STUDY THE POSSIBLE VIRAL ETIOLOGY OF HUMAN MALIGNANCIES.....	2N01 CP53526-05	277,740
MILLER, RICHARD R.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82900-03	115,163
NELSON, THOMAS E.....	CYSTIC FIBROSIS FACTOR IDENTIFICATION & QUANTIFICATION.....	5N01 HR72921-01	76,215
NICHOLS, BUFORD L.....	HUMAN MILK BANK RESEARCH AND DISTRIBUTION CENTER.....	1N01 HD82828-00	260,529
PEAVY, DUANE L.....	APHTHOUS STOMATITIS AND BEHCET'S SYNDROME.....	5N01 DE72400-01	64,299
ROSEN, JEFFREY M.....	ESTROGEN/PROGESTIN EFFECTS ON BREAST IN NEONATAL PERIOD.....	2N01 CB74189-01	75,000

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
TEXAS—Continued			
SOCHER, SUSAN H	REGULATION OF GENE EXPRESSION IN MOUSE MAMMARY CANCER.....	2N01 CP43385-05	116,848
STEVENS, PAUL M	STUDY OF INTERMITTENT POSITIVE PRESSURE BREATHING.....	2N01 HR72905-03	240,970
SUKI, WADI N.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52506-04	38,892
THOMPSON, HOWARD K, JR.....	DEVELOP AND EVALUATE THE CLINFO SYSTEM	1N01 RR82108-00	99,360
TINDALL, DONALD J.....	ISOLATE AND PURIFY RAT ANDROGEN BINDING PROTEIN	2N01 HD62842-02	53,631
ORGANIZATION TOTAL	19	5,231,184	
J. ROBB ASSOCIATES ZIP CODE 77027			
GLASSER, JAY H	ASSESS DATA ON SAFETY OF ARTIFICIAL LENS	3N01 EY82100-01	66,467
ORGANIZATION TOTAL	1	66,467	
METHODIST HOSPITAL ZIP CODE 77025			
KELLAWAY, PETER A.....	CLINICAL QUANTIFICATIONS & TREATMENT OF INFANTILE SPASMS.....	2N01 NS62342-05	31,942
ORGANIZATION TOTAL	1	31,942	
ST. JOSEPH HOSPITAL ZIP CODE 77002			
MOORE, DUNCAN L.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55100-05	359,000
ORGANIZATION TOTAL	1	359,000	
STEHLIN FOUNDATION FOR CANCER RESEARCH ZIP CODE 77002			
GIOVANELLA, BEPPINO C.....	STUDY OF BREAST-CANCER TRANSPLANTS IN ATHYMIC MICE.....	2N01 CB33856-08	149,700
GIOVANELLA, BEPPINO C.....	MODEL SYSTEMS FOR CHEMOTHERAPY OF HUMAN TUMORS.....	2N01 CM67073-02	325,000
ORGANIZATION TOTAL	2	474,700	
TEXAS HEART INSTITUTE ZIP CODE 77025			
NORMAN, JOHN C.....	EVALUATION OF MODEL VII LEFT VENTRICULAR ASSIST DEVICE.....	2N01 HV53006-06	207,556
ORGANIZATION TOTAL	1	207,556	
TEXAS INSTITUTE FOR REHABILITATION AND RESEARCH ZIP CODE 77030			
HERRON, R E.....	BIOSTEREOMETRIC ASSESSMENT OF NUTRITIONAL STATUS.....	1N01 CP85618-00	118,801
ORGANIZATION TOTAL	1	118,801	
UNIVERSITY OF HOUSTON ZIP CODE 77004			
WEINHEIMER, ALFRED J.....	ISOLATE ANTINEOPLASTIC AGENTS.....	1N01 CM87209-00	128,101
WELCH, STEVEN C.....	SYNTHESIS OF NEW RETINOIDS.....	5N01 CP75935-01	65,531
ORGANIZATION TOTAL	2	193,632	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON ZIP CODE 77025			
FRIEDMAN, LAWRENCE A.....	EVALUATE SODIUM MONOFLUOROPHOSPHATE MOUTHRINSE.....	5N01 DE62496-03	34,312
FRIEDMAN, LAWRENCE A.....	EFFECT OF MOUTHRINSING WITH FLUORIDES.....	1N01 DE82416-00	132,627
HAWKINS, C MORTON.....	STUDY OF HYPERTENSION IN THERAPY	5N01 HV12442-14	2,698,233
HAWKINS, C MORTON.....	COORDINATING CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV72948-03	497,020
SMITH, KEITH D.....	ENDOCRINE CHANGES IN VASECTOMIZED MEN.....	5N01 HD22776-06	85,553
ORGANIZATION TOTAL	5	3,447,745	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS SYSTEM CANCER CENTER ZIP CODE 77025			
ARLINGHAUS, RALPH B.....	BIOSYNTHESIS OF ONCO-RNA PROTEINS IN MAMMALIAN CELLS.....	3N01 CP61017-05	157,314
ARNOTT, MARILYN.....	ISOLATE AND PURIFY OF HUMAN POLYCYCLIC HYDROCARBONS.....	1N01 CP85671-00	122,279
BECKER, FREDERICK F.....	BIOLOGY OF NEOPLASTIC LIVER LESIONS IN MICE.....	5N01 CP65846-05	174,728
BENJAMIN, ROBERT.....	PHARMACOKINETICS OF ANTICANCER DRUGS.....	1N01 CM87233-00	108,466
BODEY, GERALD P.....	PHASE I STUDIES OF NEW ANTICANCER AGENTS.....	3N01 CM43801-10	11,750
BODEY, GERALD P.....	QUANTITATIVE EVALUATION OF PROTECTED ENVIRONMENT.....	2N01 CM53832-07	645,869
BODEY, GERALD P.....	STUDIES OF PATIENTS WITH SOLID DISSEMINATED TUMORS.....	3N01 CM57042-13	646,479
CLARK, R LEE.....	COMPREHENSIVE CANCER CENTERS COMMUNICATIONS NETWORK.....	2N01 CN55244-07	228,912
GRANATEK, CHRISTINE H.....	DIAGNOSTIC USE OF CROSS-REACTING MICROBIAL ANTIGENS.....	2N01 CB74122-01	78,160

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
TEXAS—Continued			
GREER, BENJAMIN	THERAPY OF PATIENTS WITH OVARIAN CARCINOMA.....	5N01 CM67116-04	24,431
GUINEE, VINCENT F.....	STATISTICAL CENTER.....	2N01 CN65296-02	300,000
HERSH, EVAN M.....	STUDY OF CANCER IMMUNOTHERAPY.....	2N01 CB33888-10	648,404
KEELING, MICHAEL E.....	MAINTENANCE AND BREEDING OF CHIMPANZEES.....	5N01 RS72142-01	118,916
LOO, TI L.....	PHARMACOLOGIC STUDIES OF ANTITUMOR AGENTS.....	3N01 CM53773-05	64,214
LOO, TI L.....	PHARMACOLOGIC STUDIES OF ANTITUMOR AGENTS.....	1N01 CM87185-00	335,786
MC KELVEY, EUGENE M.....	CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER.....	1N01 C085405-00	377,679
MOUNTAIN, CLIFTON F.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	3N01 CM77149-05	184,017
MOUNTAIN, CLIFTON F.....	PATHOLOGY SUPPORT FOR NON-OAT CELL LUNG CANCER.....	5N01 CM77153-01	140,525
MURPHY, SAMUEL G.....	IMMUNOTHERAPY IN THE L2C LEUKEMIA.....	2N01 CB64003-02	51,217
SHALEK, ROBERT J.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	2N01 CN45150-07	62,095
VAN EYS, JAN.....	OPTIMAL NUTRITIONAL SUPPORT AS ADJUNCT TO CANCER THERAPY.....	5N01 CP65794-02	60,424
VAN EYS, JAN.....	ULTRASONIC ASSESSMENT OF NUTRITIONAL STATUS.....	1N01 CP85655-00	186,105
WHARTON, J TAYLOR.....	STUDY OF CHEMOTHERAPY OF OVARIAN CARCINOMA.....	5N01 CM33710-11	192,831
ORGANIZATION TOTAL	23	4,920,601	
RICHARDSON			
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT DALLAS ZIP CODE 75080			
CLOWES, ROYSTON C.....	VERIFICATION OF GENETIC CONSTITUTION OF PLASMID VECTORS.....	2N01 AI62517-03	35,767
ORGANIZATION TOTAL	1	35,767	
SAN ANTONIO			
SANTA ROSA MEDICAL CENTER ZIP CODE 78285			
COOPER, ELMER E.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52921-03	69,026
ORGANIZATION TOTAL	1	69,026	
SOUTHWEST FOUNDATION FOR RESEARCH AND EDUCATION ZIP CODE 78284			
HEBERLING, RICHARD L.....	LATENT VIRUS INFECTION & C-TYPE PARTICLES TRANSMISSION.....	3N01 CP43214-11	40,000
KALTER, SEYMOUR S.....	SUPPORT FOR CHIMPANZEE BREEDING COLONY.....	3N01 CP33340-11	99,259
MC GILL, HENRY C.....	NONHUMAN PRIMATE MODELS OF ATHEROSCLEROSIS/HYPERTENSION.....	3N01 HV53030-06	556,696
MELTZ, MARTIN L.....	SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67075-02	106,153
RAO, PEMMARAJU N.....	SYNTHETIC CHEMICAL FACILITY.....	3N01 HD52857-06	77,118
RAO, PEMMARAJU N.....	SYNTHETIC CHEMICAL FACILITY.....	1N01 HD82823-00	147,323
SHAIKH, ABUBAKAR A.....	PRIMATE TESTING FACILITY.....	3N01 HD52810-04	83,286
SHAIN, SYDNEY A.....	STUDY OF HORMONAL FACTORS OF PROSTATE.....	2N01 CP33379-08	365,373
ORGANIZATION TOTAL	8	1,475,208	
SOUTHWEST RESEARCH INSTITUTE ZIP CODE 78228			
MANGOLD, DONALD J.....	RETINOIDS FOR LABORATORY DIETS.....	1N01 CP85601-00	106,035
MANGOLD, DONALD J.....	DEVELOPMENT OF ORALLY-ACTIVE DOSAGE FORMS FOR STEROIDS.....	5N01 HD72831-02	104,104
ORGANIZATION TOTAL	2	210,139	
SOUTHWEST TEXAS METHODIST HOSPITAL ZIP CODE 78229			
WHITECAR, JOHN P, JR.....	CLINICAL ONCOLOGY PROGRAM.....	5N01 CN75396-01	118,818
ORGANIZATION TOTAL	1	118,818	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS AT SAN ANTONIO ZIP CODE 78285			
SAGIK, BERNARD P.....	TEST SURVIVAL IN SEWAGE TREATMENT PLANT MODEL.....	1N01 AI82566-00	216,081
ORGANIZATION TOTAL	1	216,081	
UNIVERSITY OF TEXAS SYSTEM—UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO ZIP CODE 78284			
BANOWSKY, LYNN.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 AI52505-07	30,081
HARRIS, STEVEN C.....	BREAST CARCINOMA INTRALESIONAL IMMUNOTHERAPY TREATMENT.....	1N01 CB84248-00	75,124

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
TEXAS—Continued			
LAMM, DONALD L.....	BCG IMMUNOTHERAPY OF RECURRENT BLADDER CANCER.....	2N01 CB74192-01	35,855
LIVINGSTON, ROBERT B.....	STUDY METHODS TO PREDICT CHEMOTHERAPY SENSITIVITY.....	5N01 CB74205-01	54,900
MC GUIRE, WILLIAM L.....	ENDOCRINE-INDUCED BREAST CANCER REGRESSION.....	2N01 CB23862-08	125,000
ORGANIZATION TOTAL	5 320,960		
TYLER			
TEXAS DEPARTMENT OF HEALTH RESOURCES—EAST TEXAS CHEST HOSPITAL ZIP CODE 75701			
HURST, GEORGE A.....	TYLER ASBESTOS WORKERS STUDY.....	3N01 CN45066-15	347,500
ORGANIZATION TOTAL	1 347,500		
STATE TOTAL	98 20,126,897		
UTAH			
LOGAN			
UTAH STATE HIGHER EDUCATION SYSTEM—UTAH STATE UNIVERSITY ZIP CODE 84322			
KLEINSCHUSTER, STEPHEN J.....	IMMUNOPROPHYLAXIS OF 'CANCER EYE' IN CATTLE.....	2N01 CB74155-01	224,642
ORGANIZATION TOTAL	1 224,642		
PROVO			
BRIGHAM YOUNG UNIVERSITY ZIP CODE 84602			
BRADSHAW, WILLIAM S.....	IDENTIFY BIOCHEMICAL INDICATORS FOR TOXICITY.....	5N01 ES72119-02	111,205
ORGANIZATION TOTAL	1 111,205		
SALT LAKE CITY			
SALT LAKE CLINIC RESEARCH FOUNDATION ZIP CODE 84102			
BARKER, ALLAN H.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	3N01 HV72969-03	161,960
ORGANIZATION TOTAL	1 161,960		
UTAH STATE DEPARTMENT OF SOCIAL SERVICES ZIP CODE 84103			
REIBER, GAYLE E.....	IMPLEMENTATION FOR A CERVICAL CANCER SCREENING PROGRAM.....	2N01 CN65365-06	295,531
ORGANIZATION TOTAL	1 295,531		
UTAH STATE HIGHER EDUCATION SYSTEM—UNIVERSITY OF UTAH ZIP CODE 84112			
DANIELS, A U.....	VENA CAVA RING TESTS OF ANIMAL BIOMATERIALS.....	2N01 HV62911-04	122,246
DE WITT, CHARLES W.....	HISTOCOMPATIBILITY MATCHING IN RENAL TRANSPLANTATION.....	2N01 A142507-06	13,375
GANDHI, OM P.....	EFFECTS OF MICROWAVE RADIATION ON THE NERVOUS SYSTEM.....	3N01 ES62146-02	1,013
GLASGOW, LOWELL A.....	STUDY OF ANTIVIRAL SUBSTANCES & ANIMAL SYSTEMS.....	3N01 A142524-06	50,471
JARVIK, ROBERT K.....	ENERGY CONVERTER FOR LEFT VENTRICLE ASSIST DEVICES.....	5N01 HV72975-02	92,659
KOLFF, WILLEM J.....	SYSTEM TO REMOVE UREA FROM DIALYZING FLUID.....	2N01 AM72210-02	97,810
LYON, JOSEPH L.....	AN EPIDEMIOLOGICAL INVESTIGATION OF CANCER IN UTAH.....	5N01 CP43382-08	567,526
LYON, JOSEPH L.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71039-01	14,985
LYON, JOSEPH L.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	1N01 CP81015-00	57,200
MORTENSEN, J D.....	ACUTE PUMP-DEPENDENT LEFT VENTRICULAR FAILURE-MODEL.....	1N01 RR82146-00	57,629
OVERALL, JAMES C, JR.....	RECURRENT HERPES VIRUS HOMINIS INFECTION.....	2N01 A152532-07	104,431
PETERSEN, ROBERT V.....	TEST OF NEW BIODEGRADABLE DRUG DELIVERY SYSTEMS.....	2N01 HD72824-02	219,750
RIEKHOF, F TEMPEL.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32122-07	74,626
RIEKHOF, F TEMPEL.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINOPATHY.....	5N01 EY72149-02	104,645
SWINYARD, EWART A.....	PHARMACOLOGICAL EVALUATION OF ANTI-CONVULSANTS.....	5N01 NS52302-06	463,882

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
UTAH—Continued			
TOWNSEND, LEROY B.....	SYNTHESIS OF POLYCYCLIC FRAUDULENT NUCLEOSIDES.....	5N01 CM77142-03	195,000
WARD, J R.....	COOPERATIVE SYSTEMATIC STUDIES OF RHEUMATIC DISEASES.....	5N01 AM62218-03	888,071
ORGANIZATION TOTAL	17 3,125,319		
STATE TOTAL	21 3,918,657		
VERMONT			
BURLINGTON			
UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE ZIP CODE 05401			
BORAKER, DAVID K.....	DEVELOPMENT OF A PEDIGREED STRAIN OF OCTODON DEGUS.....	2N01 EY52105-02	67,360
CRAIGHEAD, JOHN E.....	STUDY OF CARCINOGENESIS IN ORGAN CULTURE.....	5N01 CP33360-07	123,980
FOSTER, ROGER S, JR.....	NETWORK DEMONSTRATION PROJECT IN BREAST CANCER.....	2N01 CN65322-03	238,887
PHILLIPS, CHARLES A.....	EVALUATION OF H1N1 INFLUENZA VACCINE.....	1M01 AI82563-00	30,191
WEED, LAWRENCE L.....	COMPUTERIZED PROBLEM-ORIENTED MEDICAL INFORMATION SYSTEM.....	5M01 CM33716-06	34,833
ORGANIZATION TOTAL	5 495,251		
VERMONT AGENCY OF HUMAN SERVICES—DEPARTMENT OF HEALTH ZIP CODE 05401			
COFFIN, ROBERTA R.....	IMPLEMENTATION FOR A CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN65368-03	127,780
ORGANIZATION TOTAL	1 127,780		
STATE TOTAL	6 623,031		
VIRGINIA			
ALEXANDRIA			
ATLANTIC RESEARCH CORPORATION ZIP CODE 22314			
REEVE, JAMES E.....	INSTALLATION OF TELECAST ROOMS FOR CTS EXPERIMENTS.....	3N01 LM64745-06	33,891
ORGANIZATION TOTAL	1 33,891		
HALIFAX ENGINEERING, INC. ZIP CODE 22312			
NOT APPLICABLE.....	MAINTENANCE ELECTRONICS AT NMAC ATLANTA, GEORGIA.....	2N01 LM64730-06	64,100
ORGANIZATION TOTAL	1 64,100		
VALUE ENGINEERING COMPANY ZIP CODE 22303			
DEAN, CHARLES.....	DRUG DISTRIBUTION AND INVENTORY SYSTEM.....	3N01 CM53821-13	8,500
DEAN, CHARLES.....	DRUG DISTRIBUTION AND PROTOCOL MONITORING SYSTEM.....	1N01 CM87192-00	108,438
SANFACON, THOMAS J.....	DRUG RESEARCH & DEVELOPMENT OF DATA PROCESSING SYSTEM.....	2M01 CM67086-05	905,041
ORGANIZATION TOTAL	3 1,021,979		
ARLINGTON			
AMERICAN BLOOD COMMISSION ZIP CODE 22209			
SWITALSKI, RICHARD.....	TASK FORCE ON MEETING NATIONAL BLOOD BANKING DATA NEEDS.....	2N01 HB62968-07	287,687
ORGANIZATION TOTAL	1 287,687		
CONTROL SYSTEMS RESEARCH ZIP CODE 22209			
PYKE, HAROLD.....	NATIONAL DIABETES INFORMATION CLEARINGHOUSE.....	1N01 AM82221-00	323,159
ORGANIZATION TOTAL	1 323,159		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
VIRGINIA—Continued			
DATA USE AND ACCESS LABORATORIES ZIP CODE 22209			
BERESFORD, JOHN.....	TECHNOLOGY/TRAINING FOR ACCESSING UNIT RECORD DATA FILES.....	3N01 HD62828-04	43,137
ORGANIZATION TOTAL	1 43,137		
KAPPA SYSTEMS ZIP CODE 22209			
BAUER, WILLIAM I.....	SUPPORT FOR THE NATIONAL COMMISSION ON DIABETES.....	3N01 AM62220-08	98,811
HART, CAROL.....	NATIONAL CANCER PROGRAM INFORMATION CLEARINGHOUSE.....	2N01 C075351-03	348,514
LERNER, CHARLES S.....	NATIONAL HIGH BLOOD PRESSURE EDUCATION PROGRAM.....	3N01 HV52942-11	480,145
LERNER, CHARLES S.....	NATIONAL HIGH BLOOD PRESSURE EDUCATION PROGRAM.....	1N01 HV82923-00	1,939,156
ORGANIZATION TOTAL	4 2,866,626		
BLACKSBURG			
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY ZIP CODE 24061			
WILKINS, TRACY D.....	RELATION OF FECAL NEUTRAL STEROLS TO LARGE BOWEL CANCER.....	2N01 CP55685-06	158,085
ORGANIZATION TOTAL	1 158,085		
CHARLOTTESVILLE			
UNIVERSITY OF VIRGINIA ZIP CODE 22903			
ANDREWS, BRIAN S.....	CHARACTERIZE SOLUBLE ANTIGEN-ANTIBODY COMPLEXES.....	1N01 CB84262-00	84,911
BROWN, JAY C.....	LARGE SCALE PREPARATION OF VSV & ITS DI PARTICLES.....	1N01 NS82391-00	70,387
DREIFUSS, FRITZ E.....	A COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS52329-05	994,788
DREIFUSS, FRITZ E.....	STUDY PROPERTIES OF ETHOSUXIMIDE AND CLONAZEPAM.....	5N01 NS92196-09	130,492
GWALTNEY, JACK M, JR.....	INFLUENZA VIRUS AND MYCOPLASMA PNEUMONIAE VACCINES.....	3N01 AI22508-15	61,706
HOWARDS, STUART S.....	EFFECTS OF VASECTOMY ON TESTES, EPIDIDYMIS, AND VAS.....	2N01 HD22770-16	57,951
JANE, JOHN A.....	COMPREHENSIVE CENTRAL NERVOUS SYSTEM TRAUMA CENTERS.....	3N01 NS72373-01	31,277
PARSONS, J THOMAS.....	MAPPING OF INTEGRATION SITES OF AVIAN SARCOMA VIRUS.....	5N01 CP71056-01	63,490
ORGANIZATION TOTAL	8 1,495,002		
FALLS CHURCH			
G. E. BOGGS AND ASSOCIATES ZIP CODE 22043			
BOGGS, GAIL E.....	FACILITY DESIGN PLAN.....	1N01 LM84727-00	50,302
ORGANIZATION TOTAL	1 50,302		
HERNDON			
EXPERIMENTAL PATHOLOGY LABORATORIES ZIP CODE 22070			
BUSEY, WILLIAM.....	ANIMAL PATHOLOGY SUPPORT.....	5N01 CP65731-07	268,538
COCKRELL, BEVERLY.....	IMPROVE ORGAN CULTURE EPITHELIAL CELL SYSTEMS.....	1N01 CP85630-00	34,320
ORGANIZATION TOTAL	2 302,858		
LURAY			
DOUBLE J. FARMS ZIP CODE 22835			
JUDY, JESSE N.....	MAINTENANCE OF SHEEP COLONY.....	2N01 HI72900-01	184,092
ORGANIZATION TOTAL	1 184,092		
MC LEAN			
BOEING COMPANY-BOEING COMPUTER SERVICES ZIP CODE 22101			
GARNEAU, JEAN.....	MIIS/MUMPS SOFTWARE SUPPORT.....	2N01 LM74726-02	104,741

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
VIRGINIA—Continued			
ORGANIZATION TOTAL	1	104,741	
EMMES CORPORATION ZIP CODE 22101			
NOVAK, JOEL W.....	SUPPORT THE GASTROINTESTINAL TUMOR STUDY GROUP.....	1N01 CM87193-00	253,377
ORGANIZATION TOTAL	1	253,377	
FLOW LABORATORIES ZIP CODE 22101			
ADKINS, HARRY F.....	FACILITY FOR STORAGE AND DISTRIBUTION OF CLINICAL DRUGS.....	5N01 CM67088-04	231,000
COTE, PAUL J.....	ANIMAL FACILITY TO SUPPORT RESEARCH ON RNA VIRUSES.....	2N01 CP53566-04	99,736
HAUGHOM, JOAN R.....	GROWTH OF HUMAN TROPHOBLASTIC CELLS IN CULTURE.....	2N01 HD62864-03	72,700
MILLER, RODNEY T.....	REPOSITORY CENTER FOR RESEARCH REAGENTS.....	1N01 AI82542-00	443,040
MILLER, RODNEY T.....	LOW TEMPERATURE REPOSITORY OF HUMAN TUMOR CELLS.....	2N01 CP61000-07	227,188
SULLIVAN, RUDOLPH R.....	MAINTENANCE AND BREEDING OF RABBITS.....	1N01 AI82565-00	149,714
ORGANIZATION TOTAL	6	1,223,378	
JRB ASSOCIATES ZIP CODE 22101			
CUMMING, PAUL.....	SUPPORT SERVICES FOR THE DIVISION OF CANCER CONTROL.....	2N01 CN55200-09	522,450
DANZEISEN, RICHARD N.....	RESOURCES ANALYSIS & PLANNING FOR NCP BUDGETING.....	2N01 C045425-15	304,767
HILDRETH, RICHARD.....	TECHNICAL SUPPORT SERVICES FOR THE ICRDB PROGRAM.....	1N01 C085383-00	418,320
HILDRETH, RICHARD.....	SUPPORT SERVICES TO DCCP PROGRAM ANALYSIS SYSTEMS.....	1N01 CP81008-00	89,540
JAY, GEORGE.....	EVALUATION OF THE NIH GENETIC RESOURCE.....	1N01 RS82138-00	23,545
NOVOTNEY, LAURENCE C.....	DESIGN NINCDS PROGRAM INFORMATION SYSTEM.....	2N01 NS62345-06	125,000
NOVOTNEY, LAURENCE C.....	NINCDS PROGRAM INFORMATION SYSTEM.....	1N01 NS82301-00	261,455
WELLS, FRANK M.....	SYSTEMS PLANNING SUPPORT SERVICES-NCI.....	3N01 C075390-02	230,000
ORGANIZATION TOTAL	8	1,975,077	
MITRE CORPORATION ZIP CODE 22101			
ARONSON, MARTIN H.....	PHS-CTS BIOMEDICAL COMMUNICATIONS EXPERIMENTS.....	3N01 LM74727-05	8,800
JOYCE, CHARLES C, JR.....	COMPUTER SYSTEMS TECHNICAL SUPPORT.....	1N01 LM84720-00	99,480
KORNREICH, MARY R.....	PREPARATION OF CARCINOGENESIS BIOASSAY REPORTS.....	3N01 CP65863-04	95,748
SUMMERS, JOHN K.....	COMPUTER SYSTEMS STUDIES.....	3N01 LM64753-04	119,418
ORGANIZATION TOTAL	4	323,446	
TRW, INC.—TRW SYSTEMS GROUP ZIP CODE 22101			
KERRIGAN, C L.....	CONTINUED DEVELOPMENT OF NCP PROJECT ANALYSIS MODEL.....	2N01 C055318-05	136,189
ORGANIZATION TOTAL	1	136,189	
RICHMOND			
VIRGINIA COMMONWEALTH UNIVERSITY ZIP CODE 23284			
BANKS, WILLIAM L.....	NUTRITIONAL REQUIREMENTS IN TREATMENT OF BRAIN TUMORS.....	5N01 CP75881-05	326,360
FREER, RICHARD J.....	EVALUATE PEPTIDES AS CHEMOATTRACTANTS FOR LEUCOCYTES.....	5N01 DE62494-04	129,827
FREER, RICHARD J.....	PROSTAGLANDIN AND KALLIKREIN-KININ SYSTEM ANTAGONISTS.....	5N01 HV72943-01	76,300
GUZELIAN, PHILIP S, JR.....	STUDY PHARMACOKINETICS AND TOXICITY OF KEPONE.....	5N01 ES62117-04	34,997
MAURER, HAROLD M.....	STUDY OF PHOTOTHERAPY FOR NEONATAL HYPERBILIRUBINEMIA.....	2N01 HD42820-14	79,018
MELLETTE, SUSAN J.....	REHABILITATION/CONTINUING CARE RESOURCES AND SERVICES.....	5N01 CN65287-07	242,260
RICHARDSON, DAVID W.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52914-04	103,360
RICHARDSON, DAVID W.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	2N01 HV82906-02	88,407
ORGANIZATION TOTAL	8	1,080,529	
SPRINGFIELD			
REVLON, INC.—MELDY LABORATORIES ZIP CODE 22151			
BLACKMAN, KENNETH E.....	GROWTH OF NORMAL AND TUMOR VIRUS CELLS.....	5N01 CB74139-01	85,350
BLACKMAN, KENNETH E.....	SPONTANEOUS & VIRUS-INDUCED NEOPLASTIC TRANSFORMATION.....	3N01 CP43236-17	627,285

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
VIRGINIA—Continued			
DIWAN, BHALCHANDRA.....	BIOASSAY OF MAMMARY TUMOR VIRUSES	3N01 CP43263-07	75,000
HARNES, JAMES.....	NCI IMMUNODIAGNOSTIC REFERENCE CENTER.....	2N01 CB63976-06	307,171
INNERARITY, THOMAS L.....	PREPARATION AND ANALYSIS OF LIPOPROTEINS.....	2N01 HI32926-10	263,915
KORTRIGHT, KENNETH H.....	RADIOIMMUNOASSAY OF IMMUNOGLOBULIN MOLECULES.....	5N01 CB63932-03	136,755
LUBINIECKI, ANTHONY S.....	STORAGE OF HUMAN TROPHOBLASTIC AND RAT LEYDIG CELLS.....	2N01 HD62821-09	74,553
SLY, LEWIS D.....	SUPPORT FOR ANIMAL-CARE FACILITY.....	5N01 AI32504-14	308,000
SLY, LEWIS D.....	TRANSPLACENTAL CARCINOGENESIS IN ERYTHROCEBUS PATAS.....	3N01 CP55613-07	197,137
SLY, LEWIS D.....	HERPES VIRUS INDUCTION OF CERVICAL CANCER.....	2N01 NS72360-01	136,154
SLY, LEWIS D.....	ISOLATION HOUSING OF ANIMALS.....	3N01 NS72375-03	339,847
VERNA, JOHN E.....	SPONTANEOUS AND VIRUS-INDUCED NEOPLASTIC TRANSFORMATION.....	3N01 CP43207-19	1,425,621
VERNA, JOHN E.....	MOLECULAR STUDY OF CARCINOMA OF THE BREAST.....	2N01 CP43223-14	674,761
ORGANIZATION TOTAL	13	4,651,549	
VIENNA			
CRC SYSTEMS ZIP CODE 22180			
COOPER, RICHARD.....	ANALYSIS OF INTER AND INTRA COMMUNICATIONS SYSTEMS.....	1N01 LM84729-00	7,431
ORGANIZATION TOTAL	1	7,431	
HAZLETON LABORATORIES CORPORATION—HAZLETON LABORATORIES AMERICA ZIP CODE 22180			
BOWLES, CHARLES A.....	PRECLINICAL ANIMAL BONE MARROW TRANSPLANTATION.....	3N01 CM87156-01	265,034
BOYD, DALE D.....	STUDY OF IMMUNIZATION TO CARIES.....	5N01 DE42434-13	179,689
BOYD, DALE D.....	MAINTAINING A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RR42180-05	142,126
BOYD, DALE D.....	MAINTAIN A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RR62150-01	50,000
DALGARD, DANIEL W.....	SUPPORT FOR PRIMATE-BREEDING FACILITY.....	3N01 CM33708-18	417,770
DALGARD, DANIEL W.....	PRIMATE MODEL FOR DENTAL CARIES STUDIES.....	2N01 DE52458-06	172,894
GARGUS, JAMES L.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM57007-07	547,966
GARGUS, JAMES L.....	PROVISION OF TUMORED MODELS FOR INVESTIGATION.....	3N01 CM77126-02	8,651
MC LAUGHLIN, RONALD M.....	MAINTAINING A BREEDING COLONY OF RHESUS MONKEYS.....	5N01 RS42182-09	20,000
VALERIO, DAVID A.....	STUDY ROLE OF VIRUSES IN EXPERIMENTAL AND HUMAN CANCER.....	3N01 CP61024-05	844,000
ORGANIZATION TOTAL	10	2,648,130	
STATE TOTAL	78	19,234,765	
WASHINGTON			
PULLMAN			
WASHINGTON STATE UNIVERSITY ZIP CODE 99163			
HOSICK, HOWARD L.....	DIFFERENTIATION OF MAMMARY EPITHELIAL CELLS.....	2N01 CB63986-03	55,000
ORGANIZATION TOTAL	1	55,000	
RICHLAND			
BATTELLE MEMORIAL INSTITUTE—PACIFIC NORTHWEST LABORATORIES ZIP CODE 99352			
WILDING, RAYMOND E.....	HEAVY METALS & THEIR COMPLEXES FATE IN SOILS & PLANTS.....	1N01 ES82150-00	94,888
ORGANIZATION TOTAL	1	94,888	
SEATTLE			
CHILDREN'S ORTHOPEDIC HOSPITAL AND MEDICAL CENTER ZIP CODE 98105			
BERNSTEIN, ILENE.....	ROLE OF LEARNED FOOD AVERSIONS IN THE CANCER PATIENT.....	2N01 CP65790-03	55,808
ORGANIZATION TOTAL	1	55,808	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
WASHINGTON—Continued			
FRED HUTCHINSON CANCER RESEARCH CENTER ZIP CODE 98104			
BRESLOW, NORMAN E.....	CENTRALIZED CANCER PATIENT DATA SYSTEM.....	3N01 C075325-02	511,103
HELLSTROM, KARL E.....	IMMUNOTHERAPEUTICAL TRIALS WITH HUMAN TUMORS.....	3N01 CB64018-04	77,413
HELLSTROM, KARL E.....	TUMOR SPECIFIC TRANSPLANTATION ANTIGENS IN TUMORS.....	2N01 CP53570-08	163,260
HILL, LUCIUS D.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	5N01 CM77148-05	154,712
HUTCHINSON, WILLIAM B.....	COMPREHENSIVE CANCER CENTER COMMUNICATIONS NETWORK.....	2N01 CN55233-06	175,733
LEE, JOHN A.....	MODELS OF MALIGNANT & PREMALIGNANT BREAST DISEASE.....	5N01 CB74100-01	83,690
NOWINSKI, ROBERT C.....	AN IMMUNOGENETIC ANALYSIS OF MOUSE LEUKEMIA VIRUSES.....	5N01 CP61009-03	97,700
PRENTICE, ROSS L.....	STATISTICAL DEVELOPMENT OF CARCINOGENESIS MODELS.....	1N01 ES82124-00	61,491
THOMAS, DAVID B.....	EPA/NCI SPECIAL SKIN CANCER EPIDEMIOLOGY STUDY.....	3N01 CP71038-01	14,655
THOMAS, DAVID B.....	STUDY ROLE OF SACCHARIN IN BLADDER CANCER.....	3N01 CP81031-01	48,814
THOMPSON, DONOVAN J.....	SUPPORT FOR A CANCER SURVEILLANCE SYSTEM.....	2N01 CP61059-03	643,298
ORGANIZATION TOTAL	11 2,031,869		
INSTITUTE OF APPLIED PHYSIOLOGY AND MEDICINE ZIP CODE 98122			
REID, JOHN M.....	ULTRASONIC IMAGING DEVELOPMENT.....	5N01 HV72926-04	99,016
ORGANIZATION TOTAL	1 99,016		
PACIFIC NORTHWEST RESEARCH FOUNDATION ZIP CODE 98104			
RILEY, VERNON.....	INFLUENCE OF ANIMAL HANDLING TECHNIQUES ON PHYSIOLOGY.....	1N01 CP85606-00	15,000
SCRIBNER, JOHN D.....	PHYSICOCHEMICAL PARAMETERS IN STRUCTURE-ACTIVITY.....	1N01 CP85628-00	63,780
ORGANIZATION TOTAL	2 78,780		
PROVIDENCE MEDICAL CENTER ZIP CODE 98122			
MANSFIELD, PETER B.....	TISSUE CULTURED ENDOTHELIUM/VASCULAR PROSTHETIC DEVICES.....	5N01 HV12060-18	135,412
ORGANIZATION TOTAL	1 135,412		
UNIVERSITY OF WASHINGTON ZIP CODE 98195			
ALEXANDER, E RUSSELL.....	DIAGNOSTIC APPLICATIONS OF HUMAN TUMOR ANTIGENS.....	2N01 CB64068-03	106,068
ANDERSEN, NIELS H.....	SYNTHESIS OF LUTEOLYTIC PROSTANOIDS.....	5N01 HD42839-04	13,415
ANDERSEN, NIELS H.....	PREPARE POSTOVULATORY PROSTANOID ANTIFERTILITY AGENTS.....	1N01 HD82808-00	50,039
ANDERSEN, NIELS H.....	ARACHIDONATE ANTAGONISTS.....	1N01 HV82933-00	79,921
BAGDADE, JOHN D.....	STUDY OF HYPERLIPIDEMIA AND ATHEROGENESIS.....	3N01 AM32212-09	60,120
BIERMAN, EDWIN L.....	SUPPORT FOR LIPID RESEARCH CLINIC.....	5N01 HV12157-14	2,039,700
BLANDAU, RICHARD J.....	STUDY OF SPERM TRANSPORT THROUGH CERVICAL MUCUS.....	2N01 HD42826-06	60,897
BUCHANAN, THOMAS M.....	SEROTYPING SYSTEM FOR NEISSERIA GONORRHOEAE.....	2N01 AI52535-02	59,015
CHRISTOPHER, T GRAHAM.....	DEVELOP AND EVALUATE THE CLINFO SYSTEM.....	1N01 RR82109-00	39,180
CUTLER, RALPH E.....	PHARMACOKINETIC STUDIES IN CHRONIC RENAL DISEASE.....	2N01 AM22219-05	118,606
ENWONWU, CYRIL.....	NUTRITION ON THE EPITHELIUM OF ORAL MUCOUS MEMBRANES.....	5N01 DE42442-07	86,805
FEFER, ALEXANDER.....	CELLULAR IMMUNOTHERAPY OF MURINE TUMORS.....	1N01 CB84247-00	137,920
FINCH, CLEMENT A.....	RED CELL DISTRIBUTIONS IN CYANATE-TREATED BLOOD.....	2N01 HB62962-02	176,367
FISHER, LLOYD D.....	COLLABORATIVE STUDIES OF CORONARY ARTERY SURGERY.....	5N01 HV32973-12	1,502,977
FOY, HJORDIS M.....	INFLUENZA SURVEILLANCE AND VACCINE EVALUATION.....	3N01 AI62511-05	369,454
HEIMBACH, DAVID M.....	SATELLITE TECHNOLOGY IN BIOMEDICAL COMMUNICATION.....	1N01 OD82114-00	58,672
HOFFMAN, ALLAN S.....	INTERACTION OF NATURAL & MODIFIED BIOPOLYMERS WITH BLOOD.....	3N01 HV42970-07	11,405
HOOVER, J JOANNE.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52922-03	76,484
JOHNSTON, RICHARD P.....	DEVELOP A MODIFIED STIRLING CYCLE ENGINE.....	2N01 HV42901-08	839,935
LOCKARD, JOAN S.....	STUDY EXPERIMENTAL ANTI-EPILEPTIC DRUGS.....	5N01 NS12282-17	478,796
LOVELY, RICHARD H.....	EFFECTS OF MICROWAVE RADIATION ON THE NERVOUS SYSTEM.....	2N01 ES62133-04	66,928
MC LEAN, EDWARD B.....	CLINICAL STUDY OF DIABETIC RETINOPATHY.....	2N01 EY42128-07	64,955
MILLER, BRUCE E.....	CARCINOGENESIS OF PETROLEUM HYDROCARBONS IN MARINE LIFE.....	5N01 ES72101-01	82,523
MINIFIE, FRED D.....	RELATION OF HEARING IMPAIRMENT & LANGUAGE DISABILITY.....	5N01 HD32793-06	256,916
NUTE, PETER E.....	DETECTION OF POINT MUTATIONS IN HUMAN SOMATIC CELLS.....	5N01 ES42151-09	162,535
ODLAND, GEORGE F.....	ANALYZE PRIORITIES AND NEEDS FOR RESEARCH IN DERMATOLOGY.....	5N01 AM72215-01	189,910
OPPENHEIMER, GERALD.....	REGIONAL MEDICAL LIBRARY PROGRAM SERVICES.....	3N01 LM54729-04	313,286
SCRIBNER, BELDING H.....	INFLUENCE OF ANIONS DURING DIALYSIS.....	2N01 AM72222-03	100,300
SILVERSTEIN, FRED E.....	ENDOSCOPIC CONTROL OF MASSIVE BLEEDING IN PATIENTS.....	3N01 AM52211-05	216,492

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
WASHINGTON—Continued			
WARD, ARTHUR A, JR.....	COMPREHENSIVE EPILEPSY PROGRAM.....	2N01 NS62341-05	809,000
WILENSKY, ALAN J.....	CARBAMAZEPINE IN THE TREATMENT OF EPILEPSY.....	2N01 NS02281-12	254,895
WOOTTON, PETER B.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	5N01 CN45158-11	129,978
ORGANIZATION TOTAL	32 9,013,494		
VIRGINIA MASON RESEARCH CENTER ZIP CODE 98101			
CARLILE, THOMAS.....	BREAST CANCER DETECTION DEMONSTRATION PROJECT.....	2N01 CN55304-04	117,628
ORGANIZATION TOTAL	1 117,628		
WASHINGTON DEPARTMENT OF SOCIAL AND HEALTH SERVICES ZIP CODE 98102			
BEARE, JOHN A.....	CERVICAL CANCER SCREENING PROGRAM.....	3N01 CN55265-06	160,868
ORGANIZATION TOTAL	1 160,868		
WALLA WALLA			
ST. MARY COMMUNITY HOSPITAL ZIP CODE 99362			
CONNELL, ROBERT M.....	IMPLEMENTATION OF CLINICAL ONCOLOGY PROGRAM.....	5N01 CN75395-02	143,163
ORGANIZATION TOTAL	1 143,163		
STATE TOTAL	53 11,985,926		
WEST VIRGINIA			
AUGUSTA			
MOUNT PLEASANT BOOKBINDER ZIP CODE 26704			
NOT APPLICABLE.....	REPAIR, RESTORATION, AND REBINDING OF RARE BOOKS.....	1N01 LM84710-00	12,000
ORGANIZATION TOTAL	1 12,000		
MORGANTOWN			
WEST VIRGINIA UNIVERSITY ZIP CODE 26506			
FODOR, GABOR.....	EVALUATE NEURO AND ELECTROPHYSIOLOGICAL ACTIVITIES.....	2N01 AM72212-01	10,000
ORGANIZATION TOTAL	1 10,000		
STATE TOTAL	2 22,000		
WISCONSIN			
MADISON			
DEXTER CORPORATION—ARS/SPRAGUE DAWLEY ZIP CODE 53711			
FORTNEY, ROGER D.....	OPERATION OF A GERM-FREE RODENT COLONY.....	3N01 CM53813-12	764,764
FORTNEY, ROGER D.....	MAINTENANCE OF RODENT PRODUCTION CENTER.....	3N01 CM53846-06	292,836
FORTNEY, ROGER D.....	PRIMARY GENETIC CENTER FOR RODENTS.....	1N01 CM87232-00	819,236
ORGANIZATION TOTAL	3 1,876,836		
ENDOCRINE LABORATORIES OF MADISON ZIP CODE 53713			
DAVIS, JAMES.....	EFFECT OF CERTAIN AGENTS ON REPRODUCTIVE TRACT FUNCTIONS.....	5N01 ES62111-04	213,375
ORGANIZATION TOTAL	1 213,375		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
WISCONSIN—Continued			
RALTECH SCIENTIFIC SERVICES ZIP CODE 53707			
STATZ, DU WAYNE.....	PREPARATION OF PLANT EXTRACTS.....	1N01 CM87182-00	121,841
ORGANIZATION TOTAL	1 121,841		
UNIVERSITY OF WISCONSIN SYSTEM—UNIVERSITY OF WISCONSIN-MAISON ZIP CODE 53706			
ALLEN, JAMES R.....	STUDY RHESUS MONKEYS EXPDSED IN UTERO & NURSING TO PCB'S.....	1N01 ES82128-00	38,508
BRANDENBURG, JAMES H.....	DEMDNSTRATION PROJECT FDR HEAD AND NECK CANCER.....	2N01 CN45130-04	135,039
BRESNICK, GEORGE H.....	EVALUATE EARLY TREATMENT DF DIABETIC RETINOPATHY.....	5N01 EY72139-01	108,585
BRYAN, GEORGE T.....	PREVENTION OF EPITHELIAL CANCER BY RETINOIDS.....	5N01 CP75905-02	212,002
CAMERON, JOHN R.....	CANCER CONTROL RADIOLOGIC PHYSICS CENTERS.....	5N01 CN45152-08	200,700
DAVIS, MATTHEW D.....	STUDY DF DIABETIC RETINOPATHY (READING CENTER).....	2N01 EY32130-08	377,202
DAVIS, MATTHEW D.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52148-03	143,658
DAVIS, MATTHEW D.....	EVALUATE EARLY TREATMENT OF DIABETIC RETINDPATHY.....	5N01 EY72148-01	92,521
EASTERDAY, BERNARD C.....	STUDY OF INTERFERON AND INTERFERON INDUCERS.....	2N01 AI02132-11	50,035
JDHNSON, ROBERT O.....	CDMPREHENSIVE CANCER CENTER CDMMUNICATIDNS NETWRK.....	5N01 CN55228-07	220,831
LARSON, FRANK C.....	SIGNIFICANCE OF ALKALINE PHOSPHATASE IN CANCER PATIENTS.....	2N01 CB74173-02	67,920
MYERS, FRANK L.....	STUDY OF DIABETIC RETINOPATHY.....	2N01 EY32121-05	143,055
MYERS, FRANK L.....	EVALUATE EARLY VITRECTDMY IN DIABETIC RETINOPATHY.....	2N01 EY52140-02	71,981
PERLMAN, DAVID.....	CELL CULTURE SCREENING OF NEW MATERIALS FOR CYTOTOXICITY.....	5N01 CM67076-04	59,624
PITOT, HENRY C.....	DNA REPAIR STUDIES IN CULTURED HEPATDCYTES.....	1N01 CP85609-00	59,041
ZACHMAN, RICHARD D.....	ANTENATAL STEROID THERAPY IN THE PREVENTIDN OF NRDS.....	5N01 HR62952-05	26,023
ORGANIZATION TOTAL	16 2,006,725		
WISCONSIN ALUMNI RESEARCH FOUNATION ZIP CODE 53705			
DE DENNIS, SUSANA R.....	IN VIVD SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM53770-04	422,901
HUGHES, DONALD L.....	ANALYZE PCB'S AND DDE IN HUMAN FLUIDS AND TISSUE.....	5N01 ES72141-03	84,839
ORGANIZATION TOTAL	2 507,740		
MARSHFIELD			
MARSHFIELO MEDICAL FOUNATION ZIP CODE 54449			
SAUTTER, RICHARD D.....	COLLABORATIVE STUDIES DF CORONARY ARTERY SURGERY.....	5N01 HV32981-10	106,432
ORGANIZATION TOTAL	1 106,432		
MILWAUKEE			
ALORICH CHEMICAL COMPANY ZIP CODE 53233			
SZABO, WILLIAM.....	PREPARATIDN DF BULK CHEMICALS AND DRUGS.....	1N01 CM87202-00	276,685
ORGANIZATION TDAL	1 276,685		
MEOICAL COLLEGE OF WISCONSIN ZIP CODE 53233			
AABERG, THOMAS M.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	2N01 EY52143-02	32,956
CURTIS, ROBIN L.....	SPECIAL ANIMAL COLDNY (MOUSE NEUROLOGICAL MUTANTS).....	1N01 RR82134-00	26,358
GRAUSZ, JDHN P.....	MEASURE PULMDNARY FUNCTIDN IN INFANTS AND CHILDREN.....	3N01 HR62902-02	6,082
GRDSSBERG, SIDNEY E.....	STUDY OF STABILITY DF HUMAN INTERFERON.....	2N01 AI42520-06	66,660
MILBRATH, JDHN R.....	BREAST CANCER DETECTIDN DEMDNRSTRATION PROJECT.....	2N01 CN55308-05	284,552
SANCES, ANTHONY, JR.....	NMR CDNCEPTS AND DEVELOPMENT OF BIDLDGICAL FLOW.....	5N01 HI02216-10	170,041
WILKINSON, EDWARD J.....	DCCULT BREAST CANCER METASTASES IN AXILLARY LYMPH NODES.....	5N01 CB74110-01	110,900
DRGANIZATION TOTAL	7 697,549		
MILWAUKEE BLOOD CENTER ZIP CODE 53233			
DUQUESNOY, RENE J.....	REFERENCE HLA LABORATORIES.....	1N01 AI82543-00	25,622
ORGANIZATION TDAL	1 25,622		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
WISCONSIN—Continued			
MOUNT SINAI MEDICAL CENTER ZIP CODE 53233			
BORTIN, MORTIMER M.....	MAINTAIN INTERNATIONAL BONE MARROW TRANSPLANT REGISTRY.....	3N01 HB62963-04	8,860
ORGANIZATION TOTAL	1 8,860		
STATE TOTAL	34 5,841,665		
WYOMING			
CHEYENNE			
WYOMING STATE DEPARTMENT OF HEALTH AND SOCIAL SERVICES ZIP CODE 82002			
PARISH, HERMAN S.....	CERVICAL CANCER SCREENING PROGRAM.....	5N01 CN65261-03	179,903
ORGANIZATION TOTAL	1 179,903		
STATE TOTAL	1 179,903		
PUERTO RICO			
SAN JUAN			
PUERTO RICO DEPARTMENT OF HEALTH ZIP CODE 00908			
MARTINEZ, ISIDRO.....	CANCER SURVEY IN THE PUERTO RICO AREA.....	2N01 CP43386-09	89,956
ORGANIZATION TOTAL	1 89,956		
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS 00936			
BERROCAL, JOSE.....	CLINICAL STUDY OF DIABETIC RETINOPATHY.....	2N01 EY42142-07	66,835
BERROCAL, JOSE.....	EVALUATE EARLY VITRECTOMY IN DIABETIC RETINOPATHY.....	5N01 EY82103-01	110,874
GARCIA-PALMIERI, MARIO R.....	EPIDEMIOLOGICAL STUDIES OF CORONARY HEART DISEASE.....	5N01 HV42902-08	233,447
GARCIA-PALMIERI, MARIO R.....	CLINICAL CENTER FOR ASPIRIN-MYOCARDIAL INFARCTION STUDY.....	5N01 HV52910-03	109,266
KERBER, WILLIAM T.....	DOMESTIC SQUIRREL MONKEY PRODUCTION.....	5N01 RR52133-05	77,247
KERBER, WILLIAM T.....	BEHAVIOR, ECOLOGY AND REPRODUCTION OF NONHUMAN PRIMATES.....	3N01 RR72115-02	95,510
ORGANIZATION TOTAL	6 693,179		
STATE TOTAL	7 783,135		
OTHER COUNTRIES			
AUSTRALIA			
MELBOURNE			
WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH			
METCALF, DONALD.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	2N01 CB74148-02	85,476
ORGANIZATION TOTAL	1 85,476		
SYDNEY			
ROYAL NORTH SHORE HOSPITAL			
NELSON, D S.....	ROLE OF THE MACROPHAGE IN TUMOR RESISTANCE.....	2N01 CB63973-03	57,109

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
AUSTRALIA—Continued			
NELSON, D S.....	MACROPHAGE FUNCTION/INFLAMMATORY RESPONSE CAUSES.....	1N01 CB84251-00	49,997
ORGANIZATION TOTAL	2 107,106		
SYDNEY HOSPITAL			
HERSEY, PETER.....	DIAGNOSTIC APPLICATIONS OF ANTIBODIES TO MELANOMA.....	2N01 CB74120-01	46,099
ORGANIZATION TOTAL	1 46,099		
UNIVERSITY OF SYDNEY			
BERAL, VALERIE.....	MALIGNANT MELANOMA AMONG WOMEN ON CONTRACEPTIVE STEROIDS.....	1N01 HD82804-00	41,464
ORGANIZATION TOTAL	1 41,464		
STATE TOTAL	5 280,145		
AUSTRIA			
INNSBRUCK			
UNIVERSITY OF INNSBRUCK			
WICK, GEORGE.....	IMMUNOFLUORESCENT IDENTIFICATION OF BASEMENT MEMBRANES.....	1N01 DE82412-00	13,050
ORGANIZATION TOTAL	1 13,050		
SALZBURG			
AUSTRIAN ACADEMY OF SCIENCES—INSTITUTE FOR MOLECULAR BIOLOGY			
KRATOCHWIL, KLAUS.....	RESPONSE OF EMBRYO MAMMARY GLAND TO ANDROGENIC HORMONES.....	3N01 CB33883-07	72,000
WIRL, GERHARD.....	STUDIES OF INFLUENCE OF MAMMARY CARCINOMA ON COLLAGEN.....	2N01 CB74109-01	44,600
ORGANIZATION TOTAL	2 116,600		
STATE TOTAL	3 129,650		
BELGIUM			
BRUSSELS			
EUROPEAN ORGANIZATION FOR RESEARCH ON TREATMENT OF CANCER			
ATTASI, GHANEM.....	IN VIVO SCREENING FOR ANTICANCER ACTIVITY.....	2N01 CM57040-04	178,860
TAGNON, HENRI J.....	CANCER CHEMOTHERAPY RESEARCH COLLABORATIVE OFFICE.....	2N01 CM53840-05	81,900
ORGANIZATION TOTAL	2 260,760		
STATE TOTAL	2 260,760		
CANADA			
CHALK RIVER			
ATOMIC ENERGY OF CANADA, LTD.—CHALK RIVER NUCLEAR LABORATORIES			
PATTERSON, MALCOLM C.....	DNA REPAIR IN GENETIC SYNDROMES AND HIGH CANCER RISK.....	1N01 CP81002-00	78,289
ORGANIZATION TOTAL	1 78,289		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CANADA—Continued			
HALIFAX			
DALHOUSIE UNIVERSITY			
RAUTAHARJU, P M.....	SUPPORT FOR ECG CENTER FOR PREVENTION OF HEART DISEASE.....	2N01 HV42911-07	212,913
ORGANIZATION TOTAL	1	212,913	
HAMILTON			
MC MASTER UNIVERSITY			
WITELSON, SANDRA F.....	NEUROANATOMY IN THE HUMAN TEMPORAL LOBES.....	5N01 NS62344-03	9,500
ORGANIZATION TOTAL	1	9,500	
MONTREAL			
MC GILL UNIVERSITY			
MACKLEN, P T.....	STANDARDIZATION OF MEASUREMENT OF CLOSING VOLUME.....	5N01 HR32902-07	89,975
ORGANIZATION TOTAL	1	89,975	
MONTREAL GENERAL HOSPITAL			
SKAMENE, EMIL.....	MACROPHAGE ACTIVATION STUDIES.....	1N01 CB84269-00	85,350
ORGANIZATION TOTAL	1	85,350	
MONTREAL HEART INSTITUTE			
BOURASSA, MARTIAL G.....	COLLABORATIVE STUDY OF SURGERY ON CORONARY ARTERIES.....	5N01 HV32983-11	146,010
THEROUX, PIERRE A.....	CLINICAL CENTER FOR PROPRANOLOL HEART TRIAL.....	1N01 HV82910-00	77,361
ORGANIZATION TOTAL	2	223,371	
QUEBEC			
LAVAL UNIVERSITY			
ENGEL, CHARLES R.....	SYNTHESIZE PROGESTERONE ANALOGUES OF NOVEL STRUCTURES.....	1N01 HD82812-00	74,715
ENGEL, CHARLES R.....	SYNTHESIS OF POTENTIAL MALE CONTRACEPTIVES.....	1N01 HD82815-00	33,812
ORGANIZATION TOTAL	2	108,527	
TORONTO			
HOSPITAL FOR SICK CHILDREN			
MC CLURE, PETER D.....	COLLECT BLOOD SPECIMENS AND SOLID TUMOR MATERIALS.....	5N01 CP61040-03	24,250
ORGANIZATION TOTAL	1	24,250	
ONTARIO CANCER INSTITUTE			
FELD, RONALD.....	ADJUVANT TRIALS IN RESECTABLE NON-OAT CELL LUNG CANCER.....	5N01 CM77152-02	206,164
MINOVITCH, LOUIS.....	SUPPLY OF MUTANT VERTEBRATE CELLS.....	5N01 CP43331-09	213,864
ORGANIZATION TOTAL	2	420,028	
TORONTO WESTERN HOSPITAL			
OREOPOULOS, DIMITRIOS G.....	CONTINUOUS AMBULATORY PERITONEAL DIALYSIS (CAPD).....	1N01 AM82213-00	87,000
ORGANIZATION TOTAL	1	87,000	
UNIVERSITY OF TORONTO			
FARBER, EMMANUEL.....	BIOCHEMISTRY AND MORPHOLOGY OF HEPATIC CARCINOGENESIS.....	5N01 CP75879-01	92,613
LITTLE, ALICK.....	LIPID RESEARCH CLINIC.....	5N01 HV22917-11	957,205

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
CANADA—Continued			
ORGANIZATION TOTAL	2	1,049,818	
VANCOUVER			
UNIVERSITY OF BRITISH COLUMBIA			
BROWN, JOHN C.....	SUPPLY GASTRIC INHIBITORY POLYPEPTIDES.....	1N01 AM82203-00	50,000
KUTNEY, JAMES P.....	SYNTHESIS OF VINBLASTINE AND VINCRIStINE.....	5N01 CM23223-07	109,985
KUTNEY, JAMES P.....	PLANT AND CELL CULTURE SOURCE FOR ANTINEOPLASTIC AGENTS.....	1N01 CM87236-00	89,950
ORGANIZATION TOTAL	3	249,935	
WINNIPEG			
UNIVERSITY OF MANITOBA			
ANTHONISEN, NICHOLAS R.....	NOCTURNAL OXYGEN THERAPY IN CHRONIC HYPOXIC LUNG DISEASE.....	5N01 HR62943-05	26,580
ANTHONISEN, NICHOLAS R.....	INTERMITTENT POSITIVE PRESSURE BREATHING CLINICAL STUDY.....	5N01 HR72902-04	455,984
CHERNIACK, REUBEN M.....	STUDY TO STANDARDIZE THE MEASUREMENT OF CLOSING VOLUME.....	5N01 HR32903-11	81,470
RIGATTO, HENRIQUE.....	ANTENATAL STEROID THERAPY IN THE PREVENTION OF NRDS.....	5N01 HR62949-05	89,203
ORGANIZATION TOTAL	4	653,237	
STATE TOTAL	22	3,292,193	
CHINA (TAIWAN)			
TAIPEI			
DONALD DEXTER VAN SLYKE MEMORIAL FOUNDATION			
YOUNG, TZE-KONG.....	GI DIALYSIS AS ADJUNCT TO THERAPY OF RENAL FAILURE.....	2N01 AM62210-08	124,377
ORGANIZATION TOTAL	1	124,377	
STATE TOTAL	1	124,377	
COLOMBIA			
CALI			
UNIVERSITY OF VALLE			
CUELLO, CARLOS.....	GEOGRAPHICAL PATHOLOGY AND EPIDEMIOLOGY OF CANCER.....	5N01 CP33286-07	103,514
ORGANIZATION TOTAL	1	103,514	
STATE TOTAL	1	103,514	
FINLAND			
HELSINKI			
CENTRAL PUBLIC HEALTH LABORATORY			
MAKELA, P HELENA.....	CONDUCTING A FIELD TRIAL OF MENINGOCOCCUS VACCINE.....	2N01 AI52502-04	56,000
ORGANIZATION TOTAL	1	56,000	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
FINLAND—Continued			
UNIVERSITY OF HELSINKI			
HAYRY, PEKKA J.....	EFFECTOR MECHANISMS IN CANCER REJECTION.....	2N01 CB64032-02	53,650
MAKELA, V OLAVI.....	SPECIFICITY OF ANTIGEN-BINDING RECEPTORS ON T-CELLS.....	5N01 CB43923-04	28,800
ORGANIZATION TOTAL	2	82,450	
TURKU			
UNIVERSITY OF TURKU			
HAKKINEN, ILKKA P.....	SCREENING FOR GASTRIC CANCER.....	2N01 CB64070-03	33,400
TOIVANEN, PAAVO.....	ANIMAL MODELS FOR BONE MARROW TRANSPLANTATION.....	2N01 CB74177-01	43,500
ORGANIZATION TOTAL	2	76,900	
STATE TOTAL	5	215,350	
FRANCE			
LYON			
WORLD HEALTH ORGANIZATION—INTERNATIONAL AGENCY FOR RESEARCH ON CANCER			
AGTHE, C.....	THE EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN.....	3N01 CP45608-11	477,222
DAY, N E.....	ETIOLOGY OF ESOPHAGEAL CANCER IN IRAN.....	5N01 CP71048-02	177,263
DE THE, G BLAUDIN.....	SEROEPIDEMIOLOGICAL STUDY OF CARCINOMA AND LYMPHOMA.....	3N01 CP43296-13	200,000
LOGAN, W P.....	CANCER MORTALITY RELATED TO OCCUPATION AND SOCIAL CLASS.....	5N01 CP71015-01	15,750
MONTESANO, R.....	SIGNIFICANCE OF EXPERIMENTAL CARCINOGENESIS DATA.....	3N01 CP55630-09	213,314
MUIR, C S.....	CLEARINGHOUSE FOR ON-GOING WORK IN CANCER EPIDEMIOLOGY.....	5N01 C055195-05	115,049
ORGANIZATION TOTAL	6	1,198,598	
STATE TOTAL	6	1,198,598	
GERMANY BERLIN			
BERLIN			
SCHERING, INC.			
HOROWSKI, REINHARD.....	LONG-ACTING INJECTABLE CONTRACEPTIVE AGENT.....	3N01 HD52817-05	120,000
ORGANIZATION TOTAL	1	120,000	
STATE TOTAL	1	120,000	
GERMANY FED R			
FRANKFURT			
JOHANN WOLFGANG GOETHE UNIVERSITY OF FRANKFURT			
BALDAMUS, C A.....	HEMODIALYSIS/HEMOFILTRATION, COMPARISON OF COST FACTORS.....	1N01 AM82227-00	128,333
ORGANIZATION TOTAL	1	128,333	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
GERMANY FED R—Continued			
HANOVER			
HANOVER UNIVERSITY OF MEDICINE			
MOHR, ULRICH	DEVELOP ANIMAL MODEL FOR PANCREATIC CARCINOGENESIS.....	5N01 CP75972-02	108,120
ORGANIZATION TOTAL	1 108,120		
NEPHROLOGY CENTER OF LOWER SAXONY			
QUELLHORST, E.....	HEMODIALYSIS AND HEMOFILTRATION IN CHRONIC RENAL FAILURE.....	1N01 AM82229-00	29,327
ORGANIZATION TOTAL	1 29,327		
HEIDELBERG			
GERMAN CANCER RESEARCH CENTER			
KRAMMER, P H.....	CHARACTERIZATION OF ANTIGEN-BINDING T-CELL RECEPTORS.....	2N01 CB74179-02	68,529
ORGANIZATION TOTAL	1 68,529		
STATE TOTAL	4 334,309		
ISRAEL			
BET-DAGAN			
ISRAELI MINISTRY OF AGRICULTURE--VOLCANI CENTER			
HURWITZ, SHMUEL.....	PARATHYROID FUNCTION IN RELATION TO BONE DISORDERS.....	5N01 AM72214-01	24,000
ORGANIZATION TOTAL	1 24,000		
JERUSALEM			
HEBREW UNIVERSITY OF JERUSALEM			
KEDAR, ELIEZER.....	IMMUNOTHERAPY OF MURINE LEUKEMIAS.....	2N01 CB64050-03	97,542
MENCZEL, JACOB.....	OSTEOPOROSIS AND FRACTURE RESEARCH.....	3N01 AM32204-13	204,845
STEIN, YEchezkiel.....	ESTABLISHMENT OF A LIPID RESEARCH CLINIC.....	5N01 HV53015-09	498,485
ORGANIZATION TOTAL	3 800,872		
ISRAELI MINISTRY OF HEALTH—CENTER OF REGISTRATION OF CANCER AND ALLIED DISEASES			
KATZ, LEAH H.....	CANCER INCIDENCE STUDY & REGISTRY ASSESSMENT.....	2N01 CP33351-06	94,411
ORGANIZATION TOTAL	1 94,411		
REHOVOTH			
WEIZMANN INSTITUTE OF SCIENCE			
ARNON, RUTH.....	ANTIBODY-DRUG CONJUGATES IN THE IMMUNOTHERAPY.....	2N01 CB64049-02	58,815
BERKE, GIDEON.....	MOLECULAR STUDIES OF SPECIFIC CELL MEDIATED CYTOTOXICITY.....	2N01 CB74183-01	106,651
COHEN, IRUN R.....	TUMOR AVOIDANCE OF DESTRUCTION BY THE IMMUNE SYSTEM.....	2N01 CB63982-04	39,450
HAAS, MARTIN.....	INDUCTION OF FUNCTIONAL DIFFERENTIATION OF T-CELLS.....	2N01 CB74180-01	91,295
HERAN-GHERA, NECHAMA.....	GENETIC CONTROL OF SUSCEPTIBILITY TO TUMORS.....	5N01 CB74151-03	201,232
REVEL, MICHEL.....	STUDY OF ALTERATION IN TRANSLATION OF GENETIC MESSAGES.....	5N01 CP33220-10	308,480
SACHS, LEO.....	INVESTIGATE ASPECTS OF LUNG CANCER INCIDENCE.....	5N01 CP02217-12	271,240
SEGAL, SHRAGA.....	IMMUNOBIOLOGY OF METASTASES.....	2N01 CB74185-01	53,006
SHAPIRO, DAVID.....	PRODUCE 3 RADIOLABELED GLYCOLIPID SUBSTANCES.....	2N01 NS52300-05	39,900
SHARON, NATHAN.....	ISOLATION AND CHARACTERIZATION OF HUMAN PBL'S.....	2N01 CB74163-01	80,560
SHINITZKY, MEIR.....	ALTERED MEMBRANE MICROVISCOSITY.....	2N01 CB74193-01	30,998
SILBERBERG, ALEXANDER.....	INTERACTIONS OF PLATELETS WITH COLLAGENS.....	5N01 HV52907-04	119,210

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ISRAEL—Continued			
ORGANIZATION TOTAL	12	1,400,837	
TEL AVIV			
TEL AVIV UNIVERSITY			
FRENSDORFF, ASHER.....	INFLUENCE OF CARCINOGENS ON VIRAL GENE EXPRESSION.....	5N01 CB74118-01	112,755
FRENSDORFF, ASHER.....	IMMUNIZATION OF MICE WITH PURIFIED MMTV POLYPEPTIDES.....	5N01 CP71011-01	99,790
WITZ, ISAAC P.....	EARLY DETECTION OF ANTIBODIES TO SYNGENEIC MOUSE TUMORS.....	2N01 CB74134-01	73,552
ORGANIZATION TOTAL	3	286,097	
TEL HASHOMER			
CHIAM SHEBA MEDICAL CENTER			
MODAN, BARUCH.....	DIET FACTORS AND EPIDEMIOLOGY OF BREAST CANCER.....	2N01 CB53883-05	67,000
MODAN, BARUCH.....	EPIDEMIOLOGY OF BENIGN BREAST DISEASE.....	5N01 CB74102-02	67,805
ORGANIZATION TOTAL	2	134,805	
STATE TOTAL	22	2,741,022	
ITALY			
MILAN			
MARIO NEGRI INSTITUTE FOR PHARMACOLOGICAL RESEARCH			
GARATTINI, SILVIO.....	COLLECTION AND SCREENING OF ANTINEOPLASTIC AGENTS.....	3N01 CM33720-07	304,275
GARATTINI, SILVIO.....	ANTINEOPLASTIC DRUG KINETICS.....	5N01 CM67064-02	75,580
GARATTINI, SILVIO.....	EVALUATE AGENTS FOR TREATING ANOREXIA IN CANCER.....	1N01 CP85604-00	84,810
GARATTINI, SILVIO.....	COMPARATIVE PHARMACOLOGY OF STEROID CONTRACEPTIVE DRUGS.....	2N01 HD22733-09	32,850
SPREAFICO, FEDERICO.....	STUDIES IN IMMUNOCHEMOTHERAPY RESEARCH.....	5N01 CM53826-04	96,809
ORGANIZATION TOTAL	5	594,324	
NATIONAL INSTITUTE FOR THE STUDY AND CARE OF TUMORS			
VERONESI, UMBERTO.....	STUDY OF CANCER AND BRAIN TUMORS.....	3N01 CM33714-13	117,921
VERONESI, UMBERTO.....	COORDINATING CENTER FOR THE CLINICAL STUDY OF MELANOMA.....	3N01 CM43726-08	126,192
ORGANIZATION TOTAL	2	244,113	
NAPLES			
UNIVERSITY OF NAPLES			
GIORDANO, CARMELO.....	STUDY OF AMINO ACID AND UREMIA.....	3N01 AM90066-12	9,750
GIORDANO, CARMELO.....	STUDY OF OXYSTARCH AND UREMIA.....	2N01 AM90070-10	43,000
ORGANIZATION TOTAL	2	52,750	
PAVIA			
UNIVERSITY OF PAVIA			
PAOLETTI, PIETRO.....	THERAPY OF PATIENTS WITH BRAIN TUMORS.....	5N01 CM67056-04	29,594
ORGANIZATION TOTAL	1	29,594	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
ITALY—Continued			
PERUGIA			
UNIVERSITY OF PERUGIA			
BONMASSAR, ENZO	DRUG MODIFIED TUMOR ANTIGENS AS IMMUNOTHERAPY	2N01 CB64054-03	67,000
ORGANIZATION TOTAL	1 67,000		
PISA			
UNIVERSITY OF PISA			
BIANCHI, ROMANO.....	STUDY OF DIETARY TREATMENT OF CHRONIC UREMIA	2N01 AM80707-16	22,575
ORGANIZATION TOTAL	1 22,575		
STATE TOTAL	12 1,010,356		
JAPAN			
NAGOYA			
AICHI CANCER CENTER			
NISHIZUKA, YASUAKI.....	PERINATAL ALTERATIONS INFLUENCE ON CARCINOGENESIS	2N01 CP55650-07	69,520
SEGI, MITSUO	SHIFTS IN CANCER RISKS FOR SPECIFIC SITES.....	3N01 CP23213-08	34,094
ORGANIZATION TOTAL	2 103,614		
OSAKA			
OSAKA CITY UNIVERSITY			
TOKUYAMA, TAKASHI.....	STUDY OF STRUCTURE OF ALKALOIDS	2N01 AM42203-05	10,000
ORGANIZATION TOTAL	1 10,000		
TOKYO			
INSTITUTE OF MICROBIAL CHEMISTRY			
UMEGAWA, HARNO.....	POTENTIAL ANTITUMOR AGENTS FROM MICROBIAL ORIGIN.....	2N01 CM57009-04	150,000
ORGANIZATION TOTAL	1 150,000		
INTERNATIONAL MEDICAL INFORMATION CENTER			
FUJIKAWA, MASANOBU.....	INTERACTION BETWEEN THE ICRDB PROGRAM AND ASIA	5N01 C075362-02	90,902
ORGANIZATION TOTAL	1 90,902		
JAPANESE FOUNDATION FOR CANCER RESEARCH			
IKAWA, YOJI	SUPPLY ASIATIC RODENT AND PRIMATE MATERIALS	5N01 CP71032-01	57,860
SAKURAI, YOSHIO	CANCER LIAISON OFFICE IN JAPAN	5N01 CM22054-10	49,000
ORGANIZATION TOTAL	2 106,860		
KYOWA, HAKKO, KOGYO, CO. LTD.			
MASANARA, MISAWA.....	PLANT AND CELL CULTURE SOURCE FOR ANTINEOPLASTIC AGENTS	1N01 CM87190-00	104,027
ORGANIZATION TOTAL	1 104,027		
STATE TOTAL	8 565,403		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
NETHERLANDS			
AMSTERDAM			
NETHERLANDS CANCER INSTITUTE			
BOOT, LOURENS M.....	IMMUNOGENETIC STUDY OF BREAST CANCER AND LEUKEMIA.....	2N01 CP33368-04	49,500
ORGANIZATION TOTAL	1 49,500		
NETHERLANDS RED CROSS			
LOOS, J A.....	CRYOPRESERVATION OF HUMAN MONOCYTES.....	2N01 CB74164-01	44,562
ORGANIZATION TOTAL	1 44,562		
LEIDEN			
STATE UNIVERSITY OF LEIDEN			
VAN ROOD, JON J.....	ACQUISITION OF HOMOZYGOUS TYPING CELLS.....	1N01 A182549-00	54,100
VAN ROOD, JON J.....	ACQUISITION OF HOMOZYGOUS TYPING CELLS.....	1N01 A182553-00	24,400
ORGANIZATION TOTAL	2 78,500		
RIJSWIJK			
NETHERLANDS CENTRAL ORGANIZATION TNO			
BENTVELZEN, PETER A.....	RELEASE OF RNA TUMOR VIRUS & ITS GENETIC CONTROL.....	5N01 CP43328-05	180,000
BROERSE, JOHANNES J.....	STUDY OF INTERACTION OF HORMONES.....	2N01 CP33330-06	83,000
MARQUET, R L.....	IMMUNOGENICITY OF 'SPONTANEOUS' ANIMAL TUMORS.....	3N01 CB64038-02	2,083
VAN PUTTEN, L M.....	COMBINATION OF RADIATION AND CHEMOTHERAPY.....	2N01 CM53763-03	73,151
ORGANIZATION TOTAL	4 338,234		
STATE TOTAL	8 510,796		
NORWAY			
OSLO			
NORWEGIAN PUBLIC HEALTH SERVICE			
PEDERSEN, EINAR.....	SHIFTS IN CANCER RISKS AMONG NORWEGIAN MIGRANTS.....	3N01 CP43247-05	7,800
ORGANIZATION TOTAL	1 7,800		
TRONDHEIM			
UNIVERSITY OF TRONOHEIM			
BAKKETEIG, LEIV S.....	OUTCOME OF SUCCESSIVE PREGNANCIES FOR NORWEGIAN WOMEN.....	1N01 HD82826-00	20,539
ORGANIZATION TOTAL	1 20,539		
STATE TOTAL	2 28,339		
PHILIPPINES			
MANILA			
INTERNATIONAL RICE RESEARCH INSTITUTE			
JULIANO, BIENVENIDO O.....	SCREENING OF RICE VARIETIES.....	2N01 AM70726-16	18,834
ORGANIZATION TOTAL	1 18,834		

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
PHILIPPINES—Continued			
STATE TOTAL	1	18,834	
SWEDEN			
GOTHENBURG			
GOTHENBURG UNIVERSITY			
LINDAHL, TOMAS.....	BIOMOLECULAR RELATIONSHIP OF HERPES VIRUS AND CANCER.....	1N01 CP81020-00	106,880
ORGANIZATION TOTAL	1	106,880	
STOCKHOLM			
CAROLINE INSTITUTE			
BERGSTROM, JONAS.....	STUDY OF UREMIC TOXICOLOGY.....	2N01 AM22215-11	103,487
KLEIN, EVA.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64023-02	49,000
KLEIN, EVA.....	IN VITRO IMMUNIZATION WITH AUTOCHTHONOUS HUMAN TUMOR.....	2N01 CB74144-01	53,100
KLEIN, GEORGE.....	ETIOLOGY OF SOME HUMAN CANCERS.....	2N01 CP33316-07	197,000
ORGANIZATION TOTAL	4	402,587	
UNIVERSITY OF STOCKHOLM			
ERNSTER, LARS.....	STUDY OF POLYCYCLIC HYDROCARBON METABOLISM.....	5N01 CP33363-08	195,000
ORGANIZATION TOTAL	1	195,000	
UPPSALA			
UNIVERSITY OF UPPSALA			
WIGZELL, HANS L.....	CELLS INVOLVED IN THE IMMUNE RESPONSE TO TUMORS.....	2N01 CB64033-02	65,000
WIGZELL, HANS L.....	OBTAIN UNIQUE MARKERS FOR MONONUCLEAR CELLS.....	2N01 CB74129-01	55,000
ORGANIZATION TOTAL	2	120,000	
STATE TOTAL	8	824,467	
SWITZERLAND			
GENEVA			
INTERNATIONAL UNION AGAINST CANCER			
DELAFRESNAYE, J F.....	SUPPORT OF THE NCI INTERNATIONAL PROGRAMS.....	3N01 C075377-03	272,814
GRASSI, GUY E.....	INTERNATIONAL SCIENTIST INFORMATION EXCHANGE PROGRAM.....	2N01 C065341-05	444,691
ORGANIZATION TOTAL	2	717,505	
WORLD HEALTH ORGANIZATION			
KUPKA, KAREL.....	PREPARATION OF AN INTERNATIONAL NOMENCLATURE OF DISEASES.....	3N01 RG62129-03	60,000
ORGANIZATION TOTAL	1	60,000	
STATE TOTAL	3	777,505	

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director	Purpose of contract	Contract no.	Dollars
UGANDA			
KAMPALA			
MAKERERE UNIVERSITY			
OLWENY, CHARLES M.....	SUPPORT FOR CANCER TREATMENT CENTER.....	2N01 CM71343-19	25,000
ORGANIZATION TOTAL	1 25,000		
STATE TOTAL	1 25,000		
UNITED KINGDOM			
BELFAST			
QUEEN'S UNIVERSITY OF BELFAST			
BOYD, DEREK R.....	SYNTHESIS OF OPTICALLY ACTIVE BP 7,8-DIHYDRODIOL.....	2N01 AM62209-02	4,500
ORGANIZATION TOTAL	1 4,500		
CAMBRIDGE			
UNIVERSITY OF CAMBRIDGE			
CHIVERS, DAVID J.....	DEVELOP A PRIMATE RESEARCH PROGRAM IN MALAYSIA.....	5N01 C085409-01	251,574
ORGANIZATION TOTAL	1 251,574		
EDINBURGH			
INVERESK RESEARCH INTERNATIONAL			
MC GREGOR, GEORGE.....	MICROBIAL SYSTEMS AS PREScreens FOR CHEMICAL CARCINOGENS.....	3N01 CP75858-03	158,978
ORGANIZATION TOTAL	1 158,978		
GLASGOW			
UNIVERSITY OF GLASGOW			
JARRETT, WILLIAM F.....	CARCINOGENS AND PAPILOMA VIRUSES IN CATTLE CANCER.....	1N01 CP81022-00	67,748
ORGANIZATION TOTAL	1 67,748		
LEATHERHEAD			
BRITISH FOOD MANUFACTURING INDUSTRIES RESEARCH ASSOCIATION			
WALTERS, CLIFFORD.....	N-NITROSO COMPOUNDS AND PRECURSORS IN THE ENVIRONMENT.....	2N01 CP43337-05	53,255
ORGANIZATION TOTAL	1 53,255		
LEEDS			
UNIVERSITY OF LEEDS			
COOPER, EDWARD H.....	TRIALS IN GASTROINTESTINAL CANCER.....	2N01 CM43727-08	32,900
ORGANIZATION TOTAL	1 32,900		
LONDON			
BRITISH LIBRARY			
HOLMES, PHILIP L.....	CANCER INFORMATION SERVICES FOR DEVELOPING COUNTRIES.....	1N01 C085410-00	215,602

Table 2.—NIH Research and Development Contracts, by Area, Organization, and Project Director, Fiscal Year 1978—Continued

Project director		Purpose of contract	Contract no.	Dollars
UNITED KINGDOM—Continued				
ORGANIZATION TOTAL	1			215,602
BROMPTON HOSPITAL				
TURNER-WARWICK, MARGARET.....		HISTOCOMPATIBILITY IN HYPERSENSITIVITY LUNG DISEASES.....	5N01 HR62935-02	37,325
ORGANIZATION TOTAL	1			37,325
CITY UNIVERSITY				
WAKE, W C.....		DEVELOP BIOMATERIALS FOR NEURAL PROSTHESES.....	1N01 NS82394-00	28,420
ORGANIZATION TOTAL	1			28,420
MEDICAL RESEARCH COUNCIL				
GREGORIADIS, GREGORY.....		LIPOSOMAL ENCAPSULATION OF ANTITUMOR AGENTS.....	1N01 CM87171-00	40,953
KIRK, DAVID N.....		STEROID COLLECTION FOR MEDICAL RESEARCH.....	2N01 AM50032-17	32,151
ORGANIZATION TOTAL	2			73,104
UNIVERSITY OF LONDON				
ADAMS, GERALD E.....		SYNTHESIS OF RADIOSENSITIZING AGENTS.....	5N01 CM77139-02	175,438
BROOKES, PETER.....		POLYCYCLIC HYDROCARBON METABOLISM IN RESPIRATORY TRACT.....	2N01 CP33367-04	90,000
HARRAP, KENNETH R.....		MODEL SYSTEM DEVELOPMENT & ANTICANCER AGENT COLLECTION.....	3N01 CM43736-09	104,000
HICKS, R MARIAN.....		PREVENTION OF EPITHELIAL CANCER BY RETINOLIDS.....	5N01 CP75938-01	92,803
HICKS, R MARIAN.....		STUDIES OF CARCINOGENESIS IN HUMAN TISSUES.....	5N01 CP75955-02	83,144
ORGANIZATION TOTAL	5			545,385
WELLCOME FOUNDATION				
FINTER, N B.....		ANTISERUM TO HUMAN LYMPHOBLASTOID INTERFERON.....	1N01 AI82569-00	15,823
ORGANIZATION TOTAL	1			15,823
NOTTINGHAM				
UNIVERSITY OF NOTTINGHAM				
BALDWIN, ROBERT W.....		IMMUNOTHERAPY OF C3H MURINE MAMMARY CARCINOMA.....	2N01 CB64042-04	94,760
BALDWIN, ROBERT W.....		DETECTION OF TUMOR SPECIFIC ANTIGENS IN THE CIRCULATION.....	2N01 CB74167-01	52,066
EMBLETON, MICHAEL J.....		IMMUNOGENICITY OF SPONTANEOUS ANIMAL TUMORS.....	2N01 CB64009-02	60,215
ORGANIZATION TOTAL	3			207,041
OXFORD				
UNIVERSITY OF OXFORD				
JOHNSON, PAUL.....		STUDY OF SUDDEN INFANT DEATH SYNDROME.....	3N01 HD32772-09	32,519
ORGANIZATION TOTAL	1			32,519
STATE TOTAL	21			1,724,174



APPENDIX

Notes on Selected Organizations

Organizations appearing in more than one geographical location or requiring a clarifying comment are listed below in alphabetic sequence. Comments on certain foundations or on organizations whose names have changed since last year appear after the name of the organization.

United States

Affiliated Hospitals Center--Boston (2 units), Mass.
Battelle Memorial Institute--Columbus, Ohio; Richland, Wash.
Becton, Dickinson and Company--Baltimore, Md.; Research Triangle Park, N.C.
Boston Health and Hospitals Department (may include awards to Mallory Institute of Pathology Foundation)--Boston (2 units), Mass.
California State Health and Welfare Agency--Sacramento, San Francisco, Calif.
CDP Associates--La Jolla, Calif.; Rockville, Md.
Claremont Colleges System--Claremont (2 units), Calif.
College of Medicine and Dentistry of New Jersey--Newark, Piscataway, N.J.
Cornell University--Ithaca, New York, N.Y.
E G & G, Inc.--Rockville, Md.; Wellesley, Worcester, Mass.
Ebon Research Systems--Washington, D.C.; Silver Spring, Md.
Enviro Control--Rockville, Temple Hills, Md.
Flow Laboratories--Rockville, Md.; McLean, Va.
General Tire and Rubber Company--Folsom (2 units), Calif.
Gulf South Research Institute--Baton Rouge, New Iberia, La.
Harvard University--Boston, Cambridge, Mass.
Informatics, Inc.--Riverdale, Rockville, Md.
International Business Machines Corporation--Bethesda, Md.; Armonk, N.Y.
Kaiser Foundation Hospitals--Oakland, Calif.; Portland, Oreg.
Kapiolani-Children's Medical Center (formerly shown as Kapiolani Hospital)--Honolulu, Hawaii
Los Angeles County Health Services Department--Los Angeles, Torrance, Calif.
Louisiana State University--Baton Rouge, New Orleans, La.
Mitre Corporation--Bedford, Mass.; Mc Lean, Va.
New York Medical College--New York, Valhalla, N.Y.
New York State Department of Health (may include awards to Health Research, Inc.)--Albany, Buffalo, N.Y.
New York State Department of Mental Hygiene (may include awards to New York State Research Foundation for Mental Hygiene, Inc.)--Albany, N.Y.
Northwestern University--Chicago, Evanston, Ill.

Oregon State Higher Education System--Corvallis, Portland, Oreg.
Pennsylvania State University--Hershey, University Park, Pa.
State University of New York--Albany, Buffalo, New York, Stony Brook,
Syracuse, N.Y.
State University System of Florida--Gainesville, Tampa, Fla.
Tulane University--Covington, New Orleans, La.
U.S. Small Business Administration--Washington (2 units), D.C.
U.S. Smithsonian Institution--Washington (2 units), D.C.
University of California--Berkeley, Davis, Irvine, La Jolla, Los
Angeles, San Francisco, Santa Cruz, Calif. The unit in La Jolla
may include awards to Friends of Psychiatric Research of San
Diego.
University of Connecticut--Farmington, Storrs, Conn.
University of Illinois--Chicago, Urbana, Ill.
University of Kansas--Kansas City, Lawrence, Kans.
University of Maryland System--Baltimore, College Park, Md.
University of Minnesota at Minneapolis--Austin, Duluth, Minneapolis,
Saint Paul, Minn.
University of Texas System--Austin, Dallas, Galveston, Houston (2
units), Richardson, San Antonio (2 units), Tex.
University System of Georgia--Athens, Atlanta, Augusta, Ga.
Utah State Higher Education System--Logan, Salt Lake City, Utah
Westinghouse Electric Corporation--Baltimore, Columbia, Md.

Other Countries

World Health Organization--Lyon, France; Geneva, Switzerland

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