ANNUAL REPORT OF PROGRAM ACTIVITIES NATIONAL CANCER INSTITUTE

Fiscal Year 1981

Part I

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service National Institutes of Health

ANNUAL REPORT

OF

PROGRAM ACTIVITIES

NATIONAL CANCER INSTITUTE (U.S.)

Fiscal Year 1981

Part I

Office of the Director

NATIONAL CANCER INSTITUTE

ANNUAL REPORT

October 1, 1980 through September 30, 1981

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Introduction

Contract Operations

The National Cancer Institute initiated a number of new or substantially revised policy and procedural changes in FY 1981 that are designed to strengthen both the programmatic and the managerial aspects of its contract operations. The major changes are these:

- All new contract-supported projects and existing projects for which currently authorized contract support is expiring will be subjected to "concept" review well in advance of proposed awards. This review will be performed by each division's Board of Scientific Counselors, except that contracts within the Office of the Director will be reviewed by a subcommittee of the National Cancer Advisory Board. This will ensure (1) that each contract has received a rigorous examination of its overall programmatic merits and relative funding priority by an outside advisory body, before it even reaches the traditional peer review stage and (2) that this process will be consistent throughout all divisions of the Institute.

- The Division of Extramural Activities will now be responsible for achieving technical, peer review of not only research contracts but also all resource and intramural support contracts. Additional advisory committees and staff will be provided, as necessary, to accomplish this expanded responsibility.

- Comprehensive, written guidelines have been developed, detailing the post-award monitoring responsibilities of NCI staff responsible for contract administration.

- Each division has appointed a Chief of Project Officers who is responsible for (1) ensuring that individual Project Officers are consistently following Institute guidelines on contract administration; (2) identifying and dealing with any special, contract-related problems in his/her division; and (3) working closely with key staff in other parts of the Institute to develop policy or procedures on Institute-wide contract issues.

- A detailed plan of action has been developed to convert all clinical trials projects--the Clinical Cooperative Groups--from the contract to the cooperative agreement support method. This new funding instrument will more realistically recognize the nature of the relationship between the NCI and the outside institutions that form each Clinical Cooperative Group.

Reorganization

In FY 1981, the NCI provided a formal organizational focus for the Congressionally mandated research initiative on the biological effects of low-level radiation with the establishment of a Low-Level Radiation Effects Branch in the Office of the

Director. It is anticipated that this activity will be transferred to one of the research-oriented operating divisions of the Institute when existing plans for the development of this field of research can be fully implemented.

Another program in transition, the Bioassay Program, was transferred to the National Institute of Environmental Health Sciences. The Bioassay Program, which is involved in the testing of compounds for carcinogenicity, is a part of the National Toxicology Program (NTP), headed by Dr. David Rall, Director, National Institute of Environmental Health Sciences. The Bioassay Program had previously been placed under the administrative control of Dr. Rall to maximize its contribution to the NTP. The formal transfer of the Program is the culmination of an evolutionary process of NTP consolidation.

In order to enhance the research support capabilities of the National Cancer Institute, the Laboratory Services Section of the Administrative Services Branch was transferred to the Laboratory Animal Science unit in the Office of the Director. The Laboratory Animal Science unit was itself restructured to improve its capabilities in the areas of animal science advisory, management and logistical services.

In response to Congressional interest and in order to take advantage of the scientific potential of research on interferon and other biological response modifiers, the Division of Cancer Treatment established the Biological Response Modifiers Program (BRMP). The BRMP incorporated the Biological Development Branch and Biological Resources Branch, which were previously established in anticipation of the approval of the program. In order to facilitate the transfer of research information to investigators and other interested parties, the Division of Cancer Treatment established the Scientific Information Branch, which provides an organizational locus for scientific information gathering, storage and promulgation.

The Division of Cancer Cause and Prevention augmented intramural research efforts in chemical and biological carcinogenesis with the creation of four new laboratories. Increased emphasis on studies of chemical carcinogenesis was achieved with the establishment of the Laboratory of Human Carcinogenesis; the Laboratory of Comparative Carcinogenesis; and the Laboratory of Cellular Carcinogenesis and Tumor Promotion. Establishment of the Laboratory of Molecular Oncology served a dual purpose of aiding in the restructuring of intramural biological carcinogenesis research and facilitating the relocation of intramural laboratories to the Frederick Cancer Research Center.

The Division of Cancer Biology and Diagnosis rearranged research approaches in the area of theoretical biology by creating a Laboratory of Mathematical Biology to study the theories of structure, function and dynamics of biological systems, develop mathematical and computational techniques for biological systems analysis, and design mathematical models for physiological and biochemical processes.

The Division of Resources, Centers and Community Activities added a Behavioral Medicine Branch, an Occupational Cancer Branch and an Educational Research and Evaluation Branch to enhance technology transfer and cancer control efforts.

Cancer prevention and detection were emphasized through the creation of the Screening Branch, which seeks to provide information on cancer screening techniques; improve screening and prevention trials through the development and

refinement of statistical and epidemiological research techniques; and identify natural history characteristics or pre-symptomatic indicators of cancer to aid in the early treatment or prevention of cancer.

LOW-LEVEL RADIATION EFFECTS BRANCH

Planning for a research program on the biological effects of low-level ionizing radiation has resulted in establishment of the Low-Level Radiation Effects Branch which is initially located within the Office of the Director, NCI. This high priority research program has been authorized by P.L. 95-622 and originates from a mandate from the Secretary, DHHS. Several research projects are underway and a Program Announcement is being published to encourage new grant applications in this particular area. The Branch has been directly involved in writing a "Federal Strategy for Research into the Biological Effects of Ionizing Radiation."

APPOINTMENTS, HONORS AND AWARDS - 1981

NIH Merit Award

Mr. John P. Hartinger
Ms. Marianne S. Wagner
Dr. Daniel F. Hoth
Dr. Mary K. Wolpert-Defilippes
Dr. Herman K. Kraybill
Mr. Mark F. Kochevar
Mr. Alexander B. Dock

Distinguished Service Medal

Dr. Edward L. Kuff

Meritorious Service Medal

Dr. Steven A. Rosenberg

Superior Service

Dr. Stephen Katz
Dr. D. Jane Taylor

Commendation Medal *

Dr. Mark H. Greene
Dr. John D. Boice
Dr. Robert McIntire
Dr. Sylvan B. Green
Dr. Mark E. Lippman
Mr. Paul J. Vilk
Dr. Jane Henney

PHS Special Recognition

Dr. Eli Glatstein
Mr. Charles Land

EEO Awards

Dr. Elizabeth K. Weisburger
Mr. James Michael Stump
Dr. Anthony R. Torres
Dr. Richard H. Adamson
Dr. Clarice Gaylord
Ms. Dreama J. Chapman
Mr. Michael I. Goldrich
Dr. John S. Macdonald
Dr. Peter Wiernik
Dr. Vincent T. Oliverio
Dr. Bruce Chabner
Ms. Kim Horgan
Mr. Hillil Soclof
Mr. William New
Mr. Mark F. Kochevar
Dr. Alan Rabson
Dr. Vincent T. DeVita, Jr.

* Pending formal approval by the Acting Director, NIH

Appointments

Mr. Philip D. Amoruso was appointed Executive Officer (Associate Director, Office of Administrative Management). Mr. Amoruso was previously Executive Officer of the National Library of Medicine, and prior to that was Administrative Officer of the NCI Division of Cancer Treatment.

Ms. Barbara S. Bynum was appointed Director of the Division of Extramural Activities. Ms. Bynum came to the NCI from the NIH Division of Research Grants where she held a key post in the grant peer review process.

Program Activities Report
Fiscal Year 1980-81
Editorial Office of the National Cancer Institute

The Board of Editors reviewed 760 manuscripts submitted for publication in JNCI during the 12-month period July 1, 1980 to June 30, 1981. These manuscripts were from the following sources:

National Cancer Institute: 55 (16 accepted, 10 rejected, 29 pending)
Other research institutions: 705 (150 accepted, 220 rejected, 335 pending or withdrawn)

Although the total number of manuscripts submitted showed a decrease from the previous 12-month period (-5.5%), a significant increase (10%) occurred in manuscripts submitted by NCI researchers. Similar decreases in manuscripts submitted were experienced by other cancer journals during 1980; Cancer Research showed a 6.3% decrease and the International Journal of Cancer showed a decrease of approximately 8%.

Of the 705 manuscripts received from sources outside the National Cancer Institute, 248 were from authors in other countries, including Argentina, Australia, Austria, Belgium, Bulgaria, Canada, China, Denmark, England, Federal Republic of Germany, France, German Democratic Republic, Greece, Hungary, India, Israel, Italy, Japan, Kuwait, New Zealand, Nigeria, Norway, Poland, Scotland, South Africa, Sweden, Switzerland, The Netherlands, U.S.S.R., Venezuela, Wales, and Yugoslavia.

Volume 65 (July-December 1980) contained 1,418 pages, and volume 66 (January-June 1981), 1,309 pages, for a yearly total of 2,727 pages.

The printing and binding of volumes 65 and 66 were placed under contract by the Government Printing Office to the McFarland Company in Harrisburg, Pennsylvania. This printer has continued to produce high quality work. Specifications have been prepared for bidding of a new contract that will commence in October 1981.

Two reports of major significance were published in JNCI during this period. The November 1980 issue contained a 154-page monograph on populations at low risk of cancer. The June 1981 issue presented a special report commissioned by the Office of Technology Assessment, U.S. Congress, entitled, "The Causes of Cancer: Quantitative Estimates of Avoidable Risks of Cancer in the United States." By publishing in regular issues of JNCI, the time required to get reports of this size into print as a separate monograph is greatly shortened. The Board of Editors has voted to continue this practice so that selected meetings or symposia of timely interest can reach our readership quickly.

The July 1980 issue of JNCI was the first to incorporate two new improvements in the physical appearance of the Journal. Printing was done on a matte-finish, dull-coated paper to reduce reading glare, and the

abstracts were set in a medium boldface type for greater legibility. The August 1980 issue was entered in the annual publication competition sponsored by the Washington Chapter of the Society for Technical Communication and was granted an Award of Achievement in the category of complete periodicals. It was cited for superior editing, graphics, and total integration.

In the fall of 1980, several changes were made in the procedures used for processing manuscripts. These included contacting potential reviewers of manuscripts by telephone to determine whether they would be able to review a manuscript within a reasonable length of time. When a reviewer indicated he would be away from his office for an extended period or if the subject of the manuscript was not in his field, the manuscript would be sent to another reviewer. In addition, the backlog of accepted manuscripts ready for processing by the editorial staff was substantially reduced. A random sampling of manuscripts published in 1981 compared to a sampling of manuscripts published in 1979 indicated that the average review time was reduced from 60 days to 52 days. The time from date of acceptance to publication was reduced from 179 to 156 days. The average total time from date of submission to date of publication was 254 days in 1981 compared to 336 days in 1979. This represents a 24% reduction in total publishing time (see attached chart).

During this period, eight NCI Monographs were in various stages of production. The status of each Monograph is as follows:

The Occurrence of Tumors in Domestic Animals (No. 54). Published February 1981

Experimental Evaluation of Antitumor Drugs in the USA and USSR and Clinical Correlations (No. 55). Published February 1981

Sarcomas of Soft Tissue and Bone in Childhood (No. 56). Publication date: August 15, 1981

Surveillance, Epidemiology, and End Results Program: Incidence and Mortality Data, 1973-1977 (No. 57). Publication due August 1981

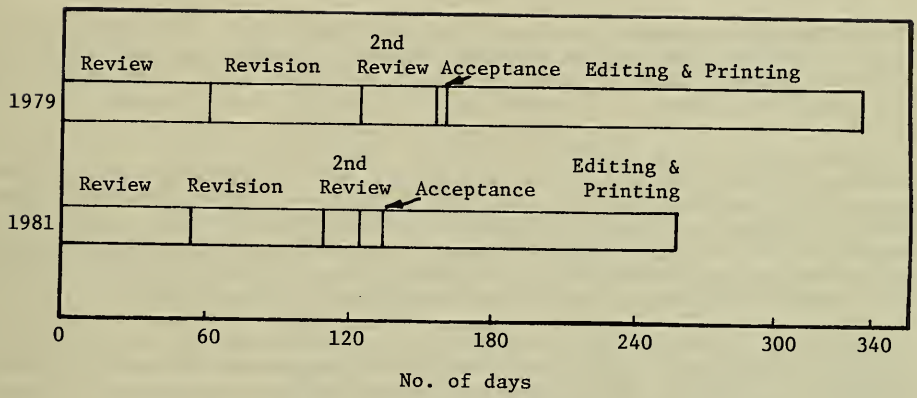
Conference on Carcinogenic and Mutagenic N-Substituted Aryl Compounds (No. 58). Expected publication date December 1981

Research Frontiers in Aging and Cancer (No. 59). Expected publication date December 1981

Third International Symposium on Cancer Therapy by Hyperthermia, Drugs, and Radiation (No. 60). Expected publication date December 1981

Populations at Low Risk of Cancer, a Monograph not in the numbered series, appeared in the November 1980 issue of JNCI.

The editing and proofreading of all the above Monographs except the unnumbered one were (are being) done by the Monograph Editor. Secretarial assistance was provided for six months by a part-time exployee.



Time required for publication of manuscripts in JNCI.

OFFICE OF ADMINISTRATIVE MANAGEMENT
OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE

Program Activities Report
October 1, 1980 - September 30, 1981

The Administrative Services Branch has undertaken special initiatives in the areas of property management and travel. Property inventory and record-keeping procedures have been streamlined to facilitate more accurate, efficient annual inventories, and to promote greater control and accountability over government property. Internal procedures for handling and tracking surplus property have been strengthened to achieve maximum productive use of equipment, especially equipment that has been purchased under research contracts that have expired. New methods are being developed to internally distribute travel funds in order to meet the conflicting considerations of (1) changing program priorities; (2) cost inflation; and (3) diminishing travel ceilings.

The Personnel Management Branch and the Equal Employment Opportunity staff have collaborated to develop and implement an NCI strategy for the Federal Equal Opportunity Recruitment Program (FEORP), a government-wide initiative to remedy the underrepresentation of women and minorities in the federal work force.

The Management Policy Branch collaborated with policy staff in the Division of Personnel Management, NIH, in the development of a revised NIH-wide policy on the use of the special experts which were authorized initially in 1971 under the National Cancer Act, and then subsequently under other legislation covering other parts of NIH. Problem-solving studies were completed and implementation steps were taken on the transportation and communication problems which were anticipated as a result of the major space moves accomplished during FY 1980.

The Research Contracts Branch was physically consolidated in one building during FY 1981. This will lead to more effective management of workload and staff resources, as well as facilitating on-the-job training objectives. The Branch undertook several special initiatives during FY 1981:

- Development of computerized administrative reports which will assist the Institute in monitoring the timely submission of required progress reports on contracts;

- Development of a computerized, milestone reporting system, to track the major pre-award actions in the procurement process of any given contract;

- Development of standardized criteria, procedures, and a reporting format for contract site visits. This will be completed in collaboration with the Institute's Chiefs of Project Officers.

OFFICE OF CANCER COMMUNICATIONS

OFFICE OF THE DIRECTOR

NATIONAL CANCER INSTITUTE

PROGRAM ACTIVITIES REPORT, OCTOBER 1, 1980--SEPTEMBER 30, 1981

The National Cancer Act Amendments of 1974 require that the "Director of the National Cancer Institute shall provide and contract for a program to disseminate and interpret on a current basis for practitioners and other health professionals, scientists and the general public, scientific and other information respecting cause, prevention, diagnosis and treatment of cancer."

NCI disseminates information in three categories:

1. Scientific information used and produced by investigators.
2. State of the art information for use of health professionals and the public.
3. Administrative and program information used by NCI and other organizations within the National Cancer Program.

The Office of Cancer Communications (OCC) is a major source of information for the public (including cancer patients and people at risk of developing cancer) and a substantial source for health professionals. It carries out traditional communications support activities for NCI. Within the National Cancer Program it assumes the role of coordinator of cancer communications, and develops new initiatives to help meet responsibilities stemming from the Act, to provide the public and health professionals with useful information about cancer.

OCC's traditional activities include responding to press inquiries; preparing news releases, press summaries, announcements, and background statements for use by the press; and assisting in press room operations at major cancer-related scientific meetings. The OCC develops reports and publications, speeches and Congressional testimony, reports required by law, special reports for the byline of NCI's Director, and a wide variety of publications for public and professional audiences.

The OCC develops exhibits aimed primarily at health professionals and scientists. They are used at scientific and professional meetings each year, and provide audiences with information on cancer and how to tap resources available through NCI and other organizations.

The office also responds to public inquiries: those requiring both customized and and non-customized written responses, and controlled and Congressional inquiries. The office distributes publications, and replies to inquiries by regular telephone and to a special toll-free number. It provides backup service to 20 Cancer Information Services (toll-free inquiry systems).

OCC maintains awareness of communications activities of all participants of the National Cancer Program, assuring that there is a minimum of unneeded duplication, and identifying and filling gaps in communications programming.

The OCC operates a national Cancer Information Clearinghouse that maintains awareness of cancer-related informational and educational materials and services produced or used by the cancer community. The Clearinghouse responds to requests for information about available informational and educational materials and services, promotes the use of existing informational and educational materials and services, and identifies areas where needed materials and services do not exist.

OCC's approach to information dissemination is to reach out to target audiences through intermediary groups which have best access to the chosen audiences. The types of intermediary organizations with which OCC is involved are: cancer related (cancer centers, cancer societies); non-cancer related (fraternal organzations, medical societies, community groups, etc.); and the mass media. Organized dissemination projects are under way in the areas of smoking information, breast cancer information, and coping with cancer. Other areas of special emphasis are: 1) pretesting and evaluation of all communications projects; 2) communication with minority audiences; 3) an internship program for graduate students in journalism, communications, etc.; and 4) support for 20 Cancer Information Service offices located around the country.

As part of the development of needed communications resources, OCC sponsors a six-month graduate internship in health communications. Outstanding graduate students are selected for varied communications appointments involving science-writing, information sciences and health education programs. Interns are assigned to work with professional staff and are given writing, editing and other technical tasks. Interns are encouraged to participate in a specially designed seminar series and to develop special projects during their term.

INFORMATION PROJECTS BRANCH

The Information Projects Branch is responsible for designing, implementing, and evaluating programs to disseminate cancer information. As such, it has undertaken a variety of projects to reach various target audiences with specific health messages.

Smoking Education Programs

The Information Projects Branch (IPB) is engaged in a number of projects intended to help smokers who want to quit, either directly or through health professionals; assist school officials and others interested in education to develop smoking cessation programs for youth; develop approaches to utilize the workplace and education materials aimed at high-risk minority audiences; and stimulate smoking-related efforts through the print and audiovisual media. These activities are being developed and implemented in cooperation with other public and private health organizations so that these smoking programs will contribute to an overall coordinated effort.

The following projects related to smoking are underway for health professionals:

1. "Helping Smokers Quit" kit. Intended for use by physicians with patients who want to quit smoking, these kits have been prepared and distributed to more than 150,000 physicians and other health professionals. The availability of the kits was announced through a mass mailing of a promotional flyer, presentations at several medical conventions, and print ad and editorial coverage in numerous medical and dental newsletters. In

addition special mailings were undertaken with many public and private health agencies.

A field evaluation of the kit has been conducted in two communities. Results of this evaluation and others will be used in future modifications of the kit to streamline kit materials and enhance their use.

2. "Let's Help Smokers Quit" kit. This kit was designed by the American Dental Association and IPB for use by dental professionals (dentists, hygienists, and assistants) with patients who want to quit smoking. The kit is an adaption of the "Helping Smokers Quit" kit developed for physicians. The focus of this program is oral health care, effects of smoking on peridontal disease, and smoking's cosmetic effects.

3. "Everyone Can Do Something About Smoking" program kit. Developed with the American Academy of Family Physicians and the American Lung Association, this kit contains a slide-tape show designed for presentation by a physician and voluntary health organization to dispel the myth that efforts to curtail smoking have been fruitless and to stimulate new community activities related to smoking.

4. The Smoking Digest. The Digest was designed for program planners, leaders and activists. It summarizes and examines recent information on attitudes about smoking, cessation techniques, smoking information campaigns, smoking legislation, and the tobacco industry. The Digest is being revised.

The following projects are underway for young people:

1. Smoking Programs for Youth. To fill a gap in the existing literature on smoking education for young people, IPB has prepared this comprehensive state-of-the-art report. An offshoot of The Smoking Digest, this booklet discusses the issues related to adolescent smoking, and summarizes policies, curricula, and counseling programs related to smoking prevention/-cessation in primary and secondary schools.

2. Smoking and Health Bibliography. Approximately 10,000 copies of this listing of available print and audiovisual smoking education materials have been distributed. A school edition has been prepared by the OCC Cancer Information Clearinghouse and has been distributed to over 150,000 elementary and high school principals, school and public libraries nationwide.

The following projects are underway for minority groups:

As a result of the DHHS Office on Smoking and Health's recent Planning Conference on Smoking and Health in Minority Communities, IPB has initiated the following activities:

1. Promotion of the "Helping Smokers Quit" kit to minority physicians.

2. Translation and Promotion of "Clearing the Air." The NCI pamphlet, "Clearing the Air," is a compilation of methods and techniques for giving

up cigarettes. IPB has actively promoted its availability in lay and professional publications with Hispanic and black readership. In addition, the booklet and a supporting poster have been translated into Spanish, with appropriate adjustments in format and graphic design, and widely promoted.

Breast Cancer Education Program

The goal of the breast cancer education program is to increase public awareness and improve attitudes about breast cancer in order to:

(1) Increase detection practices, including: thorough monthly breast self-examination; routine breast exam by a health professional; instruction in breast self-examination techniques by health professionals; mammography when recommended and appropriate.

(2) Reduce delay time in seeking medical consultation for breast cancer symptoms.

(3) Improve the ability to deal effectively with the medical and psychosocial aspects of breast disease should a symptom be discovered.

The audience for the program is all women over the age 18, with a special focus on women over age 35 and those women with less than a high school education and/or low family income.

The program materials and projects communicate that there is progress being made against breast cancer because (a) detection practices are effective, (b) treatment of breast cancer by combined modalities is reducing recurrence of the disease and extending survival, and (c) rehabilitation of breast cancer patients allows women to continue leading active lives after treatment.

Program materials offer a variety of printed and audiovisual materials:

1. The Breast Cancer Digest, A Guide to Medical Care, Emotional Support, Information Programs and Resources, was developed for health professionals, educators, and the media. The Digest covers the medical, psychosocial and educational aspects of the disease including detection, diagnosis, treatment, rehabilitation, and breast reconstruction.

2. Progress Against Breast Cancer was designed for use by business, service clubs, religious organizations, unions, and other interested groups. The educational package includes: a 17-minute slide-tape program which provides an overview of progress being made and what people can do to take advantage of it; a take-home pamphlet for every member of the audience which summarizes the information contained in the slide-tape presentation and sources of additional information; a poster which can be used to advertise the program and reinforce its message; an article describing the program for use in organizational newsletters; a User's Guide to help persons organizing the program. The program is suitable for use among both women and men and is available in versions for general, black and Spanish-speaking audiences. This program has been evaluated and is being improved.

3. Breast Cancer: An Annotated Bibliography of Information and Educational Materials was compiled by the Cancer Information Clearinghouse. This bibliography lists public and patient materials available from a variety of sources.

4. Breast Self-Examination is a pamphlet that provides step-by-step instructions on how to examine the breasts for signs of cancer. The pamphlet is also available in Spanish.

5. What You Need to Know About Cancer of the Breast is a pamphlet designed for breast cancer patients and discusses symptoms, diagnosis, rehabilitation, emotional issues and questions to ask the doctor. Also available in Spanish.

6. Breast Exams: What You Should Know is a booklet for the public, describing a variety of breast cancer screening methods including physical examination, breast self-examination, and mammography.

7. Breast Cancer: A Measure of Progress in Public Understanding is a management summary of a national survey on public knowledge, attitudes, and practices related to breast cancer. The survey was conducted among a national probability sample of women and men and a supplemental sample of urban black and Hispanic women. The survey has important implications for health program planners and health professionals.

8. Questions and Answers About Breast Lumps is designed for women who have questions about breast lumps. The pamphlet discusses some of the most common noncancerous lumps, diagnostic procedures, treatment, and cancer risks. Step-by-step instructions in breast self-examination is also included.

9. Breast Cancer Patient Education Unit is a sequential unit of breast cancer education materials to be given to women at various points in the disease continuum from symptom discovery through rehabilitation.

Coping with Cancer

The goal of the Coping with Cancer program is to provide persons with cancer and their family members the opportunity to gain a sense of control over their lives by providing them with information on the disease, its treatment, and psychosocial aspects. Program materials emphasize the following:

1. Cancer is not necessarily fatal. More individuals than ever before are living with the disease.

2. Living with cancer creates certain pressures and problems with which patients and their families must cope.

3. There are useful coping behaviors that can be learned to help patients and their families improve the quality of their lives.

4. Often, problems in coping with cancer and other chronic diseases are not unique, but are common to many patients and families. However, the

applicability of a coping approach depends on the individual patient and his or her circumstances.

The primary audience for the program and the main focus for its materials are persons with cancer and their families. The secondary audience includes health professionals and others to whom the patient and family go to for information and support.

The following materials are available for adults with cancer and their families:

1. Eating Hints - Recipes and tips for Better Nutrition During Cancer Treatment -- collection of helpful, practical informatiion on making mealtime more pleasant for the patient. Tips for coping with common eating problems and tasty recipes are included in this cookbook-style publication.

2. Chemotherapy and You - A Guide to Self-Help During Treatment -- addresses problems and concerns associated with chemotherapy treatment. Emphasis is on explanation and self-help. Includes a glossary of terms.

3. Radiation Therapy and You - A Guide to Self-Help During Treatment -- addresses problems and concerns of patients in radiation treatment. Emphasis is on explanation and self-help. Includes a glossary of terms.

4. Taking Time - Support for People with Cancer and the People Who Care About Them -- sensitively written booklet for persons with cancer and their families, addressing the feelings and concerns of others in similar situations and how they have learned to cope.

5. What You Need to Know About Cancer -- a series of pamphlets discussing symptoms, diagnosis, rehabilitation, emotional issues and questions to ask the doctors. The series consists of one general pamphlet and 24 site-specific pamphlets.

The following materials are available for young people with cancer and their families:

1. Hospital Days, Treatment Ways -- developed for children with cancer, this coloring book explains procedures the young patient may experience in the hospital environment.

2. Diet and Nutrition: A Resource for Parents of Children with Cancer -- contains suggestions for dealing with nutrition problems arising from pediatric cancer or its treatment. Includes special diets and an attractive poster for convenient display in the kitchen.

3. Maintaining a Normal Life (Proceedings of the First National Conference of Parents of Children with Cancer) -- compiled in cooperation with the National Candlelighters Foundation. Presentations delivered at the 1978 conference include the following areas: discipline, nutrition, treatment developments, practical problems, parental roles and relationships, and remarks from a panel of teenagers with cancer.

4. Feeding the Sick Child -- addresses problems in feeding healthy young children, as well as those with cancer. The booklet includes general nutritional guidelines, recipes, and a list of child-oriented cookbooks.

5. The Leukemic Child -- written for parents, this booklet describes one mother's experience in caring for a child with leukemia.

6. What You Need to Know About Wilms' Tumor; Child Leukemia -- see two pamphlets in the "What You Need to Know About Cancer" series (Item 5 in section above).

The following materials are available for health professionals and others who provide support and information:

1. Coping with Cancer - A Resource for the Health Professional -- a reference work on the psychological and social aspects of cancer. Summarizes issues faced by cancer patients of all ages and their families and provides practical guidance to caregivers in responding to patient and family needs. Support programs available throughout the country are described. References for further reading and an easy-to-use subject index are included.

2. Students with Cancer - A Resource for the Educator -- a booklet for educators of young students with cancer, designed to answer questions pertaining to the student's participation in school activities.

3. NCI Patient Materials Catalog -- Annotated citations of 40 patient and professional information materials available free of charge from NCI. Includes an order form.

4. Coping with Cancer - An Annotated Bibliography of Public, Patient, and Professional Information and Education Materials -- Annotated citations of 300 print and audiovisual materials for patients, health professionals, and the public.

5. Services Available to Persons with Cancer - National and Regional Organizations -- A reprint from the October 10, 1980 Journal of the American Medical Association, written to acquaint the physician with national and regional organizations with services available to help patients with the psychological, social, and economic problems related to their having cancer.

Pretesting and Evaluation Program

1. Health Message Testing Service

The Health Message Testing Service (HMTS), developed within IPB, is beginning its fifth year. To date, approximately 65 radio and television public service announcements (PSA's) have been tested through the service. In addition, eight brochures and flyers and three posters have been tested as part of the print component of HMTS.

In FY 1981, funds to support the service were contributed by the National Cancer Institute (NCI), National Heart, Lung, and Blood Institute (NHLBI), Office of Health Information and Health Promotion (OHIHP), and Office of the Assistant Secretary for Public Affairs (OASPA), DHHS. Funds from the Office of the Assistant Secretary for Public Affiars, DHHS, were used to support a contract for broadcast testing capabilities. OCC staff served as co-project officers for the contract and management of both broadcast and print HMTS continued through OCC. The broadcast contract expanded the services to include a number of new message sponsors from the Department of Health and Human Services. This year's message sponsors include: Social Security Administration, New York State Department of Health, National High Blood Pressure Education Program, Michigan Cancer Foundation, Office on Smoking and Health, Fox Chase Cancer Center, Surgeon General's Office, American Lung Association, National Institute on Drug Abuse and the Food and Drug Administration.

Evaluation funds from NCI, NHLBI and OHIHP were used for analysis of broadcast data and further development of the print testing component of HMTS. Based on consultation with an expert working group and numerous inquiries concerning the utility and feasibility of the project, methodologies for testing brochures, flyers and posters were designed. A pilot testing phase was conducted during this year using printed materials from a number of sponsors. These include: Office of Health Information and Health Promotion, Health Care Financing Administration, National Heart, Lung, and Blood Institute, Baylor College of Medicine, California State Office of Prevention, Bergen County Department of Health and the Public Health Service. As part of this exploratory phase, the HMTS studies the feasibility of using university staff from marketing and communications departments to test health materials.

Finally, a paper entitled, "Health Public Service Announcements: Assessing Their Potential Effectiveness through Standardized Pretesting," was presented at an international conference on "Health Education and the Media," sponsored by the Scottish Health Education Group and the Advertising Research Unit, University of Strathclyde, and held in Edinburgh, Scotland.

A number of pretests and evaluations were conducted as part of program development for the smoking, breast cancer, coping and special audiences/minority projects. These include: evaluation of the "Helping Smokers Quit" kit, users evaluation of the Breast Cancer Digest, pretest of Questions and Answers About Breast Disease and Questions and Answers About Pain Control, and an evaluation of the program of teaching breast self-examination in hospitals.

2. Pretesting and Evaluation Activities

OCC also provided technical assistance to the Northern California Cancer Program in an investigation of knowledge, attitudes and practices about cancer among Chinese Americans. Results of this pretesting will be used to develop cancer education materials in Chinese.

During this year, Pretesting in Health Communications was produced and distributed along with the Health Message Testing Service booklet and Readability Testing in Cancer Communications. An article describing pretesting techniques and evaluating health messages was submitted for publication in the Rural Health Journal.

A number of presentations of HMTS results and other pretest and evaluation activities were given to various groups and professionals meetings (HHS information office staff, pretesting seminar with Northern California Cancer Program, International Communication Association Conference, High Blood Pressure Education Conference, Health Education and the Media Conference).

New pretest and evaluation activities underway include: a second analysis of newspaper coverage of cancer; an evaluation of the What You Need to Know About Cancer pamphlet series; evaluation of the Coping With Cancer resource book, Taking Time, Radiation Therapy and You, Chemotherapy and You, and the "Let's Help Smokers Quit" kit; and a survey conducted among American College of Obstetricians and Gynecologists members concerning teaching patients breast self-examination.

Cancer Communications Network

The Centers Outreach Program of the Division of Resources, Centers, and Community Activities (DRCCA) has established a Cancer Communications Network through the contract mechanism. This network consists of 21 individual offices located throughout the country. Collectively, they are a coordinated network whose efforts address the public and professional cancer information/education needs of the nation. Separately, they are designed to bring the significant resources within their institutional setting to bear on the specific cancer communications needs within the region they serve. Eighteen of these offices are located within designated Comprehensive Cancer Centers, two are in non-comprehensive settings, and the remaining program is a national service for those parts of the country not served by the individual network offices and also acting as a back-up (weekends, evenings, holidays) for them. Although each network office has established a number of information/education program components, the core activity of each has been a toll-free telephone service (Cancer Information Service-CIS) to respond to inquiries from the public and health professionals.

Because of a similarity in activities and skills with the network programs, the Office of Cancer Communications has played a major role in the management and support of the network since its inception in 1975. The Information Projects Branch serves as the designated coordination and liaison point between OCC and DRCCA. The Branch provided support to the Cancer Communications Network in two broad areas during the past year.

1. Management Support - At the request of DRCCA, a special arrangement was established in which a member of the Branch staff (Thomas Kean) was assigned half-time to the DRCCA to serve as Project Officer for the network.

Robert Denniston (Branch Chief) and Carol Case (staff member) continued to serve on the Network Evaluation Task Force, which met twice during the year to develop a national evaluation plan for the program.

2. Technical Advice and Support - The Branch continued to provide direct support to the network offices in the areas of advice on program and materials development (including pretesting), publicity and promotion, and advance notice of national publications and broadcast programming which cites or promotes the network and its services. Although it is NCI policy that each network office is responsible for promoting its own telephone services, the Branch is responsible for producing several promotional items each year which the individual offices can order for their own use.

Minority Program

The thrust of the IPB minority program this year was to ensure that ample cancer information materials were available to users and to involve key outside organizations to help OCC plan for the future.

In this regard, the Branch:

- Assisted the Cancer Information Clearinghouse with the development of a revised bibliography of Spanish-lanuage materials on cancer.

- Translated into Spanish and promoted "Clearing the Air," "Everything Doesn't Cause Cancer," and other materials.

- Heavily promoted the audiovisual program on breast cancer, and "What Black Americans Should Know About Cancer," to the black media and minority organizations.

- Initiated an evaluation of "What Black Americans Should Know About Cancer" and "Lo Que Usted Debe Saber Sobre El Cancer" for the purposes of updating and improving these materials.

- Widely disseminated results of the "National Survey of Public Knowledge, Attitudes, and Practices Related to Breast Cancer," including the portions related to black and Hispanic knowledge, attitudes, and practices, to the media, health professionals, and minority organizations.

- Established a Hispanic Outreach Task Force and held a two-day meeting of this group, which represents comprehensive cancer centers with experience in reaching Hispanic audiences related to cancer. This group devised recommendations to OCC. OCC responded formally to these recommendations and now is engaged in developing new Hispanic programs based on the recommendations. These programs involve gathering data on Hispanics and cancer, developing new audiovisual and print materials, and creating specialized promotional activities.

The staff of the Information Projects Branch at the beginning of the year consisted of Robert W. Denniston, Branch Chief; Barbara D.

Blumberg, Carol S. Case, Thomas J. Kean, Nancy McCormick-Pickett, and Rose Mary Romano, program staff; Dorothy Kipnis, Sylvia Pines, and Sandra McEachrane, support staff; and interns Andrea Eastman, Karen Vogel and Kathleen Duffy. Interns earlier in the year were Ann Mahony and James Bromley-Diaz. In May 1981, Mi-Hyang Nam, summer student, returned for a second summer.

REPORTS AND INQUIRIES BRANCH

The Reports and Inquiries Branch responds to inquiries from the public, cancer patients, and the news media, and disseminates information on research findings and National Cancer Institutes activities. Information dissemination occurs in a variety of forms, including reports and other publications, speeches and Congressional testimony, magazine articles, and news releases and fact sheets for the news media.

Reports Section

As in recent years, inquiries from the news media continued at a high level, reflecting interest in all areas of cancer research and activities of the National Cancer Institute and the National Cancer Program (NCP). Section staff responded to approximately 2,000 inquiries from journalists, representing daily and weekly newspapers, magazines, and the electronic media, as well as newspapers and magazines for physicians and scientists. In addition, Section staff initiated contacts with the media on numerous occasions to remind them of upcoming meetings, press conferences, or major reports. NCI administrators and scientists were interviewed for news and comment programs of the major television and radio networks, as well as local stations throughout the country and news organizations from many countries of the world.

The Reports Section prepared four news releases, announcing a new report on cancer survival rates, purchase of interferon for clinical trials, and results of bioassays showing the carcinogenicity in animal tests of cinnamyl anthranilate and hexachlorodibenzo-p-dioxin. Notes to writers and editors were prepared on a monograph on cancer rates in low-risk populations, clinical trials of interferon, the award of the Griffuel Prize for Cancer Research to NCI Director Vincent T. DeVita, Jr., and a special NIH lecture.

Section staff assisted science writers and general journalists who were reporting on NCI-sponsored conferences, seminars and workshops, including the NIH/NCI Consensus Conference on "CEA: Its Role as a Marker in the Management of Cancer." This meeting required extensive staff time to develop artwork, manage mailings and publicity, and summarize and distribute the panelists' conclusions.

Three press summaries were prepared to assist journalists reporting on research papers presented by NCI scientists at annual meetings of the American Society of Clinical Oncology (ASCO) and the American Association for Cancer Research (AACR), held this year in Washington, D.C. The press summaries discussed results of studies on pregnancy in patients treated for Hodgkin's disease, acute non-lymphocytic leukemia following treatment for non-Hodgkin's lymphoma, and monoclonal antibody research on lung and breast cancers.

Press inquiries continued at a high level on potential and known causes of cancer, breast cancer, interferon and Laetrile research, cancer statistics on incidence, mortality and survival, smoking, asbestos, diet and nutrition, THC, coffee, industrial exposures, and NCP programs, priorities and budget. As a result of the phased transfer of carcinogenesis bioassay information to National Toxicology Program staff, the total number of inquiries declined from the preceding year. However, the number of requests for detailed information about the cancer program increased. Reporters and researchers for television networks, film companies, and major newspapers began major surveys of progress in cancer research during the 10 years of the National Cancer Program. Their requests, particularly for project-by-project accounting of spending in major program areas, absorbed extensive time of the Reports Section and other NCI staff.

To respond more effectively to high levels of requests about evolving NCI research studies, Section staff prepared "Fact Sheets" and "Updates" on the following topics: mortality among petroleum refinery and petrochemical workers, melanoma-prone families, basic and clinical research on interferon, coffee and cancer of the pancreas, excess cancer risk among professional artists, breast cancer risk and prophylactic mastectomy, cancer risk in shipyard workers, vitamin A research, snuff, monoclonal antibodies, virus research, autologous bone marrow transplantation, and the new Biological Response Modifiers Program.

Results of the Laetrile clinical trial were reported at the ASCO meeting, with Section staff handling preparation of summary and background information, announcement of the findings, and coordination of their release with the institutions that participated in the study. The press conference at the Washington, D.C., meeting attracted most of the major print and electronic media representatives in the country. Coverage on radio, television and in the newspapers was extensive.

Interest in conflicts of interest, contracting procedures, and examples of fraud in science led to criticism of the NCP in the press and Congressional hearings. Section staff participated in the preparation of materials for Congress and the media. Specific projects included the traditional statements for both the House and Senate appropriations hearings, as well as testimony for oversight hearings that described the progress in NCP research over the past decade, and the evolution of how that program is now managed. Staff also prepared four speeches and two articles for the NCI Director, and a special letter describing progress in cancer treatment to Eppie Lederer, a member of the National Cancer Advisory Board.

A book, Decade of Discovery: Advances in Cancer Research 1971-1981, was completed and readied for printing. A senior writer in the section with responsibility for day-to-day management of the project spent an estimated 30 percent of her time on the book this year.

Several short articles on cancer research findings of significance for practicing physicians were prepared for inclusion in the "From the NIH" section of the Journal of the American Medical Association. Fifty-eight articles of interest to the NCI and NIH communities were prepared for the NIH Record biweekly newspaper from October 1, 1980, through the end of June 1981. Updated short scripts were prepared for the NIH "Jukebox" and a variety of other short documents.

Staffing shortages continued to be a major problem through the end of calendar year 1980. Florence Karlsberg joined the Section in November; Eleanor Nealon in December; and Linda Anderson in June 1981 to fill out the science writing staff. Two editorial assistants, Amelia Champion and Anne Gooding, joined the Section to fill positions held previously by clerk-typists Lyn Bacon and Meg Withers, who resigned during the year. Writer Joan Hartman resigned to accept a position in the National Institute of Allergy and Infectious Diseases information office. Staff continuing through the year included Patricia A. Newman, Section Chief; Lorraine Kershner, Harriet Page, Alice Hamm, and Farrell Wolfson, writers; and Marilyn Pazornik, part-time clerk-typist.

The arrival of new staff made orientation and training important. A monthly seminar program was initiated; NCI scientists were invited to discuss their research with the writers. Section reorganization to provide editorial assistance to the writers led to selecting two types of word-processing equipment for a three-month comparison.

Five science writing interns trained in the Section, as part of the OCC internship program: Julia Goplerud (to January 1981), Sana Siwolop and Cynthia Butler (January-July 1981), and Tom Hager and Aubin Tyler (beginning July 1981). In addition, two NIH information interns worked in the section, Jody Dove from January 1-March 31, and Patrice Moore from July 6-September 30, 1981. A summer intern, Nathan Rosen, worked on articles for the NIH Record and related duties. Theresa Jones joined the Section as a part-time clerk-typist in early 1981.

Public Inquiries Section

The Public Inquiries Section responds to written and telephone requests for information about cancer from the general public, cancer patients and their families, and the professional community. Services provided, with the assistance of a contractor, Biospherics, Inc., include preparing letters in response to public and Congressional inquiries, disseminating publications and other materials prepared by OCC and NCI staff, and responding to telephone inquiries to NCI or to the Cancer Information Service, a national, toll-free hotline that serves as a backup to the Institute's Cancer Communications Network and as a primary source of information for areas of the United States without a local number.

In Fiscal Year 1981, the Section responded to an estimated 260,000 written and telephone inquiries and distributed an estimated 11.5 million publications. This volume reflects the American public's continuing need for reliable information about cancer and interest in the national effort to achieve control over the disease.

In comparison with the fiscal year ending September 30, 1980, the most noteworthy change in the current year is the increase in calls to the national toll-free information service, up more than 50 percent from 29,712 in 1980 to a projected 45,194 in 1981. This represents a current monthly average of more than 3,700 calls, up from an average of 2,500 calls per month.

The other areas of the public information program declined from the previous fiscal year. Estimates projected to the end of Fiscal Year 1981 include 7,660 custom letters (individually prepared responses to letters and telephone inquiries), 186,700 noncustom inquiries (requests that can be answered by sending

publications alone), 22,000 telephone inquiries to the Section, and 385 "controlled" letters received or referred from members of Congress, the White House, and other Government offices.

In the period from Fiscal Year 1978 to 1981, the volume of custom mail has gradually decreased from 14,000 annually to the current estimate of 7,660. Factors associated with this trend are the increasing promotion and use of the Institute's toll-free telephone information service and the development of new publications and information sheets that satisfy inquirers' information needs.

The volume of publications distributed in this year is projected to be about half that of the previous year, when two smoking kits developed for physicians and dentists were heavily promoted. These kits and other pamphlets dealing with smoking and health accounted for 80 percent of the distribution in 1980. This year, smoking and health materials constituted about 38 percent of the distribution during the first 8 months. Because of continuing promotion of the kits in professional journals and reorders, 2 million of the almost 3 million smoking pamphlets distributed during that period were kit items.

The booklet Smoking Programs for Youth was promoted by the OCC in the educational community, and almost 20,000 requests were received in a 3-month period. The pamphlet Clearing the Air had the highest distribution for the first 8 months of fiscal 1981 of any NCI publication (581,403). This pamphlet was featured in several newspaper columns (including "Dear Abby" and a column by Joyce Lain Kennedy) and was widely distributed through supermarkets.

The active promotion by the OCC of materials in other program areas, notably the Coping with Cancer program, is expected to account for a substantial portion of the year's distribution. Early in the fiscal year, a priority mailing to 80,000 health professionals announced the coping Resource and Bibliography; this was followed by promotions of the NCI Patient Materials Catalog and another mailing for the Resource and Bibliography. As of May 31, about 19,000 orders had been received from these promotions. Pamphlets in the Coping with Cancer program comprised about 9 percent of the distribution through May, but are expected to account for a larger portion by the end of the year as increasing orders for these materials are filled.

Publications in the "What You Need to Know" series and Breast Cancer Education Program made up 18 and 10 percent, respectively, of the total 8-month distribution. Titles from both program areas were listed on the NCI Patient Materials Catalog, and individual pamphlets received media attention during the year. Two breast cancer publications were among the highest distributed of the year--Breast Self-Examination and Breast Exams: What You Should Know.

Eating Hints, another pamphlet in the Coping with Cancer program, was mentioned in a New York Times article in November, which was reprinted in other newspapers. Some 5,415 requests for this booklet were received in a 3-month period as a result of this article; over 160,000 copies were mailed out by the end of May. Other widely distributed pamphlets were Everything Doesn't Cause Cancer, Chemotherapy and You, and What Black Americans Should Know About Cancer.

At the end of May, approximately 19 million NCI publications were stored in the warehouse facility in Lanham, Maryland, compared to 15 million a year ago. This

included 330 titles. The publications are inventoried on a TRS-80 microcomputer. During the year, new procedures to aid in inventory control were initiated. The monthly "inventory and distribution" table prepared by the contractor was expanded to include an 8-month's distribution total as a prediction tool, as well as a column for noting the current status of a publication. In addition, special forms were developed to alert project personnel of impending shortages of phamphlets.

The national CIS number has received wide publicity in the popular media since the toll-free service was initiated 5 years ago. The use of this service by the public and by health professionals has grown steadily and now accounts for 17 percent of the total inquiries. As of May 31, the service had received 109,643 calls since its founding. During FY 1981, the number appeared in such popular media formats as Parade magazine, the "Ann Landers" column, Family Circle, and the "Over Easy" television program. The Parade article in February generated 2,330 calls. The "Ann Landers" article promised information about NCI-supported clinical programs, and special materials were prepared to respond to these inquiries.

The service is staffed by trained health information specialists and is open 16 hours a day, 7 days a week. About half of the calls are from patients, their families, or their friends. Followup information, usually publications, is provided to about 40 percent of the callers, and about half are referred to local Cancer Information Service numbers for additional help. The national service has eight incoming lines, including two lines for callers in Alaska and Hawaii.

The volume of custom letters is influenced both by media publicity and by OCC promotions. Many inquirers responding to promotional mailings request additional information of some kind; for example, nutritional information or other publications or reports in the general subject area. An article in the National Enquirer in February about experimental cancer treatment programs resulted in more than 700 letters. To answer these inquiries, a form letter with enclosures was developed that provided information about NIH Clinical Center studies and other NCI-supported treatment programs.

In general, about two-thirds of the custom letters are from lay people, and about one in five concerns a specific patient. A large proportion of the letters are from individuals concerned about carcinogens in the environment--such as asbestos, tobacco smoke, and radiation. In 1981, a major subject of interest for both custom and controlled letters was interferon.

Writers in the Section prepared a number of publications during the year: two research reports (Cancer of the Lung, Cancer of the Bladder), a fact sheet on metastatic cancer, a pamphlet (Cancer, What to Know, What to Do About It), and a booklet (Cancer Definitions). Five columns were written for "Search for Health," a syndicated newspaper feature distributed by the NIH Office of Communications.

The Section staff consisted of the Chief, Robert J. Avery, Jr., who also served as project officer of the Biospherics contract; Betty MacVicar and Frances Boak, writers; and secretaries Karen Schlick and Sheila Stempler.

The section is regularly augmented by two OCC information interns who serve six-month tours. For the July 1980-January 1981 term, the interns were Katherine Kane and Susan Sare. During the January-July 1981 period, the interns were Nissi Wang and Deborah Loeser. Jeanine Brumbeau and Pamela Frankel started internships in July 1981.

INFORMATION RESOURCES BRANCH

The Information Resources Branch provides services and support for the Office of Cancer Communications and other NCI information programs. The Branch's Document Reference Section is an information center with reference services and related support. The Graphics and Audiovisuals Section encompasses a wide variety of printing management, audiovisual services, exhibits, and specialized distribution efforts.

Cancer Information Clearinghouse

The Cancer Information Clearinghouse is a contractor-operated project. The Clearinghouse collects public, patient and professional educational materials and serves a nationwide clientele of health organizations with bibliographic services and published bibliographies based on the collection.

The Clearinghouse collection comprises 7,000 public and professional education documents that are accessible via an on-line computer. The collection continues to grow at a rate of about 1,500-2,000 new items per year. Removal of older materials that are unavailable or out of date tends to moderate the overall growth of the collection.

The Clearinghouse project received a comprehensive review June 23, 1981, in which OCC management considered the operations with respect to scope, data base building, cost-recovery, quality control, products and services. The reviews concluded with a number of decisions that reduced the scope of operations and strengthened evaluation procedures.

Internship Program

The OCC communications internship program, in its seventh year of operation, has trained 67 interns. The program is unique at the NIH in its scope and purpose. The internship brings outstanding graduate students to the office for 6 months of work experience in the following areas: science writing, health communications, public information, information sciences and other allied health fields.

During 1981, the recruitment effort was significantly expanded to include graduate students in nursing schools, minority institutions, and other schools with biomedical communications emphasis. All together, the program contacted more than 400 schools and institutions with appropriate graduate education areas.

The following were interns during January-July 1981:

- Cynthia Butler [University of Colorado (Boulder) School of Journalism] served in the Reports Section as a science writer (Patricia A. Newman, supervisor).

- Kathleen T. Duffy (University of Massachusetts School of Health Sciences) served in the Cancer Information Service Project Office as a health communicator (Thomas J. Kean, supervisor).

- Andrea Eastman (San Jose State University Department of Health Sciences) served in the Information Projects Branch as a health communicator (Robert W. Denniston, supervisor).

- Deborah Loeser (University of Missouri School of Journalism) served in the Public Inquiries Section as a public information specialist (Robert J. Avery, supervisor).

- Sherry Morgan (Syracuse University School of Information Studies) served in the Document Reference Section as an information science intern (Patricia Dickison, supervisor).

- Sana Siwolop (Massachusetts Institute of Technology Interdisciplinary Science Program) served in the Reports Section as a science writer (Patricia A. Newman, supervisor).

- Karen Vogel (University of California at Irvine, Program in Social Ecology) served in the Information Projects Branch as a health communicator (Robert W. Denniston, supervisor).

- Nissi Wang (Johns Hopkins University School of Hygiene and Public Health) served in the Public Inquiries Section as an public information specialist (Robert J. Avery, supervisor).

The following were interns during July 1981-January 1982:

- David Altman (University of California at Irvine, Program in Social Ecology) served in the Information Projects Branch as a health communicator (Robert W. Denniston, supervisor).

- Jeanine Brumbeau (University of Maryland Graduate Program in Nutritional Sciences) served in the Public Inquiries Section as a public information specialist (Robert J. Avery, supervisor).

- Kathi Canese (State University of New York at Albany School of Library and Information Science) served in the Document Reference Section as an information science intern (Patricia Dickison, supervisor).

- Pamela Frankel (Tulane University School of Public Health and Tropical Medicine) served in the Public Inquiries Section as a public information specialist (Robert J. Avery, supervisor).

- Tom Hager (University of Oregon School of Journalism) served in the Reports Section as a science writer (Patricia A. Newman, supervisor).

- Holly Keck (University of Maryland Department of Communications Arts) served in the Information Projects Branch as a health communicator (Robert W. Denniston, supervisor).

- Aubin Tyler (University of Arizona Department of Journalism) served in the Reports Section as a science writer (Patricia A. Newman, supervisor).

- Louise Villejo (University of Texas School of Public Health) served in the Information Projects Branch as a health communicator (Robert W. Denniston, supervisor).

Document Reference Section

The Document Reference Section (DRS) is a central informational resource of the Office of Cancer Communications and the Institute. Support materials (both published and unpublished) are collected, indexed and made available to specific users. Included in this user group is the NIH scientific community as well as professionals working in public information areas. The in-house collection comprises public/press inquiry records, newsclips, scientific publications, audio-visuals and other significant documents. The automated, bibliographic data base, composed of data records for DRS collection items, may be searched free-text or by controlled vocabulary index terms.

The Section has continued its growth of services to OCC staff this year. Additional data bases have been obtained, particularly in public affairs areas. Cataloging of the book collection was completed.

The in-house data base representing the indexed DRS collection has grown by nearly 6,000 items to 38,000 items. Additionally, a microfiche collection of core journals with substantial backruns was purchased to enrich the collection.

Staff have performed an analysis of the NCI "archives" in anticipation of future archival material reorganization

The DRS has access to major commercially available, health-relevant data bases. These include those sponsored by the National Library of Medicine (Medline, Cancerline, Clinprot, etc.), Bibliographic Retrieval Services (Pre-Med, Drug Info/Alcohol Use and Abuse, Medoc, etc.), System Development Corporation (Psychological Abstracts, ERIC, Agricola, etc.) and Lockheed-Dialog (Excerpta Medica, Pharmaceutical News Index, Science Citation Index, etc.). Access to journalistic data bases such as the New York Times Information Bank, Newsearch, National Newspaper Index and NEXIS allows the DRS to support the Institute with data especially useful in public information work.

The Section performed more than 3,000 computerized searches and 1,000 manual searches this fiscal year. These searches have aided health communicators, scientist-administrators and public information specialists in responding to inquiries and developing information projects.

Restaffing continued throughout the year as all but one previously trained staff member moved on to other more advanced positions. Patti Dickison continued as Section Chief. Marlene Bobka, a student at the State University of New York at Albany, assigned to the DRS as an information intern from July 1980 until January 1981, resigned to take a position as an information specialist with Bibliographic Retrieval Services in Scotia, New York. Susan Grodsky joined the DRS staff in November 1980 as a full-time temporary technical information specialist. Karen Schlick, part-time temporary information assistant, resigned her position in November to assume a permanent position in the OCC Public Inquiries Section. Betsy Hoisington joined the staff in January as a half-time temporary clerical assistant for journal routing and copy support services. Sherry Morgan, an information intern, joined the staff in February. Ms. Morgan worked on reorganization of the archives as well as on-line searching. Ms Morgan completed her internship in September. In June, Kathi Canese joined the staff as an information science intern for the period July 1981 to January 1982.

Graphics and Audiovisuals Section

The Graphics and Audiovisuals Section provides a variety of services to OCC and the NCI.

Printing management services involve more than 300 titles of public information materials and other NCI publications. This work involves coordination of graphics and printing services as well as arranging for distribution by direct mail from the printer.

Two new table top exhibits were developed on specific information programs. Eight new panels were prepared to supplement panels in existing large exhibits, to allow promotion of educational materials on specific programs. Exhibits were shown at 22 professional meetings. More than 100,000 publications were distributed at those meetings. Printed maaterials were provided for three health fairs in Miami, Florida, Louisville, Kentucky, and Washington, D.C. (U.S. Department of Labor).

The NCI film "Research to Prevent Cancer" was shown to approximately 10,000 groups, chiefly science classes and civic groups. The total audience was approximately one million. The film was then withdrawn from distribution at the end of June 1981, because the information was becoming outdated.

NCI's Special Communication is service for rapid disseminating of information. The Special Communication can be sent selectively to medical and voluntary groups, professional societies, and persons in allied health professions. During FY 1981, nearly one million individuals and groups were reached via nine Special Communications.

Over 5 million publications were distributed for NCI by Supermarket Communications Systems, Inc., in bulletin board distribution facilities located in 4,500 supermarkets and discount stores throughout the United States. The Consumer Information Distribution Center in Pueblo, Colorado, distributed approximately 330,000 copies of English and Spanish NCI publications.

More than 250 nonresearch materials including publications, audiovisuals, and speeches were processed by the Section for official clearance. Assistance was provided to all NCI program areas in obtaining printing and audiovisual services. Section staff also handled arrangements for a number of special events, including awards ceremonies and tours.

Over 350 requests under the Freedom of Information Act were received and processed.

A daily newspaper cliping service of items of NCI interest was provided to the professional staff, Cancer Information Service offices, and members of the President's Cancer Panel and the National Cancer Advisory Board. Section staff screened eight newspapers and a number of mass-circulation and scientific magazines and journals.

The staff of the Section included Margaret Layton, Section Chief; Arlene Soodak-Cohen, visual information specialist; Maralyn Farber-Berlin, NCI Freedom of Information Coordinator; public information specialists Anthony Anastasi and Edith Gaub; and Beverly Gamble, clerk-typist. Ms. Gamble is responsible for purchasing activities for OCC.

OFFICE OF INTERNATIONAL AFFAIRS
OFFICE OF THE DIRECTOR, NATIONAL CANCER INSTITUTE

PROGRAM ACTIVITIES REPORT, OCTOBER 1, 1980 - SEPTEMBER 30, 1981

Today, the efforts of an increasing number of world specialists engaged in cancer research are mediated significantly through international interaction for the exchange of scientific results and the generation of new ideas and approaches to cancer problems that they share in common. The reward of such collaboration between the NCI and international counterparts is the determination of the existence of striking differences in the geographic, environmental, demographic, occupational, and social/living conditions of peoples throughout the world. The development and sharing of such knowledge on cancer causation, identification of population risk groups, availability of early detection measures, and effective therapeutic intervention is essential to management and ultimate prevention of cancer.

The contribution of the National Cancer Institute to the international team effort against cancer stems from: (1) the support of cancer research outside of the United States by foreign scientists who are highly qualified and reputed for unique expertise; (2) the support of cooperative research programs, principally, under bilateral agreements with foreign governments, institutions or organizations; (3) maintenance of liaison and research collaboration with international organizations and agencies which have well-defined objectives in cancer research and cancer treatment/prevention; (4) the support of training of foreign scientists in the United States as well as the interaction of American scientists with colleagues in foreign laboratories; and (5) the management and operation of an International Cancer Research Data Bank for promoting and facilitating, on a worldwide basis, the exchange of information for cancer research and treatment.

BILATERAL AGREEMENTS

Cooperative cancer research programs under formal government-to-government treaties and other forms of Bilateral Agreements comprise a major segment of the international activities of the National Cancer Institute. The first of these cooperative cancer research agreements was established on 23 May 1972 with the signing of the USA-USSR Agreement for Cooperation in the Fields of Medical Science and Public Health. Subsequently, additional bilateral programs were formalized between the NCI and the Japanese Society for the Promotion of Science (1974); the Institute of Oncology, Warsaw, Poland (1974), under the USA-Polish People's Republic Agreement; in 1975 with the French Institut National de la Sante et de la Recherche Medicale (INSERM) under an earlier NIH Agreement with INSERM; the Cairo Cancer Institute (1976) under the aegis of the Agreement between the USA and the Arab Republic of Egypt; the Ministry of Science and Technology of the Federal Republic of Germany (1976); the Cancer Institute, Chinese Academy of Medical Sciences, People's Republic of China (1979); the National Cancer Institute of Milan and the Institute of Oncology of Genoa, Italian Republic (1980); and the National Institute of Oncology, Budapest, Hungarian People's Republic (1981).

The following sections deal with the progress that has been achieved in these cooperative efforts.

Cooperation with the Soviet Union

Joint American-Soviet cancer research activities, during this fiscal year, must be described as being very modest by comparison to previous years. In Moscow, USSR, from 25 to 29 October 1980, seven American scientists participated in a joint Workshop on "Clinical Biochemical Pharmacology." It was the consensus of the Americans, in face of some frustrating experiences of the past, that this interaction turned out to be more productive and scientifically rewarding than anticipated. The American visitors were provided with the opportunity to establish contact with excellent Soviet scientists with whom previous interactions had been relatively sparse. Some of the Soviet contributions -- assessed by the Americans as being superb -- were from their recent efforts with: (1) the selectivity of drug action and the administration of selectively localized drug-carrier complexes; (2) the selective activation of pro drugs and of protective metabolites; and (3) the biochemical and pharmacologic target cell determinants of drug action for utilization in the design of "individualized therapy regimens."

One Soviet virologist spent one month in NCI and the Sidney Farber Cancer Institute exchanging information on general problems associated with viral carcinogenesis and/or co-carcinogenesis.

A second virologist spent six months in the Sidney Farber Cancer Institute engaged in research on the characterization of the genomes of the Baboon endogenous viruses M7 and BlLN. This he pursued by the techniques, developed by his American host, on the use of fingerprinting methodologies and electron microscopy. A second problem he worked on was the analysis of the genomes of virulent and avirulent strains of retroviruses derived from mice. Both projects, according to the American host, "utilized and expanded" the skills of the Soviet scientist providing, thereby, "a good example of productive scientific interaction."

Finally, a Soviet geneticist spent two months at the State University of New York at Stony Brook for the purpose of mastering the technique of removing nuclei from cells and inserting these into the anucleated cytoplasm of cells of different origin. This enabled him and his American hosts to make "minicells" containing a few or a single chromosome and inserting these into cells of a different species. As a result, the Soviet scientist and his hosts were able to isolate and characterize a protein associated with cells that are resistant to genetically damaging agents such as colchicine.

In general, this Agreement, since its inception in 1972, has provided opportunities for American cancer specialists to view and appraise the Soviet "modus operandi" in health care delivery and research. By virtue of reciprocal exchange visits, scientists from both nations have had opportunities to evaluate the potential for successful collaboration in many areas of cancer research.

The most rewarding feature of this Agreement has been the establishment of a person-to-person communication and interaction between American and individual Soviet cancer scientists. A number of collaborative studies, on a scientist-

to-scientist basis, have yielded useful scientific information, published jointly in monographs and in reputable scientific journals, on cancer treatment, viral oncology, genetics, and epidemiology.

While a number of "benefits" have resulted from the collaborative efforts, none can be viewed as significant scientific innovations or breakthroughs. The United States appears to have given, overwhelmingly, more than it has received in return from the Soviet Union.

After nine years of American-Soviet collaboration on problems of cancer, a restatement of priorities and goals is definitely in order. Changes are mandatory, based on our determination that certain programs have been more productive than others. Although an overtone of "one-way streetism" still exists, there is a basis for attempting to salvage the "best" segments of the collaborative effort and to modify and restructure these into an operational plan that would yield an optimum return for our input. It is our intent to continue a minimal, modified collaborative program based on: (1) redesign and redevelopment of priority areas; (2) limiting the exchanges and activities to one-on-one, scientist-to-scientist interaction; and (3) restricting meetings of delegations to one per year wherein principals could convene for a review of total program achievement and plans for continued cooperation in areas where specific scientific success might be achieved through joint effort.

Currently, our USA-USSR cancer activities are in abeyance pending the decisions/recommendations during a Joint Program Review Meeting to be convened in late September 1981. Thereafter, only "essential" exchanges would be effected while we await the American decision to renew or discontinue the USA-USSR Health Agreement.

Cooperation with Japan

In May 1979, the Joint American-Japanese Steering Committee restructured this cooperative cancer program to provide greater flexibility and breadth in order to accommodate current changes in the fields of cancer research. For the next five-year period, the 11 research specialities being pursued jointly were categorized into four broad Program Areas; namely, Etiology, Cancer Biology and Diagnosis, Cancer Treatment, and Interdisciplinary Research.

The major objectives of the Etiology Program Area are to identify carcinogenic factors and to elucidate the mechanisms of carcinogenesis in an attempt to provide fundamental bases for understanding the causation of human cancer. This program includes four closely interrelated subareas: epidemiology, chemical carcinogenesis, viral carcinogenesis, and genetics.

In February 1981, a Workshop on "Biochemical Epidemiology" was held in Honolulu, Hawaii. The organizers were Dr. Susumu Nishimura, National Cancer Center Research Institute, Tokyo, Japan, and Dr. Allan H. Conney, Hoffman-LaRoche, Inc., Nutley, New Jersey. The participants included ten Americans, fourteen Japanese, and one British scientist. The topics discussed at the workshop included dietary factors, breast and colon cancer; metabolism and DNA modifications; chemical methods, cytogenetics and DNA repair; gastro-

intestinal and other cancers; and lymphoma, bladder cancer and miscellaneous topics, including smoking and cancer.

In March 1981, a meeting was convened in Tokyo on "Interspecies Correlations in Chemical Carcinogenesis," organized by Drs. Shozo Takayama, Cancer Institute, Tokyo, and Dr. Curtis Harris, National Cancer Institute. The topics during the sessions focused on comparative investigations of carcinogen metabolism, mutagenesis and carcinogenesis in different biologic systems. Based on current information from laboratory and epidemiologic studies, the qualitative and quantitative interspecies differences were discussed by the participants from Japan, the United States, and the United Kingdom. Presentations by the participants served as useful starting points for active discussions that continued throughout the conference. Anatomic, physiologic, metabolic, and genetic factors among animal species were found to influence oncogenic susceptibility, tissue site and pathogenesis of cancer. These factors were found to exert their influence at different steps in the multistage process of carcinogenesis. Broad quantitative differences in response to carcinogens were found at the molecular, cellular, tissue, and animal levels of biologic organization. Much of the discussion was directed at the relationship between these responses and the susceptibility to cancer in the intact organism. Possible qualitative interspecies differences, e.g., fidelity of DNA repair and tumor promotion, were also considered. Finally, cancer epidemiology and clinical pharmacogenetics should continue to provide cancer researchers with important clues for future investigations.

During FY 1981, seven Japanese and six American investigators were appointed as Exchange Scientists in the Etiology Program Area. The scientists presented seminars as well as engaged in collaborative research activities in the areas of chemical and biological carcinogenesis, molecular genetics and epidemiology.

In October 1980, Cancer Biology and Diagnosis Program Area sponsored a meeting on "Immunology: Biology, Genetics, and Preclinical Immunotherapy," which was held in Osaka, Japan. The meeting was organized by Dr. Richard J. Hodes, NCI, Professor Y. Yamamura, and Dr. T. Hamaoka, Osaka University Faculty of Medicine, Osaka, Japan. At the meeting, there were seven American and more than ten Japanese participants who presented papers, providing significant advances in this area of interchange. Within the field of basic immunology of host-tumor interaction, the subject areas included: the existence of tumor specific antigens; the role of regulatory events in determination of host immune response to tumor; and the roles of cytotoxic T-lymphocytes, macrophages, and natural killer cells as effectors of antitumor responses. Preclinical studies in experimental immunotherapy were also presented and dealt with areas of both tumor prophylaxis and active therapy. The quality of individual participants and of presentations was generally excellent throughout the two and one-half day meeting. A particularly gratifying aspect of this meeting was the excellent and extensive interaction between the areas of basic tumor immunology and preclinical/clinical immunotherapy. It has been, and continues to be, a unique character of these meetings that they permit the exchange of information and ideas between investigators in areas of basic immunology and investigators whose orientation is toward applied immunotherapy. Throughout the meeting, and in particular during an extensive discussion session

at the end of the meeting, ideas were generated for the application of basic immunology to the development of new forms of experimental immunotherapy.

In December 1980 a conference on "Oncodevelopmental Proteins: Basic Biologic and Clinical Aspects" was held in San Diego, California, organized by Dr. William H. Fishman, LaJolla Cancer Research Foundation, LaJolla, California, and Professor Hidematsu Hirai, Hokkaido University School of Medicine, Sapporo, Hokkaido, Japan. There were 20 American and 15 Japanese scientists who participated in presentations and discussions. The topics of the conference included: the modification of oncodevelopmental gene expression with anti-AFP antibodies; hepatoma diagnosis; radioimmunodetection of cancer; differentiation and neoplastic transformation of hepatocytes; testicular and yolk sac tumors; oncotrophoblast proteins; and conceptual perspectives in oncodevelopmental biology. Proceedings are to be published in "Oncodevelopmental Biology and Medicine."

The consensus of the participants and observers was that the discussions were critical and constructive and that new collaborations were being generated along with proposed exchange of materials and reagents.

In January 1981, a symposium on "Genetic and Epigenetic Aspects of Cancer" was held in Honolulu, Hawaii. The symposium was organized by Dr. Yoji Ikawa, Cancer Institute, Tokyo, Japan, and Dr. Michael Gottesman, Laboratory of Molecular Biology of NCI. There were seven Japanese and eight American investigators who participated. Two general approaches to understanding the biology of cancer were taken. The first involved the use of animal models to study the relative role of genetic and epigenetic factors in the development of cancer. The second approach involved the use of tissue culture systems to study the molecular basis of transformation by viral agents.

During the year, two American and three Japanese investigators were appointed as Exchange Scientists under the Cancer Biology and Diagnosis Program Area.

The Cancer Treatment Program Area continued to become progressively more multidisciplinary during the past year, balancing modality-oriented and disease-oriented seminars and exchanges. Radiation oncology continues to be of increasing importance in the exchange, as both countries work in the areas of high LET radiation, radiation sensitizers, radiation protectors, and hyperthermia. The exchange of information between American and Japanese scientists in this area is helping to advance the science more rapidly in both countries and is setting the stage of potential future collaboration.

Cancer chemotherapy still remains a major focus of the treatment area. The exchange of drugs and data in the preclinical area is vigorous, aiding both countries toward more rapid progress. At the clinical level, a vigorous exchange continues as well. Based on the Japanese experience, clinical studies of Aclacinomycin A have begun. Clinical studies in the U.S. will soon begin on PEP Bleomycin, again based on the clinical experience in Japan. Both countries are placing emphasis on new anthracyclines, fluorinated pyrimidines and nitrosoureas. Comparison of clinical and preclinical data between the two countries continues to be a highlight of the annual chemotherapy meeting which is part of the annual Program Review.

From a disease-oriented perspective, tumors of emphasis including lung cancer, breast cancer, gastric cancer, and bladder cancer. The collaborative protocol in advanced gastric cancer between the Northern California Oncology Group and Japanese investigators has been completed and is being prepared for publication. It demonstrated an important comparability of Japanese and American data in the chemotherapy of advanced gastric cancer. A second generation protocol has been developed and has just been activated.

The Cancer Treatment Program Area sponsored three meetings during the year. In June 1980, the Annual Program Review for Cancer Treatment was held in Tokyo, Japan. Papers were presented to give an overview of the five years of cooperation in cancer treatment, the development of cancer chemotherapy in Japan, the NCI Cancer Therapy Evaluation Program, radiation oncology, drug development, biologic response modifiers, the progress of the US-Japan cooperative trials in gastric cancer, new drugs, including the analogues of bleomycin, bestatin, anthracyclines, nitrosoureas, ftorafur, and the overview of new drugs of interest. At the meeting, 11 American and 24 Japanese oncologists had the opportunity to present 27 papers and discuss various aspects of clinical research and the development of cancer treatment.

The "Radiation Oncology Seminar" in November 1980, Honolulu, Hawaii, was an excellent meeting indicating that the physical and radiobiologic dosimetry intercomparison studies on proton beams have progressed well. These were the subject of the first four presentations. This aspect will be completed in February or March of 1981 when Dr. Alfred R. Smith, Chairman of the American Association of Physicists in Medicine (AAPM), Charge Particle Beam Dosimetry Task Group, brings two Japanese to the US, Dr. Smith's Task Group is funded by an NCI grant to the AAPM and is charged with dosimetry intercomparisons among particle beam therapy facilities in the United States, Japan, Canada, and Europe. Two other spin-offs from the US-Japan Radiation Oncology Program are: Dr. Mitsuyuki Abe (Professor, Department of Radiology, Kyoto University) has been invited to participate on the Program Committee for the International Symposium of Radiosensitizing and Protective Agents to be held in Key Biscayne in September 1981; and Dr. Yoichiro Umegaki (Head, Department of Radiology, Cancer Institute Hospital, Tokyo) who will serve on the Program Committee for the Third International Conference on Particles in Radiation Therapy to be held in Houston, Texas, March 1982.

The "Breast Cancer Treatment Symposium" held in San Antonio, Texas, in March 1981, highlighted the combined use of chemotherapy and endocrine therapy in the treatment of advanced breast cancer. This area is of increased interest because of the development of the estrogen receptor assay and of new hormonal approaches to the treatment of breast cancer, particularly the anti-estrogen drug tamoxifen. The combination chemotherapy approach to breast cancer is now well established in both countries, and it is hoped that combining the two modalities will dramatically improve survival. Chemotherapy data from Japan was presented which matched up very well with the US chemotherapy data indicating that the two countries were using drugs in a similar way and achieving comparable results. The data on hormonal assays in both countries also demonstrated great comparability. A total of 19 papers were presented by seven Japanese and ten American oncologists. This symposium was organized by

Dr. Kiroki Koyama, The Center for Adult Diseases, Osaka, Japan, and Dr. William McGuire, University of Texas Medical Center, San Antonio, Texas.

During the year, two American experts in radiation oncology visited Japan to study dosimetric intercomparisons in ^{60}Cobalt treatment beams and proton beams in Japan. An American investigator visited several laboratories in Japan to present seminars on carcinogenesis and bladder cancer, as well as assess the treatment of bladder cancer in Japan. In addition, a Japanese oncologist spent one month at Memorial Sloan-Kettering Cancer Center and the University of Utah to discuss the incidence and treatment of familial polyposis and other forms of gastrointestinal tumors. Two Japanese and two American pathologists met in Hawaii to discuss and plan a future joint meeting on the pathology, diagnosis and treatment of bladder cancer, as well as future collaborative studies.

The Interdisciplinary Program Area jointly sponsored a large two-day conference on Recent Topics in Cancer Research with the Japanese Cancer Association in Osaka, Japan, in June 1980. The Conference was held in conjunction with the Annual Joint Steering Committee Meeting in Nara, Japan. It was estimated that 150 Japanese researchers attended the Conference which was held in the Osaka Chamber of Commerce and Trade Building. Topics discussed at the Conference included the structure and function of the US-Japan Cooperative Cancer Research Program, current topics in the field of cancer etiology and prevention, genetics of tumor cells, preclinical and clinical immunotherapy, relationship of chromosomes to cancer, combined modality therapy, new developments in radiation oncology, cooperative trials in the treatment of gastric cancer, breast cancer, and colorectal cancer. A total of 21 papers were presented by the speakers.

At last year's annual meeting, it was noted that binational research programs are especially suited to study of diseases that differ substantially in frequencies between the two countries-the more so if the diseases are approached in a novel way.

To this end, the Interdisciplinary Area convened a Workshop on "Differences in Lymphocytic Diseases between the US and Japan." The participants included epidemiologists, clinicians, and laboratory scientists from the US Mainland, Hawaii, and Japan. The meeting was held in Honolulu on March 11-12, 1981. The rationale for the meeting was based on the observation that high rates for lymphoproliferative disorders are associated with low rates of autoimmune diseases. Among US whites, lymphoma is more frequent in males, and autoimmune diseases in females (e.g., systemic lupus erythematosus [SLE] M:F-1:9, and Hashimoto's thyroiditis M:F=1:20). A reciprocal relation between the two categories of disease is also found when data from the US and Japan are compared. Certain lymphoid neoplasms are rare in Japan, and certain autoimmune diseases are known or suspected to be substantially more frequent there than in Caucasians.

As a result of this meeting, plans were made for several Japanese and American investigators to extend collaborative efforts to compare the frequency of SLE to other relatively common autoimmune diseases; to investigate rare cases of adult T-cell leukemia in the US; to study the distribution and

determinants of subacute necrotizing lymphadenitis in Hokkaido; and to develop a hypothesis concerning ethnic differences in T-cell function to account for the excesses and deficiencies in the lymphocytic diseases.

During the year, a Japanese surgeon spent six months at the Memorial Sloan-Kettering Cancer Center to study the recent advances in the diagnosis and treatment of pancreatic cancer, especially in regard to Regional Pancreatectomy.

Cooperation with the Polish People's Republic

In April 1981, the Agreement for Cooperation in Cancer Research was renewed for an additional five years. This Agreement, between the National Cancer Institute and the Maria Sklowdowska Curie Memorial Institute of Oncology, has been a very important addition to the Polish National Cancer Program, in that it provides support for the exchange of information and scientific personnel.

During FY 1981, exchange scientists from Poland included a molecular biologist, who studied at the NCI; a radiologist for training at Harvard Medical School; a surgeon, who studied the treatment of gastrointestinal cancer at the University Hospital in Cleveland, Ohio; a physiologist at the National Heart, Lung, and Blood Institute; a pathologist who visited several leading American departments of pathology; and a radiotherapist at the University of Texas System Cancer Center. The head of the Oncology Clinic, of the National Research Institute of Mother and Child of Warsaw, attended a conference on Pediatric Oncology in Washington, D.C., and later consulted with NCI on cooperative research on the treatment of childhood cancers.

An NIH senior scientist visited the Institute of Oncology in Warsaw to consult with the staff in the Department of Nuclear Medicine on collaborative research in cancer detection.

Cooperation with France

During a meeting in Paris, in December 1979, NCI agreed, in principle, to a French proposal for the reorganization of the American-French Program and combined the former Viral Oncology and Hormone/Cancer Working Programs into one which would be dedicated to Basic Research in Carcinogenesis. The other program deals with Clinical Cancer Research.

The Clinical Cancer Research Program encompasses the activities which were included formerly under the Clinical Trials and Treatment Research Program. However, the scope has been expanded to include immunotherapy, hormone therapy, and studies on hormone receptors. Thus, the American-French clinical research effort includes: (1) Phase I and II clinical trials and preclinical studies of the efficacy of anticancer drugs such as nitrosoureas, anthracyclines, and platinum analogs; (2) Phase III studies of gastrointestinal tumors; and (3) the treatment of resistant breast cancer. Other collaborative efforts are devoted to the study of multiple pharmacologic and biochemical determinants.

The program in Basic Research in Carcinogenesis is considered to be one of broad spectrum wherein meritorious scientific studies of a nonclinical nature are to be undertaken. These include such areas as cell proliferation, cell growth factors, normal and cancer cell differentiation, molecular genetics, tumor promoters, DNA repair, induction of cell transformation by DNA and RNA viruses, chemical and physical carcinogenesis, etc.

In October 1980, the Joint US-French Committee on Basic Cancer Research met in Paris to review the activities of the past year and to plan for exchanges of scientists for FY 1981. During the first four years of cooperation, 36 French scientists visited and studied in American laboratories, while 35 American investigators spent varying periods of time working in French laboratories. These collaborative efforts resulted in over 35 joint publications.

In view of increasing costs of travel and research expenses, the Joint Committee agreed that selection of Exchange Scientists will be based on the highest scientific merits and relevance to the goals of the cooperative program for mutual benefit. During the meeting, the French Committee reported that 12 research grants were made by the National Institute of Health and Medical Research (INSERM) to support cancer projects for collaborative research between American and French investigators. It was agreed that bilateral relationships would be very productive and elicit new avenues of research. The Joint Committee stressed the importance of the exchange of scientists to engage in collaborative research activities, to exchange techniques and research ideas, and to develop approaches to engender continuous interaction and cooperation. During the year, seven French scientists spent varying periods of time (a few weeks to 12 months) in American laboratories, while seven American investigators worked in French laboratories engaged in basic research, particularly in molecular biology, biologic carcinogenesis, and hormone research related to cancer.

The Joint NCI-INSERM Committee on Cancer Clinical Research met in Bethesda in December 1980 to review and evaluate the collaborative activities of the previous year. The meeting was co-chaired by the Director, NCI, and Dr. Francoise Haguenau, representing INSERM. The discussion centered on the ongoing activities in clinical studies and treatment research. The Joint Committee agreed that the Program Area should be expanded to take advantage of unique developments that might arise in treatment research. This can be accomplished through the use of workshops to exchange ideas and clinical and experimental data, as well as scientist-to-scientist exchanges.

The French Committee reported that the Committee was expanded to include other disciplines, such as epidemiology and radiation therapy, in order to cover areas which were not previously included. During the year, the French Committee reviewed and selected proposals leading to 18 research grants for the support of collaborative research between American and French scientists.

The Joint Committee agreed to have several working groups, namely, Working Groups for Clinical Trials; Clinical Biochemical Pharmacology; Biologic Response Modifiers; Radiation Therapy; and Epidemiology. These would meet to discuss areas of mutual interest for future collaborative efforts. There was general consensus to continue collaboration on the treatment of

gastrointestinal cancers; clinical trials; pediatric oncology; new drug development; exchange of scientists for collaboration in clinical biochemical pharmacology; exchange of information in radiation therapy, including hyperthermia, radiosensitizers, labeled antibody, and time-dose delivery; the exchange and coordination of information in the epidemiology study of nasopharyngeal cancer and high risk cancer.

During the year, three American cancer specialists and four French investigators were appointed as Exchange Scientists to engage in collaborative research.

In February 1981, a French scientist was invited to attend the NCI-sponsored meeting on "Hybridoma Research," which was held at NCI. Also, two French investigators attended a "Workshop on T-cells," held in Bethesda in June 1981. Several French oncologists also attended the annual meeting of the American Association for Cancer Research (AACR) and the American Society of Clinical Oncology (ASCO), which was held in Washington, D.C., in April 1981.

Cooperation with the Arab Republic of Egypt

The effort between the NCI and the National Cancer Institute of Cairo University continued under the Special Foreign Currency Program (PL 480). Three ongoing programs include the treatment of bladder cancer, cytopathology of bladder cancer, and cooperative clinical studies, under the Southwest Oncology Group (SWOG), for the treatment of breast cancer, head and neck cancers, adult lymphomas, and childhood lymphoma.

During the year, two NCI medical oncologists visited the National Cancer Institute of Cairo University to review the activities of a cooperative project on the radiotherapy and chemotherapy of bladder cancer. In addition, a pathologist and a tumor biologist consulted with the Egyptian project leader on the progress of the project on the cytopathology of bladder cancer. As participating members of the Southwest Oncology Group, six Egyptian oncologists attended the annual meeting of the SWOG, which was held in the US.

Cooperation with the Federal Republic of Germany

In April 1980, an NCI delegation met in Heidelberg, with the German delegation representing the German Ministry of Research and Technology and the German Cancer Research Center (DKFZ), to discuss formalization of bilateral cooperation on Environmental Carcinogenesis. A Memorandum of Understanding was signed by the Director, NCI, and the Director, DKFZ, in February 1981, for cooperative research in studying: (1) causation and mechanisms in carcinogenesis; and (2) prevention and modulation of the carcinogenic process.

In October 1980, a German delegation met with a group of NCI staff to discuss the possibilities of cooperation in the areas of drug development and clinical studies. Further discussions and exchange of information have been initiated prior to formalizing a bilateral program.

Cooperation with the Italian Republic

Pursuant to a meeting of American and Italian cancer specialists in April 1979, agreement was reached early in 1980 to pursue joint studies in Cancer Therapeutics and Cancer Prevention. American and Italian Working Groups for both of these programs have been established and meetings were held in October and November 1980, respectively.

In Cancer Therapeutics, the following topics were discussed and considered for implementation of collaborative research: (1) Chemotherapy of Stage I-III Breast Cancer; (2) Phase I Studies of Deoxycoformycin in Pediatrics plus Deaminase Monitoring; (3) Phase II Pediatric Studies; (4) Experimental Metastasis Models and Therapy Sensitivity; (5) Fundamental and Clinical Studies of Biologic Response Modifiers; (6) Studies of Pain in Adults and Children, plus Pharmacologic Monitoring.

Keynoting the American-Italian cooperative cancer research effort, a joint "Clinical Biochemical Pharmacology Workshop" was held in Milan, Italy, in late October 1980, in which 17 American and over 20 Italian scientists participated. In addition, the US-Italy Joint Committee on Therapeutics met to discuss and plan the activities for the year. Thus, an Italian oncologist was appointed as exchange scientist to visit and study cancer immunotherapy at NCI and at the Roswell Park Memorial Institute. An American chemist was invited to collaborate on studies of antitumor drugs in Milan.

In the Cancer Prevention Program Area, the US-Italy Joint Committee on Prevention met in Bethesda in November 1980 to discuss areas for cooperative research. The general areas include: cancer epidemiology; chemical carcinogenesis; detection and diagnosis; and biologic carcinogenesis. The mechanisms for implementation involve an exchange of scientists; an exchange of information and research resources; and the design and development of joint research projects.

Subsequent to the agreement, four Italian investigators were appointed as exchange scientists for periods of two weeks to twelve months to confer and/or to engage in collaborative research. In the fall of 1981, a workshop on cancer epidemiology will be held in Portofino, Italy. The workshop will address the estimation of cancer risk among leatherworkers, persons exposed to benzene and shipyard workers. A group of four or five Americans will be active participants in the workshop.

Cooperation with the People's Republic of China

Pursuant to the Protocol of June 1979 for American-Chinese "Cooperation in the Science and Technology of Medicine and Public Health," a five-person cancer delegation from the USA visited the PRC in November 1979. The American and PRC scientists agreed, in principle, to consider ten cancer problems of mutual interest as well as the implementation of joint research in these areas. These were described in a Memorandum of Understanding that was signed in Beijing on November 19, 1979.

On June 6, 1980, the Director, NCI, formally submitted to his Chinese counterparts an outline of the NCI objectives and general proposals for implementation of joint research. This outline was intended to be the basis for the development of a formal work plan in oncology to be presented for approval by the Joint Committee.

During its meeting on November 19, 1980, the USA-PRC Joint Committee on Medicine and Public Health approved the joint cancer proposal which is included in Annex 2 to the Protocol for Cooperation in the Science and Technology of Medicine and Public Health. The USA-PRC cancer proposal includes provisions: for the joint study of the epidemiology, early detection and diagnosis, treatment and multidisciplinary studies of esophageal cancer. The provisions for implementing collaborative research include:

1. (a) One scientist from the PRC will spend one year at the National Cancer Institute, NIH, beginning in 1981, to acquire experience in case-control studies of high cancer rate counties; on comparability between the USA and PRC in mapmaking; and in analytic epidemiology and scientific design.

   (b) A second scientist from the PRC will come to the NCI for one year for rotational work/study in the various sections of the Biometry Branch of NCI to learn more about tumor registries; demographic studies; clinical trials; and end result studies.

   (c) A third scientist will spend one year at the NCI to acquire information and experience in recent developments in cancer chemotherapy.

   (d) The fourth scientist will spend one year in NCI learning recent, new techniques for biologic and/or immunologic markers and/or the utility of internal ultrasound probes for the detection of esophageal cancer.

2. The NCI will provide to the Chinese new chemotherapeutic agents that are used in the USA and are not available in the PRC, especially those drugs that hold the potential for being more effective than the existing chemotherapeutic agents now in use in the PRC. The Cancer Institute, CAMS, Beijing, will provide NCI with information on the results of using these therapeutic agents in clinical trials.

3. Late in 1981 or early 1982, the NCI will send four scientists for one month to the PRC for studies in a high rate area for esophageal cancer and to evaluate the progress of collaborative research related to screening and detection as well as the treatment of esophageal and other cancers; drug development and evaluation; and the role of nutritional factors in carcinogenesis including the role of selenium.

   Each NCI scientist will give a short course on recent developments in his/her field of cancer research. The American expert(s) on detection and diagnosis will demonstrate and, perhaps, develop new procedures, for instance, new tests involving biochemical markers. An American expert on selenium will collaborate with counterparts of the Cancer Institute, CAMS, on research to evaluate the role of selenium in carcinogenesis.

Cooperation with the Hungarian People's Republic

Based on the exchanges with a delegation of Hungarian cancer researchers visiting the United States, in December 1978, and Americans visiting Hungary, in June 1979, proposals have been exchanged for initiation of joint research between scientists of the two nations. Subsequently, on 23 February 1981, a Memorandum of Understanding for a Cooperative Cancer Program was signed by the Director, NCI, and the Director, National Institute of Oncology, Budapest, HPR. Priorities for scientific activity are given to studies of: (1) cancer epidemiology/etiology; (2) experimental pathology; (3) immunology with emphasis on the leukemias and hematologic research; (4) cancer therapy and developmental therapeutics.

Agreement was reached in May, wherein the NCI, initially, will accept three Hungarian cancer specialists, in 1981, for implementation of joint research in American cancer centers. Each visitor will spend six months in pursuit of research programs specified in proposals that are acceptable to the Program Coordinators.

One HPR scientist will be in residence at the Roswell Park Memorial Institute for the purpose of studying the effect and metabolism of 5-fluorouracil or related antimetabolites, with or without thymidine and ethyl-deoxyuridine combination on various human colorectal tumor xenografts. Such a study is intended to help clarify those host and/or tumor factors which support or limit the effectiveness of antimetabolite therapy in individual colorectal cancers. As well, he will attempt to isolate Kupffer cells, hepatocytes and tumor cells from the liver for study of their cytochemical characteristics and metabolism of their cell surface components. And, if possible, he hopes to study the metabolism and effects of antimetabolites entrapped in liposomes.

The second Hungarian scientist will undertake joint research with personnel of the Sidney Farber Cancer Institute on the basic phenomena occurring during induction and the course of normal and pathologic immune response regulated by functionally different lymphocyte subpopulations. He intends to investigate the distribution of different lymphocyte subpopulations in various pathologic conditions, e.g., immunologic resistance to tumors; rejection and tolerance of transplants; and autoimmune disease.

The third of the Hungarian visitors will study the anticancer drug screening system, especially the human tumor xenograft system relative to its advantages over screening of drugs in rodent models. As such, she hopes to examine, in special solid tumor systems and in resistant tumor cell lines, the hexitol and vinca derivatives under development and study in her country. Finally, she intends to study drug combinations for the purpose of establishing optimal drug sequences, schedules of delivery, and dose ratios.

The multinational effort of the NCI that has been described is indicative of a wide range of activity over the broad spectrum of cancer problems and the scientific disciplines related to their study. Thus, the geographic separation of scientists and disciplinary research appears to be a phenomenon of the past and an enhancement has been achieved in current awareness of what is being done, where, and by whom. Certainly, then, these binational efforts are

exemplary of the sharing of "biomedical know-how" among nations and a step in the direction of an effort to raise the quality and productivity of life among people everywhere. Of course, the cancer patient or the potential cancer patient is the benefactor of new methods of early detection and diagnosis, more effective treatment and rehabilitation, and the realistic potential for cancer prevention in the future.

INTERNATIONAL CANCER RESEARCH DATA BANK (ICRDB) PROGRAM

The ICRDB Program was established by the National Cancer Act of 1971, in recognition of the urgent need for a comprehensive, large-scale effort to collect and disseminate the massive amount of information resulting from increased support for cancer research. This Program is an international information resource for cancer researchers throughout the world. It represents a very small investment of NCI resources designed to maximize the return to society on the large investment in research.

Because of the volume of cancer literature, individual scientists can cover only a small fraction of the sources that have information related to their research. Much of the potential benefit of research is lost when investigators remain unaware of new findings relevant to their own experiments. The ICRDB Program has developed an effective, multi-faceted system for promoting the rapid exchange of cancer research findings among scientists so that this information can be most productively utilized.

Organizational Changes

In November 1980, the ICRDB Program was moved from the Division of Cancer Cause and Prevention back to the Office of International Affairs where it had originally been located prior to 1980.

Accomplishments

To facilitate the transfer of cancer research information among scientists, the ICRDB Program has: 1) developed three online computer data bases which enable scientists to easily retrieve cancer information at more than 1,600 locations within the United States and in 13 other countries; 2) developed several series of useful publications providing complete coverage of cancer research information, in special formats designed for easy use and quick reference; and 3) supported a variety of specialized information collection, analysis and dissemination activities. These services and activities are described briefly on the following pages.

Computer Data Bases - The CANCERLINE System:

CANCERLIT: Contains more than 250,000 abstracts of published cancer literature, papers presented at scientific conferences and symposia, meetings, books, technical reports and theses;

CANCERPROJ: Contains descriptions of about 20,000 current cancer research projects from 83 countries; and

CLINPROT: Contains summaries of some 2,500 experimental cancer treatment protocols.

CANCERLIT is growing at a rate of nearly 50,000 abstracts per year, selected from over 3,000 biomedical journals. Because of stringent input processing requirements and monthly updating of CANCERLIT, the most recently published research results are rapidly made available to cancer researchers worldwide. As of early 1980, all new entries are indexed with the MeSH vocabulary developed by the National Library of Medicine, making them easier to retrieve via online searching. ICRDB screening, indexing and abstracting activities are performed under contract by the Franklin Research Center.

CANCERPROJ offers the most comprehensive available source for ongoing cancer research project information, including nearly 5,000 project descriptions collected by an international network of data input coordinators. CANCERPROJ is updated quarterly. Collection, input and updating of project descriptions are performed by the Current Cancer Research Project Analysis Center (CCRESPAC) under an interagency agreement with the Department of Commerce.

CLINPROT provides worldwide access to summaries of new clinical cancer treatment protocols currently being evaluated at major American and foreign cancer centers. CLINPROT is updated quarterly. Collection, input and updating of protocols are performed under contract by Informatics, Inc.

The CANCERLINE databases are made available worldwide through the National Library of Medicine (NLM) computer system, supported by an intra-agency agreement. Foreign access to CANCERLINE has been enhanced by the recent addition of CANCERLINE to the EURONET system in Europe (see Special Information Activities, below).

ICRDB Publications:

CANCERGRAMS: Monthly current awareness bulletins containing abstracts of recently published literature in 66 major cancer research areas;

Special Listings of Current Cancer Research: Annual compilations of ongoing research projects in 55 different cancer research areas;

ONCOLOGY OVERVIEWS: Retrospective bibliographies with abstracts on 30 topics per year selected for high current interest to cancer researchers;

Compilation of Experimental Cancer Therapy Protocol Summaries;

Directory of Cancer Research Information Resources; and

Special collaborative publications (See Special Information Activities, below).

CANCERGRAMS are prepared monthly from the newest input to the CANCERLIT database by scientists at three Cancer Information Dissemination and Analysis Centers (CIDACS); (see Special Information Activities, below) and a network of nearly 100 researcher-consultants, and rapidly disseminated to nearly 11,000 scientists worldwide. Containing carefully selected and organized abstracts screened from over 3,000 biomedical journals, CANCERGRAMS enable scientists to keep up with the most relevant portions of the vast cancer literature with minimum time and effort.

Special Listings of Current Cancer Research are extracts from the CANCERPROJ database, prepared by scientists at the CCRESPAC (see Special Information Activities, below). They are intended to stimulate interaction between investigators pursuing related avenues of research.

ONCOLOGY OVERVIEWS provide comprehensive coverage of the literature dealing with selected high interest cancer topics. They contain the most relevant abstracts on the OVERVIEW topic, selected from the CANCERLIT database and covering a period of several years, providing in-depth coverage of emerging foci of cancer research. OVERVIEWS are prepared by scientists at the CIDACs, with review and editorial commentary by well-known researchers in each topic area. They provide an excellent means of rapidly updating knowledge in burgeoning areas of research.

The Compilation of Experimental Cancer Therapy Protocol Summaries (5th Edition, May 1981) is derived from the CLINPROT data base and contains over 1,500 summaries of Phase II and Phase III clinical trials currently in progress worldwide. Protocols which have been closed to patient entry during 1980 are listed by principal investigator and include a mailing address. This edition also includes a brief, preliminary list of Phase I protocols activated during 1980. The Compilation is indexed by tumor, agent and protocol identification number and is a useful reference for the practicing oncologist. It is prepared under contract by Informatics, Inc.

The Directory of Cancer Research Information Resources (3rd Edition, April 1981) contains over 900 entries covering a wide spectrum of resources available to health professionals. It is prepared under contract by JRB Associates.

The ICRDB publications described above are printed and distributed by the National Technical Information Service (NTIS), under an inter-agency agreement.

Special Information Activities:

1. Cancer Information Dissemination and Analysis Centers (CIDACs)

Three contract-supported centers have been established as information resources in the following broad areas of cancer research:

1. Diagnosis and Therapy -- University of Texas, M.D. Anderson Hospital and Tumor Institute
2. Carcinogenesis -- Franklin Research Center; and
3. Cancer Virology, Immunology and Biology -- Franklin Research Center.

Each CIDAC is staffed by scientists and served by a consultant network with special expertise in the appropriate fields. Within their own subject area, each CIDAC prepares CANCERGRAMS and ONCOLOGY OVERVIEWS, performs custom CANCERLINE searches, and provides scientific guidance to the ICRDB Program.

2. Current Cancer Research Project Analysis Center (CCRESPAC)

Operated by the Smithsonian Science Information Exchange, the CCRESPAC collects and processes ongoing research project information, generates the CANCERPROJ data base, prepares the Special Listings of Current Cancer Research, and performs custom database searches on request.

3. Clearinghouse for On-going Research in Cancer Epidemiology

This cooperative project is supported jointly by the ICRDB Program, the International Agency for Research on Cancer (IARC) in Lyon, France, and the German Cancer Research Center in Heidelberg, Germany. The Clearinghouse, located in Lyon, collects, processes, and disseminates detailed data on research related to cancer epidemiology and studies of human cancer causation in countries around the world. The Clearinghouse also prepares lists of epidemiology researchers and resources, responds to technical questions and produces an annual Directory of On-Going Research in Cancer Epidemiology.

4. Latin American Cancer Research Information Project (LACRIP)

The ICRDB Program, in collaboration with the Pan American Health Organization (PAHO) and its Regional Library of Medicine (BIREME) in Sao Paulo, has developed and implemented mechanisms for identifying, collecting, and supplying Latin American biomedical literature, summaries of ongoing cancer-related research projects and therapy protocols in Latin America for input to the CANCERLINE system.

PAHO also serves as the center for searching ICRDB databases and providing documents and data in response to requests for information from cancer researchers in Latin America.

Through LACRIP, a series of collaborative clinical studies have been developed between nine cancer centers in the United States and six centers in Latin America. LACRIP maintains clinical data gathered at the Latin American centers and also arranges for the exchange of professional staff between centers in order to promote a better understanding of the current cancer treatments available in the United States.

5. Scientist-to-Scientist Communication

The ICRDB Program, through the International Union Against Cancer (UICC) in Geneva, Switzerland, encourages international scientist-to-scientist communication through the International Cancer Research Technology Transfer Program (ICRETT). This program promotes direct and rapid transfer of information about new or improved technology or methodology between two or more investigators located in different countries. This is accomplished by supporting short-term visits for the purpose of conducting brief collaborative research projects by investigators working in different countries. Since the inception of the program in 1975, 476 ICRETT awards have been granted (through December 1980).

A second program, the International Cancer Research Workshop (ICREW) supported two international workshops during FY-81. This project has now been phased out.

6. A Project to Promote International Collaboration Between Cancer Research Organizations

In cooperation with the International Union Against Cancer (UICC) in Geneva, partial support is provided for a special Committee for International Collaborative Activities (CICA), within the framework of the UICC. This project supports the collection of data about ongoing cancer research projects (including clinical protocols) from 72 countries around the world. CICA personnel also identify and promote collaborative projects among cancer centers and cancer scientists in different countries. A CICA project is the publication of a periodically updated International Directory of Specialized Cancer Research and Treatment Establishments, containing descriptions of nearly 700 cancer centers around the world.

An International Cancer Patient Data Exchange System (ICPDES) has been established, and present participants include nine European and five United States cancer centers. The ICPDES could result in the first internationally recognized and standardized tumor registry, providing comparative data of value in cancer prevention and treatment.

BRITISH LIBRARY (NO1-CO-85410)

Title: Cancer Information Services for Developing Countries

Contractor's Project Director: Dr. David Russon

Project Officer (NCI): Donna J. Wicker

Objective: The CISDC project provides free access to the ICRDB collection of cancer information for cancer scientists in developing countries.

Major Accomplishments: In 1979, a major effort was undertaken to identify medical institutions located in 100 Asian and African countries with per capita GNP under $2,500 per year. Following preparation of the list, each of the institutions received brochures and literature describing the CISDC Program and explaining procedures for using the service. By the end of 1980, approximately 1,200 search requests had been filled.

Significance to Biomedical Research and Program of the Institute: This project provides access to the comprehensive ICRDB collection for scientists in countries with poor informational facilities. An important feature of the CISDC Program is the provision of 5 photocopies of full articles selected from the bibliographic listing for each search.

Proposed Course: The contract continued until current funds were expended in January 1981.

Date Contract Initiated: September 30, 1978

Current Annual Level: $215,602

DEPARTMENT OF COMMERCE (National Technical Information Service) (YO1-CO-60702)

Title: ICRDB Document Announcement and Dissemination Services

Contractor's Project Director: James Jennings

Project Officer (NCI): Dr. Hortencia Hornbeak

Objective: This agreement supports the printing and dissemination of ICRDB publications, the announcement of these documents to potential users, and maintenance of all ICRDB documents in archival storage for supplying copies on request.

Major Accomplishments: Currently, NTIS disseminates more than 23,000 copies of CANCERGRAMs per month to nearly 11,000 investigators. In addition 55 Special Listings of Current Cancer Research and 30 ONCOLOGY OVERVIEWs are published yearly. An average of 800 copies of each Special Listing and 500 copies of each ONCOLOGY OVERVIEW are distributed to

investigators. The annual Compilation of Experimental Cancer Therapy Protocol Summaries is disseminated to over 7,000 investigators. NTIS also distributes 5,000 copies of other ad hoc ICRDB publications yearly. NTIS announcements have resulted in over 2,000 additional subscriptions to CANCERGRAMs.

Significance to Biomedical Research and Program of the Institute: This interagency agreement has allowed the ICRDB Program to rapidly fulfill one of its mandated activities, namely, the broad dissemination of biomedical research information on cancer. Through its various worldwide outlets, NTIS performs a valuable service in disseminating ICRDB products to the global scientific community.

Proposed Course: Plans call for the continuation of the agreement through September 29, 1981.

Date Agreement Initiated: September 30, 1976

Current Annual Level: $558,588

DEPARTMENT OF COMMERCE (National Technical Information Service, Smithsonian Science Information Exchange, SSIE) (Y01-CO-00708)

Title: Current Cancer Research Project Analysis Center

Contractor's Project Director: Dr. Donald Elliott

Project Officer (NCI): Dr. Hortencia Hornbeak

Objective: The overall objective of this agreement is the operation of a Current Cancer Research Project Analysis Center (CCRESPAC) to support the International Cancer Research Data Bank (ICRDB) Program by coordinating the collection and processing of research project descriptions.

Major Accomplishments: The contractor prepares for publication 55 annually updated Special Listings of Current Cancer Research, which consist of edited summaries of ongoing research in specific cancer subject areas. Computer tapes containing over 20,000 cancer projects are prepared on a quarterly basis for the regeneration of the CANCERPROJ data base, which is available for online searching and retrieval via the NLM MEDLARS computer system. Continued correspondence and other communications with scientists and clinicians in 83 countries has resulted in the addition of over 5,000 non-U.S. research projects to the CCRESPAC information system.

Significance to Biomedical Research and Program of the Institute: This interagency agreement promotes the exchange of cancer research project information among researchers around the world by providing a variety of information products and services tailored to their individual

needs. Current awareness of research in progress enables investigators to effectively utilize new concepts and techniques in the design of their own research projects.

Proposed Course: Plans call for the continuation of the agreement through September 29, 1981.

Date Agreement Initiated: December 30, 1974

Current Annual Level: $417,078

FRANKLIN RESEARCH CENTER (NO1-CO-05463)

Title: Screening, Indexing and Abstracting of Published Cancer-Related Literature

Contractor's Project Director: Ms. Silba Cunningham-Dunlop

Project Officer (NCI): Donna J. Wicker

Objectives: The SIA project collects, abstracts and indexes cancer literature published in professional journals, monographs and reports. This literature collection is the source material for the three primary services of the ICRDB Program: CANCERLIT, CANCERGRAMs, and ONCOLOGY OVERVIEWs.

Major Accomplishments: Approximately 4,000 items are photocopied, abstracted, indexed and keyed onto magnetic tape each month and sent to the ICRDB computer contractor for the final reformatting required to update the computer database. The items are collected from over 3,000 journals, and are abstracted from articles written in over 20 languages within 30 days of the receipt of each journal issue.

Significance to Biomedical Research and Program of the Institute: The SIA project is a multifaceted activity that provides rapid scanning of the world's cancer literature followed by processing that permits rapid, easy access to narrow cancer topics within a fraction of the time a scientist would normally have to spend retrieving the same material in a library. Access to the complete collection is possible via the CANCERLIT database or, following further processing, via the secondary publications ICRDB produces in narrow cancer subject areas.

Proposed Course: The contractor will continue the activity as described.

Date Contract Initiated: June 30, 1977

Current Annual Level: $1,623,000

FRANKLIN RESEARCH CENTER (NO1-CO-14343)

Title: Cancer Information Dissemination and Analysis Center (CIDAC) for Chemical Environmental and Radiation Carcinogenesis

Contractor's Project Director: Dr. L. Gerald Parchman

Project Officer (NCI): Dr. Dianne E. Tingley

Objectives: The CIDAC provides scientific input necessary to produce information products and services for cancer researchers, and provides guidance to the ICRDB Program, in the area of carcinogenesis.

Major Accomplishments: The CIDAC regularly produces 21 monthly CANCERGRAMs, current awareness bulletins containing abstracts of recently published literature. A new CANCERGRAM series on "Genetic Aspects of Carcinogenesis" was initiated in 1981. Five ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in carcinogenesis research, are published annually. Recently covered topics include the organ-specific carcinogenicity of tobacco products, chemoprevention of carcinogenesis, and microbial systems for mutagenicity testing. As a pilot project to explore new methods for enhancing the transfer of cancer research information, the CIDAC on November 18, 1980, conducted and videotaped a symposium on "Relationship of Carcinogen Action on DNA to Cell Transformation." The videotapes are available on loan from the ICRDB Program at no charge to requesters. The CIDAC also performs custom searches of the CANCERLINE data bases in response to requests for information; submits monthly Highlight Reports, pinpointing significant new developments in carcinogenesis research; and assists in database quality control.

Significance to Biomedical Research and Program of the Institute: The CIDAC serves as a valuable resource for the NCI and the worldwide cancer research community in the area of carcinogenesis. The CANCERGRAMS collectively provide comprehensive coverage of this entire field, quickly alerting researchers to new findings with minimal expenditure of effort, and thereby allowing them more time for productive research. ONCOLOGY OVERVIEWs enable researchers to rapidly update their knowledge in emerging areas of research concentration.

Proposed Course: The contractor will continue production of CANCERGRAMs and ONCOLOGY OVERVIEWs and provision of information services.

Date Contract Initiated: May 4, 1978

Current Annual Level: $312,312

FRANKLIN RESEARCH CENTER (NO1-CO-85404)

Title: Cancer Information Dissemination and Analysis Center (CIDAC) for Cancer Virology, Immunology and Basic Cancer Biology (VIB)

Contractor's Project Director: Dr. Graham L. Campbell (Acting)

Project Officer (NCI): Dr. Dianne E. Tingley

Objectives: The CIDAC provides scientific input necessary to produce information products and services for cancer researchers, and provides guidance to the ICRDB Program, in the area of cancer virology, immunology, and basic cancer biology.

Major Accomplishments: The CIDAC regularly produces 24 monthly CANCERGRAMs, current awareness bulletins containing abstracts of recently published literature. Ten ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in basic cancer research, are published annually. Recently covered topics include interferon (induction, production and physicochemical properties), preneoplastic lesions of the mammary gland, and hepatitis B virus. As a pilot project to explore new methods for enhancing the transfer of cancer research information, the CIDAC on January 28, 1981, conducted and videotaped a symposium/workshop on "Mechanisms of Metastasis." The videotapes are available on loan from the ICRDB Program at no charge to requesters. The CIDAC also performs custom searches of the CANCERLINE data bases in response to requests for information; submits monthly Highlight Reports, pinpointing significant new developments in basic cancer research; and assists in data base quality control.

Significance to Biomedical Research and Program of the Institute: The CIDAC serves as a valuable resource for the NCI and the worldwide cancer research community in the area of cancer virology, immunology, and biology. The CANCERGRAMS collectively provide comprehensive coverage of this entire field, quickly alerting researchers to new findings with minimal expenditure of effort, and thereby allowing them more time for productive research. ONCOLOGY OVERVIEWs enable researchers to rapidly update their knowledge in emerging areas of research concentration.

Proposed Course: The contractor will continue production of CANCERGRAMs and ONCOLOGY OVERVIEWs and provision of information services.

Date Contract Initiated: June 22, 1976

Current Annual Level: $313,680

HERNER AND COMPANY (NO1-CO-05465)

Title: Acquisition, Indexing and Keyboarding of Cancer-Related Meeting and Dissertation Abstracts

Contractor's Project Director: Lois Lunin

Project Officer (NCI): Donna J. Wicker

Objective: The AIK project collects, indexes and keys abstracts presented at meetings which describe cancer research projects. The project also indexes and keys abstracts from Dissertation Abstracts, a secondary journal that summarizes doctoral theses. These abstracts are part of the source material for CANCERLIT, CANCERGRAMs and ONCOLOGY OVERVIEWs.

Major Accomplishments: Approximately 1,000 items are processed each month and forwarded to the ICRDB computer contractor for the final reformatting required to update the computer database. The abstracts are collected from major biomedical conferences such as the American Association for Cancer Research, the American Society of Clinical Oncology and the Federation of American Societies for Experimental Biology.

Significance to Biomedical Research and Program of the Institute: The AIK project provides rapid, easy access to cancer research information presented at meetings. This information can be retrieved by searching the CANCERLIT database in any narrow topical area of cancer.

Proposed Course: The contractor will continue the activity as described.

Date Contract Initiated: August 12, 1980

Current Annual Level: $152,280

IIT RESEARCH INSTITUTE (NO1-CO-05468)

Title: Computer Support for Cancer Information Dissemination

Contractor's Project Director: Peter B. Schipma

Project Officer (NCI): Dr. John H. Schneider

Objective: The purpose of the contract is to establish and operate a Computer Support Center (CSC) for the ICRDB Program.

Major Accomplishments: The contractor performs a wide variety of computer operations necessary for the creation and maintenance of ICRDB databases, preparation of ICRDB publications, maintenance of special mailing lists, statistical reporting and special tasks identified by the Program.

Significance to Biomedical Research and Program of the Institute: The computer support provided by the contractor is of central importance to the entire spectrum of ICRDB products and services, whereby the Program is able to fulfill its mandate to actively promote the dissemination of cancer research information on a worldwide basis.

Proposed Course: No significant change.

Date Contract Initiated: June 27, 1975

Current Annual Level: $538,157

INFORMATICS, INC. (NO1-CO-05509)

Title: Preparation and Updating of Clinical Protocol Summaries

Contractor's Project Director: Marilynn Meinke

Project Officer (NCI): Dr. Hortencia Hornbeak

Objectives: This contract provides the capabilities for collecting, processing and disseminating ongoing cancer therapy protocol summaries to clinicians and investigators throughout the world.

Major Accomplishments: Informatics prepares annual updates of the Compilation of Experimental Cancer Therapy Protocol Summaries. The 1981 fifth edition contains over 1,500 summaries of Phase II and Phase III clinical trials currently in progress worldwide. This edition also includes a brief, preliminary list of several Phase I protocols activated during 1980 and a list of protocols closed to patient entry during 1980. Magnetic tapes containing the summaries of all protocols (2,400) are provided for the quarterly regenerations of the CLINPROT online database.

Significance to Biomedical Research and Program of the Institute: Both the Compilation and the CLINPROT data base are valuable information resources for apprising practicing oncologists of the latest developments in cancer treatment research. The availability of the principal investigator's or group chairman's address and telephone number on all protocol summaries facilitates the interaction of clinicians and investigators with common interests.

Proposed Course: Plans call for the continuation of this contract through December 1982, including annual updating of the Compilation.

Date Agreement Initiated: December 14, 1979

Current Annual Level: $210,093

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (NO1-CO-55195)

Title: Clearinghouse for On-going Work in Cancer Epidemiology

Contractor's Project Director: Dr. Calum S. Muir

Project Officer (NCI): Dr. John H. Schneider

Objective: This contract provides a special mechanism for intensive collection and dissemination of information about current cancer-related epidemiology projects.

Major Accomplishments: The Clearinghouse, located in Lyon, France, continually identifies and contacts new sources of epidemiology research project descriptions. Project descriptions are collected, edited, and published annually as the Directory of On-going Research in Cancer Epidemiology, as well as provided on magnetic tape for entry into the CANCERPROJ data base. The 5th edition of the Directory (1980) contained 1,261 project descriptions collected from 69 countries.

Significance to Biomedical Research and Program of the Institute: By serving as a resource for epidemiological data and establishing communication among epidemiology researchers worldwide, the Clearinghouse promotes international awareness and cooperation which contributes to more productive research in this area.

Proposed Course: Work will continue as described.

Date Contract Initiated: February 25, 1975

Current Annual Level: $112,987

INTERNATIONAL MEDICAL INFORMATION CENTER (NO1-CO-75362)

Title: Development and Implementation of Mechanisms for Interaction between the ICRDB Program and Asian Countries.

Contractor's Project Director: Masanobu Fujikawa

Project Officer (NCI): Dr. John H. Schneider

Objective: This project was established to enhance the coverage of Asian cancer literature by the ICRDB Program, and to facilitate communication with Asian cancer researchers.

Major Accomplishments: The contractor provides annually more than 1,000 cancer-related abstracts or annotations for input to the CANCERLIT database, screened from approximately 150 Asian-language journals and proceedings of Asian cancer meetings (mostly Japanese).

Significance to Biomedical Research and Program of the Institute: Through CANCERLIT, this activity makes available to researchers worldwide cancer-related findings which might otherwise pass unnoticed because of the Asian language barrier.

Proposed Course: The contract will continue, with increasing emphasis on meeting abstracts and coverage of non-Japanese Asian literature.

Date Contract Initiated: November 30, 1976

Current Annual Level: $129,964

JRB ASSOCIATES, INC. (NO1-CO-85383)

Title: Technical Support Services for the International Cancer Research Data Bank (ICRDB) Program

Contractor's Project Director: Richard Hildreth

Project Officer (NCI): Dr. J. Wesley Simmons

Objectives: This project provides a broad range of technical support activity to all projects within the ICRDB Program and to related information activities within DCCP.

Major Accomplishments: CANCERGRAM flow analysis studies have contributed to decreasing production time required for CANCERGRAMs, the principal ICRDB publication. Support relating to exhibits at major meetings for cancer researchers (e.g., ASCO and AACR) has contributed significantly to the enhancement of user awareness of the ICRDB Program.

Significance to Biomedical Research and Program of the Institute: This project makes available to the ICRDB Program for short- and long-range special projects, as needed, personnel and expertise in the areas of publications preparation, promotion of user awareness, evaluation of user services, and scientific analysis. This support is essential to fulfillment of the ICRDB Program mandate for active collection and dissemination of cancer research information.

Proposed Course: The present contract will continue until March 21, 1981, with special efforts devoted to formal evaluation of ICRDB products and services, updating of the Directory of Cancer Research Information Resources, and increasing awareness of ICRDB services at major cancer research institutions.

Date Contract Initiated: March 22, 1978

Current Annual Level: $356,000

NATIONAL ACADEMY OF SCIENCES (NAS) (NO1-CO-65280)

Title: Support for U.S. National Committee on the International Council of Societies of Pathology (ICSP)

Contractor's Project Director: June Ewing

Project Officer: Barry M. Goldfarb

Objectives: This project provides support for an ongoing program of the NCI to provide a means for effective participation by pathologists of the United States in all matters of concern to the ICSP. The NAS established the U.S. National Committee to coordinate the policies and activities of the societies in this country participating in the ICSP.

Major Accomplishments: The U.S. National Committee participates in the review of tumor classification standards developed through international collaborative efforts, and works to promote the international acceptance of these standards at conferences attended by pathologists.

Significance to Biomedical Research and Program of the Institute: Worldwide agreement on histologic tumor classification findings is highly desirable, in order to clearly interpret clinical research findings on cancer diagnosis and treatment. The professional, technical and promotional guidance provided by the U.S. National Committee contributes to the scientific excellence of the classification standards and insures their widest possible acceptance.

Proposed Course: ICRDB support will not be renewed following completion of work under the present contract.

Date Contract Initiated: October 15, 1975 (precedent contract initiated September 1974)

Current Annual Level: 0 Contract expires July 31, 1981

NATIONAL ACADEMY OF SCIENCES (NAS) (NO1-CO-75279)

Title: Support of the U.S.A. National Committee on the International Council of Societies of Pathology (ICSP) and WHO International Reference Centers

Contractor's Project Director: June Ewing

Project Officer (NCI): Barry M. Goldfarb

Objective: This project provides support for an ongoing program of the World Health Organization (WHO) to promote worldwide standardization of histological tumor classification for the furtherance of medical treat-

ment, research and education. The program is coordinated by the Cancer Unit of WHO and operates through 25 Collaborating Centers, each working on a different tumor type.

Major Accomplishments: This effort has resulted in 23 volumes in the International Histologic Classification of Tumors (IHCT) series, representing an international consensus on tumor identification and nomenclature. The IHCT series is eventually published in 4 languages and distributed worldwide.

Significance to Biomedical Research and Program of the Institute: The IHCT series is designed to facilitate the worldwide adoption of a uniform and standard nomenclature for cancer, without which results of research on cancer diagnosis and treatment cannot be effectively compared.

Proposed Course: Two additional IHCT classifications are now in preparation. ICRDB support of this project will not be renewed following completion of work under the present contract.

Date Contract Initiated: January 16, 1977 (precedent contract initiated September 1974)

Current Annual Level: 0 Contract expires June 30, 1980

NATIONAL ACADEMY OF SCIENCES (NAS) (NO1-CO-75384)

Title: Support of Activities of the U.S.A. National Committee for the International Union Against Cancer (UICC)

Contractor's Project Director: June Ewing

Project Officer (NCI): Barry M. Goldfarb

Objective: This contract serves the dual purposes of: 1) providing for one representative body (acting on behalf of the various U.S. cancer organizations and foundations) to deal with issues and policies on the International Union Against Cancer (UICC); and 2) supporting Committee participation in the UICC-sponsored International Cancer Congress held every four years.

Major Accomplishments: Much of the groundwork and planning for the XIII International Cancer Congress to be held in Seattle in 1982 has been completed.

Significance to Biomedical Research and Program of the Institute: This contract supports the representative body which develops and presents the issues and policies of the United States cancer research community to the UICC, and through support of International Cancer Congresses

promotes the productive exchange of research information among researchers throughout the world.

Proposed Course: Planning efforts for the XIII International Cancer Congress will continue.

Date Contract Initiated: April 1, 1977

Current Annual Level: $44,960

NATIONAL LIBRARY OF MEDICINE (1-Y01-CO-50003)

Title: Joint NLM/NCI International Cancer Research Data Bank

Contractor's Project Director: Dr. Henry M. Kissman

Project Officer (NCI): Donna J. Wicker

Objective: The agreement with the NLM permits the generation, maintenance and operation of the three ICRDB databases (published literature, research projects, clinical protocols) on the NLM computer, and for the dissemination of the information in these collections to institutions subscribing to the NLM computer services.

Major Accomplishments: The NLM currently maintains approximately 250,000 abstracts of published literature, 20,000 descriptions of research projects and 2,500 summaries of clinical protocols for the ICRDB Program. Each year a total of 20 updates or regenerations are performed to update or correct the records in these three files. Approximately 7,000 searches were run against CANCERLINE in 1980.

Significance to Biomedical Research and Program of the Institute: In consonance with the National Cancer Act of 1971, this interagency agreement has given the ICRDB Program the cost savings benefit of using an existing organization with capabilities to reformat, process, and make the results of cancer research available to more than 1,600 locations throughout the world via an existing telecommunications network resident at NLM. These locations include medical schools, medical research institutions, regional medical libraries and hospitals throughout the United States, and several countries outside the United States.

Proposed Course: Plans call for the continuation of this agreement through September 1983.

Date Contract Initiated: July 1, 1974

Current Annual Level: $340,000

PAN AMERICAN HEALTH ORGANIZATION (NO1-CO-65332)

Title: Latin American Cancer Research Information Program

Contractor's Project Director: Dr. Jorge Litvak

Project Officer (NCI): Dr. Hortencia Hornbeak

Objective: This contract established a Latin American Cancer Research Information Program (LACRIP), administered through the Pan American Health Organization (PAHO), which coordinates the collection of journal articles, meeting abstracts, clinical protocols and cancer research projects from Latin America. In addition, LACRIP identifies areas of cancer research that could lead to collaborative efforts between Latin American and United States investigators; identifies Latin American institutions involved in cancer-related activities and disseminates cancer-related information in Latin America.

Major Accomplishments: The contractor has supplied several hundred cancer-related articles and meeting abstracts from Latin America for inclusion in CANCERLIT. There has been a steady input of cancer research projects and clinical protocols for inclusion into the CANCERPROJ and CLINPROT data bases respectively. At present there are over 350 cancer research summaries from Latin America in CANCERPROJ. The Collaborative Cancer Treatment Research Program (CCTRP) presently sponsors 28 active protocol collaborations involving over 1,300 patients. The CCTRP has been received with great enthusiasm in Latin America and has stimulated the cooperation of 45 other Latin American cancer institutions and 92 other investigators, at no expense to the ICRDB Program.

Significance to Biomedical Research and Program of the Institute: LACRIP is an important resource for the ICRDB Program in that it supplies project descriptions, clinical protocols and journal articles for the databases (CANCERPROJ, CLINPROT and CANCERLINE) that would otherwise not be included, and provides a centralized mechanism for dissemination of cancer-related information to a large number of countries.

Proposed Course: The CCTRP will be removed from the work scope at the end of the present contract (July 1981). Since the collaboration has been successful, DCT will support this program for an additional five years.

Date Contract Initiated: May 24, 1976

Current Annual Level: $477,508

UNION INTERNATIONALE CONTRE LE CANCER (UICC) (NO1-CO-65341)

Title: International Scientist-to-Scientist Information Exchange Program

Contractor's Project Director: Dr. John F. Delafresnaye

Project Officers (NCI): Barry M. Goldfarb, Dr. Robert R. Omata

Objective: The purpose of this program is to promote direct and rapid person-to-person transfer of information about new or improved technology or methodology between investigators from different countries who are working in areas of basic, clinical or behavioral research, in order to further the progress of cancer research.

Major Accomplishments: This contract promotes international cancer research collaboration by providing International Cancer Research Technology Transfer (ICRETT) awards which enable two cancer researchers from different countries to jointly carry out brief research projects. From the inception of this program through December 1980, 476 exchanges (average period sponsored, 3 weeks) have been granted..

Significance to Biomedical Research and Program of the Institute: Scientists are afforded the valuable opportunity for on-the-spot collaboration necessary for comparing the results of parallel or related research and developing or improving techniques. These interactions frequently lead to continuing exchange of research information, which in turn leads to a more productive collaborative effort.

Proposed Course: Although the ICRETT program is considered worthwhile, this contract activity will not be renewed upon expiration in March 1982, reflecting a re-evalution of ICRDB Program needs and priorities.

Date Contract Initiated: December 4, 1975

Current Annual Level: $100,000

UNION INTERNATIONALE CONTRE LE CANCER (UICC) (NO1-CO-75377)

Title: Liaison and Implementation Projects in Support of the NCI, International Cancer Research Data Bank (ICRDB) Program

Contractor's Project Director: Dr. G. P. Warwick

Project Officer (NCI): Barry M. Goldfarb

Objective: Through its Committee on International Collaborative Activities (CICA), the UICC provides liaison and implementation projects in support of the International Cancer Research Data Bank (ICRDB) Program.

Major Accomplishments: Through 1980, this effort has resulted in collection and processing of information on over 6,000 unpublished current cancer research projects. This information is made available worldwide through the CANCERPROJ data base. The CICA has also established, as a pilot program, an International Cancer Patient Data Exchange System (ICPDES) whereby information covering the entire patient care spectrum is collected

in an internationally standardized manner, with participation by 5 major U.S. and 9 foreign cancer centers. As of April 1980, over 11,000 case reports had been entered, covering breast, colorectal and laryngeal cancers, and Hodgkin's and non-Hodgkin's lymphomas.

Significance to Biomedical Research and Program of the Institute: CICA activities have been of major significance in making the ICRDB Program truly international in scope. Active efforts to establish liaison with and obtain data from cancer centers and individual investigators around the world have stimulated increased communication and cooperation among researchers, as well as more effective utilization of clinical research data.

Proposed Course: Patient data collection will continue through the ICPDES, and efforts are underway to re-establish a European data processing center in addition to the one located in Houston. A new edition of the International Directory of Specialized Cancer Research and Treatment Establishments, last published in 1978 and listing 679 such centers located in 80 countries, is in preparation for release in September 1982.

Date Contract Initiated: June 1, 1977

Current Annual Level: $255,380

UNIVERSITY OF TEXAS SYSTEM CANCER CENTER (NO1-CO-85405)

Title: Cancer Information Dissemination and Analysis Center (CIDAC) for Cancer Diagnosis and Therapy

Contractor's Project Director: Dr. Eugene McKelvey

Project Officer (NCI): Dr. Dianne E. Tingley

Objectives: The CIDAC provides scientific input necessary to produce information products and services for cancer researchers, and provides guidance to the ICRDB Program, in the area of cancer diagnosis, therapy and rehabilitation.

Major Accomplishments: The CIDAC regularly produces 21 monthly CANCERGRAMs, current awareness bulletins containing abstracts of recently published literature. Ten ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in clinical cancer research, are published annually. Recently covered topics include small cell carcinoma of the lung, mycosis fungoides, and new agents for tumor localization. The CIDAC performs custom searches of the CANCERLINE data bases in response to requests for information; submits monthly Highlight Reports, pinpointing significant new developments in clinical cancer research; and assists in database quality control.

Significance to Biomedical Research and Program of the Institute: The CIDAC serves as a valuable resource for the NCI and the worldwide cancer research community in the area of oncology research. The CANCERGRAMS collectively provide comprehensive coverage of this entire field, quickly alerting researchers to new findings with minimal expenditure of effort, and thereby allowing them more time for productive research. ONCOLOGY OVERVIEWs enable researchers to rapidly update their knowledge in emerging areas of research concentration.

Proposed Course: The contractor will continue production of CANCERGRAMs and ONCOLOGY OVERVIEWs and provision of information services.

Date Contract Initiated: June 24, 1976

Current Annual Level: $301,305

NCI-SPONSORED RESEARCH IN FOREIGN COUNTRIES

During 1981, the Divisions of Cancer Biology and Diagnosis, Cancer Treatment, and Cancer Cause and Prevention maintained extensions of their programmatic objectives in foreign countries through 34 contract research activities, compared to 53 during the previous year. The Division of Extramural Activities provided fiscal support, through 52 grants, to scientists in foreign institutions conducting basic and applied cancer research. Table 1 lists the number of NCI grants (52) and research contracts (34) that were awarded to 53 institutions in 16 countries.

The Division of Cancer Treatment (DCT)

DCT research contracts have been awarded to investigators in eleven institutions of six foreign countries for studies related to the characterization of anticancer agents; the search for potentially useful anticancer agents; the screening and testing of such compounds; and clinical trials on specific cancers. Examples of this international collaborative effort follow.

In 1972, DCT established a "Cancer Chemotherapy Research Collaborative Office" at the Institut Jules Bordet in Brussels, Belgium. This facility provides an important service function to cancer researchers and clinicians in the USA and Europe as a center of reference for the vast amount of pertinent information on ongoing cancer research programs in both continents. Its "liaison function" has been invaluable in promoting cooperative studies in experimental and clinical pharmacology and in clinical trials. In this context, there is a direct association with the European Organization for Research on the Treatment of Cancer (EORTC) which, among other activities, collects and manages data on clinical trials from Europe and serves as the coordinating center for clinical cooperative groups. By this means, the EORTC facilitates data collection, at a much faster rate, on the clinical evaluation of new drugs and therapeutic results from a large number of patients. Currently, there are approximately 64 clinical studies in progress among the EORTC clinical cooperative groups. Two hundred and fifty-five institutions in 13 countries are involved in the trials and, currently, 6500 European patients are monitored by the EORTC data center. Since 1972, more than 25,000 new compounds have been collected through the direct efforts of the Collaborative Office and several of these proved to be interesting enough for development toward clinical trial.

DCT's maintenance in Tokyo, Japan, of a "Collaborative Office for Cancer Chemotherapy Research" contributes significantly to NCI's cancer treatment program. On the order of 35 to 40 potentially useful drug materials are collected per month, including synthetic preparations and products of natural origin. During the period spanning June 1979 and June 1980, 390 synthetics and 67 natural products were collected from 34 Japanese institutions. Active new materials include synthetic cyanines; analogues of 5-fluorouracil, cytosine arabinoside, and imidazolyl carboxamide; and nitrosoureas. Among the natural products are fatty acid esters of a crude nagilactone mixture, and anthracycline antibiotics.

There is a continuation of cooperative preclinical and clinical research associations between American cancer centers and those of the United Kingdom, stimulated largely through DCT efforts and its partial support. The Institute of Cancer Research in London is contributing significantly to the DCT mission through research encompassing: (a) drug development and screening; (b) preclinical toxicology; (c) clinical Phase I-II testing; (d) drug rescue strategies and scheduling; and (e) collaborative pharmacologic and clinical testing of new drugs.

In Italy, DCT supports partially the coordinating center for clinical study of melanoma in the National Institute of Oncology in Milan. There, as well, controlled clinical trials are continuing on breast cancer, gastrointestinal cancer, and tumors of the brain. The Mario Negri Institute in Milan screens potential anticancer compounds, that are available in Europe, emphasizing studies of their pharmacology.

In association with the University of Dar Es Salaam in Tanzania, DCT is engaged in a study of the use of oral 13-cis retinoic acid as a chemopreventive agent of skin cancer in albino Africans. These people, living in the equatorial zone, are subject to the most intense ultraviolet irradiation on the surface of the earth and are candidates, virtually, to a 100% incidence of skin cancer.

Three years ago, DCT entered into a cooperative relationship with Latin American cancer institutes by virtue of the NCI-PAHO Collaborative Cancer Treatment Research Program (CCTRP). Clinical research activities are being pursued jointly by investigators in ten Latin American cancer institutes/hospitals and eight American cancer centers. Currently, there are 28 active treatment protocols being evaluated. These include therapeutic concepts in hematologic malignancies, childhood malignancies, osteosarcomas, and testicular cancer. Multimodal concepts in solid tumors are being pursued in advanced breast and head and neck cancer. Systemic therapy of solid tumors is being evaluated in advanced breast cancer, advanced gastric cancer and adenocarcinoma, and in sarcomas. Since the inception of this multinational effort, 1158 patients have been accrued into the program.

The Division of Cancer Cause and Prevention (DCCP)

DCCP is very active in its associations with international organizations and agencies which have well-defined objectives in cancer research, especially its cause and prevention. As well, DCCP is engaged in collaborative contract research in 8 institutions/agencies in 6 foreign nations. These foreign extensions of the DCCP program thrusts include studies in epidemiology, cell biology, carcinogenesis, and virology.

Specifically, there is the study of in vitro radiosensitivity and DNA repair in genetic syndromes in families at high risk of malignancy being pursued in the Atomic Energy of Canada, Ltd. Personnel of the Middlesex Hospital of England are studying carcinogenesis in humans as well as chemoprevention of epithelial cancer by retinoids. In the National Center for Scientific Research in France, interdisciplinary studies are underway on nasopharyngeal carcinoma and associated human tumors. University of Ghana scientists are collecting clinical specimens for a comprehensive investigation of Burkitt's lymphoma.

And, virologists and molecular biologists in the Karolinska Institute, Sweden, are studying the significance of certain DNA and RNA viruses in the etiology of some human cancers.

The NCI and the DCCP, in particular, have been very supportive of the International Agency for Research on Cancer (IARC) and have utilized the expertise resident in the Agency to the fullest extent possible. The Agency has served as a coordinating focus, as well as an active participant, in a number of international collaborative programs initiated and supported by the DCCP. The NCI and the DCCP benefit materially from the information generated by the Agency as s result of activities which are supported by its core budget or by other member states.

Among the notable activities of the IARC, to which DCCP support contributes, are the IARC Monographs on the "Evaluation of the Carcinogenic Risk of Chemicals to Humans," exemplary of which is the 1980 compendium entitled "Chemicals and Industrial Processes Associated with Cancer in Humans." Other DCCP-supported research by the IARC includes: (1) A program on the evaluation of carcinogenis risk of chemicals to man; (2) Interdisciplinary studies on nasopharyngeal carcinoma; (3) Seroepidemiologic studies of nasopharyngeal carcinoma and Burkitt's lymphoma; (4) Laboratory and field studies in chemical carcinogenesis.

The Division of Extramural Activities

Grants by the DEA have been made available to 37 institutions/organizations in 13 countries. The scientific investigations include both basic and applied research and range over the spectrum of the thrusts and objectives of the NCI. Among these are assays for and studies of the action of carcinogens and "promoters" of carcinogenesis by personnel of the National Research Council of Canada. At the University of London a study is underway on the therapeutic response of human tumor xenografts. In the University of Helsinki in Finland studies are being pursued to determine glycoprotein differences in normal and malignant human blood cells. Scientists of the Weizmann Institute in Israel are engaged in research on the immunobiology of tumor metastasis.

THE NIH VISITING PROGRAM

During 1981, personnel of the National Cancer Institute served as hosts for scientists from 35 countries who came to the United States to engage in collaborative cancer research activities. There was a total of 274 foreign visiting scientists, associates, and fellows. Twelve of the visitors were appointed as Experts and 39 came as Guest Workers, whose financial support comes from sources other than NCI. The activities of these scientists were pursued in the laboratories of the NCI Divisions of Cancer Treatment, Cancer Cause and Prevention, and Cancer Biology and Diagnosis.

These associations are mutually beneficial. The NCI host scientist is afforded opportunities to learn from his/her visitor about cancer problems in a given foreign country; of factors peculiar to that nation that might be related to morbidity and mortality of cancer; and of activities underway

toward the management, treatment, and prevention of cancer. On the other hand, the foreign scientists are provided with unique opportunities to improve their mastery of the scientific method or to develop their potential for significant contributions to basic and/or clinical research. The value of such scientific interaction can be assessed, ultimately, on the knowledge that cancer patients throughout the world are benefiting from an improved quality of care.

SUMMARY

International collaboration in cancer research by the National Cancer Institute extends to locations in six of the seven continents of the world. This outreach is accomplished through bilateral agreements, research contracts and grants, the exchange of scientists and information, and a global network of communication of research information through mechanisms of the ICRDB Program, the IARC and UICC, and the WHO and PAHO.

Although this interaction with the world's scientific community has brought forth gains in the war against cancer, strongholds still remain and continue to resist even this aggressive deployment of the skills of contemporary science. However, as our international struggle against cancer continues, additional knowledge will accrue on how normal cells become malignant. We should be able to determine more precisely what compounds and other factors are carcinogenic or pose a risk for cancer incidence.

As efforts are continued toward the rational design and development of more effective anticancer agents and cancer treatment procedures, we will benefit, as well, from an insight into possible chemoprevention by virtue of an awareness of specific biochemical and pharmacokinetic action of chemicals in the control of cell differentiation and other cellular activities related to neoplastic growth.

A significant input from this international effort will be the accrual and analysis of demographic and geographic information endemic to a given population or region of the world, thus contributing to our understanding of the risk factors associated with a given cancer and the development of measures for cancer control and/or prevention.

Most important, however, is that continuous communication be maintained for the exchange of scientific information on cancer for the benefit of the peoples of all nations.

TABLE 1: SUMMARY OF NON-U.S. RESEARCH SUPPORT

	FY 1979 Actual	FY 1980 Estimated	FY 1981 Estimated	FY 1982 Estimated
Contracts	$ 8.8 (78)	$ 7.4 (59)	$ 6.7 (34)	$ 4.7 (25)
Grants	2.4 (44)	3.9 (52)	3.8 (52)	2.4 (33)
TOTALS:	$11.2	$11.3	$10.5	$ 7.1

$ funding x 100,000

( ) = number of contracts or grants

ANNUAL REPORT
OFFICE OF THE DIRECTOR FOR PROGRAM PLANNING AND ANALYSIS (ODPPA)
NATIONAL CANCER INSTITUTE

OCTOBER 1, 1980 - SEPTEMBER 30, 1981

OFFICE OF THE DIRECTOR

The ODPPA provides leadership, consultation and direct participation in program analysis, program planning, evaluation and management information systems. Organizationally, it is located in the Office of the Director, NCI, to enable it more effectively to provide its services to all operating units of the NCI and, at the discretion of the Director, to non-Federal organizations participating in the National Cancer Program (NCP). Operationally, it carries out its responsibilities in close collaboration with NCI operating units, and other offices in the Office of the Director, NCI.

The Office consists of two branches: The Program Analysis and Formulation Branch (PAFB) and the Systems Planning Branch (SPB) which includes the MIS project office. The PAFB is typically staffed with M.D.'s and Ph.D.'s with broad laboratory and clinical research experiences in the major disciplines involved in cancer research. The SPB is staffed with professionals with extensive experience in general management, planning, operations research, systems analysis, and management and technical information systems. Although primary and continuing assignments are made to each branch based on expertise required, the Office typically operates on a project matrix system whereby members of both branches are assigned to specific projects to provide the mix of scientific and managerial talents required by much of the work performed by the Office. Thus this annual report describes activities and accomplishments in terms of the three major areas of performance (Analysis and Formulation, Planning, Management Information Systems) rather than an accounting by branches.

ANALYSIS AND FORMULATION

Using information prepared by PAFB staff from a detailed review of FY'80 NCI supported extramural projects, scientific journals, in addition to participation in scientific meetings and conferences, the PAFB professional staff prepares position papers and develops guidelines and procedures for the review and analysis of current NCI programs and for the implementation of new programs. Papers are prepared on current research subjects relevant to cancer. Analytic services are provided and preliminary reviews prepared in response to specific needs of different science administrators or program leaders within operating units of the NCI.

A. ORI, Inc., with the guidance and assistance of PAFB and SPB has continued to maintain the SCAN system and to institute improvements in analytic methodologies and operating procedures. The analysis and input of data for FY'80 relating to NCI supported extramural grants and contracts is complete and available for retrieval of information pertinent to the project areas and objectives of the National Cancer Plan (NCPP), and on subjects or fields of interest in cancer research. The following types of products are available on request:

1. An identification of NCI supported projects relevant to NCPP objectives or to sub-categories of these objectives, e.g., project areas.

2. Comparison of the level of effort in one or more components of the NCPP for the current fiscal year, in relation to previous years.

3. Identification and analysis of the science content of NCI supported projects and sub-projects, especially for P01 grants, for this fiscal year in relation to different fields of research in cancer, e.g., chemoprevention, radiodiagnosis.

4. Comparison of the differences in level of effort over a period of several fiscal years for one or more of these research fields.

5. Identification and analysis of NCPP project areas in relation to fields of research in cancer, e.g., project areas relevant to immunology.

B. The SCAN system Annual Report for FY'80 was completed. This contains tabulated data and comments on NCI supported extramural research in different fields of cancer research. In addition to data covering FY'80, several tables are included showing differences or similarities in the level of effort for these fields over a span of several fiscal years.

C. Modification of retrieval capability under the SCAN system is in progress. This will permit the retrieval of information on a quarterly basis in addition to annually.

D. Analysis of FY'81 grants and contracts is in progress.

E. Several analytic reports were prepared or are nearing completion on selected research areas based on the data bases in the SCAN system. These include a review of research in:

1. chemoprevention for FY'79 and an FY'80 update; also NCPP project areas in chemoprevention

2. studies in cancer research with interferon

3. radiodiagnosis research for FY'80

4. research on aging and cancer

5. the distribution of dollars for NCI supported intra- and extramural research projects in FY'80 in relation to NCPP objectives.

6. research projects in radiobiology.

F. Executive Secretary and analytical support was provided by PAFB staff to the NCI Chemoprevention Coordinating Group.

G. PAFB staff provided technical, logistic and scientific support for the Low-Level Ionizing Radiation Research Planning Group; also support (technical, logistic, scientific) to prepare reports for the Digestive Diseases Coordinating Committee (HHS).

H. The staff of PAFB responded to queries from NCI staff using information retrieved from the SCAN systems.

I. The staff also provided executive secretarial, logistical and scientific support to the Interagency Radiation Research Committee (IRRC) and to subcommittees of the IRRC.

PLANNING

Since its creation in 1965, the ODPPA has been primarily responsible for the development and application of system analysis, planning, and evaluation techniques to cancer research and control activities; providing direct support for National Cancer Program planning, department level planning, and individual program planning. The Office also provides general planning consultation services to various program areas within the National Cancer Institute and other institutions and groups participating in the National Cancer Program. In carrying out these responsibilities, staff participants as members of planning teams organized to develop individual program plans, works directly with program and administrative personnel in the development of operational plans; maintains liaison with program personnel; provides periodic consultation and direct efforts, as requested by program leaders, to revise and update both program and operating plans; provides education and training to program staff in the use of systems techniques; and works closely with the financial management staff during the budget preparation cycle to correlate budget preparation with existing plans.

Specific planning activities engaged in during the past years are described in the paragraphs that follow:

A. Coordinated the preparation of the National Cancer Program 1980 Director's Report and Annual Plan (DR/AP) for FY 1982-1986 for submission to the President and Congress as required by law. This report describes National Cancer Program progress during 1980, current activities, and planned efforts for the five-year planning period, including budget projections. After extensive internal and external review (NCAB, NIH, OMB, OASH, etc.) and incorporation of review comments, the Report is submitted to the Secretary for transmittal to the President and the Congress and is distributed to research and educational institutions, voluntary organizations and Federal, State, and local agencies involved in cancer-related activities.

   In response to reviewers' comments on the 1979 DR/AP and in an effort to group all activities related to prevention, as an example, the format for the 1980 DR/AP differs significantly from that of previous years. Previously, NCI activities were described in the context of three major components: 1) Research, 2) Control, and 3) Resources Development. The new format also includes these components, but they are now subsets for each of four major categories of effort: 1) Cause and Prevention, 2) Detection and Diagnosis, 3) Treatment, Rehabilitation, and Continuing Care and 4) Cancer Biology.

B. Coordinated the preparation of the NCI submission to the NIH Forward Plan and the associated activities of: preparation for NCI participation in Director's (NIH) Forward Planning Review Session, including preparation of a briefing book for NCI Director and staff, and development of agenda items; and coordinating and reporting NCI activity action items which resulted from review session discussions.

C. Coordinated NCI evaluation activities in general and developed further NCI's evaluation strategy including the program performance indicators requested by the Department. Assistance was provided to NCI staff in the development, implementation, and administration of 1% set-aside evaluation projects.

The NCI Evaluation Plan was prepared which describes total NCI evaluative efforts (set-aside and non set-aside); material was prepared for NCI participation in Evaluation Plan review sessions at OD, NIH and Departmental levels.

The Office also has responsibility for coordinating and reporting any NCI activity action items which result from review session discussions. Branch personnel attend and participate in all reviews.

D. Provided support for Frederick Cancer Research Center space management activities.

E. Provided assistance to the Smoking and Health Program; a staff member serves as the Executive Secretary.

F. Provided planning assistance to the Personnel Management Branch.

G. Coordinated NCI's contributions to the PHS and DCRT ADP plans. Data on two additional systems, the Fiscal Projection Model (FPM) and the Science Content Analysis System (SCAN), was collected for registration in the PHS ADP Planning and Inventory Data Base System. These systems will be added to the Directory of Automatic Data Processing Systems in the Public Health Service which identifies and classifies computerized data processing systems in PHS. The system included in the Directory provide information necessary to support effective and efficient management of automatic data processing resources and operations.

For the first time in preparing the NCI ADP budget submission to DCRT, the Zero Based Budget and the ADP Financial Data (43A) were required to be in agreement. The NCI figures were divided into two categories: 1) intramural research and 2) direct operations and program management, to reflect separate decision units. Coordination with the Financial Management Branch ensured agreement between all documents.

H. Provided staff support to the Director, NCI, in preparation for Congressional hearings.

I. Initiated an update of the 1974 Operational Plan to reflect current NCI operations. The original version of the Operational Plan included the NCI five-year plan for operating the National Cancer Program for the period FY 1976 through FY 1980 which was submitted as part of the Director's report to the President for transmittal to the Congress. Since 1974 a separate document, the Director's Report and Annual Plan, is prepared each year.

The updated document will serve as a reference tool and present overviews of the various operations and functions of the NCI, i.e., planning and evaluation, budgeting, and funding mechansims. It will deal with management policies and procedures as well as the organizational structure of the Institute - its divisions and programs and activities.

J. Provided assistance to the Executive Officer; a staff member serves as the Executive Secretary of the Executive Officers Luncheon Meetings.

MANAGEMENT INFORMATION SYSTEM (MIS)

The National Cancer Institute's Management Information System is composed of a network of user oriented and managed systems which are designed and developed at the request of and with requirements supplied by the operating areas. In general these systems support individual operating areas but are so designed that the information from several of these systems may be combined to provide a more unified picture of NCI activities than provided by a single system. Development and maintenance of software, operating procedures, and documentation for these systems; user training and problem resolution; coordination of all program and data file changes; and consultation on ADP-related activities are provided by the MIS Project Office. Components developed to date support areas within the Office of the Director and several of the divisions with primary emphasis on the Financial Management Branch and administrative offices.

A. The primary objective of the MIS Project Office is to maintain the operational state of current systems. This activity includes the review of all proposed modifications to ensure that the change will produce the expected benefits and to determine whether the magnitude of the change (including impact on the system, users, interfacing systems, schedules, and cost), is appropriate for the expected benefit, testing or modifications, updating of documentation, retraining of users and resolution of operational problems. Specific activities of this type during the year include:

1. Modification of the NCI Travel System so that the printed reports can be used for reporting directly to the Fogarty International Center.

2. Modification of the Personal Services Forecasting System to reflect organization changes. This system forecasts the disbursements for personal services for the current fiscal year. Efforts continued to isolate the specific categories in which the forecasting algorithms are not sufficiently accurate and to make corresponding changes to the system.

3. Redesign and implementation of the operating procedures in the Biweekly Status Report Program to reduce the possibility of user error in the saving of the various divisional files and enhancement of the report format to simplify distribution and to reflect organization changes. This program assists the administrative offices in the handling of personnel actions.

4. Modifications of several versions of the Financial Data Report System (FDRS) used to report intramural costs at various organization levels in the Institute. The total NCI version was modified to summarize data at the cost center rather than the project level to reduce both storage and operational costs. The FDRS used by the administrative office for OD was modified to reflect new groupings of both Common Account Numbers (CANs) and Object Class Codes and to expand the reporting for travel. A single query which will produce a one-page report for a CAN specified at run time will be added to the OD, DCT, DCBD, and DCCP versions of the FDRS.

5. Review of all system documentation to determine the impact of the new version of WYLBUR installed at DCRT. Systems undergoing modification at the time the new version was released were converted. Since the amount of documentation to be changed was too massive to be completed before required use of the new system, training sessions on the new version were offered to all MIS users. These training sessions concentrated on the commands to be used to continue existing functions as well as several new commands which would be of special benefit to MIS users.

6. Providing intermin operational support to the Divisional Information System in DCCP from the conclusion of DCCP's maintenance and operational support contract until the end of the fiscal year.

7. Development of profiles, as required by the security program, for all ADP equipment managed by the Project Office. Development of awareness programs for users of this equipment was initiated.

B. Enhancements of current MIS systems and new system initiations include:

1. Implementation of a new version of the FDRS for DCCP. The command procedures in DCRT's new version of WYLBUR were used to simplify the user interface with the system. Consequently the operating procedures, the amount of software to be maintained, and the type of documentation required differ significantly from those items in similar systems.

2. Development of additional queries for the NCI Space Management System to provide reports on a quick turn-around basis to support NCI planning activities. A program to compare NCI Space Management Files from different time periods was developed to assist administrative staffs in the preparation of manual updates to the NIH Space Management System (NIH does not accept automated updates).

3. Redesign and implementation of the NCI gift fund procedures to simplify and consolidate the various reporting features.

C. Technology transfer continued in the following areas:

1. Software and documentation for one of the versions of the FDRS were provided to NHLBI; consultation was provided upon request. A functioning system in now available in that institute.

2. The software and documentation for the NCI Travel System were provided to DCT along with consultation on adapting that system to the specific needs of DCT. The first phase of that system is now operational.

3. Software and documentation for one of the versions of the FDRS were provided to NLM. Upon request, the MIS Project Office will assist that organization in the modification and installation of the system.

D. The MIS Project Office also provides technical support for specific ADP applications in other areas of the Institute and coordination of NCI-wide activities. Included in this category are:

1. Two updates of the ADP equipment inventory, collection of initial compliance data for remote work stations, review of one NCI remote work station and one NCI application system and working with the NIH ADP System Security Officer in developing and testing procedures to be used by the NIH ADP System Security Program. Additionally, a sample profile for remote work stations was developed for NCI Facility Managers, USDA training materials were investigated, and consultation was provided to NCI System/Facility Managers.

2. Assistance in monitoring the technical aspects of the operational support contract for the SCAN system was provided to the Program Analysis and Formulation Branch.

The staff of the MIS Project Office was assisted by a programming support contract with System Sciences, Inc.; major activities of this contractor are reported in the contract narrative.

CONTRACT NARRATIVE
OFFICE OF THE DIRECTOR FOR PROGRAM
PLANNING AND ANALYSIS, NCI
FY 1981

CONTRACTOR: ORI, Incorporated (Contract #NO1-CO-95427)

TITLE: Science Content Analysis System (SCAN)

CONTRACTOR'S PROJECT DIRECTOR: Mr. Norman Shusterman

PROJECT OFFICER: Dr. Michael Klein

OBJECTIVE: To maintain an updated science data base for each fiscal year on NCI supported projects and to relate these to the scientific recommendations of the National Cancer Program Plan; to enhance system capabilities in light of new requirements; to provide tabular data on the relationship of NCI projects to the Plan and to different aspects of cancer research; to provide an ad hoc query capability.

MAJOR ACCOMPLISHMENTS:

1. Using PAFB/OPPA science content analyses, ORI developed an updated data base for the SCAN system covering NCI extramural projects active in FY'80.

2. Using the previously completed FY'79 science data base, PAFB staff prepared several reports on timely subjects, e.g., interferon, chemoprevention, radiodiagnosis.

3. Information on chemoprevention was updated using FY'80.

4. Enhancements have been incorporated in analytic methodology for SCAN.

5. Information retrieved from SCAN system provided basis for a fiscal analysis of FY'80 NCI extramural projects assigned to different NCPP objectives.

SIGNIFICANCE TO THE NATIONAL CANCER PROGRAM: Use of the SCAN system provides the NCI and other groups with an objective measure of NCPP coverage by NCI funded extramural projects. General and specific questions relating to elements of the National Cancer Plan or research fields in cancer can be answered from information in the SCAN system.

PROPOSED COURSE:

1. To complete the analysis of NCI extramural projects for FY'81 and to enter these into the SCAN system.

2. To improve efficiencies and capabilities of this system including retrieval of currently supported research on a quarterly as well as annual basis.

DATE CONTRACT INITIATED: May 1979

CURRENT CONTRACT LEVEL: (amended April 1981): $117,462

CONTRACT NARRATIVE
OFFICE OF THE DIRECTOR FOR PROGRAM
PLANNING AND ANALYSIS, NCI
FY 1981

CONTRACTOR: System Sciences, Inc. (Contract #NO1-CO-95460)

TITLE: NCI Management Information System Support Services (Programming)

CONTRACTOR'S PROJECT DIRECTOR: Christopher Gordon

PROJECT OFFICER: Betty Ann Sullivan

OBJECTIVE: To provide maintenance support which includes modification to computer programs, testing, installation, user training and documentation updates for software and/or procedural changes approved by the MIS Configuration Control Board; operational support which is used primarily to initialize systems at the start of a new fiscal year, to operate test or prototype systems prior to release to the user and for problem resolution; and implementation support which provides software and related documentation based on specifications prepared by the MIS Project Office.

MAJOR ACCOMPLISHMENT: Maintenance activities included modifications to the NCI Travel System to improve the report formats, changes in both the NCI and OD versions of the Financial Data Report System (FDRS) and addition of a query capability to four versions of the system; several changes in the Personal Services Forecasting System (PSFS) to reflect organization changes and to improve forecasting techniques, and reporting and procedural enhancements in the Biweekly Status Reporting Program.

Operational support included testing of features of the new version of WYLBUR and implementation of required changes in selected systems, comparison of the reports produced from two versions of the PSFS and six-month operation and maintenance support for the DCCP Divisional Information System.

Development activities included implementation of additional queries and a Notification of Change report for the NCI Space Management System, implementation of a DCCP version of the FDRS, and implementation of a consolidated NCI Gift Fund System.

SIGNIFICANCE TO THE NATIONAL CANCER PROGRAM: The National Cancer Act of 1971 provides for improved information systems. This contract gives NCI the programming support required to maintain the operational components of its Management Information System and to implement new modules.

PROPOSED COURSE: To continue the current pattern of maintenance, operational support and development activities for the remaining year of the contract. A one-year no cost extension is anticipated at the conclusion of the initial period-of-performance.

DATE CONTRACT INITIATED: September 24, 1979

TOTAL VALUE OF CONTRACT: $499,679

CONTRACT NARRATIVE
OFFICE OF THE DIRECTOR FOR PROGRAM
PLANNING AND ANALYSIS, NCI
FY 1981

CONTRACTOR: JRB Associates (Contract # NIH-NO1-CO-75390)

TITLE: Planning and Support Services for the National Cancer Program

CONTRACTOR'S PROJECT DIRECTOR: Mr. Charles Fricker

PROJECT OFFICER: Barbara R. Murray

OBJECTIVE: Provide the support services necessary to assist the Office of the Director, NCI, in meeting the expanded responsibilities established by the National Cancer Act of 1971 and subsequent amendments.

MAJOR ACCOMPLISHMENTS: The activities included support services for program planning, the preparation of briefing and presentation materials, administrative and logistical support to the Office of the Director for planning conferences and meetings, and assistance in the preparation of draft documents required to develop the National Cancer Annual Plan.

SIGNIFICANCE TO THE NATIONAL CANCER PROGRAM: The expanded scope and responsibilities of the National Cancer Program have imposed additional requirements for reporting, planning and analyzing alternative courses of action. This contract provides assistance in areas which could not be done in NCI.

DATE CONTRACT INITIATED: September 30, 1977.

TOTAL CONTRACT VALUE: $3,403,104 all of which has been obligated. The contract has been extended through February 1982.

DATE DUE

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