OFFICE OF THE DIRECTOR

1983 Annual Report
October 1, 1982-September 30, 1983

U.S. DEPARTMENT
OF HEALTH
AND HUMAN SERVICES

National
Institutes of
Health

National
Cancer
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National Cancer Institute

NATIONAL CANCER INSTITUTE (U.S.)

Annual Report

October 1, 1982 through September 30, 1983

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General Framework of Responsibility

The functions of the Office of the Associate Director can best be described as those which fall within the purview of general scientific coordination within the Institute. The coordination involves all scientific pursuits which involve cross-divisional input and expertise. The formation and rearrangement of scientific units, the incorporation of new developments in science into intramural management structures, and the general consideration of contract support for intramural research, especially via the Frederick Cancer Research Facility, are of major concern. Together with several specialized responsibilities described below, the direction and coordination of intramural science also extends to the questions of outside activities and the determination of patent status rights in derivative inventions. In short, the responsibilities of this office within NCI mirror, to a substantial degree, the Office of NIH Deputy Director for Intramural Research in Building 1.

Intramural Scientific Coordination

This duty requires input dependent on basic science expertise in various phases of cancer research to effect major intramural scientific decisions. This is the least well defined function in terms of interactive protocols. Assuming a dotted line interactive input to Division Directors, two major types of events are influenced and modified by the Associate Director. The first is the formation or restructuring of basic science laboratories. This has occurred and is occuring in all Divisions. Close advisory and consulting activity with the Director and Division Directors is mandatory. Eventually a concensus option is reached relative to the final proposed laboratory structure. This is discussed and decided upon by the Executive Committee.

The second element results in less formalized structures, because it involves inter-laboratory inter-divisional cooperation on timely topics, usually in breakthrough areas of scientific advances. At times, these interactions are intense but not structured. The area of transforming genes fits this example. Close input occurs on a regular basis by pertinent Laboratory chiefs in all Divisions. This is generally transmitted to the Director, NCI, on an ongoing basis, because he has to be conversant in this area of dramatic scientific paradigm changes. In other cases, structured units have been formulated, such as the Monoclonal Antibody Working Group and the AIDS Task Force (vide infra).

A formal and defined mechanism for rapid updating in the avant garde areas of science is defined by the Office of the Director Continuing Seminar Series. When possible, these are scheduled on a weekly basis. Although the primary purpose is the transmission of novel information in science, other purposes are served as well. For example, controversial claims and observations are

evaluated, new intramural findings are discussed in detail, and other timely topics of general interest to NCI which may affect long range planning are considered as well.

In the last year, 14 seminars were presented.

NCI AIDS Task Force

The object is a functional synthesis of efforts of the various NCI intramural divisional activities in acquired immune deficiency syndrome (AIDS) with contract support and extramural cooperative agreements and grants. The Task Force is directed and coordinated by the Associate Director, NCI.

The composition is tripartite in nature. There is an intramural Scientific Director (Dr. R. Gallo), who directs and interacts with bench scientists on basic research in the AIDS area. The major thrust is the role of the HTLV family of viruses in the potential etiology of AIDS. The basic Task Force component is supplemented by contract support at the NCI-FCRF. Large scale virus growth, viral nucleic acid and protein testing, lymphokine production, immunological tests, and other requisite support activities are carried out by Program Resources, Inc. and Litton Bionetics, Inc., on contractual as well as collaborative bases.

The clinical part of the Task Force is headed and directed by Dr. S. Broder, involving several branches. Various modalities of treatment are being attempted which include chemotherapy, electron beam therapy, and treatment with several types of cytokines. A close coordination and actual collaboration exists with Dr. Gallo.

The extramural contingent encompasses one program director from each of the Scientific Divisions. The cooperative agreements, funded subsequent to the RFA, are integrated into the Task Force effort. Collaborative studies are being initiated with the UO-1 grantees. AIDS research is now also supported through the normal research project pool. These grantees are also being integrated in a two-way information flow. Because of the urgent nature of the problem, extramural program directors suggest and develop a funding plan designed to make optimal use of AIDS-dedicated HHS supplemental funding.

The NCI-AIDS activities are further integrated by a series of small Advisory Committee meetings. The participants are outside researchers and clinicians who are actively working on HTLV and AIDS. These include scientists from CDC and other BID's as well as foreign investigators. The importance of an integrated NCI Task Force effort was underscored by a special dedication of funds designated to cover the integration function through an O.D. appropriation number.

Outside Activities and Patents

The major responsibility is the adjudication of whether an activity by an intramural scientist for a profit or a nonprofit organization represents a potential conflict of interest. The activity is subject to prior signatory approval by the Office of the Associate Director. The decision is next forwarded to the Deputy Director for Intramural Research, NIH, for confirmation.

Up to now, 638 requests were decided upon, or approximately 64 per month, with a projected yearly total of 770. These consisted primarily of scientific lectures and secondarily, of medical practice consults. Specific sets of rules and standard phraseology were developed so that the activity would not be misinterpreted to fall within the realm of consulting which is as yet unacceptable. Special cases were considered in terms of interactions with nonprofit concerns basically funded by the tobacco industry. The presence on tobacco industry-related advisory bodies, councils, boards, etc., is frowned upon, even if the specific organization deals with dissemination of funds for aceptable biomedical research. The NCI decision was that the level of Associate Division Directors or above, i.e., a policy making position, automatically precluded any interactions. Writing and editing were common outside activities as well.

Any capacity of program influence, or decision making process by an NCI extramural-responsible person, was carefully examined for potential conflict. In the area of NCI contracts, Project Officer status was monitored to determine that if a scientist was a Project Officer at an institution, then if his Division had a contract with the organization, the outside activity was changed to official duty. No Project Officer within one NCI Division is considered to have any influence on contract activity of another NCI Division, because of the administrative structure. In the area of grants, requests for outside acivity by program people were very unusual, but similar restrictions would tend to apply, with closer scrutiny paid to UO-1 grants with cross-divisional functions.

Essentially all approvals from this office were cleared by the subsequent NIH authorizing officials. The discordancy rate was on the order of about 1%. Some of these were precedent setting, because there were no prior guidelines. After discussion with Building 1 or legal counsel, and further arbitration, Building 1 prevailed at times, but the converse also occurred.

The question of consulting is tied closely to the approval for outside scientific presention, because multiple lectures at the same for-profit organization could be looked upon as quasi-consulting. The present scheme follows the legally-defined limits for scientific presentation. However, an ongoing consideration by NCI and NIH deals with the concept of limited consulting as a potentially permissible activity.

To determine the feedback of NCI scientists, all NCI Laboratory/Branch Chiefs were asked to conduct a poll of their scientists who could be involved in future consulting. Significant conclusions could be derived from the collected 58 respondees. It was clear that a new era, engendered by the bioengineering revolution, generated a significant consulting demand. Of the units polled, 81% were in favor of a limited consulting option, but the present version of the option as stated was generally not considered as optimal.

Another related function of the Office of the Associate Director is to determine the status of potential or actual inventions which were wholly, or in part, developed under Federal research support. The decision process falls into two categories:

1. An evaluation of the invention status. This is generated as a request via OMAR which is mediated through the Assistant Director, NIH. These requests are either considered directly or funneled to individual NCI expertise for assessment.

2. The category of ruling on the legal and scientific interface related to evaluating the invention proper, usually with the intrinsic extention of the petitioner seeking exclusivity or greater rights. The laws have changed on this subject within the past few months and a new set of rules is being developed. Agreements with industry are also being generated de novo in collaborative ventures with NCI. These have also been generally precedent setting. A major outstanding example involving extensive NCI-DCT consideration was the recent Bristol Myers request for the extension of exclusivity on their cisplatin license. The final decision rests with the Assistant Secretary for Health, HHS; however, this office had extensive evaluatory input and comments prior to passage of the NCI decision to NIH and the Department.

NCI Monoclonal Antibody Working Group:

The mission of the working group is to integrate and facilitate the continuum of activities which begin at the bench and terminate in the treatment of the patient. The group represents a cross-divisional scientific activity of NCI.

It is headed by the Associate Director, and it comprises participants from all three scientific divisions. The group was instituted on November 30, 1982, because of a widely perceived need by the members for a combined input on this multidisciplinary activity. The skills of participants include areas such as: theoretical immunology, basic hybridoma technology, cytokine activity, the identification of specific and nonspecific tumor cell-surface antigens, "arming" technology involving both radiometal chelates and toxins, growth factors and potential oncogene products, and clinical expertise in the diagnosis and treatment of tumors with monoclonal antibodies.

Two additional non-NCI participating units are present as well. These are the Nuclear Medicine experts from the Clinical Center, who have ongoing collaborative experiments using labeled monoclonal antibodies; and the FDA participants who function as intermediaries, and who approve the final stages of the development of antibody which is inoculated into the patient.

Five major meetings have been held so far. The first was a planning session describing objectives of the Working Group and theoretical approaches that should be considered on the mouse-mouse and human-human hybridoma levels. The second meeting was a familiarization of the bench and clinical scientist with the FDA requirements, specifically with the monoclonal antibody in mind. The third and fourth discussion comprised the detailing of monoclonal antibody activities of the BRMP program, and the ongoing isotope-labeled anti-human melanoma monoclonal studies in humans by S. Larson. The last session focused on the possible role of growth-factor-"oncogene" products in tumor cells, and the negative effect that monoclonal antibodies could have on disease progression. The model was the small-cell lung carcinoma, which expresses bombesin which may be an autocrine-type growth factor in that system.

NCI-Frederick Cancer Research Facility

The Associate Director has overall responsibility for the operation of the Frederick Cancer Research Facility (FCRF), a Government-owned/ Contractor-operated facility located in Frederick, Maryland. On-site management of the FCRF for the Associate Director is through a General Manager with an administrative and scientific staff. In addition, the Research Contracts Branch maintains a Section level unit at the FCRF headed by a Contracting Officer who works with the General Manager to assure effective management of the facility.

The FCRF is approximately a 65-acre complex with 67 buildings located within the U.S. Army's Fort Detrick installation. The land occupied by the FCRF is owned by the NIH, and the various contracts for operation of the facility are with the NCI. The facility serves multiple purposes. First, a number of intramural NCI laboratories assigned to the three NCI research Divisions (DCBD, DCCP, DCT) is physically located at the FCRF. Second, intramural research units assigned to the NINCDS and NIAID are stationed at the FCRF. Third, a Contractor-operated Basic Research Program encompassing areas of molecular biology, chemical carcinogenesis, immunology, virology and genetics is housed at the facility. Fourth, a large Contractor-operated animal production unit which produces over 600,000 genetically defined barrier raised rodents is maintained at the facility. Fifth, Contractor-operated library and computer facilities are maintained to serve both Contractor and Government research and administrative personnel. Finally, a large Contractor-operated support unit is maintained which provides for maintenance and renovation of the physical plant, technical support to the research staffs and business/ accounting requirements of all Contractor and Intramural programs.

As of September 1983, approximately 1150 personnel were stationed at the FCRF, including 300 Government employees and 850 Contractor personnel. Major policy decisions concerning the FCRF, including the assignment of personnel and space, are made by the NCI Executive Committee and are promulgated by the Associate Director to the General Manager for implementation. The Intramural staffs located at the facility are under the direct supervision of their respective Divisions or Institutes, but they must comply with the regulations and contractual requirements of the FCRF. Further, all personnel at the FCRF are required to comply with certain regulations imposed by the Army at Fort Detrick. The latter are kept to a minimum and are coordinated through the Office of the General Manager and the Army's Base Commander.

During the current reporting period, the NCI completed negotiations with five Contractor's for the operation of the FCRF for a period of five years commencing September 26, 1982. Prior to implementation of these contracts, the FCRF was operated by a single Contractor. A major recompetition of the FCRF contract was initiated in 1981 with the goal of splitting the contract into five distinct areas of responsibility. Two operations, Library and Computer, were set aside for small businesses. As a result of the recompetition, each of the five contract areas was awarded to a separate Contractor. These include contracts for Basic Research, Operations and Technical Support, Animal Production, Library, and Computer Services. With the exception of the Basic Research Contract, which is fixed fee, the remaining contracts operate under an award fee mechanism. Although not a requirement of the RFP, four of the five contracts were awarded to small businesses.

A smooth transition from a single to a multiple Contractor mode of operation was achieved through the efforts of the NCI management staffs at the FCRF, with support and guidance from the Associate Director. The success of the transition was accomplished by holding frequent interface meetings of the various Contractors whereby problem areas and requirements were discussed and resolved. In addition, the General Manager and Contracting Officer, working as a team, maintained close scrutiny of the Contractor operations and provided sufficient flexibility to prevent and/or correct problems as they were identified. The Policies and Procedures of the facility were modified, as required, to comply with the needs of the various Contractors. In addition, close communication was maintained with the Intramural programs stationed at the FCRF and their respective Divisions and Institutes to assure that they were aware of changes being considered and that their needs were met. The success of the transition from single to multiple Contractors was evidenced by the six-month award fee evaluations where all four Contractors were judged to have performed at a level which met or exceeded their requirements under the contracts.

Prior to completion of the recompetition, the Associate Director implemented a major change in the Contractor Basic Research Program by estabalishing a chartered Advisory Committee comprised of distinguished non-Government scientists to evaluate the research being carried out and to make appropriate recommendations concerning new areas of research as well as funding levels. The Committee met on June 29-30-July 1, 1982 and reviewed the Contractor's research program at the Section level. Recommendations were formulated and submitted to the Associate Director, who, following review and approval by the Executive Committee, transmitted them to the General Manager for implementation. The Committee recommended reduced funding levels for various Sections to a total of approximately 2 million dollars, with the understanding that these funds would be made available to the new Principal Investigator to be selected by the Contractor. The Contractor was instructed by the NCI to implement the budget reductions over a nine-month period to be completed by September 25, 1983. This will be accomplished. The Contractor also established a Search Committee to select a new Principal Investigator. Based on the Committee's recommendations, with which the NCI concurred, the Contractor initiated negotiations with a distinguished scientist to assume the position of Principal Investigator of the Basic Research Program.

During the current reporting period the NCI, in concert with the Basic Research Contractor, established new procedures to assure protection of proprietary information generated at the facility while assuring rapid dissemination of information to the scientific community. Forms were developed so that laboratories receiving materials and products generated at the FCRF would acknowledge Government ownership. Policies were developed to allow rapid dissemination of materials and information to Universities and non-Profit Institutions with minimal administrative delays. In the case of for-profit companies desiring FCRF-produced materials, the NCI required the Contractor to obtain a signed acknowledgment by the company of the Government's ownership and rights.

The operation of the technical scientific services provided by FCRF Contractors to the research staffs was modified during the current reporting period to bring them in line with other NCI resource service contracts. The changes implemented included a pay-back system whereby unit prices were developed for each service area (i.e. graphics, histopathology, biological products, electron microscopy, chemical synthesis and analysis, microbial mutagenesis,

repository, etc.) to be chared to the requestor. The new system required significant changes in the accounting procedures which were implemented by utilizing the services of the Computer and the Operations and Technical Support Contractors. Despite some initial administrative difficulties, the pay-back system has been successfully implemented and is operating smoothly. The system has allowed NCI investigators at the Bethesda campus to gain access to services available at the FCRF resulting in significant savings to the Institute. In addition, certain services have been made available to the FDA and Army research units via interagency agreements.

A major accomplishment during the current reporting period was resolution of the issue of the price the NCI pays to the Army for furnishing heat and steam at the FCRF. Utility services required by the NCI at the FCRF are furnished by the Army through an interagency agreement. The Army, following DOD (Department of Defense) policy, has been charging the NCI for oil based on a central stock price per gallon used at all DOD facilities. The NCI raised the issue with the DOD that the cost being charged the NCI was substantially above the price for oil available locally in Frederick. The DOD, at the behest of the Director, NCI, recently modified their policy and will henceforth charge the NCI actual costs rather than stock prices. As a result, the Institute will realize a savings of approximately 1 million dollars in the amount owed to the Army Garrison for supplying utility services to the FCRF.

Extensive efforts were undertaken during the current reporting period to encourage interaction between the various administrative units collocated at the FCRF, as well as between the FCRF and Army units located at Fort Detrick. In addition to the five FCRF Contractors, Intramural units assigned to the three NCI research Divisions and two Institutes are collocated at the FCRF. Of major importance has been the fostering of scientific interaction between these diverse units. This has been accomplished by holding periodic meetings whereby the scientific staffs can meet and exchange ideas and interests. In addition, a major seminar program has been implemented which avoids overlapping of scheduling and allows investigators the opportunity to attend and learn of work being carried out in other areas. As a result of this "new" atmosphere of interaction, a number of new collaborations have been initiated between various Contractor and Government scientists. It is anticipated that these interactions will continue to increase and accrue benefit to the NCI and the FCRF community. Areas of common interest have also been identified between FCRF investigators and Army scientists associated with the USAMRIID (U.S. Army Medical Research Institute of Infectious Diseases) which have resulted in collaborations and utilization by the Army of FCRF technical services. In the area of community involvement, several FCRF personnel (Contractor and Government) have made presentations to local lay groups concerning the activities of the facility.

Finally, three major Intramural Laboratories were moved to the FCRF during the current reporting period. These include the DCT's Laboratory of Molecular Immunoregulation, the DCBD's Laboratory of Immunobiology, and the DCCP's Laboratory of Molecular Oncology. In the case of the LMO, renovation of a new laboratory building was completed and was made available to the Laboratory in June 1983. Plans for moving additional Intramural units to the FCRF are being formulated and will be accomplished when finalized. In addition, renovations for a new repository for the NIAID were initiated and will be completed during the next reporting period.

Program Activites Report
Fiscal Year 1982-83
Office of Laboratory Animal Science

To effectively implement uniform animal research practices at NCI in accord with with both humane and "Guide" recommendations, the Office of Laboratory Animal Science has undertaken the responsibility for logistical support of intramural animal research programs. During this period the central animal resource unit was established to perform direct basic care and support services, quarantine, and health surveillance of research animals for NCI.

To resolve the myriad of problems in remote animal holding areas, LAS is coordinating the NCI trend to operating small centralized facilities within buildings or areas within buildings. The 5,000 square foot DCT Central Animal Facility in Building 37 initiated in 1980 will soon be coming on line representing the most recent effort to consolidate and upgrade animal holding space. The Building 10/ACRF DCT Central Animal Facility on the 13th floor, managed by LAS and providing all attendant laboratory animal services, is now fully operational.

LAS is an intramural focal point for animal and animal cell monitoring for common animal contaminents to meet the objective of MI-3043-1 on the "Introduction of Rodents and Rodent Products." In this respect, LAS established a mechanism for all NCI investigators introducing such animal and products both from the United States research communities and commercial sources as well as overseas. In addition to providing laboratory analysis, facilities for isolation, quarantine and defining animals is managed by LAS at a lease site off campus.

LAS is active in the resolution of animal research grant discrepancies not in compliance with the Office of Research Risks by reviewing site visit reports with Executive Secretaries and Project officers and offering mutually agreeable solutions to inadequacies rather than forwarding problems to ORR.

LAS also consults and collaborates with the Research Facilities Branch on compliance and construction of NCI animal facility items dealing with possible action for uniform standards.

An Animal Handler Surveillance Program has been initiated with the Occupational Medical Service whereby animal caretakers will be assured of automatic review and call-up on their health status when involved with research animals. It is planned for the next period to pursue a similar program for Laboratory Biological Technicians.

LAS continues to participate in various NIH level animal committees; i.e. NIH Genetic Advisory Committee, NIH-FCRF Animal Advisory Committee, NIH Trans Coordinating Committee for Research Animal Resources, and the NIH Animal Care Committee. The NCI MI-3040 on "Care and Use of Animals in NCI Intramural Research" was used as the model for the recently approved "NIH Guide for Intramural Animal Care and Use." Many of NCI animal standard operating policies and research protocol review mechanisms are being incorporated into NIH practice.

Planned projects for the coming period will evaluate water filtration systems for the 10/B2B and 37/6E areas and a Heat Recovery System. Personnel within

LAS continue to participate in seminars and programs of associations dealing with laboratory animal science; i.e. AALAS, ACLAM, AVMA, ILAR, to facilitate information exchange and training.

LAS continues to be a resource for not only technical assistance but the management and animal care service and logistics for NCI.

OFFICE OF THE ASSISTANT DIRECTOR

OFFICE OF THE DIRECTOR

PROGRAM ACTIVITIES REPORT

October 1, 1982 through September 30, 1983

The Office of the Assistant Director (AD) administers the functions of the President's Cancer Panel, which convened three meetings during the period of this report, two of which were regional meetings. The Panel has been a forum for both the scientific community and public, and has affected the initiation of new program priorities and implementation of existing priorities. The AD serves as the Executive Secretary to the Panel.

The Chairman of the President's Cancer Panel, Dr. Armand Hammer, was reappointed by the White House for a second term in that office; Dr. John A. Montgomery was named to replace Dr. Harold Amos as a member; and Dr. William P. Longmire continues his three year term as a member of the Panel.

In addition to a meeting held in Bethesda during 1982, the President's Cancer Panel also conducted public meetings in Houston, Texas, at the M.D. Anderson Hospital and in Chicago, Illinois, at Northwestern University. At these meetings, the Panel examined alternatives and options proposed by scientists regarding possible modifications of the peer review and grants award mechanisms at the NCI and the NIH.

This year the President's Cancer Panel initiated a study of the grant mechanisms available to established research investigators, as a result of the consultations with members of the scientific community at the Panel's meetings around the country. An ad hoc working group was established, chaired by Dr. Harold Amos, and charged with the responsibility to draft recommendations for an Outstanding Investigator Grant (OIG). The OIG is intended to provide stable financial support and research flexibility over a long, but defined period of time. The Office of the AD will coordinate the implementation of the guidelines for this potential NCI grant mechanism.

The AD is also responsible for the activities of the Office of Medical Applications of Cancer Research (OMACR) and maintains liaison with the NIH Office of Medical Applications of Research (OMAR) as the NCI representative on the Coordinating Committee on Assessment and Transfer of Technology (CCATT). During 1982 and 1983, OMACR processed numerous evaluations of patent applications from grantees and contractors, and also supported consensus development programs and technology transfer activities at the NIH. A major activity during this period has been the planning for the Cancer Institute Consensus Development Conference on Precursors to Malignant Melanoma which will be held at the Lister Hill Center of the NIH on October 24, 25, and 26, 1983. The objective of the conference is to evaluate the issues concerning the current technology and arrive at a consensus statement useful to health care providers and the public at large.

Other activities of the Office of the AD this year have included the establishment of two radiation coordinating groups in the capacity of liaison with the Interagency Radiation Research Committee, chaired Dr. James B. Wyngaarden, NIH Director.

As Coordinator of Radiation Research Activities of the NCI, the AD provides staff and support for the work of two committees established pursuant to the Orphan Drug Act (PL-97-414), passed in January 1983. Dr. Victor Zeve, of the AD Office is Executive Secretary for the Ad Hoc Working Group to Develop Radioepidemiological Tables as per Section 7(b) of PL-97-414 and also for the committee to report on the analysis of thyroid cancer in relation to iodine-131 exposure, as required by section 7(a) of the above law. These activities are coordinated with the Office of the Director, NIH and the Office of the Secretary, HHS.

During the past year, the Office of the AD was concerned with the initial planning and implementation necessary to integrate NCI resources for PDQ, the computer information system, regarding treatment options for cancer patients. The PDQ1 database was available to professional and lay users of the National Library of Medicine MEDLARS System in October 1982. PDQ2 has now been developed and coordinated by the Director's Office and by the Deputy Director, NCI, and Dr. Robert J. Esterhay of the AD's Office has been the project director for this effort.

PDQ2 provides information on state-of-the-art cancer treatments and the latest treatment protocols, where they are being tested, and which specialists use them. PDQ2 informs a physician about the current cancer treatment options and gives general information about the range of treatment procedures. The PDQ1 database provides the names and institutional contacts for physicians associated with clinical trials groups and cancer centers throughout the United States. The database is updated monthly to ensure that information is current. PDQ2 consists of five sets of information identified as follows:

File A - CANCERINFO: Information about the specific cancer and state-of-the-art information for each stage or cell type of the disease.

File B - DIRECTORY: Names of cancer specialists who are members of organizations or institutions that have a special interest in cancer treatment.

File C - PDQ1: Geographically matrixed information on individuals who utilize active cancer treatment protocols.

File D - CLINPROT: Detailed summary information on both active and closed cancer treatment protocols.

File E - GLOSSARY: Definitions of cancer-related terms.

During this year there were two other additions to the staff of the AD Office, Ms. Susan Meates and Ms. Ruth Mattingly. Ms. Meates has supported the office operations and functions as secretary to the AD and has provided the materials for the efforts in the radiation programs, the PDQ and contract programs, and the operations of the Panel. Ms. Mattingly, who is a technical writer and specialist in information programs, has been working on the PDQ project.

Other areas of activity of the AD Office have included signatory responsibilities for various steps in contract negotiations undertaken by the NCI; the review of Confidential Statements of Employment and Financial Interests; and, as Deputy Ethics Coordinator for NCI, the AD confirms the absence of conflicts of interest on the part of staff following review of the activities and holdings reported by the employees.

JOURNAL OF THE NATIONAL CANCER INSTITUTE
OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE

Program Activities Report
October 1, 1982 - September 30, 1983

In the first issue of the Journal of the National Cancer Institute, published in August 1940, Surgeon General Thomas Parran stated, "it seems desirable that the National Cancer Institute have a journal of its own. . . . A special journal is clearly demanded, too, by the increasing amount of work in the field of cancer research, and the growing importance as well as the increasing interest in this great public health problem. The policy of the JOURNAL will be, therefore, to contribute to the dissemination of knowledge and to encourage research in the subject of cancer."

Today, forty-three years later, publication of the Journal, now called JNCI, is still considered one of the most effective ways to disseminate information useful in the prevention, diagnosis, and treatment of cancer. Although early issues of the Journal were dominated by papers from NCI researchers, JNCI has grown into a widely recognized international journal with fewer than 8% of its manuscripts submitted by NCI authors and more than a third of its manuscripts now submitted by authors outside the United States.

During the 12-month period, July 1, 1982, to June 30, 1983, the Board of Editors reviewed 650 manuscripts submitted for publication in JNCI. These manuscripts were from the following sources:

National Cancer Institute: 56 (31 accepted, 7 rejected, 18 pending)
Other research institutions: 594 (159 accepted, 197 rejected, 238 pending or withdrawn)

The total number of manuscripts submitted shows a slight decrease (<2%) from that submitted in the previous 12-month period; however, it is a substantial improvement over the decrease in the preceding year (-13%).

Of the 594 manuscripts received from sources outside the National Cancer Institute, 218 were from authors in other countries. As shown in table 1, authors from 27 foreign countries submitted manuscripts for publication in JNCI. Substantial increases were noted in submittals from Australia, Canada, and the United Kingdom; however, submittals from Japanese authors, the leading foreign contributors, declined by one-third.

An improvement was noted in the total number of pages published. The yearly total was 2,657 pages compared to 2,478 pages in the preceding 12-month period. Volume 69 (July-December 1982) contained 1,486 pages and volume 70 (January-June 1983) contained 1,171.

Typesetting, printing, and binding of JNCI are performed by Waverly Press, Inc.. of Easton, Maryland, under a 2-year contract through the Government Printing Office. This contract expires in September 1983 and specifications for the future contract include an accelerated publication schedule. This schedule

should enable manuscripts to be published within 90 days after acceptance compared to the present publishing time of 129 days.

Of special interest, the proceedings of a significant symposium on photochemical toxicity sponsored by the Food and Drug Administration were published in the July 1982 issue of JNCI. In addition, eight guest editorials were published during this period along with six meeting highlights. A special report entitled "Diet, nutrition, and cancer: Interim dietary guidelines," by Sushma Palmer and Kulbir Bakshi of the National Academy of Sciences was featured in the June 1983 issue.

A continuing effort is being directed to increasing the JNCI subscriber base. A Special Communication promoting subscriptions was sent out to several thousand potential subscribers. In cooperation with the Marketing Department of the Government Printing Office, a direct mail promotion of JNCI is being initiated. A survey of NCI laboratory and section chiefs was conducted to determine how JNCI meets the needs of its readers.

Several areas for improvement are being considered, the most significant being a decrease in time from submittal to publication. Improved computerization of several operations in manuscript processing is also being considered.

JNCI has continued to maintain high standards of editing and publishing. The July 1982 issue was entered in the annual publication competition sponsored by the Washington Chapter of the Society for Technical Communications and received an Award of Excellence in the category of complete periodicals. The award was based on excellence in writing, editing, graphics, and their total integration into the publication.

Three NCI monographs were published and five others are in various stages of publication. Pending receipt of all manuscripts, no dates have been set for four of these. The status of each is as follows:

No. 60: Research Frontiers in Aging and Cancer: International Symposium for the 1980's; August 1982

No. 61: Third International Symposium: Cancer Therapy by Hyperthermia, Drugs and Radiation; September 1982

No. 62: Third Symposium on Epidemiology and Cancer Registries in the Pacific Basin; January 1983

No. 63: Biological Response Modifiers: A Subcommittee Report; September 1983

Forty-five Years of Cancer Incidence in Connecticut: 1935-1979

The Use of Small Fish Species in Carcinogenicity Testing

Photobiologic, Toxicologic, and Pharmacologic Aspects of Psoralens

The Governance of Science

The work of the contract printer, McFarland Company of Harrisburg, Pennsylvania, has been most satisfactory; average time from submission of manuscripts to printer and publication has been 6-7 months. This represents 12 to 16 months less time than the individual bid system (through the Government Printing Office) used previously.

Two monographs, No. 60 and No. 61, were entered in the Society for Technical Communications publication competition. Each received an Award of Merit in the books category.

The position of editorial assistant to the Monograph Editor was made a full-time position with the addition of duties as research assistant to the Editor in Chief. A qualified candidate was hired and began work on April 18, 1983.

Table 1. Countries of Origin of Manuscripts Submitted to JNCI 1982-83

Argentina	2	Italy	8
Australia	15	Japan	45
Austria	2	Mexico	3
Belgium	3	Netherlands	8
Canada	32	Norway	1
China	4	Poland	2
Denmark	4	Scotland	5
England	21	Singapore	2
France	13	Sweden	8
Democratic German Republic	3	Switzerland	5
Federal Republic of Germany	7	Thailand	1
Greece	1	United States	432
India	2	Venezuela	1
Israel	20		

EQUAL EMPLOYMENT OPPORTUNITY OFFICE (EEO)
OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE

Summary Report

October 1, 1982 through September 30, 1983

The Federal Equal Opportunity Recruitment Program (FEORP) was implemented during the month of January 1982. The first semi-annual FEORP/Affirmative Action Plan (AAP) assessment report was prepared and distributed during the month of April 1983. The Invitation to Careers in Research (ICR) program, an NCI pilot project to provide minority students at elementary and secondary levels with an opportunity to learn about the biomedical research program and to encourage excellence in the study of science, was implemented in its first phase in May in five District of Columbia schools.

A seminar on the legislative background of the handicap program was presented to the NCI administrative staff in June. Mr. Joe Faha from the Public Health Service was the speaker. The EEO staff also implemented the Unpaid Work Experience Program, and the volunteer handicap training. The EEO office employs an unpaid work experience volunteer on the staff and several handicapped employees have been placed throughout the NCI.

The EEO staff is presenting a Federal Women's Program Seminar Series. The first seminar conducted was on stress management. The second seminar will be presented in the late fall on time management.

OFFICE OF ADMINISTRATIVE MANAGEMENT
OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE

Program Activities Report
October 1, 1982 - September 30, 1983

The Office of Administrative Management (OAM) coordinates and manages all administrative activities of the Institute and is headed by the Associate Director for Administrative Management who also serves as Executive Officer. The Office is composed of seven branches; Management Analysis Branch, Administrative Services Branch, Personnel Management Branch, Research Contracts Branch, Grants Administration Branch, Extramural Financial Data Branch, and Financial Management Branch.

Some notable activities of the OAM during Fiscal Year 1983 include:

- Acquisition of new building: Through generous donations to the NCI gift fund, the Institute purchased what is now the R. A. Bloch International Cancer Information Center. Staff in various OAM components worked on the legal and financial aspects, arranged the actual purchase, planned and carried out arrangements for renovations and furnishings and coordinated the actual moves into the new building.

- PDQ: This new system of computerized information on cancer treatment and cancer treatment resources has involved administrative and program staff throughout the Institute. OAM branches have provided support for resolution of operating policy questions, contracting and staffing needed to implement this vital new program.

Individual branches of the Office achieved the additional accomplishments described below.

Administrative Services Branch (ASB)

The ASB serves as the Administrative Office for all of the components of the Office of the Director, including the Office of Administrative Management, Office of Cancer Communications, Office of International Affairs, and the Office of Program Planning and Analysis. It is also responsible for office services, property management, mail and files, international travel, domestic travel policy, and the annual travel plan for the entire Institute and for space management, especially in leased buildings, and serves as the NCI coordinating point for cross-cutting administrative issues.

- Automated Systems: Records of NCI property are being computerized as it is inventoried for more accurate monitoring. New automated systems will provide current and accurate information regarding budget and personnel in the Office of the Director.

- Travel: A comprehensive travel policy was issued including standards for site visiting of grants and contracts.

- Administrative Handbook: A compilation of instructions for handling various administrative forms was distributed. Guidance was tailored to the offices in the Office of the Director.

- Procurement Procedures Guidelines: Developed and issued step-by-step instructions for filling out and processing different requisition forms and purchase mechanisms.

Financial Management Branch (FMB)

The FMB serves as principal advisor to the Institute in the financial management aspects of the planning, formulation, execution and evaluation of its programs. It collaborates with the Office of Program Planning and Analysis in the development and coordination of the National Cancer Plan with the budget plans and monitors the execution of the Institute's financial management program.

- Postage Analysis: Completed usage analysis and allocated funds to the NCI Divisions on a usage basis.

- Budget Calendar: The budget calendar was restructured as a flow chart graphically displaying the sequence of activities during the budget cycle.

- Position Monitoring: A major work effort resulted in the restructuring of Full Time Equivalent (FTE) reports so that all hours worked will be reported in the system operated by the Division of Computer Resources and Technology (DCRT). The NCI Divisions were provided direct access to this system.

- Intramural operations were analyzed to determine an "average" cost and an indirect cost.

- Automation: FMB operations were further computerized to include the commitment base and the interdigitation of personnel services costs and personnel accession/separation reports to produce a single report, for personnel costs. The semi-annual report on selected overhead functions was automated and a new set of reports on the Gift Fund, including a graphics package, instituted. The Budget Formulation and Presentation Support System was enhanced to generate automatically the Summary of Changes exhibit used for Congressional Justification.

Research Contracts Branch

RCB participates in developing policies on Institute research contract programs; develops guidelines, procedures and controls to promote compliance with policy and sound contracting practices; provides contract management services for all Institute research contracts; and implements automated Institute contract management information systems.

- Mr. John Campbell was appointed new Chief of RCB in June 1983.

- Reorganization: Staff from five sections were reduced and reorganized into three sections and moved into smaller quarters. This change reflects the Institute reduction in contracting activities and greater efficiency in operations.

- Promotion reviews were undertaken under a new rigorous system for all professional promotions.

- Contract Administration System was fully implemented. The reports generated by this automated system which tracks required activity for management of contracts have resulted in the number of delinquent deliverables dropping from more than 1000 in early 1983 to less than 100 at the end of the year.

- Pre-Award Tracking System (PATS) initiated last year began producing useful reports and scheduling for the steps necessary to effect the award of a contract during 1983 and will enable close monitoring in 1984.

- Standardized procedures for issuance of Requests for Proposals and maintenance of RCB files were completed.

- Final review by the PHS Division of Grants and Contracts of corrective actions initiated in 1981 confirmed the efficacy of these improvements.

- Policy and Procedures Issuances: A total rewrite of NCI Contracting Policies and Procedures documents was issued, incorporating into a single, uniform document, the numerous changes in contracts policy and procedures introduced during the past four years.

Extramural Financial Data Branch (EFDB)

EFDB is responsible for maintaining grants financial data, performing the analyses necessary to provide funding guideline recommendations, preparation of budgets and advising on grants financial policy decisions, and for making grants financial data available to requestors. Its name was changed from Grants Financial and Data Analysis Branch during FY 1983 following the incorporation of the automated Contract Management System and Pre-Award Tracking System into the responsibilities of the Branch.

- Contract Management System: EFDB is rewriting this system for the monitoring of NCI contracts for increased accuracy, flexibility, and responsiveness to user needs while orienting the new contractor to operation of the existing system.

- Pre-Award Tracking System: Working with the Research Contracts Branch, a new system was designed and made operational to schedule and track accomplishment of all essential steps and approvals required

prior to the award of a contract. EFDB will continue to develop and revise this system to meet the needs of program, review, and contracting officials.

- Grants funding process was detailed in a new orientation and reference booklet for use by program and administrative staff.

- Grants financial data system was implemented which integrates IMPAC, the grants financial data base and grants review branch data to reduce significantly duplication of effort in data entry and increase the flexibility and range of the participating systems. A user-friendly system is being developed to permit creation of various reports from IMPAC and the financial data base with little programmer assistance. Common account numbers for all grants are now entered automatically on award statements reducing errors and workload. Ranking lists are routed on the computer to Administrative Officers for direct transmission to program staff.

- Funding Options: The EFDB has played a vital role in Institute efforts to stretch grant funds in a time of level budget by preparing analyses of the impact of various grant funding options for use in decision making by NCI executive staff.

Grants Administration Branch (GAB)

The GAB performs all business activities attendant to the administration of NCI grant and cooperative agreement programs. It participates with the Division Directors and their staffs in the formulation and execution of grant policy, develops the Institute's position on grant and cooperative agreement management issues, and negotiates the amount of awards. During FY 1983, NCI issued approximately 5,000 award notices for over 3,835 grants and cooperative agreements totaling $598 million.

- Awards in two new programs, the Community Clinical Oncology Program (CCOP) and the Small Business Innovative Research Program (SBIR) were developed. Implementation of the CCOP program required GAB to orient and brief applicants and evaluate grantees which had not previously had Federal grant support. The SBIR program which was legislatively mandated will result in approximately 28 NCI grants in FY 1983 to small businesses, also new to NIH grants programs.

- Accounting Transaction Release System (ATRS): GAB participated in the pilot testing of the new NIH ATRS which was designed to quicken the issuance of grant awards. The new system eliminates the need for the traditional approval list and was recommended for adoption across NIH in FY 1984.

- Microfiche Project pilot test was continued and an assessment of the feasibility of microfiche for large, multi-budgeted grants undertaken. Sensitive issue files have been placed on microfiche to guard against their loss.

- Internal Management Reviews: The Internal Auditor completed reviews of Program Project grants and Cancer Center grants. Recommended changes were adopted to improve efficiency of administration and timeliness of award of these complex grants.

- Scientific Review and Evaluation Awards were transferred to the Division of Extramural Activities for routine administration as DEA is responsible for extramural reviews. GAB retains fiscal management functions and ensures adherence to required procedures.

- Issuances and Publications

  Grants Management Advisory was developed as a vehicle to disseminate grants management policy and procedural changes to NCI staff.

  Terms used in Notices of Grant Award were revised and updated.

  Policy issuance - Cooperative Agreements

Personnel Management Branch (PMB)

The PMB exercises appointing authority and provides central personnel management services for the entire NCI including policy development, training, workforce planning, recruitment, employee development, salary administration and equal employment opportunity in collaboration with the NCI EEO Coordinator.

- Confidential Statement of Employment and Financial Interest forms were reviewed in cooperation with the Assistant Director, NCI.

- Studies were undertaken of Administrative Officer positions at GS 13 and above and of clerical and technical positions in administrative offices. Both should aid in position management and classification.

- Supervisory training needs will be the focus of a study for which PMB and the NIH Training Branch have developed the initial design. Core knowledges and skills will be identified to guide the development of training efforts.

- Orientation film was produced in cooperation with the Office of Cancer Communications for use in initial orientation of new employees.

- On-site personnel services were initiated on a routine basis for NCI offices in local rental buildings and at the Frederick Cancer Research Facility.

- NCI Supervisor's Handbook was augmented by the issuance of a new chapter: Classification.

- New PMB Operations Manuals

  Processing Personnel Actions
  Processing Expert Appointments and Extensions
  Security Clearance Procedures for Non-Sensitive and Non-Critical Sensitive Positions

- New and Revised Issuances and Instructions

  Processing Personnel Actions
  Guest Researcher Program
  NCI Checklist of Required Personnel Documents

- Clerk-Typist Intern Program was initiated to expedite selection and placement of qualified candidates by the PMB Staffing Office. Interns work in administrative offices where they receive intensive orientation and training before being placed in program areas. This program aids the Institute in recruiting promising, entry level support staff.

- NCI Summer Employment Program resulted in the hiring of 206 students of whom 113 were women and 24 percent were minorities.

- NCI Employee Training System, a new automated system designed and developed during FY 1983, will provide reports on all approved training for NCI staff to use in the review and assessment of training and its costs.

- Study of University of the District of Columbia training for NCI employees from FY 1980 - FY 1982 was conducted to provide input to a review of the NIH Career Education Center.

OFFICE OF CANCER COMMUNICATIONS
OFFICE OF THE DIRECTOR
NATIONAL CANCER INSTITUTE

Program Activities Report
October 1, 1982 - September 30, 1983

The National Cancer Act Amendments of 1974 require that the "Director of the National Cancer Institute (NCI) 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 (J. Paul Van Nevel, OCC Director) 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 and audiovisual materials 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 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.

OCC maintains awareness of communications activities of all participants in 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 information 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 organizations, medical societies, community groups, etc.); and the mass media. Major organized dissemination projects are under way in the areas of smoking information, breast cancer information, coping with cancer, and special (minority) audiences. Other areas of special emphasis are: (1) pretesting and evaluation of all communications projects; (2) support for 21 Cancer Information Service offices located around the country and (3) an internship program for graduate students in journalism, communications, etc.

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, and program administration. Interns are assigned to work with professional staff and are given writing, editing and a variety of other technical tasks. Interns are encouraged to participate in a seminar series and to develop special projects during their term.

J. Paul Van Nevel is the director of OCC, and Gertrude Anthony serves as secretary. Jean Johnson, a summer employee, completed her tour of duty as a clerk-typist in August.

INFORMATION PROJECTS BRANCH

The Information Projects Branch (IPB) 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 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 under way 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 avail-

ability of the kits is promoted by direct mail, presentations at medical conventions, and print ad and editorial coverage in medical and dental newsletters. A revised kit, based on careful evaluation, has been produced in 1983, and is widely endorsed.

2. "Let's Help Smokers Quit" kit. This kit was designed by the American Dental Association and OCC 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 periodontal disease, and smoking's cosmetic effects.

3. "Helping Smokers Quit" program. The American Pharmaceutical Association and the National Cancer Institute have worked together to design a smoking cessation program for pharmacists' use in counseling patients who would like to quit smoking. The program (similar to the quit smoking kits designed for physicians and dentists) will be available and widely promoted in 1984.

4. The Smoking Digest. The Digest was published in 1978 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, and will be available in 1984.

5. Smoking Programs for Youth. To fill a gap in the existing literature on smoking education for young people, OCC 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.

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

1. Promotion of the "Smoking Cessation" kits 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. OCC 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 of 18, with materials prepared and tested especially for women who are at increased risk to breast cancer and who tend to have lower levels of knowledge about the subject.

Program materials offer a variety of printed and audiovisual materials, including:

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. Breast Cancer, We're Making Progress Every Day (formerly entitled "Progress Against Breast Cancer") was designed for use by business, service clubs, religious organizations, unions, and other interested groups. The educational package includes: a slide-tape or videocassette 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; two posters; a User's Guide to help persons organizing the program; and a print ad.

3. "BSE-in-Hospitals Program" was designed to help nurses teach their hospitalized women patients how to perform breast self-examination (BSE) and to encourage these women to practice BSE monthly following their hospitalization. The program has been endorsed by the American Nurses Association. Materials include a "Coordinator's Guide," a three-part slide-tape or videocassette program, a brochure for nurses, a pamphlet for patients, four posters, and a certificate of completion for nurses.

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

5. 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.

6. 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.

7. 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 are also included.

8. If You've Thought About Breast Cancer, written by Rose Kushner, contains information about topics including symptoms of breast cancer, detection, diagnosis, treatment, rehabilitation, and breast reconstruction.

9. If You've Had Breast Cancer offers suggestions on followup care for mastectomy patients.

10. Breast Reconstruction: Creating a New Breast Contour After Mastectomy discusses techniques used in breast reconstruction, advantages and disadvantages of the procedure, and other factors concerned with breast reconstruction.

Coping with Cancer: The goal of the Coping with Cancer program is to provide those 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. A diagnosis of cancer does not have to be a death sentence. More individuals than ever before are living with the disease.

2. Living with cancer is frequently accompanied by physical, psychological, emotional, and/or social problems that patients, family, and friends must cope with in order to live with quality.

3. There are useful coping behaviors and strategies that those with cancer and their families can employ.

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 those with cancer and their families. The secondary audience includes health professionals and others to whom the patient and family go to for care, 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 is a collection of helpful, practical information 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 is a 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. Control of Cancer Pain is a fact sheet addressing medical and nonmedical modalities of dealing with pain related to cancer.

6. Questions and Answers About Pain Control is a booklet that includes information on pharmacologic and nonpharmacologic options for pain relief. Developed in cooperation with the Yale Comprehensive Cancer Center, it was printed by and is available from the American Cancer Society.

7. What You Need to Know About Cancer is a series of pamphlets discussing symptoms, diagnosis, rehabilitation, emotional issues and questions to ask 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. Young People with Cancer: A Handbook for Parents was written in cooperation with the National Candlelighters Foundation. It includes information on the most common pediatric cancers, treatments, and side effects. Special consideration is given to the emotional impact of cancer on patients and family members.

2. Help Yourself: Tip for Teenagers with Cancer was produced in cooperation with Adria Laboratories, Inc. This award-winning kit includes a booklet and an audio-tape designed to provide information and support to adolescents with cancer. Issues addressed include reactions to diagnosis, relationships with family and friends, school attendance, and body image. A User's Guide for health professionals is also available.

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

4. 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.

5. Maintaining a Normal Life (Proceedings of the First National Conference of Parents of Children with Cancer) was 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.

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

7. What You Need to Know About Wilms' Tumor; Child Leukemia--see two pamphlets in the "What You Need to Know About Cancer" series (item 7 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 is a reference work on the psychological and social aspects of cancer. It 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, is designed to answer questions pertaining to the student's participation in school activities.

3. NCI Patient Materials Catalog contains 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 provides annotated citations of 300 print and audiovisual materials for patients, health professionals, and the public.

5. Services Available to Persons with Cancer--Nation and Regional Organizations is a reprint from the October 10, 1980, Journal of the American Medical Association. The article was 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.

6. Help Yourself: Tips for Teenagers with Cancer: User's Guide is a short leaflet produced in cooperation with Adria Laboratories, Inc., summarizing the content included in the "Help Yourself" patient booklet and audiotape.

7. Adult Patient Education in Cancer is a reference work on the state-of-the-art of adult cancer patient education. It points out issues that create the special needs of cancer patients, and discusses programs and activities for meeting these needs, as well as planning and evaluation.

Pretesting and Evaluation Program:

1. The Health Message Testing Service

   The Health Message Testing Service (HMTS) is as a service to test broadcast and print health messages. Approximately 74 television and 20 radio public service announcements (PSA's) have been tested through the broadcast component of the service. Twenty-five brochures and 10 posters have been tested as part of the print component of HMTS.

   Funding for this year also was used to conduct a final analysis of the data from broadcast testing. This analysis examined 58 television PSA's to

determine what factors within the message contributed to high test scores. In addition, a review of the literature for developing effective PSA's was conducted. A working group of experts in communication research, advertising, and PSA production was gathered to comment on these reports and make recommendations on what can be shared from this project. Based on the recommendations from this group, the HMTS staff prepared a booklet on planning, producing, and implementing public service announcements entitled "Making PSA's Work," which incorporates the results of the broadcast HMTS project. In addition, an updated version of the popular booklet, "Pretesting in Health Communications" was prepared and published.

2. A number of requests for technical expertise and support were made by a variety of health-concerned agencies during the year. All were supported with advice, consultation , and appropriate materials, including relevant publications and test reports.

Cancer Communications Network: The Cancer Communications Network (CCN) has been established by the Division of Resources, Centers and Community Activities (DRCCA) for the purpose of assuring that accurate, up-to-date information on cancer cause, prevention, early detection, diagnosis, treatment, rehabilitation and continuing care is readily available and accessible to the public and health professionals. The CCN contracts were recently recompeted for an additional three years of funding and currently consist of 17 regional offices funded by NCI. Four additional offices receive no funds from NCI but actively participate in the information exchange that occurs throughout the network.

Each network office is responsible for:

1. Establishing a Communications Office to plan, administer, promote, develop support materials for, and evaluate activities undertaken by the contract staff;

2. Developing and maintaining a resource directory of agencies and services available to cancer patients and their families within the defined service area of the center;

3. Establishing and operating a toll-free telephone service (the Cancer Information Service or CIS) for immediate access to answers on cancer-related questions from the public; and

4. Identifying, developing, implementing and evaluating a limited number of special projects to meet specific cancer information/education needs within the service area.

A new nationwide toll-free telephone number, 1-800-4-CANCER, was instituted for the Cancer Information Service on March 1, 1983. Replacing the many different WATS-line telephone numbers, this new system enables national publicity and promotes the use of service. Also, through newly developed technology, the system makes it possible to pre-determine to which CIS office a caller will be routed. In preparation for the full-scale implementation of the PDQ cancer treatment database system, all CCN offices have purchased computer terminals, modems and printers to allow staff to access information contained in the database. Over 168,000 inquiries (approximately 14,000 per month) from the public, from cancer patients and their families, and from health professionals were answered by the

CIS during the past year. This brings the total number of individuals served by the CIS since 1976 to approximately one million.

A standardized call record form was implemented nationwide January 1, 1983, to record all inquiries to the Cancer Information Service. This form will provide national and local project management staff with information including demographic profiles of CIS callers; the types of questions asked; the cancer sites of concern; and behavioral suggestions offered by CIS staff. To provide a smooth transition to this new reporting format, an operations manual, a staff training program, and a training videotape were developed. Also, a standardized Cancer Information Service user survey was developed and pilot-tested for full-scale implementation in October 1983. This survey will demonstrate: (1) the degree to which the CIS is able to meet informational needs of its users; (2) the relative importance of the CIS in the decision-making process of callers; and (3) the degree to which CIS contact influences the health behavior of users.

The CIS program staff cooperated with the Office on Smoking and Health, Public Health Service, to distribute a series of public service announcements featuring Dr. C.Everett Koop, U.S. Surgeon General. The Cancer Information Service telephone number was tagged on these announcements, and CIS program staff responded to resulting inquiries. They were very successful in generating calls to the CIS from individuals who whished information on how to stop smoking. Also, CIS staff produced and distributed various CIS promotional items including public service announcements, counter-card posters, media kits, slides, clip art and print ads.

A Special Project Review Group met periodically to review special project proposals submitted by CCN offices. Forty-four special projects are currently under way in network offices.

Special plans for the Cancer Information Service include:

- Analyze data from the national CIS Call Record Form and report results to appropriate groups and individuals;

- Analyze data from the national CIS User Survey and report to appropriate audiences;

- Continue the CIS test call system to determine the quality of responses given by CIS staff members;

- Implement a promotional campaign targeted to audiences 50 years of age and older. This campaign will consist of a fact sheet, developed by the CCN project office, which will also be published as an Age Page, a publication of the National Institute on Aging, NIH. Television and radio public service announcements will be developed, as well as print ads and other promotional items. Promotional assistance on this campaign will be received from the American Association of Retired Persons.

- Implement a national publicity and promotion campaign designed to heighten public awareness of the new central toll-free telephone number of the CIS, 1-800-4-CANCER.

Because of a similarity in activities and skills with the CCN programs, the Office of Cancer Communications has played a major role in the management and support of

the network since its inception in 1974. The Information Projects Branch serves as the designated coordination and liaison point between OCC and DRCCA.

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, Nancy McCormick-Pickett, and Rose Mary Romano, program staff; Dorothy Kipnis and Rose Soodak, support staff; and a number of interns. In May 1983, Mi-Hyang Nam, summer student, returned for a fourth 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 Institute 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.

Robert M. Hadsell, Ph.D., is chief of the branch with Mary Federline serving as secretary.

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. Twenty-six percent of these calls were from the electronic media. 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 documented telephone workload in the section showed an average call load of 11-15 calls per day to the person taking press calls, and an average of 950 calls per month coming into the section. From October 1982 through June 1983, the heaviest months for press calls were January, March, and April; the lightest months were December, February, and May.

The Reports Section prepared three news releases on NCI-funded projects and research results concerning the Acquired Immune Deficiency Syndrome (AIDS), one on discovery of links between Human T-cell Leukemia Virus (HTLV) and AIDS patients, and one announcing the selection of participants in the new Community Clinical Oncology Program (CCOP).

Section staff assisted the American Society of Clinical Oncology (ASCO) in the press room operations at its annual meeting. They prepared a summary of NCI research on AIDS in hemophilia patients for the ASCO meeting. For the annual meeting of the American Association of Cancer Research (AACR), section staff prepared a description of recent research by Dr. Robert C. Gallo of NCI, who delivered the Richard and Hinda Rosenthal Award Lecture at the meeting.

Press inquiries continued at a high level on potential and known risks for cancer, breast cancer, interferon, cancer statistics on incidence, mortality and survival, Kaposi's sarcoma, AIDS, experimental cancer therapies, chemoprevention, nutrition, and NCI priorities and budget. Reporters and researchers for television networks, film companies, and major newspapers continued major surveys of progress in cancer. There were increased numbers of inquiries this year on the PDQ cancer treatment information system, monoclonal antibodies, bone marrow transplants, mouthwash, oncogenes, prostate cancer and melanoma, on the specific carcinogens asbestos, dioxins and formaldehyde, and on promotion campaigns of the National Foundation for Cancer Research and the American Institute for Cancer Research.

To respond more effectively to high levels of requests about evolving NCI research studies, section staff prepared 33 fact sheets, 31 of which were prepared as book chapters for a revision of a major NCI publication, Cancer Rates and Risks; 6 backgrounders; and 14 updates:

Fact Sheets: NCI Chemoprevention Program; Interferon and Cancer; Cancer Rates and Risks: Lung Cancer; Tobacco; Alcohol; Childhood Cancer; Hodgkin's Disease; Leukemias; Nonmelanoma Skin Cancer; Familial Cancer; Breast Cancer; Primary Liver Cancer; Stomach Cancer; Prostate Cancer; Skin Cancer; Solar Radiation; Cervical Cancer; Esophageal Cancer; Air and Water; Occupation; Ionizing Radiation; Viruses; Biliary Tract Cancer; Ovarian Cancer; Pancreatic Cancer; Testicular Cancer; Urinary Cancer; Diet; Drugs; Colorectal Cancer; Uterine Corpus Cancer; Multiple Myeloma; and Oral/Pharyngeal Cancer.

Backgrounders: National Cancer Institute Clinical Trials of Interferon; Cancer in Minorities: What the NCI is Doing; Oncogenes; Information for Physicians: Steroid Receptors in Breast Cancer; Biological Response Modifiers; and Virus Associated with Certain Leukemias and Lymphomas in Humans.

Updates: NCI Announces Award of Contracts for FCRF; PDQ Now Available; Radiation Research Program; Cancer Patient Survival Statistics; Study of Possible Link Between Oral Cancer and Mouthwash Use; Leukemia after Treatment with Alkylating Agents for Ovarian Cancer; Chromosome Rearrangements in Burkitt's Lymphoma and Chronic Myelogenous Leukemia; Trends for Cancer Deaths from 1950 to 1977; Laminin Protein and the Biochemistry of Metastasis; Awards for Research on AIDS; PDQ; Lung Cancer among Steel Industry Workers; Study on Nonmelanoma Skin Cancer Patterns in the United States; and Mesothelioma.

In addition, section staff wrote a biography and background on the research of Dr. Robert C. Gallo; prepared NCI input for NIH special reports on arthritis, aging, and diabetes research; an article on PDQ for the Journal of the American Medical Association; revised the NCI section of the NIH Almanac; wrote an article on CCOP's for a physicians' newsletter, and a Presidential proclamation for Cancer Control Month; drafted charts for the revision of Cancer Rates and Risks, commissioned a freelance science writer to prepare an updated chapter on oncogene research for separate publication; prepared the annual article on cancer research for U.S. Medicine; and prepared a chronology on the health effects of DES exposure.

In addition to Cancer Rates and Risks, a major effort of the past year was interviews, other research and preparation of a booklet for patients explaining clinical trials. This publication is now being pretested.

Section staff participated in the preparation of materials for Congress. Specific projects included the traditional statements for both the House and Senate appropriations hearings, as well as testimony for reauthorization hearings, NCI's drug development program, smoking and health, and input for HHS testimony on the Orphan Drug Act.

Staff also prepared the 1982 report of the National Cancer Advisory Board (NCAB), the President's Cancer Panel, and the NCI Director's annual report to the Congress.

In addition to several short articles for the NCI director, staff prepared speech material for the director for a cancer center dedication at the Medical College of Virginia, the Palm Beach Roundtable, an Ohio State award ceremony for Dr. DeVita, and an award ceremony for Dr. Luther Brady at the American Cancer Society in Philadelphia. A speech for the NCI deputy director was prepared for an American Cancer Society symposium on cancer in minorities. Special Communications from the director were prepared on the NCI funding plan for 1983, and a proposed outstanding investigator grant.

More than 50 articles of interest to the NCI and NIH communities were prepared for the NIH Record, as well as four articles for the "From the NIH" column in the Journal of the American Medical Association. Staff reviewed for accuracy several articles on cancer from publications such as Better Homes and Gardens, at their request.

Current permanent staff are Patricia Newman, section chief; writers Harriet Page, Alice Hamm, Linda Anderson, Eleanor Nealon, Florence Karlsberg, and Joyce Doherty; editorial assistants Amelia Champion and Anne Gooding; and clerk-typist Marilyn Pazornik. Among the permanent staff of the section, secretary Elsie Cleveland received a promotion in another part of the NIH and left in May; writer Joyce Doherty joined the section in January, and senior writer Lorraine Kershner went on detail with the Public Health Service downtown in June. Both vacant positions are still open. Chris Hartman joined the section as a clerk-typist for the summer.

Four science-writing interns trained in the section, as part of the OCC internship program: Ron Cowan and Ina Silverman (to July 1983) and Michele Gauthier and Leslie Fink (beginning in July 1983).

Public Inquiries Section

The Public Inquiries Section answers written and telephone inquiries about cancer from patients, their families, the general public, students, health and other professionals, members of Congress, and other Government officials. With the assistance of a contractor, Biospherics, Inc., the section prepares responses to the written inquiries and operates the Cancer Information Service (CIS) national line that acts as the backup to the Institute's Cancer Communications Network. Publications are distributed with responses to letters and telephone calls. Large numbers of publications also are sent in response to requests from health professionals, voluntary health organizations, and others concerned with patient and public health education.

In FY 1983 (the last two months are projected), the section responded to an estimated 185,000 written and telephone inquiries and distributed 10.0 million publications. In comparison with the fiscal year ending September 30, 1982, the total

number of inquiries declined from a high of 280,830. Estimates projected to the end of FY 1983 include 5,000 custom letters (individually prepared responses to written and telephone inquiries), down from 5,446 in FY 1982, and 95,000 non-custom inquiries (requests that can be answered by sending publications alone), a sharp drop from the 215,046 in FY 1982. The section prepared 145 responses to "controlled mail," inquiries from members of Congress, the White House staff, and other government officials.

In the period from FY 1978 to FY 1983, the number of custom responses has gradually decreased from about 14,000 annually to the current estimate of 5,000. Factors associated with this trend may include the increased use of the Cancer Communications Network and the publication of new printed materials that satisfy inquirers' information needs.

In contrast, calls to the national CIS line increased dramatically from 51,662 in the last fiscal year to a projected 75,400 in 1983, an average increase of nearly 1,980 calls per month. In FY 1982, 21 percent of total inquiries were telephone calls as compared to 46 percent in FY 1983. Several factors account for this rise in the number of telephone inquiries. Among these are the inauguration of the new 1-800-4-CANCER national number on March 1, 1983, and continuing promotion of the number and NCI publications in the media. For example, the national number appeared in televised public service announcements made by the Surgeon General, in which he offered "stop smoking" publications. In one month alone, these announcements generated 4,795 telephone requests.

Common topics of inquiries are breast cancer, followed by other major types of cancer and questions about how to find good treatment. Questions about risk factors and cancer prevention have become more prevalent than in past years. Up to 40 percent of people requesting information from the Institute are members of the health community. Most of these individuals are seeking information for cancer patients or about health education projects.

Many requests are made for information about treatment research programs. The section's ability to respond to these requests was improved significantly during the year by the ready availability of clinical trial information from the new PDQ information database.

In May 1983, the section became responsible for responding to inquiries received by the Cancer Information Clearinghouse. Using the Clearinghouse database and collection of materials, the section and its contractor were able to assist health professionals in locating sources for a wide variety of public and patient education materials about cancer.

Because of the size and complexity of the public inquiries program, a number of quality control procedures are employed. Blind calls are made to the CIS on a regular basis. Reports on these calls are shared with the CIS staff as a means of continuing staff training. Quality control of the warehouse inventory includes handcounts of randomly selected titles each month and rigid control procedures of computer entries. At the end of August 1983, approximately 16 million publications were stored in the warehouse.

Administration of telephone response operations in both the section and contract was improved by institution in January 1983 of a form for recording data in greater detail on each inquiry. The form was developed by the Cancer Communica-

tions Network for use by all the CIS offices. The NIH Division of Computer Research and Technology developed a computer program for analysis and tabulation of the data.

This past year, the section prepared a number of information pieces, including Research Report: Cancer of the Uterus and a chapter on the "Financial Impact of Breast Cancer" for a new edition of the Breast Cancer Digest.

The staff consisted of the acting chief, Robert M. Hadsell; Betty MacVicar, writer and project officer of the Biospherics contract; Joan Chamberlain, writer; Karen Schlick, public affairs specialist; and two secretaries, Sheila Stempler and Pat Kelly. (Section chief, Robert J. Avery, Jr., retired in November 1982; Ms. Schlick moved to another NCI office in May 1983.)

INFORMATION RESOURCES BRANCH

The Information Resources Branch (E. Joseph Bangiolo, Chief) provides supporting services for the Office of Cancer Communications (OCC) and the National Cancer Institute (NCI). The branch is composed of two sections: the Document Reference Section and the Graphics and Audiovisuals Section. These two sections have specialized service responsibilities.

The Document Reference Section (DRS) is an information center and library providing OCC with scientific, technical, and public information/reference support services. The DRS searches on-line databases upon request for OCC staff and for other NCI offices.

The Graphics and Audiovisuals Section (GA/V) manages graphics and printing services for the OCC and other NCI components. The GA/V has specialized functions including the NCI Exhibits Program, "Current Clips" (NCI's clipping service), NCI document clearance control, graphic services (slides, photographs, etc.), photo resources, NCI Speakers Bureau, Freedom of Information Act/Privacy Act coordination, and Special Communications. Arrangements for special events, such as awards ceremonies, dedications, and visiting groups, are handled in this section.

Cancer Information Clearinghouse: The Information Resources Branch is responsible for the Cancer Information Clearinghouse, a source of information on cancer-related materials for use in public and patient education. Significant changes were carried out for the Clearinghouse during FY 1983.

Among these changes was the conversion to a project supported by in-house staff and service contracts. Other significant changes included: (1) the purging of materials and texts; (2) the purging of all "non-current" materials, i.e., earlier than 1979; (3) promotion of the availability of the Clearinghouse database; and (4) evaluation of user satisfaction.

Document Reference Section

DRS, the in-house library of the OCC, has continued its growth of services to OCC staff this year. Additional databases have been obtained, particularly in the public affairs areas; backlog cataloging of the book collection was completed and cataloging of new books accomplished; the database representing the indexed DRS collection has grown by nearly 8,000 items to a total of 50,000 items. Weeding of some older items was accomplished. Of special note during this year was the

addition of the Decade of Discovery slide collection to the DRS database, including slide captions, and the completion of a written inventory of items comprising the NCI archives.

The DRS is a central informational resource for OCC and the Institute. Materials (both published and unpublished) are collected, indexed, and made available to specific users. The in-house collection is comprised of public/press inquiry records, news clips, bioscientific publications, audiovisuals, and other significant documents. The automated, bibliographic database, composed of data records for DRS collection items, may be searched free-text or by controlled vocabulary index terms.

In addition to its own database, DRS has access to major commercially available, health-relevant databases. They include those sponsored by the National Library of Medicine (MEDLINE, PDQ, CANCERLINE, CLINPROT, etc.), Bibliographic Retrieval Services (Pre-Med, SSIE, Medoc, etc.), System Development Corporation (Psychological Abstracts, ERIC, Agricola, etc.), and Lockheed-Dialog (Exerpta Medica, Pharmaceutical News Index, Science Citation Index, etc.). Access to journalistic databases such as the Newsearch, National Newspaper Index, and NEXIS allows the DRS to support the Institute with data especially useful in public information work.

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

Patti Dickinson served as DRS Chief. Judy Lim-Sharpe, professional librarian, became a permanent staff member. In October, Ms. Joyce Conner, professional librarian, joined the staff replacing Susan Grodsky who resigned her position in June 1982. Dolores Leshy, a student at the University of California, Berkeley, assigned to the DRS as an information intern from July 1982 until December 1982, completed an internship and returned to complete her master's degree work. Penny Passikoff, a student at Syracuse University, completed an internship from January 1983 until June 1983. Ms. Passikoff accepted a position as information specialist/on-line searcher with the Information Technology Group, Landover, Maryland. Susan Murphy, a student at Catholic University, joined the staff in July as an information intern. Ms. Murphy worked on a journal check-in manual and assisted with searching of on-line systems. Johanna DeVoest worked throughout the year as an intermittent clerical assistant. Ms. DeVoest completed her Associate of Arts degree in June and relocated to Brazilia, Brazil, in August. Geri Yancik joined the staff in June as a summer aide. Ms. Yancik completed her undergraduate work in accounting at American University in June.

Graphics and Audiovisuals Section

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

Printing management services are available for 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.

New table-top exhibits were developed on specific information programs. A new exhibit structure was prepared on the programs of the OCC for use in the OCC

exhibit program. Exhibits were shown at 12 professional meetings. One hundred twenty-five thousand publications were distributed at meetings. Printed materials were provided for health-related groups interested in cancer information. Other exhibits (bulletin boards) were produced for the three floors of building 31 where NCI personnel are located. Approximately six boards are produced a year.

NCI's "Special Communication" is a service for rapid disseminating of information. The special communication is sent selectively to medical and voluntary groups, professional societies, and persons in allied health professions. During FY 1983, one million individuals and groups were reached via 12 special communications.

Three 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 200,000 copies of English and Spanish NCI publications.

More than 200 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 award ceremonies and tours.

Over 300 requests under the Freedom of Information Act were received and processed. Approximately 1,200 Privacy Act requests were handled during the year.

The section provided a daily newspaper clipping service of items of NCI interest to the professional staff, Cancer Information Service offices, 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.

Other activities included tours of NCI laboratories in the Clinical Center for foreign visitors, the NCI Awards Ceremony held in October, and arrangements for dedication of the R. A. Bloch International Cancer Center:

The staff of the section included Margaret Layton, section chief; Arlene Soodak-Cohen, visual information specialist; Maralyn Farber Berlin--replaced by Alexia Roberts in June--NCI freedom of information coordinator; public information specialists Anthony Anastasi and Edith Gaub; and Beverly Gamble, secretary. Ms. Gamble is responsible for purchasing activities for OCC.

INTERNATIONAL ACTIVITIES

of the

NATIONAL CANCER INSTITUTE

FY 1983

Report to the Director, NIH

I. INTRODUCTION

The National Cancer Institute continues to contribute significantly to the improvement of the basic quality of life because of its long tradition of involvement in the international arena for cancer research. The interest of the National Cancer Institute in the cancer problems of other nations has contributed to the establishment of a concerted international effort in the war on cancer. The National Cancer Act has intensified the commitment of the NCI to the international team approach toward the control, prevention, and ultimate eradication of cancer as a major crippler and killer disease of a large segment of the world's population.

By virtue of the prevalent international effort against cancer, striking variations in the incidence and mortality of a wide range of specific organ cancers are now well recognized and, in some instances, the geographic, environmental, and socioeconomic causes have been established for excess rates of cancer incidence in certain regions of the world. The derivation of cause-effect relationships stems from studies in those countries of the world where the population is at low risk for a given type of cancer, thereby establishing a "baseline" rate for that particular cancer type. Subsequently, a high rate of incidence for that same cancer in other countries can be assumed to be associated with the factors endemic in the environment of those countries.

Through its participation in activities of the international cancer science community, the National Cancer Institute benefits ultimately from the rapid advances in basic research throughout the world and their translation into application for the clinical management, control, and prevention of cancer. The ultimate gain from such collaborative cancer research efforts between the NCI and its international counterparts is a tangible improvement in the quality and quantity of health services to millions of people over the world.

The contribution of NCI to the international struggle against cancer includes: (1) the support of cancer research in foreign countries by scientists who are highly qualified by virtue of a unique expertise; (2) the support of cooperative research programs, principally through bilateral agreements with foreign government institutions, or organizations; (3) maintenance of liaison and research collaboration with international organizations and agencies that have well-defined objectives in cancer research and cancer prevention; (4) the support of training of foreign scientists in the United States as well as of 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, care and management of patients, and cancer control and/or prevention.

II. BILATERAL AGREEMENTS AND OTHER COUNTRY-TO-COUNTRY ACTIVITIES

Cooperative cancer research programs under formal government-to-government treaties and other forms of bilateral agreement comprise a major segment of the international activities of the NCI. 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 the 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 (Hospital), Chinese Academy of Medical Sciences, under the USA-People's Republic of China Accord for Cooperation in Science and Technology (1979); the National Cancer Institute of Milan and the Institute of Oncology of Genoa, Italy (1980); and the National Institute of Oncology, Budapest, Hungary (1981).

The following sections relate to NCI's bilateral activities and the progress that has been achieved through these cooperative efforts.

Cooperation with the Soviet Union

From inception in 1972, until late 1981, the American-Soviet collaborative cancer activities spanned a scientific spectrum which included cancer treatment, tumor immunology, viral oncology, the genetic aspects of neoplasia, epidemiology, cancer pathomorphology, cancer control measures and technologies, and the role of cancer centers in the education and training of personnel in health fields and the lay public. These broad approaches were modified and the objectives were restructured in September 1981. Thus, the scientific areas of Cancer Treatment, Carcinogenesis, and Cancer Prevention now constitute the priority areas for continuing collaboration between American and Soviet cancer specialists. Annual meetings of delegations have been deemphasized in favor of protracted one-on-one, scientist-to-scientist interactions in joint research activities.

In 1976, when collaborative projects on the epidemiology of cancer were considered for joint pursuit by American and Soviet scientists, cancer of the breast was one of the organ sites to be selected for study. Thus, a group of epidemiologists from the Institute of Experimental and Clinical Medicine, Tallinn, Estonian SSR, had undertaken case-control studies in several areas of the Soviet Union concentrating, however, on women of Estonia. The data from this study were made available to American counterparts at the Harvard School of Public Health for comparison with similar data that had been collected in other areas of the world. The joint study has been completed this year. The Estonian data show that women whose first birth occurred before 20 years of age had a breast cancer risk less than one-third the risk of nulliparous women. Risk increased with increase in age at first birth but remained low, relative to childless women, even in the highest age at first birth categories. After adjustment for age at first birth in this Estonian population, it appeared that subsequent births had a protective effect additional to that conferred by the first birth. It is concluded that, in the Estonian women studied, not only are births after the first child associated with additional protection but that, as with the first birth, the extent of protection is dependent on the subject's age at the time of the birth.

During a visit to Roswell Park Memorial Institute earlier this year, a scientist from the Republic Oncologic Dispensary, Tallinn, elaborated with his host counterpart a protocol for the study of lymphocyte receptor status in health, oncologic disease, and other disorders. The receptor is specific for N-acetyl neuraminic acid on human lymphocytes and may be an excellent indicator of the health status of the patient. The patients to be included in the study, in parallel in both

countries, are those with malignancies of the lung, breast, stomach, and gynecologic organs.

A pediatric oncologist from the All-Union Oncologic Scientific Center, Moscow, spent nearly two months at Roswell Park Memorial Institute engaging in research activities with host counterparts on manageable pediatric malignancies. A significant amount of Soviet data was reviewed and collated with comparable RPMI data. Soviet disease staging criteria and approach to therapy are similar to those used at RPMI. The Soviets, however, apparently lose many patients to follow-up. The result of these interactions has led to the possibility of a collaborative study on the use of high-dose cytosine arabinoside and L-asparaginase for remission induction and high-dose cytosine arabinoside, methotrexate, and L-asparaginase for maintenance of patients with relapsed acute lymphoblastic leukemia.

Scientists of the Grace Cancer Drug Center, RPMI, shared research concepts, experimental approaches, and results of their studies of drugs at the preclinical and clinical levels with another Soviet developmental chemotherapist from the All-Union Oncologic Scientific Center. Demonstrated to her were examples of how preclinical data are being utilized for the design of Phase I and II clinical protocols and, in some cases, the identification of determinants of response in patients. In addition to a comprehensive course in activities related to the clinical biochemical pharmacology of anticancer drugs, the Soviet scientist was afforded opportunities to engage in laboratory research leading to her learning many techniques for the continuous infusion of drugs in mice and rats. She was introduced to and utilized RPMI preclinical model systems, such as the nude mouse, which are utilized for the screening of potential anticancer drugs.

The joint study by personnel of the University of Maryland Cancer Center and those in Moscow's All-Union Oncologic Scientific Center is continuing on the Phase I clinical and pharmacologic evaluation of platinum diammine (1,1-cyclobutane-dichloroxylate)2-(-0,0'), otherwise known as CBDCA. The joint effort has been in effect for almost a year and patient accrual into the protocol, by both sides, is sufficient for detailed review and analysis of data. This is to be accomplished later this year in Moscow.

The NCI has submitted to the Soviets a proposal for priority research topics to be pursued jointly in the Carcinogenesis program area. Now being considered by the Soviet side are the following scientific areas for potential collaborative study: (1) modifying effects of chemicals on gene expression of normal and neoplastic cells; (2) role of tumor promotors in biologic, chemical, and physical carcinogenesis (3) genetic analysis of malignancy by means of somatic cell hybridization; (4) chemical induction of tumors in specific target organs; (5) gene regulation and gene amplification relating to viral and chemical carcinogenesis; (6) the role of viral-related transforming (onc, sarc) genes in the genesis of spontaneous and induced tumors of animals and man; (7) development and exchange of monoclonal antibodies (hybridoma) directed against different antigens in biologically-and chemically-induced tumors; (8) studies on the development of cancers resulting from transplacental and perinatal exposures to biologic and chemical carcinogens; (9) chemical/viral co-carcinogenesis studies in primates; (10) genetic disorders with predisposition to malignancy; (11) mutagenic action of anticancer drugs; (12) clinical aspects of somatic cell genetics; and (13) studies on new candidate oncogenic virus isolates from primates, including man.

Cooperation with Japan

At the outset of this agreement between the NCI and the Japanese Society for the Promotion of Science, eleven specialty areas in cancer research were pursued jointly. Four years ago, these were categorized into four broad program areas, namely, Etiology, Cancer Biology and Diagnosis, Cancer Treatment, and Interdisciplinary Programs.

Cancer epidemiology, chemical carcinogenesis, viral and biologic carcinogenesis, and molecular biology constitute the principal areas of research being pursued under the Etiology Program Area. The principal objectives are to clarify the cause of human cancers and to determine the mechanism(s) of carcinogenesis.

A seminar on "Multiple Primary Neoplasms" was held in Oiso, Japan, in February 1983, focusing on multiple primary human cancers in terms of possible genetic involvement and unusual human exposures to carcinogens. The discussions centered about the importance of the observations made by clinicians and pathologists of multiple primary cancers, mostly double cancers, in a single patient. Such observations now are seemingly more frequent due, perhaps, to the prolonged survival of patients who have been cured of their primary cancer. The role of research-oriented clinicians in the initiation of investigations has led to new insights into the mechanism(s) of carcinogenesis. It was demonstrated that patients with multiple primary cancers were generally those who are unusually susceptible due to acquired or hereditary host factors, or those who are exposed to high levels of environmental carcinogens such as chemicals, pollutants, and radiation. Numerous opportunities evolved for clinical investigators for cooperation with laboratory researchers and epidemiologists on studies of these groups of patients with multiple primary cancers.

"New Etiology of Lung Cancer" was the basis for a seminar organized in Honolulu, Hawaii, in March 1983. Passive smoking was one of the main topics of intensive discussion. It was reported that there is a sharp increase of lung cancer in Japan in all age groups, in both sexes. Recent results of an on-going, large-scale cohort study in Japan indicated a relationship of passive smoking to lung cancer. The risk of developing lung cancer in nonsmoking women was increased in proportion to the amount of cigarettes their husbands smoked. These results are in accordance with a Greek study and somewhat at a variance with an American Cancer Society study in the USA. Considerable attention was paid to reports of indoor pollution by tobacco smoke, particularly regarding chemical carcinogens found in higher concentration in sidestream smoke than in mainstream smoke. Collaborative studies between the American and Japanese scientists are planned for research on passive smoking.

The identification and measurement of nitroarenes in diesel emissions and in air samples, the metabolism and biologic properties of nitroarenes, short-term and long-term bioassays, and the induction of tumors in animals by nitropyrenes were discussed. In recent years diesel emission and exhaust pollution have gained importance because of the increasing number of automobiles and trucks now being powered by diesel engines. Several conflicting bits of data exist, and many questions remain unanswered concerning the role of environmental pollutants, particularly diesel emissions, which appear to lead to lung cancer development.

During the seminar on "Carcinogenesis and Environmental Factors," held in Dedham, Massachusetts, in March 1983, sessions were devoted to: (1) analysis of and detection of carcinogens and promoters; (2) new and old carcinogens and promoters; and (3) modulation of carcinogenesis. In the first session, recent methodology was reviewed for the detection and quantification of carcinogen adducts in biologic materials, such as using specific antibodies for post-labeling. New methods were discussed for detecting tumor promoters. The second session was devoted to nitrosamines found in cigarette smoke condensate and their metabolism, as well as aromatic amines, nitroaromatic hydrocarbons, and other mutagenic compounds found in tobacco smoke. The third session included discussions of the usefulness of human tissue explants for the study of metabolism of various types of carcinogens and for the evaluation of the risk of carcinogens to humans. The American and Japanese participants accepted the seminar data as being mutually informative and beneficial to further studies on environmental factors in human carcinogenesis.

During the year, seven Japanese Exchange Scientists visited American laboratories for information exchanges and/or collaborative research activities. These activities related to the effects of tumor promoters on gene expression and cytoskeletal architecture; regulation of adenovirus transcription; regulation of Moloney leukemia virus gene in mouse teratocarcinoma cells; molecular biology of papovaviruses; the role of cytochrome P-450 in the metabolic activation of carcinogens; and chemical carcinogenesis and toxicologic pathology.

An American biochemist from the University of Utah spent three months at the National Cancer Center Research Institute in Tokyo to engage in collaborative research on the biosynthesis of the hypermodified Q nucleoside in mammalian tRNA and the structural characterization of new nucleosides from rat and rabbit liver tRNA. This exchange is a continuation of an on-going joint research project.

During this fiscal year, three seminars and workshops were sponsored via the Biology and Diagnosis Program Area.

A seminar on "Immunogenetics Analyses of the Expression of Tumor Antigens and Responses to Tumors" was held in Osaka, Japan, in November - December 1982. A series of presentations related to descriptions of the existence and identification of tumor-specific antigens; the relationship of these antigens to oncogenes; and the molecular biology of oncogenesis. New technologies for application to the study of tumor immunology were presented by Japanese investigators in which microinjection and nuclear transplantation techniques are utilized as well as the introduction of macromolecules to analyze cellular functions. Papers presented on host responses to tumor described two pathways of suppressor T cell control of B cell activation and experimental data in a system which allowed the cytotoxic T cell killing of retrovirus infected target cells. Several presentations were made relative to killer T cell activity, as well as on recent studies of the structure and expression of genes for interferons. Several participants discussed recent preclinical trials for tumor immunotherapy. A model system was described which involved the elimination of suppressor cells by pretreatment of animals and the subsequent priming to hapten, followed by immunization with hapten-coupled tumor. It was demonstrated that such a protocol allowed the induction of potent tumor immunity. When this technique was applied as an immunotherapy protocol, an optimized regimen allowed substantial immunotherapeutic responses in the mouse model. The final session included a general discussion on basic tumor biology and immunology and the application of these principles to future studies of tumor diagnosis and immunotherapy. It was noted that many of

the recent advances in cellular immunology, immunogenetics, and molecular biology now allow for the implementation of rational approaches to tumor diagnosis, prevention, and therapy.

In January 1983, Honolulu was the site for a meeting on "Gene Transfer in Animal Cells and Activation of Cellular Oncogenes." The topics of the sessions focused on cellular and viral oncogenes. As such, recent research data was exchanged on the isolation and characterization of dominant transforming genes. One of the highlights was the description of newly developed procedures for introducing macromolecules into living cells. The method includes red blood cell hemolysis and ghost trapping of macromolecules followed by fusion with Sendai virus for quantitative introduction of macromolecules into cells. New advances in the research on DNA transfer and onc genes were discussed.

A workshop on "Cytology Automation" convened in New York in February 1983, centered on the clinical applications of automated cytology as well as improvements in specimen preparation, techniques, and instrumentation. Progress has been made in flow cytometry analysis of leukemias and lymphomas; in the detection and monitoring of bladder cancer as well as carcinoma of the cervix; and in quantitating effects of hormones and drugs. Reports were presented on the use of immunofluorescent tumor-associated monoclonal antibodies and a high resolution laser scanning system. The interchange between the American and Japanese participants was productive and reflected an increased pace of joint activity in the biologic and clinical applications of automated cytology.

During his visit to the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, Maine, a Japanese virologist learned the technique for introducing a foreign gene into mouse eggs for obtaining animals with new genetic make-up. He was able to exchange information on recent studies on the mouse T/t complex and the teratocarcinoma system.

A Japanese physicist was able to visit several American laboratories for discussions on the current status and future direction of the application of ultrashort pulse and tunable laser technology to cytology and molecular biology. The exchanges included the use of laser photoradiation therapy for the treatment of cancer. He arranged for the continued exchange of information on using laser spectroscopy for photochemical studies at the molecular level.

Activities in the Cancer Treatment Program Area included the annual meeting on "Drug Development and Treatment Research." Convened in Bethesda, in November 1982, the events in this program area continue to focus on anticancer drug development and the study of new therapeutic approaches utilizing biologic response modifiers. Continuing are cooperative clinical projects on gastrointestinal malignancy and other tumors. During the meeting, discussions ensued on the application of human tumor stem cell assay to anticancer drug development and experimental data on new antitumor antibiotics. Discussed was the topic of biologic response modifiers and how to screen for these agents, using in vitro laboratory assay and animal tumor models. During the discussions on clinical trials, information was presented on the design of clinical trials with regard to various statistical considerations and data management. Phase I data were reviewed on new anticancer agents, including anthracycline and cis-platinum analogs, mitomycin, and interferon. Considerable attention was paid to clinical trials in the area of breast cancer, small cell lung cancer, and gastric cancer.

A "Radiation Therapy Research Seminar" was held in Chiba and Kyoto, Japan, in October 1982, principally for the exchange of information and techniques related to methods of increasing the relative radiosensitivity of the tumor tissue (e.g. high LET radiation, hypoxic cell radiation sensitizers, and hyperthermia). Included in the exchanges were techniques for delivering increased doses of radiation to the target volume, while protecting nearby tissues and organs (e.g. intraoperative radiotherapy and proton beam radiotherapy).

In May, a workshop on "Anticancer Drug Resistance" took place in Honolulu, Hawaii, the goal of which was an understanding of the phenomenon of drug resistance and approaches to overcoming drug resistance. Reports were presented on the clinical implications of drug resistance; review of current studies of drug resistance in cancer cells; somatic cell mutants with altered sensitivity to anticancer drugs; and calcium and phospholipid turnover in transmembrane control of cellular function and proliferation. Reviewed as well were the possible mechanism for broad cross resistance between anthracyclines and vinca alkaloids; multidrug resistant phenotype in human tumor cell populations; drug resistance as a membrane and cell-sap phenomenon; and reversal of acquired resistance to anthracyclines and vinca alkaloids by calcium modifiers.

Two Japanese medical oncologists attended the Phase I and II study meetings sponsored by the Division of Cancer Treatment, National Cancer Institute. In addition, they visited several of our comprehensive cancer centers in the U.S. for discussions on new methodologies in cancer treatment.

An American radiotherapist visited several Japanese cancer research centers to become familiar with their radiation therapy facilities and to exchange information on new methodologies in radiation therapy.

Two seminars were the highlight of the Interdisciplinary Program Area during this reporting period.

Prior to the International Cancer Congress in Seattle, September 1983, a workshop took place on "Lymphocytic Diseases." It was a sequel to the seminar convened in March 1981 on this topic. Emphasis was placed on the differences between the U.S. and Japan in the frequencies of chronic lymphocytic leukemia and nodular lymphoma (almost absent in Japan), and certain, but not all autoimmune diseases (of much higher frequency in Japan). Some lymphocytic diseases that are or were rare in the U.S. are much more common or even occur as epidemics in Japan, e.g. necrotizing lymphadenitis, which affects women particularly in northern Japan who are 20-35 years of age; Takatsuki's disease (characterized by plasma cell dyscrasia, endocrine abnormalities, and polyneuropathy); and mucocutaneous lymph node syndrome (Kawasaki's disease). Takatsuki's disease resembles, but is distinct from Castelman's disease, as it is a disorder in Japan with multicentric lymphadenopathy, angiosclerosis, sheets of interfollicular plasma cells, and sinus histiocytosis in clearly defined lymphatic sinuses.

In January 1983, a seminar was held in Honolulu on the "Causes and Pathogenesis of Liver Cancer." Information was exchanged for consideration of the rising incidence of liver cancer in Japan, a new classification of liver tumors, the multiple steps involved in chemical carcinogenesis, and specific hepatic carcinogens, known or suspected (mycotoxins, vinyl chloride, thorotrast, alcohol, parasites, contraceptives and other hormones, hepatitis B virus, and schistosomiasis).

A Japanese pathologist from the Aiohi Cancer Center, Nagoya, Japan, came to the NCI to engage in collaborative research on mammary tumor development. Another Japanese pathologist collaborated in leukemia and lymphoma studies at the University of Washington. A Japanese cytogeneticist studied the development of the macronuclear genome in eukaryotic cells. A Japanese biochemist visited the NCI to confer with chemists on the safe handling of chemical carcinogens. He received extensive information on laboratory safety procedures for handling toxic and carcinogenic materials.

A well-known cell biologist from the Massachusetts Institute of Technology visited several Japanese cancer centers to present seminars on the latest advances in oncogene research. An American pathologist visited Kyoto University and other Japanese research institutes to exchange information on recent work on adult T cell leukemia.

In June 1983, the NCI-JSPS Joint Steering Committee met in Honolulu to review and evaluate the activities of the program activities of the previous 12 months. The Committee also conferred and planned the sponsored activities for the coming year. In addition, preliminary negotiations were conducted to plan for the extension of the US-Japan Cooperative Cancer Research Program for the next five years.

Cooperation with Poland

The exchange of scientists between the Polish People's Republic and the United States has continued to be effective, despite the current situation in Poland.

An American surgeon was invited to the Institute of Oncology in Warsaw to present lectures and to consult on the surgical treatment of breast cancer and other types of cancer. An American pharmaceutical chemist spent six weeks at the Institute in Warsaw for the purpose of reviewing the results of his collaborative studies with Polish counterparts in nuclear medicine and radiopharmaceutical research. Thus far, their experiments have demonstrated the stability of microsphere carriers of radioactive isotopes in animal models. A potential has been demonstrated for the use of this technique for treating human cancers such as those difficult ones affecting the liver.

During the year, a young Polish biologist from Gliwice spent one year at the National Cancer Institute to obtain advanced training in molecular biology. The Director of the Institute of Oncology, Warsaw, spent one month in the U.S., attending the International Cancer Congress in Seattle and visiting several comprehensive cancer centers for discussions with their staff of ongoing basic and clinical research and the organizational aspects of the cancer centers. He also visited the National Cancer Institute and met with several of the key officials to discuss the US-Poland cooperation and many aspects of the National Cancer Programs of both countries.

Cooperation with France

Two broad areas of cancer research now constitute the cooperative activities between American and French cancer specialists. These are a Basic Cancer Research Program Area and a Clinical Cancer Research Program Area. Activities constituting the basic research include biologic and chemical carcinogenesis, cellular and

molecular biology, viral oncology, cancer immunology, and hormone research related to cancer. Clinical cancer research includes cooperative scientific endeavors in the clinical study of breast cancer treatment, the treatment of osteosarcoma, biochemical and clinical pharmacology, hormone therapy utilized in breast cancer, research on biologic response modifiers, and clinical epidemiology.

Under the Basic Cancer Research Area, an American endocrinologist spent six months at the University of Paris to study the hormonal response of adenocarcinoma of human endometrium. A French biologist visited the National Cancer Institute to study biologic carcinogenesis. A well-known French cell biologist from Lyon, France, studied the antagonistic effects of retinoids and growth factors in both normal and tumor cells at the University of California at San Francisco. A French molecular biologist arrived recently at the State University of New York at Stony Brook to collaborate in a study of the Epstein-Barr virus in altering the growth potential of primate lymphocytes. An American virologist spent three months at the Pasteur Institute in Paris to collaborate in an investigation of papilloma virus and transformation of host cells. An NIH scientist is spending two months at the National Center for Scientific Research (CNRS) in Villejuif to study the regulation of cell growth and the replication of animal viruses. An endocrinologist from the University of Illinois was invited to the Faculty of Medicine, Marseille, to collaborate in a study of the effect of estrogens on the estrogen receptors and the assay of estrogen receptor content of human breast tumors.

In the Clinial Cancer Research Area, a young French physician is spending a year at the Grace Cancer Drug Center, Roswell Park Memorial Institute in Buffalo, New York, to study the pharmacokinetics of several anticancer drugs. A pharmacologist from Marseille, visiting at the Medical College of Virginia in Richmond, is studying the metabolism of methotrexate in isolated liver cells and tumor cell systems as well as studying the biochemical pharmacology of other anticancer drugs. A leading French oncologist visited NCI and other research centers to discuss ongoing clinical trial studies.

An American radiologist is spending a year at the Institute Gustave-Roussy in Villejuif to study the treatment of early stage breast cancer by primary radiation therapy. A medical oncologist visited the Foundation Bergonie, Bordeaux, to discuss collaboration on Phase II studies of combination chemotherapies in gastrointestinal malignancy and treatment of breast cancer.

Cooperation with Egypt

Scientists and clinicians of the National Cancer Insitute of Cairo University have been collaborating with counterpart specialists in the National Cancer Institute on a Phase II study of chemotherapy of urinary bladder cancer, breast cancer, and other types of cancer. This cooperative project was initiated in 1976 between the two institutions and has been supported under the Special Foreign Currency Program (PL 480). This project continues to be the mainstay of the cooperation in cancer research.

A new collaborative project on the "Epidemiologic and Clinical Studies of Lymphomas and Leukemias" was initiated this year between the National Cancer Institute and the Cairo Cancer Institute.

Under the Exchange Scientist segment of the program, an Egyptian radiotherapist

spent three weeks conferring with other radiotherapists at the National Cancer Institute and the Johns Hopkins University School of Medicine. His interest was in procedures and methodologies being utilized in the radiotherapy of urinary bladder cancer and other types of cancer.

Cooperation with the Federal Republic of Germany

In the Environmental Carcinogenesis Program Area, a tumor biologist from the National Cancer Institute visited the German Cancer Research Center and several leading German universities and research institutions to learn from German cancer investigators the current cancer research effort in Germany. The German researchers expressed considerable interest in basic studies of the mechanism(s) of carcinogenesis and possibilities for increasing the number of scientist exchanges in this area.

Under the Drug Development and Clinical Studies Program Area, an American working group met with a counterpart German working group for discussions on possibilities for collaborative research and the exchange of information on new anticancer drugs.

In August, a pharmacologist from the National Cancer Institute visited German laboratories to confer and give seminars on biomedical pharmacology. Plans are being made to have a German oncologist visit the National Cancer Institute to discuss problems of mutual interest in cancer treatment and the evaluation of various types of therapy.

Cooperation with China (Mainland)

During the interval of 16 October and 4 November, an American-Chinese workshop was convened in Beijing, People's Republic of China, for the purpose of developing research strategies to assess the feasibility of conducting three major epidemiologic studies of cancer. The three projects, to be conducted under contract between NCI and the Cancer Institute (Hospital) of Beijing are: (1) a nutrition intervention trial and case-control study in a high-risk area (Linian) for esophageal cancer; (2) a case-control study of lung cancer in Shanghai; and (3) a case-control study in Beijing of choriocarcinoma (a rare cancer which occurs when fetal tissue becomes malignant and invades the maternal host). The studies in China are afforded an advantage of unique opportunities to investigate etiologic factors in the three cancers and, hopefully, will provide new information which will be useful in developing measures toward the prevention of cancer in both the United States and China.

Since the workshop, research protocols have been designed and developed, accepted jointly, and are now in the process of implementation. For instance, the intervention trial for esophageal cancer will enable testing of specific nutritional hypotheses, namely, that certain micronutrient deficiencies enhance the risk of esophageal cancer. Previous studies in Linxian--where the mortality from this disease is exceptionally high--have identified several suspect causes. However, the evidence is still insufficient to clearly indicate any single carcinogen or set of carcinogens.

The American and, especially, the Chinese collaborating scientists attach a high

degree of importance to learning more about the etiology of the three cancers they are studying jointly. From the Chinese side, for example, high priority and exceptional support are given to these studies at all levels of government.

A delegation of seven American scientists spent the period of 11-22 July 1983 in Beijing for participation in a joint "Workshop on Lymphoma and Leukemia" as well as to explore opportunities for routine scientific exchanges and mutually beneficial collaborative research projects related to these two malignancies. Recent advances in the understanding of the distribution of lymphoreticular malignancies in China and the application of novel "traditional" Chinese medicinal agents in the treatment of these disorders has provided impetus for further research activities in this area. Maps of mortality in China are documentary that leukemias and lymphomas tend to cluster in the eastern central provinces. A recent light microscopic review of slides of lymphoma cases in this region of China establish regional differences in the occurrence of cases with morphologic features suggestive of T cell characteristics.

An American biologist/engineer, from the University of Rochester, visited Chinese institutes in Shanghai, Xi'an, and Beijing for the exchange of information and scientific interaction with Chinese counterparts on basic flow cytometry instrumentation, slit-scan cytofluorometry, and prescreening instrumentation for the detection of cancer in the female genital tract. His assumption was confirmed that the Chinese are really interested in collaborative research for testing a Rochester-developed prototype prescreening instrument and evaluation of the technologies for automated cytologic analyses in mass cancer screening programs.

During the coming year, under Annex Three of the Health Protocol, the NCI will receive Chinese scientists for study/research in molecular biology, clinical laboratory science, and cancer detection and diagnosis. Reciprocally, the NCI will send scientists to China for collaborative studies related to early detection and diagnosis, treatment, and epidemiologic research. Areas considered to be of significance and mutual benefit include: the identification and characterization of biochemical/biologic markers of tumors; unified concepts for the collection and analysis of epidemiologic data; photoimaging and intensification in detection/diagnosis; exploitation of the utility of photoradiation therapy; and studies related to genetic predisposition or susceptibility to cancer.

The joint research efforts initiated as direct interinstitute activities will continue. Other such initiatives will be considered on a research priority basis, for instance, studies on automated cytology and dietary factors and their role in carcinogenesis and/or in cancer chemoprevention/intervention.

Cooperation with Italy

Activities in Cancer Therapeutics and Cancer Prevention constitute broad efforts in the collaboration between American and Italian cancer specialists.

Under the Prevention Program area, an epidemiologist from Rome spent one month at the Institute of Cancer Research, Columbia University, New York, to learn computer analysis of epidemiologic data and to share information evolving from epidemiologic research being conducted in Italy. Another Italian epidemiologist from Torino visited the National Institute of Occupational Safety and Health in Cincinnati, Ohio, to collaborate on the analysis of epidemiologic data on occupational

diseases. This has been a segment of the ongoing cooperation in the occupational epidemiology of workers in the tannery, shipyard, and other industries in which there are exposures to potentially hazardous substances.

The Joint US-Italy Committee on Prevention sponsored a workshop on the "Epidemiology of Gastric Cancer" which was held in Florence, Italy, in May 1983. Topics discussed at the meeting included the launching of an epidemiologic investigation of gastric cancer, the geographic variation in gastric cancer within Italy, potential dietary factors, and classification of histologic types of gastric cancer. The workshop served as a catalyst for bringing together epidemiologists, statisticians, gastroenterologists, and other investigators and clinicians throughout Italy to discuss problems of mutual interest.

Under the Therapeutics Program Area, an Italian oncologist is spending a year at the Roswell Park Memorial Institute to acquire experience and to engage in research on biochemical pharmacology and experimental therapeutics. A pharmacologist from Milan is spending a year at the Dana-Farber Cancer Institute in Boston to study cancer management practices and attending classes at the Harvard School of Public Health. A young immunologist from Rome spent four months at the Dana-Farber Cancer Institute to study the requirements for synergy and antagonism in combining different monoclonal antibodies to eliminate lymphoma cells from irradiated bone marrow.

The annual joint meeting for the Therapeutics Program was held in Palermo, Italy, in October 1983. The meeting included discussions on drug resistance, trends in biochemical pharmacology, adjuvant treatment of breast cancer, radiotherapy in combination with chemotherapy and surgery and the applicability of radiobiology to clinical treatment.

Cooperation with Hungary

Joint research on tumor cell disaggregation continues between scientists of the Roswell Park Memorial Institute and the Semmelweis Medical University of Budapest. These studies had their beginning in 1981 when an experimental pathologist/chemotherapist came to RPMI for six months of collaborative research on problems related to developmental therapeutics. In May 1983, the counterpart RPMI biochemical pharmacologist was able to spend an interval of time at the Semmelweis Medical Institute. During that exchange period, one jointly developed manuscript was updated for publication of the results of the tumor cell separation study and another was prepared on the relevance of cell separation to tumor cell heterogeneity and biochemical pharmacologic efficacy of anticancer drugs. Simultaneously, collaborative experiments were planned on human colon xenografts for the preclinical evaluation of anticancer drug specificity. Additionally, the Hungarian scientist has established several human tumors in immune suppressed mice. The tumors include renal cell carcinoma, breast carcinoma, and melanoma in addition to four human colorectal tumors. These tumors/cell lines, which are well characterized morphologically, have been shared with RPMI counterparts for use in anticancer drug evaluation.

An American pathologist documented his visit to Budapest as having been very rewarding scientifically. This was especially true with respect to the acquired immune deficiency syndrome (AIDS). As yet, no overt cases of AIDS have been identified in Hungary. However, Hungarian scientists are concerned that an

increased incidence will be manifest soon because of the high level of tourism and the frequent contacts between homosexual males in Hungary and those from abroad. Nevertheless, scientists in the Hungarian Institute of Dermatology-Venereology and the Institute of Hematology and Blood Transfusion are eager to collaborate with NCI and other NIH BID's. With respect to cancer, the significance of the AIDS problem rests on its impact in the occurrence of Kaposi's sarcoma and other opportunistic infections during the course of the disease process. In the Hungarian Institute of Dermatology-Venereology there are records of extremely extensive data on a group of more than 120 university-affiliated homosexuals. American scientists are of the view that opportunities are present thus for access to a population that is probably on the verge of a marked AIDS outbreak. Also, the standards of medical treatment and remarkable centralization of AIDS cases in Hungary offer many advantages for detecting clues as to the etiology and spread of AIDS.

Pursuant to his visits to American cancer centers, a Hungarian pediatrician/oncologist has developed a proposal for collaborative projects with American counterparts on the treatment of meningeal leukemia using high dose methotrexate and cobalt irradiation. With respect to leukemia and lymphoma, a well-organized registry exists in Budapest. Because the population is small and practically stable, national studies have been pursued with precision over a ten-year period. Thus, he has proposed a joint study of the occurrence of different histologic types, natural histories, and therapeutic responsiveness of these malignancies for comparison with U.S. data looking toward standardization of classification, data collection and processing, and therapeutic procedures.

In summary, the foregoing bilateral and multilateral scientific relationships between the NCI and its counterpart foreign institutions/organizations are indicative of significant contributions to the overall international health policy of the United States. Cancer is a global health problem and forces us to look beyond our national borders and concerns. Cancer still is beyond the remedial powers of any single country and, as collaboration in health becomes an even greater responsibility of the world citizenship, it is important that we continue to direct our international cancer activities so that they respond to specific differences among countries and to be assured that there is return benefit to the people of the United States.

International Cancer Research Data Bank (ICRDB) Program

Established by the National Cancer Act of 1971, the International Cancer Research Data Bank Program has developed into an effective, multifaceted system for the rapid exchange of the results ensuing from the cancer research efforts of the international team of scientists and clinicians. This international resource for cancer information is comprehensive and provides a unique service to cancer researchers almost everywhere in the world. To facilitate the transfer of available cancer research data and information, the ICRDB Program has: (1) established five online databases comprising the CANCERLINE system, which enables scientists to retrieve cancer information easily at more than 3,000 locations within the United States and in 13 other countries; (2) developed a series of 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.

The Computer Databases of the CANCERLINE System

The five databases comprising the CANCERLINE system are CANCEREXPRESS and CANCERLIT (cancer literature); CANCERPROJ (cancer research projects); CLINPROT (clinical protocols); and PDQ/Directory (cancer treatment information).

CANCERLIT contains more than 350,000 substantive abstracts from published scientific papers, meetings, symposia, and conferences; books; technical reports; and research theses. CANCERLIT is growing at an annual rate of nearly 45,000 abstracts, selected from over 1,000 biomedical journals. Because of stringent input processing requirements and monthly updating of the CANCERLIT Database, the most recently published results are quickly available to cancer researchers. Since early 1980, all new literature entries have been indexed with the Medical Subject Heading (MeSH) vocabulary developed by the National Library of Medicine, making their retrieval easier during online searching. CANCERLIT and CANCEREXPRESS can be searched with both MeSH headings and free text terms. This database is updated monthly.

CANCEREXPRESS is a companion file to CANCERLIT, which is a comprehensive archival file of bibliographic records to cancer-related documents published since 1963. CANCEREXPRESS, however, utilizes a list of approximately 400 of the highest quality journals, which can be processed more rapidly than is currently possible for CANCERLIT. All CANCEREXPRESS records are also entered into CANCERLIT. A given record will remain in CANCEREXPRESS for a period of four months. This database is updated monthly.

Descriptions of some 20,000 current cancer research projects in 83 countries are the elements of the CANCERPROJ Database, the most comprehensive source available for ongoing cancer research project information. Included in this database are some 5,000 foreign project descriptions collected by an international network of data input coordinators. This database is updated quarterly.

Summaries of nearly 4,000 experimental cancer therapy protocols are the substance of CLINPROT, the database providing worldwide access to information on new procedures, agents, and combinations of modalities/agents being evaluated for treating cancer patients in major American and foreign cancer centers. Of these protocols, 1,500 are active while the remainder serve as a unique reference source. This database is updated quarterly.

PDQ was added to the CANCERLINE System in October 1982. It is a geographically matrixed, centralized information source designed to assist physicians by listing treatment options and research protocols for specific cancers and directories of institutions and specialists who have interest and experience in the management of cancer patients. This file contains approximately 1,000 cancer treatment protocols and is updated monthly to ensure that the information is current.

The PDQ/Directory File was added to the CANCERLINE System in July 1983. This file contains the names of health care professionals and institutions which specialize in cancer care. For health care professionals, the file will also include addresses, telephone numbers, medical specialties, and professional affiliations. Health care institutions will be identified as comprehensive cancer centers, community cancer centers, etc. when that information is provided. The initial file will consist of approximately 10,000 records and will be updated monthly.

The information contained in the CANCERLINE System is available through MEDLARS, the computerized biomedical information network of the National Library of Medicine.

Special Information Activities of the ICRDB Program

Under contracts with the NCI, three CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTERS (CIDACS) function as information resources in three broad areas of cancer research. These are the CIDAC for Diagnosis and Therapy, University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston; the CIDAC for Carcinogenesis and the CIDAC for Cancer Virology, Immunology, and Biology, located at the Franklin Research Center, Philadelphia. Each CIDAC is staffed by scientists and served by a consultant network with special expertise appropriate to the fields pertinent to each CIDAC. Within its own subject area, each CIDAC prepares CANCERGRAMS and ONCOLOGY OVERVIEWS, performs custom CANCERLINE searches, and provides scientific guidance to the ICRDB Program.

A new service to cancer researchers was initiated in 1982 with the publication of Recent Reviews in Carcinogenesis. Each issue provides a categorized and indexed listing of abstracts of 250-400 review articles in carcinogenesis research, covering the prior calendar year. Published annually as a supplement to the CANCERGRAM series on carcinogenesis topics, RECENT REVIEWS is compiled from review articles cited each month in these CANCERGRAMS as the feature, "Notice of Current Reviews".

A CLEARINGHOUSE FOR ONGOING RESEARCH IN CANCER EPIDEMIOLOGY is a cooperative project 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. The CLEARINGHOUSE, located in Lyon, collects, processes and disseminates detailed data on research related to cancer epidemiology and studies related to the cause of cancer in countries throughout the world. The CLEARINGHOUSE also prepares lists of epidemiology researchers and resources, responds to inquiries of a technical nature, and produces an annual Directory of Ongoing Research in Cancer Epidemiology.

The LATIN AMERICAN RESEARCH INFORMATION PROJECT (LACRIP) was developed through the ICRDB Program in collaboration with the Pan American Health Organization (PAHO) and its Regional Library of Medicine (BIREME) in Sao Paulo, Brazil. LACRIP serves as the source for identifying and collecting Latin American biomedical literature, summaries of ongoing cancer-related research projects, and active cancer therapy protocols in Latin America for inclusion in 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. A cancer literature update service is provided quarterly to cancer researchers and clinicians in Latin America.

In cooperation with the International Union Against Cancer (UICC), the ICRDB Program provides partial support for a special COMMITTEE FOR INTERNATIONAL COLLABORATIVE ACTIVITIES (CICA) within the framework of the UICC. One of the CICA activities is the collection of data on ongoing cancer research projects, including clinical protocols, from more than 70 countries. CICA personnel identify and promote collaborative projects among cancer centers and cancer scientists in different countries. CICA periodically publishes an updated International Directory of Specialized Cancer Research and Treatment Establishments, which describes more

than 700 of the world's cancer centers and their cancer research and treatment activities, and resources. An International Cancer Patient Data Exchange System (ICPDES) has been established as part of the CICA project. Currently, ICPDES participants include scientists and clinicians from nine European and five American cancer centers. This pilot project could result in the development and establishment of an internationally recognized information resource from which comparative data of value would be provided on cancer epidemiology, treatment, and prevention. Data is entered for all cancer types from each participating cancer center. Data for this activity has been collected since November 1977.

Scientist-to-Scientist Communication

The ICRDB Program, through the UICC in Geneva, Switzerland, encourages INTERNATIONAL SCIENTIST TO SCIENTIST COMMUNICATION through the UICC-administered International Cancer Research Technology Program (ICRETT). The goal of this program is the promotion of direct and rapid transfer of information about new or improved technology or methodology between two or more investigators, located in different countries and working on similar research projects. This interaction between such scientists is accomplished by the support of short-term visits for the purpose of conducting collaborative research projects over a brief interval of time, usually two to four weeks. Since the inception of the program in 1975 through June 1983, 663 ICRETT awards have been granted to scientists of 48 countries (Tables I and II).

In many instances, ICRETT associations between scientists from different countries developed into significant collaborative studies that otherwise might not have acquired the impetus and the resources with which to evolve. Examples of such activities will follow.

A biochemist from Belgium studied the metabolism drugs and environmental carcinogen at the International Agency for Research on Cancer in Lyon, France. From these preliminary experiments, collaborative research will be continued for studies of the metabolism of aflatoxin, benz(a)pyrene, and other carcinogens.

A Dutch cell biologist spent his time at Harvard University, learning the latest techniques for the biochemical characterization of cell surface determinants on human lymphoid cells by means of immunoprecipitation using monoclonal antibodies directed to these antigens.

A Swedish cell biologist collaborated with a Scotch biologist in a study of the molecular aspects of chromosomal translocation in cancer. He learned new techniques for chromosome sorting with the fluorescence activated cell sorter as well as the cloning procedures for small amounts of DNA. This collaborative activity continues.

A biochemist from India studied at the American Health Foundation in New York to learn chromatographic analysis to detect nitrosamines in tobacco. He analyzed the nitrosamines found in the tobacco used in India to prepare Bidi, an indigenous cigarette smoked in India. He also learned to use a specially constructed cigarette smoking machine to collect smoke condensate for analysis.

A biostatistician from Texas reviewed the hardware and software of the computer data system at the European Organization for Research on Treatment of Cancer (EORTC) in Brussels, Belgium. The principals reviewed available information and exchanged

ideas on techniques and procedures in statistical methods to design a system to analyze clinical data. Other statistical research units were visited in Denmark and Switzerland.

A biophysicist from Malaysia visited the Radiobiological Institute in the Netherlands to observe and learn the latest technique for neutron and photon dosimetry for biomedical application. The information will be used to calibrate and utilize the radiation equipment in Malaysia.

An Israeli cell biologist learned the latest technique for chromosomal analysis at the Karolinska Institute in Sweden. This technique will be used in the study of metabolic processes in normal and tumor cells as well as non-metastatic and metastatic cancer cells.

A radiologist from Taiwan learned the latest technique in hyperthermia treatment of cancers at the Washington University in St. Louis, Missouri. The procedures will be used to study the treatment of recurrent neck nodes and breast cancer in Taiwan.

Table I

Summary from 1976 through June 30th, 1983

Origin of ICRETT Awardees	
Argentina	18
Australia	4
Austria	7
Belgium	13
Brazil	7
Bulgaria	3
Canada	15
R.O. China	2
P.R. China	7
Columbia	2
Czechoslovakia	7
Denmark	1
Egypt	1
El Salvador	1
Finland	7
France	44
F.R. Germany	30
Greece	5
Hungary	4
India	23
Iran	2
Israel	57
Italy	48
Japan	15
Kenya	1
Liberia	2
Malaysia	2
Mexico	4
Netherlands	11
New Zealand	2
Nigeria	7
Norway	13
Peru	1
Phillippines	1
Poland	14
South Africa	2
Spain	4
Sri Lanka	3
Sweden	29
Switzerland	6
Thailand	4
Turkey	1
Uganda	1
United Kingdom	78
Uruguay	72
U.S.A.	145
Yugoslavia	6
Zambia	1
	663

Destination of ICRETT Awardees	
Argentina	1
Australia	10
Austria	1
Balgium	7
Canada	14
R.O. China	1
P.R. China	8
Colombia	1
Denmark	7
Finland	8
France	40
F.R. Germany	37
Hungary	2
Iceland	1
India	2
Israel	9
Italy	10
Japan	27
Malaysia	1
Mexico	1
Netherlands	14
New Zealand	4
Norway	4
Peru	1
Poland	1
Sweden	39
Switzerland	30
United Kingdom	75
U.S.A.	301
U.S.S.R.	3
Venezuela	2
	663

TABLE II

INTERNATIONAL CANCER RESEARCH TECHNOLOGY TRANSFER
ICRETT

Disciplines	'76 six mos	'77	'78	'79	'80+ JFM 81	'81 Apr 81 Mar 82	'82 Apr/ Mar 83	'83 Apr/ June	Total
a. Epidemiology, Biostatistics and Registries	–	3	5	7	7	5	7	–	34
b. Biochemistry, Molecular Biology and Biophysics	5	14	14	11	11	7	11	3	76
c. Viral Carcinogenesis	7	13	10	9	11	6	10	1	67
d. Chemical Carcinogenesis	3	14	8	13	12	5	4	2	61
e. Cell Biology and Cell Genetics	1	15	11	8	19	14	7	1	76
f. Experimental Pathology (including histopathology and cytology)	4	5	12	14	10	3	8	–	56
g. Immunology	5	19	25	31	33	11	8	1	133
h. Experimental Chemotherapy	6	3	2	9	2	2	3	–	27
i. Surgery	–	1	2	–	4	–	1	–	8
j. Clinical Chemotherapy and Endocrinology	2	3	1	8	7	3	1	2	27
k. Radiobiology and Radiotherapy	5	4	7	10	9	7	10	1	53
l. Controlled Therapeutic Trials	1	–	1	4	–	–	2	1	9
m. Detection and Diagnosis	1	6	4	1	8	1	–	–	21
n. Behavioral and Social Sciences Rel. to Cancer	–	–	1	–	4	1	3	–	9
o. Environmental Factors and Prevention	–	2	–	1	2	–	1	–	6
	40	102	103	126	139	65	50	12	663

THE NIH VISITING PROGRAM

During 1983, scientists of the National Cancer Institute received scientists from 40 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. Four of the visitors were appointed as experts and 59 came as Guest Workers, whose financial support was provided by sources other than the NCI. The activities of these visiting scientists were pursued in the laboratories of the NCI's divisions of Cancer Treatment, Cancer Cause and Prevention, and Cancer Biology and Diagnosis. These associations have been mutually beneficial. The NCI host scientists were afforded opportunities to learn from his/her visitor about cancer problems in a given foreign country; about factors peculiar to that nation that might be related to the morbidity and mortality of cancer; and about activities under way toward the management, treatment and prevention of cancer. Reciprocally, the foreign visitors were 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 and benefit 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.

NCI-SPONSORED RESEARCH IN FOREIGN COUNTRIES

During 1983, the divisions of Cancer Treatment and Cancer Cause and Prevention maintained extensions of their programmatic objectives in foreign countries through 18 contract research activities (Table III). The Division of Resources, Centers and Community Activities has negotiated a contract with the Finnish Public Health Institute in Helsinki for epidemiologic studies of nutrition and cancer. No contractual research was in effect to extend the research effort of the Division of Cancer Biology and Diagnosis.

The Division of Extramural Activities provided the fiscal support, through 45 grants, to scientists in foreign institutions conducting basic and applied cancer research (Table III).

Institutions in 17 nations currently are the recipients of NCI grants and contracts. Thus, the outreach of NCI support extends to Australia, Belgium, Canada, China (Mainland), Finland, France, Germany (West), Ghana, Israel, Italy, Japan, Korea, South Africa, Sweden, Switzerland, Tanzania, and the United Kingdom.

TABLE III
Grants and Contracts in Institutions and
Organizations Outside the United States

COUNTRY	GRANTS	AMOUNT	CONTRACTS	AMOUNT	TOTAL
Australia	3	$150,361		$	$ 150,361
Belgium	1	227,490	1	199,286	426,776
Canada	12	929,401	2	16,707*	946,108
China (PRC)			1	195,000	195,000
Finland	2	82,303			82,303
France (IARC)	1	453,838	2	1,044,907	1,498,745
Germany (FRG)	1	29,328			29,328
Ghana			1	26,500	26,500
Israel	7	534,171	2	252,500	786,671
Italy	1	37,079			37,079
Japan			3	541,100	541,100
Korea	1	12,968			12,968
South Africa	1	46,349			46,349
Sweden	8	751,240			751,240
Switzerland	2	191,778	2	325,000	516,778
Tanzania			1	0 **	0 **
United Kingdom	5	447,609	3	746,029	1,193,638
TOTALS	45	3,893,915	18	3,347,029	7,240,944

* -- One contract was funded in FY 82
** -- Funds in FY 83 carried over from previous year

Division of Cancer Treatment

Division of Cancer Treatment (DCT) research contracts have been awarded to investigators in eight institutions of five foreign countries for studies related to the characterization of anticancer agents; the search for potentially useful anticancer agents such as those of microbial and natural origin, the screening and testing of such compounds, and studies of their biochemical pharmacology and toxicology; the synthesis of radiation sensitizing agents; the production of human lymphoblast interferon; and clinical trials on specific cancers. One contract is specifically for the production and delivery of human lymphoblast interferon. Examples follow of this international collaborative effort in the area of cancer drug design and development and preclinical and clinical evaluation.

Through its "Cancer Chemotherapy Research Collaborative Office" at the Institut Jules Bordet in Brussels, Belgium, DCT maintains interaction with investigators of European nations relative to information concerning ongoing cancer research programs on both continents. The Brussels office has been especially useful in the areas of experimental and clinical pharmacology, clinical trials, and the organization of symposia jointly conducted by American and European investigators. It relates closely to the European pharmaceutical industry, providing a flow of new agents with potential anticancer activity.

The Institute of Cancer Research in England relates to the NCI, under contract, with a research effort toward designing, synthesizing, and evaluating novel compounds, both nitroimidazoles and other heterocycles as potential radiation sensitizers. Several classes of heterocycles have been synthesized and are in the process of evaluation. Another activity in the Institute of Cancer Research involves: (1) validation of human tumor xenografts as models for cancer chemotherapy; (2) the use of human tumor xenografts and transplantable mouse tumors for testing new compounds of interest to the NCI; (3) the toxicology, pharmacology, and initial clinical trials of new drugs developed in this project; and (4) studies of the biochemical basis for treatment response or failure aimed at the design, synthesis, and detailed evaluation of new drugs.

Under contract, the NCI maintains a Chemotherapy Liaison Office in the Japanese Foundation for Cancer Research in Tokyo. The program is designed to foster close collaboration between American and Japanese investigators in the development and application of new clinical anticancer drugs, and in the exchange of preclinical experimental and clinical scientific knowledge and materials requisite for maximum progress in cancer therapy.

Six years ago, through the ICRDB Program's special information activity, LACRIP, a series of collaborative clinical studies had been developed between nine cancer centers in the United States and six centers in Latin America. This cooperative relationship with Latin American cancer institutes is now managed by DCT as the NCI-PAHO Collaborative Cancer Treatment Research Program (CCTRP). Currently, clinical research activities are being pursued jointly by investigators in 12 Latin American cancer institutes/hospitals and nine American cancer centers. The treatment protocols presently in evaluation include therapeutic concepts in hematologic malignancies, childhood malignancies, lung cancer, breast cancer, gynecologic cancer, gastrointestinal cancer, and osteosarcomas. Multimodal concepts in solid tumors are being pursued in advanced breast and head and neck cancer. Over the total life of the program, there have been 64 therapy protocols that have been put to trial. Twenty-eight of these protocols have been completed

or terminated, leaving 26 still actively under investigation. Since the inception of this multinational effort, 2,954 patients have been accrued under the various protocols.

Personnel of DCT play key roles in the NCI Bilateral Agreements with China, Egypt, France, Federal Republic of Germany, Italy, Japan, and the USSR through participation in: clinical trials; the evaluation of the activity of substances indicating properties for biologic response modification; and programs in experimental/development therapeutics.

Division of Cancer Cause and Prevention

The Division of Cancer Cause and Prevention (DCCP) maintains active associations with international organizations and agencies that have well-defined objectives in cancer research, especially its cause and prevention. As well, DCCP is engaged in collaborative contract research in seven institutions/agencies in six foreign nations. These foreign extensions of the DCCP research program thrusts enable the division to support fundamental studies on normal and malignant cells in relation to such carcinogens as viruses and chemicals, as well as epidemiologic studies of human populations for the identification of risk factors predisposing individuals to various cancers. Excellent model systems are available to scientists studying the effects of potentially carcinogenic factors in the environment. Thus, studies are related primarily to three major program areas with DCCP: biologic carcinogenesis; chemical/physical carcinogenesis; and epidemiology.

The binational programs in which DCCP collaborates provide epidemiologic opportunities of significance to cancer research. This year, special emphasis was given to joint studies and exchange programs with scientists of the Cancer Institute Hospital in Beijing to pursue clues drawn from the recent county-based maps in China (Mainland) and the changing risks among Chinese migrants to the United States. Reports were prepared on the geographic correlations within China (Mainland) between cancers of the cervix and penis, colorectal cancer and schistosomiasis, and on the patterns of childhood cancer in Chinese populations around the world. Collaborative analytic investigations are being developed in China (Mainland) on cancers of the esophagus and lung, trophoblastic neoplasms, and T cell leukemia.

Through the medium of a contract with DCCP, scientists at the Chaim-Sheba Medical Center in Israel are determining the incidence of cancer in 10,000 Israeli children irradiated for ringworm of the scalp, in 10,000 nonexposed persons selected from the general population, and in 5,000 nonexposed siblings. This effort is of significance in the study of patients irradiated for benign diseases in that it is an important area for evaluating biologic mechanisms for carcinogenesis in humans. The minimal confounding effects of carcinogenic influences and the possible greater susceptibility of young people to environmental carcinogens, enhance the chances of detecting radiogenic effects, and provide an opportunity for lifetime studies of cancer incidence.

By contract with the International Agency for Research on Cancer (IARC), DCCP is cooperating in an international radiation study to evaluate the risk of radiation exposure in cervical cancer in Europe. More than 22,000 patients treated for cervical cancer in 22 European clinics are being evaluated for the occurrence of second cancers subsequent to radiotherapy. Efforts are being made to quantify the risk of high- and low-level radiation doses and to evaluate the influence of

host factors, such as age, on subsequent radiogenic risk. Fifteen cancer registries have been conducting cohort analyses on the risk of second cancers among 200,000 former cervical cancer patients. The cancer registry cohort analyses are almost complete and the findings are to be published as a monograph. The findings indicate excess risks, related to radiation, of cancers of the rectum, kidney, ovary, and corpus uteri, as well as acute nonlymphocytic leukemia. A deficit of breast cancer, possibly related to ovarian ablation, was also observed.

Among the notable activities in the environmental carcinogenesis program are the IARC monographs on the "Evaluation of the Carcinogenic Risk of Chemicals to Humans," exemplary of which are the compendia entitled "Chemicals and Industrial Processes Associated with Cancer in Humans." These IARC volumes serve as an authoritative source, for example, of the list of chemicals being tested for carcinogenicity in laboratories throughout the world. They reflect the international consensus regarding these agents and have become indispensible reference sources to scientific pursuits on carcinogenesis.

Personnel of DCCP play their roles in the NCI efforts under Bilateral Agreements with China, France, Federal Republic of Germany, Italy, Japan, and the USSR.

Division of Extramural Activities

Grants by the Division of Extramural Activities (DEA) have been made available to institutions and organizations in 13 foreign countries. The scientific investigations under the 45 DEA grants 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 activation and action of carcinogens by personnel of the National Research Council of Canada. Other studies being pursued in Canadian universities and institutions include the pathogenesis of liver cancer induced by chemicals, the role of antitumor action of nitrosoureas, DNA repair/replication in chemical carcinogenesis, the metabolism and carcinogenicity of haloaromic pollutants, and melphan interaction with amino acids in human cells. At the University of London, a study is under way on the metabolic activation of the polyclic hydrocarbons as well as a study of the therapeutic response of human tumor xenografts. In Finland, an investigation is being pursued on natural and tissue-specific immunity to human neoplasms and another deals with changes in prostatic acid phosphatase in diseases of that organ site. Scientists at the Weizmann Institute of Science in Israel are studying the control of gene expression in tumor viruses and in cells. At that institution, as well, studies are under way of receptors and growth factors for neoplastic cells and the genetic control of leukemogenesis.

These research grant activities provide NCI with opportunities to associate with and take advantage of the foreign expertise available in basic and clinical research which is directly relevant to the thrusts and goals of the NCI.

Summary

The highest possible level of health for all people of the United States and the world is a goal of international scope. Achieving such an objective can be accomplished only through the control and prevention of those diseases such as

cancer which are formidable obstacles to health. Contemporary management and ultimate eradication of cancer, thus, are dependent on continued research activities which represent cooperative endeavors. The integrated talents and skills are required of an internationally wide variety of specialists encompassing all areas of basic and applied science relating to unraveling and understanding the phenomenal complexities of cancer.

The international team effort in cancer research, promoted and sponsored in part by the National Cancer Institute, is indicative of a scientific outreach that spans the world. It represents a multitude of cooperative scientific activities accomplished through bilateral agreements for cancer research; contracts and grants to support scientists with expertise in foreign countries; the exchange of junior and senior scientists and information; and a global network of communication of research information through mechanisms of the ICRDB Program, the IARC an UICC, the EORTC, and the WHO and PAHO.

This interaction with the world's scientific community has brought forth gains in the war against cancer. As our international struggle against cancer continues, additional knowledge will acrue on how normal cells become malignant. We would be able to determine more precisely what compounds and other factors are carcinogens 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. This stems from 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 is the accrual and analysis of demographic anc geographic information endemic to a given population or region of the world. This resource will contribute 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 is maintained through the exchange of scientists and scientific information on cancer for the benefit of the peoples of all nations.

DEPARTMENT OF COMMERCE (National Technical Information Service) (Y01-CO-60702)

Title: ICRDB Document Announcement and Dissemination Services

Contractor's Project Director: James Jennings

Project Officer (NCI): Dr. Dianne Tingley

Objective: This agreement supports the printing and dissemination of ICRDB publications, the announcements 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 24,000 copies of CANCERGRAMs per month to over 12,000 investigators. In addition, 15 ONCOLOGY OVERVIEWs are published yearly, each of which is distributed to an average of 600 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.

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: The agreement will continue as described.

Date Agreement Initiated: September 30, 1976

Current Annual Level: $309,179

FRANKLIN RESEARCH CENTER (N01-CO-05463)

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

Contractor's Project Director: Willian S. Thompson

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 databases. The items are collected from approximately 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 activity as described above will be merged into a Screening, Indexing, Abstracting and Keying contract to be awarded in FY 84.

Date Contract Initiated: June 30, 1977

Final Annual Level: 1,794,934 (FY 82)

FRANKLIN RESEARCH CENTER (NO1-CO-14343)

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

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

Project Officer: 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. In 1982, a compilation of abstracts of carcinogenesis-related review articles appearing during calendar year 1981 was published as a supplement to the CANCERGRAMs, under the title "Recent Reviews in Carcinogenesis." Five ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in carcinogenesis research, are published annually. Videotapes of a CIDAC-sponsored symposium on "Relationship of Carcinogen Action on DNA to Cell Transformation," held on November 18 1980, are still circulating to many requesters, and have been well received. 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: $315,597

FRANKLIN RESEARCH CENTER (NO1-CO-14356)

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

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

Project Officer: 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. Five ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in basic cancer research, are published annually. Videotapes of a CIDAC-sponsored symposium/workshop on "Mechanisms of Metastasis," held on January 28, 1981, are still circulating to many requesters, and have been well received. The CIDAC also performs custom searches of the CANCERLINE databases in response to requests for information; submits monthly Highlight Reports, pinpointing significant new developments in basic 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 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: $318,432

HERNER AND COMPANY (NO1-CO-05465)

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

Contractor's Project Director: Lois Lunin

Project Officer (NCI): Donna J. Wicker

Objectives: 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.

Date Contract Expired: August 11, 1983 (The activity as described above will be merged into a new contract entitled Screening, Indexing, Abstracting and Keying to be awarded in FY 84).

Date Contract Initiated: August 12, 1980

Final Annual Level: $117,851

IIT RESEARCH INSTITUTE (N01-CO-05468)

Title: Computer Support for Cancer Information Dissemination

Contractor's Project Director: Peter B. Schipma

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

Objectives: 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: $649,883

INFORMATICS, INC. (NO1-CO-05509)

Title: Preparation and Updating of Clinical Protocol Summaries

Contractor's Project Director: Mr. Richard Amacher

Project Officer (NCI): Mr. Barry Goldfarb

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 the annual updates of the Compilation of Experimental Cancer Therapy Protocol Summaries. The 1983 seventh edition contains over 1,300 summaries of Phase II and Phase III clinical trials currently in progress worldwide. This edition also includes 73 Phase I protocols and a list of protocols closed to patient entry. Magnetic tapes containing the summaries of all protocols (3,767) 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 October 6, 1983, including annual updating of the Compilation.

Date Contract Initiated: December 14, 1979

Current Annual Level: $219,016

INFORMATICS, INC. (NO1-CO-14361)

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

Contractor's Project Director: Richard Amacher

Project Officer: 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 the OIA.

Major Accomplishments: 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. Updates of the CANCERGRAM and Compilation mailing lists were made to preclude unnecessary mailing of ICRDB publications.

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 the fulfillment of the ICRDB Program mandate for active collection and dissemination of cancer research information.

Proposed Course: The present contract will continue, with special efforts devoted to formal evaluation of ICRDB products and services, and increasing awareness of ICRDB services.

Date Contract Initiated: August 31, 1981

Current Annual Level: $301,486

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

Objectives: 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 database. The 7th edition of the Directory (1982) contained 1,247 project descriptions collected from 74 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: $136,907

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

Objectives: 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: Planning for and attendance at the XIII International Cancer Congress held in Seattle in September, 1982.

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 the International Cancer Congresses, promotes the productive exchange of research information among researchers throughout the world.

Proposed Course: Plans call for continuation of this contract through November 15, 1983.

Date Contract Initiated: April 1, 1977

Current Annual Level: $35,000

NATIONAL LIBRARY OF MEDICINE (1-YO1-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

Objectives: 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 320,000 abstracts of published literature, 20,000 descriptions of research projects and 3,200 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. It is estimated that over 24,000 searches were run against CANCERLINE in 1982.

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 2,500 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: This agreement was continued through April 1983 when it was replaced by agreement no Y02-CO-30708 with NLM.

Date Contract Initiated: July 1, 1974

Current Annual Level: $710,000

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. J. W. Simmons

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 databases respectively. At present, there are over 350 cancer research summaries from Latin America in CANCERPROJ.

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: This contract will continue, at a reduced level, through July 1984.

Date Contract Initiated: May 24, 1976

Current Annual Level: $226,696

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

Title: International Scientist-to-Scientist Information Exchange Program

Contractor's Project Director: Dr. Anders Englund

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

Objectives: 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 February 1983, 625 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: This contract activity will continue at approximately the same level through March 1984.

Date Contract Initiated: December 4, 1975

Current Annual Level: $100,000 (From FY 82 funds)

UNION INTERNATIONAL 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

Objectives: 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: 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 database. 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 10 foreign cancer centers. As of November, 1982 over 31,400 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 simulated 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 under way 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, was released in September 1982.

Date Contract Initiated: April 1, 1977

Current Annual Level: $225,000 (projected, but not as yet awarded)

UNIVERSITY OF TEXAS SYSTEM CANCER CENTER (NO1-CO-14347)

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. Five ONCOLOGY OVERVIEWs, retrospective bibliographies with abstracts concerning high interest topics in clinical cancer research, are published annually. The CIDAC performs custom searches of the CANCERLINE databases 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: $352,679

ANNUAL REPORT
OFFICE OF THE DIRECTOR FOR PROGRAM PLANNING AND ANALYSIS (ODPPA)
NATIONAL CANCER INSTITUTE
OCTOBER 1, 1982 - SEPTEMBER 30, 1983

OFFICE OF THE DIRECTOR

The ODPPA provides leadership, consultation and direct participation in: program analysis, planning and evaluation; the design, development and support of management information systems; the analysis of all legislation that could have an impact on the NCI and the conduct of appropriate liaison with the Congress; and providing design, development, coordination, and supporting services for office automation and information planning (OA/IP) activities throughout the Institute. Organizationally it is located in the Office of the Director (OD), 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, counterpart offices at the NIH and DHHS, and other Federal agencies as required.

The Office consists of two branches: the Systems Planning Branch (SPB) and the Management Information Systems Branch (MISB). The Legislative/Congressional Unit and the OA/IP unit are part of the immediate OD. The SPB is staffed with professionals with formal training and experience in general management, planning, operations research, systems analysis, and evaluation. The MISB is staffed with professionals with training and experience in the design, implementation, operation, and support of management and technical information systems. The legislative/congressional activities are performed by a senior analyst with extensive knowledge and experience in the Federal legislative process, and congressional committees and staff operations assisted by a legislative reference specialist. The OA/IP unit is currently being staffed.

Although primary and continuing assignments are made to each branch or unit based on expertise required, the Office often operates on a project matrix system whereby staff members 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, rather than an accounting by organizational units, this annual report describes activities and accomplishments in terms of the major areas of performance: Planning and Evaluation, Management Information Systems, Legislative Analysis/Congressional Liaison, Office Automation and Information Planning.

Historically, the OPPA has worked closely with NCI operational units on an as-requested basis to carry out its responsibilities. During the 1981-1982 reporting period, management decided that a more formal link between the OPPA and the operating units was desirable. Thus, the NCI Large Planning Group was formed. the group consists of at least one professional, programmatic person from each NCI division and the senior members of the OPPA staff. Regularly scheduled monthly meetings have been held to plan work, exchange information and select planning areas for future targeting and participate in the preparation of the Institute's major planning and evaluation documents. The operation of this group has significantly improved communications and coordination between the operating divisions and the OPPA.

There were several personnel actions during the reporting period: Dr. Michael Klein and Dr. Vaman Waravdekar retired from the Federal service; Dr Bayard Morrison, III was appointed Special Assistant to the Director for Program Planning and Analysis; Louis Kerns joined the MISB staff as Computer Program Analyst; Karen Schlick joined the Legislative/Congressional Unit as Legislative Reference Specialist; Mary Lou Flanagan became secretary to SPB; Patricia Weir became secretary to the Legislative/Congressional Unit; and Diana Jessop became secretary to the MISB.

PLANNING AND EVALUATION

The Office of Program Planning and Analysis (OPPA) is generally responsible for the development and application of systems analysis, planning, evaluation, and operations research techniques to cancer research and control activities; providing direct planning support for the National Cancer Program planning at the national and individual program levels, and participating in NIH and Department level planning. The Office also provides planning, operations, and management consultative services to program areas within the National Cancer Institute and other institutions and groups participating in the National Cancer Program. The Systems Planning Branch has the primary responsibility for carrying out these activities. Staff direct planning meetings, participate as members of planning teams organized to develop individual program plans, work directly with program and administrative personnel in the development of operational plans; maintain liaison with program personnel, provide periodic consultation and direct efforts, as requested by program leaders, to revise and update both program and operating plans; provide education and training in the use of systems techniques; and work 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 year are described in the paragraphs that follow:

A. Requests for planning assistance remained heavy during this year. As OPPA continued to support the Division of Resources, Centers and Community Activities (DRCCA), emphasis was directed towards the high priority areas of Chemoprevention, Diet and Nutrition, and Smoking and Health. Planning groups were established for each of these areas.

   Each group consists of representatives from the NCI Divisions conducting research in that particular area, as well as senior members of the OPPA staff. Research plans were developed for the Chemoprevention and the Diet, Nutrition, and Cancer Programs and were presented to the DRCCA Board of Scientific Counselors and the National Cancer Advisory Board. Completion of the Methods plans for both programs is now in progress. Individual program plans will be used as input to an overall divisional plan. Planning efforts have also been initiated for the Detection and Diagnosis, Cancer Control Centers, and for the Environmental and Occupational Cancer program.

   The Division of Cancer Treatment's linear array and decision network for the Drug Development Program is being updated; the preclinical portion is complete and ready for review by the Division. During program planning, considerable emphasis is placed on developing or refining evaluation criteria so that planning may be thoroughly integrated with evaluation.

B. Coordinated the preparation of the National Cancer Program 1982 Director's Report/Annual Plan (DR/AP) for FY 1984-1987 for submission to the President and Congress as required by law. This report describes National Cancer Program progress during 1982, current activities, and planned efforts for the five-year planning period, including budget projections. The 1982 Report also included an expanded section on coordination of the National Cancer Program. Through the continuing efforts of NCI staff to broaden the scope of the report, additional nonprofit, State, and industrial groups were identified and contacted for information about their cancer-related activities. A new section described the contribution of professional organizations to the National Cancer Program. This information, along with that from contacts in other Federal agencies, resulted in a more complete description of non-NCI activities. After extensive internal and external review (NCAB, NIH, OMB, OASH, etc.) and incorporation of review comments, the report was submitted to the Secretary for transmittal to the President and the Congress and was distributed to research and educational institutions, voluntary organizations, and Federal, State, and local agencies involved in cancer-related activities.

Since the Director's Report/Annual Plan highlights accomplishments during the past year as well as forecasts future activities, it has proven to be a valuable reference tool.

C. Coordinated the preparation of the NCI participation in the Director's (NIH) Forward Planning Review Session including: 1) development of agenda items, 2) preparation of a briefing book for the Director, NCI, and staff, and 3) coordinating and reporting action items which resulted from the Review Session discussions. The focus of the Review Session is to prepare the Director, NIH, for the upcoming congressional appropriation hearings and items to be discussed at that time. Agenda items for this year's sessions were divided into three categories: 1) high priority areas of scientific opportunity, 2) trans-NIH areas of research, i.e., prevention, and 3) other program issues likely to be raised at the appropriation hearings. Regarding high priority areas of scientific opportunity, 14 specific items were discussed including oncogenes, biochemical epidemiology, chemoprevention, clinical trials, AIDS, and cancer control science. The rationale for according these areas high priority and FY 1983, 1984, and 1985 funding were described.

As a followup to the Director's Review Session, OPPA staff coordinated the preparation of the NCI chapter of the 1985 NIH Research Plan. This plan consisted of an update of the high priority areas of scientific opportunity which were presented at the Director's Forward Planning Review Session and a description of any major program changes for FY 1985 (new initiatives, reductions expansion of ongoing activities, and changes in emphasis).

D. Further developed the evaluation strategy and coordinated all evaluation activities of the NCI. Prepared the NCI Evaluation Plan which included a strategy statement and a description of Institute evaluative efforts (set-aside and non set-aside). Assistance was provided to NCI staff in the development, implementation, and administration of 1% set-aside evaluation projects, including the preparation of close-out documents for completed project. Close-out submissions include an executive summary, assessment of benefits, and an impact statement describing the importance and implications of the study for the program and any decisions that have been or will be made as a result of the study. Progress reports are prepared for multiphase or long duration projects.

The proposed set-aside evaluation budget for FY 1983 was $2,152,000 involving 12 projects. Seven new projects were proposed; the others were continuations or deferrals from previous years. Five of the seven, with a total budget of $1,210,000, have thus far received approval from the Assistant Secretary for Planning and Evaluation.

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.

F. Provided staff support to the Director, NCI, in preparation for congressional hearings.

G. Coordinated the preparation of NCI's contribution to the Maternal and Child Health Inventory. The submission included a listing of NCI projects (grants, contracts, intramural) where there was a major emphasis on maternal and child health, a summary narrative (6 pages) describing NCI efforts in this area, and a table showing distribution of the numbers of projects and dollar amounts by mechanism of support. Total funding of $31,367,831 (198 projects) was reported.

H. Other staff activities included:

- Participation in the NCI/ADP Committee with special reference to planning for future office technology at NCI.
- Membership on the Steering Committee for other Automation/Information Planning.
- Consultative services to divisions planning, information, and evaluation, and especially on the monitoring of support service contracts.
- Membership on the DHHS Nutrition Research Committee.
- Evaluation of the Frederick Cancer Research Facility data processing contractor which serves four other contractors as well as NIH staff.

MANAGEMENT INFORMATION SYSTEMS

A. The development of a network of Management Information Systems (MIS) which provide information on budget, personnel, space, travel, and other primarily administrative activities;

B. The coordination of a variety of NCI automatic data processing (ADP) activities; and

C. Consultation with Institute staff on the application of ADP technology to the administration and management of NCI resources.

The MIS is composed of a network of user oriented and managed systems which support both individual operating areas and provide consolidated reporting of information across organizational lines. Systems are developed at the request of

and with the participation of the user organizations. Current MIS systems support areas within OD and several of the divisions with priority given to applications for the Financial Management Branch (FMB) and the administrative offices.

The primary responsibility of the MISB is to maintain the operational status of current systems, to enhance current modules, and to design and develop new components. Specifically, this includes development of specifications for changes to existing systems or for new applications; implementing programs or testing contractor-developed software; providing general system overviews and documentation for operators and maintenance programmers; installing the software; training users; and resolving operational problems. Specific activities in this area during the year include:

A. Integrating the FMB Employment Plan Reports into the Personal Services Forecasting System. The programs included in this enhancement maintain a summary of the actions (by division and category) generated by the NCI Personnel System, collect expected personal actions to generate the Employment Plans and then use these estimates in the forecasts.

B. Improving operating efficiency and correcting several problems in the Operating Budget System.

C. Developing the NCI Employee Training System for the Personnel Management Branch (PMB). This system provides procedures for the collection, update and reporting (both for PMB and the administrative areas) of information on all applications for training processed by PMB.

D. Modifying the NIH Full Time Equivalency (FTE) System and installing it for use in a program area. This system allows the user to add expected accessions and separations for any remaining pay period in the fiscal year, to set ceilings for employment categories by laboratory or branch, to compare the results with year-to-date actuals using data from the HHS personnel and payroll systems, and to report summaries at user-specified levels. Assumptions which are the basis for the estimates can also be reported.

E. Developing a variation of the Computer Assisted Flowcharting System to produce program planning charts. Parameters which describe the size, shape and relative position of symbols to be produced in the charts, and the textual material included in the charts are typed into WYLBUR data sets. The system then automatically produces planning charts using the CALCOMP plotter.

F. Enhancing the Gift Fund System to include the expansion of data elements in the master file and to add statistical reports and charts.

G. Modifying several versions of the Financial Data Report System (FDRS). Reports were added to the FDRS/DCBD which compared prior-year with current-year data, the documentation was automated using WYLBUR, and the normal FY 1983 changes were made. Extramural CAN's, prior-year data and several new reports for FY 1983 were added to the FDRS/DCCP system. The documentation for the FDRS/OD was automated, normal fiscal year changes were made, and the reports were modified to reflect new user requirements.

H. Training divisional representatives to enter their data for the International Travel Plan and providing consultation to the Administrative Services Branch in the preparation of the consolidated report.

I. Modifying the DCT/CMS Interface System to more closely reflect the CMS algorithms.

J. Incorporating the DCT/DTP Contract Tracking System into the NCI/MIS and making additional modifications requested by the user. All software was renamed to conform to MIS naming conventions, standard NCI/MIS automated documentation was developed, the software was modified to improve the error handling capabilities, outdated data element names were revised, operating procedures were enhanced so that the system can be operated by the user, and additional reporting capabilities were provided.

K. Assisting PMB in the operations of the Personnel Data System. Changes were made to the roster for additions, deletions and rearrangement of data elements in the report; a summer employee report was implemented for FMB; and a program was created to edit specific data fields to provide information necessary to correct any errors in the file prior to producing the monthly reports.

L. Providing a modified module of the FDRS/DCCP System to combine the data from the FCRF accounting system with the data from the NIH Accounting System for NCI intramural laboratories at FCRF.

Coordination and consulting activities of the MIS Project Office were formalized and expanded with the elevation of the office to branch status. The number and scope of requests for assistance in this area increased significantly during the year as reflected in the following staff projects:

A. Participated in the Office Automation/Information Planning Steering Committee, served as the alternate for the chairman of the Steering Committee, and provided leadership and support for assigned OPPA OA/IP activities.

B. Participated in the activities of the NCI ADP Committee and the Subcommittee on Administrative Systems. Coordinated the compilation, editing and distribution of the NCI ADP Systems and Reports Inventory and assumed responsibility for maintaining the document.

C. Chaired and provided technical support for the OA/IP Inventory Coordination Working Group which is developing procedures to collect information on the hardware and software used in the Institute. The purpose of the inventories is to provide complete and accurate information on ADP/OA hardware, software, projects and contracts for current reporting requirements; to reduce and simplify current data collection; and to provide an information base for other OA/IP projects.

D. Participated in the OA/IP Electronic Mail Working Group. The purpose of this group is to determine the level of use of electronic mail in NCI and to determine whether additional effort should be devoted to educating and training NCI staff in this capability.

E. Prepared the FY 1983 NCI ADP System Security Annual Plan and First Quarter Reports for submission to NIH, continued ADP security reviews of NCI application systems, and initiated off-site backup procedures for MIS Systems.

F. Coordinated the preparation of both the OD portion and the total NCI submissions to the FY 1985 Inventory Technology Systems (ITS) Budget and worked with the FMB on the preparation of the FY 1985 Commitment Base for ITS. The budget included a five-year plan, modifications of the FY 1984 submission, an analysis of the FY 1985 commitment base, justifications for modifications, and a separate plan for word processing systems.

G. Participated in the technical review of contract proposals and evaluation of hardware and software for several non-MIS applications within the OD.

NCI was permitted by the Department to proceed with MIS development under the condition that project results could be transferred to other institutes at NIH and to other agencies. This effort continued by providing software and documentation for the NCI Travel System to NIADDK. Components of this system can be used to prepare the Quarterly International Travel Report and Summary, the International Travel Plan Report and Summary, and various other reports which provide both detail and summary information on domestic as well as foreign travel. Consultation was provided to the NIADDK system manager, as needed, to bring the system into operational status. Discussions were also held with representatives from NINCDS, NLM, and NIMH to explain NCI software, procedures, etc.

The contract which provides programming support to the staff of the MISB was recompeted during the year. Major activities of both the previous and current contracts are reported in the contract narrative.

OFFICE AUTOMATION AND INFORMATION PLANNING OA/IP

During the reporting period, a new responsibility was assigned to this office by the Director, NCI -- to provide development, coordination, and support services for office automation and information planning activities throughout the Institute. A search committee has been appointed to recruit an expert consultant who will develop the parameters of the new organizational unit's responsibilities, and help recruit permanent staff. OA/IP steering committee, with representatives from OD offices and the operating divisions, has been appointed and has developed several projects involving the development of accurate inventories of hardware and software, education, training, equipment demonstrations, and the establishment of an OA/IP library.

LEGISLATIVE ANALYSIS AND CONGRESSIONAL LIAISON

The categories of activities in this area of responsibility are described below followed by a brief summary of typical actions carried out by the NCI during the past year.

A. Monitored and analyzed all legislation with potential impact or significance for the NCI. During the past year, bills on a wide variety of subjects were tracked and analyzed, i.e., Reauthorization bills, radiation, marijuana rescheduling, smoking and health effects. In addition, assistance was given in coordinating the implementation of Section 7 of the Orphan Drug Act.

B. Assisted in the preparation of congressional hearings where NCI staff were requested to testify. Prepared briefing materials for the Director, Deputy Director and others, reviewed testimony, attended hearings and prepared responses to follow-up questions. During the past year the Director of NCI

testified regarding reauthorization bills and appropriations for the FY 1984 and he accompanied the Assistant Secretary for Health at a variety of other hearings. The NCI Deputy Director testified at both the House and the Senate on the relationship between smoking and cancer. Special oversight hearings were held by the Senate Labor and Human Resources Committee on the NCI Drug Development Program and the FDA in which the Director of Division of Cancer Treatment also testified.

C. Responded to numerous telephone, written and personal inquiries made by members of Congress and their staffs about NCI programs. Coordinated, when appropriate, such responses with the Department of Health and Human Services, and the NIH.

D. Through written and verbal communication, kept the senior NCI staff briefed on current congressional and legislative activities. Also kept the National Cancer Advisory Board informed of relevant congressional and legislative matters. Responded throughout the year to inquiries from the NCAB about pending bills, particularly as such bills could affect the operation of the NCAB.

E. Arranged for meetings between NCI senior staff and members of Congress and their staffs.

F. In an effort to continue to consolidate the legislative function, all logging in and tracking of congressional correspondence is now done in this office. A new staff member was added to coordinate this function and to assist in other legislative areas.

CONTRACT NARRATIVE OFFICE OF
THE DIRECTOR FOR
PROGRAM PLANNING AND ANALYSIS, NCI
FY 1983

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

TITLE: Planning and Support Services for the National Cancer Program

CONTRACTOR'S PROJECT DIRECTOR: Ms. Carol L. Anglin

PROJECT OFFICER: Ms. 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 Institute's Director's Report/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 performed within 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 July 1984.

CONTRACT NARRATIVE
OFFICE OF THE DIRECTOR FOR PROGRAM
PLANNING AND ANALYSIS, NCI
FY 1983

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

TITLE: NCI Management Information Systems Support Services (Programming)

CONTRACTOR'S PROJECT DIRECTOR: Christopher Gordon

PROJECT OFFICER: Betty Ann Sullivan

OBJECTIVE: (1) To provide maintenance support which includes modification of computer programs, testing, installation, user training, and documentation updates for software and/or procedural changes approved by the MIS Configuration Control Board; (2) to provide 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; (3) to provide implementation support for development of software and related documentation based on specifications prepared by the MISB.

MAJOR ACCOMPLISHMENTS: Integrated the FMB Employment Plan into the Personal Services Forecasting System and improved the operating efficiency of the Operating Budget System. Developed the NCI Training System for the Personnel Management Branch. Implemented a program to edit the master files for the NCI Personnel Data System and to provide a mechanism for correction prior to generation of the monthly reports. Modified several versions of the Financial Data Report System which included FY 1983 changes and allowed several divisions to maintain and report on prior-year and current-year data. Implemented a system for the Systems Planning Branch to automatically draw program planning charts. Modified the DCT/CMS Interface System; implemented changes in the DCT/DTP Contract Tracking System and modified the system and documentation to conform to MIS standards. Operational support for the start-up of new systems and problem resolution for current systems continued.

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

PROPOSED COURSE: The contract expired on May 31, 1983. Recompetition of the contract has been completed.

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 1983

CONTRACTOR: System Sciences, Inc. (NO1-CO-33854)

TITLE: NCI Management Information Systems Support Services (Programming)

CONTRACTOR'S PROJECT DIRECTOR: Christopher Gordon

PROJECT OFFICER: Betty Ann Sullivan

OBJECTIVE: To provide technical support services to the Management Information Systems Branch in the expansion, maintenance, and operation of NCI's Management Information Systems and to support other computer-related activities of the Branch. Specific activities will include preparation of detailed flowcharts, programming of computer routines, debugging and testing of programs, providing technical documentation, supporting operations and training users.

MAJOR ACCOMPLISHMENTS: The following activities were initiated during the year: addition of two new programs to the NCI Personnel Data System to provide information to the Financial Management Branch and the Office of Cancer Communications; restructuring and adding programs to the Financial Data Report System for DCT to accept data by CAN, to ease maintenance and to simplify operations; modifying the DCT/DTP Contract Tracking System, implementing additional queries and developing a similar DCT Animal Contract Tracking System. Support in resolving operational problems continued.

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

PROPOSED COURSE: To continue the current pattern of maintenance, operational and development support for MISB activities.

DATE CONTRACT INITIATED: May 26, 1983

TOTAL VALUE OF CONTRACT: $673,898

DATE DUE

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