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91- September 30, 1992

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Office of The Director

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

NATIONAL CANCER INSTITUTE

Intramural Activities

October 1, 1991- September 30, 1992

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NATIONAL CANCER INSTITUTE U.S.

NATIONAL CANCER INSTITUTE
OFFICE OF THE DIRECTOR
ANNUAL REPORT
October 1, 1991 - September 30, 1992

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FREDERICK CANCER RESEARCH AND DEVELOPMENT CENTER
Associate Director: Dr. Werner Kirsten

The Frederick Cancer Research and Development Center (FCRDC) in Frederick, Maryland, is a Government-owned facility, managed as a Federally funded research and development center by the following five contracts.

- o ABL-Basic Research Program (basic research)
- o Program Resources, Inc. (operations and technical support)
- o Harlan Sprague Dawley, Inc. (animal production)
- o Data Management Services, Inc. (computer services)
- o Data Management Services, Inc. (library services)

The Associate Director is responsible for the Center; a General Manager-Project Officer and a Contracting Officer operate the Center through NCI management. During this reporting period, there were about 350 Government employees and 1,450 Contractor employees at FCRDC.

A chartered FCRDC Advisory Committee meets twice a year to review "the merit and relevance of research conducted by the contractor" and to "review the management of interactions of the multiple contracts at FCRDC, primarily as they relate to scientific activities carried out by the basic research contractor." The Committee's evaluations and recommendations are submitted to the Institute Director, who holds final decision-making authority.

The Committee met on October 25, 1991. Two concept reviews were conducted at this meeting: the subcontract with the New Mexico Regional Primate Research Laboratory (NMRPRL), using chimpanzees to develop a safe, effective vaccine against AIDS, and the newly formed operations contractor's Structural Biochemistry Laboratory.

In July 1986, the NMRPRL subcontract for the housing, handling, and caring of 100 chimpanzees reserved for AIDS vaccine development studies began. The chimpanzees have been used to test a variety of immunogens including intact HIV, native or recombinant gp120 envelope, recombinant gp160 envelope precursor proteins, the PBI region containing the V3 hypervariable loop, and peptides that contain cell epitopes. Immunogens are tested with a variety of adjuvants. Challenge experiments are carried out with homologous and heterologous virus to test for protection. If protection is achieved, the potential immune response that might have been involved will be characterized. The chimpanzee facilities and the budget and personnel involved at NMRPRL were discussed. The Committee unanimously voted approval, reporting that the contract was essential to the NCI AIDS Vaccine Development Program.

The second concept review was for the Structural Biochemistry Laboratory. There were presentations of the scope of the new program, organization, collaborative interactions, and research initiatives for combining computational and structural biochemical approaches for the structure-based drug design. The following is an example of the activities underway or planned.

- o Design of HIV-1 protease inhibitors
- o Study of Cathepsin-D related to cancer metastasis

- Protein-nucleic acid complexes as targets for drug design, such as the HIV-1 p7 protein

- Urokinase-urokinase receptor as a target for an antimetastatic agent

- Other systems related to cancer, such as Interleukin 2/receptor and Interleukin 1/receptor

The discussion focused on projected plans and a possible timetable (1) to obtain the necessary protein crystals, laboratory space, studies planned for smaller proteins with the 600 mhz NMR and (2) to recruit an interactive senior scientist for the new NMR Section in the research contractor's Crystallography Laboratory. Collaborative interactions are continuing with the Crystallography Laboratory on HIV protease and the operations contractor's AIDS Vaccine Development Program on the HIV p7 nucleoprotein. Additional collaborations are planned with the NMR Section, when it is established in the Crystallography Laboratory. The proposed research activities were enthusiastically approved.

In the closed session of the October 25, 1991, FCRDC Advisory Committee meeting, the site visit report of the operations contractor's AIDS Vaccine Development Program and the Laboratory of Cell and Molecular Structure were discussed. The remainder of the closed session was devoted to a site visit review of the Laboratory of Chromosome Biology under contract with Advanced BioSciences Laboratory, Inc.-Basic Research Program (ABL-BRP). The first part of the review was focused on the Cell Cycle Regulation Section and included projects on unit-copy plasmid replication and active partition of unit-copy plasmids to daughter cells. The Molecular Control and Genetics Section, projects on transcriptional and post-transcriptional control of gene expression, and RNA function were also reviewed.

The Committee also on met July 11-12, 1992, for a site visit review of the ABL-BRP Molecular Mechanisms of Carcinogenesis Laboratory. The following were reviewed.

- The Eukaryotic Transcriptional Regulation Group and its projects on bZIP DNA-binding proteins and cell-specific transcriptional activation by the C/EBP-like proteins

- The Cellular Growth Mechanisms Group and projects on regulation of RAF protein kinases in mitogenesis and development

- The Eukaryotic Signal Transduction Group and projects on nerve growth factor, TRK receptors, and neuronal signal transduction

- The Molecular Oncology Section and projects on properties of the *mos* oncogene and proto-oncogene, tubulin as a candidate *mos* substrate, *mos* phenotype in somatic cells, properties of *met* oncogene and proto-oncogene, hepatocyte growth factor-scatter factor, and tumorigenicity of the *met* proto-oncogene

- The Gene Expression in Eukaryotes Section and projects on mutagenesis of HIV-1 RT and analysis of drug resistance and *ski*

- The Human Retrovirus Pathogenesis Group and projects on genome structure and regulation of expression of human retroviruses

- The Human Retrovirus Section and projects on rev protein of HIV-1, regulation of HIV-1 expression, and relevance to mechanism of pathogenesis

The new NIH Director and the NCI Director visited FCRDC on October 24 for a tour and briefing of structural biology projects, oncogene biology, crystallography, and mouse genome mapping studies performed by FCRDC contractors.

Operations and Technical Support Contractor, Program Resources, Inc. (PRI)

Accomplishments

- The new Cray Y-MP supercomputer is fully operating and is providing FCRDC scientists with valuable new means for research. In a collaboration between PRI and ABL-BRP, the crystal structure of the anti-leukemia drug L-asparaginase was solved at 2.3 Å resolution, using the expanded memory and calculation capabilities of the new computer.

- The Structural Biochemistry Program has completed high resolution x-ray crystal structures of HIV protease inhibitor complexes. Three dimensional studies on human cathepsin D and human urokinase are underway. A solution structure study of taxol has been initiated, which could help rationalize structure activity data for the effects of semi-synthetic taxol analogs on microtubule assembly.

- The Laboratory of Cell and Molecular Structure (LCMS) has developed two potential animal models for study of AIDS: BIV infected rabbits and BIV transgenic mice. They have developed and characterized a panel of monoclonal antibodies to the Gag protein of BIV and have used these to develop antigen capture ELISA tests. This group has also collaborated with the AIDS Vaccine Development group in making noninfectious pseudovirion particles derived from HIV strains.

- The AIDS Vaccine Development Program has adapted the HIV (MN) strain for growth in chimpanzee PBL and has collaborated with LCMS to correct mutations in the original virus stock. This technology will allow vaccine studies to be performed using both subunit and whole inactivated virus. The latter would be performed as part of an increased collaborative effort with the National Institute of Allergy and Infectious Diseases.

  An expression vector has been made for the HIV NC protein (p7), which has already proved successful in producing large amounts of the protein. This will permit structural studies leading to potential designed anti HIV drugs to proceed.

  A highly sensitive antigen capture assay for p7 is being developed to permit the measuring of virus load in infected individuals. Both the AVP and LCMS activities in support of the NCI AIDS program received excellent peer reviews by an ad hoc review group of the FCRDC Advisory Committee.

- Clinical Immunology Services continued (1) to increase the number of patients who can be treated on active protocols in Frederick and (2) to manage efficiently schedules and travel, thereby reducing the program's overall cost.

  The support laboratories have improved the mechanisms to generate activated lymphocytes and tumor infiltrating lymphocytes, reducing the exposure to potential toxicities.

- The Chemical Synthesis and Analysis Laboratory and Fermentation Production Facility groups have worked together to continue developing and purifying schemes on many compounds for various treatment protocols. The reprocessing of previous extracts has provided a number of related bryostatin compounds; purification schemes were developed to resolve enantiomers of leucovorin. The work on taxol and Rebeccamycin has continued. The groups have also provided quantities of HIV RT, protease, and HIV rev for ongoing AIDS research projects at FCRDC.

- The Research Support Program completed the second year of the two-year pilot program that encourages underserved and under-represented minority students to choose careers in science, mathematics, and computer science. This Science Enrichment Program offered science enrichment courses, seminars, and theme tours of local research laboratories. It also encouraged interaction with scientists in the Ft. Detrick community, through an Adopt-a-Scientist program. The program, with over 213 staff and support personnel, was expanded to support 157 students.

- A pilot program to introduce Total Quality Management to FCRDC was developed and approved. The initial training took place in Facilities Maintenance and Engineering (FME), but other smaller groups also have started the training. FME is incorporating TQM concepts into daily operations and selecting Quality Teams for improving various customer support functions.

- The Anti-AIDS Virus Drug Screening Laboratory is conducting a cytoprotection assay, tests for AZT resistant mutants, and animal model studies using SIV. The laboratory also began a program for B cell lymphoma drug testing to expand all the drug testing programs at FCRDC. The In Vitro Cell Line Screening Program has introduced new cell lines to the panel and developed a new approach to increase the screening capacity of the screen.

The ABL-Basic Research Program (ABL-BRP)

Accomplishments

- The Cell Biology of Development and Differentiation Group has determined that a basic fibroblast growth factor is involved in regulating the development of mouse primordial germ cell (PGC). Using this growth factor, PGC-derived cell lines resemble feeder-dependent and pluripotent embryonic stem cells. These cell lines will be an important resource in studying germ line imprinting, recombination, sexual differentiation, and pluripotency.

- The Cell Cycle Regulation Section has progressed in understanding how model minichromosomes are replicated and segregated to daughter cells.

- The Molecular Control and Genetics Section studies the molecular interactions between proteins and RNA that modulate gene expression in Escherichia coli, its phages and its plasmids. Signals near the 5' end of a transcript are required for Rho, a transcription termination protein, to bind. Once bound, Rho moves along the RNA toward the 3' end and engages the RNA polymerase complex, causing the complex to release the RNA at specific sites.

  A different area of research in the Section has generated an E. coli population containing at least 10 million cells distinguished by different randomly generated peptides exposed on their surface. The sizes of these peptides vary from 11 amino acids long to greater than 100. Individual cells that adhere to specific surfaces or to molecules by their specific protein can be selected from this population.

- The Molecular Oncology Section has discovered that the Met proto-oncogene product is expressed in cells bordering lumen structures in vivo. Studies with the ligand (hepatocyte growth factor) indicate that Met is involved in the production and maintenance of lumens. In human breast tissues, Met is expressed in the lumens that form the mammary duct; while in adjacent tumor tissue, Met expression is markedly reduced. A possible link between loss of Met expression and breast cancer may be related to metastasis-free survival.
  The Mos proto-oncogene functions in the reorganization of microtubules, leading to the formation of the spindle pole during egg maturation (meiosis) and the production of an unfertilized egg. When Mos is overexpressed in somatic cells, it produces a phenotype that resembles meiosis (karyokinesis in the absence of cytokinesis). Mos expression at lower levels in somatic cells leads to morphological transformation. The M-phase phenotype regulated by Mos can explain the phenotype of somatic cells transformed by constitutive Mos expression.

- The Gene Expression in Eukaryotes Section, in collaboration with Dr. Edward Arnold (Rutgers University), has obtained a complete 3 Å data set for a complex of HIV-1 reverse transcriptase (RT) double-stranded synthetic DNA and a Fab fragment of a monoclonal antibody. The structure has been solved at 4 Å resolution, and the section expects to have the structure solved at 3 Å resolution in the near future. High resolution data has also been obtained from crystals containing drugs that inhibit HIV-1 RT. About 170 HIV-1 RT point mutants have been prepared. Among these are mutants that represent known drug-resistant variants. These variants can be used to investigate the binding sites for anti-RT drugs.

- The Eukaryotic Transcription Regulation Group investigates the basis for DNA sequence recognition by the basic region:leucine zipper (bZip) class of DNA-binding proteins. Using chimeric molecules composed of protein basic regions, two residues that influence DNA-binding specificity lie on one face of a putative α-helical basic region domain.

- The Eukaryotic Signal Transduction Group has identified components of the *trk*/Nerve Growth Factor (NGF) signal transduction pathway. NGF is

required for the differentiation and survival of sympathetic neurons and certain sensory and cholinergic neurons. NGF stimulates the activity of the *trk*/NGF receptor. Several of these proteins are proto-oncogene products or regulators of the activities of proto-oncogene products.

- Molecular Aspects of Chemical Carcinogenesis Laboratory is studying how dihydrodiol epoxide metabolites of individual polycyclic aromatic hydrocarbons react with DNA to yield different distributions of adenine and guanine adducts. Although the mutagenic consequences of these interactions reflect the relative reactivities of the individual dihydrodiol epoxides with adenine and guanine residues, mutation frequency at specific nucleotides within a target gene is not directly related to adduct concentration at that site.

  Mutagenicity studies using plasmid vectors containing site-specifically incorporated O^6-substituted guanines indicate that the mechanisms for repair of these adducts in bacteria and mammalian cells may be more varied than previously thought.

  The structural features of substituted purines that contribute to their efficient depletion of the human DNA repair protein O^6-alkylguanine-DNA alkyltransferase were determined. Active agents in this group can be used as adjuvants to enhance the effectiveness of chemotherapeutic drugs whose mechanism of action involves reaction at the O^6-position of DNA guanine residues.

- Macromolecular Structure Laboratory is involved in projects on tetragastrin and pentagastrin, small peptides that are ligands for the gastrin receptor (GR). Cytotoxic acyltriazenes have been attached covalently to the amino terminal ends of these peptides. The resulting constructs have been shown to be excellent substrates for GR. This result suggests that peptide hormone receptors may be potential targets for tumor-directed chemotherapeutic agents. GR, for example, is expressed by many gastrointestinal tumors.

- In the Laboratory of Molecular Virology and Carcinogenesis, the substrate binding sites of the protease (PR) of both HIV-1 and HIV-2 were determined and extensively characterized by kinetic studies with synthetic peptide substrates and molecular modeling. This will facilitate the rational design of PR inhibitors active against both HIV-1 and HIV-2.

  A rapid, quantitative assay system was developed to study the antiviral effects of HIV PR inhibitors in cell culture. This system uses a defective HIV genome carrying a selectable marker that allows the quantitation of HIV infected colonies but does not allow secondary infection. The results show that certain PR inhibitors are capable of preventing productive infection prior to DNA synthesis. The results confirm previous proposals that the PR has an active role in the early stage of the viral life cycle. This provides the basis for the design of second generation of HIV PR inhibitors capable of gaining access to the viral capsids (as they enter the cell) where reverse transcription takes place.

The phosphorylation sites in HTLV-1 Rex protein were mapped. Phosphorylated Rex protein was found in the nucleolus complexed with a 38 kDa host protein identified by amino acid sequencing as the nucleolar protein B-23. Rex is a post-transcriptional regulator required for the control of the expression of structural proteins and replication of HTLV.

A new protein encoded by equine infectious anemia virus, a lentivirus related to HIV has been found. The protein consists of 29 amino acids encoded by the extreme 5' end of the genome and 218 residues derived from the 3' end of the env gene, immediately downstream from the membrane-spanning region. Previously described transcripts from a variety of lentiviruses suggest that a similar protein may be expressed in all members of the family. Since the carboxy terminus of lentiviral transmembrane proteins has been shown to influence viral infectivity, growth kinetics, and cytopathology, this protein may play an important role in the viral life cycle.

OFFICE OF PROGRAM OPERATIONS AND PLANNING
Assistant Director: Iris Schneider

The Office of Program Operations and Planning (OPOP) includes the Planning, Evaluation and Analysis Branch (PEAB). The office supports the Institute Director by analyzing, advising, and assisting in the decision-making process and in the developing, documenting, carrying out, and monitoring of policy and operating decisions, including the decisions of the Executive Committee and the Director's semi-annual Budget and Planning Meetings. Through PEAB, the office also provides leadership and guidance for strategic and operational planning within the Institute and takes part in NIH and DHHS planning activities; collects and analyzes programmatic data and reports of research accomplishments, plans and policy options; and implements and tracks Institute evaluation projects.

The office is the contact for the NIH Division of Management Policy and provides Institute comments on regulations and funding announcements planned by other DHHS areas and other federal agencies. Some of the issues include Medicare coverage for screening for cervical and breast cancer, Social Security Administration disability determinations (including those for people with cancer and AIDS), and the Centers for Disease Control program for cervical and breast cancer screening.

The Assistant Director is the co-vice-chair of the NIH Advisory Committee on Women's Health Issues, an advisory to the NIH Office of Research on Women's Health (ORWH). The office coordinates activities and represents the Institute on women's health issues and is the Institute contact for ORWH queries and initiatives. The Assistant Director is also the Executive Secretary for the National Cancer Advisory Board Subcommittee on Women's Health and Cancer. Throughout the year, the developments in silicone breast implants have been monitored, and the Assistant Director takes part in the PHS Task Force on Breast Implants. In the support of these activities and others, OPOP assists in furthering NCI programs related to women's health.

Planning, Evaluation and Analysis Branch
Planning Officer: Cherie Nichols

The branch coordinates strategic planning and implementation at the Institute level, assists the divisions in program planning, and takes part in NIH and Department planning activities. The staff members direct planning meetings, serve on program planning teams, work with program personnel to develop operational plans. PEAB maintains a file of Institute evaluation activities, provides technical assistance in designing and implementing evaluation projects to be performed by contractors, and develops in-house evaluation projects. Program analysis activities include reporting on specialized subjects and on highlights of activities across NCI programs.

Preparation of Reports

PEAB coordinated the Institute's role in the annual NIH Director's Briefing Session. This year more than 60 briefing papers were developed to inform the NIH Director of NCI research and training initiatives,

accomplishments, and policy developments. Some of the topics addressed were gene therapy, anticancer vaccines, development of taxol, women's health, diet and cancer, molecular genetics, and chemoprevention.

PEAB coordinates reporting for several annual requests for information on special topics for use by the Department, Interagency Committees, and other Federal Task Forces responsible for collecting government-wide information. The branch prepared the Institute's FY 1991 Human Fetal Tissue Report, an overview of ongoing research using human fetal tissue, and abstracts and budget figures for all relevant NCI-supported projects. PEAB is the liaison between NIH and NCI for all Institute correspondence related to human fetal tissue and informs NCI staff regarding fetal tissue policy.

PEAB also coordinated the preparation of (1) an inventory of NCI's population research projects for the Interagency Committee for Population Research, (2) a description of NCI-supported arctic-related research and budget estimates for the Interagency Arctic Health Policy Committee, and (3) a narrative on relevant NCI research for the annual report of the Arthritis and Musculoskeletal Diseases Interagency Coordinating Committee.

A report of recent NCI scientific advances was developed for the FY 1993 NIH Congressional Budget Justification. Highlights of scientific accomplishments aligned with the components of the NIH Strategic Plan included the following.

- Molecular studies with the p53 gene
- Advances related to the MDR gene
- New findings about the trk oncogene product
- New findings about heterocyclic amines
- Development of a new rat model for prostate cancer
- Use of the COMPARE computer program in the NCI drug screen
- Combined adjuvant therapy for high-risk rectal cancer patients
- Development of recombinant toxins as anticancer agents
- Initiation of gene therapy trials
- Advances in communications technologies
- Evaluation of socioeconomic factors and cancer incidence among Blacks and whites

Reports were also prepared on research of medical rehabilitation, environmental health, cystic fibrosis, measures of functional capacity, neuroscience, and contraception. PEAB prepared a narrative for the Office of Management and Budget on advances in cancer treatment over the past 30 years and treatment advances expected in the near future. The branch developed the Institute's portion of the fourth Biennial Report of the Director, NIH for fiscal years 1991 and 1992.

Preparation of Planning Documents

The branch developed the NCI submissions to the FY 1994 PHS Plan. Four research areas were highlighted: molecular mechanisms underlying cancer progression, vaccine development, gene therapy, and rational drug design for cancer treatment and prevention. Plans also were described for minority health and training activities, initiatives on infant mortality, the Construction Program, the Research Manpower Development Program, and the

Institute's strategy for evaluating cancer research programs. Highlights of prevention research and visuals were provided for the NIH Director's briefing of the Assistant Secretary for Health.

The National Institutes of Health is developing a long-range Strategic Plan to chart the future course of biomedical research in this country. The plan is composed of interrelated objectives for critical opportunity areas in science and technology, for addressing the nation's critical health needs, and for the responsible management of fiscal and intellectual resources. PEAB coordinates the Institute's part in the plan development process. The Planning Officer and other NCI staff took part in a meeting of a National Task Force on the Strategic Plan and in the NIH Director's retreat to refine the draft plan. PEAB prepared the NCI mission statement in the plan, evaluated the NIH "action plan" for the molecular medicine and vaccine development areas of the critical science and technology objective, and provided background materials to be distributed at the National Task Force meeting. The branch is responsible for developing action plans and measures of outcome to implement the trans-NIH objectives of the Strategic Plan within the Institute.

The Federal Coordinating Council for Science, Engineering and Technology (FCCSET) is responsible for shaping and coordinating U.S. policy in science and technology. PEAB reported to the council on Institute activities in global change research, advanced materials and processing, biotechnology research, and advanced manufacturing technology. NCI's extensive research in biotechnology was described, including projects on gene therapy, vaccine development, and rational drug design. With the Financial Management Branch, PEAB prepared budget tables and presented new initiatives (or expansion of existing ones) that would be carried out in two different budget scenarios for FY 1994. The branch also provided information on NCI biomaterial-related research that will be used to develop an interagency plan for coordinating research on advanced materials.

Evaluation and Analysis Activities

The branch developed and maintains a system to follow, report, and highlight the progress of the Institute Director's commitments made at the annual Congressional appropriations hearings. Several times during the year, this tracking system was updated to reflect current activities related to the commitments for FY 1991 and 1992.

An extramural committee charged with assessing measures of progress against cancer recommended that NCI periodically document how research advances in cancer impact on mortality, incidence, survival, and quality of life. Responding to the recommendation, PEAB and the Division of Cancer Prevention and Control are coordinating efforts to develop a report on progress against cancer. Six panels of extramural scientists will meet to identify the significant advances in cancer research since 1987 and the potential impact of these advances on future research and cancer prevention and care.

Although the overriding mission of the Institute is to prevent and to cure cancer, thereby alleviating the human suffering cancer causes, some research advances also produce economic benefits through health care and

productivity cost savings. In the past, PEAB has prepared several case studies on health care cost savings that resulted from NCI-supported applied research and clinical trials. One recent study measured the clinical and economic impact of smoking cessation in patients counseled by their physicians to quit. Another calculated the cost savings realized by using the combined modality therapy of postoperative radiation plus chemotherapy (5-fluorouracil) to treat high-risk rectal cancer patients.

The Planning Officer is the Institute representative to the NIH Office of Medical Applications of Research (OMAR) and a member of the NIH Coordinating Committee on Assessment and Transfer of Technology (CCATT). OMAR supports the NIH Consensus Development Program, which consists of major conferences that produce consensus statements on important and controversial topics in medicine. During the 15 years of the consensus program, NCI has sponsored 17 conferences on different cancer topics. A 15-year commemorative publication will feature highlights from these conferences, news headlines, and consensus development conference (CDC) posters. PEAB will serve on the planning committee for an NCI-co-sponsored CDC on the treatment of ovarian cancer to be held in 1993.

In addition to coordinating and supporting these conferences, PEAB takes part in two other key activities related to medical applications of research. The first involves channeling scientific questions to NCI staff about the assessment of inventions from NIH-funded biomedical research. Such assessments focus on the potential for commercial use of these inventions and their impact on the delivery of public health care services. The second is coordinating NCI comments for PHS regarding cancer-related Medicare coverage issues.

The branch is responsible for maintaining information on completed and ongoing NCI evaluation projects. PEAB is a resource for information on NIH evaluation set-aside funds and on NCI evaluation activities and contributes to the development of evaluation plans at NCI, NIH, and PHS levels.

Other Activities

OPOP, PEAB in particular, is the NCI contact for the General Accounting Office (GAO) when the agency conducts studies or seeks information related to NCI activities. A final report summarizing NCI's implementation of recommendations made in the 1989 GAO report, "Breast Cancer: Patients' Survival" was submitted this year.

The branch coordinates the Institute's response to requests (1) for comments on proposed regulations related to public health or clinical research and (2) on changes to existing regulations such as those concerning training authority at NIH. The branch also coordinates the review of RFPs, RFAs, and PAs being developed at other health agencies when comments from NCI are solicited.

As Executive Secretary for the National Cancer Advisory Board (NCAB) Subcommittee on Planning and Budget, the Planning Officer provides staff support and guidance to the committee. This group reviews and advises the Institute on such budgetary issues as the Bypass Budget and the NIH Strategic Plan. In the past year, PEAB helped the subcommittee prepare the

NCAB Biennial Report, part of the Institute's contribution to the fourth NIH Biennial Report. In addition, PEAB staff took part in an Outstanding Investigator Grant (OIG) working group that proposed options for modifying this grant mechanism. After these options were presented to the subcommittee, the subcommittee recommended to the NCAB that OIGs be discontinued. This recommendation was adopted and NCI will phase out the use of this award mechanism. PEAB also supports the NCAB Subcommittee on Women's Health and Cancer.

The Planning Officer serves on an NCI P01 (program project) working group that is analyzing program project grants for type of research, amount of support, and quality of subprojects and will develop recommendations for the optimal use of this mechanism. The Planning Officer is also a member of NCI's Special Action Committee. The committee collects information to make recommendations on NCI efforts to meet the research and research application needs of minorities, underserved populations, and older Americans. The Planning Officer represents NCI at NIH Planning and Evaluation Officer meetings and serves on the NIH Evaluation Training Committee.

OFFICE OF LEGISLATION AND CONGRESSIONAL ACTIVITIES

Legislative Liaison: Dorothy Tisevich

The Legislative Office is a liaison between the Institute Director and Congress. Its primary mission is to keep the Director, the Institute staff, the National Cancer Advisory Board (NCAB), and the President's Cancer Panel apprised of Congressional activity that may affect the National Cancer Program. Its purpose is also to convey information about NCI policy and programs to members of Congress and their staffs.

Office responsibilities include developing legislative proposals; coordinating the preparation of Congressional testimony or statements presented by the Institute Director and staff; briefing NCI staff for Congressional hearings and visits; and supplying copies of bills, hearing reports, and Congressional Record excerpts. The staff also conducts briefings for members of Congress and their staffs on the National Cancer Program's research initiatives and advances, grant and contract awards, and the Institute budget process. The office is responsible for coordinating all written and telephone inquiries from Congressional staff and for providing information on sensitive policy issues of concern to Congress.

The Legislative Office is responsible for preparing other documents that inform the NCI community and non-Federal organizations involved with the National Cancer Program of all relevant legislative, Congressional, and administrative policy developments. The staff regularly briefs NCAB, division Boards of Scientific Counselors, and outside organizations on Congressional activities by preparing the "Legislative Update" three times a year. Copies of this document are distributed annually to more than 1500 individuals in the biomedical research community.

Activities

- The office assisted with or coordinated the preparation of testimony for Congressional hearings on appropriations, reauthorization, pediatric AIDS, conflicts-of-interest, women's health, taxol, breast cancer research, software copyright protection, the twentieth anniversary of the National Cancer Act, biotechnology, NIH patent process, and genetic research.

- It assisted with or coordinated the briefing of Congressional members and their staffs on cancer and AIDS research, prostate cancer, women's health, cancer registries, extramural research, and gene therapy.

- During the 102nd Congress, the office monitored more than 300 bills concerning appropriations, NIH reauthorization, animal welfare, AIDS (research, treatment, and prevention); constructing biomedical research facilities; tax credit for screening procedures; prohibiting honoraria; technology transfer; women's health; prostate cancer; and preventive health care.

- The office assisted the NIH Division of Legislative Analysis in developing FY 1994 legislative proposals for the Office of Assistant Secretary for Health.

- NCI staff comments and recommendations on bill report language and legislation of interest to the NIH community were coordinated at the request of the Office of Science Policy and Legislative and DHHS.

- Articles on Congressional and legislative issues were submitted to the Journal of the National Cancer Institute.

OFFICE OF ADMINISTRATIVE MANAGEMENT
Associate Director: Philip Amoruso
Deputy Associate Director: Donald Christoferson

The Office of Administrative Management (OAM) plans, directs, and coordinates the Institute's administrative management activities. The Associate Director manages the following eight office branches and is also the Institute's Executive Officer.

- o Administrative Services Branch (ASB)
- o Financial Management Branch (FMB)
- o Personnel Management Branch (PMB)
- o Research Contracts Branch (RCB)
- o Management Analysis Branch (MAB)
- o Grants Administration Branch (GAB)
- o Extramural Financial Data Branch (EFDB)
- o Management Information Systems Branch (MISB)

Activities

- o The staff in OAM and in the division administrative offices have become involved in Total Quality Management (TQM), a program for improving administrative management and delivery of administrative services. The TQM Steering Committee of selected administrative staff prepared a TQM Implementation Plan (the "Roll Out Plan"), which has been approved by the TQM Council and is now in its early stages. The Management Analysis Branch will coordinate the Institute's TQM effort, which will begin with recruiting a TQM coordinator.

- o The 1992 NCI appropriation included an unprecedented requirement that 10 percent of the projected yearly obligations (more than $200 million) be made on September 30, 1992, the final day of the fiscal year. Several branches (FMB, GAB, RCB and EFDB) devised a plan to manage the efficient obligation of these funds.

  After the staff identified the grants and contracts for obligation, the information was stored on special tapes for the Division of Financial Management to enter in the accounting system on September 30. The plan was carefully prepared and tested to minimize the possibility of error, and preparing each requested obligation required careful analyzing and planning months before September.

- o FMB enhanced the administration of the budget, consolidating the accounting for non-appropriated funds (Royalty, CRADA, and Gift Fund) into computerized systems for operating and reporting the status of funds. The branch monitored efforts to reduce FTE usage and expenses for salaries, benefits, and travel. The branch integrated new data into the 1994 budget to reflect NIH Strategic Plan and Federal Coordinating Committee on Science, Engineering and Technology (FCCSET) initiatives.

- o Because an NIH audit of NCI-ADP procurement activities showed the Institute's responsible handling of delegated ADP procurement authority,

NCI requested increased responsibility and control of its ADP procurement activities.

- MAB has coordinated an effort to set up a PC-based database of model EPMS plan elements and performance standards. The goal is to develop an on-line database for any NCI Local Area Network (LAN) user to develop EPMS and PMRS plans.

- MAB revised the pamphlet describing the NCI intramural review process. The pamphlet is used as a policy guide for staff, an orientation guide for members of the Institute's Boards of Scientific Counselors, and a manual for informing the external scientific community about the intramural review process.

- EFDB worked with the Executive Committee to assure that the Institute's funding policies (1) would be consistent with the NIH cost containment plan and (2) would permit the funding of as many competing Research Project Grants as possible in one year.

- To improve the Institute's procedures for funds control and grant documentation, EFDB staff revised the format and distribution process for the ranking and pay lists. These lists are to document funding selections within the payline for each grant review round.

- GAB and the DCBDC Research Facilities Branch continued to work to improve the administration and management of cancer-related construction grants. GAB kept an extensive database, tracking NCI-supported construction projects and site-visited grantees to check for compliance of the construction grant policy.

- PMB and the NCI Intramural Supervisory Training Committee designed a Management Information Seminar Program for intramural laboratory and branch chiefs.

- ADP-OA Technology:

  Fifty-five workstations have been connected to the RCB LAN; the last 20 stations should be connected by December 1992. A specific menu has been developed for the LAN with additional utilities to increase the use and sharing of software. Electronic forms and a system that allows contract specialists to prepare and assemble contracts and Requests for Proposals (RFP) also can be accessed.

  GAB continued to develop a comprehensive Grants Management System (GMS). This system uses LAN facilities to calculate and to process awards, to track grant actions, and to create an historical database on Institute-funded grants and cooperative agreements. This year a log system has been added to the specialist's portion of the worksheet for electronic tracking of grant actions. A Records Management Center component also has been added to collect and track information missing from grant applications and to generate a form letter requesting the missing information. The system may be fully operating by the beginning of FY 1993.

GAB has been connected to "NIH-NET" and is transferring IMPACT data from the NIH mainframe to its network servers. Downloads that took two to three hours using a 2400 baud modem now take less than 10 minutes.

DHHS selected PMB to test and to evaluate a prototype automated system for initiating and approving training nominations (HHS-350s).

MISB began the conversion to a new LAN operating system and a new electronic mail (EMail) system; established a high-speed link to the Division of Computer Research and Technology (DCRT) for all NCI LANs in Executive Plaza (EP); and completed LAN cabling for staff in Building 31; initiated a project for a LAN infrastructure for the intramural program.

MISB installed prototype systems for collecting data on minority participation in in-house training programs and for developing a database of performance standards and elements for Employee Performance Management System (EPMS) and Performance Management Recognition System (PMRS) employee plans; helped the divisions in improving management of the ADP clearance authority delegated to the Institute

MISB converted the Office of Cancer Communications from the NBI system to an environment of personal computers (PCs) and released a new macro library for WordPerfect 5.1.

Administrative Services Branch
Chief: Susan Kiser

ASB serves the immediate Office of the Director (OD) and the ten OD offices. It is responsible for general office services, international travel, domestic travel for the immediate OD, domestic travel policy for the Institute, space management, and the Institute's central files. ASB also coordinates all Institute administrative issues.

Activities

Procurement Audits

ASB fared very well in the ADP clearance review conducted by NIH auditors. As a result, NCI requested that the requirement for its keeping ADP logs of purchases of $2500 or less be suspended and that the dollar level of purchases that must be logged be raised.

The operation of the two DELPRO nodes used by ASB for centralized ordering of all supplies and equipment for OD program areas also was reviewed and met with all procurement rules and regulations.

Procurement Cooperation and Liaison

The administrative officers and purchasing agents have begun holding weekly procurement meetings to discuss new policies and procedures.

These meetings will be a forum not only for notifying staff about changes in procurement policies but also for solving problems. Each purchasing agent also will be meeting separately with staff at least one morning a week to cover procurement activities.

ADP Improvements in Procurement

All purchasing agents are using the IRMA software in their PCs to communicate with the NIH Administrative Data Base (ADB). It is no longer necessary to lease individual AT&T terminals for each agent to process orders.

Contract for the Maintenance of the Central Files Facility

The Automated File Referencing System for the central files, which is maintained by a contractor, now has 39,829 documents in its database, and the list of acronyms compiled since the beginning of the project has 2,600 entries.

Two new databases have been developed in the file room. The first tracks all file retrieval history since the project began. The other is a "names" database to help in identifying personnel and personnel positions.

The contractor has also been asked to assist the Office of Technology Development in developing an OTD Data Management System to track documents in its area.

Property

The automated Property Management Information System (PMIS) has now been operating for about two years. Many measures have been taken to strengthen the property management activities at NIH. Supervisors are being given major responsibility for the inventory and control of equipment in their areas. Users of personal custody equipment (1) must sign for such equipment and (2) must make sure they are relieved of custodial responsibility when they leave their positions or when the property is transferred to another employee. Property subcustodians are responsible for locating and tagging all new accountable equipment within five days after it appears in the PMIS queue.

All OD property subcustodians have been trained to use PMIS and are updating their property records so that the logging of incoming inventory will as efficient as possible.

A property committee of lead property coordinators, administrative officers, subcustodians, and representatives from each NCI division has been formed to discuss property issues and to make recommendations regarding property inventory and control to NIH. The committee has suggested that (1) a subcustodian handle no more than 450 pieces of property and (2) EPMS plans for subcustodial and custodial officers contain an element for property inventory and control.

Travel

In January, the NIH-ADB travel module for processing domestic and local travel orders and vouchers went on-line. ASB will enter orders and vouchers for the OD staff members who travel occasionally. However, the other Institute areas, which process many more of these forms, will enter their forms directly into the system for ASB review. A log system using the Q&A software package enables program administrative officers to access travel data for reports, particularly when travel ceilings and budget restrictions are imposed. A special travel problem-solution log also has been set up.

Financial System

ASB now prepares a new, customized report for the weekly budget that replaces the one provided by the Division of Financial Management. This report separates and describes each OD office and branch expenditure. Because of its detailed format, the new report offers more stringent budget control and a simpler way to distribute information to the OD offices and branches.

Personnel

ASB is using the Q&A software to maintain three databases for Requests for Personnel Action (SF-52s), within-grade increases, and probationary periods. With this software, personnel information can be easily accessed and reports can be easily prepared.

ASB is the main office for processing all personnel actions. The actions are keyed into the IMPACT (personnel) System and approved electronically before being forwarded to personnel office.

Clearance of Employees for Separation or Transfer

ASB started a checklist system for the Clearance of Employees for Separation or Transfer. The checklist ensures that all clearances are taken care of and all property, ID cards, keys, and the like are returned before an employee leaves the Institute.

New Training Systems

In November 1991, ASB started taking part in a pilot of the IMPACT Training System, which initiates, approves, and tracks training requests on-line. When the pilot is completed, the IMPACT system should efficiently handle various training requests.

The Q&A Log System also is being used to keep training records, from which continual reports are compiled and printed quickly.

Renovations and Space

ASB organized the removal of asbestos and the installation of new lighting and ceiling tiles for the 3rd and 10th floor hallways in Building 31. ASB is also coordinating the renovations for the Office of

Cancer Communications in Building 31 and the Personnel Management Branch at Executive Plaza South.

General Administration

ASB started realigning space and duties, moving the administrative officers closer to the purchasing agents they supervise. This relocation will help the officer and agent to work together more efficiently, to offer better service, and to cover program areas for other officers.

ASB staff are still conducting internal timekeeper audits to review the office records of all OD areas to assure compliance with Department regulations.

The staff has started to use the Transmission Control Program/Internet Protocol (TCP/IP). This program links the NCI network to the NIH ADB so that individual PCs can quickly process travel, procurement, and property actions. With this new capability, the branch will not have to rent the one dedicated AT&T terminal from DCRT to accomplish these actions.

Financial Management Branch
Chief: John Hartinger

The Financial Management Branch (FMB) is responsible for formulating, presenting, and executing the Institute's annual budget. This responsibility involves planning, organizing, and directing a comprehensive financial management program for developing formal budget submissions to the Executive and Legislative Branches and for establishing, evaluating, and monitoring systems for expending Federal funds.

The branch's responsibilities affect the entire NCI organization. The budget analyst works closely with division administrators to develop budgets. The analyst monitors at least one division budget, directing such aspects of budget development as the intramural and extramural commitment bases. Analyzing Congressional Appropriations Subcommittee reports for specific financial directives or coordinating the AIDS budget for all NCI divisions is another responsibility.

Activities

1994 Preliminary Budget

The 1994 NIH Preliminary Budget has a new programmatic structure that is designed to support the Strategic Plan and Federal Coordinating Committee on Science, Engineering and Technology (FCCSET) Initiatives. These initiatives are combined with the traditional mechanism tables, the AIDS-cancer splits, and numerous special emphasis areas.

The Strategic Plan areas associated with budget data are Critical Technology, Research Capacity, and Intellectual Capital. Critical Technology is separated into overlapping areas of molecular medicine, biotechnology, vaccine development, and structural biology. The FCCSET

areas are biomaterials, high performance computing, biotechnology, science education, global change, and food safety. This year the special emphasis areas are Alzheimer's disease, infant mortality, minority programs, clinical trials, prevention, rural health, alcohol related research, and vaccine- related research, including vaccine development and breast cancer research.

Automation of Reports on Non-Appropriated Funds

The past year FMB has automated some of the reporting of non-appropriated funds (funds received from royalties, CRADA monies, and donations to NCI Gift Fund). This automation is the first step toward enabling division and FMB staff to track unappropriated funds the way we track appropriated funds. New reports integrate data on non-appropriated funds in the Status of Funds and the Operating Budget reports, which are provided to the Divisions. The reports also show how the funds, by sub-object class, are spent; this information will be useful for external reports for GAO and OMB.

The branch has concentrated on establishing and updating operating manuals for the royalty, gift fund, and CRADA accounts. A CRADA database has been created for historical data on receipts and obligations and up-to-date balances for individual CRADAs.

To track gift fund activities, a standardized packet has been devised. The packet, an accounting approvals, obligations, gift fund entertainment expenses, investments, and interest income, will be updated continually and sent quarterly to the OAM Associate Director.

A similar packet has been created to record royalty approvals and obligations. This packet is updated as needed and is distributed quarterly to administrative staff.

We are continuing to assess and improve the system for logging and tracking NCI Gift Fund donations. Now all information on such gifts is handwritten in a book, the first entry recording the date the gift is received. All contributions must be quickly deposited. Continual communicating with our gift fund contractor ensures that all problems are quickly resolved and all acknowledgements are sent promptly to donors.

If a donor wants the contribution to be used by a particular organization or for a specific area of cancer research, the request is recorded so that the Executive Committee can distribute the funds appropriately.

Travel

In FY 1992, Congress imposed PHS travel ceilings, reducing the travel allotment requested in the 1992 President's budget. NCI expenditures were reduced by $1,262,000, allowing a ceiling of $4,535,000 for 1992 compared to $5,828,000 for actual travel obligations in 1991. Another redistribution of travel ceilings by NIH further reduced the NCI travel ceiling to $4,514,000, presenting the branch with major management and financial challenges.

To meet these challenges, FMB has created a tracking file, from a report is prepared and distributed monthly to the divisions. The reports shows up-to-date travel obligations tracked against the divisions' ceilings, charges to appropriated CANs, and travel obligations to reimbursable, royalty, CRADA, and gift fund CANs. Obligations are separated into patient versus non-patient travel and subobject code. This monthly status will be a very useful in preparing for the end of the fiscal year.

Delay of Obligations

The 1992 appropriation for NCI contained an unprecedented requirement that 10 percent of the Institute's projected yearly obligations for grants and contracts be made on September 30, 1992, the final day of the fiscal year. This means that the Institute would have to obligate more than $200 million on this day. For this task to be accomplished efficiently on what is normally one of the busiest days of the year for financial managers, several OD offices devised a plan for the orderly apportioning of these funds. The offices involved were the Financial Management Branch, the Grants Administration Branch, the Extramural Financial Data Branch, and the Research Contracts Branch.

Specific grants and contracts were identified, processed, and loaded onto a special tape for obligation by the Division of Financial Management.

The data on grants was processed electronically by the Grants Administration Branch and sent to a special tape maintained by the NIH Division of Financial Management (DFM). DFM performed preliminary edit checks and EFDB reconciled the reports; all awards were in place for obligation on September 30.

Working with the NCI Research Contracts Branch, the Financial Management Branch developed a list of contracts, totaling $20.5 million, to be obligated on September 30. FMB developed a Symphony spreadsheet with all data necessary for the NIH Division of Financial Management to obligate each contract.

Using this information, FMB and DFM loaded the contract information onto a computer tape used to enter each contract in the central accounting system on September 30. This process reduced the chances for errors by allowing the task of obligating millions of dollars in one day to be planned for months in advance.

Hiring Freeze

The Institute was required by the 1992 Rescission Bill (PL 102-298) to reduce its personnel costs; the NCI portion amounts to about $1 million. To effect this reduction, NCI declared a partial employment freeze requiring a ratio of two separations for each person hired; delayed employment commitments, whenever possible, until the next fiscal year; and modified the obligation pattern for Visiting Fellows and participants in the Intramural Research Training Award program. These

steps are expected to meet the NIH targeted rescission amount of $851,000.

AIDS

FMB has continued to enhance the design and operation of an NCI AIDS database. NCI and other ICDs are required to report quarterly their expenditures for each AIDS project. These reports become part of the NIH-wide, computer-based AIDS Research Information System (ARIS).

In the past, FMB has collected and coordinated the listing of division projects and expenditures by using complicated Symphony spreadsheets, which became cumbersome as AIDS research increased. FMB worked with a contractor to develop a comprehensive AIDS database enabling each division to enter its data and electronically transmit it to FMB for consolidation. The database can be used to produce printed reports so that FMB can easily verify the data. The branch now can prepare summary reports more quickly.

Using this new database instead of the Symphony spreadsheet, the Institute can collect more information on each AIDS project without increasing the division workload. The data can be used to generate several reports for completing many assignments and NIH requests for AIDS information.

After the branch consolidates quarterly information, the data also can be transmitted electronically to the NIH ARIS database. This capability greatly decreases the staff's time and effort each quarter to transmit AIDS data to and receive data from the NIH Office of AIDS Research.

Personnel Management Branch
Chief: Marianne Wagner

The Personnel Management Branch (PMB) is responsible for the Institute's personnel management program, including policy development, employee development and training, work force planning, recruitment, salary administration, and collaboration with the Institute's EEO Officer on equal employment opportunity.

Activities

Total Quality Management

Because of PMB's continuing interest in meeting the needs of its internal and external customers, in November 1991, PMB established a Total Quality Management Council to integrate TQM into all PMB activities. A TQM Implementation Plan was developed to introduce this concept to the branch. The plan has five components: 1) training, 2) operating structure, 3) measures to determine the success of work improvement activities, 4) communication, and 5) recognition.

Classification Guide for Secretarial Positions

To ensure consistency in the classification of secretarial positions in the Institute's intramural laboratories and branches, PMB developed an Intramural Secretary Classification Guide, which was endorsed by the NIH Director of Personnel Management for NIH use.

Management Information Seminar Program

With the Intramural Supervisory Training Committee, established by the Institute Director, PMB designed and started the Management Information Seminar Program for intramural laboratory and branch chiefs. The program focuses on six major areas: 1) managing performance, 2) rewarding employees, 3) hiring quality staff, 4) understanding the Merit Promotion Program, 5) managing employee conduct, and 6) managing time.

Changes in Review Requirements

PMB worked with the Institute's Equal Employment Opportunity Advisory Group to develop a proposal for changing the Laboratory Specialist Peer Review Panel process. The proposal to eliminate the requirement for a panel review of laboratory specialist appointments or promotions at the GS-11 level was approved by the NIH Board of Scientific Directors. The board also approved our revised criteria for reviews of (1) appointments or promotions for GS-12 level laboratory specialist positions and (2) newly developed appointments or promotions for GS-13 laboratory specialist positions.

Automated System for Reviewing and Approving Training Requests

PMB and the DHHS Regional Personnel Office in Philadelphia were selected by DHHS to test and evaluate an automated system for initiating and approving Training Nomination and Authorization forms (HHS-350s). Because the test program was a success, the system will be used in DHHS offices nationwide, beginning in April 1993.

Research Contracts Branch
Chief: John Campbell, Jr.

The Research Contracts Branch (RCB) handles for the following tasks.

- Developing policies for the Institute's research contract programs
- Developing guidelines, procedures, and controls to promote compliance with policy, regulatory and statutory guidance, and sound contracting practices
- Providing contract management services for all Institute research contracts
- Designing and carrying out automated Institute contract management systems.

Activities

Local Area Network

At the beginning of FY 1992, nine RCB workstations were connected to the LAN. As of July 1992, 55 stations have been connected, and the last 20 should be connected by the end of this calendar year.

An RCB specific menu, with several added utilities, has been developed for the LAN. Any LAN user can access the NCI-LAN Directory, the RCB Intercom Listing, the Human and Animal Assurance Listings, the Division of Contracts and Grants Information and Instruction Memorandums, and the Justification for Other Than Full and Open Competition (JOFOC) Desk Guide. Shared software packages on the LAN are WordPerfect, Symphony, Rbase, and a few others.

By July 1992, the RCB work forms were available the on LAN so that the electronic forms could be filled out without creating hard copies. Contract specialists also can access a system on the LAN to prepare and assemble contracts and Requests for Proposals (RFPs).

RCB is hampered somewhat by having to share its network servers with other branches. The hardware and software to upgrade the RCB LAN should be delivered in September 1992 and should be installed shortly thereafter.

Laser jet printers also have been linked to the LAN, and by the end of this calendar year, each RCB section will have a laser printer for each user having access to the RCB LAN.

Frederick Cancer Research and Development Center Recompetition

Planning for the recompetition of the contracts to support and operate the Frederick Cancer Research and Development Center (FCRDC) has been ongoing since the beginning of FY 1992. While RCB does not expect to issue RFPs for another year, competition of this magnitude requires a formidable measure of planning to deal with such details as pre-solicitation approvals. The recompetition is schedule, but procurement actions of this size significantly tax branch resources.

Training

In March 1992, all RCB contract specialists attended a two-day seminar "Negotiate to Win" at Executive Plaza. The seminar was conducted by the Cooper Management Institute, some of whose other clients have been Toyota America and IBM. Chief contracting officers from other institutes and senior staff from the NIH Division of Contracts and Grants also attended the RCB-sponsored seminar.

The participants rated course content and the instructor very highly. NIH and a few ICDs have expressed an interest in the course, and the Division of Contracts and Grants may sponsor a seminar sometime next fiscal year.

Administrative Career Development Interns

RCB has trained three interns, exposing them to as much of the procurement cycle as possible. They were assigned routine printing purchases, contract modifications, and new awards. The contracting officer involved them in all planning and strategy sessions associated with the procurement cycle. While it is difficult to show the interns a complete procurement during their assignment, by taking specific, sequential steps from several procurements, they can observe the complete procurement process.

Decentralization of Procurement

The RCB chief is a member of an NIH Task Force charged with developing a plan to decentralize all station support procurement activities now handled by the NIH Division of Procurement. Under the decentralization plan, procurement support (except ADP and construction procurements) that was previously provided by the Division of Procurement will be offered to the ICDs with decentralized research contracting authority. If this plan is fully realized, RCB will eventually become a "full service procurement organization," responsible for the spectrum of procurement activities--an enormous benefit to the Institute.

Science Enrichment Program

The Division of Cancer Prevention and Control (DCPC) Science Enrichment Program presented a special challenge for RCB staff. The program was set up (1) to encourage under-represented minority and underserved youths who show an interest in science or mathematics to select careers in science, mathematics or research and (2) to broaden and enrich the students' science, research, and sociocultural backgrounds. This regional summer program offers a science-oriented curriculum, special events, seminars, and field trips and evaluates the students.

DCPC first contacted RCB about the procurement in early October 1991. If the deadline for starting the program in June 1992 were to be met, the procurement would require extreme effort and constant monitoring. RCB received the project plan in mid-November 1991; six months later, the Institute awarded four contracts. Essentially, the procurement cycle was completed in almost one-half the time the cycle normally takes.

This accomplishment is a prime example of what can be accomplished with the cooperation and coordination of all concerned. In this case, RCB, the Contracts Review Branch, the Division of Extramural Activities, and the DCPC program staff did an outstanding job in completing their respective tasks, while coordinating activities to make these awards. This was a special task, requiring unusual effort, but it did demonstrate what could be done under extraordinary circumstances.

Division of Cancer Etiology Fast Track Procurements

In late January 1992, RCB was notified that the Division of Cancer Etiology (DCE) would receive additional funds for six FY 1992 projects.

These projects were the subject of Congressional interest and designed as special initiatives by the NCI Director.

Since contract awards usually require a nine- to twelve-month procurement cycle, RCB, DCE, and the Contract Review Branch would be hard pressed to award these contracts before the end of the fiscal year. However, with outstanding team work, all these projects were awarded in time.

Delay of Obligations

The FY 1992 NCI appropriation included a requirement that 10 percent of the total obligations for the fiscal year be made on the last day by September 30, 1992. Working closely with the NCI Financial Management Branch, RCB identified $20.5 million in contract actions to be obligated by this date. September 30 is one of the busiest days of the fiscal year, and the teamwork required to execute such a large obligation of funds on this day is indeed noteworthy.

Management Analysis Branch
Chief: Thomas Kearns

The Management Analysis Branch (MAB) is responsible for the following administrative and staff services.

- Carrying out studies
- Researching and analyzing Institute programs and operations
- Preparing and maintaining Institute policies and procedures in the NCI Manual Issuances and Delegations of Authority
- Interpreting and analyzing legislation, regulations, policies, and procedures that affect, or have the potential to affect, the Institute's management and operation
- Processing requests for organization changes and informing staff of the organization change process
- Preparing and maintaining organization charts and function statements
- Executing the Paperwork Reduction Act
- Forming design and records management
- Coordinating various Institute-wide reports and plans.

Total Quality Management Program

Selected MAB staff members were part of the effort to institute the Total Quality Management (TQM) program at NCI. Two MAB staff members

were members of the TQM Steering Committee and one was the Executive Secretary for the TQM Council. In June 1992, the TQM Steering Committee issued the Total Quality Management Implementation Plan or the "Roll Out Plan." The plan was accepted by the Council and is in the early phases of implementation. Before the TQM Implementation Plan was issued, MAB was chosen as the organizational NCI principal coordinator of the TQM effort.

Special Projects and Studies

MAB was the Institute coordinator for the following studies or research projects.

- Served as chair of the NCI Electronic Forms Subcommittee, which surveyed administrative staff and reviewed software to develop a database of commonly used electronic forms. In May 1992, a report was issued recommending a contractor-supported pilot project to test the design and operation of such a system.

- Assisted the DEA Research Analysis and Evaluation Branch with a review of internal records to determine retention and storage requirements. The records have historical value and are classified as permanent.

- Coordinated the administration of the NCI Internal Control Review of Gift Fund.

- Coordinated the efforts of a staff work group responsible for developing standardized EPMS plan elements and performance standards for different positions. The elements and standards were assembled in an electronic database so that any NCI LAN user could access these materials to produce EPMS or PMRS plans. This was a cooperative effort involving MISB, MAB, and Institute division program and administrative staff.

Institute Reports and Plans

- Coordinated the annual Administrative Accomplishments Report. The report highlights the most noteworthy Institute administrative achievements for the fiscal year.

- Prepared the annual OMB Information Collection Budget Request for FY 1992-1993. The budget request reports on projects that ask for information from the general public. The request contains data on each project's cost and on plans for information collection, including how quickly the public responds to NCI requests for information. The information requests are usually surveys for epidemiologic studies or other biomedical research projects.

- Coordinated the annual Advisory and Assistance Services (AAS) Plan, which compiles the Institute's divisions plans for acquiring advisory and assistance services, as defined by OMB Circular A-120. The information is included in an overall NIH plan.

Policy Issuances

- Revised the pamphlet describing the Institute's intramural review policy. This pamphlet explains the process for reviewing the merit of in-house scientific operations to the external scientific community and gives a statement of policy so that all NCI staff members are well versed on these review process and can apply it consistently.

- Prepared and issued an NCI Manual Issuance to carry out the NCI On-the-Spot Award Program "intended to provide NCI managers and supervisors with a means to recognize, in a more expeditious manner, the contributions of individual NCI employees to the accomplishment of the work of the NCI."

- Developed an NCI policy issuance on the use of royalty funds. The policy is to guide NCI staff on the various general and specific projects and activities that can be supported with royalty funds.

- Prepared an NCI Manual Issuance on receiving and using gift funds. The policy is to notify division supervisors of staff efforts to secure non-government funding, such as gifts or donations to NIH or NCI Gift Funds, for intramural research projects.

- Issued an NCI policy issuance for the Time Off Award, which rewards employees for noteworthy contributions to the mission of the Institute.

- Prepared an NCI Delegation of Authority, which grants NCI Scientific Directors the authority to approve foreign travel.

Organizational Changes

MAB maintains a set of Institute organization charts and function statements. In April and October, the branch distributed the revised versions of these charts and statements. MAB reviewed and processed 28 organizational changes this fiscal year.

Grants Administration Branch
Chief: Leo Buscher, Jr.

The Grants Administration Branch (GAB) is responsible for the following tasks:

- Negotiating and issuing grant and cooperative agreement awards;

- Helping grantees and program staff interpret policies;

- Monitoring the financial assistance process to make sure that the awardee and the Government perform all required business management actions in a timely manner, before and after award;

- o Evaluating an applicant's business management capability and monitoring the grantee's management performance to confirm that PHS funds will be or are being properly managed;

- o Interpreting existing financial assistance policies and, when necessary, developing new policies;

- o Reviewing all financial assistance applications, financial status reports, and other documents to ensure awardee compliance with established administrative and financial policies and procedures and sound business practices; and

- o Performing a cost analysis on approved grant and cooperative agreement applications before the award is made to assure that the amount of funds awarded for the project is fair and reasonable.

Activities

NCI Construction Grant Program

GAB and the DCBDC Research Facilities Branch continued to administer and to manage cancer-related grants received from NIH solicitations for construction grant applications. GAB kept an extensive database to track each NCI-supported construction project.

GAB completed the first year of monitoring the use of NCI-supported cancer research facilities. More than 60 grantees receiving support for about 160 construction grant projects were contacted. Each recipient provided details about the use of NCI-funded space. About 95 percent of the grantee institutions had complied with the facility usage requirement. The remaining five percent have moved NCI programs to newer facilities. GAB conducted site visits at several institutions reporting a change in the use of its facilities. It conducted these visits to assure that the new allocation of space was equivalent to or greater than the space originally constructed using Federal funds. NCI is considering transferring the remaining 20-year usage obligation to the new locations.

NCI has awarded three new construction grants this fiscal year. In addition, two institutions that previously received support for the design of a Proton Therapy Research and Treatment Center have applied for two construction grants to complete the proton therapy equipment and facilities. A total of $4 million was set aside to support these projects.

GAB staff reviewed several NIH and PHS policy issuances relating to construction grants; their comments were well received.

Training New Staff

GAB has developed a training program for new specialists that combines theory and practice. This program, consisting of about 35 one-to-two-hour seminars on various grants management topics, is conducted by GAB "experts." These training sessions instruct new grants management specialists on selected policies and guidelines and, combined with

individualized training, should enable the new specialists to advance to senior grants management positions. At some of these seminars, staff members from different offices within NIH, such as the NIH Policy Office, the NIH Division of Financial Management, and the NCI Extramural Financial Data Branch, discuss the functions of their respective organizations and their interaction with GAB. The specialists also tour a cancer center and attend a presentation on the center's business management systems.

These training sessions play an important role in the development and growth of a grants management specialist. For the first two years, all new specialists also work closely with their team leaders on a daily basis.

The time GAB devotes to the training process has been, and continues to be, beneficial to the trainees and a worthwhile investment for the branch.

New or Revised Policies

This fiscal year GAB has focused again on giving NCI staff the most up-to-date information on grants policies and procedures by establishing new NCI-GAB policies and guidelines and revising old ones. The following policies were issued or revised in FY 1992.

NCI 1.02	Administrative Increases for Salaries
NCI 3.12	Concurrence Memoranda
NCI 3.38	Guidelines for Award of Grants Not Exceeding $50,000 Direct Costs
NCI 4.20	Change of Grantee Institution
NCI 5.19	Minority Research Supplement Program
NCI 3.14	Cost of Living Escalation NCI Grants
NCI 3.26	Inactivation of Unfunded Applications
NCI 3.38	Ranking/Approval/Funding of Grant Applications and Notification to Unsuccessful Applicants
GAB 3.55	Guide for Cost Analysis
GAB 3.86	Guidelines for Administration of Clinical Trials Program
GAB 1.26	Veterans Administration Investigators
GAB 3.15	Request for Revised Budget
GAB 3.32	New Grantee Institutions
GAB 4.02	Change Notices/Revised Awards/Updates
GAB 4.18	Successor in Interest
NCI 5.16	NCI Administration of Small Business Innovation Research (SBIR) Program

Duplicate Grant Numbers

For several years, GAB has had problems with duplicate grant numbers for the Fellowships (F), Career (K) and Training (T) grants. DRG reserved blocks of numbers to identify these particular grant activities. However, as the number of NCI applications grew and sequential numbers were exhausted, numbers assigned to other grants categories duplicated numbers designated for the F, K, and T categories. After extensive

negotiations, the Division of Research Grants (DRG) agreed to start the sequential numbering of all NCI grants activities this year.

FY 1992 Delayed Obligations

The 1992 appropriation for NCI specified that $208 million must be obligated on the last day of the fiscal year--September 30. It was decided that about $180 million of these deferred obligations would be for grants. To meet this requirement, NCI, DRG, and DFM developed a method to systematically obligate grants on the last day of the year. Grant awards of $300,000 or more were slotted for delayed obligations.

These awards were flagged with a special code and were posted to a special tape in DFM. DFM ran the tape through the regular edit checks and produced reports on the contents of the tape on July 31, on August 31, and on selected days in September. DFM, NCI, and DRG worked to correct any errors or problems identified by running the tape. NCI scheduled September 15 as the final date for completing the awards and posting them to the special tape. On September 30, DFM released the tape for the obligations to be recorded that day.

A GAB work group developed, tested, and monitored the delayed obligation system. The pilot initiative targeted a small group of grants to "test" the system, with the expectation that $180 million would be obligated on September 30. The group, along with EFDB, DRG, and DFM, worked out a system to complete all aspects of award issuance for the obligation date. This system was available to all the ICDs and used by the ICDs that obligate funds on September 30 by the phased-award method.

Computerization

GAB continued to develop a comprehensive Grants Management System (GMS) that uses LAN facilities for calculating and processing awards, for tracking grant actions, and for creating an historical data base for storing information pertaining to funded NCI grants and cooperative agreements. The main GMS system is completed and a log system has been added to the specialists portion of the worksheet, allowing electronic tracking of grant actions. A Records Management Center component has been added to the system to collect and track data on items missing from grant applications. The component produces a form letter that is sent to grantees, requesting the missing information. The system is expected to be fully operational the beginning of FY 1993.

GAB has increased the number of staff members connected to the LAN. Ten more users were added this year. All GAB personnel now have personal computers connected to the LAN.

GAB has been connected to "NIH-NET" through a router on the ground floor of EPS. The router is shared with EFDB, RCB, and the OD LAN. The branch now has access to mainframe data through the TCP/IP protocol. The branch is transferring IMPACT data from the NIH mainframe to the GAB network servers using this system. Downloads that took two to three hours using a 2400 baud modem now take less than 10 minutes.

GAB has ordered 47 486DX personal computers to replace the aging AT computers being used. The order was advertised in the CBD on May 29, 1992. The new machines may be delivered by the end of the fiscal year.

GAB has purchased Microsoft Lan Manager network software to replace the 3Com 3+Share. The branch is waiting for the software tape version in order to install it on our 3Com servers.

GAB has developed a PC/Paradox version of our Control System, a system for tracking the specialists, program directors, start dates, and other information associated with specific grants. The branch is now using the program and expects to make the system available to NCI Program staff in the near future.

GAB has continued to conduct in-house computer training for GAB staff. In addition to introductory classes for new employees, the branch held classes in network printing, obtaining grant information through WYLBUR, and using tables in WordPerfect.

New Funding Mechanism

GAB and program staff convinced NIH to establish a new funding mechanism identified by the code U43. This new designation was necessary because, for the first time, cooperative agreements have been identified as a funding mechanism under the SBIR Program. Until now, applicants seeking awards under the SBIR Program have been able to apply only for grants and contracts with NIH. The new cooperative agreement mechanism was part of the 1992 PHS Omnibus Solicitation for the SBIR Program, which included a solicitation for cooperative agreement applications for three NCI programs.

Extramural Financial Data Branch
Chief: Stephen Hazen

The Extramural Financial Data Branch (EFDB) is responsible for financially managing NCI grant and cooperative agreement expenditures by handling the following services.

- Maintaining grant financial data
- Performing financial analyses to provide funding guideline and policy recommendations
- Preparing budgets for the grant programs of the Institute
- Responding to requests for historical and current grant funding data

EFDB provides information system services for program, review, and contract management staff by administering the Contracts Management System (CMS), the Pre-Award Tracking System (PATS), and the Contracts Administration System (CAS). Moreover, EFDB provides a variety of information services to the extramural staff and for the management of the Institute.

Activities

Budget Formulation and Execution

As a result of the unique appropriation law that made about $223 million available for obligation on September 30, 1992, EFDB organized a work group with representatives from the NIH DFM, DRG, and NCI to establish a process for managing the obligation. With GAB and program staff, EFDB identified the grants for obligation and monitored the obligations to assure that the Institute could meet this unusual fiscal requirement.

EFDB advised the NCI Executive Committee on the management of this obligation (1) to assure that the funding of Research Project Grants (RPGs) was accomplished within the NIH cost containment principles and (2) to assure that the Institute could fund the greatest number of competing RPGs awarded by NCI in a single fiscal year.

For improving funds control and grants management practice, an EFDB work group revised the format and distribution process for the ranking lists and pay lists. These lists are used to document funding selections within the payline each review round. Using suggestions from GAB and the divisions' program and administrative staff, the work group devised a new format that followed the PHS grants management policy and procedures manual. This new format and distribution process will be routinely revised to conform more efficiently to the PHS policy manual.

EFDB developed, monitored, and modified grant funding plans to assure proper, effective expenditure of funds for NCI scientific assistance programs. For FMB, EFDB prepared databases for formulating grant budgets for the 1993 Congressional Justification, the 1994 Bypass Budget, and the Department's 1994 OMB submission. EFDB staff coordinated the Institute's submission of nominations for the Shannon grant awards, instituted by Dr. Healy in FY 1991. These awards enable investigators whose grant applications are not within the payline, to test hypotheses or to initiate high-risk research projects.

Information and Analysis Services

Responding to several requests from the National Cancer Advisory Board (NCAB), EFDB staff generated reports and analysis on the following.

- The foreign grant portfolio
- The portion of the RPG portfolio allocated to the Outstanding Investigator Grant (OIG) and the MERIT (Method for Extending Research In Time) grant mechanisms
- Principle Investigators whose current support exceeds $750,000 in direct costs
- The funding implications of three options that the NCI OIG work group presented to the board.

To prepare for a conversion of the current fiscal control systems to a system that would use the LAN more effectively, EFDB staff evaluated several alternative database systems.

For the CMS to be more accessible to the divisions and RCB, a CMS contractor was commissioned to evaluate LAN-based approaches to rewriting several of CMS system components. The evaluation is due by the end of the fiscal year and will allow EFDB to start converting the system during FY 1993.

EFDB staff continuously enhanced and improved the capabilities of two Institute systems: the FYACCESS system and the Extramural Information System. Enhancements were developed for user needs and documented in user manuals.

Management Information Systems Branch
Chief: Betty Ann Sullivan

The Management Information Systems Branch (MISB) is the consultant for selecting, applying, and using automatic data processing (ADP), office automation (OA), and telecommunications (TC) technologies. MISB determines the requirements for such systems; designs, implements, and maintains application systems and LANs; advises the Institute on the technological and policy impact of ADP, OA, and TC developments; and coordinates the Institute's Information Resources Management (IRM) activities.

Activities

Support for NCI-NICHD LANs

Work continued on all aspects of LAN support, including network design and configuration; cable, hardware, and software installation; user support; planning; and product evaluation for integrating and expanding the capabilities of NCI and NICHD LANs in EP and Building 31. Specific activities include the following.

- LANs were installed in the DCT Cancer Therapy Evaluation Program (CTEP), in MAB, in PMB (EP location), and in the Office of Cancer Communications. The number of installed file servers increased from 38 to 52 and the number of workstations increased from 337 to 649.

- Cabling was completed for the 3rd, 4th, and 10th floors of Building 31.

- A changeover from 3Com to Microsoft's LAN Manager network operating system was started in EFDB and the Division of Cancer Etiology. The CTEP LAN was also installed with the LAN Manager operating system.

- A new E-Mail system was chosen to replace 3Com E-Mail, and a plan for the change was implemented.

- All NCI LANs in EP were connected to NUnet to provide high speed connection (1.5MB) to DCRT facilities. Installation of the TCP/IP protocol, used for the high speed access, has begun, and users are being trained as the installation proceeds.

- Major extensions were made to the DCPC LAN in EP. A bridge to create a single logical LAN for the installations on the second and third floors was installed. The DCPC SUN Sparkstation was installed as a TCP/IP host computer giving access via the SUN to all DCPC LAN users. A GATORBOX, which allows the DCPC APPLETALK LAN to communicate over NUnet to DCRT and to communicate with the DCPC SUN Sparkstation, was also installed.

- LAN administration was provided for the OD and DCE LANs in Building 31. Activities included planning and procuring hardware and software upgrades, installing virus scanning and protection software, and starting procedures for database sharing.

MISB took part in NIH and NCI groups developing requirements for the coordination of networking activities. These groups included the following:

- Office Technology Coordinators Networking Subcommittee, which is a forum for the exchange of information and requirements between the ICDs and DCRT;

- NIH Mail Directory Working Group, which is developing an NIH-wide LAN user directory of electronic addresses, building and room numbers, telephone and facsimile numbers, and mail-forwarding capabilities; and

- Working Group for NCI-Frederick Cancer Research and Development Center Network, which is responsible for designing and initially installing the fiber optic backbone for the FCRDC campus.

Support for NCI Intramural LANs

A new project to set up LANs for the Institute intramural programs was started during the year. This project included the following actions.

- Selecting LAN closets for Buildings 37 and 41 and for the new wing in Building 10, completing LAN cabling for the new wing of Building 10, establishing cabling specifications for Buildings 37 and 41, and starting the cabling for these buildings.

- Receiving concept approval for a 5-year contract for technical support, hardware procurement, and hardware maintenance for setting up a basic infrastructure of networks; obtaining Delegated Procurement Authority; and proceeding with the award of the contract.

Applications Support

MISB continued to develop, maintain, and enhance custom software for Institute microcomputer, LAN, and mainframe users and to provide continuing support for these systems.

- A prototype system for the collecting data on minority participants in in-house training programs was developed. This standalone PC or network-based system will standardize data collection, track data, and report on minority participation in various in-house training programs.

- NIAID's Employee Performance Appraisal Forms System was installed on the MISB LAN, and several users from different offices were linked to the LAN for testing and evaluating the software. NCI reviewed its existing performance elements and standards and developed procedures for incorporating the NIAID system into its environment.

- The branch created a Rolodex-type database system for OCC that searches for private-sector organizations categorized by scientific subject. It can search by organization name, subject, city, and state.

- A system to help NCI's ethics officials store, track, and report employee data on outside activities, financial interests, and possible conflicts of interest was developed and installed.

- The WYLBUR-based retrieval system used for the minutes of the NIH Board of Scientific Directors is being adapted for Institute-wide access to the minutes of the NCI Executive Committee.

Information Resources Management Activities

MISB coordinated the Institute's IRM activities and represented the Institute in many IRM-related activities. These activities included the Office Technology Coordinators, the Personal Workstation Branch's Lead Users Program, the Automated Information Systems Security Program, the NIH IRM Council, and the ADP Extramural Coordinating Committee. Specific IRM-related activities include the following.

- MISB developed guidelines for and coordinated the division submissions for the NCI FY 1994 IRM Strategic Plan and the FY 1993 Information Technology Systems Financial Budget and prepared the final submissions.

- MISB assisted the NIH procurement analyst who audited the NCI ADP procurement clearance procedures. The branch also coordinated the annual internal review of ADP procurement clearance procedures.

- MISB started a support program to assist NCI users in combating computer viruses. The branch briefed NCI contacts, outlining the

problem and offering recommendations and procedures for preventing and detecting computer viruses.

User Assistance and Consultation

MISB consulted with Institute staff and other agencies on the following subjects.

- Using hardware
- Choosing and using custom and commercial software for the mainframe
- Operating Macintosh and IBM-compatible microcomputers
- Implementing LAN environments
- Preparing procurement specifications and applying procurement procedures
- Developing and evaluating options for initiating or modifying current automation approaches

MISB handles such inquiries in brief telephone discussions, in a series of discussions, in contacts with third parties, and in formal analyses or interventions when potential problems were noted. Examples of typical activities in this area included the following.

- Assisting users in converting PCs using 286 chips to PCs using 486 chips. As part of this effort, MISB assisted 30 OCC staff members in converting their NBI system to PCs by installing all software and helping individual staff members with the conversion.
- Developing procedures and providing Institute-wide installations including IRMA Remote and Kermit software to access the ADB travel and property management modules.
- Serving as the technical consultant to the NCI Forms Subcommittee and assisting the subcommittee in selecting and demonstrating PerFORM Pro software for filling in routine forms.
- Producing and distributing information on DOS 5, Windows 3, and WordPerfect for Windows for all NCI staff.
- Developing and distributing the NCI WordPerfect 5.1 Macro Library, a collection of 65 macros created and optimized for NCI users. Requirements in the new NIH Correspondence Manual and the U.S. Postal Addressing Standards were analyzed, reconciled, and incorporated into the NCI WordPerfect automated stationery macros.

OFFICE OF INTERNATIONAL AFFAIRS
Associate Director: Dr. Federico Welsch

The National Cancer Institute places a high priority on international collaboration. Cross-national research offers unique opportunities to advance the frontiers of cancer research. This commitment to international cooperation will continue as the Institute pursues new areas for research with foreign scientists and institutions and increases its efforts to circulate cancer information worldwide.

The Institute NCI works closely with international cancer research organizations and the following agencies.

- o European Organization for Research and Treatment of Cancer (EORTC)
- o International Agency for Research on Cancer (IARC)
- o International Union Against Cancer (UICC)
- o Organization of European Cancer Institutes (OECI)
- o Pan American Health Organization (PAHO)
- o World Health Organization (WHO) and others

The goal of collaborative cancer research between NCI and its counterparts is to improve the quality and quantity of health services for millions of people throughout the world.

Cancer research, and for that matter biomedical research, is conducted worldwide. It is supported by governments, industry, private non-profit institutions, and private individuals. The results of this research are usually published in scientific literature that is available to the public. Most of the collaboration in cancer research is among individual scientists of the developed world; most of it is informal. There are no reliable records that could measure the research contributions from the exchange of information among investigators, but everyone agrees it is substantial.

Therefore, NCI--which supports about 2,300 intramural research scientists and staff, about 670 visitors, and about 5,000 extramural grants, contracts, and training awards--appropriates part of its resources for promoting such international cooperation. There is substantial cooperation between scientists of English-speaking nations and scientists of other developed nations. But there is typically less between U.S. scientists and scientists from either developing countries or non-English speaking nations. The latter cooperative ties receive most of OIA's attention.

The unique opportunities provided by international collaboration are determined either (1) by the special knowledge, skill, or ability of an individual foreign scientist or (2) by the availability of special populations or nutritional or environmental exposure to carcinogenic agents in a foreign country. Such is the case with the high incidence of esophageal cancer in Linxian, China; the high incidence of stomach cancer in China, Chile, Costa Rica, Italy, and Hungary; the high incidence of pediatric AIDS in Rumanian orphanages; the Chernobyl disaster; and the enormous levels of polycyclic aromatic hydrocarbons and other contaminants in the air, soil, and water in Silesia, Poland.

Formal cooperative research programs fall under the aegis of either government-to-government agreements (science and technology or health agreements) or institute-to-institute agreements. NCI takes part in many of the 73 bilateral agreements that NIH has with 39 nations (Table I), directly with organizations in 13 countries and indirectly (through the NIH Fogarty International Center [FIC]) with institutions in another 20 countries.

Direct bilateral participation is with institutions in Egypt, France, Germany, Hungary, Israel, Italy, Japan, Korea, the People's Republic of China, Poland, Romania, the former Soviet Union, and the United Kingdom. Participation through FIC is with institutions in Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Colombia, Czechoslovakia, Finland, India, Mexico, Nigeria, Pakistan, Spain, Sweden, Switzerland, Taiwan, former Yugoslavia, and Zimbabwe.

The Institute's collaboration with institutions in other countries (Chile, Costa Rica, Estonia, Ghana, Honduras, Jamaica, Latvia, Mongolia, Nicaragua, Panama, Trinidad, Turkey, and Uganda) is informally handled either directly by NCI or through international scientific organizations.

During FY 1992, NCI obligated about $25 million for foreign grants and contracts, for the NIH visiting program, for bilateral scientist exchanges, and for international cancer information dissemination.

Extramural Cooperation

This year NCI supported 58 foreign grants and 21 foreign contracts. (The annual NIH publication "Grants and Contracts Awarded" lists the foreign grants and contracts.) Thirty-seven grants ($4,078,228) and 15 contracts ($5,749,369) were awarded with FY 1992 funds (see Table II). The remainder had received funding last year.

The following studies were supported:

- A community-intervention smoking-cessation trial involving 22 communities in the United States and Canada;
- A nutrition study in China to evaluate the effect of multivitamin and mineral supplements in the incidence of esophageal cancer;
- A study on international breast cancer screening and mammography quality control with the World Health Organization;
- A study in Italy, Tanzania, Nigeria, Ghana, Jamaica, and Trinidad on the epidemiology of women at risk of HIV infection;
- A study in Rwanda and Senegal on the incidence and natural history of concomitant Human Papilloma Virus (HPV) and HIV infections; and
- An incident case-control study in cervical cancer undertaken in Costa Rica, Panama, Mexico City, and Bogota.

Other international cooperation included the following:

- A US-Germany effort to develop an HPV mucosotropic vaccine;
- US-CIS (Commonwealth of Independent States) efforts in charged particle therapy and anti-sense oligonucleotide synthesis; and
- The screening of Red Sea natural products for anti-cancer drug activity and cancer epidemiology in migrants, both in with Israeli scientists.

Seventy-one grants ($12,489,868) and 18 contracts ($8,294,712) awarded to American institutions during FY 1992 had a foreign component.

For the Public Health Service, the office manages two US-Agency for International Development-funded projects, one at the Ain-Shams Medical Genetics Center and the other at the NCI-Cairo in Egypt. The office also collaborates with FIC in managing projects (1) in Zagreb, Croatia, on bone marrow transplantation and (2) in Bombay and New Delhi, India, on the carcinogenicity of Indian tobacco products and the molecular epidemiology of childhood cancers. These projects are supported by the FIC Special Foreign Currency Fund Program.

NCI and FIC funded seven Fogarty International Research Collaboration Awards (FIRCA) to NCI-supported scientists for work in Central and East European institutions.

Workshops and Scientist Exchanges

The office fosters collaborative research between U.S. and foreign scientists by cosponsoring international workshops and scientist exchanges.

These workshops assemble small groups of 6-10 American and foreign scientists at the forefront of their fields to discuss confidentially unpublished results for a few days. Thirty-three workshops were held in 1992, the 12 annual US-Japan workshops being the most notable. Table III lists the workshops cosponsored by OIA this year.

In a few cases, OIA has invited young or mid-career scientists from the former Warsaw Pact countries or from other developing areas to workshops on cancer and AIDS prevention and control. Thirty-eight such scientists took part in OIA sponsored workshops.

The Scientist Exchange Program brings American and foreign scientists together for either short-term (less than one year) or long-term cooperation. This year OIA will have cost-shared in the funding of 250 short-term scientist exchanges (for about 500 person-months) and 40 long-term scientist exchanges (for 480 person-months). Long-term exchanges are supported by the NCI-EORTC, the NCI-JSPS (Japan Society for the Promotion of Science) and JFCR (Japanese Foundation for Cancer Research), and the Oncology Faculty Development programs.

The Institute also hosted 626 foreign scientists, for one year or more of hands-on training, through the Visiting Program (countries of origin are

listed on Table IV). It contributed towards the funding of some 100 short-term International Cancer Technology Transfer Fellowships (ICRETT), a program administered by UICC. Some foreign physician-scientists, having passed the Foreign Medical Graduate Exam in the Medical Sciences (FMGEMS), are given clinical responsibilities during their visit at NCI.

Long-Term Faculty Development Programs

Two new programs for oncology faculty development were started this year. These long-term programs prepare young but established scientists from cancer research laboratories in developing countries for independent investigative careers and for leadership positions in cancer research in their countries. Foreign cancer research institutes nominate a limited number of their scientists for the selection committee.

Up to 16 candidates per year are accepted in NCI-supported laboratories. Directors of NCI-designated Cancer Centers can nominate an 16 more candidates from developing nations for training at their respective institutions. The Institute and the sponsoring laboratory or cancer center share the cost of these programs.

Clinical Trials and Preclinical Drug Development

OIA facilitates international cooperation in clinical trials involving U.S. industries, which contribute free pharmaceuticals for such trials. For example, three clinical trials using donated leucovorin or G-CSF (granulocyte colony stimulating factor) to treat colon, colorectal, and breast cancers are being conducted in the United States and at the Russian (former All-Union) Cancer Research Center in Moscow.

The Cancer Therapy Evaluation Program (CTEP) provided investigational anticancer agents for selected clinical trials to foreign investigators. The identification number, title, and investigational agent of the trial are summarized in Table V. Table VI lists the foreign institutions taking part in the clinical trials cooperative groups during 1992. Not all institutions taking part in a cooperative group receive Institute financial assistance to conduct this research. Many investigators take part for the intellectual and emotional satisfactions, their institutions subsidizing the research.

The Developmental Therapeutics Program (DTP) searches for anticancer and anti-AIDS drugs. At least four of the agents undergoing preclinical development for cancer or AIDS clinical trials came from Japan. One of these agents, a fumagillin analogue from Takeda, involved a very active collaboration in which the company carried out toxicology studies using NCI-developed protocols. For many years, there has been a formal collaboration with the Cancer Research Campaign (U.K.) and EORTC. DTP formulated, developed, and produced clomesone, bryostatin, and rhizoxin, which are now under initial clinical study in Europe. Based on the European data, this year NCI expects to file INDs on rhizoxin and anthrapyrazole (both of which have shown preliminary activity in breast cancer) and on bryostatin.

In FY 1992, the International Cooperative Biodiversity Groups were established. These groups will address the interdependent issues of biodiversity conservation, sustained economic growth, and drug discoveries for

cancer, AIDS, and other diseases, including those of primary concern to the developing world. NCI maintains worldwide contacts to acquire synthetic and pure natural products for testing in the cancer and HIV screens. In the past year, 3,400 compounds were obtained from 496 sources.

The DTP Natural Products Branch has an important program of plant and marine collections in 25 countries. U.S. contractors coordinate this work: the Missouri Botanical Garden (Africa and Madagascar), the New York Botanical Garden (Central and South America), The University of Illinois at Chicago (South East Asia), and the Coral Reef Research Foundation (marine organisms in the Indo-Pacific region). There are also collaborations with groups in China, India, and Korea to study medicinal plants and with groups in Israel to study Red Sea organisms.

To explore alternative sources for the anticancer drug taxol, NCI has sponsored surveys of Taxus species in Mexico by the Arnold Arboretum and in Russia by the Rancho Santa Ana Botanic Garden. A special collaboration is being established with investigators in Cameroon to collect and cultivate large amounts of the plant identified as the source of michellamine B, a drug for treating AIDS.

The DTP Biological Testing Branch has collaborated with foreign investigators in developing and further refining the in vitro human tumor cell line panel for cancer screening. For example, human tumor specimens have been provided by investigators from the University of Freiburg, Germany, the Mario Negri Institute in Milan, Italy, and the Norwegian Radium Hospital.

NCI also supports clinical and epidemiological studies in Egypt on adult lymphocytic leukemia (ALL) and non-Hodgkin's lymphomas (NHL). NCI and three cancer centers in India also cooperate on treatment protocols for ALL and NHL. Similar studies are carried out between NCI and Argentinean, Brazilian, Chilean, and Colombian scientists.

Last year's historical ADA (adenosine deaminase)-gene transfer to cure severe combined immunodeficiency diseased (SCID) children was duplicated this year in Milan, Italy.

Cancer Information Dissemination Projects

OIA funds PAHO to distribute published cancer research results to Latin American scientists and physicians. It also funds UICC in Geneva, Switzerland, to provide for international cancer research technology transfer (ICRETT) through short-term fellowships.

With the help of the International Cancer Information Center (ICIC), OIA set up three CD-ROM technology-based projects in FY 1990 to distribute cancer information at centers in Budapest, Moscow, and Warsaw. This technology offers access to the latest published cancer research literature and treatment information, through NCI databases CANCERLIT and PDQ. For a limited time, NCI will supply free subscriptions on compact discs to these databases, while the recipient institute provides the necessary computer hardware.

Because of deficits in telecommunication infrastructure, hard currency restrictions, and the cost to access these databases from the developing world

(either online or by fax), the CD versions of PDQ and CANCERLIT have been particularly attractive to the East European and Russian institutions. Forty-seven additional demonstration projects were set up during FY 1991 and FY 1992. The demonstration sites are listed in Table VII. CANCERLIT is also accessible through electronic mail; PDQ will be accessible before the end of 1992. PDQ, which can be accessed by fax (CANCERFAX: 301-402-5874), will be available in Spanish in the very near future.

ICIC continues to provide free subscriptions to the Journal of the National Cancer Institute and other NCI publications to 221 cancer center or medical school libraries in developing countries in Latin America and the Caribbean, in Central and Eastern Europe, and in Africa and Asia.

The availability of solid scientific information on cancer prevention should lead to anti-smoking campaigns and nutrition intervention programs. The aims are to reduce cancer incidence and to stimulate early detection.

Liaison with National-International Agencies

As mentioned in the introductory paragraphs, OIA is the Institute's liaison with such international agencies involved in cancer research and prevention as EORTC, IARC, UICC, OECI, PAHO, and WHO. OIA also maintains a connections with the following organizations, and many others, that have international components.

United States

The American Cancer Society (ACS)
The National Academy of Sciences (NAS)

United Kingdom

The United Kingdom Coordinating Committee for Cancer Research (UKCCCR)
The Cancer Research Campaign (CRC)
The Imperial Cancer Research Fund (ICRF)

France

The Association pour la Recherche sur le Cancer (ARC)
Institut National de la Sante et de la Recherche Medicale (INSERM)
Centre National de la Recherche Scientific (CNRS)

Japan

Japanese Foundation for Cancer Research (JFCR)
Japan Society for the Promotion of Science (JSPS)

All of OIA's foreign counterparts routinely receive NCI publications, including the section "Progress and Plans" of NCI budget documents. They are constantly apprized of the Institute's priorities and research findings.

The Institute represents the United States on the Governing Council of IARC. The U.S. portion of IARC's regular budget is furnished by the Department of State.

The Institute collaborates with UICC and WHO in setting up overseas national cancer control programs in the developing nations: Central and Eastern Europe, Latin America, Far Eastern Asia, and South and East Africa. NCI provides support to WHO for developing and setting up a global action plan for tobacco control.

Summary

The NCI will continue its efforts to promote scientific cooperation and information exchanges with other countries. This cooperation will continue to include studies basic to all common cancer sites and will continue to focus on epidemiology research, technical workshops, short- and long-term scientist exchanges, and clinical trials.

Table I

U.S. INTERNATIONAL AGREEMENTS INVOLVING THE NCI

COUNTRY	YEAR FIRST ESTABLISHED
Argentina	1972
Australia	1968
Austria	1987
Belgium	1984
Brazil	1971
Bulgaria	1986
Canada	1970
China*	1979
CIS*	1972
Colombia	1981
Czechoslovakia	1986
Egypt*	1975
Finland	1982
France*	1974
Germany*	1976
Hungary*	1977
India	1974
Israel*	1972
Italy*	1967
Japan*	1965
Kenya	1980
Korea*	1976
Kuwait	1981
Mexico	1972
Nigeria	1980
Pakistan	1982
Poland*	1972
Romania*	1974
Spain	1976
Sweden	1974
Switzerland	1980
Taiwan	1983
Thailand	1984
United Kingdom*	1974
Yugoslavia	1973
Zimbabwe	1980

* Institute-to-Institute agreements: the NCI Director is the signatory

Table II
FY 1992 Foreign Grants and Contracts

Country	Grants	Contracts
Australia	7	-
Belgium	1	-
Canada	27	2
China	-	3
Denmark	1	2
Finland	-	2
France	4	1
Ghana	-	1
Israel	8	-
Italy	1	-
Jamaica	-	1
Japan	-	1
New Zealand	-	2
Norway	1	-
Slovenia	-	1
Sweden	4	2
Switzerland	1	1
Tanzania	-	1
Trinidad/Tobago	-	1
United Kingdom	3	-
	58	21
	$4,078,228	$5,749,369
To U.S. Institutions (with a foreign component)	# 71 $12,489,868	# 18 $8,294,712

Table III

FISCAL YEAR 1992
(OCTOBER 1, 1991 - SEPTEMBER 30, 1992)
OIA CO-SPONSORED WORKSHOPS

WORKSHOP	CO-SPONSOR	LOCATION	DATES
Cancer Registries in Latin America	AACR	Quito, Ecuador	Oct. 2-9
Nat'l Cancer Control in Sub-Saharan Africa	WHO	Nyanga, Zimbabwe	Oct. 14-18
Fluorescent Probes in Oncology	INSERM	Montpellier, France	Oct. 15-17
Gene Therapy	CNR	Naples, Italy	Nov. 11-12
Cancer Prevention in Central Europe	GMST	Berlin, Germany	Nov. 21-22
Progress in Radiation Oncology	JSPS	Ann Arbor, Michigan	Nov. 21-23
Lymphocyte Growth and Activation	JSPS	San Diego, California	Jan. 13-15
Research Development in Chile	FIC	Santiago, Chile	Jan. 16-18
Genetic Analysis of Hepatocarcinogenesis	JSPS	Oahu, Hawaii	Feb. 8-9
New Anti-Cancer Drugs and Differentiation	JSPS	Kauai, Hawaii	Feb. 15-16
Growth Factors and Their Receptors	JSPS	Maui, Hawaii	Feb. 15-17
Genomic Instability	JSPS	Kauai, Hawaii	Feb. 16-17
Molecular Mechanism of Programmed Cell Death	JSPS	Fukuoka, Japan	Feb. 18-19
Transgenic Animals in Cancer Research	JSPS	Kanagawa, Japan	Feb. 23-26
Mucin and Other Cancer Associated Antigens	JSPS	Oaha, Hawaii	Feb. 24-26
Cancer Prevention	JSPS	Maui, Hawaii	Mar. 9-10
US-Japan Differences in Cancer Epidemiology	JSPS	Maui, Hawaii	Mar. 12-13
High Dose Chemotherapy	JSPS	Tokyo, Japan	Mar. 13-14
New Cancer Therapies Based on Molecular Biology	BSF	Jerusalem, Israel	Mar. 23-27
Partnership in Cancer Care	AMC, MSCIO	Warsaw, Poland	Mar. 29-31
Drugs and Microtubules	INSERM	Marseille, France	Apr. 2-4
Smoking Cessation in Latin America	PAHO	Santiago, Chile	Apr. 10-11
Hyperthermia in Cancer Treatment	ICHO	Tucson, Arizona	Apr. 26-30
Immunodeficiency and Lymphomas	LACER	Buenos Aires, Argentina	May 4-6
Molecular Biology of Cell Proliferation	ESCP,NIO	Budapest, Hungary	May 6-9
Izmir Cancer Registry	EgeU	Izmir, Turkey	May 3-15
Cell Biology of Chlamydomonas	CMBC	Asilomar, California	May 26-31
Cancer Risk in Silesia	MSCIO	Gliwice, Poland	June 11-13
Medical Informatics	NLM	Geneva, Switzerland	Sept. 5-6
Treatment of Childhood Thyroid Cancer	FIC	Bethesda, Maryland	Sept. 8-16
Controversies in Cancer Research	ACS	Columbus, Ohio	Sept. 9-12
Public Health in Central Europe	CECHE	Budapest, Hungary	Sept. 14-17
Oligonucleotide Effects	INSERM	Arcachon, France	Sept. 25-27

Table IV

VISITING SCIENTISTS AT NCI
FISCAL YEAR 1992

Argentina	13	Jamaica	1
Australia	13	Japan	95
Austria	7	Korea	29
Bahamas	1	Mexico	1
Belgium	6	Morocco	1
Brazil	5	Netherlands	6
Bulgaria	4	New Zealand	1
Canada	9	Nigeria	3
Chile	2	Norway	4
China	79	Other FSU	15
Colombia	2	Pakistan	1
Costa Rica	1	Panama	1
Czechoslovakia	5	Philippines	1
Denmark	3	Poland	10
Egypt	1	Romania	2
Estonia	1	Russia	6
Finland	1	St. Kitts and Nevis	1
France	16	Spain	10
Germany	32	Sweden	1
Greece	8	Switzerland	9
Hong Kong	1	Taiwan	4
Hungary	20	Trinidad and Tobago	1
India	29	Turkey	4
Iran	1	United Kingdom	29
Ireland	2	Venezuela	1
Israel	21	Yugoslavia	6
Italy	70	Res. Aliens	30

TOTAL = 626

Table V
CTEP Sponsored Foreign Trials During FY 1992

Identification Number	Title	Investigational Agent
EORTC 22851	A Phase III Study of Accelerated Fractionation in the Radiotherapy of Advanced Head and Neck Carcinoma.	IUDR
EORTC 06852	A Phase II Protocol for the Evaluation of Pentostatin in Therapy of Refractory Lymphoid Neoplasms.	Pentostatin (Deoxycoformycin)
T85-009	A Randomized Trial of Cardioprotection with ICRF-187 in Patients with Advanced Breast Cancer Receiving 5-Fluorouracil, Doxorubicin and Cyclophosphamide.	ICRF-187
T85-0262	Phase II of 2'-Deoxycoformycin (Pentostatin) in T-Cell Leukemias, Hairy Cell Leukemia and Related B-Cell Disorders.	Pentostatin (Deoxycoformycin)
T86-0185	Clinical and Cellular Pharmacological Study of 2'-Deoxycoformycin in Lymphoproliferative Neoplasms: Phase II	Pentostatin (Deoxycoformycin)
T86-0192	A Phase II Evaluation of Trimetrexate in Patients with Small Cell Lung Cancer.	Trimetrexate
T86-0275	A Phase II Study of Pentostatin in Intermediate and High Grade Non-Hodgkin's Lymphoma.	Pentostatin (Deoxycoformycin)
T86-0276	Phase II Trial of Pentostatin in Low Grade Non-Hodgkin's Lymphomas.	Pentostatin (Deoxycoformycin)
T87-0211	A Phase II Study of Flavone Acetic Acid.	Flavone Acetic Acid
T87-0232	Phase II/III Trial of WR-2721 Before Protracted Fractionated Radiotherapy.	WR-2721
T88-0120	Phase I Study of Combination Iododeoxyuridine and Bleomycin in Patients with Advanced Cancer.	IUDR
T89-0075	Analysis of Cell Kinetics of Myelopoiesis Before and During Treatment with GM-CSF in Patients with Myelo-Dysplastic Syndromes (MDS).	IUDR
T89-0167	Protection of the Rectosigmoid Mucosa from Radiation Effects by Topical Application of WR-2721 in Patients Undergoing External Beam Therapy to the Pelvis.	WR-2721
T90-0120	The Measurement of Tumor Cell Kinetics and of Epidermal Growth Factor Receptors in Patients with Solid Malignant Tumors: A feasibility Study.	IUDR
T90-0186	Rapid Estimation of Brain Tumor Cell Kinetics with BUDR and IUDR	BUDR, IUDR

Table VI

FOREIGN INSTITUTIONS PARTICIPATING IN THE CLINICAL TRIALS COOPERATIVE GROUP PROGRAM

Eastern Cooperative Oncology Group (ECOG)

South Africa
University of Pretoria

Australia
St. Vincent's Hospital, Melbourne, Fitzroy
Newcastle Mater Misericordiae, Hoswarath
Royal Prince Alfred Hosp., Camperdown, New South Wales
Royal Perth Hospital, Perth
Prince of Wales Hospital, Randwick
Repatriation General Hospital Heidelberg West, Victoria
Princess Alexandra Hospital, Woolloongabba

Canada
Hospital du Saint Sacrament, Quebec
Allan Blair Memorial Clinic, Regina, Saskatchewan
St. Michael's Hospital, Toronto

Nat'l Surg. Adjuvant Breast and Bowel Proj. (NSABP)

Canada
Tom Baker Cancer Center, Calgary, Alberta
Cancer Treatment and Research, Halifax, Nova Scotia
OCTRG Hamilton Reg. Cancer Center, Hamilton, Ontario
London Regional Cancer Center, London, Ontario
Credit Valley Hospital, Mississauga, Ontario
Ottawa Regional Cancer Center, Ottawa, Ontario
Mt. Sinai Hospital, Toronto, Ontario
St. Michael's Hospital, Toronto, Ontario
Toronto Bayview Regional Cancer Center, Toronto, Ontario
Toronto Western Hospital, Toronto, Ontario
Women's College Hospital, Toronto, Ontario
Cross Cancer Institute, Edmonton, Quebec
Hotel-Diere de Levis, Levis, Quebec
Hospital Maisonneuve-Rosemont, Montreal, Quebec
Hospital Notre Dame, Montreal, Quebec
Hotel Dieu of Montreal, Montreal, Quebec
Jewish General Hospital, Montreal, Quebec
Montreal General Hospital, Montreal, Quebec
Royal Victoria Hospital, Montreal, Quebec
St. Mary's Hospital Center, Montreal, Quebec
L'Hospital Laval, Sainta-Foy, Quebec
St. Sacrament Hospital, Quebec City, Quebec
Northwestern Ontario Regional Cancer Center, Sudbury
British Columbia Cancer Agency, Vancouver
Manitoba Cancer Foundation, Winnipeg

Pediatric Oncology Group (POG)

Canada
Tom Baker Cancer Center, Calgary, Alberta
Cross Cancer Institute, Edmonton, Alberta
St. Justine Hospital, Montreal, Quebec

Switzerland
University of Bern, Bern

Radiation Therapy Oncology Group (RTOG)

Canada
Tom Baker Cancer Center, Calgary, Alberta
Univ. of Alberta, Cross Cancer Institute, Edmonton, Alberta
Manitoba Cancer Treatment & Research Fnd., Winnipeg, Manitoba
University of Western Ontario, London, Ontario
McGill University, Montreal, Quebec
Cancer Control Agency of B.C., Vancouver, B.C.

United Kingdom
Clatterbridge Hospitals, Bebington

North Central Cancer Treatment Group (NCCTG)

Canada
Allan Blair Memorial Clinic, Regina, Saskatchewan
Saskatoon Cancer Center, Saskatoon, Saskatchewan

Gynecologic Oncology Group (GOG)

Canada
Princess Margaret Hospital, Toronto, Ontario

Cancer and Leukemia Group B (CALGB)

Canada
Jewish General Hospital, Montreal, Quebec
McGill Cancer Center, Montreal, Quebec
Montreal General Hospital, Montreal, Quebec
Queen Elizabeth Hospital, Montreal, Quebec
St. Mary's Hospital, Montreal, Quebec

Denmark
The Finsen Institute, Copenhagen

Children's Cancer Group

Canada
University of British Colombia, British Colombia
Izsaak Walton Killam Hospital, Halifax
Allan Blair Memorial Clinic, Regina
Saskatoon Cancer Center, Saskatoon
Cancer Control Agency of BC, Vancouver
Children's Hospital, Winnipeg
University of Mannitoba, Winnipeg

Australia
Princess Margaret Hospital, Subicao

Southwest Oncology Group (SWOG)

Canada
Princess Margaret Hospital, Toronto, Ontario
St. Michael's Hospital, Toronto, Ontario
Sunnybrook Medical Center, Toronto, Ontario
Toronto General Hospital, Toronto, Ontario
Wellesley Hospital, Toronto, Ontario
Women's College Hospital, Toronto, Ontario

Table VII

CD-ROM Based International Cancer Information Dissemination Sites

Fundacion Estevez, Buenos Aires	Argentina
The Queen Elizabeth Hospital, Bridgetown	Barbados
LACRIP/BIREME, Sao Paulo	Brazil
National Center of Oncology, Sofia	Bulgaria
Facultad de Medicina, University of Chile, Santiago	Chile
Cancer Institute and Hospital, Beijing	China
Institute of Medical Information, Beijing	China
Byelorussian Institute of Oncology, Minsk, Belarus	CIS
Institute of Experimental Pathology and Therapy, Sukhumi, Georgia	CIS
Kazakh Academy of Sciences, Alma-Ata, Kazakhstan	CIS
Russian Academy of Sciences, Moscow, Russia	CIS
Russian Cancer Research Center, Moscow, Russia	CIS
Research Institute of Medical Radiology, Obninsk, Russia	CIS
Novosibirsk Institute of Biological Chemistry, Novosibirsk, Russia	CIS
Petrov Institute of Oncology, St. Petersburg, Russia	CIS
Kiev Research Institute of Clinical Oncology, Kiev, Ukraine	CIS
Lvov Medical Institute, Lvov, Ukraine	CIS
Instituto Nacional de Cancerologia, Bogota	Colombia
Biblioteca Nacional de Salud, San Jose	Costa Rica
Central Institute of Tumors, Zagreb	Croatia
Cancer Research Institute, Bratislava	Czechoslovakia
Czech Academy of Sciences, Prague	Czechoslovakia
Facultad de Medicina, Quito	Ecuador
National Cancer Institute, Cairo	Egypt
The Institute of Experimental and Clinical Medicine, Tallinn	Estonia
Institute for Molecular Medicine, Berlin	Germany
University of Ghana Medical School, Accra	Ghana
National Institute of Oncology, Budapest	Hungary
Tata Memorial Cancer Center, Bombay	India
Cancer Institute, Madras	India
All-India Institute of Medical Sciences, New Delhi	India
Regional Cancer Center, Trivandrum	India
Central Oncologic Hospital, Riga	Latvia
Centro Nacional de Information y Documentation en Salud, Mexico City	Mexico
Ministry of Health, Ulaanbaator	Mongolia
Hospital de la Mujer Berta Calderon, Managua	Nicaragua
University of Ibadan Medical College, Ibadan	Nigeria
Armed Forces Institute of Pathology, Rawalpindi	Pakistan
Instituto Nacional de Oncologia, Panama City	Panama
Fundacion Gomez Mazzi, Asuncion	Paraguay
Instituto Nacional de Enfermedades Neoplasicas, Lima	Peru
Maria Sklodowska-Curie Memorial Institute of Oncology, Gliwice	Poland
Maria Sklodowska-Curie Memorial Institute of Oncology, Krakow	Poland
Maria Sklodowska-Curie Memorial Institute of Oncology, Warsaw	Poland
Institute of Oncology, Bucharest	Romania
Institute of Oncology and Radiology, Belgrade	Serbia
Institute of Oncology, Istanbul University, Capa-Istanbul	Turkey
Onkoloji Hastanesi, Demetevler-Ankara	Turkey
Uganda Cancer Institute, Kampala	Uganda
Medical Library, University of Zimbabwe, Mt. Pleasant-Harare	Zimbabwe

INTERNATIONAL CANCER INFORMATION CENTER
Associate Director: Susan Hubbard

The International Cancer Information Center (ICIC) is responsible for collecting and distributing scientific data on all research related to cancer biology, etiology, prevention, and treatment. This responsibility includes collecting, cataloging, storing, and distributing the results of clinical and preclinical cancer research to individuals involved in cancer research throughout the world. Using available technology, ICIC promotes the exchange of information among cancer researchers and develops more effective ways of distributing scientific information.

The Center consists of the Office of the Director, the International Cancer Research Databank Branch (ICRDB), the Computer Communications Branch (CCB), the Scientific Publications Branch (SPB), and the Marketing Office. The staff in the Office of the ICIC Director plan, direct, coordinate, promote, and evaluate the activities and operations of NCI's scientific journals, monographs, online databases, and database-derived special publications. These products and services furnish basic scientists and clinical investigators with up-to-date information on current advances in cancer research and constitute the Institute's centralized resource for scientific information.

International Cancer Research Databank Branch
Chief: Dr. Gisele Sarosy

Established by the National Cancer Act of 1971, the International Cancer Research Databank Branch (ICRDB) develops and updates the following information products that are resources in diagnosing, treating, and preventing cancer.

- Computer databases (CANCERLIT and PDQ) updated on a monthly basis, enabling scientists and other health professionals to retrieve cancer information at more than 100,000 locations throughout the world.

- Three series of specialized CANCERLIT-derived publications (CANCERGRAMS, ONCOLOGY OVERVIEWS and RECENT REVIEWS) containing abstracts of published cancer research results in special formats for easy use and quick reference.

Computer Databases

CANCERLIT

CANCERLIT is a comprehensive archival file of about 875,000 bibliographic records, most with abstracts describing cancer research results published during the past 30 years in biomedical journals, proceedings of scientific meetings, books, technical reports, and other documents. During FY 1992, CANCERLIT increased by more than 60,000 abstracts. Since 1980, all entries in CANCERLIT have been indexed with the National Library of Medicine's Medical Subject Heading (MeSH) vocabulary. The database is updated monthly.

PDQ

PDQ is the NCI's comprehensive cancer treatment database. PDQ contains three types of information.

- Full-text statements that reflect current recommendations for treatment, supportive care, and screening of cancer based on published literature
- Summaries of protocols for standard treatments and treatments under evaluation a clinical trials
- Directories of physicians and organizations involved in cancer treatment.

ICRDB maintains the database's highest standards of quality by developing and updating the content of the cancer information and protocol files.

PDQ--Cancer Information File

Treatment Information

PDQ contains prognostic and treatment information on the major types of cancer in children and adults, including information on AIDS-related malignancies. For each major disease topic, there is a detailed statement on prognosis, staging, and treatment (state-of-the-art statement) directed to the health care professionals. Key citations to the literature are referenced and abstracts of these citations are available for the user. Companion statements for patients (patient information statements) contain similar information but in language appropriate for patients and their families. A limited number of brief statements on rare cancer diagnoses are also included in the Cancer Information File.

Supportive Care Information

Supportive care statements detailing the treatment of common conditions resulting from cancer and cancer treatment are also included in the database. These statements cover such areas as pain, hypercalcemia, and nausea-vomiting. Each statement generally has an overview, etiology information, assessment and management, and references to current literature. During FY 1992, new statements on superior vena cava syndrome and hypercalcemia were added to the supportive care file. Work on new statements is ongoing.

Early Detection (Screening) and Prevention Information

During FY 1992, a new PDQ file of statements for cancer screening guidelines was developed. These statements cover guidelines for cancers of the breast, cervix, oropharynx, skin, colon and rectum, prostate, and testis. Other screening guidelines for cancers of the ovary, stomach, bladder, liver, lung, and neuroblastoma are being developed. Each statement contains the current screening guideline, levels of evidence for that guideline, and the significance and evidence of benefit for the

guideline. References to the current literature supporting the information in the statement are also included. Statements on the prevention of different types of cancer are planned for FY 1993.

PDQ Editorial Boards

The Cancer Information File is updated by Editorial Board members who represent various cancer specialties. For each area, a core Editorial Board meets to discuss the cancer information statements, modifying them according to recently published data. The core Editorial Boards also approve all new cancer information statements within their areas of expertise. In addition, members of the core groups review non-NIH-sponsored protocols that have been submitted to PDQ.

During FY 1992, two new Editorial Boards, the PDQ Early Detection and Prevention Board and the PDQ Supportive Care Board, were appointed to oversee the development and maintenance of these topics for the cancer information file.

The following describes each of the current Editorial Boards.

- The Main PDQ Editorial Board has 21 oncology specialists from the fields of medical oncology, radiation oncology, surgical oncology, urology, and oncology nursing. This board meets monthly to review and update the PDQ statements on adult malignancies. It is regularly updated on the sub-boards' activities.

- PDQ Pediatric Editorial Board has 11 members representing pediatric oncology, radiotherapy, and surgery. The board meets monthly to review and update the PDQ statements on treatment of childhood cancers.

- PDQ Early Detection and Prevention Editorial Board represent the fields of oncology, statistics, epidemiology, and economics. The board meets bimonthly to write and update information on early detection and prevention of cancer.

- PDQ Supportive Care Editorial Board has 10 members widely experienced in supportive care. This board meets quarterly to develop and update information on supportive care in PDQ.

The expertise of each core Board is supplemented by Advisory Boards consisting of over 100 specialists who review information in the PDQ state-of-the-art statements biannually to suggest changes or updates to the core Editorial Boards.

Stored Search Strategies

More than 250 pre-formulated CANCERLIT search strategies are mounted in a subfile of the Cancer Information File. Written for searching the NLM's implementation of CANCERLIT, these searches cover many cancer topics discussed in the state-of-the-art statements. A special feature of the PDQ Access software allows users to automatically search CANCERLIT by using these search strategies. PDQ users with other telecommunications

software packages can use these strategies by first logging on to CANCERLIT on the NLM's MEDLARS system and then entering the search strategies individually as they are written.

In FY 1992, ICRDB staff began the process of updating all 250 search strategies. The update process resulted in the following:

- Changes in the range of publication dates each search retrieves,
- Changes in MESH headings and terminology to reflect recent additions and changes to the MESH thesaurus and changes in the classification of different cancers, and
- Changes in subject coverage to reflect changes in the types of treatments as new drug interventions and other therapies evolve.

Searches on drugs no longer in use have been deleted as well as searches that no longer reflect the content of the database, such as those on AIDS. New search strategies will be added as the database continues to grow.

PDQ Protocol File

The Protocol File contains more than 1,400 summaries of clinical trials open or approved for patient accrual. Protocols listed in PDQ include those supported by the Institute and protocols from around the world, which have been reviewed and approved by the PDQ Editorial Board. Protocols for cancer treatment, supportive care, early detection and prevention are included. An archival file contains more than 6,500 summaries of protocols that have been completed or that are no longer accepting patients.

A small file of 42 standard therapy protocols detail the regimens of proven efficacy, with information on dose and schedule, clinical and laboratory monitoring, and dose modification. Standard therapy protocols correspond with the standard treatment recommendations listed in the state-of-the-art statements and are developed, reviewed, and updated by the PDQ Editorial Board.

This year ICIC expanded the focus of the PDQ protocol file to include early detection, screening, and prevention protocols. The center worked with the Division of Cancer Prevention and Control (DCPC) to include all appropriate CCOP-sponsored studies and prevention protocols funded through DCPC grants. To include these different types of protocols, ICIC staff revised the menus and indexing in PDQ so that protocol retrieval could be simplified.

Staff also started to add publications to the protocol record. A field has been added to the protocol summary to include citations and abstracts (if available) from the protocol. Citations from about 5,000 protocols were obtained from the Cancer Therapy Evaluation Program. A semi-automated method of using this information to extract the appropriate record from the database and linking it to the correct protocol summary in PDQ is being developed.

Another enhancement being developed will enable users to narrow a large retrieval for a selected diagnosis, based on more specific factors, such as menopausal status, receptor status, or prior therapy. As part of this effort, a test tape of protocols indexed with exclusion criteria terms was generated and evaluated by ICIC staff.

PDQ Physician Directory

The Physician Directory File consists of more than 18,000 names, addresses, and telephone numbers of physicians who devote a major portion of their clinical practices to treating of cancer patients. The file includes names from the membership directories of major oncologic societies and names of clinical investigators who have protocols in PDQ or who are members of NCI-sponsored Clinical Trials groups.

PDQ--Organization Directory

The Organization Directory consists of more than 2,500 health-care institutions providing care for cancer patients. The file lists the names, addresses, contact persons, telephone numbers, and affiliations for these organizations. This year ICRDB worked with the American College of Radiology (ACR) to include information on ACR-accredited mammography facilities. The information will be available from PDQ in early FY 1993.

PDQ News

ICRDB staff continued to be responsible for collecting or writing all news items in the PDQ News and for deleting outdated news items and banner messages. News items cover Cancer Information File updates, indexing changes, PDQ user support materials, NCI drug information, and NCI-issued clinical updates. In May 1992, the news provided referral information for the NCI-sponsored trial of tamoxifen for preventing breast cancer.

User Documentation

A revision of the PDQ User Guide for the NLM version of PDQ was released in May 1992. The substance of the guide was developed by ICRDB, with assistance from the Director and from the Computer Communications Branch and the Marketing Office staff. The guide offers basic information for inexperienced users and contains information on advanced searching techniques for the expert searcher. A detailed table of contents, appendices, and indexes are included. The guide includes PDQ Access software, which facilitates access to PDQ online through NLM. The guide is sold through the National Technical Information Service, and ICRDB will provide regular updates to subscribers. The guide will be revised in FY 1993 to reflect major new enhancements.

An updated version of the PDQ Quick Reference Guide was also printed, using the same format and design as the User Guide. The Quick Reference Guide is free to all PDQ users. It contains information on how to log on and to search the NLM version of PDQ more effectively.

The PDQ Terminology Listing, first published during FY 1989, was updated and reprinted in November 1991 and May 1992. ICRDB and the

Computer Communications Branch staff created a method of automating the generation of terminology portions from the terminology file. The terminology listing contains alphabetically arranged lists of terms used to index information in PDQ and is designed to help all users retrieve appropriate information, regardless of the implementation being used. Whoever receives the terminology listing is asked to return a reply card to receive the next update. Major enhancements of the Terminology Listing are planned for FY 1993.

PDQ ACCESS Software

PDQ ACCESS, a telecommunications program for IBM microcomputers, was produced by ICIC staff and released in November 1987. This program automates the connecting and downloading of information from the PDQ database on the NLM system. It also allows users to execute pre-formulated search strategies automatically in CANCERLIT and then to return to the PDQ database. PDQ ACCESS allows untrained searchers to select and execute more than 250 predefined searches of the CANCERLIT database as an adjunct to PDQ searching. Sold separately through the National Technical Information Service until May 1990, PDQ ACCESS is now included with the purchase of the PDQ User Guide.

The current version of PDQ ACCESS accommodates the NLM conversion to the Virtual Telecommunications Access Method (VTAM) of telecommunications. It contains several improvements over the last version, including an easier setup, 2400 baud access, additional communication serial ports, and a direct link to the user's word processor.

Database Access

As of May 1992, more than 40,000 domestic and 4,600 foreign centers have access to the cancer databases on the MEDLARS system. More than 7,000 student codes are also in effect. Sixteen principal foreign MEDLARS centers offer foreign medical institutions and physicians access to PDQ and CANCERLIT databases; fourteen of these foreign MEDLARS centers offer access to CANCERLIT and ten offer access to PDQ.

CANCERLIT and PDQ are also available throughout the world through other commercial online vendors, through CD-ROM subscriptions, and on in-house computer systems. Domestic and international commercial and educational institutions still license the databases from the Institute; more than 30 requests for licensing information were received during the year. One new license agreement has been finalized for PDQ this year, bringing the total vendors to 16. Several more license agreements are in various stages of processing and finalizing.

In the United States, PDQ is available online through the NLM MEDLARS system; BRS SEARCH, Maxwell Online's command-language driven system; BRS COLLEAGUE, Maxwell Online's menu-driven system; and Mead Data Central's LEXIS/NEXIS system. CANCERLIT is available online through NLM's MEDLARS, DataStar's system, DIALOG, and Maxwell Online's BRS Information Technologies.

Outside the United States, PDQ is available through the following online vendors: TELMED in Switzerland; MediMatica in the Netherlands offers a videotext-based version; and ARC in France offers PDQ state-of-the-art treatment statements in French. The European Organization for Research and Treatment of Cancer (EORTC) offers PDQ on the EuroCODE electronic network. The German Institute for Documentation and Information in Medicine (DIMDI), a major MEDLARS center offering access to CANCERLIT, has recently added PDQ to its menu-driven system. Maxwell Online (BRS Information Technologies) offers both CANCERLIT and PDQ throughout the world via dedicated telecommunication links between major foreign cities and the BRS data center in Chicago. Both DIALOG and DataStar offer CANCERLIT internationally.

Both CANCERLIT and PDQ are licensed to educational and non-profit institutions with in-house computers. The PDQ database, including search software, is licensed to institutions with mainframe, mini, or microcomputers. The PDQ database that runs on the MUMPS operating system and programming language is licensed to Georgetown University, George Washington University, the State University of New York (SUNY) at Buffalo, Johns Hopkins University, and the Veterans Administration. The Ministry of Health in Singapore offers PDQ to its medical community via its own search software.

The CANCERLIT database is licensed to the University of Texas M.D. Anderson Cancer Center, but to run the database on its in-house computer system, the cancer center licenses the BRS search software from Maxwell Online, Inc. The cancer center also makes the database available to the faculty and staff of the University of Texas Medical Center at Houston and the University of Texas at Galveston through an amendment to the license agreement. The University of Tsukuba in Japan offers the CANCERLIT database to its medical community via its own search software.

PDQ and CANCERLIT also are available for licensing with the SearchLITE software, a proprietary retrieval system developed under an NCI SBIR contract by I.S. Grupe, Inc. Three organizations now are using SearchLITE software to run the PDQ and CANCERLIT databases. Two other companies are negotiating agreements with I.S. Grupe, Inc. to license the databases and SearchLITE software.

The development of the PDQ database and search software, which runs on the 'C' programming language, was completed this year. Many smaller institutions and private physician practices may be interested in this version of the database as it fits on a mini or microcomputer and runs on the DOS and VMS operating systems.

PDQ and CANCERLIT are available on CD-ROM (compact disc-read only memory) from several vendors. Cambridge Scientific Abstracts offers three separate CD-ROM products: CANCERLIT, PDQ, and a combination of both databases on one disc. SilverPlatter, Inc. has merged three sources of cancer literature abstracts into a single comprehensive database called CANCER-CD. The disc contains recent years of CANCERLIT and medical information from two other sources, EMBASE (the Excerpta Medica database) and the *Yearbook of Cancer*. The J.B. Lippincott company produces OncoDisc, which includes PDQ, the recent years of CANCERLIT, the 3rd

edition of *Cancer: Principles and Practice of Oncology*, *Important Advances in Oncology*, and *Manual for Staging of Cancer*. Aries Systems, Inc. produces the CANCERLIT database on CD-ROM for the MacIntosh computer, using Knowledge Finder™ search software. CD PLUS, Inc. produces a CD-ROM with CANCERLIT from 1984 to the present. Other companies are developing CD-ROM versions of PDQ or CANCERLIT, and one company is developing a PC-hard-drive version of PDQ.

As part of an initiative to increase information dissemination in developing countries and underserved populations in the United States, a free subscription to OncoDisc, a commercial CD-ROM product containing PDQ and CANCERLIT databases, is being offered by the Office of International Affairs (OIA) to cancer centers in 45 sites throughout the world. OncoDisc subscriptions now are being sent to Eastern Europe, the former Soviet Union, Africa, Central and South America, India, and various U.S. medical centers that serve minority populations. The organizations in these countries are cancer information dissemination centers, enabling the ICIC to distribute current cancer research findings and standards of patient care to new audiences and to those most in need of this information.

In June 1992, NLM's popular telecommunications package and search aid, GRATEFUL MED (Version 6.0), was distributed. GRATEFUL MED permits direct access to PDQ and untrained searchers easy access to CANCERLIT. All 250 CANCERLIT search strategies in PDQ can be executed in CANCERLIT by typing the name of the stored search strategy followed by (SN).

CancerFax™

ICRDB staff oversaw the updating of the contents of the ICIC CancerFax system. This system allows patient information and supportive care information from the PDQ Cancer Information File to be accessed through a fax machine. Users dial the CancerFax telephone number from their fax machines, enter a code number from the CancerFax contents list, and follow the voice prompts to receive information. ICRDB works with CCB staff to ensure that the system is updated each month, appropriate voice response messages are recorded, and new information is added to the system as needed.

CancerNet

ICRDB staff assisted CCB staff in evaluating and updating another method of distributing the PDQ cancer information file. Similar to CancerFax™, CancerNet makes the state-of-the-art statements, patient information statements, and information on supportive care available to users of the Internet system via electronic mail. To receive information, users send electronic mail messages containing the appropriate CancerNet code to the ICIC computer. ICRDB staff work with CCB staff to ensure that the system is updated monthly and that new information is incorporated into the CancerNet list of contents.

Database Usage

PDQ and CANCERLIT usage continues to grow. During FY 1991, total PDQ database use increased through all avenues of use, including online, CD-ROM subscriptions, and CIS database use from hard copy. Total use of the PDQ database for FY 1992 is expected to increase by more than 16 percent. Final FY usage figures will not be available until FY 1993 per licensing agreements. To receive timely usage statistics, all license agreements will be amended to require monthly reporting of these statistics rather than the present quarterly reporting. A system to send letters automatically to vendors reminding them to send in usage data is being evaluated.

During the latter part of FY 1991 and into FY 1992, a system for tracking both database vendors and usage statistics was set up. Online hours by month and vendor and hours of PDQ use through CancerFax™ are recorded for PDQ and CANCERLIT. The CIS offices use the software program STATS.EXE with SearchLITE software to record the hours of use on CD-ROMs. With the Office of International Affairs (OIA), the branch set up a system to request hourly use by the OIA subscribers. The branch sends new subscribers a copy of the STATS.EXE program and instructions for use when the subscriber receives the first issue of OncoDisc. A reminder letter that coincides with following issues are sent every two months asking subscribers to run the STATS program and to send the printout of usage data. Responses from the U.S. underserved areas, Eastern Europe, and India have been good. The branch and OIA are exploring methods to increase response from the other sites.

A system for collecting data on the number of CD-ROM sales-subscriptions and on hard copy use by CIS and the Pan American Health Organization also has been established. An automatic collection and reporting mechanism has been programmed into the MUMPS and 'C' versions of the PDQ database so organizations that license these versions print a monthly usage report and send it to ICRDB. Compliance has been excellent.

Service Desk

The PDQ Service Desk, which the branch administers, provides information and technical assistance to PDQ users and to people requesting information on other ICIC databases and publications. When users call the Service Desk, they can speak to experts on PDQ search strategies, PDQ content information, PDQ computer systems, and CANCERLIT content and search strategies. A recent study showed that 31 percent of callers were librarians and 17 percent were physicians. The remaining callers belonged to many professions including nursing, pharmacy, and computer-related and other non-medical professions. ICRDB staff provides background material to experts at the PDQ Service Desk and ensures that the desk is always manned.

PDQ User Group

In FY 1988, a User Group, including all PDQ searchers on any system, was formed to improve communication between the producers of the database and the direct users of the system. A newsletter describing new PDQ

developments and announcing upcoming events was sent to the more than 1,000 members of the User Group in December 1990.

As a result of a joint promotional venture between ICIC and the National Library of Medicine, a brochure describing PDQ was mailed with each copy of the NLM Grateful Med Software. Membership in the PDQ User Group quadrupled in 1991. A plan to continue publishing the PDQ User Group Newsletter regularly is being outlined. As the user base grows, the PDQ User Group remains an important means of increasing awareness of PDQ, distributing information about new database enhancements, and receiving helpful feedback about the database when planning new enhancements.

PDQ Literature Surveillance

ICRDB staff regularly screens more than 120 journals for the most recent information on cancer treatment, cancer prevention, and supportive care. Staff meets monthly to review these articles and to identify those most relevant to PDQ. About 75 articles are selected each month for the PDQ Editorial Board review.

International Cancer Information Center Library

ICRDB is responsible for maintaining the ICIC library. This library contains more than 60 journals and a collection of books on oncology and information science to assist staff in developing and maintaining the center's scientific information products.

Publications

- CANCERGRAMS are a series of 22 monthly CANCERLIT-derived publications. Each contains abstracts of recently published articles in diagnosis and therapy. Plans to increase the use of CANCERGRAMS by improving the appearance and marketing of CANCERGRAMS have been started. The addition of a cumulative subject index will aid researchers in using this product.

- ONCOLOGY OVERVIEWS are retrospective bibliographies containing 200-500 abstracts-citations of papers published during the preceding few years on topics of interest to medical oncologists. Five Oncology Overviews were published in FY 1992: The Cell Cycle in Cancer Prognosis, Antiangiogenesis, Current Management of Childhood Leukemia, Therapeutic Use of Interleukin-2, and Childhood Brain Tumors.

- RECENT REVIEWS are annual, fully-indexed compilations of the abstracts of 250-400 major review articles cited in the monthly "Notice of Current Reviews" section of each CANCERGRAM series. An annual volume is published as a supplement to the CANCERGRAMS.

There are about 4,000 paid CANCERGRAM subscriptions. The ICRDB staff continues to work with the Marketing Office to increase the awareness of these publications.

As part of the initiative to increase information dissemination in other countries, free subscriptions to these publications are being provided to key

medical libraries and academic institutions in more than 200 sites in Eastern Europe, South America, Asia, Africa, the Middle East, and the Far East.

Special Activities

Staff Presentations

Because of travel restrictions, ICRDB staff members could not attend many planned presentations. Despite these limitations, the branch staffed exhibits or gave presentations at several national meetings of professional organizations.

- A full-day program for continuing education credit at the annual meeting of the Medical Library Association in Washington, DC
- Invited Presentations
  - "Clinical Decision Making - 2000; Medical Informatics", a symposium sponsored by Providence Cancercare in Seattle, Washington, in October 1991
  - Clinical Oncology Program Grand Rounds at the NIH Clinical Center in February 1992
  - A seminar on the "C" version of PDQ for the medical informatics group at George Washington University in February 1992
  - PDQ presentation at the Plenary Session of the Southwest Oncology Group's Data Managers Committee in San Antonio, Texas, in April 1992
  - NCI's Scientific Information Services presentation to new Institute Clinical Oncology Program fellows in June 1992
  - PDQ presentation for a DCPC course

Education, Training, Outreach, and Other Information Dissemination Activities

Education, training, and outreach activities have increased markedly in FY 1992. The branch has added an evaluation and research component to an increasing number of projects for increasing awareness of PDQ, for attracting new PDQ users, for educating current and potential users in PDQ applications, and for finding ways to distribute PDQ information to underserved areas.

In FY 1991, ICRDB staff began developing a curriculum for educating and training current and potential PDQ users. In FY 1992, the staff evaluated the first training prototype presented as a half-day, four-credit Continuing Eduction Course for medical librarians at the 1991 annual meeting of the Medical Library Association in San Francisco. The course included a history of the PDQ database, database content and structure, searching techniques, and indexing terminology.

The evaluation showed that to cover all the topics relevant to searchers would require more than four hours of course time, that some students were

more familiar with PDQ and searching techniques than others, and that students needed more online demonstrations and hands-on searching practice.

ICRDB staff has developed a new full-day course on the PDQ database, primarily for users accessing PDQ through the NLM MEDLARS system. The course contains two segments: a four-hour novice course for infrequent users or for beginners and a four-hour advanced course for searchers who are familiar with the database. The course balances instruction in database content with specifics in database searching methods. A draft of a training manual and several support materials were developed for the course. Both segments contain online demonstrations and a considerable amount of hands-on searching practice.

The new course for eight continuing education credits, four for each segment, was presented first at the annual meeting of the Medical Library Association in Washington, DC, in May 1992. A preliminary evaluation of the presentation showed that the new course was very successful. A final version of the training manual is being prepared. Requests for this training course have been received from many regions of the country. In the future, these training materials may be modified for other PDQ users.

The George Washington University has been contacted about developing a module on PDQ as a required computer course for medical students.

In addition to the new training course, ICRDB has entered into a partnership with the NLM Special Information Services to develop PC-based tutorials for the PDQ and CANCERLIT databases. The partnership will produce an updated DOS version of the NLM's tutorials--MEDLEARN, TOXLEARN, and CHEMLEARN--and DOS-based tutorials for CANCERLIT and PDQ, all using the same authoring software. Since CANCERLIT uses the same ELHILL search mechanisms, CANCERLIT tutorials are an obvious extension of NLM's effort and a new training tool for ICIC.

Using the new training course as a starting point, the PDQ tutorials are built around the teaching modules already established and evaluated. For PDQ and CANCERLIT users who cannot travel to a training site, the tutorials offer the opportunity to learn to use PDQ at their own pace and convenience. Future efforts will include tutorials for other types of PC systems and for multimedia platforms.

As companion pieces to the tutorials, ICRDB staff is producing three motivational videos. Each video will target different types of potential PDQ users: primary care physicians, oncology specialists, and medical information professionals. The videos graphically show (1) how useful the information in the PDQ database can be in typical medical practices and hospital situations and (2) how medical information professionals can provide such information to physicians and their patients. After viewing the videos, potential users will be invited to try the database, using the tutorials provided with each video.

Continuing to increase PDQ and CANCERLIT awareness for end-user searchers who access these databases through the NLM Grateful Med interface, three physicians in different geographic regions and in different types of oncologic practices submitted an article on PDQ use to Gratefully Yours, the

bimonthly magazine distributed to more than 30,000 Grateful Med users. This article is the first of a series of articles focusing on PDQ users and the special features of the PDQ and CANCERLIT databases.

In a major ICIC and OCC effort to evaluate and increase the use of the Patient Information subfile of the PDQ Cancer Information File, ICRDB staff is conducting a baseline study to ascertain (1) how cancer patients receive cancer treatment information and (2) how health professionals may use the Patient Information File (PIF) in a hospital setting.

Three hospitals, each serving a different population and each located in different geographic settings, are sites for the study. The hospitals--Massey Cancer Center in Richmond, Virginia, Wilmington Hospital of the Medical Center of Delaware, and Washington Hospital Center in Washington, D.C.--represent diverse patient populations: rural, small industrial, and large urban.

The information flow is expected to be different in each hospital setting. Data collection is accomplished through a series of semi-structured, individual interviews with physicians, nurses, social workers, health educators, and librarians at each hospital. Questionnaires for each type of health and information professional have been developed and pretested. An independent contractor will conduct the interviews to avoid a possible bias of the data.

The textual analysis of the interviews will be used to analyze the structure of information flow and to find the best ways to use the Patient Information subfile in a hospital setting. Strategies to increase use of the PIF among health professionals will be developed from study results, which will be shared with participating hospitals. This study continues the effort to assess the extent and diversity of PDQ use, isolating the approaches best suited to increase awareness and use of PDQ in different populations.

Outreach activities that further the use of PDQ information as an educational tool and can increase and improve communication among the patient, the primary care physician, and the oncologist or surgeon, have progressed. A collaborative effort between ICRDB and the Fox Chase Cancer Center in Philadelphia resulted in a plan to make PDQ information available to primary care physicians in the community hospitals that are part of the Fox Chase network. In-house staff at each hospital will present a series of instructional modules about different aspects of PDQ, such as availability and the use of PDQ information in a practice setting. One Continuing Medical Education credit will be offered through Fox Chase for the full course of instruction.

ICRDB and Fox Chase also examined the use of "academic detailing" to increase awareness of PDQ among physicians. With this methodology, an interviewer presents one or more of the PDQ instructional modules to the physician. The collaboration was part of an effort to understand the mechanisms that guide diffusion of innovation within the medical community and to further the distribution of the most current research in cancer treatment.

Understanding the needs of PDQ users is a necessary part of planning training and setting up educational materials. In FY 1992, ICRDB was able to acquire information about the use of PDQ and CANCERLIT on OncoDisc, a CD-ROM compilation of different types of cancer information. At the request of Industria Farmaceutica Serono, a large pharmaceutical firm in Milan, Italy, ICRDB staff prepared three versions of a user questionnaire for gathering information on CD-ROM use at Serono CD-ROM installations in Italian medical centers. Serono chose one of the three questionnaires to collect the data. Preliminary findings showed that, of the several cancer information resources available on OncoDisc, PDQ and CANCERLIT are the most used and that the PDQ information was complete, accurate, and useful.

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

Title: ICRDB Document Announcement and Dissemination Services

Contractor's Project Director: Louisa Day

NCI Project Officers: Bonnie Harding
Jana Johnston

Objectives:

This agreement supports the billing, collecting, and crediting of fees from the leasing of ICRDB databases to private organizations and commercial vendors and from the sales of other cancer-related information products produced by the Institute. It also enables NTIS to collect (1) the charges incurred by NCI use of access codes for online searching of cancer databases on the NLM computer system and (2) other charges for information services provided by NCI, such as the billing for the revised PDQ User Manual.

Major Accomplishments:

NTIS credited more than $102,000 to the ICRDB-NTIS deposit account during the first six months of the fiscal year. About 1,000 copies of PDQ User Manual Version 3.0 and more than 500 copies of version 4.0, both of which contain PDQ Access, have been sold for $34.95 per copy.

Significance to Biomedical Research and Institute Programs:

This interagency agreement has assisted ICRDB in fulfilling its mandated responsibility, the broad dissemination of research information on cancer.

Proposed Course:

ICRDB expects to continue to require NTIS billing and accounts handling services for database usage and leasing and access software distribution and, in future years, may elect to use additional printing and tape reproduction services.

Date of Agreement: September 30, 1976

Current Annual Level: $125,000

ATLIS Federal Systems, Inc. NCI-CO-64088

Title: Clinical Protocol Analysis and Tracking (CPAT)

Contractor's Project Manager: Dr. Grace Cannon

NCI Project Officer: Jennifer Ricks

Objectives:

The agreement establishes and operates a Cancer Research Project-Protocol Analysis Center. This responsibility entails preparing abstracts of protocols of cancer treatment clinical trials, preparing dose modification information, keying, formatting this information for input to computer-based information systems, and maintaining an current listing of participating institutions and investigators.

Major Accomplishments:

The contractor continued the following tasks: preparing protocol summaries for all new protocols considered within scope of PDQ; updating existing protocol summaries based on amendments or addenda to the protocols; maintaining the matrix of participating organizations and investigators for active clinical trial protocols; writing standard therapy protocols for review and approval by the PDQ Editorial Board; indexing protocols for retrieval using PDQ Terminology.

During the final months of the contract, the protocol processing work was converted to the ICIC computer system maintained by the ICIC Computer Support Contractor. The contractor assisted in testing the new Oracle system, providing data maintenance support during a one-month parallel run of the new and old protocol processing systems. The new system is more efficient because it eliminates duplicate processing of data on two computer systems.

Significance to Biomedical Research and Institute Programs:

The project provides cancer researchers with summaries of domestic and international clinical trial protocols that are accruing patients, that have been approved for patient entry, and that have been closed to patient accrual. The summaries of active studies provide detailed referral information that help with the referral of patients to ongoing clinical trials. The summaries of closed studies provide information that can be used for research purposes or for planning new research efforts.

Date of Contract: June 16, 1986

The contract was renewed for four years in June 1987 and was extended for 5.5 months in June 1991 and 1.5 months in November 1991. The contract expired on January 15, 1992.

Current Annual Level:

The contract received $73,600 to cover the costs of extensions.

ATLIS Federal Systems, Inc. NCI-CO-21037

Title: Cancer Information Analysis and Tracking (CIAT)

Contractor's Project Manager: Dr. Grace Cannon

NCI Project Officer: Jennifer Ricks

Objectives:

The goal is to provide database maintenance services for the content of the Physician Data Query (PDQ) database. Such services include data collecting, analyzing and abstracting, indexing, keying, proofreading, tracking, and reporting. The contract covers maintenance of all the major PDQ files and support files, including the cancer information file, supportive care file, protocol file, cancer terminology file, cancer index (menu) file, and the directory files. Maintenance of all files other than the protocol file will be phased in over the life of the contract. The contractor will assist in the development of new PDQ files as directed.

Major Accomplishments:

Beginning in January 1992, the contractor began work on the first task of protocol maintenance. ATLIS maintained the protocol file using the new computer system developed under the predecessor CPAT contract, suggesting and developing refinements as needed. The contractor abstracted new summaries, updated existing summaries, indexed new and revised information, and wrote standard therapy protocols for PDQ Editorial Board to review. Major revision of the indexing for biological response modifier therapy protocols was developed and accomplished during the first several months of the contract.

During the final months of FY 1992, the contractor prepared to phase in work related to the cancer information file, the supportive care file, the cancer terminology file, and the cancer index (menu) file. A new database management system in Oracle, developed by the Computer Support Contract, was tested and carried out. The contractor updated the cancer information file under the direction of the Scientific Review Administrator of the PDQ Editorial Board. Under the direction of the project officer, the contractor updated and maintained the cancer terminology and index (menu) files and updated the PDQ News files. ATLIS completed rewriting the patient information statements. The contractor also assists with updating and maintaining the Spanish version of CancerFax™, which makes the cancer information statements available to Spanish users via fax.

Development of several PDQ enhancements began during the first year of the contract. The contractor helped develop exclusion indexing terms in the PDQ protocol file and assisted in further identifying information related to publication of protocol results. The contractor entered the test information related to the above enhancements for ICIC staff evaluation.

Significance to Biomedical Research and Institute Programs:

This project helps to maintain the accuracy of PDQ, which provides oncologists, other health care professionals, and patients with detailed information concerning cancer treatment and prevention. The system distributes the latest treatment information, availability of clinical trials, and the names and addresses of physicians and organizations for referrals.

Date of Contract: January 16, 1992.

Current Annual Level:

For the first year, $1,051,698 was allotted. An additional $353,000 has been allotted to cover increased costs associated with PDQ enhancements.

INFORMATION VENTURES, INC. NO1-CO-84348

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

Contractor's Project Director: Dr. William Creasey

NCI Project Officer: James Carter

Objectives:

CIDAC identifies relevant articles on cancer diagnosis and therapy to be published as abstracts in specialized ICIC publications.

Major Accomplishments:

CIDAC regularly produces CANCERGRAMS, a series of 22 monthly CANCERLIT-derived publications, each containing abstracts of recently published articles on cancer diagnosis and therapy. Five ONCOLOGY OVERVIEWS, retrospective bibliographies with abstracts on topics that interest clinical oncologists, are published annually. One RECENT REVIEW, a fully-indexed compilation of the abstracts of 250-400 major review articles cited in the monthly CANCERGRAMS, is published annually. CIDAC also searches the CANCERLIT and PDQ databases to respond to requests from physicians and other health care professionals and assists with database quality control.

Significance to Biomedical Research and Institute Programs:

CIDAC is a valuable resource in oncology research for the Institute and the worldwide cancer research community. The CANCERGRAMS provide comprehensive coverage of the entire field of clinical oncology. ONCOLOGY OVERVIEWS update readers and provide state-of-the-art perspectives on major areas of clinical cancer research.

Proposed Course:

The contractor will continue to produce CANCERGRAMS and ONCOLOGY OVERVIEWS and provide information services.

Date of Contract: August 30, 1988

Current Annual Level: $481,777

Final Date of Contract: August 29, 1993

INFORMATION VENTURES, INC. NO1-CO-84338

Title: Screening, Indexing, Abstracting, and Keying of Cancer-related Literature (SIAK)

Contractor's Project Director: Silba Cunningham-Dunlop

NCI Project Officer: James Carter

Objectives:

The SIAK project collects, indexes, and keys abstracts on current cancer research presented at meetings. The project also indexes and keys abstracts of books, journal articles, technical reports, and other documents not covered by NLM. These abstracts are part of the source material for CANCERLIT, CANCERGRAMS, and ONCOLOGY OVERVIEWS. Foreign abstracts are translated into English. Abstracts are written when none are submitted.

Major Accomplishments:

During most of FY 1992, an average of more than 800 items were processed each month and forwarded to the ICIC Computer Support Contractor for the final reformatting to update the CANCERLIT database. The meeting abstracts are collected from hundreds of medical conferences, such as the American Association for Cancer Research, the American Society of Clinical Oncology, and the Federation of American Societies for Experimental Biology. From February through May, a great deal of work was required to input several thousand abstracts from these three key meetings held in April and May. Because of this effort, the abstracts were available in the ICIC databases and publications without delay. Books, reports, and other documents are collected from hundreds of sources.

Significance to Biomedical Research and Institute Programs:

The SIAK project provides rapid, easy access to cancer research information presented at meetings and published in other sources not covered by NLM's MEDLINE database. This information can be retrieved by searching the CANCERLIT database in a particular area of cancer or by reading the CANCERGRAMS and ONCOLOGY OVERVIEWS prepared from CANCERLIT by ICRDB contractors.

Proposed Course: The project will continue for a five-year period.

Date of Contract: February 22, 1988

Current Annual Level: $379,473

Final Date of Contract: February 21, 1993

This contract underwent a concept review in September 1991 and was approved for an additional five years. The RFP was issued this spring and the proposals will be reviewed this summer.

NATIONAL LIBRARY OF MEDICINE Y02-CO-30708

Title: Joint NLM-NCI Intra-agency Agreement

Contractor's Project Director: Harry Bennett

NCI Project Officer: James Carter

Objectives:

The contractor generates, maintains, and operates the NCI PDQ and CANCERLIT databases and systems on the NLM computer and distributes information in these collections via the MEDLARS network to institutions and individual users.

Major Accomplishments:

NLM contributes cancer abstracts prepared for the MEDLINE database as a major component of the cancer literature database, CANCERLIT. NLM also maintains and updates the NCI online databases, including CANCERLIT, which contains about 875,000 abstracts of published literature. NLM also maintains the PDQ database, which contains state-of-the-art information on the diagnosis, staging, prognosis, and treatment of nearly 80 types of cancer; more than 1,400 summaries of standard and investigational treatment protocols; and names, addresses and, telephone numbers of more than 18,000 physicians and 2,500 organizations specializing in the treatment of cancer. All databases are updated monthly.

Significance to Biomedical Research and Institute Programs:

Through the MEDLARS system, users at more than 45,000 locations in the United States and 16 other countries may have rapid access to the cancer information stored in the CANCERLINE and PDQ databases. Physicians, researchers, and other health professionals use the information retrieved from searches of these databases to improve cancer patient care and design more productive research experiments.

Proposed Course:

The intra-agency agreement will continue to provide the database input, maintenance, and dissemination services as described.

Date of Contract: May 1, 1983

Current Annual Level: $786,311

Final Date of Contract: September 30, 1992

Intra-agency agreement was signed in FY 1992 as modification #15 to the previous agreement. At the September 1991 Concept Review, the NCAB approved this agreement for another five years, beginning FY 1993.

PDQ DATABASE DISTRIBUTION AGREEMENTS
July 1992

Vendor	Type of license	Status
NLM	Online	Active
Maxwell/BRS	Online	Active
Mead Data Central	Online	Active
EORTC's (Europe) (EuroCODE)	Online	Active
ARC (France) (MEDARC)	Online	Active
MediMatica (The Netherlands)	Online	Active
TELMED (Switzerland)	Online	Active
DIMDI (West Germany) (MEDLARS Center)	Online	Active
Georgetown University	Online (on-site)	Active
George Washington University	Online (on-site)	Active
Johns Hopkins	Online (on-site)	Active
Veterans Administration Hospital (Washington, DC)	Online (on-site)	Active
SUNY, Buffalo	Online (on-site)	Active
Singapore Ministry of Health	Online (on-site)	Active
Cambridge Information Group (via SearchLITE)	CD-ROM	Active
J.B. Lippincott (via SearchLITE)	CD-ROM	Active
DIALOG	Online	Pending
RTP, Inc. (via SearchLITE)	Online	Pending
Department of Defense	Online (on-site)	Pending
Andalusian Health Service	Online (on-site)	Pending
University of Texas (MDA)	Online (on-site)	Pending
Fox Chase Cancer Center	Online (on-site)	Pending

PDQ DATABASE DISTRIBUTION AGREEMENTS (continued)
July 1992

Vendor	Type of license	Status
Aries Systems	CD-ROM	Pending
SilverPlatter	CD-ROM	Pending
Inscape	PC/hard-drive based	Pending
Lexical Technologies	CD-ROM	Pending
Teton Data Systems	CD-ROM	Pending

CANCERLIT DATABASE DISTRIBUTION AGREEMENTS
July 1992

Vendor	Type of license	Status
NLM	Online	Active
Maxwell/BRS	Online	Active
Data-Star (via Swiss Medlars Center)	Online	Active
DIMDI (via Medlars Center)	Online	Active
DIALOG	Online	Active
University Tsukuba (Japan)	Online (on-site)	Active
M.D. Anderson Cancer Center (using BRS Search Service)	Online (on-site)	Active
Aries Systems	CD-ROM	Active
Cambridge Information Group (via SearchLITE)	CD-ROM	Active
Cambridge Information Group (via own system)	CD-ROM	Active
J.B. Lippincott (via SearchLITE)	CD-ROM	Active
SilverPlatter	CD-ROM	Active
CD Plus	CD-ROM	Active
Inscape	PC/Hard Drive	Pending
Teton Data Systems	CD-ROM	Pending
RTP, Inc. (via SearchLITE)	Online	Pending

The Computer Communications Branch
Chief: Nicholas Martin

The Computer Communications Branch (CCB) is responsible for the following activities:

- Maintaining and operating the ICIC Computer Communications Center, a state-of-the-art multi-computer facility that includes local and wide area communications networks;

- Managing the maintenance and production systems for the PDQ and CANCERLIT databases, distributing data from these databases to vendors and users of ICIC products and services throughout the world;

- Operating the NLM online delivery system for PDQ and supporting vendor efforts in database construction and delivery; and

- Operating a research and development program to identify emerging technologies that may enable ICIC to perform in the most timely and cost-effective manner.

Four CCB Groups manage these activities.

- The Online Medical Systems Group manages the maintenance and production systems for the ICIC medical databases PDQ and CANCERLIT, including monthly distributing the databases to vendors and users in the United States, Europe, Singapore, South America, and the newly opened Eastern Bloc countries. The group consults with the vendors regarding database design, content and delivery. It maintains and enhances (1) the NLM version of PDQ used by medical librarians, researchers, and physicians worldwide and (2) the MUMPS and 'C' language versions of the database used by smaller medical institutions.

- The Applications Development Group develops new systems to meet ICIC needs and maintains existing systems. The group supports the development, implementation, and enhancement of administrative applications including the local area network, electronic mail, office automation, and desktop publishing.

  It maintains an inventory of computing equipment and manages the maintenance of the equipment. It searches for and tests new application and system software and hardware that will meet the needs of ICIC staff and contractors. It supports the Office of International Affairs (OIA) in the distribution of ICIC-CD-ROM database subscriptions in Eastern Bloc and third-world countries. It prototypes and develops new methods of information dissemination to support the mission of ICIC.

- The Research and Development (R&D) Group explores the increasingly complex information needs of physicians and other scientists involved in cancer research and treatment, supplying computer hardware and software solutions dealing with those needs. These solutions are normally on the cutting edge of information technology and must deal with emerging standards, technology transfer issues, and rapidly evolving trends in

cancer treatment and research. This group also deals with innovative ways for supporting research within the government and is involved with Small Business Innovation Research (SBIR) contracts, Cooperative Research and Development Agreements (CRADAs), and standard research contracts.

- The Systems and Operations Support Group installs and tunes new operating systems, database management systems, and other system level software. The group configures and tunes equipment and manages the wide-area network connecting ICIC to contractors and users associated with ICIC functions. This group also provides computer operations for producing ICIC information products and support for the development of new applications.

The branch also provides such services as producing mailing labels for the President's Cancer Panel meetings, for special monograph mailings, and for CIS. The staff conducts PDQ training programs for user groups, CIS Offices and other offices and technically assists other NCI groups with ICIC information products and services.

PDQ

A major CCB responsibility is the ongoing production of the PDQ database. Updated monthly, the PDQ database consists of three component files.

- Cancer information and literature
- Clinical research protocols
- Directory of physicians and organizations.

PDQ goals are to distribute information on the progress in cancer treatment to practicing physicians and to reduce cancer mortality nationwide. To achieve these ends, PDQ is made available in many formats:

- An easy-to-use, menu-based version through the National Library of Medicine's MEDLARS system;

- MUMPS and 'C' language menu-based versions designed for a wide range of computers in medical installations;

- A version of the cancer information file retrieved by the users' fax machines or by electronic mail over the Internet; and

- A "data only" version used by commercial time-sharing and CD-ROM vendors in the United States and Europe.

Several new data elements were added to the database and enhancements were made to the NLM online version. Because of the steady growth of the physician and organization directories and in the protocol file, the size of the PDQ database increased about 9 percent. The monthly production and distribution of the PDQ and CANCERLIT databases amounted to mailings of more than 1,300 magnetic tapes to online and CD-ROM vendors worldwide. The conversion of the PDQ Cancer Information File to Oracle was completed, and the conversion of all other files is expected to be completed during the next six months.

The NLM retrieval version of PDQ was improved so that users may search more precisely and efficiently.

A new contract was awarded for maintenance and distribution of the MUMPS and 'C' language versions of PDQ. Both versions were ported to the MUMPS/UNIX workstation, and regular production procedures were developed. The user interface to the MUMPS version was redesigned, and work is underway to make the user interface for the 'C' version identical. These changes are being made so that the user interfaces for all ICIC-sponsored versions of PDQ will be as identical as possible.

CancerFax™ use steadily grew, showing that this technology has been accepted as a valuable method for distributing information. CancerFax™ receives 80-100 calls each working day, monthly transmitting nearly 2,000 PDQ state-of-the-art statements, patient information statements, or other information to health practitioners.

CancerFax™ statements were recently made available through electronic mail over the Internet. Called CancerNet™, this new product-service is in the beta test stage. Called a list server, this technology is expected to play an increasingly important role in distributing ICIC services and products as electronic communications becomes more important in business and society.

ICIC Computer Communications Center

The center houses two Hewlett Packard 9000, model 850 mid-range computers. These Reduced Instruction Set Computers (RISC) are coupled by a baseband local area network (LAN) and are connected to the ICIC broadband LAN serving Building 82. This LAN uses TCP-IP Ethernet protocols and Ungermann-Bass software. About fifty personal computer and graphics workstations connected to this LAN perform electronic mail, word processing, database management, statistical reporting, graphics, and desktop publishing operations.

The mid-range computers also are connected to ICIC contractors by 56KB digital circuits and to DCRT by a T-1 circuit. Using this wide area network, ICIC personnel can communicate worldwide with users of ICIC scientific information products.

During 1992, CCB contracted for a study of future ICIC networking needs. The results of the study are expected to define the shape of the ICIC local and wide area networks over the next five years.

Applications Development

Work on a new Manuscript Tracking System (MTS) for SPB is being completed. The system services all levels of users including SPB management, the Editor-In-Chief, senior and associate editors, and administrative staff. It provides manuscript tracking, production tracking, productivity measurement, and operational statistics. Staff also completed a statistical analysis of 1991 operations to assist SPB management.

Staff continued to work with OIA to distribute a CD-ROM version of PDQ and CANCERLIT to developing or underserved countries.

Continuing to enhance the CancerFax™ product-service, staff has worked with ICRDB and the Pan American Health Organization to design an interface for translating PDQ statements into Spanish. This cooperative project, which required considerable research, is expected to start within a few months.

Staff members have worked with the network study contractor to determine ICIC needs for future networking and are planning a network upgrade during the next year.

Research and Development

The R&D staff continued to develop an Integrated Clinical Workstation for Oncology, which will serve as a prototype for other medical practice fields. This work is being accomplished by a Phase II SBIR contract. The software being developed by the contractor was demonstrated at the American Society of Clinical Oncology and Oncology Nursing Society meetings.

Staff is still working on a Cooperative Research and Development Agreement to develop concept demonstration sites for the Clinical Information System for Oncology. NCI, IBM, and Second Foundation, Inc. have written a letter of intent to form this agreement.

Staff started two SBIR research projects: (1) Development and Implementation of a Voice Recognition Interface and Knowledge Server Prototype (2) and Development and Implementation of a Portable Digital Data and Knowledge Base Prototype for Cancer Patients. Each project is being funded; the work will begin in the near future. Staff also is planning a new SBIR project to investigate the potential for using a hand-held computer to interact with ICIC medical databases.

Staff started the development of an PDQ file for prototype drugs and continues to consult with members of the development team.

As an advisory member to the Institute of Medicine, National Academy of Science Study of the Computer-based Patient Record, 1989-1990, a staff member helped to formulate a national strategy and implementation plan for the study recommendations. This study was published during the last year: The Computer-based Patient Record: An Essential Technology for Health Care, Committee on Improving the Patient Record, Richard S. Dick and Elaine Steen (editors), National Academy Press, Washington, D.C., 1991.

A staff member took part in the Advisory Council to the Coalition to Create the Computer-based Patient Record Institute (CPRI) and co-chaired the Committee on Demonstration Projects for CPRI. The institute was incorporated in January 1992.

A staff member also is serving on the CPRI "Codes and Structure" work group. The first annual meeting was held on July 14, 1992, in Washington, DC.

After taking part as an observer, a staff member has been nominated to serve as a member of the American National Standards Institute Healthcare Informatics Planning Panel.

M C SYSTEMS CONSULTANTS, INC. NO1-CO-15603

Title: Monthly Updating and System Maintenance of MUMPS and 'C' Versions of PDQ

Contractor's Project Director: David Campbell

NCI Project Officer: Cheryl Berg

Objectives:

- To convert monthly PDQ integrated tapes to MUMPS and 'C' language versions of PDQ with a user friendly interface.
- To distribute monthly MUMPS and 'C' versions of PDQ and associated documentation to appropriate PDQ licensees.
- To assist PDQ licensees in loading up-to-date versions of PDQ.
- To provide system maintenance and enhancements to the MUMPS and 'C' versions of PDQ.

Major Accomplishments:

The MUMPS version of PDQ has been modified to make the user interface clearer and easier to use. This interface now will become the standard model for all NCI-sponsored versions of PDQ. The 'C' language version is now being modified so that the user interface mirrors the MUMPS version. The data have been converted and distributed in a timely and accurate manner each month.

Significance to Biomedical Research and Institute Programs:

The National Cancer Act of 1971 mandates that the Institute "Collect and disseminate all data useful in the prevention, diagnosis, and treatment of cancer...." The efforts of this contract has substantially improved the international distribution of ICIC databases, helping the Institute to meet this mandate.

Proposed Course:

This contract will span a five-year period from September 16, 1991, through September 15, 1996.

Date of Contract: September 16, 1991

Current Annual Level: $101,525

SECOND FOUNDATION, INC. NO1-CO-94386

Title: Computer Support for Cancer Information Dissemination

Contractor's Project Director: Dr. Peter Walton

NCI Project Officer: Kent Hevner

Assistant NCI Project Officer: Rita Burke

Objectives:

This project involves the purchase, installation, and acceptance test of new mid-range computer hardware, operating system software, and database management system software. The project requires converting databases, developing application software, and maintaining and supporting ICIC databases.

- PDQ contains data on prognosis, stage information, and treatment options for all major types of cancer. PDQ also contains (1) the names, addresses, and telephone numbers of physicians and organizations that specialize in cancer treatment protocols supported by NCI and (2) protocols voluntarily submitted by national and international cancer treatment organizations and institutions.

- CANCERLIT contains more than 900,000 citations (most with abstracts) describing published results of cancer research projects.

- The contractor must also process and format CANCERGRAMS, ONCOLOGY OVERVIEWS and RECENT REVIEWS.

Major Accomplishments:

Several new elements were added to the database and enhancements were made to the NLM online version. The overall size of the PDQ database continued to increase, this year by 9 percent. Conversion of the PDQ Cancer Information File to Oracle was completed, and the conversion of all other files is expected to be completed during the next six months. Continued improvements were made to the NLM retrieval version of PDQ so that users may search more precisely and efficiently.

Significance to Biomedical Research and Institute Programs:

The contractor's computer support is centrally important to the entire spectrum of ICIC products and services. By enhancing the distribution of state-of-the-art treatment information, the time period to inform physicians of improved cancer treatments can be shortened and cancer mortality rates can be reduced.

Proposed Course:

This contract will span a five-year period from December 30, 1988 through December 29, 1993. This continuing support requirement will be recompeted during 1993.

Date of Contract: December 30, 1988

Current Annual Level: $1,636,000

SECOND FOUNDATION, INC. N44-CO-05180

Title: Clinical Oncology Workstation

Contractor's Project Director: Dr. Peter Walton

NCI Project Officer: Dr. Robert Esterhay, Jr.

Assistant NCI Project Officer: Michael Arluk

Objectives:

The purpose of this phase II SBIR is to develop a production version of the Clinical Oncology Workstation on a UNIX computer workstation platform with the following features.

- o Electronic medical record keeping
- o Automated acquisition of clinical laboratory test results
- o Remote access to hospital patient data
- o Access to knowledge bases and literature via CD-ROM
- o Decision support for cancer treatment protocol management
- o Access to user-installed PC-DOS software packages

Major Areas of Activity:

Progress on the following tasks identified in the original SBIR proposal and contract.

- o Develop enhanced outpatient interface
- o Implement improved use of color and graphics in the user interface
- o Develop techniques for acquiring test results
- o Define multiple hardware configuration options
- o Develop methods for constructing clinical vocabularies
- o Develop enhanced interface options for SearchLITE and CD-ROM
- o Develop mechanism for selecting protocols and entering patients
- o Develop mechanism for managing protocol-based treatment and follow-up
- o Perform alpha and beta testing at multiple sites
- o Form and use ad hoc clinical advisory group

Significance to Biomedical Research and Institute Programs:

As clinical practitioners struggle to deal with increasingly complex administrative reporting and fiscal requirements, many oncologists find it difficult to take part in clinical research. Despite efforts to encourage increased participation in cancer clinical trials, only a fraction of U.S. oncologists regularly enroll patients in the very trials that promise a future for cancer patients. Technology offers solutions for dealing with the current chaos in data management, paperwork, and reporting and for simplifying the role of the physician in formal clinical trials. This contract will provide an advanced personal computer that offer the oncologist a variety of data-management and decision support tools, many of which run on other computers but which are accessed through networks or telephone-modem connections.

Proposed Course: This contract ends on September 30, 1992

Date of Contract: October 1, 1990

Current Annual Level: $250,000

Scientific Publications Branch
Chief: Julianne Chappell

As part of the information dissemination-technology transfer effort mandated by the National Cancer Act, the Scientific Publications Branch (SPB) develops, manages, and reviews ICIC scientific periodicals produced for health professionals. The branch is a major NCI resource for reviewing, distributing, and exchanging scientific information among health professionals throughout the world.

One primary branch responsibility is managing the Journal of the National Cancer Institute. The journal is a national publication featuring highly technical articles about original preclinical and clinical research; general articles addressing basic issues in cancer research and treatment; and news items reporting new activities, policies, and practices related to the National Cancer Program. It is published biweekly and distributed to individuals in the medical and allied communities, at government and private research institutions, and at national and international medical and university libraries.

SPB also publishes Journal of the National Cancer Institute Monographs. The publication contains (1) proceedings of conferences and symposia on cancer and related fields of research and (2) papers on cancer research, prevention, or control. Monographs are published up to six times a year.

The branch also manages the printing of CANCERGRAMS, a series of 22 monthly database-derived publications containing abstracts of articles pertaining to specific areas of cancer research.

The Journal Editorial Board has an Editor-in-Chief, Dr. Daniel Ihde, and a 33-member core board of associate editors, prominent scientists in cancer research. The Editor-in-Chief and the Editorial Board determine the journal's scientific content; an editorial advisory board of 74 extramural scientists complements the core board, extending the scope of what the associate editors handle. The Branch Chief advises Editor-in-Chief and editorial board on technical and administrative policies.

Manuscript Submissions

An average of 68 manuscripts per month was processed for the Journal. Since the standards for accepting a manuscript are exacting, the rejection rate is as high as 62 percent. On an average, manuscripts are published within three months of being accepted. To maximize their readability, all papers appearing in the Journal are carefully edited for a multidisciplinary audience.

Manuscript Tracking

All manuscripts are processed by a computerized tracking system and assigned to associate editors who supervise the peer review process. Using this computerized system for document control, the time to process manuscripts

has been reduced, fewer staff members are needed to speed the process, and tasks are accomplished more efficiently. The system tracks information on the reviewers, on the status of each submission, and on analyses of manuscript actions-decisions. The system is being enhanced to include a database of potential reviewers by name, specialty, research interests, performance as a reviewer, and current number of manuscripts in review.

A post-acceptance tracking system is also being developed. This system will track all the production phases of a manuscript, from the editorial process to the printed article. Phase I of our new computer system is scheduled to be completed in July 1992.

Journal Impact

The Journal has about 10,000 subscribers. The journal's impact is evidenced by the coverage it continues to receive from the medical and scientific media receiving it regularly before publication. According to the Science Citation Index, the impact increases every year.

As part of the Institute Director's initiative to increase information dissemination in underserved areas of the world, free Journal and NCI Monographs are sent to key medical libraries and academic institutions in Eastern Europe, South America, Asia, Africa, the Middle East, and the Far East. Significantly saving time and cost, the issues are mailed by the printer, eliminating the need to return the journals to NIH or ship them to the Government Printing Office (GPO) for distribution. GPO Superintendent of Documents Office keeps the subscriber mailing lists and sends them to the printer before the publication of each issue. ICIC keeps press lists and other distribution lists and sends them to the printer for each issue.

The cost of a subscription is still $51.00 for domestic subscribers and $63.75 for foreign subscribers.

Journal of the National Cancer Institute Monographs

The following monographs were published during the current year.

Monograph No. 11
Consensus Development Conference on the Management of Early Stage Breast Cancer

Monograph No. 12
ICCCR International Conference on Cancer Prevention: Facts, Maybes, & Rumors

Monograph No. 13
Biology of and Novel Therapeutic Approaches for Epithelial Cancers of the Aerodigestive Tract

One Monograph--First International Conference on Smokeless Tobacco: Tobacco and Health--was withdrawn and will be published with other NCI tobacco-related publications.

The following subjects have been approved for the coming year.

Cancer Information Service
Scientific Editor: Alfred C. Marcus, Ph.D., AMC Cancer Research Center, Denver, CO.

Proceeding of a Workshop on Taxus and Taxol
Scientific Editor: Susan G. Arbuck, M.D., Division of Cancer Treatment, National Cancer Institute, Bethesda, MD.

Support Contracts

One major contract covers such editorial services as writing, proofreading, copy editing, data checking, and editorial reviewing. Two smaller Professional Services contracts were set up for the substantive editing of two of the monographs published during this period. Another Professional Services contract covered the preparation of the journal's year-end subject index.

Coverage in Other Publications

The Journal is indexed in the following publications.

Biological Abstracts
Chemical Abstracts
Index Medicus
Nutrition Abstracts
Hygiene Abstracts
Biotechnology Abstracts
CIS Abstracts
Current Contents
Dental Index
Index U.S.
Government Periodicals
Risk Abstracts
Excerpta Medica.

GRAMMARIANS INC. NO1-CO-03851

Title: Editorial Services for the International Cancer Information Center

Contractor's Project Director: Mellen Candage

NCI Project Officer: Edwin Haugh

Objectives:

To provide editorial support primarily for the Journal of the National Cancer Institute, Journal of the National Cancer Institute Monographs, and other ICIC activities requiring writing, editing, and editorial reviewing services.

Major Accomplishments:

According to the contract, the contractor will be compensated for services that meet the contractor's guaranteed productivity standards; the quality of these services are monitored and judged on the basis of these standards. If guaranteed quality level is not meet, the contractor, must work without government compensation until the guaranteed quality level is restored.

During this period, the contractor did not meet the quality standards for substantive technical editing. By mutual agreement, this task was deleted from the contract. The contractor will continue to provide proofreading, copy editing, and editorial review services.

Significance to Biomedical Research and Institute Programs:

The services help to keep up the quality and accuracy of the Journal and other ICIC publications. The Journal, a scientific publication of international impact, is one of the Institute's major instruments for distributing scientific information, a function mandated by the National Cancer Act.

Proposed Course:

The contractor will continue to provide editorial services for up to 3 years or more.

Date of Contract: June 30, 1990

Current Annual Level: $168,000

Marketing Office
Director: Jean Baum

In its sixth year, the ICIC Marketing Office expedites the distribution of the Institute's scientific information resources, especially the PDQ database and the Journal of the National Cancer Institute. This task is accomplished through many marketing activities that target a range of health professionals for whom these resources were developed.

PDQ

To market PDQ, the staff has focused on PDQ presentations for health professionals at medical meetings and exhibits, on such new access methods as CancerFax™, and on such new or improved user aids as the PDQ User Guide.

CancerFax™

CancerFax™ was introduced in 1991 to increase access to PDQ cancer information statements. By combining a computer and fax machine, ICIC can send current cancer information to any health professional who has a fax machine. CancerFax™ was developed to make PDQ state-of-the-art treatment guidelines more accessible to physicians, especially those who do not use computers in their clinical practice but who are part of the rapidly growing number of professionals who have fax machines.

CancerFax™ was first promoted in the Clinical Update on Rectal Cancer, a direct mail initiative to 35,000 physicians, nurses, and related health professionals that increased monthly calls from 50 in March 1991 to 2000 in March 1992. CancerFax™ also offers more information about all the PDQ components, PDQ availability, news and patient education materials, such press releases as the Breast Cancer Prevention Trial of 1992, and listings of NCI-designated cancer centers.

The Marketing Office is coordinating the distribution of CancerFax™ in Spanish. With the Office of Cancer Communications staff, ICIC took part in Minority Awareness Week activities by developing a CancerFax™ print ad and brochure in Spanish that was available at a April 1992 Departmental (HHS) Press Conference featuring Dr. Antonia Novello, the U.S. Surgeon General. This opportunity enabled the Institute to brief the Hispanic media about CancerFax™ as a tool for accessing cancer information. With OIA staff, an article and a print ad were placed in the May 1992 issue of MEDICO INTERAMERICANO to publicize CancerFax™ to Latin-American physicians.

When the Spanish translation of CancerFax™ has been approved for release, the Marketing Office will organize a Spanish CancerFax™ Advisory Board to help with a full-scale announcement. The release is projected for fall 1992.

User Aids

The Marketing Office directed the revising, reprinting, and distributing of the PDQ User Guide for the NLM system. The first printing was sold out (1,000 copies), and as of June 1992, 50 percent of the second printing (500

copies) have been sold and distributed. PDQ access software is now included in the guide and is one of the ways the CANCERLIT database is promoted. Other user aids that the Marketing Office and ICRDB produce jointly are PDQ Terminology, PDQ Quick, PDQ Wall Chart, PDQ Slides and speaker presentations, and PDQ information packages.

Journal of the National Cancer Institute

The Journal, well-known and highly respected for its content and rapid publication, is a major reference for the media reporting on cancer research and issues. Before general distribution, the Journal is mail to a list of reporters to promote timely press coverage of the journal articles or releases. A new system for monitoring (1) the media articles referencing the journal and (2) the other databases collecting such information is in process. This monitoring is a solid indicator of the journal's potential to distribute information beyond its basic readership and to distribute it to the medical community. According to the Science Citation Index, the Journal's impact continues to increase every year.

A campaign to increase Journal subscribers was completed in 1992. A promotional letter was sent to 390,000 cancer professionals, including the 14,000 listed in the PDQ directory. So far, subscriptions have increased from 5000 to more than 8000, with more being added.

Promotional copies of the Journal were available at the following meetings where ICIC did not have a formal exhibit.

National Association of Science Writers (February 1992)
National Association for the Advancement of Sciences (February 1992)
American Urological Association (March 1992)
American Society of Preventive Oncology (March 1992)
Medical Library Association (May 1992)
AIDS Lymphoma Meeting (May 1992)
International Conference on the Molecular and Clinical Genetics,
Epidemiology, and Clinical Characteristics of Childhood Renal Cancer (May 1992)
Fourth International Conference on Prevention of Human Cancer: Nutrition and Chemoprevention Controversies (June 1992)
American Library Association (June 1992)
Special Libraries Association (June 1992)
World Congress of Dermatology (June 1992)
24th Annual March of Dimes Clinical Genetics Conference: Clinical and Molecular Cytogenetics of Developmental Disorders (July 1992)
Research Methods in Somatic Cell and Molecular Genetics (July 1992)
Third International Conference on Drug Research in Immunologic and Infectious Diseases (July 1992)
Third International Conference on Head and Neck Cancer (July 1992)

Journal of the National Cancer Institute Monographs

Three monographs were published in 1992 (listing in the Scientific Publications Branch section). These monographs were promoted in announcements and advertisements in cancer-related publications and at meetings where ICIC exhibited its products and services. To increase readership, special

promotional mailings were sent to physicians interested in the topics covered by each Monograph and to the scientific media. Each Monograph title is usually sold out by the end of the year.

CANCERGRAMS

New order forms listing the current CANCERGRAM titles were advertised in several cancer-related publications. These forms were also distributed at meetings where ICIC exhibited.

ONCOLOGY OVERVIEWS

New order forms listing the current titles were also advertised in several cancer-related publications and distributed at meetings where ICIC exhibited. A synopsis of each OVERVIEW was written for a Government Printing Office mailing and sent to the Priority Announcement mailing list. Special letters and an order form were sent to 10,000 health professionals listed in the PDQ Directory. About 350 copies of each OVERVIEW were printed; an average of 300 copies of each were sold by the end of the year.

Information on subscribing to the Journal, CANCERGRAMS, and ONCOLOGY OVERVIEWS also may be accessed through CancerFax™.

Other ICIC Activities

- ICIC Newsletter

  The Marketing Office issued the first internal newsletter for ICIC staff in November 1991; it continues to be issued bimonthly. Its purpose is to keep staff updated about work in progress, as well as to signal staff achievements and activities.

- "Scientific Information Services of the National Cancer Institute"

  This booklet describes the features and benefits of the scientific information services of the NCI. The Marketing Office coordinated a complete redesign, revision and reprinting of the guide in 1992. The distribution of this new version of the "Sci Guide" has been monitored by establishing a new "subscriber" database to have greater capability to continually update audiences with news of publications and product changes. As foreign audiences find the Guide especially helpful, the EORTC Liaison Office facilitated the mailing of the new Guide to all subscribers of the European Journal of Cancer.

- Consolidated Services

  The Marketing Office and the ICIC branches are taking part in the Consolidated Services Working Group, which is comprised of representatives from ICIC, OCC, NCI, and the Government Printing Office. The Marketing Director co-chairs the group. Pre-contract planning and research are ongoing, with an expected RFP in late 1992. The Marketing Office will reorganize its activities and marketing efforts to accommodate the new contract in 1993.

- ICIC Database

  To prepare for a Consolidated Services User database, the Marketing Office is directing the merging and creating of a consolidated user mailing list. Every list is being reviewed, and special mailers have been prepared for updating these lists. Names and addresses will be organized by product, service, and type of health professional so that individual audiences can be easily identified for the new ICIC service.

Cooperative Marketing Activities

The Marketing Office works with other NIH and NCI offices, such as the Office of Cancer Communications, the Division of Cancer Prevention and Control, the Office of International Affairs, and the National Library of Medicine to communicate NCI services to target audiences. Other interactions with such outside organizations as the Federal Drug Administration and health-care marketing firms supporting the pharmaceutical industry also enhance ICIC marketing efforts.

National Library of Medicine

ICIC continues to work with NLM to promote the PDQ and CANCERLIT databases as integral components of the MEDLARS system. A growing number of physicians are obtaining personal access codes to MEDLARS, as is evidenced by the 33,000 subscriptions to the NLM Grateful Med software. The Marketing Office and NLM are reaching physicians to reinforce that, in addition to MEDLINE, Grateful Med offers access to PDQ and CANCERLIT.

As previously noted, the PDQ User Guide for the NLM system was introduced in August 1990 and revised in April of 1992. Cross promotion and marketing efforts between NLM and ICIC have been very successful, especially the joint exhibit program presented at four major medical meetings. Joint marketing efforts will continue whenever possible.

Office of Cancer Communications

The Marketing Director is an ICIC representative (primarily for PDQ information and marketing input) on the Clinical Trials Committee, organized by the OCC Information Projects Branch to handle the NCI Clinical Trials Education and Promotion initiative. This year the Marketing Office has developed a special tabletop exhibit of NCI information services for cooperative group meetings.

The ICIC Marketing Office shares three major information support contracts with OCC: Biospherics, Inc. (NO1-CO-84339), Prospect Associates (NO1-CO-64077), and Explus, Inc. (263-89-C0059). Through the OCC Public Inquiries Section, Biospherics, Inc. handles requests for general information, the inventory and storage of publications and materials, and the coordinating and mailing of large quantities of ICIC materials. Prospect Associates is managed by the Information Projects Branch and assists ICIC in communications support services. Explus, Inc. is shared with the Information Resources Branch and is responsible for the logistical support of the Institute's exhibit program.

With the Office of Cancer Communications Cancer Information Service staff, the Marketing Director developed a statement of work for a new contract to be awarded in late 1992. This statement defines the operation of a toll-free (800) service for providing PDQ searches to health professionals. The office that is awarded the contract will be one of the new regional Cancer Information Service Offices. The Marketing Office and ICRDB will promote and manage the activities of this effort.

Division of Cancer Prevention and Control

To increase PDQ use among minorities, ICIC is working with the National Black Leadership Initiative on Cancer, as well as on the DCPC initiatives for Hispanic and Appalachian outreach through CancerFax™ and other PDQ demonstrations.

Other Cooperative Activities

To reach as many physicians as possible, the Marketing Office also cooperates with health-advertising firms representing pharmaceutical companies to distribute PDQ information. In particular, the Marketing Office is working with an advertising firm whose clients Berlex Corporation and Bristol-Myers Squibb are helping to distribute the information. Berlex is distributing 7,500 PDQ "folders" with CancerFax™ information to physicians, and Bristol-Myers Squibb is promoting PDQ through CancerFax™ in its newsletters and other communications.

Exhibits

ICIC attends medical meetings to promote the Institute's scientific information services, especially PDQ and the Journal.

The Marketing Office has modified the exhibit program to adjust to the decrease in available funds for sending staff to exhibits. The office now uses contract staff instead of office personnel to man exhibits, often exhibits jointly with the NLM Network Offices, distributes materials only at registration areas of exhibits, and uses the Cooperative Group meetings to combine a speaker presentation and an exhibit. A new tabletop "Scientific Information Services" exhibit will be available this summer to be used by Cooperative Groups and NCI staff.

In addition to distributing PDQ information packages at regular exhibits, the packages were distributed at the following meeting forums.

Southwest Oncology Group Meeting, fall 1991 session
American Medical Writers' Association, October 1991
American Medical Women's Association, November 1991
Society for Computer Applications and Medical Care, November 1991
American Society of Hematology, December 1991
Third Cancer Patient Education Conference, March 1992
19th Annual Symposium on the Diagnosis and Treatment of Neoplastic Disorders, April 1992
American Urological Society, May 1992
Southwest Oncology Group Meeting, spring 1992 session
Rural Health Association, May 1992

World Congress of Dermatology, June 1992
American College of Oncology Administrators, June 1992
Gynecologic Oncology Group Meeting, July 1992

With the continuing development of the NCI CRADA for the Integrated Oncology Workstation, the ICIC Marketing Office has assisted the Computer Communications Branch in reprinting and distributing the Final Report of the Oncology Workstation. The office also took part in the pilot demonstration at the following spring 1992 meetings: the Oncology Nursing Society, the American Society of Clinical Oncology, the American Association of Cancer Research.

EXPLUS 263-89-C-0059

Title: National Cancer Institute Office of Cancer Communications (OCC)-International Cancer Information Center (ICIC) Exhibits Program and OCC Museum Exhibits Program

Contractor's Project Director: Lisa Jones

NCI Project Officer: Jean Baum

Objectives:

The contract provides logistical support for the entire NCI exhibit program: graphics, staffing, research, evaluating potential medical meeting exhibits, and acquiring all related show services and exhibit reports.

Major Accomplishments:

The contract provided logistical support for educational meetings and presentations of all ICIC services, especially PDQ and the Journal of the National Cancer Institute, to professional medical groups in the United States. (see Exhibits section).

The contractor evaluated medical association meetings and suggested appropriate future meetings for ICIC participation.

Significance to Biomedical Research and Institute Programs:

This contract enables NCI to maximize its efforts to distribute the latest Institute cancer information at related medical meetings and forums.

Proposed Course:

The contract will continue through February 1994.

Date of Contract: February 24, 1989

Current Annual Level: ICIC Allotment--$115,770

OFFICE OF CANCER COMMUNICATIONS
Associate Director: Paul Van Nevel
Special Assistant: Corinne Vanchieri

The Office of Cancer Communications (OCC) is a major resource for distributing cancer information to the public (including cancer patients and people at risk for cancer) and to health professionals. The office handles the Institute's communication activities and, within the structure of the National Cancer Program, develops initiatives for meeting Institute responsibilities mandated by the National Cancer Act.

The office approach to issuing information on cancer prevention and control is to work with the intermediary groups that can reach more easily certain audiences. Such groups are cancer centers and cancer societies, non-cancer-related groups (fraternal organizations, medical societies, community groups, etc.), and the mass media. The major projects being undertaken are cancer prevention awareness, early detection, patient education, and cancer in such special populations as older Americans and low-literate and minority groups. Other undertakings are (1) the pretest and evaluation of all communication projects; (2) the support for the Cancer Information Service; (3) an internship program for graduate students in journalism, communications, and the like; and (4) the News Section of the Journal of the National Cancer Institute.

OCC activities also include responding to press inquiries and preparing news releases, press summaries, announcements, and background statements for the press. OCC develops reports and publications, speeches and Congressional testimonies, reports required by law, special reports for the Institute Director's byline, and a variety of publications and audiovisual materials for public and professional audiences.

OCC designs exhibits primarily for health professionals and scientists. These displays are shown at scientific and professional meetings to present information on cancer and on ways to tap Institute and other organizational resources.

OCC handles controlled and Congressional inquiries and public inquiries requiring written responses. OCC also distributes publications and replies to telephone and Cancer Information Service toll-free number inquiries.

Mildred Jacobus is secretary to the associate director, and Kimberly Scott is the budget assistant.

Information Resources Branch
Chief: Nancy Brun

The Information Resource Branch (IRB) supports not only OCC activities but also Institute-wide programs. The branch is responsible for the following areas.

- Developing and keeping an in-house library

- Designing, producing, and managing the OCC exhibit program
- Distributing audiovisuals through free-loan programs
- Developing and keeping a photo-slide archives and responses to requests for these materials
- Producing such audiovisuals as speaker's kits, films, public service announcements, and videotapes
- Coordinating special NCI events
- Overseeing the scientific clearance of NCI printed materials
- Responding to requests for information through the Freedom of Information and Privacy Acts
- Producing and distributing the NCI Current Clips

Library and Information Section
Head: Judith Grosberg

The Library and Information Section (LIS) is a central information resource for OCC and the Institute. In addition to housing many books and journals, it compiles an extensive in-house collection of publications, documents, archives, news releases, and audiovisuals. This year the library moved to a new facility designed for its expanding needs, greatly increasing its effectiveness in serving the Institute.

The staff accesses the major medical databases--MEDLINE, PDQ, Cancerline, and Toxnet--from the National Library of Medicine (NLM). It also uses other on-line services (Nexis/Lexis, Dialog, CompuServe, VuText, Datatimes, and Newsnet), completing searches and answering reference questions for nearly 1200 requests.

The in-house database now has 74,000 entries that are retrieved by subject, author, title, or type of document. The collection is continuously being evaluated for its usefulness and its historical significance.

Using its news clipping service, the section provides a daily edition of the NCI Current Clips for NCI professional staff, CIS, and members of the President's Cancer Panel and the National Cancer Advisory Board. The section screens eight major daily newspapers and a variety of weekly and monthly scientific and lay magazines and journals for topics of current scientific and political interest.

LIS continues to take part in the NCI Health Communications Fellowship Program. Top-level graduate students are selected for training in various areas of health communications, including science writing and health education. For the first six months of 1992, OCC recruited three Fellows; for the remaining six months, OCC will recruit one Fellow.

Graphics and Audiovisual Section
Head: Donna Bonner

The Graphics and Audiovisual Section provides design services for OCC staff and other NCI programs. By the end of FY 1992, NCI staff will have submitted more than 350 jobs for design and production. The following illustrates a sampling of materials designed by the staff for Institute programs and projects this year.

Graphics

Cancer Prevention Program
- Tobacco Effects in the Mouth

Prevention Materials
- Get a New Attitude: A Guide for Black Americans

Pubette Series
- In Answer to Your Questions about Thyroid Cancer
- In Answer to Your Questions about Liver Cancer
- Smoking Facts and Tips for Black Americans
- Smoking: Facts and Quitting Tips for Hispanics (bilingual)
- Q and A about Choosing a Mammography Facility (Spanish)

Low-Literacy Publications
- Take Care of Your Breasts
- Having a Pelvic Exam and Pap Test
- A Mammogram Could Save Your Life
- Check Your Breasts

General
- Cancer Tests You Should Know about: A Guide for People 65 and over

Research Reports
- Cancer of the Pancreas
- Cancer of the Colon and Rectum
- Oral Cancers

What You Need to Know Series
- Cancer of the Larynx
- Multiple Myeloma
- Cancer of the Esophagus

Spanish Publications
- Have a Mammogram...Do It Today (bilingual)
- Have a Pap Smear...Do It Today (bilingual)
- Cancer Information Service brochure (bilingual)

Mammography Video Kit

"A Mammogram: Once a Year...for a Lifetime" video kit was produced. Designed for women 40 and older, the kit stresses the importance of regular mammograms, giving information on how the procedure is done and how to prepare for it. This kit was prepared for multiracial audiences and will be distributed free of charge by Modern Talking Picture Service.

The kit contains a user's guide, a poster, a flyer, 25 "A Mammogram: Once a Year...for a Lifetime" pamphlets, 25 "Questions and Answers about Choosing a Mammography Facility" pamphlets, a card for reordering, and a VHS videotape.

Other Kits
- Do the Right Thing...Get a New Attitude about Cancer
- Hágalo hoy...Por su salud y su familia
- Once a Year...for a Lifetime

These kits, developed for starting programs at work sites and in communities, contain inserts or brochures on smoking, mammography, and pap test.

Kit pieces: Over 70 coordinated inserts in English and Spanish were designed for kits above.

NCI Publications and Materials
- Administrative Career Development Program--new design for brochure, poster, flyer
- ICD-0-1 to ICD-0-2
- ICD-0-2 to ICD-0-1
- Self-Instructional Manual for Tumor Registrars, Book 2
- NCI Investigational Drugs: Chemical Information Experts Directory

Special Projects
- Design for Michael Gottesman NIH lecture series
- Design for Phillip A. Sharp NIH lecture series
- Continued coordination of the Annual NCI Award Ceremony
- JNCI Anniversary Booklet
- Down Home Healthy Cookbook
- Design for Leadership Summit Materials: The Challenge of Breast Cancer
- Hall Displays: Early Detection Poster Series, using art reproductions
- Designed 5 A Day for Better Health press conference materials
- Designed 20th Anniversary Symposium materials
- Designed DHHS Evaluation materials
- Designed CIS 15th Anniversary materials
- JNCI: Designed Stat Bites, Cancer around the World Logo, and National Cancer Program Logo

Audiovisuals

By the end of FY 1992, NCI staff will have submitted more than 570 requests for audiovisuals. Some of the requests include the following.

Photographs for ceremonies, publications, JNCI, the NCAB orientation book, and other events

Portraits for interns, Employees of the Month, and others

Videos with closed captioning
- Once a Year...for a Lifetime
- Patient to Patient: Cancer Clinical Trials and You
- Physician to Physician: Cancer Clinical Trials and You

Slide Shows

Press Conferences
- Regional Summits
- Tamoxifen
- National Minority Cancer Awareness Week
- NCAB Subcommittee on AIDS

Freedom of Information and Privacy Act Requests

This year the Institute answered 238 Freedom of Information (FOI) Act requests and 1 Privacy Act request. The following is a breakdown of requests under the FOI Act.

Companies	142
Law Firms	37
Media	8
Individuals	15
Schools, Hospitals	26
Government	1
Public Interest Groups	9

Other Branch Activities

The Exhibit Program continues to be an effective way of conveying health education messages and promoting NCI programs and publications to selected professional audiences. A five-year exhibit support contract with Explus, Inc., shared with the International Cancer Information Center, is in its fourth year. By the end of the fiscal year, OCC will have had exhibits at meetings of the following organizations.

- American Public Health Association
- Breast Cancer Resource Committee
- National Coalition for Cancer Survivorship
- National Coalition of Hispanic Health and Human Services Organizations
- American Occupational Health Conference
- National Rural Health Association
- National Council on Aging
- Oncology Nursing Society
- American Society of Clinical Oncology
- American Association for Cancer Research
- Maryland Breast Cancer Summit
- National Council of La Raza
- Links, Inc.
- Chi Eta Phi
- Delta Sigma Theta
- Alpha Kappa Alpha
- National Medical Association

Several exhibits--American Association of Retired People, American Library Association, and the League of United Latin American Citizens--were canceled because of travel budget constraints.

"Closing in on Cancer," two identical 500-square foot exhibits on the history of medicine and cancer research were developed in 1987 for the Institute's 50th anniversary. This exhibit is shown in science museums and medical institutions across the country. This year the exhibit was displayed at the Texas Medical Association in Austin, Texas; Providence Hospital in Mobile, Alabama; Maryland Perkins Cancer Center in Baton Rouge, Louisiana; Beaver County Cancer and Heart Association in Monaca, Pennsylvania; and Flower Hospital Tri-State Cancer Center in Dothan, Alabama. Preliminary plans are underway to withdraw "Closing in on Cancer" from circulation and to install it in the permanent collection of the National Medical Association.

The branch distributes OCC audiovisual materials through a contract with Modern Talking Picture Association. Since 1988, the film "It Takes a Special Love" has been viewed by families and others affected by childhood cancers. About 141,000 people will see the film at 3,000 showings this year--a total of 543,000 persons at 17,000 showings in four years.

Modern Talking Pictures is also responsible for distributing the "Eating for Good Health" speaker's kits. Nearly 5,000 kits have been distributed since the program began three years ago. The kit is being revised to include new, more practical nutritional information for older Americans.

A new speaker's kit "A Mammogram: Once a Year...for a Lifetime" has been completed this year and is being printed. Modern Talking Pictures will distribute this new kit in FY 1993.

This year the branch processed about 145 non-research materials for scientific clearance. These materials included pamphlets, fact sheets, special communications, NIH Record stories, and press releases.

Staff

Departures

Cathy Zamorano, Freedom of Information and Privacy Act Coordinator, moved in July to Portland, Oregon. Sam Whitmore, NCI Printing Officer, accepted a position in May with the NIH Printing and Reproduction Branch. Jean Moore, a volunteer for nearly seven years, retired to pursue numerous personal interests.

Additions

Karen Kapust joined the staff as a librarian in July 1991. Hong Vo, a former branch stay-in-school, is a full-time clerk-typist. Donna Kerrigan accepted a permanent position as Senior Editor after a six-month temporary assignment with the branch. Another important addition is Diana Mathews, who is responsible for a multitude of tasks--printing and reproduction, design, art work, tracking, travel, and timekeeping. Visual Information Specialists for the Graphics and Audiovisual Section are Maggie Bartlett and Betty Johnson.

Information Projects Branch
Chief: Dr. Sharyn Sutton

The Information Projects Branch (IPB) develops, evaluates, and carries out cancer information and education programs for cancer patients and their families, the general public, and health professionals. The direction and content of the branch's information and education programs are based on the following guidelines.

- o Activities must provide the Institute's divisions with solid communication support for interventions and program implementation.
- o Programs must address the communities' cancer information needs, particularly the needs of underserved populations.
- o Programs must contribute to OCC's position as the leading Federal source for state-of-the-art cancer education and information.

The branch conducts audience research, develops targeted materials, and distributes the Institute's cancer education programs through mass media and intermediary organizations. A major IPB focus last year has been planning and developing systems for community outreach to prepare for the increased field support from CIS. The branch also acquired a unique marketing-media database called INFORUM. This database will be merged with critical cancer data and will serve as a planning tool for national promotions and targeted local interventions.

There are two branch sections: the Health Promotion Section develops public education programs for cancer prevention and early detection and the Patient Education Section develops education programs and resources for caregivers and cancer patients and their families. The branch staff serve both sections in addressing special cancer communication issues related to OCC's four priority audiences: Black Americans, Hispanic Americans, older Americans, and low-literate people.

Health Promotion Section
Acting Head: Ruth Mattingly

The section designs and carries out the Institute's health education in cancer prevention and control. It delivers key messages to targeted audiences about early detection of cancer and about nutrition and smoking related to cancer.

Early Cancer Detection

Breast Cancer Education

The Institute will continue its broad-based mammography education program entitled "Once a Year...for a Lifetime." The program and materials have been a basis for many education activities that are carried out around the country by various groups--other Federal, state, and local government agencies (e.g. Centers for Disease Control (CDC), Social Security

Administration), local community groups, service organizations, churches, local health facilities, and the like.

Activities

1. Once a Year Mammography Program...the Institute has updated and reprinted these program materials, which are distributed to women age 40 and older, the media, and community groups. Limited quantities of the 30-minute "Once a Year" film are available in English and Spanish. The English television show has been aired in almost 100 cities, while the Spanish version has been shown in 600 Univision markets. The Institute is completing a "Once a Year" slide show and video show to be presented to community groups.

2. Project Awareness...a collaborative program to provide underserved women opportunities for breast cancer education, mammography, clinical breast exams, and follow-up medical care was launched at the National Minority Cancer Awareness Week press conference on April 8th. This early detection program was inspired by the effectiveness of NCI's "Once a Year" mass communications materials. Programs are planned again for Detroit and the District of Columbia. There will be six new pilot cities: Los Angeles, Baltimore, Atlanta, Raleigh-Durham, St. Louis, and Miami. For most cities, the program will start during Breast Cancer Awareness Month (October); however, NCI will begin working with national magazines on Project Awareness stories well in advance.

3. National Cosmetology Association (NCA)...NCI's partnership with NCA continues to grow. After successfully presenting the "Once a Year" film and the educational materials at the NCA July 1991 convention, NCI was invited to give another presentation at a second meeting in January 1992 to such leadership groups as Hair America, State Educators, and Aesthetics America (skin-care specialists). Institute staff will be attend the next NCA convention in July 1992. Future activities also include (1) developing a training program to instruct NCA members on how to use "Once a Year" materials with the "Look Good...Feel Better" program and (2) coordinating in-salon promotions on mammography.

4. Physicians Mammography Education...based on consistent survey data showing that people will take advantage of early detection tests if they are recommended by their physicians, IPB continued to develop a major physician education program. This program first focused on mammography and older women, but it is now intended to encompass other areas.

   The Institute has continued to work with CDC, the American Cancer Society, the Jacob's Institute, and the American College of Obstetricians and Gynecologists to increase primary-care providers' use of mammography screening. IPB presented a summary of its Physician Visits Survey (1991) at the Jacob's Institute June 1992 meeting on physicians referral patterns and mammography usage. IPB is also working with the Division of Cancer Prevention and Control in summarizing data from physicians and radiologists on mammography screening procedures and referrals.

5. NBA Wives...in January 1992, the NBA Wives and NCI worked on a breast cancer education initiative. The wives will be working in their cities to heighten public awareness about mammography and to encourage the public to call the CIS toll-free number (1-800-4-CANCER) for information on all aspects of breast cancer.

6. United States Conference of Mayors (USCOM)...NCI has developed a partnership with USCOM, the U.S. Conference of Local Health Officers, and the Breast Cancer Resource Center. While in the beginning stages, the USCOM program is designed to improve and strengthen breast cancer early detection services for women. First, a needs assessment will be conducted in several cities to determine the how much money has been allocated for breast cancer screening services and what gaps may exist in these services. The goal is to inform health and government officials about areas requiring further attention. This partnership will be announced at the USCOM meeting in June.

7. Breast Cancer Summits...NCI and the Susan G. Komen Breast Cancer Foundation is co-sponsoring eight regional Breast Cancer Summits this year. The Summits are designed to bring together community organizations and local businesses, encouraging them to provide education and screening programs for their members and employees. The Summits will be held at the NCI-designated Comprehensive Cancer Centers in Buffalo and New York City, Detroit, Durham, Houston, Miami, Philadelphia, and Tucson.

8. National Breast Cancer Awareness Month...NCI will continue its support of activities to recognize National Breast Cancer Awareness Month in October 1992. As a member of the board of sponsors for the National Association of Breast Cancer Organizations (NABCO), NCI will be supporting NABCO's development of educational materials and activities for October. NCI also will announce and promote the October implementation of Project Awareness in the pilot cities across the country through the print and broadcast media.

Prostate Cancer Education

To respond to the considerable demand from Black community groups, a prostate cancer fact sheet was prepared for National Minority Cancer Awareness Week. Consumer research is being conducted to examine men's feelings, concerns, understanding, and behavior regarding prostate cancer. Based on this research, a more detailed information packet will be prepared for distribution.

Cervical Cancer Education

IPB has worked with the Division of Cancer Prevention and Control (DCPC) in testing and revising a video tape on cervical cancer and pap tests for Native American Indians. The film will be revised and distributed in cooperation with the Nebraska Health Department.

Several basic print brochures on cervical cancer were developed and tested for special audiences, including low-literate, Black, and Hispanic women.

Tobacco Education

IPB will continue communications support for NCI's tobacco control efforts, emphasizing NCI's American Stop Smoking Intervention Study or ASSIST program. Other supported projects will include DCPC's smokeless tobacco initiatives with Major League Baseball and Little League Baseball. OCC continues to provide tobacco education publications, with a goal of offering culturally appropriate information for Black and Hispanic Americans. A communications effort for women is also planned.

Activities

1. Developing an ongoing communications effort for ASSIST. This involves serving as the national ASSIST public affairs office, providing reactive and proactive media support; working with DCPC to train CIS staff at field sites to work properly with the media; and providing nationally produced, locally tailored materials such as a "hometown" news release service.

2. Creating materials that will be useful for a variety of audiences in outreach activities. These materials will be easily reproduced at CIS sites and will also be useful in CIS outreach efforts, in the National Black Leadership Initiative, in the Hispanic Leadership Initiative, and in states not directly involved with ASSIST. These materials will include self-help literature and information on environmental tobacco smoke.

3. Developing more substantive self-help materials for specific audiences, including Hispanic Americans, Black Americans, women, and people with lower-level reading skills.

4. Continuing to repackage NCI state-of-the-art intervention documents useful for program planners developing smoking control programs. Upcoming documents will focus on programs to reach women smokers and on the use of the media.

5. Supporting the communications for DCPC's smokeless tobacco initiatives with Major League Baseball and Little League Baseball. This involves providing technical support for the planning process and helping with the development of such materials as videos, posters, and fact sheets.

6. Collaborating with the CDC Office on Smoking and Health in its public service advertising campaigns, particularly those for minority and older audiences. Historically, CIS has played a major role in these campaigns, which highlight NCI's toll-free number (1-800-4-CANCER) as a national contact for smoking prevention and cessation information and materials. In recent years, the campaign has included a public service announcement proposing quitting as a New Year's resolution.

7. Continuing OCC communications support for DCPC's programs that train health professionals to intervene in patient tobacco use. Our support includes regular follow-up communications with health professionals who are trained, publicity for the training effort, assistance in

developing training program materials, and distribution of materials through the CIS toll-free number.

Diet and Nutrition

The Institute's program on nutrition gives the public up-to-date information on the relationship between diet and cancer and suggests dietary changes that may lower the risk of cancer. "5 A Day for Better Health" program continues to be the cornerstone of this effort.

Scientific evidence indicates that eating at least five fruits and vegetables a day may lower the risk of cancer. The results of a 1991 baseline survey indicate that Americans eat only 3.4 fruits and vegetables a day. The 5 A Day for Better Health program, also supported by the Produce for Better Health Foundation, is a national consumer education program to encourage Americans to eat at least five fruits and vegetables a day.

Activities

1. The focus of this program is to inform Americans of the need to eat five servings or more of fruits and vegetables each day. Featuring Secretary Sullivan, a national press conference was held to convey this basic message. In future years, selected populations will be targeted for national campaigns.

2. IPB developed education materials to inform consumers on how to increase consumption of fruits and vegetables.

3. IPB and DCPC continued to work with the Produce for Better Health Foundation on media activities aimed at increasing fruits and vegetable consumption.

4. IPB held a press conference in July 1992 to release the results of a 1991 survey on fruit and vegetable consumption in the American diet.

5. IPB adapted a dissemination strategy for Down Home Healthy, a cookbook to meet the needs of Black American families.

6. IPB and DCPC developed and tested nutrition education materials for the low-literacy segments of specific ethnic populations--American Indians, Alaskan Natives, Hawaiian Natives, Chinese, Filipinos, Vietnamese, Hispanics, Blacks, and Whites. Forty-three tipsheets, booklets, posters, and scripts for one audio and three video tapes have been developed. Some of these materials are bilingual and are being pretested in relevant groups across the country. "Teaching Your Ethnic Patients," a guide for physicians, is also being developed.

7. IPB continued to promote Institute dietary guidelines and nutrition messages, distributing education materials to intermediaries and the public. About 2,000 community nutrition kits entitled "Eating for Good Health" were distributed in 1992. More than 500,000 copies of "Diet, Nutrition, and Cancer Prevention: The Good News" and more than 50,000

copies of "Diet, Nutrition, and Cancer Prevention: A Guide to Food Choices" were also distributed.

Black American Cancer Education Program

The Institute is expanding its Black American Cancer Education program "Do the Right Thing...Get a New Attitude about Cancer." This year "Do the Right Thing" was recognized by the communications industry's prestigious Communications Excellence to Black Audience (CEBA) Award.

Cancer affects Black Americans more than any other group, and, consequently, more Black Americans die of this disease. Most Black Americans do not know that the chances for survival are greater if cancer is discovered early and is treated promptly. "Do the Right Thing" urges Black Americans to adopt a "new attitude" and to make some simple but crucial lifestyle changes toward maintaining good health.

Accomplishments

1. Project Awareness - a program to expand current community-based efforts in increasing breast cancer screening and follow-up medical treatment among underserved women. Local chapters of the Auxiliary to the National Medical Association will spearhead the project with the Cancer Research Foundation of America, the Young Women's Christian Association, and the Congressional Families Action for Breast Cancer Awareness campaign. Other Black American organizations that will be supporting this effort are the NMA, The Links, Inc., and the Chi Eta Phi Sorority. CIS and the National Black Leadership Initiative on Cancer (NBLIC) will chair local efforts by providing media relations and technical support, as needed.

2. "Do the Right Thing...Get a New Attitude" - many materials were revised and several new pieces added.

   "Smoking Facts and Quitting Tips for Black Americans" brochure - a complement to the "Smoking and Lung Cancer" fact sheet.

   A question and answer prostate cancer fact sheet - printed for CIS and NBLIC use. This fact sheet is not for mass distribution because of limited quantities, but it can be used for answering inquiries, at small meetings, and for activities targeting Black American males.

   "Activities and Program Ideas for Your Community" - instructs community organizations on using DTRT materials in the kits supporting their local health education and media outreach efforts.

   A CIS fact sheet and rolodex card for the "Do the Right Thing" kit.

   A new NBLIC fact sheet - adapted to the "Do the Right Thing" format. The Black American program also created a new recruitment kit for NBLIC.

   Pins and bookmarks using the "Do the Right Thing" logo and colors. A limited number of these giveaways are available at community events.

3. Other Program Materials...new audio-visual materials and brochures developed for the media, community presentations, and outreach events.

Media Pieces

Breast cancer television public service announcements (PSA) from 1990 and 1991 featuring Nancy Wilson, Phylicia Rashad, and Ruby Dee were redistributed as one package, and the voices were used in radio PSAs. General information print PSAs on breast cancer and smoking were developed. All these pieces were designed for year-round use. A series of audio news releases were created, using soundbites from the 1991 video news release with Patti LaBelle and from the National Minority Cancer Awareness Week (NMCAW) 1992 press conference. Two different introductions were prepared for these news releases so the releases could be used during NMCAW or later in the year.

Low-Literacy Brochure - A color brochure on Pap Tests, targeting low-literate audiences from Black American and other ethnic communities, was available in early 1992.

4. Materials in Production - the need for new or updated materials are always being identified. There are two new pieces that will be available before the end of this year.

Get a New Attitude: A Guide on Cancer for Black Americans" brochure, an overview of Blacks and cancer, replacing the "Good News about Blacks..." general brochure, will adapt the "Do the Right Thing..." theme.

"Down Home Healthy Cookbook" - developed with two nationally known Black American chefs. They worked with NCI by taking recipes popular among Black Americans and making these recipes lower in fat and sodium. The cookbook will be available in the fall and is being circulated to numerous Black organizations this summer.

5. Intermediaries

IPB's relationship with several national Black American organizations has continued to develop. These organizations have continued their commitment to breast cancer awareness. In addition to activities during NMCAW 1992 and throughout the year, these organizations have become involved in national programs sponsored by NCI.

NMCAW and National Black American Organizations

IPB provided the chapters of several national Black American organizations with "Do the Right Thing..." kits. The kits had a sample of materials that could be ordered from CIS for activities planned during NMCAW 1992 and throughout the year. Some of these groups are the following.

- o National Medical Association (NMA)
- o Auxiliary to the NMA (ANMA)
- o The Links, Inc.

- o Alpha Kappa Alpha Sorority
- o Delta Sigma Theta Sorority
- o Zeta Phi Beta Sorority
- o Chi Eta Phi Sorority
- o The Women Missionary Society of the African Methodist Episcopal Church.

To generate enthusiasm for NMCAW, examples of activities held by ANMA, the Links, CIS, and NBLIC were included in the cover letter to the national organizations.

Hispanic Education Program

Accomplishments

1. IPB collaborated with the Revlon Foundation and Univision Spanish Television Network to produce and distribute the half-hour television special and PSA on mammography--"Una vez al año...Para toda una vida." The television special was developed to inform Hispanic women about the need for breast cancer screening. The program kicked off 1992 National Minority Cancer Awareness Week and was premiered by Univision's 602 affiliates as an exclusive national network special.

   Univision is the most influential Spanish-language network in the United States. Its broad-based, family oriented programming is viewed by an estimated 22 million U.S. Hispanics and by Spanish-speaking audiences in 18 Latin American countries and Spain. Univision serves nearly every major Hispanic market in the country, covering 90 percent of U.S. Hispanic households. IPB is now distributing the film to Hispanic organizations through CIS offices. IPB continued to work closely with Telemundo, the second largest Spanish television network to use the film as public service programming.

2. IPB worked with the CIS offices to plan and set up the 1992 NMCAW campaign. IPB worked with a special task force to prepare the week's communication plan and assisted the task force members in presenting the plan to the rest of the CIS network. IPB staff kept the network informed of all the activities in preparation for the press conference and kick-off event.

3. IPB coordinated a press conference, in Washington, D.C., with the U.S. Surgeon General to inaugurate 1992 NMCAW and the release of the "Una vez..." film. The press conference received the largest Hispanic media coverage of any other NCI event. The conference was covered by Univision, CNN-Telemundo, USIA's TV-Marti, and Hispanic community newspapers.

   A B-roll with footage from the press conference and the film was used by many television stations across the country. A bilingual media kit was produced and distributed at the press conference. In addition, the media kit was mailed to more than 500 print media outlets in the United States. IPB continued to work with the Hispanic news media to underscore cancer-related issues affecting Hispanics. The availability

of Spanish-language materials and information greatly increased Hispanic media coverage.

4. As part of 1992 NMCAW, IPB produced in Spanish two audio news releases on cervical and breast cancers and distributed them to more than 300 Spanish-language radio stations. IPB also produced and distributed cervical cancer PSAs to public service directors at the same radio stations.

5. IPB updated and reprinted the Hispanic Program Kit "Hágalo hoy...Por su salud y su familia," which focuses on early detection of breast and cervical cancers. The kit, developed for community leaders and organizations serving the Hispanic population, helps community leaders develop cancer education programs, particularly for breast and cervical cancers.

   The kit contains brochures and fact sheets to be distributed at such community events as fairs, workshops, meetings, and conferences. It also contains articles and camera-ready graphics for local media placements. Short, simple bilingual brochures on breast and cervical cancers were printed for mass distribution. A bilingual brochure on tobacco control and CIS was developed and included in the program kit. The kit has been sent to more than 1,000 community and national organizations serving the Hispanic community and to CIS offices for local community outreach efforts.

6. IPB staff arranged exhibits at professional and intermediary meetings and gave presentations to promote the Institute's Spanish-language materials on early detection and prevention. "Una comunidad saludable...Para toda una vida," a program exhibit, was developed for national meetings. Collateral materials, such as plastic bags and refrigerator magnets using the program theme, are being produced for the meetings.

7. IPB continued to support DCPC's Hispanic Cancer Control Program and the proposed Hispanic Leadership Initiative on Cancer. IPB also supported DCPC's Applied Research Branch in translating the National Health Interview Survey Spanish-language questionnaire.

8. IPB staff members have translated several patient education publications. Radiation Therapy and You will be available for distribution at the end of July 1992. Chemotherapy and You and a shorter version of What are Clinical Trials All About? are being translated.

9. IPB started to develop the Hispanic Program Long Range Communications Plans. Program staff is working with the CIS Hispanic Working Group to gather information on demographics, the health status of Hispanics, cancer data, and other topics. IPB will form a task group composed of CIS outreach coordinators and Hispanics leaders to review the plan and prepare recommendations.

10. IPB developed a process for the branch to translate or adapt the Spanish-language. This process has been distributed to the CIS Hispanic Working Group and to some PHS offices.

Cancer and Older Americans Program

In the United States, cancer affects people 65 years or older more often than it affects other age groups. Fifty-eight percent of all cancers strike this age group, which represents only 12 percent of the general population. Sixty-eight percent of all cancer mortality occurs in this age group. In FY 1992, IPB continued a cancer education and information program for older Americans and their caregivers, as one component of the Institute's multifaceted approach to the cancer problem in this population.

Accomplishments

1. In October 1991, IPB joined the National Institute on Aging, the Centers for Disease Control, the Health Care Financing Administration, and the American Association of Retired Persons to educate older women about mammography and relevant medicare benefits.

   The joint campaign initiated the following actions:

   - o A national press conference,
   - o A video news release,
   - o Television and radio public service announcements with such celebrities as Angela Lansbury and Ruby Dee,
   - o A mammography brochure for older women,
   - o A fact sheet on medicare coverage, and
   - o Articles in AARP publications, which reach more than 30 million members.

   The Cancer Information Service toll-free number was used throughout the campaign.

2. IPB has agreed to write an NCI news section for the journal Primary Care and Cancer, which reaches over 114,000 primary care physicians each month. The journal is an excellent channel for informing health professionals about cancer and older adults.

3. IPB has collaborated with the American Cancer Society on a joint statement about the importance of cancer and older Americans. The statement will be released through the public and health professional media.

4. IPB continues to work with the Cancer Information Service Older American outreach coordinators by writing and taking part in monthly conference calls.

5. IPB is working with the Alliance for Aging Research, providing technical assistance for a Capitol Hill briefing on cancer and older Americans.

6. IPB has conducted focus groups on prostate cancer with older men and women to learn more about the target audience of an upcoming prostate cancer education program.

7. IPB developed, printed, and distributed **Cancer Tests You Should Know about: A Guide for People 65 and over**, an educational brochure on cancer early detection for older Americans. IPB is evaluating the brochure and working on a revised version.

8. IPB distributed information kits on older Americans and cancer to key intermediaries throughout the country.

9. IPB is developing fact sheets about major cancers that affect older Americans for intermediary groups.

10. IPB developed a project update-newsletter on the cancer and older Americans program to inform intermediary groups of program activities and to share relevant data.

11. IPB is placing articles in major newspapers and magazines on such cancer topics and older American issues as early detection and age bias in cancer treatment.

12. IPB conducted a presentation at the symposium on cancer and older Americans at the Gerontological Society of America annual conference in San Francisco.

13. IPB organized a symposium on cancer and older minority Americans to be held at the 1992 American Public Health Association Annual Conference.

14. Through research, concept development, and evaluation, IPB is refining its messages for the older Americans program.

Cancer and Low-Literate Populations

It is widely recognized that a large number of Americans, particularly those of low socio-economic status (SES), lack the literacy skills to function adequately in our increasingly complex society. Limited literacy skills are believed to have an impact on health. Some researchers have hypothesized that people with such limited skills may lack essential information regarding their health, may not be able to adequately follow a physician's instructions, and may not be able to read a prescription label. In addition, studies have shown that individuals with low education and income levels disproportionately suffer high levels of cancer incidence and mortality.

The National Cancer Institute, committed to meeting the cancer information needs of individuals with limited literacy skills, established the Low-Literacy Cancer Education Program in FY 1991. The program has expanded rapidly over the past year.

Activities

1. The National Work Group on Cancer and Literacy met in May 1992 (a) to identify strategies for communicating cancer information to low-literacy audiences and (b) to build networks between the literacy experts and cancer control communities. The participants included specialists in cancer communications, cancer control research, literacy, international health communications, and the media.

2. IPB is developing intermediary relationships with national literacy organizations (a) to involve these organizations in NCI's educational efforts for targeting individuals with limited literacy skills and (b) to identify channels for distributing our low-literacy educational materials.

3. Materials written for appropriate reading levels is emphasized by the program. "The Pap Test: It Can Save Your Life," NCI's first print material designed for people with limited literacy skills and written at the third grade reading level, was distributed to these people through Cancer Information Service Offices, CDC breast and cervical grantees, DCPC grantees, and state and local health departments. Four low-literacy fact sheets on early detection, developed by the West Virginia CIS, are being adapted by NCI for national distribution and should be available in fall 1992.

   In addition, Developing Print Materials for People with Limited Literacy Skills, a guide for government communicators developing materials for low-literacy audiences, and Helping Yourself During Chemotherapy, a low-literacy booklet for chemotherapy patients taking care of themselves while receiving chemotherapy, are being reviewed and should be available for fall 1992.

4. The CIS Low-Literacy Outreach Group continues to be one of the most important facets of the Institute's low-literacy program. Last year, the group started an educational effort to distribute low-literacy fact sheets, developed by CIS, to intermediaries working directly with low-literate individuals. CIS Offices have tracked the use of these fact sheets through public health nurses, extension agents, and literacy tutors. The results of this low-literacy effort will be presented at a poster session at the Society of Public Health Educators conference in June 1992 and again at the CDC conference in October 1992.

5. Multimedia and cancer education is an emerging area in the low-literacy program. Because of the high reading level of most NCI print materials, the program is exploring interactive computer programs as one alternative to print media. These programs combine video, audio, graphics, and text in the presentation of the message. The programs allow the individual not only to select topics but also to query the program for additional information.

6. Master Agreement Awards will be made in FY 1992 to fund innovative, community-based outreach programs for conveying information on the detection breast and cervical cancers to low-literate audiences. These

projects will develop a variety of materials to communicate messages that can be adopted afterwards by NCI for wider distribution.

7. Efforts also are underway to develop materials on the Institute's clinical trials for low-literacy populations.

Publications

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Patient Education Section
Head: Katherine Crosson

The section is responsible for developing and promoting state-of-the art education and information programs. These programs enable cancer patients and their families to take part in decisions about their treatment and care to achieve the best possible quality of life. The section's programs are for cancer patients, their families, health professionals, and the general public.

Major Patient Education Initiatives

Cancer Patient Education Network

1. The Institute sponsored the Third Cancer Patient Education Conference with the University of North Carolina Lineberger Comprehensive Cancer Center, the Duke Comprehensive Cancer Center, and the Comprehensive Cancer Center of Wake Forest University at the Bowman Gray School of Medicine. On March 26-27, 1992, cancer center patient educators and Cancer Information Service staff met to discuss unique educational programs being conducted at the centers, administrative and management issues faced by the educators, and their roles and responsibilities as regional cancer patient educators. On March 28, the 50 center educators and CIS staff were joined by 200 educators from the North Carolina region for a one-day conference "Teaching Cancer Patients: Issues and Opportunities." A needs assessment was conducted before the conference to determine appropriate topics.

2. The Fourth Cancer Patient Education Conference will be held in Pasadena, California, March 31-April 2, 1993. NCI will sponsor this conference with the City of Hope National Medical Center, the Drew-Meharry-Morehouse Consortium Cancer Center; the Jonsson Comprehensive Cancer Center; the Kenneth T. Norris, Jr. Comprehensive Cancer Center;

and the University of California at San Diego Cancer Center. The theme of the conference will be the multicultural dimensions of cancer patient education.

3. The Resource Guide to Patient Education Programs at the NCI-designated comprehensive and clinical cancer centers was updated and distributed to all the center educators. Copies also were sent to the CIS offices.

4. A task force of cancer center patient educators is developing guidelines for cancer patient education. These guidelines will be used to help guide the planning and developing of comprehensive cancer patient education services within the NCI-designated cancer centers and in other health care systems.

5. The first issue of the NCI Patient Education Notes was distributed to cancer center patient educators in December 1991. The NCI PEN is a means for the educators to share innovative programs, new resources, and other relevant information between annual meetings.

6. The Oncology Patient Education Committee at the NIH Warren H. Magnuson Clinical Center is co-chaired by Patient Education Section staff member Julie Steele and a representative from the Cancer Nursing Staff. The committee developed and conducted a needs assessment survey in the spring for cancer patients in the clinical center. The cancer nursing staff will be surveyed in fall 1992.

Cancer Survivors Initiative

1. The Patient Education Section and the CIS Training Task Force developed a training program for CIS information specialists answering calls from survivors and their families. These calls are about such survivorship issues such as employability, insurability, and physical and psychosocial concerns. The training package includes a leader's and participant's guide, a resource manual, and a videotape. The videotape includes commentary from cancer survivors recruited from the Greater Washington Coalition for Cancer Survivorship.

2. Under a master agreement awarded in June 1991, the Dana-Farber Cancer Institute developed and tested at the community level a curriculum for cancer survivors, using the NCI patient publication Facing Forward. The Patient Education Section will receive the final report from DFCI in the summer and determine the next steps for adapting the curriculum nationally.

3. The National Coalition for Cancer Survivors continues to be a major intermediary for the cancer survivor initiative. Kathy Crosson presented a workshop "What are Clinical Trials All About?" and was a panelist for a discussion on "The Cutting Edge of Cancer Care" at the NCCS Sixth Annual Assembly in Denver.

Cancer Pain Initiative

1. On March 2, the Patient Education Section staff convened the National Working Group on Cancer Pain Education, in Bethesda, MD. The group

discussed the educational needs of cancer patients, their families, health professionals, and the public and proposed recommendations, priorities, and implementation strategies for OCC. The group's recommendations and the research literature were used to write a draft of initiative goals, objectives, and strategies.

2. NCI continues to work with national cancer pain organizations and other national agencies and organizations involved in cancer pain education. In April, Julie Steele attended the National Coalition for Cancer Pain Relief meeting and the Third National Meeting of State Cancer Pain Initiatives in Albuquerque, NM, and gave updates of NCI's cancer pain activities.

3. NCI and the American Cancer Society have worked on revising the patient publication Questions and Answers About Pain Control. The revised booklet is expected to be printed in late summer and will be available through ACS and NCI.

Clinical Trials Education and Outreach Project

1. One-page descriptions of the Series IV high priority clinical trials were made available to the cooperative groups and the NCI press office. The descriptions are also given to the CIS offices nationwide.

2. Two issues of UPDATE were published, one in October 1991 and one in July 1992.

3. "Patient to Patient: Cancer Clinical Trials and You" received the Gold Screen Award for an instructional program from the National Association of Government Communicators.

4. A table-top exhibit structure has been custom designed to fit with 11 sets of interchangeable graphic panels that provide information on NCI's special initiatives in health promotion, cancer prevention, and patient education. The structures have been made available to the cooperative group administrative offices, and the panels are available on a loan basis.

5. OCC continues to work with the Division of Cancer Treatment on procedures for handling telephone inquiries from third-party payers. The Public Inquiries Office routinely handles these calls, which occur frequently and often require lengthy explanations about basic issues and terminology of clinical trials. In addition, OCC is beginning to collaborate with the Health Insurance Association of America to develop an educational training program about the nature and application of current procedures in cancer treatment. The program will target insurance company staff--medical directors, claims administrators, and legal counsel.

PDQ-Patient Information File Project

An evaluation project is being conducted to gather baseline data on how PDQ-PIF is, or may be, used by health professionals in hospital settings. To obtain the data, physicians, nurses, hospital librarians,

social workers, and patient educators will be interviewed at Wilmington Hospital in Wilmington, DE; Massey Cancer Center in Richmond, VA; and Washington Hospital Center in Washington, DC. The findings will be used to analyze the most appropriate ways to use PDQ-PIF in hospital settings and to recommend strategies to increase PDQ-PIF use among health professionals.

Cancer Patient Education Resources

1. The section continues to be responsible for many publications for health professionals and cancer patients and family members. Efforts are being made to consolidate a number of the publications.

2. The Cancer Patient Education subfile of the Combined Health Information Database contains (1) educational resources for patient and family cancer education and (2) abstracts of patient education programs sponsored by NCI-designated comprehensive and clinical cancer centers. Most of the information is not referenced in any other computer system or print resource. The subfile is being expanded to include cancer pain patient eduction resources from selected national organizations, commercial sources, and computer databases. Spanish-language materials and resources for low-literate patients and families have been identified and will be added.

Publications

Crosson K. Clinical Trials: A constellation of decisions. In new options, new challenges. Proceedings of the sixth national conference on cancer nursing. Seattle: American Cancer Society, 1992.

Steele JA. Slow and deliberate: NCCS moves into 1992. J Natl Cancer Inst 1992;84:15-6.

Steele JA, Taylor E. Nursing's role in pain management is critical. J Natl Cancer Inst 1992;84:147-8.

Steele JA, Taylor E. Guidelines released in acute pain management, J Natl Cancer Inst 1992;84:481-2.

Taylor E, Smigel K. FDA proposes fat, cancer health claim; hesitates on fiber. J Natl Cancer Inst 1991;83:1618-9.

Taylor E. Worksite cancer education programs expanding. J Natl Cancer Inst 1992;84:146.

Taylor E. ACS survey finds 9% of cancer patients use questionable treatments. J Natl Cancer Inst 1992;84:1002-3.

Reports and Inquiries Branch
Chief: Eleanor Nealon

The Reports and Inquiries Branch (RIB), which consists of three sections--Reports (Press Office), Public Inquiries, and Cancer Information

Service--handles public affairs, public information, and community outreach programs. The branch responds to inquiries about cancer from cancer patients and their families, health professionals, the public, and the news media. It distributes information on research findings and on Institute activities and messages. Distributing such information is handled in many ways.

- o Reports and other publications
- o Speeches and Congressional briefings
- o Magazine articles
- o News releases and fact sheets for the news media
- o Patient publications
- o Materials on cancer prevention and early detection
- o A toll-free cancer information phone line
- o Community outreach programs

This year, an RFP to recompete the Cancer Information Service was released. Under the new contracts, there will be a major restructuring of the entire program (details to follow). All of the CIS program (including the present national office) will convert to regional offices throughout the country. This restructure will offer equitable coverage in every state. In late 1991, the CIS celebrated its 15th anniversary; Marilyn Tucker Quayle praised the service in a keynote address.

Working with the public affairs directors at NCI-designated cancer centers, RIB continued to expand and strengthen the national communications network. The network includes not only comprehensive cancer centers but also clinical, basic, and consortium centers. RIB also strengthened Press Office and CIS ties with the cancer centers and the American Cancer Society. Staff played a lead role in planning and setting up eight Regional Breast Cancer Summits, hosted by Comprehensive Cancer Centers across the country. Conference grants were awarded for this purpose.

Other highlights of the year included such major press conferences for inaugurating the Breast Cancer Regional Summits, Minority Cancer Awareness Week, the 5 a Day for Better Health program, and the announcement of the Tamoxifen Breast Cancer Prevention Trial (coordinated with 10 other press conferences nationwide).

Anne Morris is the branch secretary.

Reports Section
Head: Patricia Newman

Section staff continued to respond to about 7,000 inquiries per year from journalists representing daily and weekly newspapers, magazines, trade newsletters, the electronic media, and newspapers and magazines for physicians and scientists. The staff also contacted the media to notify them of upcoming meetings, press conferences, or major reports. The section received an average number of 35-40 daily press calls and an average of 700-800 monthly press calls. Based on a rudimentary record-keeping system to record all in-coming telephone calls, staff handled nearly 23,000 telephone calls (including press calls) during the year, for a monthly average of about 1,900 calls.

The reporters' inquiries spanned the breadth of cancer research topics. There was interest throughout the year in AIDS research, particularly on risk factors and drug and vaccine development. During the year, many senior press staff were involved in the following activities.

- Strategic planning and problem-solving for press conferences
- Developing materials for press kits and public inquiries
- Advisories to the news media (in writing and by phoning)
- Contacts with press staff at PHS, DHHS, other Federal agencies, and key private organizations

Major press conferences promoted the following announcements.

- Regional breast cancer summits (January)
- Melanoma consensus conference (January)
- National Minority Cancer Awareness Week (April)
- The first prevention trial in breast cancer--tamoxifen clinical trial (April)
- 5 A Day program encouraging Americans to eat more fruits and vegetables (July)
- ASSIST program to build community coalitions for discouraging tobacco use (October)

Special events, requiring press notification and logistics, included the following.

- Special symposium on retroviruses and cancer (November)
- A one-day symposium on the 20th anniversary of the National Cancer Act (November)
- Marilyn Tucker Quayle's appearance at the Cancer Information Service 15th anniversary (November)
- Mammography initiative of the National Basketball Association (January)
- Special breast cancer commission of the President's Cancer Panel (May)

Other subjects that continue to attract considerable and widespread press interest include the following.

- The annual cancer statistics update
- Breast cancer
- Bone marrow transplants
- Cancer in minorities
- Cancer prevention through diet and screening
- New cancer treatments and their side effects
- Risks of hair dye use and water chlorination

To respond more effectively to inquiries from the press, staff prepared research updates, backgrounders, statements, news releases, and fact sheets on a wide variety of cancer research topics. Many of these materials were subsequently modified by the Public Inquiries Section and used to respond to inquiries from the general public.

Staff maintained a variety of mailing lists and attended the annual ASCO and AACR meetings and such specialized meetings as those on biologicals, breast cancer, oncogenes and molecular biology, and the origins of human cancer.

Memoranda were written on various cancer research topics to share information with other OCC staff and the Cancer Information Service. Staff regularly updated the Cancer-Related Meetings and Events Calendar and mailed it to a list of regular contacts. Staff routinely distributed all new updates, backgrounders, statements, fact sheets, and notes to editors and to about 330 reporters. Section staff prepared byline articles on various topics for the Journal of the National Cancer Institute News.

Staff

Senior Science Writers
- Elaine Blume
- Linda Anderson

Full-time Science Writers
- Kara Smigel
- Frank Mahaney
- Susan Jenks
- Tom Reynolds
- Nancy Volkers

Editorial Assistants
- James Mathews
- Barbara Anthony
- Nancy Munro

Full-time Information Clerk
- Tanisha Odle

Part-time Information Clerk
- Marilyn Pazornik

Intern Fellows (graduate student internships in science writing)
- Tom Reynolds
- Nancy Volkers
- John Bowersox (6th month internship)

Student Aides
- Johnny Dang
- Ursula Sinkler

Federal Junior Fellow
- Kendall Joiner

Materials Written by Staff

Updates

December 1991
Many Infants Acquire AIDS Virus at Birth, Twin Study Suggests

January 1992
Non-Hodgkin's Lymphoma Rates Elevated in HIV-Infected Hemophilia Patients

April 1992
Breast Cancer Screening among Minorities
Panel Named to Study Breast Cancer
Breast Cancer Prevention Trial Will Recruit 16,000 Women.

Fact Sheets

January 1992
NBA Wives/NCI Mammography Initiative

February 1992
Questions and Answers: Tamoxifen
Cancer Pain Control Activities Gain Increased NCI Support
Detecting Breast Cancer

April 1992
Comprehensive Cancer Centers
Clinical Cancer Centers
Basic Science Cancer Centers
Consortium Cancer Centers
NCI-Designated Cancer Centers Public Affairs Network
NCI Cancer Centers Program

May 1992
Breast Cancer Research and Programs: An Overview

Statements

January 1992
Meta-Analysis Reaffirms Value of Adjuvant Therapy for Early Breast Cancer

February 1992
NCI Reaffirms Commitment to Prevention

March 1992
Research Identify Genetic Mutations in Radon-Associated Lung Cancer
Drug Blocks Spread of Kaposi's Sarcoma in Mice
Radiation Treatment Found To Be Small Risk for Breast Cancer Patients
Chlorinated Drinking Water and Cancer Risk

July 1992
Hair Coloring Products Linked to Risk of Lymphoma
National Cancer Institute and Rhone-Poulenc Rorer Agree to Develop Taxotere
NCI Scientists Say AIDS in D.C. Will Continue to Rise

Notes to Reporters and Editors

October 1991
Immunizing Tumor Cells

November 1991
Day Long Symposium - 20th Anniversary of the National Cancer Act

December 1991
Chemotherapy Resistance Theme NIH Lecture

January 1992
Michael Gottesman, M.D. Molecular Analysis of Resistance to Anti-Cancer Drugs

May 1992
Announcements of the Meetings of the Special Commission on Breast Cancer of the President's Cancer Panel

Backgrounders

November 1991
Journal Commemorates 20th Anniversary of the National Cancer Act

May 1992
Taxol and Related Anticancer Drugs
Long-Term Health Effects of Exposure to Diethylstilbesterol

July 1992
Separate backgrounders on the leadership initiatives for Blacks, Hispanics, and those living in Appalachia

Moyer Reports

November 1991
Infant Mortality
Rural Health
AIDS
Diabetes
Human Papilloma Viruses (HPV)

December 1991
Vaccine
Bone Marrow

For one of the year's major clinical cancer research conferences, the meeting of the American Society of Clinical Oncology (ASCO) in San Diego, CA May 17-19, 1992, the staff prepared three press summaries about NCI

investigators' research findings, prepared a fact sheet describing NCI's cancer centers public affairs network, and assisted with a major press conference. Section staff attended the ASCO and AACR meetings. Press summaries for the ASCO meeting were distributed to the people on the Institute's regular press list.

JNCI News Stories

October 2, 1991
- Biomarkers Help Advance Chemoprevention Research
- Scientists Find Better Ways to Find Better Drugs
- Herbicide Study Causes Outcry
- Dingell Subcommittee Presses FDA
- Top ACS Executive Resigns

October 16, 1991
- New Regulations on Animal Research Adds Costs, Variables
- Tails of a Different Kind in Cancer Labs
- Scientists Develop New Interest in Cancer Vaccine Research
- Insurance Option Offers Terminal Patients Financial Freedom
- Cancer Experts Set Research Agenda for Women's Health in the 1990s
- American Cancer Society Commemorates 20th Anniversary of National Cancer Act
- Researchers Push to Improve Breast Imaging
- New NIH Director Holds Town Meeting

November 6, 1991
- 1971-1991: Virus Cancer Research Pays Rich Dividends
- Women's Aspirin, Beta-Carotene Study Moves Forward
- Attempt Made to "Immunize" Patients against Their Cancers
- Congress Flooded with Letters for Breast Cancer Awareness Month
- "5-a-Day for Better Health" Program Is Launched in Boston

November 20, 1991
- Father's Lifestyle Can Have Fetal Consequences
- FDA Proposes Fat, Cancer Health Claim; Hesitates on Fiber

December 4, 1991
- Of Pedigrees, Probes, and p53: 20 years of Family Studies
- Optimism Expressed over Prostate Drug
- Pediatric Cancer Forum Examines Chemotherapy Variables

December 18, 1991
- Experts Mull Testing Guidelines for Family Cancers
- Marilyn Quayle Honors Cancer Information Service
- Cancer Act Anniversary Encourages Reflection, New Visions

January 1, 1992
- Ovarian Cancer and Older Women: Is Treatment Less Aggressive?
- States Begin CDC-Sponsored Breast and Cervical Cancer Screening
- Breast Cancer and Taxol Top Press and Public Interest: "The" Cancer Stories of 1991

January 15, 1992
Congress Weighs NIH Bid for Patient Rights to Human Genes
Tumor Virologists' Reunion Recalls Century of Research
Mimetics May One Day Replace Peptide Antibodies
For Years, U.S. Surgeons General Leading Anti-Smoking Charge
Lung Cancer Rates in White Males Leveling Off

February 5, 1992
Researchers Search for Genetic Insights into Breast Cancer Development
Benefits of Adjuvant Therapy for Breast Cancer Reaffirmed
Radiotherapist Glatstein Honored by Colleagues

February 19, 1992
Anti-Metastasis Drug Ready for Human Trials
PSA Becoming Important Tool in Prostate Cancer
Consensus on Early Melanoma: Less Surgery, Fewer Tests

March 4, 1992
First Antisense Drug Trials Planned in Leukemia
Will Your Cheese Taste like a Hockey Puck with Stricter Food Labels?
Late Effects of Childhood Cancer Treatment Can Be Life Threatening
Indirect Cost Problems Branded "Systemic"
Government Agencies Assess Expenses

March 18, 1992
Stat Bite: Potential Reductions in Tobacco-Related Cancers
Gene Therapy for ADA Takes Next Step
Supercomputer Boosts Scientists' Analytical Power
Hormone Replacement Therapy: Some Answers...More Questions

April 1, 1992
Researchers Open a Molecular Window on Radon Damage in Lung Cancer
NCI Strengthens Commitment to Prostate Cancer
EPA'S Passive Smoke Assessment: Where Is It?

April 15, 1992
Asbestos-Linked Cancer Rates up Less Than Expected
Stat Bite: Regional Variations in Breast Cancer Treatment
Feminist Group Plans"Economic Pressure Campaign" for Access to RU 486
RU 486 Enters Limited Clinical Trials
One in Nine: The Risk of a Lifetime
Central European Countries Find Communism Was No Bloc to Cancer
Television's News Doctors: How They Operate

May 6, 1992
Dramatic New Strategies for Brain Tumors Emerge
Stat Bite: Breast Cancer Deaths in American Women, Ages 40-44
Saccharin's Link to Human Cancer Questioned
Breast Cancer Prevention Trial Takes Off
BNCT: Looking for a Few Good Molecules
NCI Scientist "Temping" in Top Genome Post
Agreement To Develop Taxotere Expected in April
Taxol Synthesis in Perspective

May 20, 1992
Stat Bite: Cigarette Ads and Smoking Risk: Coverage in Magazines
Assessing the Burden of Cancer Patient Homecare
"Death" Cigarettes Offer Truth in Advertising

June 3, 1992
Cancer Data Bases Expanding

June 17, 1992
Will NIH Patent Bid Cause "Land Rush"?
Doctors Change Breast Cancer Treatment Practices
Scientists, Activists Discuss DES Issues

NIH Record

October 1991
Adele Nusbaum Retires
A Stay-in-School Student Discovers a Translocation of a Cancer Gene

November 1991
NCI Honors Its Employees at Awards Ceremony
Corinne Vanchieri Receives Rose Kushner Award

December 1991
NCI Honored at NAGC Banquet
Dr. Gottesman to Present First NIH Lecture of 1992

February 1992
NCI To Fund Regional Breast Cancer Summits
NBA Wives, NCI Launch Mammography Initiative

March 1992
Less Surgery, Fewer Test Urged for Early Melanoma

April 1992
Dr. Phillip Sharp to Present NIH Lecture

May 1992
Dr. Claude Klee Receives Wise Award
NCI Scientists Elected to the Institute of Medicine

Public Inquiries Section
Head: Christy Thomsen

Since the 1971 National Cancer Act mandating that the Institute provide information about cancer to the public, to health care professionals, and to cancer patients and their families, the Public Inquiries Office has become a highly visible office within the Institute and to the general public.

The impact of this mandate, in FY 1992 alone, resulted in the section responding to 360,000 requests for information (telephone calls, letters)

and distributing more than 24 million copies of publications. A support contractor assists the staff in this effort.

The volume of telephone calls, letters, and publications requested each year reflects (1) the American public's growing interest in the advances in cancer prevention and treatment, (2) the amount of media attention given to cancer, and (3) the Institute's efforts to distribute cancer information and results of cancer research.

The sections that follow describe in more detail the FY 1992 activities of Public Inquiries.

Answering Incoming Telephone Calls

The Public Inquiries Office answers all telephone inquiries to NCI, except those that are from the media or those that are directed to a specific staff member. These calls come from cancer patients and their families, the general public, regional Cancer Information Service offices, physicians, nurses, social workers, congressional staff on behalf of their constituents, business and industry, foreign cancer patients and family members, lawyers, stock brokers, insurance companies, marketing representatives, theorists (who have a cancer cure), students, and others. Inquiries range from relatively simple questions about symptoms to highly complex questions that require extensive research.

The office goal is to handle all calls appropriately, which may entail referring some of these calls to NCI's Cancer Information Service toll-free number. For other calls, such as those from Congress, health professionals, or patients with complicated questions, a Public Inquiries information specialist handles the call. Because of the increasing complexity of calls, it is often necessary to conduct extensive research to respond to the incoming request.

Treatment-related questions concerning drug side effects, home care of the cancer patient, and the like have reinforced the need to have on staff an information specialist who has had clinical experience with cancer patients. Often, it is necessary to develop NCI position statements to respond to news reports on cancer breakthroughs (such as FDA approval of new anticancer drugs) or to develop standard language that all CIS offices can use to answer similar questions (such as the risk of cancer from exposure to electromagnetic fields). The office also works with the NCI Press Office to prepare fact sheets for the press and the general public. These fact sheets are used in NCI press conferences and media packets.

Another important service of Public Inquiries is to assist physicians in identifying clinical trials for their patients and to refer physicians who request a consult to appropriate NCI clinicians. The Public Inquiries staff works with Division of Cancer Treatment (DCT) staff and other NIH clinicians to maintain a list of active cancer-related protocols at the Clinical Center and at the Institute's Frederick Cancer Research and Development Center. The list is updated quarterly and is distributed to NCI staff as requested. By searching the PDQ database, the staff also directs physicians to appropriate clinical trials at other institutions.

Working with DCT, the staff is responsible for handling inquiries from insurance companies directed to NCI and the Cancer Information Service. In the past year, the number of requests from insurance companies for information about cancer management was more than 400. Insurance companies are primarily looking for guidance in developing standards and policies for reimbursement of claims. They most often ask whether a treatment is considered standard care or experimental. Of particular concern is third-party reimbursement for treatment given in clinical trials (for example, autologous bone marrow transplantation in the treatment of breast cancer).

Assisting Visitors and Counseling Patients

As the Institute's information office, Public Inquiries has many visitors each year. Visitors are primarily cancer patients or family members seeking advice and the most current information about cancer treatment. Conferences with patients and family routinely take an hour or more. Other visitors include foreign scientists, government officials, and visiting physicians and nurses seeking information about the Institute's programs and services.

Researching and Writing Publications

Public Inquiries is responsible for several of the Institute's information and education materials for cancer patients and the public.

- "Research Reports," a series of pamphlets describing the latest information on cancer diagnosis and treatment for major cancer sites. In FY 1992, four reports were revised to reflect recent changes in the science.

- "What You Need To Know About Cancer," a series of booklets that provide basic information on the causes, symptoms, diagnosis, and treatment for the major types of cancer. Twenty booklets were written or revised.

- "Cancer Facts," a compilation of nearly 100 fact sheets covering such areas of interest as causes, risks, diet, biological therapy, detection, new treatments, services, and NCI programs.

- Response Book, a collection of about 90 statements on topics such as unconventional methods, rehabilitation, new treatments, cancer causes, and NCI programs and policies used by CIS in responding to inquiries. These statements are reviewed annually and updated as needed.

- A series of flyers on discrete topics that have generated recurrent inquiries. Publications on DES exposure, breast calcifications, tamoxifen, liver cancer, and thyroid cancer were developed.

- A Publications Committee was formed, with the Public Inquiries Chief as chair, to review all OCC publications and to develop a plan for streamlining production. The goals of this planning process are cost

containment in printing and production and greater access by the public to Institute educational materials.

Providing Technical Assistance

The office is a technical resource for the Cancer Information Service, other OCC programs, and other NCI staff. In addition, the staff consults with professional groups about the design and operation of public response programs.

- CIS offices contact the Public Inquiries staff to answer difficult cancer questions, to advise on NCI policy, and to inform the CIS offices of research being conducted at the NIH Clinical Center. The Public Inquiries staff also reviewed materials produced by local CIS offices to ensure that these materials were technically accurate and complied with NCI policies.

- The staff assisted in the development of the CISTERS program, a computer-assisted test call program for the Cancer Information Service. They assisted in developing test call scenarios and in testing the reliability of the system.

- Public Inquiries assisted the Institute's Patient Education Program by reviewing the patient materials for scientific accuracy, appropriateness, reading level, and sensitivity.

- Public Inquiries worked with other NCI offices to help these offices respond to large numbers of inquiries generated by write-in campaigns initiated by activist organizations. This activity included drafting model language appropriate for the general public, obtaining clearance, and in some cases preparing letters of response. In addition, the staff coordinated Institute's response to such write-in campaigns.

- Public Inquiries assisted DCT in preparing responses to inquiries about such topics as prostate cancer and unconventional cancer treatments. The staff continued to support the Clinical Oncology Program in its patient education efforts and in answering letters addressed to Dr. Steven Rosenberg from patients and physicians interested in gene therapy and Dr. Rosenberg's adoptive immunotherapy treatments.

- Staff assisted DCT in preparing for an NIH Workshop on Long-Term Effects of Exposure to Diethylstilbestrol (DES). This included responding to a write-in campaign from DES activists, developing background material and fact sheets, and providing technical support at the workshop.

- Staff assisted DCPC and the National Surgical Adjuvant Breast and Bowel Cancers program in preparing for the start-up of the Breast Cancer Prevention Trial. This included writing a fact sheet of questions and answers about the trial and preparing and distributing a list of participants for CIS to use in making referrals.

- Public Inquiries staff was often asked to present an overview of its activities to other NCI programs. Presentations were made to the NIH Clinical Center's cancer nursing staff, the International Cancer Information Center staff, the Cancer Communication Fellows, the Comprehensive Cancer Center patient educators, and the Clinical Cancer Center patient educators.

Managing the Public Inquiries Technical Support Project

Since 1974, a support contract has assisted the section with answering letters, operating the national CIS office, and storing and distributing NCI publications. This contract was staffed by 60 full-time equivalent employees.

Public Inquiries is responsible for managing this large contract, which requires daily contacts with contractor staff, monthly formal staff meetings, and continual monitoring of quality and performance. This year there was an increased demand for contractor services. Fourteen WATS lines are staffed by health information specialists, and the monthly call volume averages 6,500.

Public Inquiries is responsible for answering letters written directly to the Institute. In FY 1992, 94,000 letters received "non-custom" replies, responses for which publications containing the requested information were sent. However, 7,800 letters required custom responses that addressed each point of the inquiry at a level that the inquirer could understand. Letters from cancer patients were answered within 4 days; most custom letters took from 30 minutes to one hour to research and write. Letters prepared by the contractor were reviewed by Public Inquiries staff before they were mailed.

Letters requiring special handling are "controlled" correspondence. and include letters originally addressed to the President, the members of Congress, the DHHS Secretary, or other Government officials. In FY 1992, 960 controlled letters were prepared, three times as many as in the previous year.

The national CIS, operated by the support contractor, covered about 30 percent of nationwide calls; local CIS offices handled the remaining calls. After 4:30 p.m., the national CIS handled all calls until 10 p.m. In FY 1992, the national CIS answered 78,000 information calls and 142,000 calls to the Publications Ordering Service. Statistics on call volume have shown a steady increase in length of call, reflecting the complexity of the calls and the public's increased sophistication about cancer.

The Institute's special initiative to increase patient accrual in clinical trials has had a significant impact on the national CIS office. All telephone information specialists have received training in counseling callers about clinical trials and informing callers about the availability of trials and participating in treatment studies. Information specialists used NCI's PDQ database to discuss state-of-the-art treatments and to identify clinical trials for callers.

In FY 1992, 24 million NCI publications were distributed to individuals, cancer centers, hospitals, physicians' offices, industry, and other groups around the country.

Resource to the Cancer Information Service

Since the FY 1989 reorganization that placed administrative responsibility for the local CIS in the Office of Cancer Communications, Public Inquiries assumed an expanded role in providing support to the CIS program.

Staff has assisted the CIS Project Officer with the following:

- Developing a training program on responding to breast cancer inquiries; in reviewing CIS policies and procedures;
- Developing an orientation training program for CIS offices;
- Testing the reliability of the CISTERS test call program; and
- Reviewing materials developed by regional CIS offices for technical accuracy and adherence to NCI policies and guidelines.

In supporting CIS, staff assisted with the following:

- Answering technical questions received from CIS offices;
- Alerting regional offices of upcoming scientific conferences, events, or media stories that may generate calls to CIS;
- Providing CIS offices with the information and materials needed to respond to inquiries from the public and cancer patients; and
- Routinely reviewing and updating NCI materials used by CIS offices to ensure that the most current information is being presented to the public.

Support to the International Cancer Information Center

The International Cancer Information Center (ICIC) is responsible for the Institute's scientific information services: technical journals, specialized publications, and the PDQ database.

Public Inquiries assists ICIC with several projects.

- ICIC publication distributions
- PDQ Patient Information File revisions
- Technical assistance to CIS staff.

The Public Inquiries staff, with its support contractor, maintains a computerized inventory and ordering system for ICIC products. All materials were distributed from the contractor's warehouse. These distribution activities included promotional mailings, sending educational literature to health professionals, and shipping materials to scientific exhibits at professional meetings. The staff helped to

establish procedures for requesting services and to expand the reporting of monthly activities to aid ICIC in program planning efforts.

The section is responsible for writing many of the Institute's patient materials and has continued to take part in developing PDQ's Information for Patients project. It helped develop guidelines for writers to follow, reviewed resources and suggested materials to be referenced for further reading, and reviewed new statements as they were prepared.

In addition to these activities, Public Inquiries staffed PDQ exhibits at professional meetings of oncology nurses and physicians, provided technical assistance to CIS regional offices in using the database, and made suggestions to ICIC programming staff concerning searching enhancements.

Operation and Maintenance of the NCI Gift Fund

Public Inquiries is responsible for tracking financial donations made to the Institute and writing letters acknowledging the donations. In FY 1992, nearly 4,000 of these letters were prepared.

Maintenance of the SEER Inventory

Public Inquiries assisted the DCPC Cancer Statistics Branch with contract support for storing the SEER Program's publications and for distributing its materials to cancer researchers and tumor registrars across the country. Staff prepared publication request forms, developed computerized inventory control procedures, and established procedures to track the distribution of materials.

Staff

Science Writers
Judith Patt
Linda Slan

Public Affairs Specialist
Mary Anne Bright, R.N.

Secretary
Nina Greene

Clerk-Typist
Sherece Batchelor

Stay-in-School Clerk
Kandi Thompson

Cancer Information Service Section
Head: Kate Duffy Mazan

The Cancer Information Service (CIS) is a nationwide network of 22 regional offices that provide current cancer information to patients and their families, health professionals, and the general public. Each day more than 2,000 inquiries are answered by the regional offices and one national office in Maryland. Each year, CIS answers nearly 500,000 inquiries. More than 4.4 million inquiries have been received since the CIS began in 1976. The Cancer Information Service Section manages the 22 community-based offices across the country.

Each of the 22 regional offices is responsible for carrying out three primary activities in its community.

- Operating a toll-free phone service known as the Cancer Information Service
- Developing local resource directories of cancer-related services and programs in the service area
- Developing and setting up cancer information and education programs in service area

The toll-free phone service is the largest, most visible component of the CIS program. The CIS regional offices serve 35 states and Puerto Rico, representing about 80 percent of the total national population. To respond to inquiries, each local office is open from 9:00 a.m. to 4:30 p.m., Monday through Friday, local time. A national office, directed by the Public Inquiries Section, handles the remaining states and provides back-up service until 10:00 p.m., Monday through Friday, for the local offices.

In the past year, the staff of the regional offices responded to more than 300,000 inquiries. Patients and their family members represented the highest percentage of users, accounting for 55 percent of all inquiries. Health professionals and the general public accounted for 6 percent and 24 percent of inquiries, respectively.

The public's demand on the CIS system is increasing. In 1991, the busy-signal rate on the service reached an all-time high of 58 percent. To address this concern, more than 25 WATS lines are being added to the system.

While the CIS routinely receives calls from people learning of the number from a friend, the telephone book, or a pamphlet, the service is very sensitive to media coverage of cancer. In the past year, several major cancer news stories have generated calls for CIS. Some of these stories were the announcement of the Breast Cancer Prevention Trial, generating more than 6,000 calls in one week period; an article in Reader's Digest on the development of cancer vaccines, resulting in more than 3,500 calls; and a television program concerning support of family members with cancer, generating more than 3,000 calls. In addition, the CIS number has been featured on many television programs: the Today Show, Good Morning

America, CBS This Morning, and the Home Show. Newspapers and magazines have also featured the number: the National Enquirer, the Los Angeles Times, Family Circle, and Ladies Home Journal.

The inquiries vary from treatments for specific types of cancer to early detection and cancer prevention. While all calls are important, calls from cancer patients and their families are most critical, as the information can affect lives and, in a number of cases, make a life-or-death difference. These callers most often request information on the treatment and prognosis for specific types of cancer. The staff uses the Institute's computerized database Physician Data Query (PDQ) to give callers current, state-of-the-art information on treatment options for their specific types of cancers and stages of disease.

While patients tend to be more concerned about their current treatment and side effects, friends and family members usually ask about information on second opinions and the availability of clinical trials. More than 44,000 inquiries on clinical trials were received, and more than 24,000 PDQ searches were conducted. The CIS staff also consulted the PDQ database more than 70,000 times for information on standard treatment options. Family members often require more supportive counselling from the CIS staff. In the past year, the CIS handled more than 20,000 specific requests for help in coping with the illness of a loved one. However, the CIS staff is sensitive to the psychosocial nature of all calls from patients and family members and often address these issues during calls about other subjects. As more patients live longer, CIS is called more often to assist in helping the patient rehabilitate and return or continue in the work force. Increasingly, CIS receives calls on insurance for long-term survivors, employment needs, and other rehabilitation services.

In addition to responding to public inquiries, CIS is easily mobilized to assist NCI and other organizations in delivering important cancer messages to the public. In the past year, the CIS played a key role in supporting the Institute's breast cancer screening initiative. This support involved both the phone service and the outreach components of the program. Outreach programs targeting such underserved audiences as Black Americans, Hispanic Americans, older Americans, and low-literacy populations emphasized the importance of screening mammography. The regional CIS staff encouraged the use of the NCI video "Once a Year...for a Lifetime" throughout the United States. Older Americans (65+) were targeted through radio talk shows and radio public service announcements. Hispanic audiences also were targeted through radio PSAs featuring popular Hispanic television personalities. More than 23,000 calls about mammography were received through the CIS phone service, and thousands of people were reached through the community outreach activities.

By setting up a new state-of-the-art test call system, CIS took a major step toward assuring the quality of its nationwide response. Using a computer-assisted interviewing program, specially trained staff placed more than 800 simulated calls to CIS offices to monitor the quality of the responses. NCI staff and staff from the local offices reviewed the calls to assess the quality of the test calls and to determine standards of quality. Although in its infancy, this system has already had an impact on the CIS program, identifying areas for staff training and providing insight

into staff resources needed for responding quickly to public concerns. As a result, new training programs for the managers of the regional telephone service and standardized certification tools for information specialists are being developed.

FY 1992 heralds a new era for the CIS program. The program has been restructured so that all Americans will be served by regional CIS offices. The new structuring now includes 19 geographic regions and 25 more WATS lines to improve nationwide access to the CIS phone service. Successful offerors will provide phone service and community outreach programs for specific geographic regions (see Attachment A). In addition, the community outreach capabilities of CIS will be expanded to address the needs of special and underserved audiences.

Traditionally, the CIS program covered only a percentage of the United States, with no local CIS programs in many states. The existing regional offices were minimally staffed, and the CIS budget often supported only one part-time position for programs serving one or more states.

With the decentralized structure of the CIS program, the staff has been able to bring NCI education programs to communities throughout the United States. The expanded CIS outreach program not only modifies the program structure so that local offices now serve all states but also increases the number of employees conducting outreach activities.

In addition, the roles of the outreach staff now focus on the distribution of program materials. In this way, CIS can encourage intermediary organizations to adapt NCI programs, thereby reaching more people locally through the associations and individuals these people respect.

The new contracts are expected to be awarded in fall 1992 for five years.

Staff

Assistant Project Officer
Debra Steverson
Diane Ruesch
Catherine Muha

Information Services Assistant
Linda Bridges

Public Affairs Assistant
Anne Washburn

Secretary
Maryann Schenkel

Presidential Management Intern
Lou Fintor

Attachment A

CANCER INFORMATION SERVICE
New Regions

REGION	AREAS
01	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
02	New York City, Long Island, Westchester County, New York
03	Remaining New York State, Western Pennsylvania (area codes 412, 814)
04	Delaware, New Jersey, Eastern Pennsylvania (area codes 215, 717)
05	District of Columbia, Maryland, Northern Virginia (Arlington, Fairfax, Loudoun, Prince William, Stafford Counties)
06	Georgia, North Carolina, South Carolina
07	Florida, Puerto Rico
08	Alabama, Louisiana, Mississippi
09	Arkansas, Kentucky, Tennessee
10	Ohio, Southern Virginia (excluding Northern Virginia Counties), West Virginia
11	Iowa, North Dakota, Minnesota, South Dakota, Wisconsin
12	Indiana, Michigan
13	Illinois, Kansas, Missouri, Nebraska
14	Oklahoma, Texas
15	Alaska, Northern Idaho (Benewah, Bonner, Boundary, Clearwater, Kootenai, Latah, Lewis, Nez Perce, Shoshone Counties), Montana, Oregon, Washington State
16	Arizona, Colorado, Southern Idaho (excluding Northern Idaho Counties), New Mexico, Utah, Wyoming
17	Nevada, Northern California (excluding Southern California Counties)
18	Southern California (Imperial, Inyo, Kern, Kings, Los Angeles, Orange, Riverside, San Bernadino, San Diego, San Luis Obispo, Santa Barbara, Tulare, Ventura Counties)
19	Hawaii

OFFICE OF LABORATORY ANIMAL SCIENCE
Director: Dr. John Donovan
Deputy Director: Dr. Patricia Brown

The Office of Laboratory Animal Science (OLAS) is responsible for the following duties:

- Coordinating and directing laboratory animal care and use in Institute research programs;
- Advising and assisting the Institute Director and staff on all aspects of animal care and use;
- Assisting with developing Institute policy on the care and use of animals;
- Developing and carrying out mechanisms for monitoring compliance with NCI, NIH, DHHS, and USDA policies, guidelines, and regulations to assure uniform, ethical, and humane animal care and use in all Institute research programs;
- Managing and coordinating the use of centralized laboratory animal holding and research facilities in the Institute; and
- Serving as a liaison between NCI and organizations and institutions concerned with the ethical and humane care and use of animals in research.

OLAS has (1) a central office headed by the director and deputy director and (2) two sections: the Laboratory Animal Resources Section and the Laboratory Animal Medicine Section.

The office's primary mission is to establish and to maintain animal care and use activities that support scientifically sound animal-based research. Inherent in this goal is the Institute's responsibility to conduct animal research in a legal, moral, and ethical manner with a high degree of sensitivity for humane concerns and animal well-being.

OLAS Objectives

- Developing program elements (1) to meet or exceed the standards of the NIH Guide for the Care and Use of Laboratory Animals and (2) to assure that the Institute's program will be accredited by the American Association for the Accreditation of Laboratory Animal Care (AAALAC).
- Overseeing animal research activities that are governed by the NCI Animal Care and Use Committee and its divisional animal care and use subcommittees. These subcommittees are formed and operated according to PHS Policy on the Humane Care and Use of Laboratory Animals.
- Managing centralized animal care programs and facilities to provide a controlled, healthy, and suitable environment for keeping research animals and for conducting animal experimentation.

- Counseling Institute management and scientists on laboratory animal medicine and science.

OLAS Activities

- The NCI Veterinary and Tumor Pathology Section was established to advise and assist the Institute's intramural scientists in designing experiments, interpreting data, and publishing the results of biomedical research involving animal models and animal pathology evaluations. The section will collaborate with Institute scientists to develop new animal models of human cancers and to provide tumor classification and tumor-related pathology evaluations. The facilities and hiring of personnel for this section are expected to be completed during FY 1993.

- Staff members took part in the source selection process for all NCI contracts involving animal use. This process assures that competing offerors and future contractors can comply with the guidelines and regulations governing the use of animals in research and testing.

- Staff represented the Institute at the following PHS and NIH committee meetings.

  -The Interagency Animal Model Committee (oversees the use of chimpanzees)
  -The NIH Animal Care and Use Committee
  -The Trans-NIH Coordinating Committee for Research Animal Resources
  -The NIH Occupational Safety and Health Committee
  -The NIH Animal Program Advisory Committee of the AAALAC Oversight Committee

  The staff served as members of NCI divisional animal research subcommittees and chaired the NCI Animal Care and Use Committee. The OLAS Director is a member of the FCRDC Animal Care and Use Committee and chairman of the newly formed NIH Animal Program Directors, which advises the NIH Office of Animal Care and Use. These involvements have enabled OLAS to help with activities affecting NCI animal research.

- Progress toward full AAALAC accreditation continues. The Institute is taking part in the NIH AAALAC Accreditation Plan; the goal is accreditation for the entire NIH intramural research program. NIH applied for accreditation in December 1990; the site visit was in November 1991. The AAALAC Council on Accreditation granted NIH provisional accreditation for a year, beginning in April 1992. OLAS was commended for conducting an exceptional program of animal care and use, "with consistent veterinary care and oversight, husbandry practices, and facility and equipment sanitation."

- A program was started in the Institute's animal facilities to direct new investigators in the proper procedures for working in the facilities, for ordering animals, and for completing the NCI Animal Study Proposal form. A videotape and the NCI Investigator's Guide for Animal Use are used in the orientation. The guide is a new publication about the resources and services available through OLAS and NIH and includes information on the principles and policies regarding the use of animals in research.

Laboratory Animal Medicine Section
Head: Dr. Clara Witt

Section Responsibilities

- Managing the animal health assurance and quality control program for the intramural research program, including preventative medicine measures, animal disease investigation, genetic monitoring, disease surveillance, and other related activities.

- Advising investigative staff on animal model selection, comparative medicine, disease interference, and other factors that may complicate or invalidate research results.

- Providing or coordinating veterinary care of laboratory animals.

- Managing a centralized animal surgical facility.

Section Activities

- Continuing a program for monitoring the health status of Institute animals. In analyzing the data gathered, the section determines the general health status of research animals in each of its on-campus facilities. It has made animal husbandry recommendations to the Laboratory Animal Resources Section and has carried out the necessary preventive medicine practices for protecting the health of Institute animals.

- Working with investigators on animal disease detection, diagnosis, treatment, and control. As a result of its heightened animal health monitoring program, the section has been able to start eradication measures earlier and more quickly when confronted with murine pathogen outbreaks, minimizing the disruptive effects such outbreaks have on ongoing research. The section also continued to focus on the impact of subclinical infections and concomitant medical conditions of experimental animals.

- Advising 33 of the intramural program's laboratories and branches on animal care and use. Assisting investigators in designing animal study proposals to assure they follow sound scientific principles of animal experimentation and comply with the PHS Policy, the Animal Welfare Act, and other guidelines for the humane use of animals in research. Coordinating training for and assisting investigators in basic animal care and use and in animal model selection.

- The newly renovated 14-D large animal surgical facility is fully operating and is supporting two large Surgery Branch research projects.

Laboratory Animal Resources Section
Head: William Hinkle

Section Responsibilities

- Managing the Institute's centralized animal holding and research facilities.

- Developing and carrying out internal procedures and practices to comply with the NIH, PHS, DHHS, and USDA policies, rules, and regulations.

- Planning the breeding and purchasing of animals to assure adequate supplies for Institute programs.

- Consulting with the Institute's scientific investigators to determine animal care and husbandry needs. Providing the required services.

- Providing technical assistance and guidance to the Institute investigative staff on the biology and handling of laboratory animals.

The section operates four central animal facilities, two in Building 10, one in Building 37 and one in Building 41. These facilities use 15,555 square feet, daily housing 21,333 rodents and 94 rabbits for research conducted by three NCI divisions.

Section Activities

- This year Program Resources, Inc., a prime FCRDC contractor, assumed the animal care responsibilities for the Building 10 central animal facility. This contractor also successfully manages the facilities in Buildings 37 and 41. The remaining Institute staff in the facility have moved to areas supporting NCI animal care in the Clinical Tower or to areas responsible for delivery services in Building 37.

- Renovating the Building 10-B2B central animal facility was a major undertaking. The renovations were initiated to promote a pathogen-free operation and to provide more space for NCI investigators. The facility was repaired, remodeled, and painted, and a new floor was installed. In July the work was finished, and in August the animal repopulation and experimental procedures began. The cooperation of OLAS and about 100 investigators in six NCI laboratories and branches made this renovation effort possible.

- Renovating the NIH cagewash area on the B2 level of Building 10 was completed. The area now meets accreditation standards and has two cagewash facilities. One facility will be used for the Institute B2B central animal facility, a pathogen-free operation. The other facility will render cagewashing services for the conventional animal rooms in the Clinic Tower, substantially reducing the risk of contaminating the central facility with animal pathogens present in the Clinic Tower animal facility.

- The section focused on assisting investigators from the three NCI Divisions in animal care and use. This effort involved teaching animal handling and technical procedures and assuring research animals were ordered promptly and properly to expedite Institute animal research studies.

- A major accomplishment for section was the successful AAALAC site visit in November 1991. Section personnel devoted many hours to preparing the facilities for the site visit and to meeting additional requirements for personal training. The site visit team did not record any major deficiencies.

Staff Presentations and Publications

Brown PA. Mammals (lecture). The Banner School, grades K-3, Frederick, MD, December 1991.

Brown PA. Introduction to the hamster and guinea pig (lecture). National Capital Area Branch-AALAS, Laboratory Animal Technician Training Course, Bethesda, MD, March 1992.

Brown PA. The immune system: comparative histophysiology (book review). Lab Anim Sci 1992;42:5.

Brown PA. Reptiles, amphibians and fish in research (lecture). National Capital Area Branch-AALAS, Laboratory Animal Technician Training Course, Bethesda, MD, May 1992.

Brown PA. Recordkeeping with readily available hardware and software (lecture). National Capital Area Branch-AALAS Annual Seminar, Ellicott City, MD, September 1992.

Donovan JC, et al. Death as an endpoint. In: Bernhardt DB, et al., eds. Institutional animal care and use committee guidebook. Bethesda: Office for Protection from Research Risks and Applied Research Ethics National Association (Boston), NIH publication no. 92-3415;B15-7.

Anver M, Gorelick P, Russell R, Cook L, Witt C. Ectopic hair follicles and conjunctivitis in athymic (Cr:NIHrnu/rnu) rats (poster session). National Capitol Area Branch-AALAS Annual Meeting, Turf Valley, Maryland, September 1992.

Witt C. SRV testing: the application of modern diagnostic test methods and epidemiologic principles to primate colony management (lecture). National Capitol Area Branch-AALAS Annual Meeting, Turf Valley, Maryland, September 1992.

OFFICE OF THE ASSISTANT DIRECTOR

Acting Assistant Director and Deputy Ethics Counselor
Donald Christoferson

Acting Executive Secretary, President's Cancer Panel
Acting Executive Secretary, Special Commission on Breast Cancer
Iris Schneider

Acting NCI Representative, Office of the Medical Applications of Research
Cherie Nichols

Dr. Elliott Stonehill left the position of Assistant Director in April 1992.

The Assistant Director (AD) is the reviewing and recommending official for professional staff requests for approval of outside activities. The office logged in about 800 new outside activity requests this year, each receiving careful review to assure the absence of any real or potential conflicts of interest. More than 500 continuing outside activity requests were reviewed and approved for about 200 NCI employees filing annual status reports.

The office uses computer data files to track outside activity requests from all employees, and, to date, nearly 1,800 requests have been entered in these files. Using this electronic data tracking system, the AD can more easily access information during the review and analysis process and can quickly generate reports requested by different NCI and NIH components. Data on ethics training, on the approval of NCI contracts, and on staff records of public and confidential financial interest reports, also have been electronically filed.

The AD is the Designated Deputy Agency Ethics Counselor for reviewing confidential reports of employment and financial interests of all NCI scientific and administrative staff. The AD reviews the Executive Branch Public Financial Disclosure Reports from senior-level Institute staff. This review of employee holdings and sources of outside income affirms the absence of real, apparent, and potential conflicts of interest. The DHHS Standards of Conduct and other regulations apply to Institute staff and to members of Institute advisory groups and other non-federal affiliates. More than 600 of these reports are reviewed annually.

This year 174 NCI staff members received ethics training, which is carried out four times a year; more than 1,200 Institute employees now have been trained in government ethics. Standards regarding outside activities, avoidance of conflicts of interest, post-employment restrictions, the Ethics Reform Act of 1989 and its honorarium ban, the Procurement Integrity Act, and other ethical issues covered by Federal laws and NIH and Department regulations are discussed. Safeguards against conflicts of interest, as well as other potential violations of ethical conduct, have been successfully carried out within the Institute.

In late spring 1991, DHHS audited the Institute's implementation of the Ethics in Government Act and its management of outside activity requests. All

requests for approval of outside activities offering compensation now require supplemental information and a copy of the requestor's position or billet description. The additional information will substantiate the relationship between the proposed outside work and the employee's official duties. Overall, the audit was favorable.

On behalf of the Institute Director, the AD may sign all plans and revisions for contract projects and interagency agreements estimated to cost $1.25 million or more.

The members of the President's Cancer Panel are Dr. Harold Freeman, Chairman; Mrs. Nancy Brinker; and Dr. Henry Pitot, III (appointed in May 1992 to replace Dr. Geza Jako). The Panel meets four times in a calendar year; meetings in October and November 1992 will address the role of voluntary organizations and prostate cancer. The following meetings were held this fiscal year.

- Breast Cancer Research: Progress and New Perspectives
  M.D. Anderson Cancer Center, Houston, December 1991

- Cancer Research and Technology Transfer in the 1990s: Old Tools, New Tools
  University of California, San Francisco, February 1992

- Cancer in Minority Populations: Opportunities and Obstacles
  American Health Foundation, New York City, June 1992

In August 1991, Vice President Quayle requested that Dr. Freeman establish a subpanel "to undertake a detailed study of the state of breast cancer research, detection, and treatment in the United States and around the world." Announcements that the Panel was seeking nominations for subpanel members appeared in an October 1991 issue of the Journal of the National Cancer Institute and in other scientific publications. On March 6, 1992, the Federal Register published the establishment of the President's Cancer Panel Special Commission on Breast Cancer, and in April 1992, the Institute announced the 17 members who were selected from more than 170 nominations. Mrs. Brinker was named the chairman of the subpanel.

The Commission held its inaugural meeting in Bethesda on May 28, 1992. Mrs. Marilyn Quayle, Dr. Freeman, Mrs. Ginger Sullivan (wife of Secretary Sullivan), Dr. Bernadine Healy (NIH Director), and Dr. Samuel Broder (NCI Director) spoke at the meeting. NCI staff presented overviews of the accomplishments and opportunities regarding all aspects of cancer research, education, and training.

Several leading scientists spoke at the second meeting in Dallas on July 8, their presentations focusing on basic research. The members discussed the agendas of future meetings and suggested possible individuals and organizations that might address the commission. The final meeting of the fiscal year will take place in September 1992 at NIH. The Commission will hold about 10 meetings to assess the information and recommendations from scientists, clinicians, industrial representatives, voluntary organizations, other government agencies, and patient advocates. A final report will be prepared for the vice president.

NCI and the NIH Office of the Medical Applications of Research co-sponsored two Consensus Development Conferences.

- Vestibular Schwannoma (Acoustic Neuroma) in December 1991 with the National Institute of Neurological Disorders and Stroke and the National Institute on Deafness and Other Communication Disorders. The panel's recommendations for the diagnosis, clinical management, and research of the disease's genetics and molecular mechanisms may lead to improved interventions.

- Diagnosis and Treatment of Early Melanoma in January 1992 with the National Institute of Arthritis and Musculoskeletal and Skin Diseases. The consensus panel recommended less extensive surgery for early lesions and many measures to further prevention and early detection, when these tumors are most curable.

A consensus development conference on treating ovarian cancer is being planned.

OFFICE OF TECHNOLOGY DEVELOPMENT
Director: Dr. Thomas Mays

The Office of Technology Development (OTD) focuses on legislation, regulations, and administrative activities pertaining to the following areas.

- Cooperative Research and Development Agreements (CRADAs)
- Material Transfer Agreements (MTAs)
- Employee Invention Reports (EIRs)
- Patents
- Licenses
- Royalty Income

The office advises and assists Institute staff in these areas and other areas relating to the Institute's intellectual property concerns. It is a contact for inquiries from individuals, committees, and organizations within and outside the Federal Government.

For this fiscal year, OTD will have overseen the execution and enactment of about 25 CRADAs. An additional 22 CRADAs are being negotiated or are pending.

OTD reviews MTAs that have been modified and that differ from the NIH-ADAMHA model MTA. If necessary, OTD proposes additional terms or conditions to comply with NIH policy. The office has reviewed and processed about 310 MTAs this fiscal year.

As of July 1, 1992, OTD received and processed about 60 EIRs from DCT, DCE, DCBDC, and FCRDC.

OTD has streamlined the administrative processing of CRADAs, MTAs, and EIRs. It has developed databases to monitor CRADAs, MTAs, and EIRs and to update information regarding these contracts or reports.

OTD has also held workshops and distributed reference materials to the Institute scientific and administrative staffs to assist them in complying with Department technology transfer regulations and NIH policies. Staff advisory services now include preparing pre-patentability reports, which contain information supporting administrative decisions to obligate Institute funds for U.S. and foreign patent application filings. The reports, which provide decision-making documentation at an early stage in the disclosure process, have resulted in significant cost savings.

By offering more informative materials, more advisory services, and more efficient monitoring of the various agreements and patent applications, OTD can continue to ensure the protection of the Institute's intellectual property portfolio. Through further refinement and improvement of the office's operations, OTD will promote the Institute's technology transfer program as set forth under the Federal Technology Transfer Act of 1986 and as subsequently amended.

EQUAL EMPLOYMENT OPPORTUNITY OFFICE
Coordinator: Maxine Richardson

The Adopt-a-School Program, a partnership between NCI and McKinley High School in the District of Columbia, is in its third year. The Teachers Enrichment Program, a new phase of the Adopt-a School Program to increase the professional development of minority high school science teachers, has started its second year. This project is (1) a series of lectures, seminars, or demonstrations presented at NIH during the school year and (2) a program of paid summer interns conducting basic research in NCI laboratories. Four students and four teachers from McKinley were employed for the year's summer session.

The EEO staff has worked diligently to recruit minorities, women, and disabled students to work in the Student Research Training Program.

The NCI Periodical Recycling Program is thriving. The number of cartons sent annually to minority institutions is steadily increasing, the number averaging 620.

The staff has started an EEO lecture series program. The semi-annual lectures deal with EEO and management issues that will affect the work force in the year 2000. The first and second lectures were held in May and November 1991. Speakers from inside and outside the Federal government were invited to speak.

The EEO staff and the Institute personnel staff are continuing their efforts to carry out Institute EEO initiatives to ensure the success of the Disabled Individuals and Veterans programs.