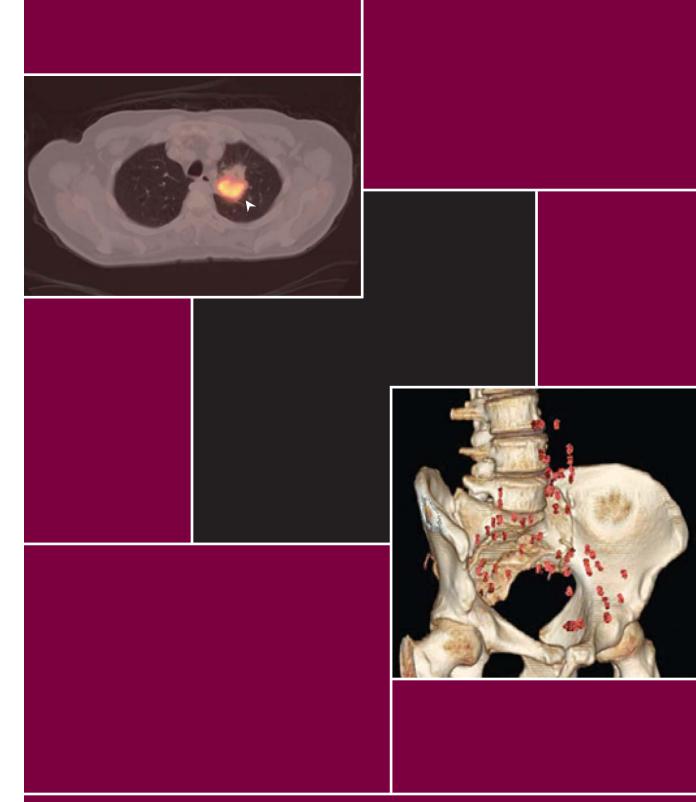
# Division of Extramural Activities Annual Report 2004



# Molecular Imaging for Cancer

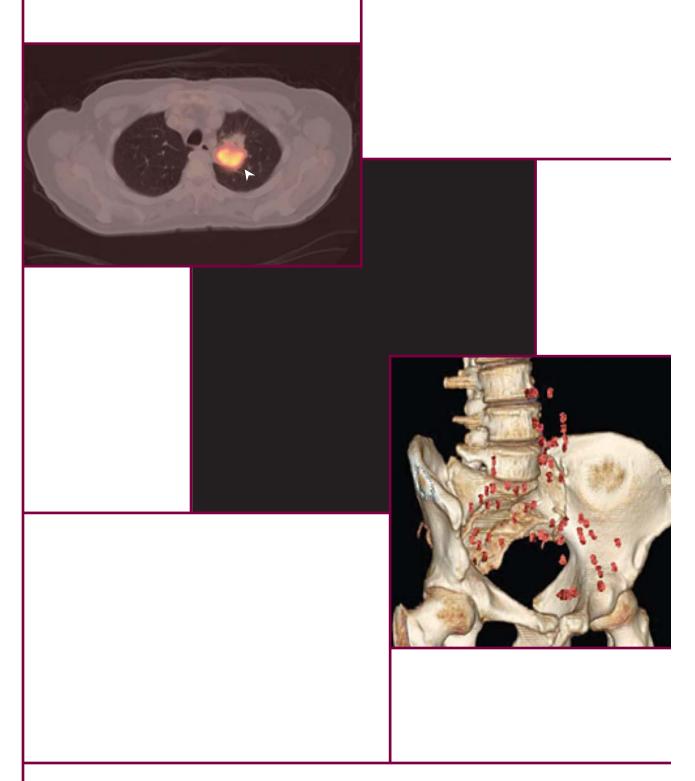
The NCI has made a significant committment to support the discovery, development, and delivery of cuttingedge molecular imaging agents and technologies. The field of molecular imaging has grown rapidly in response to this committment, and the applications being developed will have a far-reaching impact on the detection, diagnosis, and treatment of cancer patients.

The images on the cover demonstrate the power of two different types of molecular imaging techniques applied to cancer detection. The image on the top is generated using positron emission tomography-computed tomography (PET-CT) fusion imaging (image reproduced with permission from David W. Townsend, Ph.D., Department of Radiology, University of Tennessee). Computed-tomography (CT) alone, a technique based on the use of x-rays, is capable of generating images with exquisite anatomical detail, but does not provide the clinician with physiologic information about lesions that are detected. Conversely, positron emission tomography (PET) alone, a technique based on the use of radiolabeled imaging agents, provides the clinician with functional information about whether a lesion is cancerous or not, but the resulting images do not contain the anatomic detail necessary to determine exact location within the body. In the image shown, the radiolabeled agent being used is 2-[18F]fluoro-2-deoxy-D-glucose ([18F] FDG), an agent that reports on the increased metabolism occuring in a cancer cell. In the past, these two types of images were acquired using two separate machines at two different times. Each of the resulting images was subsequently superimposed on the other, resulting in inaccuracies. Through NCI funding, an imaging technology was developed that allows clinicians to acquire both types of images and fuse them automatically into a single image. The combined PET-CT image shown now accurately reflects the precise anatomic location of the lung cancer lesion (as shown by the arrow) as well as the physiologic information about that lesion, greatly enhancing the ability of the clinician to effectively treat the patient.

Another example of a cutting-edge molecular imaging technology is shown by the image on the bottom of the cover. In this example, magnetic resonance images (MRI) using a superparamagentic imaging agent [monocrystalline iron oxide nanoparticle (MION)] that selectively detects metastatic lymph nodes (colored in red) are acquired, in this case from a series of patients with metastatic prostate cancer (image reproduced with permission from Ralph Weissleder, M.D., Ph.D., and Mukesh Harisinghani, M.D., Harvard University). Those images are superimposed upon the CT image of the pelvis. Importantly, this technique results in 3D representation of the images, allowing for even more precise anatomical localization of the cancerous lesion.

The work described was supported by the Cancer Imaging Program, NCI.

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<sup>\*</sup> Special Emphasis Panel. † Research Project Grant.



## **Foreword**

Since Congress passed the National Cancer Act in 1971, we have been experiencing exponential growth in our knowledge of cancer. That scientific knowledge base, which is a primary responsibility of the National Cancer Institute (NCI), is the first stage along a continuum of discovery, development, and delivery that will ultimately take us to the goal I have challenged myself and the entire cancer community to reach by the year 2015—the elimination of suffering and death from cancer. The knowledge we discover—whether at the level of the gene, molecule, cell, tissue,

organ, individual, or population—must feed the development of strategies and interventions, which can then be delivered in a fashion that not only reduces the cancer burden, but also yields new knowledge of the biology of human cancers.

The NCI is committed to exploiting that discovery-development-delivery strategy to achieve the 2015 challenge goal. In large measure, this will be accomplished through the efforts of outstanding NCI extramural scientists who have and will continue to enhance the scientific knowledge base. The NCI Division of Extramural Activities (DEA) carries a major responsibility for strengthening that base by conducting the scientific review of applications for support of extramural research, assisting in the development of research Requests for Applications (RFAs) and Requests for Proposals (RFPs), disseminating operating policies pertaining to extramural programs, and analyzing and reporting on all extramural research programs funded by the NCI.

The DEA Annual Report provides a comprehensive look at each of the major areas of responsibility within the DEA, including program coordination, referral, review, advisory activities, information resources, portfolio tracking and analysis, management, and extramural policy.

I am pleased to endorse this annual report and congratulate the many staff who contributed to its development. It not only describes the DEA's activities and accomplishments and its work in the context of achieving the NCI's overall scientific goal of reducing the burden of cancer, but also gratefully acknowledges the hundreds of researchers who have contributed to the success of our peer-review and advisory activities.

Andrew C. von Eschenbach, M.D. Director, National Cancer Institute

## Introduction

The Division of Extramural Activities (DEA) is centrally involved in establishing and disseminating extramural policy and all aspects of grant development and tracking, from original conception of research and training programs, to issuance of announcements of such programs, receipt and referral of incoming applications, review and final approval of the applications, coding and tracking awards after disbursement of funds and coordinating relevant advisory boards. In brief, the DEA was established to:

- Provide advice and guidance to potential applicants;
- Coordinate and assist in the development of extramural research funding initiatives;
- Refer incoming grant applications to appropriate programs within the NCI;
- Provide the highest quality and most effective scientific peer review and oversight of extramural grant and contract research;
- Coordinate and administer advisory committee activities, such as the National Cancer Advisory Board (NCAB) and Board of Scientific Advisors (BSA), as they relate to the various aspects of the NCI mission;
- Establish and disseminate extramural policies and procedures, such as requirements for inclusion of certain populations in research, actions for ensuring research integrity, budgetary limitations for grant applications, policies to expedite funding and changes to the application and award processes; and
- Track the NCI research portfolio (more than 7,000 research and training awards) using consistent, budget-linked scientific information to provide a basis for budget projections and to serve as an NCI resource for the dissemination of information about cancer.

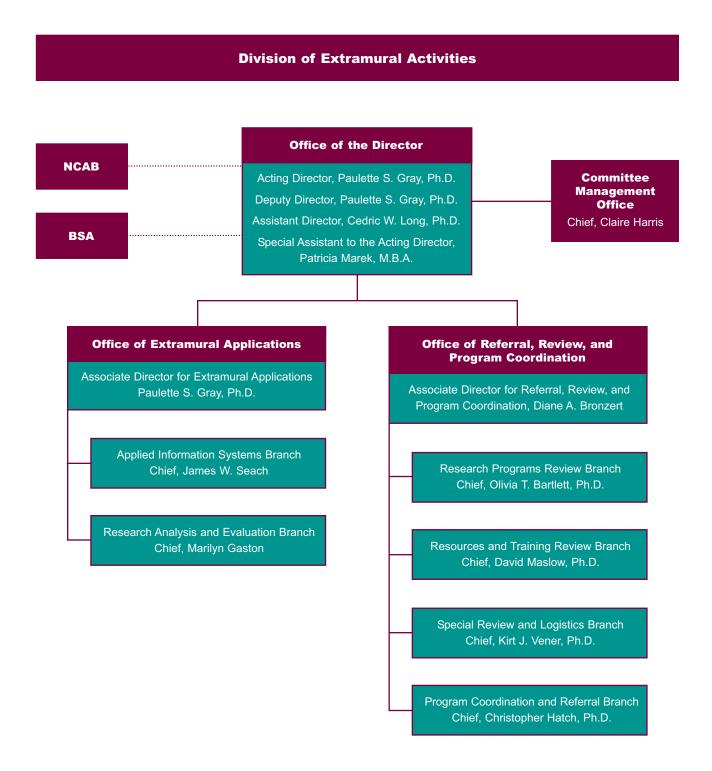
In essence, the DEA is the organizational component of the NCI that coordinates the scientific and merit review of extramural research by peer review groups and advisory boards before funding and provides systematic surveillance of that research after awards are made. In this latter role, the DEA assists the NCI in its goal of achieving a balanced portfolio of research in biology, behavior, epidemiology, and cancer control, prevention, detection, diagnosis, and treatment, as well as long-term survival/survivorship, rehabilitation, and end-of-life issues. In addition, the DEA serves as a focal point for information about the NCI's extramural policies. DEA maintains a comprehensive Web site providing detailed information related to its overall responsibilities, such as grant and contract announcements for funding opportunities, application procedures, portfolio overview, and advisory boards—see http://deainfo.nci.nih.gov/funding.htm.\*†

This DEA annual report describes activities that occurred during FY2004 (October 1, 2003–September 30, 2004). Receipt, referral, and review of grant applications generally occur from 1 to 3 months prior to either January, May, or October NCAB meetings. Applications are therefore, normally reviewed in the fall, spring, or summer prior to a January, May, or October Board meeting, respectively.

<sup>\*</sup> See **Appendix F** for a glossary of acronyms used in this report.

<sup>†</sup> A directory of Cancer Information Sources on the Internet, including selected DEA and NCI Web sites, is included in **Appendix G**.

# **Organizational Chart**



## Overview of the Division of Extramural Activities

An important part of DEA's mission is to manage and coordinate the second level of review with the National Cancer Advisory Board and the concept review of all new and reissued RFAs and RFPs with the Board of Scientific Advisors (see **Appendixes A and B**). In addition, the DEA tracks new initiatives proposed by other Institutes and agencies to consider possible NCI participation. The success of this operation is dependent on the development of clear Institute referral guidelines, also a DEA responsibility. Before the publication of an initiative, the DEA negotiates with the CSR, DEA review units, and other offices the scheduling, timelines, and workloads. Concepts for PAs do not require BSA approval, but are considered instead by the NCI Extramural Division Directors (EDD) Committee.

The **Committee Management Office** (CMO) provides oversight of all NCI chartered advisory groups, working groups, task forces, chartered review groups, etc. The CMO ensures that the Institute operates within the appropriate Federal Advisory Committee Act (FACA) and the Government in Sunshine Act guidelines. It supports the Institute staff by being readily available to provide guidance and assistance as needed.

The DEA also provides effective and timely coordination of program initiatives from the initial concept stage through publication of RFAs, PAs, and RFPs, and, finally, through the peer review of grant applications and contract proposals. The Office of Referral, Review, and Program Coordination (ORRPC) was established within the DEA for coordination of grant referral development and issuance of NCI program initiatives and review activities. The program coordination responsibilities of the DEA, in cooperation with NCI Extramural Program Divisions, extend to the development of all new extramural program guidelines and funding opportunities. The DEA manages this activity in communication with the originating NCI program and the NIH Office of Extramural Research. To maintain consistency and completeness, all new NCI guidelines are centrally edited and cleared through the DEA before being forwarded for NIH approval and publication in the NIH Guide for Grants and Contracts. Because most program staff have limited experience in crafting an initiative in the format required by the Public Health Service (PHS) rules and regulations, the services provided by the DEA in preparing such announcements materially speeds their release, often shortening the process by a month or more. Another program coordination activity is the development of referral guidelines for assignment of grant applications to the NCI. These guidelines, included in the Referral Guidelines for Funding Components of PHS, are critical to the development of program initiatives across the NIH, as well as to the prompt referral of unsolicited grant applications to the NCI. These guidelines differ from the internal referral guidelines. The internal referral guidelines are vital to the prompt referral of grant applications to the appropriate NCI program areas.

The **Research Analysis and Evaluation Branch** works closely with the NCI Office of Budget and Financial Management to provide budget linked portfolio data. In doing so, the Institute has the capability of responding expeditiously to congressional and other inquiries. This Branch has historical budget linked portfolio data from the early 1930s.

The DEA conducts continual evaluation of program initiatives and coordinates policies and procedures to ensure that all aspects are as clear and accessible as possible to staff, advisory groups, and applicants. To facilitate this evaluation, the **Office of Extramural Applications** through the **Applied** 

**Information Systems Branch** (AISB) maintains a Web-based information system to provide key information on new initiatives. This Web-based information system includes early notice of approved concepts, listings of active PAs and recently published RFAs, and policies related to the clearance of new program initiatives. This information is provided in both public Internet and NCI limited-access Intranet versions (http://deainfo.nci.nih.gov/funding.htm).

# Special Activities in the Office of the Director, DEA

In addition to managing and coordinating the extramural operations described in this report, the DEA Office of the Director (OD) is a focal point and repository of information related to various funding mechanisms for grants, staff and awardee responsibilities, eligibility requirements, receipt dates for all granting mechanisms, and special programs. The OD is, for example, the coordinating center for submission of applications for special NIH-wide awards, such as the James A. Shannon Director's Award, the Academic Research Enhancement Awards (AREAs), the Institutional Development Awards (IDeAs), and the Research Enhancement Awards Program (REAP).

The DEA OD ensures that NCI meets the congressional mandate to promote increased participation of women, children, and members of minority and medically underserved populations in the research areas of cancer cause, prevention, control, diagnosis, and treatment. The NIH Revitalization Act of 1993 mandates that women and members of minority groups be included as subjects in each research project, unless there are clear scientific or ethical reasons that inclusion is inappropriate with respect to the health of the subject or the purpose of the research. Administrative procedures allow NCI staff to resolve inclusion problems after initial review of applications that are otherwise highly meritorious. In the event a grantee believes the proposed study does not warrant or require inclusion of women or minority groups, he or she can apply for a waiver of this requirement. The Director of the DEA has the authority to grant this waiver. In FY2004, 62 applications with preliminary bars to award were received by the DEA. Through corrective action, all were brought into compliance before award decisions were made.

Additionally, the DEA Director serves as the locus for implementation and oversight of NCI policies concerning extramural research integrity and serves as a resource to all NCI staff with questions in this area. In this role, the DEA OD works to address concerns about extramural scientific misconduct, misuse of human and animal research subjects, financial mismanagement, and financial conflict of interest involving NCI-supported research. Thus, the DEA Director functions as the NCI Research Integrity Officer and receives from the appropriate sources all documents related to misconduct for transmittal and reporting to relevant sources. In FY2004, five cases of alleged scientific misconduct were opened by the Office of Research Integrity, DHHS, and referred to the Director, DEA. Three cases were closed, and of the three one case was found to involve misconduct. The other cases are open, pending resolution.

## Grant Referral: The First Point of Contact with the NCI Grantee

In Fiscal Year (FY) 2004, the NCI received more than 12,000 grant applications for referral (see **Table 1**).\* These included applications for 50 different types of funding award mechanisms (see **Appendix E**), including Career Development Awards (K awards), Research Program Projects (P01), Cancer Center Support Grants (CCSGs, P30), Research Projects (R01), Small Business Technology Transfer (STTR) Grants (R41/42), and Small Business Innovation Research (SBIR) Grants (R43/44). The past 5 years have seen a significant increase in grant applications coming to the NCI for referral. The increase in all applications has been 53 percent, while increases in R01, R21, and R03 have been 31 percent, 300 percent, and 249 percent, respectively (see **Figure 1**).

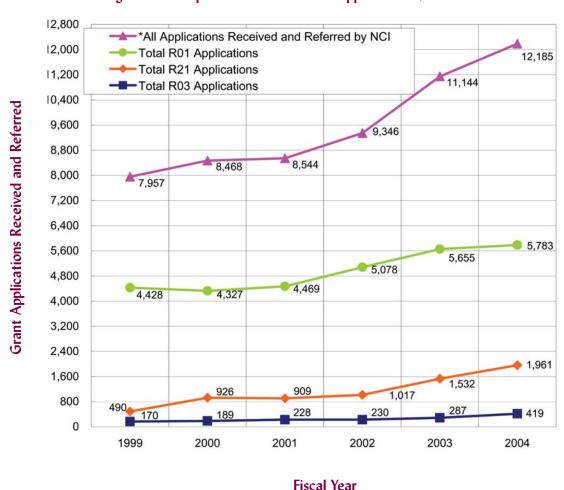


Figure 1. Receipt and Referral of NCI Applications\*, FY1999-2004

#### **Referral Functions**

All applications submitted to the National Institutes of Health (NIH) are assigned to an Institute or Center (IC). The IC in turn has a structure in place to address internal assignments. Within the NCI,

<sup>\*</sup> In addition, there were 1,198 applications that were received for referral and not accepted for review.

DEA's **Program Coordination and Referral Branch** (PCRB) is responsible for receipt, referral, and assignment of applications, as well as program development functions. Upon receipt of a primary or secondary assignment to the NCI by the NIH Center for Scientific Review (CSR), the PCRB Referral Officers (ROs): (1) assign all incoming applications to one of the 45 NCI extramural research program areas; (2) track program acceptance; and (3) whenever necessary, negotiate transfers of grant applications to and from other NIH institutes and centers. The PCRB distributes all of the applications that are to be directly reviewed by peer review groups managed by the DEA for the NCI. These applications include P01 Program Projects, P30 Centers, P20 Planning Grants, P50 Specialized Centers, R13 Conference Grants, R03 Small Grants, certain R21/R33 Phased Innovation and Technology Grants, T32 Training Grants, certain R01 Research Project Grants, and U series Cooperative Agreement applications.

The PCRB is often the first point of contact for applicants. It is the receipt point for the recipient of Letters of Intent from potential applicants for multiproject Program Grants (P01) and Conference Grants (R13). It also receives Research Supplements for Underrepresented Minorities, Supplements to Promote Reentry Into Biomedical and Behavioral Research Careers, Research Supplements for Individuals with Disabilities, and Supplements for the Continuous Umbrella of Research Experience (CURE) program for underrepresented minorities and distributes the supplements to program staff.

The ROs serve as primary NCI contact persons for members of the extramural scientific community in need of information on a broad range of subjects, including application information, new initiatives announced as RFAs or PAs, and the review process. They also provide "one-stop shopping" for applicants who are uncertain about whom to contact by directing them to appropriate Program Directors or SRAs for information on the status of the review and award of their grants. In addition, the ROs assist members of the extramural community in navigating NIH and NCI Web pages to obtain current information, forms, and guidelines.

# Peer Review—The Next Step

Once applications are referred to the NCI and the appropriate program, they must be reviewed. The high caliber of NCI-sponsored research is maintained through peer review and a quality control process in which experts in the field review and score proposals for research. The peer-review mechanism helps ensure that the NCI uses its resources wisely and funds research that has the potential to make a significant contribution to science and medicine. The NCI's extramural programs and activities are funded primarily through peer-reviewed grants and cooperative agreements. Programs that are funded through research contracts are also subject to peer review, including contract-supported projects conducted within the intramural research program.

The dual peer-review system of the NIH consists of two sequential levels of review mandated by statute. The first level of review of grant applications assigned to the NCI is performed by either an NIH CSR study section, an NCI Initial Review Group (IRG) subcommittee, or NCI Special Emphasis Panel (SEP) whose primary purpose is to review and evaluate the scientific merit of research grant and cooperative agreement applications. The second level of review for program relevance is conducted by the National Cancer Advisory Board (NCAB).

Most investigators are familiar with the NIH CSR study sections, which have primary responsibility for investigator-initiated Research Project (R01) grants and fellowships. It is less widely known, however, that applications representing more than 50 percent of the NCI's extramural budget are reviewed by groups that are directly formed and managed within the NCI by the DEA. Review by either the CSR or the DEA is usually decided by the choice of grant mechanism.

The NCI has no direct input into the selection of reviewers who serve on CSR study sections. In contrast, members of the NCI IRG are selected by DEA review staff, with suggestions from programmatic staff. All chartered DEA review committee members are approved by the Director, NCI, based on their knowledge of the various disciplines and fields related to cancer. There are eight NCI IRG specialized review subcommittees, for example: Subcommittee A reviews Cancer Centers; Subcommittee D reviews Clinical Program Projects; and Subcommittee H reviews Clinical Cooperative Groups. (The current charter and membership of subcommittees may be found in **Appendix C** and at the following Internet address: <a href="http://deainfo.nci.nih.gov/advisory/irg.htm">http://deainfo.nci.nih.gov/advisory/irg.htm</a>). IRG members are appointed for varying terms of service, which may be up to 4 years. DEA SEPs may be formed to review RFAs or special applications. Members of such panels are selected on a one-time, as-needed basis to review specific applications, contract proposals, or proposed solicitations. (Additional information about NCI SEPs can be accessed at the following Internet address: <a href="http://deainfo.nci.nih.gov/advisory/sep.htm">http://deainfo.nci.nih.gov/advisory/sep.htm</a>.)

Both the SEPs and the IRG advise the Director, NCI, on the scientific and technical merit of applications for research and research training grants, cooperative agreements and contract proposals relating to scientific areas relevant to cancer. Government-employed SRAs within the DEA manage the scientific review of applications, including the selection of peer reviewers and the overall administration of the peer-review process.

#### **Review Workload**

In FY2004, the DEA organized, managed, and reported the review of a total of 2,927 grant and cooperative agreement applications (see **Table 2**) and 420 contract proposals (see **Table 16**). This repre-

sented a 34 percent increase or 842 more grant and contract proposals in FY2004 as compared with FY2003 and a 121 percent increase or 1,834 more grant applications and contract proposals in FY2004 as compared with FY1999 (see **Figure 2**). There was an increase in the majority of mechanisms submitted in response to RFAs, PARs, and RFPs. Twenty-four meetings of the NCI IRG subcommittees were convened to review and evaluate grant applications of various types (see **Table 3**). In addition, there were 79 SEP meetings for review of grants or contracts, and 157 site visits (38 SEP and 119 IRG meetings). In FY2004, 1,782 reviewers served on 260 occasions on either the parent IRG subcommittees or SEPs (see **Appendixes C and D**). Members were selected because they are authorities in relevant fields of biomedical research or because they represent informed consumer perspectives.

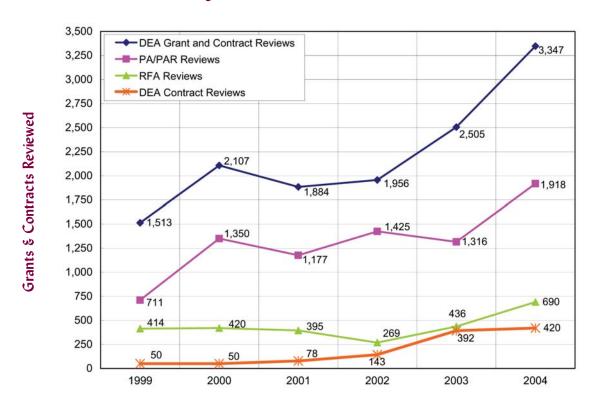


Figure 2. DEA Review Workload, FY1999–2004

**Fiscal Year** 

## **Bypass Budget Goals**

Each year, the NCI identifies several broad priority areas that serve as the framework for strategic planning and budget development. In previous years, the Institute defined a series of Extraordinary Opportunities and Challenges to describe areas of emphasis. In 2004, those categories were integrated to more closely align the initiatives of the Institute with the mission of improving discovery, development, and delivery of health care to cancer patients. To that end, the Institute has divided its initiatives into the following four areas: Building the Nation's Cancer Research Capacity, The Interface of Aging and Cancer, Advancing Discovery and Its Applications, and Addressing Areas of Public Health Emphasis. As shown on the next page and in Tables 10 and 11, in FY2004, the Bypass Budget Initiatives translated into a variety of specific RFA or PAR initiatives, not only for academic research centers, but also for the small business community. Summaries of reviews conducted by DEA are shown in **Tables 10 and 11**.

#### FY2004 Bypass Budget Initiatives

Goals		# of RFAs/PARs Issued
A.	Building the Nation's Cancer Research Capacity	
1.	Enhancing Investigator-Initiated Research (C-1*)	3/1
2.	Expanding the Capacity of Centers, Networks, and Consortia (C-2)	2/1
3.	National Clinical Trials Program in Treatment and Prevention (C-3)	2/2
4.	Developing Bioinformatics for Cancer Research (C-4)	1/1
В.	The Interface of Aging and Cancer	None
C.	Advancing Discovery and Its Applications	
1.	Genes and the Environment (O-1*)	0/0
2.	Signatures of the Cancer Cell and its Microenvironment (O-3)	2/0
3.	Molecular Targets of Prevention and Treatment (O4)	3/6
4.	Cancer Imaging and Molecular Sensing (O-2)	1/3
5.	Cancer Communications (O-6)	0/0
D.	Addressing Areas of Public Health Emphasis	
1.	Improving Quality of Cancer Care (C-7)	0/0
2.	Reducing Cancer-Related Health Disparities (C-8)	0/0
3.	Cancer Survivorship: Improving Treatment Outcomes and Quality of Life (New)	1/0
4.	Research on Tobacco and Tobacco-Related Cancers (O-5)	1/0

#### Peer Review Functions

The DEA **Office of Referral, Review, and Program Coordination** (ORRPC) is responsible for the coordination and management of review of grants, cooperative agreements, and contracts for the Institute and includes three review branches and the referral and program coordination branch. The review branches are responsible for organizing, managing, and reporting the scientific peer review of applications for a wide variety of grant mechanisms. Reviews are conducted by one of the eight subcommittees of the NCI Initial Review Group (IRG) or by specially convened Special Emphasis Panels (SEP).

Specifically, the **Resources and Training Review Branch** (RTRB) has primary responsibility for review of applications for cancer centers, cancer training and career development, and cancer clinical trials, as well as for managing the corresponding five subcommittees of the NCI Initial Review Group (IRG) (see **Table 3**). The **Research Programs Review Branch** (RPRB) has primary responsibility for review of unsolicited applications for program project grants (P01s), for Special Programs of Research Excellence (SPOREs, P50s) in various organ sites, and for conference grants (R13s). The RPRB also manages the three subcommittees of the NCI IRG that are responsible for review of program project grant applications and the NCI R13 Review Committee, which is

<sup>\*</sup> The designators in parenthesis following each initiative refer to the NCI Challenges (e.g., C-1) and Opportunities (e.g., O-1) that were identified in DEA's 2003 Annual Report.

composed of NCI extramural scientific staff from all four program Divisions and the DEA. RTRB and RPRB are primarily responsible for the peer review of a variety of unsolicited multiproject and career development grant applications (see **Table 2**) and together manage the eight subcommittees of the NCI IRG (see **Appendix C**). The **Special Review and Logistics Branch** (SRLB) organizes and manages peer review primarily for grant applications in response to most of NCI's specific RFAs, Program Announcements with special receipt dates and sometimes involving Institute managed review (PARs), and contract proposals submitted in response to specific Requests for Proposals (RFPs); all of these reviews are conducted by the Special Emphasis Panels (SEPs). Review units prepare the summary reports of the evaluations and recommendations for each site visit or review committee meeting and distribute these reports to program officials, the NIH data management system, and NCI's Records Management Center. Details of the summary statements also are provided to the NCAB, as required. Each primary Principal Investigator applicant receives a report in the form of the summary statement.

Many of the reviews conducted by the RPRB and the RTRB involve complex, multidisciplinary applications. The review format for these applications usually involves a two-tier review process. The first tier of the review is usually either a site visit to the applicants' institution, an applicant interview in the Washington, DC, area, or a teleconference by an expert review panel; these provide an opportunity for the reviewers to question the applicants directly to clarify issues in the application, thereby enhancing the review process. The review panel members prepare a draft review report, which is then considered, along with the application, by the relevant subcommittee of the NCI IRG. Five of the eight NCI subcommittees of the NCI IRG serve as the "parent committees" for final scoring of applications after expert panel reviews: Subcommittee A is the "parent committee" for Cancer Center Support Grant (P30) applications; Subcommittees C, D, and E are the "parent committees" for Program Project (P01) grant applications; and Subcommittee H is the "parent committee" for review of Cooperative Clinical Trials (primarily U10) applications. The other three subcommittees of the NCI IRG, Subcommittees F, G, and I, review all of the career development, training, and education grant applications submitted to the NCI.

#### IRG and SEP Reviews

During FY2004, the eight subcommittees of the NCI IRG reviewed a total of 830 applications of various types with requests for a total of \$542,163,515 in direct costs for the first year, and more than \$2,846,854,138 for all years (see **Table 3**). The FY2004 workload represented an annual increase from FY2003 of approximately 9.6 percent in the number of applications reviewed by the subcommittees, due mainly to the increased number of program project applications for Subcommittee D and career development applications for Subcommittees F, G, and I. In addition, during FY2004 a variety of Special Emphasis Panels (SEPs) were responsible for reviewing a total of 2,097 applications submitted in response to RFAs or applications otherwise unique to the NCI, with requests for a total of \$726,924,495 in direct costs for the first year, and \$3,481,782,724 for all years (see **Table 3**). This represented a 52 percent increase in applications reviewed by SEPs compared to FY2003.

### Research Programs Review Branch

A significant proportion of the effort of the RPRB during FY2004 was associated with the review of unsolicited P01 applications. The SRAs in the RPRB organized and managed the review of 131 new, recompeting, amended, and supplemental P01 applications (see **Table 4**). The high level of P01 workload that NCI has seen since FY2002 is shown in **Figure 3**. The 131 applications requested

more than \$281 million in total costs for the first year (see **Table 6**). IRG Subcommittees C, D, and E reviewed 124 program project applications, while 7 were reviewed by Special Emphasis Panels, due to IRG member conflicts. Forty-three of the reviews for the January 2004 and May 2004 NCAB rounds involved site visits for new and recompeting applications (see **Table 5**).

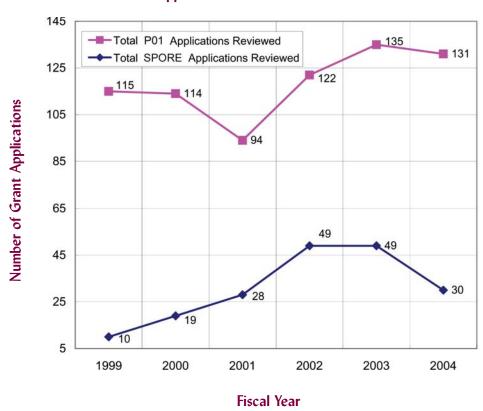


Figure 3. Numbers of Program Projects (P01) and SPORE (P50)
Applications Reviewed, FY1999–2004\*

After 18 months of study and planning, the RPRB implemented a completely new review process for P01 applications during FY2004. Beginning with applications submitted on February 1, 2004, for the September 2004 NCAB and funding in FY2005, RPRB began a 1-year pilot of "cluster reviews" for P01 applications. This change in the P01 review process resulted from the deliberations of the NCI P01 Working Group, which included representatives from DEA and the four NCI extramural program Divisions. The goal of the P01 Working Group was to consider review options for P01s for the future that would conserve reviewer time and effort, decrease the total number of reviewers required for the review panels, improve scoring consistency, decrease scoring compression, and reduce NCI costs associated with P01 review.

In the new P01 cluster review process, two to three P01 applications on closely related topics are reviewed by one review panel with expertise in all of the applications, rather than constituting a separate review panel for each individual application (see **Table 5**). Site visits and individual teleconferences for P01 applications were discontinued. The cluster review panel members meet together to

<sup>\*</sup> Withdrawn applications are not included.

discuss the applications and contact each applicant group by teleconference to ask key questions. Prior to implementing the cluster review process, RPRB staff practiced clustering the P01 applications received for five successive review cycles.

To implement this new review process, RPRB revised the NCI P01 Guidelines, prepared a new P01 Reviewer Guide with new review process instructions, and revised the P01 Scoring Guidelines. RPRB senior staff oriented the Subcommittee C, D, and E members to the new P01 review process at the December 2003 and April 2004 Subcommittee meetings. Orientation materials about the new P01 cluster review process were also prepared for applicants and were distributed electronically to all potential applicants. In addition, during the round of review for the May 2004 NCAB, RPRB piloted the process by conducting several "piggy-back" reviews, in which a teleconference review for a revised application was "piggy-backed" on a site visit for an application on a related topic. Although the piggy-backed reviews were separate, they allowed further testing of clustering methods, timelines, and reviewer assignments before full implementation of the cluster review process.

To monitor reviewer satisfaction with the new review process, reviewer feedback has been collected after every cluster review meeting. Initial results indicate general satisfaction with the new process. The process also has resulted in a reduction of at least 30 percent in the number of reviewers required, increased consistency in scoring calibration, and a modest reduction in costs. Further analysis of the new P01 review process will be completed during the spring of 2005.

During FY2004, the RPRB also continued several other initiatives to improve review procedures for program project applications, which included holding joint new member orientation sessions and developing an orientation notebook with policies, procedures, suggestions, and case studies for new members. A plenary session was established for all subcommittee reviewers with exercises designed to help the reviewers establish consistent scoring calibration standards that are applicable across the three committees, regardless of scientific discipline. The outcomes of the plenary session were more consistent review practices and scoring patterns across the three subcommittees and, therefore, better information for NCI program staff to base funding decisions for program project applications.

During FY2004, the RPRB also had responsibility for the peer review of the applications received for the NCI Special Programs of Research Excellence (SPORE) program. These large, complex multidisciplinary P50 research center applications focus on translational research directly applicable to human disease in various organ sites. During FY2004, the RPRB organized and managed Special Emphasis Panels for the review of a total of 30 SPORE applications for research in gastrointestinal (6), leukemia (7), lymphoma (5), brain (5), head and neck (6), and ovarian (1) cancer (see Figure 3). These 30 applications requested almost \$55.3 million in direct costs for the first year of support and total direct costs of more than \$291 million for all years of support. As shown in Figure 3, the number of SPORE applications reviewed by the RPRB decreased in FY2004 as the SPORE program reached its target number of awards, and the NCI has implemented a new policy of receiving applications for an organ site only when there will be competing renewals. Therefore, no applications were submitted for the February 1, 2004, receipt date for the September 2004 NCAB meeting. The SRAs who organize the SPORE reviews routinely conduct orientation conference calls with all of the reviewers before the applications are sent to the reviewers to explain the special features of the SPORE program and the special review criteria for SPORE applications. Two RPRB SRAs also were key participants, with SPORE program staff in the NCI Organ Systems Branch, in planning and facilitating the annual SPORE Investigators Workshop.

During FY2004, the RPRB also continued to conduct the reviews for unsolicited R13 applications to support a wide variety of scientific conferences. The Chief of the RPRB organized the review of 107 applications by the NCI R13 Review Committee, which is composed entirely of NCI extramural staff. This committee uses an innovative "virtual review" format to accomplish an accelerated review of the conference grant applications, so that conference organizers can plan more effectively.

In FY2004, the DEA was very active in the design and implementation of the Peer Review Module of the central NIH extramural database, called IMPAC II, and an RPRB SRA served on the task force to upgrade a new Internet-assisted review module that is part of the NIH Commons. This module allows reviewers to log in through the NIH eRA Commons and post their preliminary critiques and preliminary scores on a secure Web site prior to the review meeting. This system allows reviewers to preview the other critiques for their assigned applications and helps to focus the discussions during the review meeting more effectively. In addition, an RPRB support staff member served on the trans-NIH User Group for the Committee Management (CM) Module in the new NIH IMPAC II database system, and on the working group designing a Web-based upgrade to the CM Module. The CM Module is a critical element in preparing for and reporting on peer reviews, and the User Group has identified resolutions for problems and suggested several enhancements to the system.

Finally, RPRB staff contributed substantively to both NIH-wide and NCI DEA management studies and initiatives. During FY2004, the NIH initiated its first two large competitive-sourcing studies, as required under OMB Circular A76: extramural support and facilities management. Early in FY2004, the NIH announced that the NIH Most Efficient Organization (MEO) proposal had won the competition for extramural support, and that a new NIH Office of the Director (OD), Division of Extramural Activities Support (DEAS), would be established to provide support for all NIH program, review, and grants management functions. During FY2004, the Chief of the RPRB chaired the NIH Review Best Practices Committee that developed Standard Operating Procedures (SOPs) to implement each task in the review business area for the DEAS and all NIH review units. The RPRB Program Specialist Instructor also compiled workload and effort distribution data for an ORRPC workload study that provided justification for DEAS staffing requests by ORRPC.

## Resources and Training Review Branch

The RTRB, which administers five NCI IRG subcommittees (A, F, G, H, and I), has the responsibility for review of applications for multidisciplinary cancer centers, cooperative clinical trials, institutional training and education, and career development awards. Staff members from this branch also participate in the reviews of other funding mechanisms within the DEA.

The reviews conducted by the subcommittees within RTRB are of two types. First, for the complex, multidisciplinary applications, such as cancer center support grants (P30s) and multi-institutional clinical trial cooperative group statistical center cooperative agreements (U10s), the review format generally involves a two-step initial review. The first step of the review has involved a site visit to the applicant institution. Each group of experts serves as a fact-finding body to clarify any issues or information related to the application through discussion with the applicants. This first committee prepares a draft report that is presented, together with the full application, for discussion, evaluation, and final scoring by the appropriate parent subcommittee: NCI IRG Subcommittee A for cancer centers and Subcommittee H for clinical trials. Second, the U10 applications for support of the operational

aspects of the clinical trial cooperative groups are reviewed by applicant interview at the parent subcommittee meeting, which eliminates a separate trip for reviewers and, thus, reduces the reviewer burden. Scoring by a parent subcommittee provides for a more uniform evaluation of applications than scoring by individual review teams.

Shortly after his appointment as NCI Director, Dr. von Eschenbach established a P30/P50 Working Group composed of leaders of the cancer research community to study the P30 Cancer Center Support Grant (CCSG) and the P50 SPORE award to determine how to continue supporting these important methods for funding translational research in a more restricted budget environment. A final report was presented to the NCAB in February 2003. RTRB staff members who were involved in the review of P30 applications provided considerable input in the preparation of new Guidelines, especially in those areas affecting application preparation and peer review. In addition, the SRA for Subcommittee A participated in discussions at the Cancer Center Directors' Retreat, the BSA, and the NCAB on the new Guidelines, which were completed and approved in September 2004. The first applications to be reviewed using these new Guidelines were received in February 2005. RTRB review staff have instituted some modifications to the review process to reduce the burden on peer reviewers, including poster sessions for shared resource presentations, uniform time limit for individual program presentations, selection by staff of protocals for review, and simplified review of core budgets. SRAs involved in CCSG review will continue to interact with staff of the Cancer Centers Branch on the implementation of these new Guidelines and on the format to be used in future Summary Statements. During FY2004, Subcommittee A reviewed 14 CCSG applications.

There was a large increase in the numbers of institutional training grant and individual career development applications reviewed by RTRB in FY2004 (see Figure 4). Between 1999 and 2003, the number of career development applications reviewed in DEA increased by 47 percent (280 to 411); in 2004 the number reviewed was 525, an increase of 28 percent for just that year. Similarly, the number of institutional training grant applications, which had increased from 136 to 167 between 1999 and 2003 (20 percent), grew to 198 in 2004, an increase of 18.5 percent in 1 year. This large increase is due, in part, to the increased number of mechanisms available and to the increased information disseminated about them. The reduced success rates for these applicants also have increased the numbers of amended applications seen in each round of review. Last year, to address the increase in the numbers of basic science-oriented applications, a second committee was formed to share the review responsibilities in that area. The increase in the numbers of applications proposing research in the population and clinical areas also has increased, creating a severe review load for members of the subcommittee. This was ameliorated somewhat by having the R25 T&E education applications reviewed in SEPs. After discussions with the leadership and staff of the Cancer Training Branch, it was agreed to create a new subcommittee to share the review responsibilities in these disciplines. One subcommittee will review the K07 and K23 applications and those K22 applications with clinical or prevention emphases, and the other subcommittee will review the R25, K05, and K24 applications and the once-yearly submission of K12 applications. This distribution will be monitored over the first year to assure an equitable division of review load across the subcommittees. Because both subcommittees will have expertise in clinical and population research areas, there should be no need to create SEPs to assure fair reviews of applications that are in conflict with members on one of the subcommittees.

The SRA for Subcommittee H (Clinical Cooperative Groups) continues to work closely with the staff of the Clinical Investigations Branch of the NCI Clinical Trials Evaluation Program (CTEP) to update the Clinical Trials Cooperative Group Program Guidelines. This work is in the final stages, and the SRA has started work on the development of a Clinical Cooperative Groups Grant Appli-

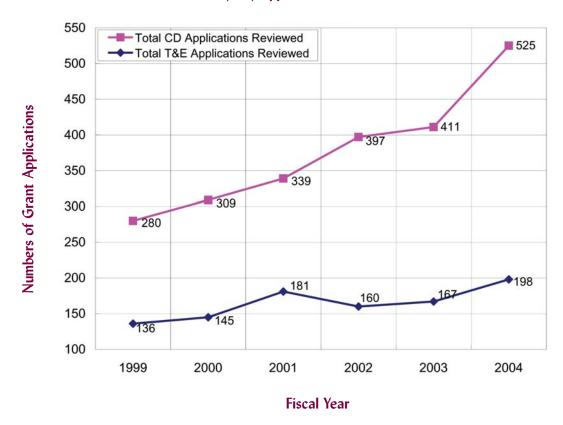


Figure 4. Numbers of Career Development (CD) and Training and Education (T&E) Applications Reviewed, FY1999–2004\*

cation Review Guide. To reduce the reviewer burden, the SRA has piloted a new review format for the Clinical Cooperative Groups, with great success, in which some of the site visits have been replaced by applicant interviews at the parent subcommittee meeting. The new review format has gained approval of all of the Cooperative Group Chairs and CTEP staff and is now considered to be the standard operating procedure. The new format has been written into the new Clinical Trials Cooperative Group Program Guidelines. During this year, three competitive Clinical Cooperative Groups were reviewed. The subcommittee also evaluated a large R01 grant application for Patterns of Care. The SRA for Subcommittee H has been actively involved in a cross-branch initiative started in the Special Review and Logistics Branch (SRLB) to assess workflow and efficiency between SRAs and DEAS staff. In this capacity, she has assisted in the Loan Repayment Program (LRP) review and in other review-related activities. She also has assisted the Research Programs Review Branch (RPRB) in review activities during this time period.

To assist reviewers in preparing for their participation in peer review, Reviewer Guides are being prepared for all of the application types reviewed by the RTRB. This will be especially helpful for the subcommittees that evaluate training and career development grant applications, because each subcommittee and most reviewers review several types of applications. The Reviewer Guides will contain general information on peer review and NIH rules on use of human subjects, as well as specific instructions for each of the mechanisms to be reviewed by that subcommittee. These mechanisms specific guides have been completed for all education, training, and career development types of

<sup>\*</sup> CD mechanisms: K01, K05, K07, K08, K22, K23, K24, K25. T&E mechanisms: R25, T32, K12. Withdrawn applications are not included.

applications that are reviewed in the RTRB, and Guides will be completed shortly for the cancer center and clinical group applications that are evaluated by Subcommittees A and H.

## Special Review and Logistics Branch

The SRLB has a prominent role in the outcome of NCI initiatives tied to the Bypass Budget indicated on page 11, because it organizes and manages peer review primarily for grant applications submitted in response to specific NCI RFAs, most special PARs, as well as for contract proposals submitted in response to specific Requests for Proposals (RFPs); most of these reviews are conducted by SEPs. At the January, May, and October 2004 NCAB meetings, 16, 10, and 14 SRLB-reviewed initiatives directly related to the Bypass Budget were recommended for funding.

Following approval by the NCI Executive Committee and BSA, program staff, assisted by the Program Coordination and Referral Branch, generate the initiatives that are published in the *NIH Guide for Grants and Contracts*.\* In an RFA, a specific, published dollar amount is set aside by the Institute, whereas for an Institute PAR (Institute Reviewed Program Announcement), there is no dollar set-aside and no requirement for BSA review. **Tables 7a through 11** summarize the NCI RFAs, PAs, and PARs published in the *NIH Guide* and the RFAs, PAs, and PARs reviewed by DEA in FY2004. The SRLB reviewed the RFAs identified in **Table 10**. **Table 11** represents those applications submitted in response to PAs or PARs, the review of which is shared by SRLB, RPRB, and RTRB. In **Tables 10 and 11**, the title of the initiative is tied to one of the specific emphasis areas identified on page 11. Contract proposals that were submitted in response to RFPs and reviewed by SRLB during FY2004 are shown in **Table 16**.

#### Breadth of Peer Review

A general theme that has been applied to all recent NCI initiatives—PAs, PARs, RFAs, and RFPs—is that the widest possible net should be cast in the search for quality science. NCI IRG subcommittees increasingly serve as the locus for peer review of applications assigned to the NCI. In the past, most PAs for single-project research grant mechanisms (R01, R03, R21) were directed to the CSR for evaluation. Over the last several years, however, increasingly specialized requirements of NCI initiatives have led to the need for specific kinds of expertise not routinely found in depth on the standing CSR study sections. This has led to the issuance of more PARs, for which ad hoc peer-review groups (SEPs) with discipline-appropriate expertise are specifically recruited. Considerable effort is required to recruit a wide range of individuals with the expertise to cover all aspects of an initiative.

The NCI developed a new grant mechanism, the R21/R33 phased application awards for the support of innovative exploratory/developmental studies, which can rapidly move to proof-of-principle research studies if the stated milestones are met. This grant mechanism is well suited for technology development, and the number of program announcement grant submissions for these initiatives has greatly expanded in the past 6 years. In FY2004, 352 R21/R33 grant applications were reviewed under five Program Announcements (PAs), which was a growth rate of 700 percent as compared to FY1999, when the grant mechanism was first started. In addition, SBIR/STTR PAs in these same research areas saw an increase in the number of grant applications from 96 to 410, which was a growth rate of 327 percent between FY1999 and FY2004 (see **Figure 5**).

<sup>\*</sup> Because of the importance of allowing adequate time for the applicant community to respond to NCI's initiatives, it is to be expected that some initiatives may be funded (or reviewed by the NCAB) in subsequent fiscal years.

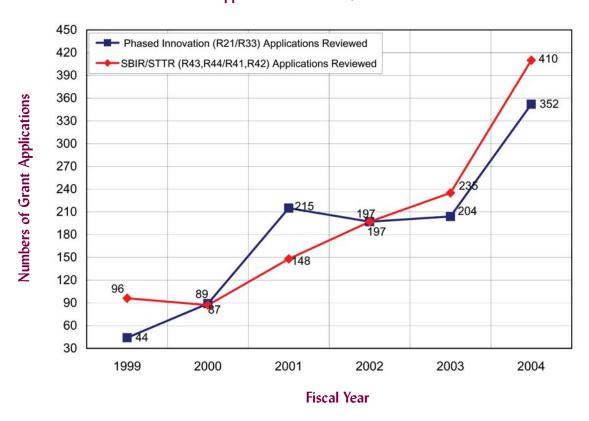


Figure 5. Technology Initiatives (Phased Innovation and SBIR/STTR)
Applications Reviewed, FY1999–2004\*

PAs relating to the development of technologies to improve in vivo imaging have continuted to generate a large response. Two PAs, PAR03-124 and 03-125, solicit applications using the phased/innovation grant mechanisms (R21/R33 for 03-124) and SBIR/STTR grant mechanisms (R41, R42, R43, R44 for 03-125)].† In FY2003, there were 37 exploratory (R21/R33) grant applications and 42 small business (R41, R42, R43, R44) grant applications reviewed. In FY2004, in which there were two receipt dates, the R21/R33 applications increased to 138, and the R41, R42, R43, and R44 applications increased to 115; a 273 percent and 174 percent increase, respectively.

Several recurring initiatives continue to attract large numbers of applicants. One group of program announcements (the small grants programs in prevention, epidemiology, and behavioral research in cancer control [PAR 02-176, PAR 03-010, and PAR 04-020]) continues to stimulate a great deal of interest on the part of the applicant community. In FY2003, those three announcements attracted 166 applications (*Division of Extramural Activities Annual Report 2003*). In FY2004, those same initiatives attracted 315 applications, an increase of 93 percent. The first-year funding request for the FY2003 application cohort was approximately \$12.4 million; for FY2004, the first-year funding request was approximately \$23 million (see **Table 11**).

Another highlight of SRLB reviews for FY2004 includes the Loan Repayment Program (LRP). The LRP is a Congressionally mandated program funded through the contract mechanism that is intended

<sup>\*</sup> Withdrawn applications are not included. Does not include applications reviewed and later assigned to other ICs.

<sup>†</sup> Note: The R42 mechanism was not used in FY2003.

to forgive outstanding loan balances for clinician scientists who intend to pursue careers in general clinical or pediatric research. Contract proposals are submitted electronically to the NIH Loan Repayment Office, which then refers the proposals to the individual Institutes. This initiative is unique in that all of the proposals are submitted electronically and are classified as contracts. Instead of conducting a face-to-face meeting to review these proposals, SRLB staff conducted a virtual meeting in which assigned reviewers submitted their evaluations and scores electronically. A total of 252 potential reviewers were contacted, and 124 actually served. Of the 334 proposals reviewed, 139 clinical and 37 pediatric proposals were funded by the Institute.

In addition to the LRP described above, the SRLB reviewed contract proposals in response to 23 RFPs. Fourteen of those 23 RFPs were part of the Omnibus Solicitation for Small Business Innovation Research (SBIR) (**Table 16**). During review, several elements of each proposal are individually evaluated and scored, with the combined score indicating the overall merit. After negotiations, contract awards result from the RFP solicitation. To facilitate the contract review process, the SRLB has been working with the staff of the Applied Information Systems Branch to develop a series of Web-based documents to be used for contract peer review.

#### Team Work and Communication

The SRLB has continued to emphasize the importance of team work and communication in the management of its review activities. First, branch staff participate in pre-application meetings that are organized by the NCI program staff. During the pre-application meeting, review staff answer questions relating to the review process.

Prior to the receipt of applications, program staff are brought into the review planning process to ensure that all relevant issues are discussed. After the review committee is empaneled, review and program staff conduct a pre-review orientation conference call so that all reviewers understand the intent of the initiative and any special criteria that are relevant. The latter process has been exceptionally valuable in helping to provide a consistency of approach on the part of the review panel members.

Second, SRLB staff continue to work with the staff of the other review branches in the DEA to complete the initiative reviews required by the Institute. In FY2004, the SRLB supported the review of the Integrative Cancer Biology Programs RFA (CA04-013). This initiative stimulated the submission of 15 P20 applications (planning grants) and 30 P50 applications (SPOREs), with a first-year requested total of more than \$98 million. Because of the magnitude of the response, two SRAs were required to perform the review. In this case, the lead SRA was in the RPRB, with support provided by the SRLB.

Finally, to prepare for the impact of the reduction of peer review support staff due to A-76 (A-76 refers to an Office of Management and Budget (OMB) circular that describes the procedures for the competition of jobs that are not deemed to be inherently governmental), the SRLB initiated an approach in December 2003 to systematically monitor work requirements and performance on a weekly basis. This process involved the establishment of two working teams because of the geographic separation of the branch staff. The two teams began meeting every week to discuss the work requirements for that week. In addition, the teams began to discuss approaches that might be used to facilitate the work that is done. This was a very successful activity that continues now that the support staff are technically no longer part of the NCI but report to a supervisor in the OD, NIH.

#### Trans-NCI/NIH Initiatives

In FY2004, the SRLB was involved with two major trans-NIH Initiatives: the NIH Director's Road-map Initiative and the Bioshield Initiative of the Department of Homeland Security. In the former case, the SRLB was given the responsibility of supplying the resources to review the initiative entitled Meetings and Networks for Methodological Development in Interdisciplinary Research (RM04-014). Forty-one applications were submitted, and the results of their review were presented at the NCAB meeting in September 2004.

In addition, the NCI participated in the planning of a major biodefense initiative, RFA-A1-04-45, for the establishment of Centers for Medical Countermeasures Against Radiation (CMCR). Because of the historical relationship between the NCI and the study of radiation effects, NCI's assistance (both program and review) was solicited by the National Institute of Allergy and Infectious Diseases, which is the lead NIH Institute for support of bioterrorism-related research. In the summer and fall of 2004, SRLB staff discussed the review approach to be used for these centers (the total cost maximum for one application for 1 year is \$5 million). Two SRAs have been assigned the full-time task of managing the review of these applications. These applications were received on February 22, 2005, and the results of the review will be reported to the NCAB in September 2005.

### **Other Extramural Review Activities**

The NIH selected the extramural support services to compete through the OMB Circular A76 cost comparison process in 2003. This process involves identifying functions that would be considered commercial and undergoing a process in which the government structures a most efficient organization (MEO) of the in-house workforce and then compares it with any qualified commercial providers through a contract bid process. The NIH MEO proposal was successful and was implemented in 2004. This has impacted all of the extramural activities with the centralization of support for the functions of grants management, peer review, and scientific program management. Support staff within the review and referral branches are now located within the NIH Division of Extramural Activities Support (DEAS). Important features of the new DEAS organization include a 30 percent reduction in staff, reduction in grades of staff, electronic entry and tracking of all assignments, and centralization of some tasks such as travel. These changes in work processes have involved a major commitment of DEA staff time and effort to assist in the process.

DEA staff played leadership roles in many of the committees and working groups needed during the A76 competition and implementation of the MEO. DEA staff served on the NIH MEO Implementation Committee and chaired the MEO Best Practices Review Subcommittee as well as the A76 Performance Work Statement Working Group and the MEO Working Group. The Office of Referral, Review, and Program Coordination (ORRPC) has served as the coordination point for interactions with the new DEAS organization. The Associate Director of ORRPC represents DEA on the NCI MEO Steering Committee and NCI on the NIH Extramural Activities Support Advisory Committee. Staff participated in Change Agent Workshops and organized an ORRPC retreat with DEAS management prior to the implementation of the new organization. These activities contributed to providing a smoother transition to the new organization. Other ongoing activities include regular team meetings between DEAS support staff and the DEA staff to assist in distributing and tracking workload (see SRLB on page 18).

## **Grant Funding Trends**

In **Table 12**, a comparison is made of the average cost and number of NCI R01, P01, R03, R13, R21, P30, P50, U01, U10, and U19 grants awarded in FY2002 through FY2004 according to the extramural division. **Table 13** presents a summary for FY2004 of total funding of NCI grant awards by mechanism. Trends in grant funding according to scientific discipline and organ site are described on page 31 and in **Tables 14 and 15**. Some grant awards made during a fiscal year may have been for grant applications reviewed in a prior fiscal year.

# **Supporting Peer-Review Consultants**

Ensuring that highly qualified individuals are available for expert review of grant applications and contract proposals requires an efficient administrative support system. The DEA's **Scientific Review and Evaluation Award** (SREA) unit, residing within the NCI Committee Management Office (CMO), supports the NCI peer-review process by compensating consultants for their services on the NCI IRG subcommittees or SEPs and by reimbursing them for their travel and other expenses (see **Appendixes C and D**). The SREA staff also approves and processes payments for other activities related to review, including contract-supported ticketing services. During FY2004, 4,451 consultant reimbursement vouchers and 590 nonconsultant vouchers for travel ticketing, meeting room rental, and teleconferences were authorized, and a total of 5,041 checks were processed to reimburse consultants and pay for meeting rooms and other expenses.

During FY2004, the SREA staff continued to work with a contractor to further develop the program that allowed retrieval of Financial Operating Plan (FOP) data from IMPAC II (an NIH-wide committee management database), established the new checkwriting process for the NCI, and streamlined the reconciliation process. IMPAC II is utilized for the generation of all consultant and nonconsultant voucher reimbursements, FOPs, and Internal Revenue Service Form 1099 reports. The SREA staff is working with World Travel Services to establish an interface that will allow World Travel to enter costs automatically into the IMPAC II database. This will not only provide a faster input of costs but also reduce chances for error. The SREA staff also worked with the SRAs to combine P01 reviews and reduce reimbursement costs.

The SREA Coordinator continued to serve on the NIH SREA Coordinating Committee. This group held bimonthly meetings to discuss SREA procedures and streamline processes. This committee also performed an SREA High Risk Assessment identifying several areas in need of tighter control and reached an overall agreement that an NIH office for oversight should be established.

In addition, the SREA staff advises consultants, NCI staff, and the SREA trustee on policies and procedures; performs the administrative tasks related to setting up, managing, monitoring, and closing out accounts; and prepares expenditure reports, including those required by the NIH Office of Financial Management for 1099 tax forms and those requested by the CMO for the NCI FOP, consultant services, and financial management reports for the IRG, SEP, and SREA.

The SREA administrative function is critical to the success of the peer-review system because any error, inconvenience, or delay in reimbursement that reviewers experience is likely to discourage their future service. Excellent customer service remains a constant goal of the NCI SREA staff.

# NCI Advisory Boards



**NCAB** Members



New NCAB Members



**BSA Members** 

Continued on page 28.

# **DEA's Role in Advisory Activities**

Beyond its central role in coordinating the peer review and referral of grants, perhaps the most farreaching role the DEA plays across the NCI is the coordination and administration of NCI's eight
chartered Federal advisory committees (see **Appendix C**). The activities and membership of these
advisory bodies are coordinated by the **Office of the Director**, DEA, and the **Committee Management Office**, DEA. A primary responsibility of the DEA is coordination of the activities of the
NCAB, whose members are appointed by the President and whose responsibilities include conducting the second-level review of grants and cooperative agreements, as well as advising the NCI
Director on policy for the conduct of the National Cancer Program. The DEA also coordinates
administration of the BSA, the body responsible for the oversight and concept review of the extramural programs and initiatives of the NCI. As such, the DEA plays a major role in the development
and issuance of PAs, PARs, and RFAs, the major extramural program initiatives used by the NCI.
The DEA Director serves as Executive Secretary to the NCAB, and the Deputy Director, DEA,
serves as Executive Secretary to the BSA. (See **Appendixes A and B** for highlights of the activities
of these Boards in FY2004.)

Each year, the NCI relies on thousands of individuals with special expertise to advise and support staff in its mission to win the war against cancer. These individuals provide advice and guidance to NCI staff on countless research projects, scientific concepts, and programmatic and administrative issues relating to its research initiatives and priorities. During FY2004, more than 2,400 consultants were asked to serve as standing, temporary, and ad hoc members on NCI's chartered advisory committees, panels, site visits, and work groups. Under the various chartered committees, working groups were formed to address several important areas of cancer research related to diverse populations, and cancer advocacy, treatment, prevention, communication, and education. (See **Appendix C** for a list of chartered committee members and **Appendix D** for a list of consultants.)

## Major NCI Advisory Bodies Administered by the DEA

National Cancer Advisory Board. NCI's principal advisory body is the Presidentially appointed NCAB. The Board advises the Department of Health and Human Services (DHHS) Secretary and the NCI Director on issues related to the entire National Cancer Program and provides a second level of review for grant applications referred to the NCI.

**Board of Scientific Advisors.** The BSA represents the scientific community's voice in NCI-supported extramural science. The Board, composed of distinguished scientists from outside the NCI and representatives from the advocacy community, advises the NCI leadership on the progress and future direction of the Institute's Extramural Research Program. The Board evaluates NCI extramural programs and policies and reviews ideas for new research opportunities and solicitations, to ensure that a concept is meritorious and consistent with the Institute's mission.

The BSA believes it is important to interact with and receive feedback from the clinical, population science, and laboratory research communities that are affected by NCI policies. To this end, the NCI has established BSA-sponsored "NCI Listens" sessions at national association meetings (see **Appendix B**). BSA members and NCI staff invite conference participants to join them for these sessions. A brief presentation is given by NCI staff emphasizing the status of grant funding, the Bypass Budget, and the status of several new initiatives. The brief presentation is followed by an open question-and-answer period. The NCI is committed to providing a written response to the scientific society hosting

the meeting concerning issues raised during the session. The BSA hopes that conference participants will take advantage of this opportunity to raise their concerns.

**Board of Scientific Counselors.** The BSC, managed through the Office of the Director (OD), NCI, advises the Institute leadership on the progress and future direction of NCI's Intramural Research Program residing in the Center for Cancer Research (CCR) and the Division of Cancer Epidemiology and Genetics (DCEG). This group of scientific experts from outside the NCI evaluates the performance and productivity of NCI staff scientists through periodic site visits to intramural laboratories and provides evaluation and advice on the course of research for each Laboratory and Branch.

**President's Cancer Panel**. The PCP consists of three members appointed by the President, who by virtue of their training, experience, and background are exceptionally qualified to appraise the National Cancer Program. At least two members of the Panel are distinguished scientists or physicians, and the third member is a nationally recognized cancer advocate.

The Panel monitors the development and execution of the activities of the National Cancer Program, and reports directly to the President. Any delays or hindrances in the rapid execution of the Program are immediately brought to the attention of the President.

Advisory Committee to the Director, NCI. The ACD advises and makes recommendations to the Director, NCI, for the oversight and integration of various planning and advisory groups serving the broad programmatic and institutional objectives of the Institute. The Committee serves as the official channel through which the findings and recommendations emerging from these groups are submitted to the NCI. The Committee may consider the reports of the various review groups as informational, advisory, or as recommendations, and provides the NCI with assistance in identifying opportunities to be pursued within the areas of cancer research that cut across the intramural and extramural programs.

The Committee consists of the Director, NCI; Chair, NCAB; Chair, PCP; Co-Chairs of the BSC; Chair, BSA; Chair of the NCI DCLG and three nonvoting ex officio members: the Deputy Director, NCI; the Deputy Director for Extramural Science, NCI; and the Director, Division of Extramural Activities, NCI.

Director's Consumer Liaison Group. The DCLG advises and makes recommendations to the Director, NCI, from the perspective and viewpoint of cancer consumer advocates on a wide variety of issues, programs, and research priorities. The Committee serves as a channel for consumer advocates to voice their views and concerns. The Committee may assemble ad hoc working groups; convene conferences, workshops, or other activities; and seek advice from special consultants. The members are consumer advocates who are involved in cancer advocacy and experience, representing a constituency they communicate with on a regular basis.

**NCI Initial Review Group.** The IRG, composed of eight subcommittees, reviews grant and cooperative agreement applications for centers, research projects, and research training activities in the areas of cancer cause, diagnosis, treatment, and prevention, as well as contract proposals relating to all facets of cancer. Members may be appointed as standing committee members with overlapping terms of up to 4 years, or as "temporary" members with all the rights and obligations of committee membership, including the right to vote on recommendations in which the individual fully participated as a

reviewer for a specific meeting. Consultants also may be invited to serve as special experts or ad hoc members, to provide information or advice. These individuals generally serve in site visit groups, providing critical information to the chartered advisory subcommittees responsible for initial peer review.

NCI Special Emphasis Panels. The SEPs advise the Director, NCI, and the Director, DEA, regarding research grant and cooperative agreement applications, contract proposals and concept review relating to basic and clinical sciences, and applied research and development programs of special relevance to the NCI. Membership of an SEP is fluid, with individuals designated to serve for individual meetings rather than for fixed terms. These individuals have all of the rights and obligations of committee membership, including the right to vote on recommendations.

**Program Review Groups.** As part of an ongoing process of review and revitalization, the NCI instituted a series of external reviews to guide it in strengthening major research support programs. Program Review Groups, coordinated by the DEA as an activity of the BSA, examine the NCI extramural programs and their infrastructures to evaluate whether changes are necessary for the Institute to be in a position to effectively guide and administer the needs of the science in the foreseeable future. (See <a href="http://deainfo.nci.nih.gov/advisory/bsa/bsa\_program/bsaprgr.htm">http://deainfo.nci.nih.gov/advisory/bsa/bsa\_program/bsaprgr.htm</a>.)

Progress Review Groups. As part of its overall responsibilities for committee management functions and coordination of advisory groups, the DEA assists other NCI offices with additional types of oversight activities. Progress Review Groups, managed by the Office of Science Planning and Assessment within the OD, NCI, are created to provide their expertise, biomedical research information, and assistance to NCI chartered advisory committees in defining and prioritizing the national research agenda for particular cancers—including breast, prostate, colorectal, brain, pancreatic, leukemia, lymphoma, myeloma, and lung—by: (1) identifying new or unmet scientific opportunities; (2) reviewing an NCI analysis of its current research program; and (3) using the ongoing activities as a baseline, providing expert opinions on how to address the research opportunities and hasten progress against the disease. These groups report to the NCI through a chartered Federal advisory committee. (See http://deainfo.nci.nih.gov/advisory/pog/progress/index.htm.)

# NCI Advisory Boards (Continued)



Retiring NCAB Members



Retiring BSA Members



**Retiring BSC Chairs** 

# Committee Management Activities

The CMO is the DEA administrative unit that coordinates the general administration of NCI's chartered Federal advisory committees. The CMO provides advice related to the provisions of the Federal Advisory Committee Act (FACA) and other Federal, DHHS, and NIH regulations governing the actions of NCI staff who manage advisory committees. It coordinates the activities of advisory committees across the NCI and ensures that NCI staff comply with Federal advisory committee policy. Additionally, the Office of the Director (OD), DEA, and the CMO provide guidance and information to staff and external groups on specific NIH policies related to the operation of working groups and ad hoc consultants operating under the direction of some of NCI's chartered Federal advisory committees. NCI working groups provide scientific expertise through chartered committees to the NCI Director and Division Directors on a range of matters related to the National Cancer Program. The Office works closely with the other DEA offices to coordinate activities with NCI advisory committees; implements policies and procedures designed to avoid conflicts in the nomination and selection of board members; implements policies and procedures to ensure compliance with DHHS and NIH regulations governing the operation of chartered advisory bodies; advises on issues related to conflicts of interest, selection and recruitment of viable committee members, and management of committee records; provides logistical support for NCAB and BSA meetings; and facilitates committee-related travel.

CMO staff continue to actively participate in various NIH-wide Information for Management, Planning, Analysis, and Coordination (IMPAC II) software application user group meetings, such as the CM Users Group (CMUG) and pilots, and provides advice on the redesign of the Committee Management Module. The IMPAC II Module is being redesigned as a Web-based application and will be a more user-friendly and intuitive system. In FY2004, the CMO continued to develop inhouse IMPAC II training information, such as a training guide titled *Coding Meeting Attendees in IMPAC II*. This is a user-friendly booklet that includes screen shots from the CMO Module and step-by-step instructions on how to code the various types of meeting attendees (i.e., mail reviewers, ad hoc reviewers, temporary members, regular members, telephone reviewers). Additionally, the guide is a recommended tool that will be used in the training of DEAS staff and new ESAs, SRAs, and CMOs. The Office of Federal Advisory Committee Policy (OFACP) also recognized the guide as an outstanding tool for all IMPAC II users. As a result, the guide is now accessible on OFACP's Web Site.

Additionally, CMO and SREA staff gave presentations to NCI staff on management of Federal Advisory Committees and the Scientific Review and Evaluation Award and participated in the following NCI and NIH committees:

- Working Group I-Government Accountability Office's (GAO) Promising Practices Suggestions—The group reviewed the National Academies' Background Information and Confidential Conflict of Interest Disclosure information.
- SREA High Risk Assessment Working Group—This group was established at the conclusion of the NIH SREA Audits. Several areas were rated, from checkwriting to internal controls.
- CMO Working Group—The group is developing a CM IMPAC II training program for the DEAS staff.

- Plain Language Working Group—The group developed recommendations to explain travel regulations in clear, concise, plain language.
- OMB/GSA Regulations Working Group—The group developed analyses of OMB/General Services Administration (GSA) recommendations regarding a pre-appointment/screening process for potential nominees to achieve better balance on committees.
- Ethics Working Group—The group discussed uniform processes for screening Office of Government Ethics (OGE)-450 conflict of interest forms and updates for committee members.
- Travel Policy Focus Group—The group evaluated the process of preparing travel orders and vouchers.

As a Committee Management Service Center, the CMO continues to provide exceptional committee management service to the Office of Biotechnology Activities (NIH Office of the Director) for the Secretary's Advisory Committee on Genetics, Health, and Society. This committee reports to the DHHS Secretary.

In concert with the automation of the NIH-wide committee management functions, the CMO continued to work closely with other DEA staff to streamline general committee management and review procedures related to member travel, vouchering, mail review, and teleconference reimbursements. The same procedures were used to facilitate more effective management of all other NCI chartered advisory committees.

The NCAB Ad Hoc Subcommittee on Biomedical Technology established several Focus Groups and Working Groups in FY2004. The CMO coordinated the logistics and travel arrangements for these out-of-state meetings and worked with the NCI contractor and world-renowned scientists to ensure that all meetings were run successfully. Additionally, the CMO facilitated the logistical support for the first NCI Director's Joint Board Retreat.

In addition, the DEA CMO continued to conduct briefings with the NCI Divisions, the NCI Offices of Liaison Activities, and NCI management on the use of working groups associated with chartered committees. The CMO was actively involved in the guidance and support of various NCI working groups and NIH employee working groups related to the IMPAC II Module, the Data Quality and Control Initiative, the OFACP Service Center Committee, and the SREA Coordinating Committee.

# Portfolio Tracking and Analysis

The DEA's Research Analysis and Evaluation Branch (RAEB) is the officially designated contact for scientific information on NCI-supported research. The NCI needs consistent budget-linked scientific information across all of its scientific programs to analyze the Institute's portfolio, make budget projections, and disseminate information about cancer. The DEA conducts analyses to project future NCI research expenditures and to provide budget justifications to Congress. The work of the RAEB allows the DEA to respond immediately to requests for information from NCI staff, the broader NIH community, and requesters nationally and worldwide.

These capabilities are based on a sophisticated system of indexing, in which research documentation staff analyze grant applications to classify each project for its degree of relevance to Special Interest Category (SIC) and Organ Site Codes (SITE). SIC Codes are meant to describe in a consistent way the major scientific disciplines that are of stated or growing interest to the NIH, DHHS, Congress, and the public. SIC Codes are added throughout the year to retain currency with these interests. In FY2004, RAEB added new SIC Codes for Nanotechnology and Energy Balance. Beginning in FY2004, the Branch assumed responsibility for indexing all Training projects. In FY2004, RAEB indexers profiled more than 4,000 unfunded applications. The process of indexing unfunded applications, begun in FY1999, has greatly expanded the potential for analysis of the categories found in these applications. RAEB research documentation staff profiled more than 4,000 funded grants and contracts in FY2004. A critical characteristic of these data is comparability from one fiscal year to the next. Changes in funding between FY2003 and FY2004 for selected SIC Codes and organ sites are presented in **Tables 14 and 15.** 

### Highlights of FY2004 include:

- RAEB assumed responsibility for indexing all NCI Training Grants.
- RAEB completed the first full year of indexing AIDS Basic Science Research, Risk Assessment and Prevention and Clinical Health Services Research and Delivery codes (Mason Codes), Special Interest Categories, and Strategic Planning Codes.
- RAEB indexers profiled more than 8,000 funded and unfunded applications.
- RAEB added new Special Interest Categories for Energy Balance and Nanotechnology.
- RAEB responded to inquiries related to Government Performance and Results Act (GPRA) goals by researching NCI support for Tissue Banking and Nanotechnology.
- RAEB responded to a Congressional committee inquiry about NCI's funding commitment to Human Papillomavirus (HPV), cervical cancer, and vaccine development for the past 7 fiscal years (FY96–FY03).
- RAEB fulfilled a request from the Office of Management and Budget (OMB) for NCI's Basic Behavioral Research portfolio, using the definitions of "basic" and "behavioral" provided by the OMB.

- RAEB responded to a Congressional inquiry into NCI's efforts to fulfill "Johanna's Law," HR 3438, by determining the number of grants with a research interest in gynecological cancer education and outreach.
- RAEB created the FY2004 portfolio for the NCI Biomedical Information Science and Technology Initiative.

## **Information Resources Management**

The **Applied Information Systems Branch** (AISB) provides integrated computer support, applications, and information systems development to the DEA. The AISB monitors the DEA Web Site, supports the Division's Intranet server, designs and maintains Division-specific software applications, provides oversight of hardware and connectivity, and serves as liaison with the Center for Information Technology (CIT) and NCI central units. Its mission is critical to the future of the Division in communicating both internally and externally current information technology activities and new developments with all components of the NCI, NIH, and reviewer and applicant communities.

All of the Division's Information Technology and Information Systems contracts are consolidated under the AISB. The AISB has a computer support team to track staff requests, manage the Division's computer equipment inventory, and provide computer-related training, as needed. Specific projects utilizing the technologies and services provided by the AISB are described under the appropriate functions of the DEA throughout this report. For FY2004, the following specific accomplishments are highlighted:

- Implemented a SREA (Scientific Review and Evaluation Awards) checkwriting system for use by NCI Committee Management staff.
- Implemented the DEA Calendar System via the NIH Portal. This Web facility enables DEA and NCI staff to track RFA/PA receipt dates, review meetings, and transmit schedules.
- Developed and implemented the Committee Management List Serv/IMPAC II Synchronization system, which enables NCI Committee Management staff the means to update NCI board members' e-mail addresses in their respective List Serv group with up-to-date IMPAC II database e-mail address data.
- Developed an online Form 901 (Request for Assignment Change).
- Developed the DEA Application and Reporting Center Web page, which is a collection of links to applications and other sites frequently used by DEA staff.
- Performed enhancements, upgrades, and maintenance on the following production systems:
  - RPDU (Mailroom) enhancement to the Standard Docs/RPDU application, which provides the means to assemble lists of grant applications received by the DEA for referral and archiving purposes. The Standard Docs/RPDU application is a Web-based application for DEA review staff to enable the merging of IMPAC II data into MS Word or Corel WordPerfect documents and labels.
  - Enhanced and upgraded the Fiscal-Linked Analysis of Research Emphasis (FLARE) system by adding new features. Completed consolidation and reorganization of approximately 125 reports down to 50 reports generated by the FLARE application.
  - Converted the ESATTS (Extramural Science Administrator Training Tracking System) to a Struts framework, which provides a more efficient processing and programming environ-

ment. ESATTS is a Web-based application that enables NCI extramural staff to enter and store their training data.

- Enhanced and upgraded the Reviewer CDs application by adding support for Appendix CDs, conflict CDs, and splitting meeting data across two CDs. Also, the CD assembler logic was enhanced to allow multithreading and multidestination features. Reviewer CDs is a Web-based application to allow review staff to create customized CDs containing grant applications and other materials for the reviewers.
- Enhanced and upgraded the Formula Coding application that automatically generates scientific indexing and calculates percent relevance for P30 Cancer Center Support (P30), Clinical Trials Cooperative Group Program (COOP), and Community Clinical Oncology Program (CCOP) Center Grants.
- Completed the conversion of DEAIS (DEA Information System) reports and DEA Annual Reports for DEA staff to Java-based Web applications.
- Converted the NCAB (National Cancer Advisory Board) Early Concurrence data download and mail agent to a Java-based application using Java Mail for notification.

AISB staff are involved with many NCI and NIH information systems and information technology groups and organizations, including:

- NCI Office of Information Systems and Computer Services
- NCI Information Systems Advisory Group
- NCI Change Management Group
- NIH Electronic Council Book and Query View Reporting Steering Committee
- IMPAC II Joint Applications Development and Critical Design Review Groups
- eRA Technical Coordinators Group
- NIH Architecture Review Board
- NIH Automatic Data Processing Extramural Program Coordination Committee.

# Organizational Structure of the Division of Extramural Activities Office of the Director

- Directs and administers the operations of the Division, including those activities relating to grant review and administration and contract review, as well as Advisory Committee and Board activities.
- Directly coordinates and manages the NCAB and the BSA.
- Coordinates coding of NCI's grant portfolio.
- Initiates, coordinates, and implements Institute policies and procedures relating to grants and contracts review.
- Coordinates the NCI's Committee Management Office.
- Implements NCI policies regarding extramural research integrity.
- Represents the NCI on extramural policy issues to the NIH.
- Advises the Executive Committee, NCI, on extramural guidelines, review, advisory activities, and implementation strategies.
- Coordinates NCI extramural staff training requirements with the NIH.
- Represents the NCI on the NIH Institute-wide Extramural Program Management Committee (EPMC) with responsibility for development of extramural policy and procedures across all NIH Institutes and Centers.

Paulette Gray, Ph.D. . . . . . . . . Acting Director

Deputy Director and Associate Director,

**Extramural Applications** 

Diane Bronzert . . . . . . . . . . . . Associate Director,

Referral, Review, and Program Coordination

Cedric Long, Ph.D. . . . . . . . . . Assistant Director

Patricia Marek, M.B.A. . . . . . . . Special Assistant to the Acting Director

Bernadette Monacelli . . . . . . Secretary
Wendy Jones . . . . . . Secretary
Lisa Verikios . . . . . Secretary
Joshua Rhoderick . . . . . Receptionist

## Committee Management Office, OD

- Coordinates functionally related advisory activities across the Institute and manages a DHHS committee to ensure that appropriate policies and procedures are in place to conduct its mission and ensure the synthesis, integration, and documentation of these activities.
- Provides committee management services to the Office of Biotechnology Activities, Office of the Director, NIH, and is an established NCI Service Center.
- Provides consultation services to NCI staff on administrative and technical aspects of Federal Advisory Committees; coordinates activities with all other NCI advisory committees; implements policies and procedures designed to avoid conflicts in the nomination, selection, and recruitment of board members; implements CM IMPAC II guidelines and procedures to ensure that all committee-related data are correctly entered into the database for preparation and submission of required annual reports to the President of the United States, DHHS, and NIH; provides logistical support for NCAB and BSA meetings, subcommittees and work groups; and facilitates NCAB and BSA committee-related travel.
- Provides administrative support for the peer-review system by compensating consultants for their services on NCI IRG subcommittees and SEPs; reimburses consultants for travel and other expenses; and approves and processes payments for other activities related to review, such as meeting room rental and teleconferencing.

Claire Harris Committee Management Officer
Andrea Collins Deputy Committee Management Officer
David Alperin Program Analyst
Linda Coleman Committee Management Specialist
Earline Jackson Committee Management Assistant
Hing Lee
April Mellinger* Committee Management Specialist
Kerry Peasland Program Specialist
Lisa Rustin Committee Management Specialist
Linda Southworth <sup>†</sup> Committee Management Specialist

<sup>\*</sup> Left in 2004.

<sup>†</sup> Joined in 2004.

# Office of Referral, Review, and Program Coordination, OD

- Coordinates program concept development; publication functions; and receipt, referral, and assignment of all applications.
- Coordinates activities of the SRLB, RTRB, RPRB, and PCRB.

Diane Bronzert Assoc	iate Director
Catherine Battistone Progr	am Analyst
Alma Carter* Techn	ical Assistant
Angela Collick Progr	am Specialist

<sup>\*</sup> Left in 2004.

## Special Review and Logistics Branch

- Plans, manages, and assists in the scientific merit review of special grant and cooperative agreement applications (RFAs and PAs) and the technical merit review of contract proposals (RFPs).
- Arranges for and participates in onsite assessments of the research capabilities and facilities of selected applicants.
- Identifies and recommends appropriate review committee members and site visitors, as required for the review of assigned applications and proposals.
- Provides the SRA and other support staff for the technical review committees.
- Serves as the information and coordination center for all grant applications and contract proposals pending review by the Branch.
- Provides input and advice on grant and contract review policy and procedures, application and proposal patterns, and research trends and other related information, as required.
- Coordinates secondary-level review activities of the NCAB with staff of other NCI Divisions, other Branches of the Division, the Research Contracts Branch, and the Grants Administration Branch.
- Provides logistical support for primary- and secondary-level review activities in support of other Division and Institute units.

#### **Special Review Unit**

Thomas Vollberg, Ph.D Deputy Chief
Kenneth Bielat, Ph.D Scientific Review Administrator
Allison Cook‡
Jennifer DeGroff§
Juana Diaz
Paul Gallourakus§
Sherwood Githens, Ph.D Scientific Review Administrator
Marianne Johnson*
C. Michael Kerwin, Ph.D., M.P.H Scientific Review Administrator
Sarah King-Mitchell§ Contracts Technical Assistant
Laura Larson*
Allonda Lord§
Gerald Lovinger, Ph.D Scientific Review Administrator
Timothy Meeker, M.D Scientific Review Administrator

<sup>\*</sup> Left in 2004.

<sup>‡</sup> Contractor left in 2004.

<sup>§</sup> Transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

#### Review Processing and Distribution Unit

Adrian Bishop ...... Mail and File Clerk

Greg Jones\*\* ..... Mail and File Clerk

Robert Kruth ..... Mail and File Clerk

Clara Murphy .... Program Assistant

Maurice Murrell‡ .... Mail and File Clerk

<sup>‡</sup> Contractor left in 2004.

<sup>§</sup> Transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

<sup>\*\*</sup> Contractor transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

## Program Coordination and Referral Branch

- Serves as the information and coordinating point within the NCI for the development, clearance, publication, and tracking of all NCI extramural program initiatives, which includes all RFAs, PAs, and Notices submitted for publication in the *NIH Guide for Grants and Contracts*.
- Coordinates the shared interests of all trans-NCI program initiatives through the CSR and other NIH Institutes and Centers.
- Coordinates the clearance of all NCI grant mechanism guidelines and policies through the NIH
  Office of Extramural Research.
- Serves as the NCI contact point for approval of the use of cooperative agreement mechanisms and for conversion of grants to cooperative agreements.
- Serves as liaison to the CSR, NIH, to ensure appropriate referral of applications to the Institute and their distribution and assignment to appropriate program units within the NCI.
- Coordinates development of referral guidelines within the NCI for internal and external use.
- Coordinates the development of shared (referral) interest statements with other NIH Institutes
  and Centers (ICs) so that grant applications of possible or real mutual interest can be properly
  assigned for receipt, review, and/or funding.
- Refers new (Type 1) applications to the appropriate cancer activity area(s) according to the NCI Internal Referral Guidelines that define the program interests of each of the 45 cancer activity areas (which typically represent program branches in the NCI extramural divisions).
- Semi-automatically refers amended and competing continuation (Type 2) applications to the cancer activity area that accepted the previously submitted application (with quality control measures performed to ensure the accuracy of referrals).
- Coordinates requests from program staff for application status changes and for acceptance of grant assignments.
- Works with NCI program and review staff and with NIH referral liaisons to address unresolved review and referral issues with the CSR and other Institutes and Centers.
- Receives and distributes advance copies of applications for Program Project grants, applications
  for conference grants, and applications submitted in response to RFAs and PAs, and coordinates
  this information with review and program staff.
- Receives Letters of Intent from principal investigators intending to submit large budget grants (including, but not limited to, program projects and cooperative agreements for clinical trials) and from prospective R13 (conference grant) applicants. Maintains database records of prospective large budget grant and conference grant applications for each council round.
- Processes Awaiting Receipt of Application (ARA) request forms through the NCI Online Workplace (NOW) system to the CSR so that applications with large (greater than \$500,000 first-year direct costs) budgets and applications of high-priority programmatic interest can be assigned to the NCI for consideration.

- Serves as the primary NCI information referral point for the extramural scientific community on a broad range of subjects, including grant guidelines, application information, new initiatives announced as RFAs or PAs, and the review process.
- Assists the extramural community in navigating the NIH and NCI Web pages to help users obtain current information, forms, and guidelines.
- Directs applicants to the appropriate Program Directors and SRAs for information regarding the status of the review and award of their grant applications.
- Tracks and analyzes trends of CSR referral to study sections and resultant review outcomes.

Christopher Hatch, Ph.D...... Chief, CSR Referral Liaison Deborah Bielat§ . . . . . . . . . . Program Support Assistant

David Contois..... Referral Officer

Leota Hall . . . . . . . . . . . . Referral Officer, CSR Referral Liaison

Natacha P. Lassègue . . . . . . . . . Program Analyst

Kimberly Morris . . . . . . . . . . Program Support Assistant

Florence Pedersen\* . . . . . . . . . . Referral Officer, CSR Referral Liaison

<sup>\*</sup> Left in 2004.

<sup>†</sup> Joined PCRB in 2004.

<sup>§</sup> Transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

## Research Programs Review Branch

- Plans, coordinates, and manages the scientific merit review of program project grants, specialized centers, and other grant mechanisms, as necessary, by chartered review committees and Special Emphasis Panels.
- Arranges for and participates in onsite assessments of the research capabilities and facilities of selected applicants.
- Identifies and recommends appropriate review committee members and site visitors, as required, for the review of assigned applications.
- Provides input and advice on grant review policy and procedures, application patterns, research trends, and other related information, as required.
- Coordinates grant review activities with staff of other NCI Divisions and other DEA Branches.

Olivia Bartlett, Ph.D	Chief
Virginia Wray, Ph.D	Deputy Chief
Shakeel Ahmad, Ph.D	
Courtney Banks*	Program Support Assistant
Ashley Church	Office Automation Clerk
Natasha Copeland§	Program Support Assistant
Mary Fletcher, Ph.D	
Monica Green§	
Keisha Gilbert‡	Program Support Assistant
$Michelle \ Higginbottom^{\ddagger} \ \dots \dots \dots$	Review Technical Assistant
Tiffany Jenifer	Program Specialist (Instructor)
Willie Johnson	Program Specialist
Deneen Mattocks§	Program Support Assistant
William Merritt, Ph.D	Scientific Review Administrator
Bratin Saha, Ph.D	Scientific Review Administrator
Michael Small, Ph.D	Scientific Review Administrator
Cheryl Smith§	Program Support Assistant
Maliaka Staff**	Review Technical Assistant
Patricia Stream‡	Review Technical Assistant
Shamala Srinivas, Ph.D	Scientific Review Administrator
Barbara Thompson	Program Support Assistant
Jamal Tull‡	Program Support Assistant
Claudio Dansky Ullman, M.D	Scientific Review Administrator
Peter Wirth, Ph.D	Scientific Review Administrator
Brian Wojcik, Ph.D	Scientific Review Administrator
Sunghan Yoo, Ph.D	Scientific Review Administrator

<sup>\*</sup> Left in 2004.

<sup>‡</sup> Contractor left in 2004.

<sup>§</sup> Transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

<sup>\*\*</sup> Contractor transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

## Resources and Training Review Branch

- Plans, coordinates, and manages the scientific merit review of cancer center, clinical cooperative group, training, and education grant and cooperative agreement applications by chartered review committees and Special Emphasis Panels.
- Arranges for and participates in onsite assessments of the research capabilities and facilities of selected applicants.
- Identifies and recommends appropriate review committee members and site visitors, as required, for the review of assigned applications.
- Provides input and advice on grant review policy and procedures, application patterns, and research trends and other related information, as required.
- Coordinates grant review activities with staff of other NCI Divisions, other DEA Branches, and the Center for Scientific Review.

David E. Maslow, Ph.D	Chief and Scientific Review Administrator
Lynn Amende, Ph.D	Scientific Review Administrator
Robert Bird, Ph.D	Scientific Review Administrator
Danielle Brown§	Program Support Assistant
Gail Bryant, M.D	Scientific Review Administrator
Linda Edwards §	Grants Technical Assistant
Stephanie Glynn**	Review Technical Assistant
Deborah Jaffe, Ph.D	Scientific Review Administrator
Ilda McKenna, Ph.D	Scientific Review Administrator
Raymond Petryshyn, Ph.D	Scientific Review Administrator
Linda Southworth*	Program Support Assistant
Lori Stanford**	Review Technical Assistant
Zenia Vilensky§	Lead Grants Technical Assistant
Chanee Williams*	Grants Technical Assistant

<sup>\*</sup> Left in 2004

<sup>§</sup> Transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

<sup>\*\*</sup> Contractor transferred to NIH OD OER DEAS in support of NCI DEA in 2004.

## Research Analysis and Evaluation Branch

- Serves as the Institute's officially designated, centralized source of scientific information and science-based budget information on NCI-supported research.
- Analyzes and classifies the science content of all Institute-supported projects.
- Prepares analyses comparing the distribution of funds among research areas; these analyses serve as a basis for budget projections.
- Prepares reports and analyses and answers inquiries concerning the scientific and budgetary aspects of Institute-funded research, including research grants, center grants, and research contracts.
- Maintains liaisons with other organizations involved in related classification activities.
- Documents the need for proposed RFAs by comparing RFA concepts with existing NCI-supported research and with unsolicited applications.

Marilyn	Gaston									Branch	(	hie	١f

#### **Inquiry and Reporting Team**

- Responds to generalized data requests.
- Plans, coordinates, and evaluates dissemination of extramural and intramural research data.
- Conducts in-depth analyses of extramural research data.
- Answers inquiries from Congress, the public, the press, and others concerning any phase of Institute-supported work.
- Identifies emerging priority areas for data collection and analysis.
- Conducts economic analysis of funded research; establishes consensus-building processes with programs, financial data operations, and others, including the private sector; identifies priority data gaps in funded research activities; and recommends solutions to fill these gaps.
- Evaluates user needs; conducts formalized user surveys, as needed; and translates these needs into NCI research reports and dissemination plans.
- Provides specialized data querying, archiving, and reporting functions for the Division, the Financial Management Branch, and the Institute.
- Directs and conducts the grant, contract, and reporting data file release program, including data editing, review, and documentation.
- Provides consultation services and writes scientific search formulation instructions to customers' specifications to facilitate standardized data preparation.

• Coordinates the design, development, and implementation of automated systems for award data dissemination.

Marilyn Gaston . . . . . . . . . . Team Leader

Stacy Harper-Avilla . . . . . . . . . Technical Information Specialist

#### **Research Documentation Team**

- Analyzes and indexes grants and contracts for the Branch's computerized systems.
- Ensures that terms and categories for indexing are updated and reflect current trends in cancer research, and maintains a thesaurus of term definitions.
- Analyzes extramural projects for relevance to SICs and Anatomic Sites to determine the officially reported figures for Institute support and provides a basis for budget projections.
- Maintains liaison with other offices within the Institute to ensure consistent reporting of data.
- Monitors the results of Institute grant-supported research through the literature surveillance program.

Edward KyleTeam LeaderCatherine Carneal†BiologistLisa KruegerBiologistNancy Lohrey\*BiologistBernard WhitfieldBiologistTyrone WilsonBiologist

#### **Technical Operations Team**

- Manages RAEB's FLARE grants documentation and indexing database, ensuring reliability and completeness of its contents.
- Performs computerized searches for ad hoc information requests to the Branch.
- Tracks documentation for grant applications, summary sheets, contract proposals, etc.
- Maintains and updates archival document files.
- Serves as the liaison with contractors and the AISB to resolve FLARE computer application problems for the Branch.
- Works with contractors and the AISB to refine RAEB's computer applications to meet the Branch's needs.
- Manages RAEB's personnel support functions.

Dianne Ostrow\*..... Team Leader

Gail Blaufarb . . . . . . . . . . . Technical Information Specialist

Linda Brown . . . . . . . . . . . . . . . Computer Assistant

<sup>\*</sup> Left in 2004.

<sup>†</sup> Joined in 2004.

## Applied Information Systems Branch

- Satisfies the information technology (IT) requirements of the Division; coordinates information resources management (IRM) activities with other relevant NCI and NIH units; and provides high-quality information analysis, design, development, and coordination of applications in support of Divisional business processes.
- Serves as the focal point for the Division in the development, deployment, and application of specialized software and databases required for the conduct of review, referral, coding, advisory, and other extramural applications.
- Serves as the liaison with the NCI Information Services Technology Branch (ISTB); other NCI computer professionals; other NCI units charged with execution of extramural IRM functions; other trans-NIH functional units such as the CSR, Office of Policy for Extramural Research Administration (OPERA), and Office of Extramural Research (OER); and the IMPAC II and eRA (Electronic Research Administration) systems.
- Supports resources and Internet and Intranet applications connectivity and design.
- Establishes, administers, and monitors contracts to provide design, production, and maintenance for microcomputer equipment and information storage and retrieval systems not covered by the NCI's Core Services.
- Formulates DEA-specific office automation policy.
- Provides staff/lead users with technical support and training for DEA IT applications.
- Coordinates general user support and training with NCI or NIH services.
- Provides Division-specific applications of video teleconferencing and audiovisual services in support of review and Board activities.
- Provides management with recommendations for establishing and implementing policies for conducting Divisional computer-assisted presentations, as necessary.
- Reviews user-created applications and recommends and/or designs changes to improve efficiency and effectiveness.

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#### **Application Development and Operations Team**

- Analyzes and coordinates life-cycle development of software for the Division; develops and designs applications to support the Division's business practices, including user guides.
- Develops, administers, and monitors contracts for acquisition, support, and maintenance of database systems.
- Administers office automation contracts as well as DEA-wide Blanket Purchase Agreements for microcomputer equipment maintenance and supplies.

- Formulates office automation policy, system development, and IMPAC II operations.
- Coordinates internal user groups and the provision of training for specific DEA applications and the use of office automation equipment technology.

Gregory Fischetti	. Team Leader
Deborah Buranich	. Information Technology Specialist
Charles Conley	. Information Technology Specialist
Lauren Lawson	. Information Technology Specialist
Teresa Park	. Information Technology Specialist
Hector Reyes	. Information Technology Specialist

#### Information Management Team

- Designs and maintains the Division's Intranet and Internet, and identifies documents to be placed on the NCI Web Site to make Division information more accessible to the public.
- Develops new Web-based software applications that will enhance the productivity and efficiency
  of extramural processes within the DEA and the distribution of Division information throughout the NCI.
- Establishes partnerships and ongoing communications with staff and external customers to foster openness and collaboration in accomplishing the information initiatives of the Division.
- Works with DEA staff to ensure the current utility and linkages of documents placed on the Web.

Table 1. Applications Received for Referral by the NCI/DEA (by Mechanism), FY2004\*†

	A officity:	Totala	Applic	Applications by Board				
Mechanism	Activity Code	by Activity	Totals	May	Oct			
Predoctoral Individual National Research Service Award	F31	81	8	48	25			
Postdoctoral Individual National Research Service Award	F32	396	103	153	140			
National Research Service Award for Senior Fellows	F33	1	0	1	0			
Research Scientist Development Award—Research & Training	K01	136	43	41	52			
Research Scientist Award	K05	13	2	8	3			
Academic/Teacher Award	K07	122	45	37	40			
Clinical Investigator Award	K08	158	49	56	53			
Physician Scientist Award (Program)	K12	13	13	0	0			
Career Transition Award	K22	66	18	22	26			
Mentored Patient-Oriented Research Development Award	K23	75	30	23	22			
Midcareer Investigator Award in Patient-Oriented Research	K24	13	2	7	4			
Mentored Quantitative Research Career Development	K25	21	5	3	13			
Clinical Research Curriculum Award (CRCA)	K30	6	0	0	6			
Research Program Projects	P01	142	47	53	42			
Exploratory Grants	P20	17	0	0	17			
Center Core Grants	P30	34	23	5	6			
Biotechnology Resource Grant Program	P41	1	0	0	1			
Specialized Center	P50	80	19	12	49			
Research Project	R01	5,783	1,880	2,050	1,85			
Small Research Grants	R03	419	128	142	149			
Conferences	R13	183	40	95	48			
Academic Research Enhancement Awards (AREA)	R15	87	33	33	21			
Exploratory/Developmental Grants	R21	1,961	641	705	615			
Resource-Related Research Projects	R24	43	1	42	0			
Education Projects	R25	114	27	39	48			
Exploratory/Developmental Grants Phase II	R33	86	35	25	26			
Method to Extend Research in Time (MERIT) Award	R37	3	1	0	2			

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications and withdrawn applications. Does not include 1,198 applications received for referral but not accepted for review.

<sup>†</sup> FY2004 includes receipt, referal, and review activities occuring between October 1, 2003, and September 30, 2004.

Table 1. Applications Received for Referral by the NCI/DEA (by Mechanism), FY2004\*† (Continued)

			Applications by Board				
Mechanism	R41 179 R42 39 R43 1,237 R44 340 R56 3 S06 5 T15 3 T32 81 U01 143 U10 42 U13 3 U19 3 U43 1 U54 14 U56 38	Totals by Activity	Jan	May	Oct		
Small Business Technology Transfer (STTR) Grants—Phase I	R41	179	56	75	48		
*Small Business Technology Transfer (STTR) Grants—Phase II	R42	39	13	20	6		
Small Business Innovation Research Grants (SBIR)—Phase I	R43	1,237	470	438	329		
Small Business Innovation Research Grants (SBIR)—Phase II	R44	340	115	140	85		
High Priority, Short Term Project Award	R56	3	0	0	3		
Minority Biomedical Research Support—MBRS	S06	5	2	3	0		
Continuing Education Training Program	T15	3	2	0	1		
Institutional National Research Service Award	T32	81	38	25	18		
Research Project (Cooperative Agreements)	U01	143	61	7	75		
Cooperative Clinical Research (Cooperative Agreements)	U10	42	41	0	1		
Conference (Cooperative Agreement)	U13	3	2	0	1		
Research Program (Cooperative Agreement)	U19	3	0	0	3		
Small Business Innovation Research (SBIR) Cooperative Agreements—Phase I	U43	1	0	1	0		
Specialized Center (Cooperative Agreements)	U54	14	0	12	2		
Exploratory Grants—Coop Agreement (NCI)	U56	38	0	38	0		
Overall Totals		12,185	3,993	4,359	3,833		

Table 2. Grant and Cooperative Agreement Applications Reviewed by the NCI/DEA (by Mechanism), FY2004\*

			Applications by Board					
Mechanism	Activity Code	Totals by Activity	Jan	May	Oct			
Research Scientist Development Award—Research & Training	K01	114	42	29	43			
Research Scientist Award	K05	12	2	8	2			
Academic/Teacher Award	K07	115	42	36	37			
Clinical Investigator Award	K08	134	44	44	46			
Physician Scientist Award (Program)	K12	12	12	0	0			
Career Transition Award	K22	59	17	21	21			
Mentored Patient-Oriented Research Development Award	K23	56	24	17	15			
Midcareer Investigator Award in Patient-Oriented Research	K24	13	2	7	4			
Mentored Quantitative Research Career Development	K25	19	4	3	12			
Research Program Projects	P01	131	43	49	39			
Exploratory Grants	P20	15	0	0	15			
Center Core Grants	P30	15	4	5	6			
Specialized Center	P50	78	18	12	48			
Research Project	R01	198	150	35	13			
Small Research Grants	R03	368	126	131	111			
Conferences	R13	107	17	55	35			
Exploratory/Developmental Grants	R21	531	203	216	112			
Resource-Related Research Projects	R24	39	1	38	0			
Education Projects	R25	112	27	38	47			
Exploratory/Developmental Grants Phase II	R33	83	35	23	25			
Small Business Technology Transfer (STTR) Grants—Phase I	R41	49	16	33	0			
*Small Business Technology Transfer (STTR) Grants—Phase II	R42	19	7	12	0			
Small Business Innovation Research Grants (SBIR)—Phase I	R43	261	135	111	15			
Small Business Innovation Research Grants (SBIR)—Phase II	R44	100	42	54	4			
Continuing Education Training Program	T15	2	2	0	0			
Institutional National Research Service Award	T32	74	35	23	16			

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. Excludes withdrawn applications. Of the 2,927 applications reviewed during the year, 784 applications were not recommended for further consideration by the initial review committee, and an additional 886 received scores in the bottom 33 percent and were not submitted for NCAB action. **Review of contract proposals is presented in Table 16.** 

Table 2. Grant and Cooperative Agreement Applications Reviewed by the NCI/DEA (by Mechanism), FY2004\* (Continued)

	A 11 11	<b>+</b>	Applications by Board				
Mechanism	Activity Code	Totals by Activity	Jan	May	Oct		
Research Project (Cooperative Agreements)	U01	130	55	6	69		
Cooperative Clinical Research (Cooperative Agreements)	U10	42	41	0	1		
Small Business Innovation Research (SBIR) Cooperative Agreements - Phase I	U43	1	0	1	0		
Exploratory Grants - Cooperative Agreement (NCI)	U56	38	0	38	0		
Totals		2,927	1,146	1,045	736		

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. Excludes deleted applications. Withdrawn applications have been subtracted from the total count. Of the 2,927 applications reviewed during the year, 88 applications were withdrawn, 784 were not recommended for further consideration by the initial review committee, and an additional 886 received scores in the bottom 33 percent and were not submitted for NCAB action. **Review of contract proposals is presented in Table 16.** 

Table 3. Applications Reviewed by NCI IRG Subcommittees and Special Emphasis Panels (SEPs), FY2004

			Total Costs			
NCI IRG Subcommittee	Types of Applications Reviewed	Number of Applications	Requested First Year	Requested All Years		
A—Cancer Centers	P30	15	\$90,018,469	\$478,490,813		
C—Basic and Preclinical	P01, U01	46	82,778,263	433,710,071		
D—Clinical Studies	P01, R01, R13	53	116,156,617	594,118,524		
E—Cancer Epidemiology, Prevention, and Control	P01, R01, R13, U01	42	84,600,513	410,449,168		
F—Manpower and Training	K01, K08, K25, T32	180	36,762,253	205,482,419		
G—Education	K01, K05, K07, K22, K23, K24, R25	265	44,728,836	226,395,784		
H—Clinical Groups	R01, U10	24	59,910,110	379,109,319		
I—Career Development	K01, K08, K22, K23, K25, T15, T32	205	27,208,454	119,098,040		
Total—NCI IRG Subcommittees		830	\$542,163,515	\$2,846,854,138		
Special Emphasis Panels						
All SEPs  Total—SEPs	P01, P20, P50, R01, R13, R41, R43, R44, U01, K01, K23, R03, R21, R25, K05, K07, K08, K12, K23, K25, R24, R33, U10, U43, U56		\$726,924,495	\$3,481,782,724		
Totals—IRG and SEP		2,927	\$1,269,088,010	\$6,328,636,862		

Table 4. Summary of Investigator-Initiated PO1 Applications Reviewed for Each NCAB Meeting, FY2004

Type of Application	Jan 2004 NCAB	May 2004 NCAB	Oct 2004 NCAB	Total for FY2004
New	11	14	14	39
New Amended	11	13	9	33
Recompeting	9	9	7	25
Recompeting Amended	8	8	7	23
Supplement	4	5	2	11
Totals	43	49	39	131

Table 5. Summary of Review Formats for Unsolicited Program Project Applications, FY2004

			Review Format						
NCAB Meeting	Number of Applications	Site Visit	Telephone Conference	IRG Committee <sup>†</sup>	Clusters* Format				
January 2004	43	20	21	2	0				
May 2004	49	23	25	1	0				
October 2004	39	0	0	2	37*				
Totals	131	43	46	5	37*				

<sup>\*</sup> Cluster format is a grouping of applications with similar scientific topics and organ sites. The 37 applications were grouped into 20 clusters with a maximum size of 3 applications. Occasionally, if there is no appropriate match, a cluster is composed of only 1 application.

Table 6. Summary of Unsolicited P01 Applications Reviewed by NCI Program Division, FY2004

		Total Costs				
Program Division	Number of Applications	First Year Requested Total Costs	Total Costs for Requested Period			
Division of Cancer Biology (DCB)	46	\$79,539,068	\$415,493,146			
Division of Cancer Control and Population Sciences (DCCPS)	13	39,838,186	206,096,631			
Division of Cancer Prevention (DCP)	9	26,452,975	97,853,407			
Division of Cancer Treatment and Diagnosis (DCTD)	63	135,451,760	704,057,413			
Totals	131	\$281,281,989	\$1,423,500,597			

<sup>†</sup> Type 3 requests for supplemental funding applications.

Table 7a. Requests for Applications (RFAs) Published by the NCI in FY2004 Sorted by Date of Publication

Date of Publication	RFA	Mechanism	Title	Division
10/2/2003	CA04-011	R24	Small Animal Imaging Resource Programs	DCTD
10/3/2003	CA04-012	P50	Transdisciplinary Tobacco Use Research Centers	DCCPS
12/1/2003	CA04-013	P20	Integrative Cancer Biology Programs	DCB
12/17/2003	CA05-002	R21, R33	Innovation Technologies for the Molecular Analysis of Cancer II	OD/OTIR
12/17/2003	CA05-003	R21, R33	Applications of Emerging Technologies for Cancer Research	OD/OTIR
12/17/2003	CA05-004	R21, R33	Innovations in Cancer Sample Preparation	OD/OTIR
1/7/2004	CA05-006	R41, R42, R43, R44	Innovative Technologies for Molecular Analysis of Cancer SBIR	OD/OTIR
1/7/2004	CA05-007	R41, R42, R43, R44	Applications of Emerging Technologies for Cancer Research SBIR	OD/OTIR
1/7/2004	CA05-008	R41, R42, R43, R44	Innovations in Cancer Sample Preparation SBIR/STTR	OD/OTIR
1/13/2004	CA05-005	U01, U24	The Early Detection Research Network: Clinical Epidemiology and Validation Centers	DCP
1/29/2004	CA04-015	U01	Stratetic Partnering to Evaluate Cancer Signatures	DCTD
2/20/2004	CA04-016	K25	The NCI Career Development Award for Quantitative Scientists	ODDES
4/9/2004	CA05-009	U24	The Early Detection Research Network: Biomarker Reference Laboratory	DCP
4/23/2004	CA05-014	U10	Community Clinical Oncology Program	DCP
4/23/2004	CA05-015	U10	Minority-Based Community Clinical Oncology Program	DCP
4/26/2004	CA05-012	U01	Community Networks to Reduce Cancer Disparities Through Education, Research, and Training	ODDES
4/29/2004	CA05-017	U24	Support for Human Specimen Banking in NCI-Supported Cancer Clinical Trials	DCTD
5/14/2004	CA05-018	U01	Cancer Intervention and Surveillance Modeling Network	DCCPS
5/26/2004	CA05-013	R01, R21	Reducing Barriers in Symptom Management and Palliative Care	DCP
6/9/2004	CA06-001	R41, R42, R43, R44	Circulating Cells in Cancer Detection	DCP
6/22/2004	CA05-502	U01	Breast Cancer Surveillance Consortium Infrastructure	DCCPS
7/8/2004	CA05-010	U54	Transdisciplinary Research on Energetics and Cancer	DCCPS
7/8/2004	CA05-011	U01	TREC Coordination Center	DCCPS
8/6/2004	CA05-019	U56	Patient Navigator Intervention Research Program	CRCHD
8/27/2004	CA05-023	U01	Early Detection Research Network: Biomarkers Developmental Laboratories	DCP
9/15/2004	CA06-501	U54	Academic Public Private Partnership Program (AP4) Center Grant	DCTD
9/30/2004	CA05-020	P20	Planning Grant for Minority Institution/Cancer Center Collaboration	ODDES

Table 7b. Requests for Applications (RFAs) Published by the NCI in FY2004 Sorted by Division and Office

Division	RFA	Mechanism	Title	Date of Publication
CRCHD	CA05-019	U56	Patient Navigator Intervention Research Program	8/6/2004
DCB	CA04-013	P20	Integrative Cancer Biology Programs	12/1/2003
DCCPS	CA04-012	P50	Transdisciplinary Tobacco Use Research Centers	10/3/2003
DCCPS	CA05-018	U01	Cancer Intervention and Surveillance Modeling Network	5/14/2004
DCCPS	CA05-502	U01	Breast Cancer Surveillance Consortium Infrastructure	6/22/2004
DCCPS	CA05-010	U54	Transdisciplinary Research on Energetics and Cancer	7/8/2004
DCCPS	CA05-011	U01	TREC Coordination Center	7/8/2004
DCP	CA05-005	U01, U24	The Early Detection Research Network: Clinical Epidemiology and Validation Centers	1/13/2004
DCP	CA05-009	U24	The Early Detection Research Network: Biomarker Reference Laboratory	4/9/2004
DCP	CA05-014	U10	Community Clinical Oncology Program	4/23/2004
DCP	CA05-015	U10	Minority-Based Community Clinical Oncology Program	4/23/2004
DCP	CA05-013	R01, R21	Reducing Barriers in Symptom Management and Palliative Care	5/26/2004
DCP	CA06-001	R41, R42, R43, R44	Circulating Cells in Cancer Detection	6/9/2004
DCP	CA05-023	U01	Early Detection Research Network: Biomarkers Developmental Laboratories	8/27/2004
DCTD	CA04-011	R24	Small Animal Imaging Resource Programs	10/2/2003
DCTD	CA04-015	U01	Stratetic Partnering to Evaluate Cancer Signatures	1/29/2004
DCTD	CA05-017	U24	Support for Human Specimen Banking in NCI-Supported Cancer Clinical Trials	4/29/2004
DCTD	CA06-501	U54	Academic Public Private Partnership Program (AP4) Center Grant	9/15/2004
OD/OTIR	CA05-002	R21, R33	Innovation Technologies for the Molecular Analysis of Cancer II	12/17/2003
OD/OTIR	CA05-003	R21, R33	Applications of Emerging Technologies for Cancer Research	12/17/2003
OD/OTIR	CA05-004	R21, R33	Innovations in Cancer Sample Preparation	12/17/2003
OD/OTIR	CA05-006	R41, R42, R43, R44	Innovative Technologies for Molecular Analysis of Cancer SBIR	1/7/2004
OD/OTIR	CA05-007	R41, R42, R43, R44	Applications of Emerging Technologies for Cancer Research SBIR	1/7/2004
OD/OTIR	CA05-008	R41, R42, R43, R44	Innovations in Cancer Sample Preparation SBIR/STTR	1/7/2004
ODDES	CA05-012	U01	Community Networks to Reduce Cancer Disparities Through Education, Research, and Training	4/26/2004
ODDES	CA04-016	K25	The NCI Career Development Award for Quantitative Scientists	2/20/2004
ODDES	CA05-020	P20	Planning Grant for Minority Institution/Cancer Center Collaboration	9/30/2004

Table 8a. Program Announcements (PAs) Published by the NCI in FY2004 Sorted by Date of Publication

Date of Publication	PA	Mechanism	Title	Division
10/20/2003	PA04-012	R01, R21	Cancer Surveillance Using Health Claims-Based Data System	DCCPS
11/4/2003	PA04-017	R01, R21	Studies of the Economics of Cancer Prevention, Screening, and Care	DCCPS
12/11/2003	PA04-034	R21	Exploratory Grants for Behavioral Research in Cancer Control	DCCPS
12/11/2003	PA04-035	R21	Circulating Cells in Cancer Detection	DCP
12/24/2003	PA04-045	R21	Exploratory/Developmental Grants for In Vivo Diagnostic Cancer Imaging	DCTD
12/24/2003	PA04-046	R01	Clinical Cancer Therapy and Prevention Research	DCTD
1/5/2004	PA04-047	R42, R44	Competing Continuation Phase II SBIR/STTR for Diagnosis, Prevention, and Treatment	DCTD
2/4/2004	PA04-053	R21	Developmental Projects in Complementary Approaches to Cancer Care	OD/OCCAM
2/17/2004	PA04-063	R41, R42, R43, R44	Integration and Clinical Evaluation of Technologies for Oncologic Image-Guided Interventions - SBIR/STTR Initiative	DCTD
4/19/2004	PA04-094	R41, R42, R43, R44	Novel Technologies for In Vivo Imaging - SBIR/STTR	DCTD
4/19/2004	PA04-095	R21, R33	Novel Technologies for In Vivo Imaging	DCTD
4/30/2004	PA04-099	R01, R03, R21	Diet, Epigenetic Events, and Cancer Prevention	DCP
5/2/2004	PA04-102	R21, R33	Phased Application Awards in Cancer Prognosis and Prediction	DCTD
5/6/2004	PA04-103	R01, R21	Testing Tobacco Products Promoted to Reduce Harm	DCCPS
6/18/2004	PA04-114	R01, R03, R21	Exfoliated Cells, Bioactive Food Components, and Cancer Prevention	DCP
7/8/2004	PA04-124	P01, P30, R01, R21, U01	Studies of Energy Balance and Cancer in Humans	DCCPS
9/17/2004	PA04-157	R01, R21	Research on Malignancies in AIDS and Acquired Immune Suppression	DCB, DCCP DCTD

Table 8b. Program Announcements (PAs) Published by the NCI in FY2004 Sorted by Division and Office

Division	PA	Mechanism	Title	Date of Publication
DCB, DCCPS, DCTD	PA04-157	R01, R21	Research on Malignancies in AIDS and Acquired Immune Suppression	9/17/2004
DCCPS	PA04-012	R01, R21	Cancer Surveillance Using Health Claims-Based Data System	10/20/2003
DCCPS	PA04-017	R01, R21	Studies of the Economics of Cancer Prevention, Screening, and Care	11/4/2003
DCCPS	PA04-034	R21	Exploratory Grants for Behavioral Research in Cancer Control	12/11/2003
DCCPS	PA04-103	R01, R21	Testing Tobacco Products Promoted to Reduce Harm	5/6/2004
DCCPS	PA04-124	P01, P30, R01, R21, U01	Studies of Energy Balance and Cancer in Humans	7/8/2004
DCP	PA04-035	R21	Circulating Cells in Cancer Detection	12/11/2003
DCP	PA04-099	R01, R03, R21	Diet, Epigenetic Events, and Cancer Prevention	4/30/2004
DCP	PA04-114	R01, R03, R21	Exfoliated Cells, Bioactive Food Components, and Cancer Prevention	6/18/2004
DCTD	PA04-045	R21	Exploratory/Developmental Grants for In Vivo Diagnostic Cancer Imaging	12/24/2003
DCTD	PA04-046	R01	Clinical Cancer Therapy and Prevention Research	12/24/2003
DCTD	PA04-047	R42, R44	Competing Continuation Phase II SBIR/STTR for Diagnosis, Prevention, and Treatment	1/5/2004
DCTD	PA04-063	R41, R42, R43, R44	Integration and Clinical Evaluation of Technologies for Oncologic Image-Guided Interventions - SBIR/STTR Initiative	2/17/2004
DCTD	PA04-094	R41, R42, R43, R44	Novel Technologies for In Vivo Imaging - SBIR/STTR	4/19/2004
DCTD	PA04-095	R21, R33	Novel Technologies for In Vivo Imaging	4/19/2004
DCTD	PA04-102	R21, R33	Phased Application Awards in Cancer Prognosis and Prediction	5/2/2004
OD/OCCAM	PA04-053	R21	Developmental Projects in Complementary Approaches to Cancer Care	2/4/2004

Table 9a. Program Announcements with Special Receipt Dates Published by the NCI in FY2004

Sorted by Date of Publication

Date of Publication	PAR	Mechanism	Title	Division
10/20/2003	PAR04-011	R01	Cohort Studies in Cancer Epidemiology	DCCPS
11/14/2003	PAR04-020	R03	Small Grants Program for Behavioral Research in Cancer Control	DCCPS
12/12/2003	PAR04-036	R01, R21	Colorectal Cancer Screening in Primary Care Practice	DCCPS
12/16/2003	PAR04-040	K22	NCI Transition Career Development Award	ODDES
2/3/2004	PAR04-055	K07	Cancer Prevention, Control, Behavioral and Population Sciences Cancer Development Award	ODDES
2/27/2004	PAR04-069	R21	In Vivo Cellular and Molecular Imaging Centers (ICMICs)	DCTD
4/23/2004	PAR04-096	K12	Paul Calabresi Award for Clinical Oncology	ODDES
8/18/2004	PAR04-147	R03	Cancer Prevention Research Small Grant Program	DCP
8/21/2004	PAR04-155	R21	Quick-Trials for Novel Cancer Therapies	DCTD
9/28/2004	PAR04-159	R03	Small Grant Program for Cancer Epidemiology	DCCPS

Table 9b. Program Announcements with Special Receipt Dates Published by the NCI in FY2004

Sorted by Division and Office

Division	PAR	Mechanism	Title	Date of Publication
DCCPS	PAR04-011	R01	Cohort Studies in Cancer Epidemiology	10/20/2003
DCCPS	PAR04-020	R03	Small Grants Program for Behavioral Research in Cancer Control	11/14/2003
DCCPS	PAR04-036	R01, R21	Colorectal Cancer Screening in Primary Care Practice	12/12/2003
DCCPS	PAR04-159	R03	Small Grant Program for Cancer Epidemiology	9/28/2004
DCP	PAR04-147	R03	Cancer Prevention Research Small Grant Program	8/18/2004
DCTD	PAR04-069	R21	In Vivo Cellular and Molecular Imaging Centers (ICMICs)	2/27/2004
DCTD	PAR04-155	R21	Quick-Trials for Novel Cancer Therapies	8/21/2004
ODDES	PAR04-040	K22	NCI Transition Career Development Award	12/16/2003
ODDES	PAR04-055	K07	Cancer Prevention, Control, Behavioral and Population Sciences Cancer Development Award	2/3/2004
ODDES	PAR04-096	K12	Paul Calabresi Award for Clinical Oncology	4/23/2004

Table 10. Requests for Applications (RFAs) Reviewed by the NCI/DEA,  $\mbox{FY2004}^{\ast}$ 

				Applications by NCAB Round			Round	Total	Costs
Title of Initiative	Bypass <sup>†</sup> Initiative	RFA Number	Activity Codes	Totals	Jan	May	Oct	Requested First Year	Requested Total Years
Mouse Models of Human Cancers Consortium	A2	CA04-002	U01	52	51	1	0	\$51,772,482	\$268,741,714
Long-Term Cancer Survivors: Research Initiatives	D3	CA04-003	R01 R03 R21	70 9 45	70 9 45	0 0 0	0 0 0	33,736,639 677,965 7,032,301	147,188,482 1,368,059 13,988,613
Molecular Targets for Nutrients in Prostate Cancer Prevention	A1	CA04-004	R01	78	78	0	0	27,825,399	131,083,152
Academic Public-Private Partnership Program (AP4) Planning Grant	p A2	CA04-005	U56	38	0	38	0	2,892,481	2,912,481
The Early Detection Research Network: Biomarker Developmenta Laboratories	l C2	CA04-006	U01	68	0	0	68	47,414,499	254,036,820
Miinority-Based Community Clinical Oncology Program	A3	CA04-007	U10	6	6	0	0	3,392,215	15,689,179
Community Clinical Oncology Program	A3	CA04-008	U10	13	13	0	0	15,784,537	68,309,873
Mechanisms of Physical Activity Behavior Change	N/A	CA04-009	R01 R21	26 17	0	26 17	0	12,090,868 2,108,085	54,346,722 4,136,532
Small Animal Imaging Resource Programs	C4	CA04-011	R24	37	0	37	0	41,018,588	157,099,140
Transdisciplinary Tobacco Use Research Centers	D4	CA04-012	P50	15	0	0	15	30,440,816	159,582,441
Integrative Cancer Biology Program	s A4	CA04-013	P20 P50	15 30	0	0	15 30	8,100,792 90,352,471	24,434,648 452,501,083
The NCI Career Development Awar for Quantitative Scientists	d N/A	CA04-016	K25	4	0	0	4	491,670	2,282,034
Pediatric Brain Tumor Consortium Renewal	A3	CA04-501	U01	1	1	0	0	2,981,490	15,641,117
Innovation Technologies for the Molecular Analysis of Cancer II	C3	CA05-002	R21 R33	30 13	0	0	30 13	4,799,605 7,371,903	11,920,192 22,753,997
Applications of Emerging Technologies for Cancer Research	A1	CA05-003	R21 R33 R43	21 10 1	0 0 0	0 0 0	21 10 1	3,309,169 5,350,218 99,850	26,565,176 16,130,275 99,850

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. Excludes deleted applications. Seven withdrawn applications have been subtracted from the total count.

 $<sup>^{\</sup>dagger}$  The designation refers to a Bypass "opportunity" or "challenge" initiative as noted on p. 11.

Table 10. Requests for Applications (RFAs) Reviewed by the NCI/DEA, FY2004 (Continued)

							Total	Total Costs		
				<u>Applica</u>	tions by	/ NCAB	Round			
Title of Initiative	Bypass Initiative	RFA Number	Activity Codes	Totals	Jan	May	Oct	Requested First Year	Requested Total Years	
Innovations in Cancer Sample Preparation	A1	CA05-00	R21 4 R33	10 1	0	0	10 1	\$1,621,454 739,154	\$8,665,017 2,268,536	
Innovative Technologies for Molecular Analysis of Cancer SBI	R C3	CA05-00	R43 6 R44	8 1	0	0	8 1	558,133 363,757	1,120,359 1,101,332	
Applications of Emerging Technologies for Cancer Research SBIR	C3	CA05-00	R43 7 R44	3	0	0	3 3	300,000 1,003,578	673,752 4,742,906	
Innovations in Cancer Sample Preparation SBIR/STTR	C3	CA05-00	8 R43	3	0	0	3	319,100	439,692	
Roadmap Grants	N/A	RM04-01	4 R13	6	0	0	6	239,966	479,963	
Roadmap Grants	N/A	RM04-01	4 R21	33	0	0	33	4,237,375	7,686,022	
Totals				667	273	119	275	\$408,426,560	\$1,877,989,159	

Table 11. PA/PAR Applications Reviewed by the NCI/DEA, FY2004\*

								Total (	Costs
	Bypass <sup>†</sup> Initiative	PA/PAR Number	Activity Codes	Applica Totals	tions by Jan	y NCAB May	Round Oct	Requested First Year	Requested Total Years
Mentored Clinical Scientist Development Award (K08)	N/A	PA95-053 PA00-003	K08	109	40	35	34	\$14,304,798	\$71,506,358
Mentored Patient-Oriented Research Career Development Award	N/A	PA00-004	K07 K23	4 48	0 21	2 14	2 13	546,299 6,128,136	2,772,186 30,490,169
Midcareer Investigator Award in Patient-Oriented Research	N/A	PA00-005	K24	13	2	7	4	1,743,507	9,116,539
Mentored Research Scientist Development Award	N/A	PA00-019	K01 K07	2 0	0	1 0	1 0	688,087 108,000	3,568,618 432,000
Academic Career Award	N/A	PA00-070	K07	6	1	1	4	769,638	3,780,205
NIH National Research Service Award Institutional Research Training Grants	N/A	PA00-103	T32	1	1	0	0	410,981	2,186,287
Innovative Toxicology Models: SBIR/STTR	N/A	PA02-075	R41 R43 R44	3 19 4	0 0 0	3 19 4	0 0 0	150,153 N/A 2,255,750	1,232,417 5,487,612 11,817,996
NIH National Research Service Award Institutional Research Training Grants	N/A	PA02-109	T32	21	10	4	7	6,260,394	36,758,680
Mentored Quantitative Research Career Development Award	N/A	PA02-127	K25	13	3	2	8	1,659,102	8,232,742
Established Investigator Award in Cancer Prevention, Control, Behavioral, and Population Research	N/A	PAR00-039	) K05	4	2	1	1	574,983	2,796,894
Innovative Technology for Molecular Analysis: Phased Innovation Award	C3	PAR01-104	R21 R33	18 7	18 6	0	0	2,770,470 4,181,970	28,445,329 12,342,545
Innovative Technology for Molecular Analysis: SBIR/STTR	C3	PAR01-105	R42 R43 R44	1 15 7	1 15 7	0 0 0	0 0 0	719,482 N/A 4,239,570	1,971,355 2,772,699 16,464,950
Applications of Innovative Technologies: Phased Innovation Award	n C3	PAR01-106	R21 6 R33	20 9	20 9	0	0	3,041,310 5,456,849	26,272,046 15,078,066
Applications for Innovative Technologies: SBIR/STTR	C3	PAR01-107	R41 R42 R43 ' R44	1 1 15 2	1 1 15 2	0 0 0 0	0 0 0 0	N/A 177,098 133,108 263,721	471,428 2,166,405 3,055,600 2,115,216

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. Excludes deleted applications. Sixy-seven withdrawn applications have been subtracted from the total count.

<sup>†</sup> The designation refers to a Bypass "opportunity" or "challenge" initiative as noted on p. 11.

Table 11. PA/PAR Applications Reviewed by the NCI/DEA, FY2004\* (Continued)

				A	11aa-1	. NICAD	Da	Total 0	Costs
Title of Initiative	Bypass <sup>†</sup> Initiative	PA/PAR Number	Activity Codes	Applica Totals	Jan	May	Oct	Requested First Year	Requested Total Years
Small Grants Program for Behavioral Research in Cancer Control	N/A	PAR02-037	R03	44	20	23	1	\$3,207,833	\$6,260,769
Developmental/Pilot Projects in Cancer Complementary & Alternative Medicine	A1	PAR02-040	R21	50	0	50	0	10,348,743	21,000,858
Colorectal Cancer Screening in Primary Care Practice	A3	PAR02-042	R21	33	33	0	0	4,980,613	9,719,870
Innovative Toxicology Models for Drug Evaluation: Exploratory Developmental Grants and Phased Innovation Award	v/ N/A	PAR02-074	R21 R33	7 3	0	7 3	0	1,260,696 1,367,873	3,220,844 3,521,416
Specialized Programs of Research Excellence (SPOREs) in Human Cancer for the Year 2003	A2	PAR02-126	P50	30	18	12	0	78,941,139	410,074,367
Small Grants Program for Research in Cancer Prevention	N/A	PAR02-176	R03	171	65	57	49	13,195,556	27,425,020
Mentored Clinical Scientist Awar for Underrepresented Minorities		PAR03-002	K08	7	1	1	5	900,831	4,532,696
Mentored Patient-Oriented Research For Underrepresented Minorities	d N/A	PAR03-006	K23	7	2	3	2	1,336,480	6,855,859
Small Grants Program for Cancer Epidemiology	A4	PAR03-010	R03	112	32	51	29	8,349,203	15,783,200
NCI Mentored Career Development Award for Underrepresented Minorities	N/A	PAR01-016 PAR03-016		32	11	6	15	4,421,774	25,129,453
Flexible System to Advance Innovative Research for Cancer Drug Discovery By Small Businesses (FLAIR)	C3	PAR03-074	R41 R42 R43 R44	27 4 110 24	9 2 64 16	18 2 46 8	0 0 0	N/A 2,308,877 1,287,235 13,141,001	13,642,954 15,022,873 49,989,296 67,268,709
Institutional Clinical Oncology Research Career Development Program	N/A	PAR03-083	K12	12	12	0	0	7,011,589	39,535,583
Cancer Education Grant Progam	N/A	PAR00-033 PAR03-093		74	18	24	32	20,991,216	103,310,973
Phased Application Awards in Cancer Prognosis and Predictio	n C3	PAR03-098	R21 R33	52 13	24 8	28 5	0	8,772,539 5,595,407	87,995,407 22,193,587

Table 11. PA/PAR Applications Reviewed by the NCI/DEA, FY2004\* (Continued)

				Analica	tiona h	NOAE	Dound	Total	Costs
Title of Initiative	Bypass <sup>†</sup> Initiative	PA/PAR Number	Activity Codes	Totals	Jan	May	Oct	Requested First Year	Requested Total Years
Cancer Prognosis and Prediction: SBIR/STTR Initiative	A4	PAR03-099	R41 R43 R44 U43	5 32 4 1	1 9 1 0	4 23 3 1	0 0 0	N/A N/A \$1,631,490 N/A	\$1,010,410 6,486,751 5,448,704 139,911
NCI Transition Career Development Award for Underrepresented Minorities	N/A	PAR03-101	K22	9	1	6	2	1,511,408	4,586,641
The Howard Temin Award	N/A	PAR00-066 PAR03-104	K01	75	27	21	27	9,796,427	55,097,581
Development of Novel Technologies for <i>In Vivo</i> Imaging	C4	PAR03-124	R21 R33	117 21	58 7	59 14	0	22,311,306 11,456,950	166,355,417 35,118,505
Development of Novel Technologies for <i>In Vivo</i> Imaging	C4	PAR03-125	R41 R42 R43 R44	11 12 43 49	4 2 20 12	7 10 23 37	0 0 0	518,583 1,690,247 140,800 16,968,130	6,590,967 16,205,857 7,377,268 93,207,424
Cancer Education and Career Development Program	N/A	PAR94-004 PAR00-064 PAR03-148	R25	23	5	9	9	10,202,009	56,845,523
Established Investigator Award in Cancer Prevention, Control, Behavioral, and Population Sciences	N/A	PAR00-039 PAR03-149	K05	12	2	8	2	1,660,692	8,229,845
Industry-Academic Partnership for Development of Biomedical Imaging Systems		PAR03-157	R21	46	0	46	0	10,646,612	20,399,506
Conferences	N/A	PAR03-176	R13	58	0	30	28	2,237,441	5,227,227
Small Grants Program for Behavioral Research in Cancel Control	r N/A	PAR04-020	R03	32	0	0	32	2,333,832	4,483,435
Colorectal Cancer Screening in Primary Care Practice	N/A	PAR04-036	R01 R21	11 16	0	0	11 16	6,077,774 3,040,942	25,144,660 5,772,252
NCI Transition Career Development Award	N/A	PAR01-134 PAR04-040	K22	48	16	13	19	7,545,053	22,046,805
Cancer Prevention, Control, Behavioral, and Population Sciences Cancer Development Award	: N/A	PAR99-108 PAR01-135 PAR04-055	K07	101	41	30	30	12,981,708	65,421,933
Totals				1,881	716	781	384	\$366,753,415	\$1,845,014,698

Table 12. Average Total Cost and Number of Research Project Grant Awards by Division, FY2002-FY2004

	F`	Y2002	FY	′2003	FY	′2004	F	Percent	Change	
	No.	Average Cost	No.	Average Cost	No.	Average Cost	03- No.	04 Cost	02 No.	-04 Cost
R01 Average Cost of Av	ard Data									
NCI Overall	3,377	\$324,000	3,573	\$338,000	3,780	\$338,000	5.8%	0.0%	11.9%	4.3%
DCB	1,941	291,000	2,028	304,000	2,139	305,000	5.5%	0.3%	10.2%	4.8%
DCP	126	431,000	151	452,000	169	412,000	11.9%	-8.8%	34.1%	-4.4%
DCTD	916	295,000	973	306,000	1,027	314,000	5.5%	2.6%	12.1%	6.4%
DCCPS	389	502,000	418	518,000	441	501,000	5.5%	-3.3%	13.4%	-0.2%
OD (CRCHD, OCCAM, OCTR, etc.)	5	1,799,000	3	2,886,000	4	N.A.	N.A.	N.A.	N.A.	N.A.
P01 Average Cost of Aw	ard Data						-		-	
NCI Overall	173	1,836,000	178	1,891,000	177	1,946,000	-0.6%	2.9%	2.3%	6.0%
DCB	63	1,571,000	70	1,651,000	66	1,702,000	-5.7%	3.1%	4.8%	8.3%
DCP	13	1,931,000	12	2,014,000	13	2,065,000	8.3%	2.5%	0.0%	6.9%
DCTD	80	1,995,000	83	1,988,000	86	2,040,000	3.6%	2.6%	7.5%	2.3%
DCCPS	16	2,015,000	13	2,321,000	12	2,375,000	-7.7%	2.3%	-25.0%	17.9%
OD (CRCHD, OCCAM, OCTR, etc.)	1	1,715,000	1,687	N.A.	1,313	N.A.	N.A.	N.A.	N.A.	N.A.
R03 Average Cost of Aw	ard Data									
NCI Overall	186	76,000	203	75,000	240	75,000	18.2%	0.0%	29.0%	-1.3%
DCB	3	90,000	3	85,000	7	76,000	133.3%	-10.6%	133.3%	-15.6%
DCP	81	77,000	74	74,000	137	74,000	85.1%	0.0%	69.1%	-3.9%
DCTD	3	78,000	1	72,000	5	80,000	400.0%	11.1%	66.7%	2.6%
DCCPS	99	75,000	125	74,000	91	76,000	-27.2%	2.7%	-8.1%	1.3%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
R21 Average Cost of Aw	ard Data									
NCI Overall	309	187,000	360	188,000	425	183,000	18.1%	-2.7%	37.5%	-2.1%
DCB	30	138,000	37	149,000	70	157,000	89.2%	5.4%	133.3%	13.8%
DCP	18	191,000	24	166,000	76	151,000	216.7%	-9.0%	322.2%	-20.9%
DCTD	236	196,000	231	200,000	241	202,000	4.3%	1.0%	2.1%	3.1%
DCCPS	25	148,000	41	157,000	37	177,000	-9.8%	12.7%	48.0%	19.6%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.	27	205,000	1	277,000	-96.3%	35.1%	N.A.	N.A.

Table 12. Average Total Cost and Number of Research Project Grant Awards by Division, FY2002-FY2004 (Continued)

	F	Y2002	F`	Y2003	F`	Y2004		Percent	Change	
	No.	Average Cost	No.	Average Cost	No.	Average Cost	03- No.	04 Cost	02 No.	2-04 Cost
U01/U19 Average Cost of	of Award I	Data			_		-			
NCI Overall	216	\$770,000	198	\$898,000	174	\$942,000	-12.1%	4.9%	-19.4%	22.3%
DCB	20	758,000	20	809,000	27	748,000	35.0%	-7.5%	35.0%	-1.3%
DCP	9	1,143,000	10	938,000	9	907,000	-10.0%	-3.3%	0.0%	-20.6%
DCTD	136	701,000	121	902,000	103	952,000	-14.9%	5.5%	-24.3%	35.8%
DCCPS	51	880,000	47	903,000	35	1,060,000	-25.5%	17.4%	-31.4%	20.5%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
R13 Average Cost of Aw	vard Data				_				-	
NCI Overall	83	26,000	108	23,000	112	19,000	3.7%	-17.4%	34.9%	-26.9%
DCB	44	11,000	48	11,000	56	9,000	16.7%	-18.2%	27.3%	-18.2%
DCP	8	15,000	11	14,000	13	13,000	18.2%	-7.1%	62.5%	-13.3%
DCTD	19	40,000	30	20,000	22	20,000	-26.7%	0.0%	15.8%	-50.0%
DCCPS	8	43,000	12	53,000	15	26,000	25.0%	-50.9%	87.5%	-39.5%
OD (CRCHD, OCCAM, OCTR, etc.)	4	123,000	7	82,000	6	110,000	-14.3%	34.1%	50.0%	-10.6%
U10 Average Cost of Aw	ard Data	- Includes Car	ncer Cont	rol						
NCI Overall	210	1,225,000	151	1,654,000	139	1,785,000	-7.9%	7.9%	-33.8%	45.7%
DCB		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
DCP	73	1,287,000	73	1,247,000	74	1,258,000	1.4%	0.9%	1.4%	-2.3%
DCTD	137	1,183,000	78	2,026,000	65	2,373,000	-16.7%	17.1%	-52.6%	100.6%
DCCPS		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.	0	N.A.	N.A.	N.A.	N.A.	N.A.
P30 Average Cost of Aw	ard Data	- Includes Car	ncer Cont	rol						
NCI Overall	63	3,215,000	63	3,596,000	63	3,798,000	0.0%	5.6%	0.0%	18.1%
DCB		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
DCP	2	729,000	2	728,000	2	960,000	0.0%	31.9%	0.0%	31.7%
DCTD		N.A.		N.A.	0	N.A.	N.A.	N.A.	N.A.	N.A.
DCCPS	0	N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
OD (CRCHD, OCCAM, OCTR, etc.)	61	3,282,000	61	3,640,000	61	3,834,000	0.0%	5.3%	0.0%	16.8%

Table 12. Average Total Cost and Number of Research Project Grant Awards by Division, FY2002-FY2004 (Continued)

	F	Y2002	F`	Y2003	F,	Y2004		Percent (	Change	
	No.	Average Cost	No.	Average Cost	No.	Average Cost	03- No.	-04 Cost	02 No.	-04 Cost
P50 Average Cost of Aw	ard Data	- Includes Car	ncer Cont	trol	•					
NCI Overall	43	\$2,706,000	66	\$2,377,000	83	\$2,204,000	25.8%	-7.3%	93.0%	-18.6%
DCB		N.A.		N.A.	6	2,189,000	N.A.	N.A.	N.A.	N.A.
DCP		N.A.		N.A.		N.A.	N.A.	N.A.	N.A.	N.A.
DCTD	5	2,203,000	7	2,010,000	7	2,249,000	0.0%	11.9%	40.0%	2.1%
DCCPS	4	2,603,000	12	2,042,000	12	1,830,000	0.0%	-10.4%	200.0%	-29.7%
OD (CRCHD, OCCAM, OCTR, etc.)	34	2,792,000	47	2,518,000	58	2,278,000	23.4%	-9.5%	70.6%	-18.4%

Table 13. Summary of NCI Grant Awards (by Mechanism), FY2004

	Mechanism	Award Count	Dollars in T Dollar	Thousands Average Cost	% of NC Number	I Total Dollar	Competing Requested	Competing Awarded	Succes: Rate
RPG	R01 - Traditional Research Grants	3,780	1,277,188	338	53.7%	40.3%	3,805	953	25.0%
	P01 - Program Reports	177	344,489	1,946	2.5%	10.9%	118	38	32.2%
	R03 - Small Grants	240	18,067	75	3.4%	0.6%	327	135	41.3%
	R15 - Academic Research Enhancement Awards (AREA)	20	4,560	228	0.3%	0.1%	56	20	35.7%
	R21 - Exploratory/ Developmental Research	425	77,970	183	6.0%	2.5%	1,522	245	16.1%
	R33 - Phased Innovation Grant (Phase 2)	96	42,931	447	1.4%	1.4%	67	13	19.4%
	R29 - First Awards		53		0.0%	0.0%			
	R37 - Merit Awards	73	37,888	519	1.0%	1.2%	18	18	100.0%
	U19, U01 - Cooperative Agreements	26	31,377	1,207	0.4%	1.0%	10	3	30.0%
	R01 - Program Evaluation		58,721		0.0%	1.9%			
	Total for RPG POOL Group	4,837	1,893,244	4,943	0.7%	59.9%	5,923	1,425	24.1%
	P01, R01, R03, R21, R33, U01 - Request for Applications	85	36,019	424	1.2%	1.1%	150	23	15.3%
	U01, U19, U42 - Cooperative Agreements - RFA	148	132,520	895	2.1%	4.2%	75	44	58.7%
	Total for RFA/ Cooperative Agreement	233	168,539	1,319	0.0%	5.3%	225	67	29.8%
	U43, U44, R43, R44 - Small Business Innovation Research	344	88,554	257	4.9%	2.8%	1,245	247	19.8%
	R41, R42 - Small Business Technology Transfer	53	11,025	208	0.8%	0.3%	177	46	26.0%
	Total for SBIR/STTR	397	99,579	465	0.1%	3.1%	1,422	293	20.6%
	Total for RPG	5,467	2,161,362	6,727	77.7%	68.3%	7,570	1,785	23.6%
CENTERS	U54 - Specialized Center (Cooperative Agreements)	14	14,161	1,012	0.2%	0.4%			
	Comprehensive Core Grants	36	164,959	4,582	0.5%	5.2%	5	5	100.0%
	P20 - Exploratory Grants	31	8,280	267	0.4%	0.3%			
	P30, P40, P41, U42 - Core Clinical	17	46,767	2,751	0.2%	1.5%	4	4	100.0%
	P20, P50 - Spores	70	149,366	2,134	1.0%	4.7%	55	19	34.5%

Table 13. Summary of NCI Grant Awards (by Mechanism), FY2004 (Continued)

		Award Count	<u>Dollars in</u> Dollar	Thousands Average Cost	% of NC Number	l Total Dollar	Competing C		Success Rate
	P30 - Core Basic	8	21,921	2,740	0.1%	0.7%	2	2	100.0%
	Center for AIDS Research		3,834		0.0%	0.1%			
	Total for CORE	176	409,288	13,486	2.4%	12.9%	66	30	45.5%
Other Research (A)	U56 - Exploratory Grants - Cooperative Agreement (NCI)	40	11,331	283	0.6%	0.4%	42	14	33.3%
(A)	U10 - Clinical Cooperative Groups	65	154,356	2,375	0.9%	4.9%	37	35	94.6%
	R09, U09 - Scientific Evaluation	2	10,240	5,120	0.0%	0.3%			
	S06 - Minority Biomedical Research Support		3,853		0.0%	0.1%			
	R24, U24 - Research/ Resource Grant	44	26,571	604	0.6%	0.8%	42	6	14.3%
	T15 - Training Conference Gran	ts 3	344	115	0.0%	0.0%	2	1	50.0%
	Biomedical Research Support Grant				0.0%	0.0%			
	U13 - Conference (Cooperative Agreement)		14		0.0%	0.0%			
	D43, R13 - Conference Grants/ International Training Grants in Epidemiology	109	1,786	16	1.5%	0.1%	96	72	75.0%
	Total for Other Research (A)	263	208,495	8,513	3.6%	6.6%	219	128	58.4%
Other	R25 - Cancer Education	101	32,212	319	1.4%	1.0%	83	15	18.1%
Research (B)	K01 - Temin Award K01	113	15,770	140	1.6%	0.5%	92	17	18.5%
	K05 - Established Investigator Award in Cancer Prevention and Control K05	19	2,396	126	0.3%	0.1%	13	7	53.8%
	K07 - Preventive Oncology Award K07	88	11,393	129	1.3%	0.4%	88	10	11.4%
	K08 - Mentored Clinical Scientist K08	131	17,243	132	1.9%	0.5%	114	18	15.8%
	K25 - Mentored Quantitative Research Career Development Award K25	5	713	143	0.1%	0.0%	11	3	27.3%
	K12, K14 - Mentored Career Award K12	17	8,791	517	0.2%	0.3%	12	2	16.7%
	K30 - Institutional Curriculum Award K30		1,597		0.0%	0.1%			

Table 13. Summary of NCI Grant Awards (by Mechanism), FY2004 (Continued)

			Dollars in T		% of N			<b>a</b>	
	Mechanism	Award Count	Dollar	Average Cost	Number	Dollar	Competing Requested		Success Rate
	K23 - Mentored Patient-Orient Research Career Developmen Award K23		7,911	130	0.9%	0.2%	52	14	26.9%
	K24 - Mid-Career Investigator in Patient-Oriented Research Award K24	25	3,061	122	0.4%	0.1%	10	1	10.0%
	K22 - Clinical Research Track K22	35	5,333	152	0.5%	0.2%	48	12	25.0%
	Total for Other Research (B) —Careers	494	74,208	1,591	7.0%	2.3%	440	84	19.1%
	Total for Other Research (A+B)	858	314,915	10,423	12.2%	9.9%	742	227	30.6%
NRSA	T32, T34, T35, T36 - NRSA Institution	168	59,718	355	2.4%	1.9%	67	25	37.3%
	F30, F31, F32, F33, F34 - NRSA Fellowships	161	6,545	41	2.3%	0.2%	306	78	25.5%
	Total for NRSA	329	66,263	396	4.7%	2.1%	373	103	27.6%
Cancer (	Control								
	Total for Cancer Control	204	219,964	2,000	2.9%	6.9%	235	67	28.5%
	Total NCI Grants	7,034	3,171,792	33,032	100.0%	100.0%	8,986	2,212	24.6%

Table 14. NCI Special Interest Category (SIC) Dollars for FY2004— Percent Change from FY2003\*

Special Interest Category (SIC)	2003 Grants	2004 Grants	Percent Change	2003 Contracts	2004 Contracts	Percent Change	2003 Totals	2004 Totals	Percent Change
Adoptive Cell Immunotherapy	65,348,655	70,375,002	7.69	0	0		65,348,655	70,375,002	7.69
Adv. Manufacturing Technology	7,477,696	9,724,892	30.05	2,364,215	2,938,077	24.27	9,841,911	12,662,969	28.66
Aging	155,261,752	150,356,226	-3.16	10,698,428	9,945,847	-7.03	165,960,180	160,302,073	-3.41
AIDS	110,670,266	118,548,502	7.12	8,400,382	12,292,119	46.33	119,070,648	130,840,621	9.88
Alternative Medicine, Direct	56,622,885	60,213,242	6.34	859,109	2,383,221	177.41	57,481,994	62,596,463	8.90
Alternative Medicine, Indirect	28,480,937	31,541,629	10.75	1,566	1,864,939	118,989.34	28,482,503	33,406,568	17.29
Alzheimers Dementia	1,621,994	1,558,931	-3.89	0	0		1,621,994	1,558,931	-3.89
Arthritis	1,584,332	1,515,693	-4.33	0	0		1,584,332	1,515,693	-4.33
Asbestos	4,491,877	2,255,176	-49.79	0	0		4,491,877	2,255,176	-49.79
Ataxia Telangiectasia	6,834,383	4,569,973	-33.13	2,785	0	-100.00	6,837,168	4,569,973	-33.16
Autoimmune Diseases	8,686,585	9,958,212	14.64	0	0		8,686,585	9,958,212	14.64
Behavior Research, Direct	234,536,774	244,777,079	4.37	6,575,016	6,057,895	-7.86	241,111,790	250,834,974	4.03
Bioengineering	249,639,347	240,390,660	-3.70	45,020,366	52,939,025	17.59	294,659,713	293,329,685	-0.45
Biological Response Modifiers	693,802,345	700,664,812	0.99	47,628,016	49,610,449	4.16	741,430,361	750,275,261	1.19
Biomaterials Research	24,642,591	30,314,104	23.02	8,915,546	9,431,259	5.78	33,558,137	39,745,363	18.44
Birth Defects	8,859,294	8,894,762	0.40	0	0		8,859,294	8,894,762	0.40
Bone Marrow Transplantation	62,342,401	57,457,088	-7.84	0	0		62,342,401	57,457,088	-7.84
Breast Cancer Detection	87,083,783	94,501,632	8.52	3,109,893	3,475,027	11.74	90,193,676	97,976,659	8.63
Breast Cancer Education	16,892,672	19,386,970	14.77	25,166	0	-100.00	16,917,838	19,386,970	14.59
Breast Cancer Epidemiology	68,313,342	69,771,690	2.13	982,938	698,833	-28.90	69,296,280	70,470,523	1.69
Breast Cancer Genetics	76,095,610	77,442,317	1.77	564,142	0	-100.00	76,659,752	77,442,317	1.02
Breast Cancer Prevention	32,648,918	31,570,494	-3.30	2,011,223	939,576	-53.28	34,660,141	32,510,070	-6.20
Breast Cancer Rehabilitation	13,111,191	15,549,473	18.60	0	0		13,111,191	15,549,473	18.60
Breast Cancer Screening	27,099,723	26,527,549	-2.11	74,349	26,899	-63.82	27,174,072	26,554,448	-2.28
Breast Cancer Treatment	145,047,262	148,351,792	2.28	6,749,515	6,791,336	0.62	151,796,777	155,143,128	2.20
Breast Cancer—Basic	140,617,772	143,093,208	1.76	697,101	570,723	-18.13	141,314,873	143,663,931	1.66
Cancer Survivorship	155,516,370	140,898,830	-9.40	4,012,075	3,427,200	-14.58	159,528,445	144,326,030	-9.53
Carcinogenesis, Environmental	519,568,630	524,017,147	0.86	15,414,427	16,881,526	9.52	534,983,057	540,898,673	1.11
Cervical Cancer Education	449,332	4,271,351	850.60	0	0		449,332	4,271,351	850.60
Chemoprevention	139,276,608	148,477,581	6.61	31,939,659	38,682,581	21.11	171,216,267	187,160,162	9.31
Chemotherapy	418,100,555	438,105,399	4.78	22,543,090	27,613,790	22.49	440,643,645	465,719,189	5.69
Child Health	46,735,300	53,197,399	13.83	140,916	529,844	276.00	46,876,216	53,727,243	14.62
Childhood Cancers	145,225,096	152,446,855	4.97	266,123	2,903,180	990.92	145,491,219	155,350,035	6.78
Clinical Trials, Diagnosis	76,113,941	82,077,884	7.84	54,197,359	43,869,064	-19.06	130,311,300	125,946,948	-3.35
Clinical Trials, Other	15,472,520	24,115,590	55.86	90,069	14,737	-83.64	15,562,589	24,130,327	55.05
Clinical Trials, Prevention	63,222,364	52,464,147	-17.02	16,330,637	19,534,040	19.62	79,553,001	71,998,187	-9.50
Clinical Trials, Therapy	394,745,137	397,061,464	0.59	16,942,091	22,580,065	33.28	411,687,228	419,641,529	1.93
Combined Treatment Modalities	233,282,835	312,369,420	33.90	494,586	3,106,498	528.10	233,777,421	315,475,918	34.95
Diabetes	7,548,368	6,342,418	-15.98	0	11,531		7,548,368	6,353,949	-15.82
Diagnosis	495,151,906	516,385,526	4.29	68,869,978	64,415,676	-6.47	564,021,884	580,801,202	2.97
Diagnostic Imaging	229,522,569	251,438,670	9.55	47,656,346	43,100,850	-9.56	277,178,915	294,539,520	6.26
Diethylstilbestrol	20,335	565,478		1,422,768	1,112,000	-21.84	1,443,103	1,677,478	16.24

<sup>\*</sup> Some categories are not mutually exclusive, resulting in overlap in reported funding; dollar totals, therefore, exceed 100 percent of the extramural budget.

Table 14. NCI Special Interest Category (SIC) Dollars for FY2004— Percent Change from FY2003\* (Continued)

Special Interest Category (SIC)	2003 Grants	2004 Grants	Percent Change		2004 Contracts	Percent Change		2004 Totals	Percent Change
DNA Repair	153,272,564	163,589,431	6.73	142,698	0	-100.00	153,415,262	163,589,431	6.63
Drug Development	411,687,594	459,744,432	11.67	36,193,414	57,151,663	57.91	447,881,008	516,896,095	15.41
Drug Resistance	106,222,127	115,179,443	8.43	151,379	118,808	-21.52	106,373,506	115,298,251	8.39
Drugs—Natural Products	133,489,902	136,210,983	2.04	3,195,322	1,792,604	-43.90	136,685,224	138,003,587	0.96
Endocrinology	182,937,161	176,393,387	-3.58	4,031,416	2,192,014	-45.63	186,968,577	178,585,401	-4.48
Epidemiology—Biochemical	234,520,510	207,335,066	-11.59	10,820,716	12,167,743	12.45	245,341,226	219,502,809	-10.53
Gene Transfer Clinical	20,278,841	20,661,840	1.89	0	0		20,278,841	20,661,840	1.89
Helicobacter	4,242,773	4,417,414	4.12	0	5,895		4,242,773	4,423,309	4.26
Hematology	439,919,550	442,062,008	0.49	5,523,293	5,117,078	-7.35	445,442,843	447,179,086	0.39
Hematopoietic Stem Cell Research	95,335,267	98,696,928	3.53	0	1,013,829		95,335,267	99,710,757	4.59
Hormone Replacement Therapy	13,502,323	12,859,852	-4.76	0	0		13,502,323	12,859,852	-4.76
Hospice	5,429,050	6,272,396	15.53	0	0		5,429,050	6,272,396	15.53
latrogenesis	56,747,784	52,043,786	-8.29	2,068,617	2,016,323	-2.53	58,816,401	54,060,109	-8.09
Infant Mortality	137,648	131,431	-4.52	0	0		137,648	131,431	-4.52
Information Dissemination	253,168,775	263,222,719	3.97	111,193,860	102,774,709	-7.57	364,362,635	365,997,428	0.45
Interferon	33,908,831	32,191,589	-5.06	0	0		33,908,831	32,191,589	-5.06
Magnetic Resonance Imaging	78,768,024	61,021,677	-22.53	4,283,466	6,055,551	41.37	83,051,490	67,077,228	-19.23
Mammography	35,959,438	38,337,556	6.61	74,349	89,664	20.60	36,033,787	38,427,220	6.64
Metastasis	291,583,495	306,463,051	5.10	4,447,992	2,877,556	-35.31	296,031,487	309,340,607	4.50
Mind/Body Research	16,186,181	20,374,850	25.88	0	0		16,186,181	20,374,850	25.88
Molecular Disease	1,254,249,336	1,327,303,007	5.82	7,810,872	12,317,562	57.70	1,262,060,208	1,339,620,569	6.15
Neurofibromatosis	895,105	646,068	-27.82	0	0		895,105	646,068	-27.82
Neurofibromatosis, Related	4,401,999	3,794,516	-13.80	0	0		4,401,999	3,794,516	-13.80
Nursing Research	11,916,138	12,314,520	3.34	0	0		11,916,138	12,314,520	3.34
Nutrition	200,562,461	198,181,528	-1.19	11,958,656	13,261,067	10.89	212,521,117	211,442,595	-0.51
Nutrition Monitoring	36,098,086	25,273,055	-29.99	0	0		36,098,086	25,273,055	-29.99
Obesity	31,377,290	28,678,080	-8.60	111,701	375,587	236.24	31,488,991	29,053,667	-7.73
Occupational Cancer	13,542,319	10,241,241	-24.38	1,664,027	1,679,371	0.92	15,206,346	11,920,612	-21.61
Oncogenes	615,438,803	630,525,257	2.45	5,039,633	3,712,319	-26.34	620,478,436	634,237,576	2.22
Organ Transplant Research	72,356,860	72,958,135	0.83	0	454,323		72,356,860	73,412,458	1.46
Osteoporosis	1,168,234	1,141,017	-2.33	0	0		1,168,234	1,141,017	-2.33
p53	130,311,151	133,762,049	2.65	1,405,304	473,926	-66.28	131,716,455	134,235,975	1.91
Pain	14,411,836	17,002,607	17.98	0	0		14,411,836	17,002,607	17.98
Palliative Care	21,296,057	22,501,723	5.66	0	0		21,296,057	22,501,723	5.66
Pap Testing	14,509,718	17,012,637	17.25	0	0		14,509,718	17,012,637	17.25
Pesticides	3,308,388	2,957,379	-10.61	823,095	619,416	-24.75	4,131,483	3,576,795	-13.43
Population Research	10,491,878	8,206,124	-21.79	0	0		10,491,878	8,206,124	-21.79
Prevention, Primary	325,152,163	347,065,384	6.74	38,607,415	45,505,595	17.87	363,759,578	392,570,979	7.92
Radiation—Electromagnetic Fields	495,945	427,464	-13.81	0	0		495,945	427,464	-13.81
Radiation—lonizing	39,053,743	37,598,250	-3.73	1,821,452	1,640,004	-9.96	40,875,195	39,238,254	-4.00
Radiation—Low-Level Ionizing	12,100,041	10,491,971	-13.29	0	0		12,100,041	10,491,971	-13.29
Radiation—Non-lonizing	35,855,310	39,381,363	9.83	1,038,185	0	-100.00	36,893,495	39,381,363	6.74
Radiation—Non-lonizing Dx or Rx	94,526,145	76,134,643	-19.46	4,283,466	6,055,551	41.37	98,809,611	82,190,194	-16.82
(Continued)									

Table 14. NCI Special Interest Category (SIC) Dollars for FY2004— Percent Change from FY2003\* (Continued)

Special Interest	2003	2004	Percent	t 2003	2004	Percent		2004	Percent
Category (SIC)	Grants	Grants	Change	Contracts	Contracts	Change	Totals	Totals	Change
Radiation—UV	33,983,034	37,662,847	10.83	1,038,185	0	-100.00	35,021,219	37,662,847	7.54
Radiotherapy	201,939,626	220,088,213	8.99	1,896,883	2,111,845	11.33	203,836,509	222,200,058	9.01
Radon	2,247,435	311,741	-86.13	0	0		2,247,435	311,741	-86.13
Rare Diseases	41,324,416	42,694,896	3.32	516,669	300,000	-41.94	41,841,085	42,994,896	2.76
Ras Inhibitors	12,024,328	12,619,047	4.95	448,444	9,905	-97.79	12,472,772	12,628,952	1.25
Rehabilitation	23,424,350	25,925,733	10.68	2,133,909	2,198,768	3.04	25,558,259	28,124,501	10.04
Resources	412,144,493	414,797,475	0.64	165,774,178	161,221,501	-2.75	577,918,671	576,018,976	-0.33
Rural Populations	30,622,310	29,932,451	-2.25	13,160,025	12,276,740	-6.71	43,782,335	42,209,191	-3.59
Sexually Transmitted Diseases	43,121,144	46,220,731	7.19	3,669,351	3,149,968	-14.15	46,790,495	49,370,699	5.51
Smokeless Tobacco	7,923,647	3,104,472	-60.82	128,883	131,163	1.77	8,052,530	3,235,635	-59.82
Smoking and Health	132,499,349	137,455,228	3.74	4,272,828	3,236,405	-24.26	136,772,177	140,691,633	2.87
Smoking Behavior	78,209,883	76,442,578	-2.26	748,181	955,814	27.75	78,958,064	77,398,392	-1.98
Smoking, Passive	6,023,879	6,068,225	0.74	64,442	95,581	48.32	6,088,321	6,163,806	1.24
Structural Biology	338,681,284	366,221,434	8.13	3,199,926	4,350,062	35.94	341,881,210	370,571,496	8.39
Surgery	135,221,839	136,372,650	0.85	665,662	908,970	36.55	135,887,501	137,281,620	1.03
Taxol	71,264,155	78,732,106	10.48	374,079	329,066	-12.03	71,638,234	79,061,172	10.36
Telehealth	97,153,182	96,550,988	-0.62	39,576,797	40,530,106	2.41	136,729,979	137,081,094	0.26
Therapy	1,049,142,096	1,115,713,553	6.35	77,690,439	101,678,273	30.88	1,126,832,535	1,217,391,826	8.04
Tropical Diseases	11,087,651	9,640,098	-13.06	725,000	615,766	-15.07	11,812,651	10,255,864	-13.18
Tumor Markers	471,967,996	437,156,976	-7.38	17,146,841	14,637,736	-14.63	489,114,837	451,794,712	-7.63
Tumor Necrosis Factor	27,597,775	23,491,494	-14.88	0	24,998		27,597,775	23,516,492	-14.79
Underserved Populations	112,322,588	121,861,192	8.49	17,821,410	16,658,741	-6.52	130,143,998	138,519,933	6.44
Vaccine Development	14,453,579	21,617,405	49.56	0	0		14,453,579	21,617,405	49.56
Vaccine Production	774,562	1,976,306	155.15	0	0		774,562	1,976,306	155.15
Vaccine Research	39,445,936	41,596,477	5.45	0	0		39,445,936	41,596,477	5.45
Vaccine Testing	40,102,463	40,913,280	2.02	3,424,351	3,861,407	12.76	43,526,814	44,774,687	2.87
Virus Cancer Research	191,710,572	191,210,931	-0.26	4,576,971	3,669,713	-19.82	196,287,543	194,880,644	-0.72
Virus—Epstein-Barr	23,253,988	23,134,534	-0.51	25,000	0	-100.00	23,278,988	23,134,534	-0.62
Virus—Genital Herpes	666,153	670,672	0.68	0	0		666,153	670,672	0.68
Virus—Hepatitis B	10,387,770	8,795,216	-15.33	0	0		10,387,770	8,795,216	-15.33
Virus—Hepatitis C	4,640,622	4,263,315	-8.13	74,918	0	-100.00	4,715,540	4,263,315	-9.59
Virus—Herpes	51,753,550	53,522,401	3.42	25,000	0	-100.00	51,778,550	53,522,401	3.37
Virus—HHV6	40,917	42,500	3.87	0	0		40,917	42,500	3.87
Virus—HHV8	17,712,740	17,648,098	-0.36	74,918	0	-100.00	17,787,658	17,648,098	-0.78
Virus—HTLV-I	7,718,640	6,754,160	-12.50	725,000	615,766	-15.07	8,443,640	7,369,926	-12.72
Virus—HTLV-II	15,161	39,299	159.21	0	0		15,161	39,299	159.21
Virus—HTLV-Unspecified	69,094	72,443	4.85	0	0		69,094	72,443	4.85
Virus—Papilloma	46,445,814	48,962,882	5.42	3,424,351	2,934,450	-14.31	49,870,165	51,897,332	4.06
Virus—Papova	58,451,388	62,528,125	6.97	3,424,351	2,934,450	-14.31	61,875,739	65,462,575	5.80
Virus—SV40	8,645,371	10,130,358	17.18	0	0		8,645,371	10,130,358	17.18
Vitamin A	21,937,835	21,573,171	-1.66	549,010	621,395	13.18	22,486,845	22,194,566	-1.30
Vitamin C	6,809,996	5,566,346	-18.26	0	0		6,809,996	5,566,346	-18.26
Vitamins, Other	21,047,264	19,859,860	-5.64	26,553	0	-100.00	21,073,817	19,859,860	-5.76

Table 15. NCI Organ Site-Specific Dollars for FY2004— Percent Change from FY2003\*

Site Category	2003 Grants	2004 Grants	Percent Change	2003 Contracts	2004 Contracts	Percent Change	2003 Totals	2004 Totals	Percent Change
Adrenal	3,960,952	2,593,630	-34.52	0	0		3,960,952	2,593,630	-34.52
Anus	3,802,505	5,624,492	47.92	554,188	554,472	0.05	4,356,693	6,178,964	41.83
Bladder	28,537,263	28,178,181	-1.26	838,168	1,014,319	21.02	29,375,431	29,192,500	-0.62
Blood	638,763	569,632	-10.82	136,071	0	-100.00	774,834	569,632	-26.48
Bone Marrow	18,738,105	16,859,731	-10.02	0	0		18,738,105	16,859,731	-10.02
Bone, Cartilage	22,398,965	21,427,315	-4.34	0	9,000		22,398,965	21,436,315	-4.30
Brain	92,635,682	102,140,110	10.26	2,643,784	3,386,641	28.10	95,279,466	105,526,751	10.75
Breast	487,276,101	502,945,988	3.22	11,859,220	11,460,577	-3.36	499,135,321	514,406,565	3.06
Buccal Cavity	5,193,075	6,444,095	24.09	429,189	36,281	-91.55	5,622,264	6,480,376	15.26
Central Nervous System	18,803,554	20,576,592	9.43	142,785	123,153	-13.75	18,946,339	20,699,745	9.25
Cervix	66,450,143	66,952,760	0.76	5,607,727	5,730,107	2.18	72,057,870	72,682,867	0.87
Childhood Leukemia	47,364,916	48,088,942	1.53	25,000	0	-100.00	47,389,916	48,088,942	1.48
Colon, Rectum	222,623,080	229,448,225	3.07	20,565,109	16,095,219	-21.74	243,188,189	245,543,444	0.97
Connective Tissue	7,572,951	7,094,659	-6.32	0	0		7,572,951	7,094,659	-6.32
Embryonic Tissue, Cells	7,746,541	6,559,473	-15.32	0	0		7,746,541	6,559,473	-15.32
Erythrocytes	985,198	805,272	-18.26	0	0		985,198	805.272	-18.26
Esophagus	18,297,131	19,023,025	3.97	742,552	359,015	-51.65	19,039,683	19,382,040	1.80
Eye	2,340,893	1,513,506	-35.34	91,795	0	-100.00	2,432,688	1,513,506	-37.78
Gall Bladder	757,328	872,737	15.24	0	0		757,328	872,737	15.24
Gastrointestinal Tract	14,090,712	18,506,962	31.34	1,782,279	1,090,795	-38.80	15,872,991	19,597,757	23.47
Genital System, Female	1,224,104	4,616,691	277.15	711,385	556,000	-21.84	1,935,489	5,172,691	167.25
Genital System, Male	764,895	691,767	-9.56	2,402,836	1,570,915	-34.62	3,167,731	2,262,682	-28.57
Head and Neck	33,873,712	42,187,440	24.54	1,842,386	1,979,845	7.46	35,716,098	44,167,285	23.66
Heart	6,774,839	4,909,069	-27.54	0	0		6,774,839	4,909,069	-27.54
Hodgkins Lymphoma	15,735,723	16,134,577	2.53	160,235	112,500	-29.79	15,895,958	16,247,077	2.21
Invertebrate Tissue, Cells	7,851,614	4,877,252	-37.88	229,539	233,640	1.79	8,081,153	5,110,892	-36.76
Kaposi Sarcoma	18,485,724	18,492,575	0.04	267,773	196,152	-26.75	18,753,497	18,688,727	-0.35
Kidney	23,012,397	22,344,186	-2.90	0	274,307		23,012,397	22,618,493	-1.71
Larynx	1,239,045	777,411	-37.26	0	0		1,239,045	777,411	-37.26
Leukemia	190,719,926	195,335,333	2.42	2,021,451	1,303,343	-35.52	192,741,377	196,638,676	2.02
Leukocytes	68,432,226	65,914,828	-3.68	1,091,676	261,184	-76.07	69,523,902	66,176,012	-4.82
Liver	52,377,535	52,389,230	0.02	2,548,304	1,951,877	-23.40	54,925,839	54,341,107	-1.06
Lung	233,722,488	237,039,205	1.42	20,281,024	16,451,706	-18.88	254,003,512	253,490,911	-0.20
Lymph Node	418,211	1,247,100	198.20	0	0		418,211	1,247,100	198.20
Lymphatic System	1,772,709	1,130,650	-36.22	0	0		1,772,709	1,130,650	-36.22
Melanoma	81,518,973	85,424,994	4.79	1,733,587	1,300,183	-25.00	83,252,560	86,725,177	4.17
Muscle	10,585,789	9,961,120	-5.90	0	0		10,585,789	9,961,120	-5.90
Myeloma	23,349,917	21,375,570	-8.46	108,120	0	-100.00	23,458,037	21,375,570	-8.88
Nervous System	2,947,832	2,859,805	-2.99	0	0		2,947,832	2,859,805	-2.99
Neuroblastoma	23,084,752	22,723,369	-1.57	25,000	0	-100.00	23,109,752	22,723,369	-1.67
Non-Hodgkins Lymphoma		90,453,752	3.92	658,184	649,339	-1.34	87,701,313	91,103,091	3.88

<sup>\*</sup> This table reports funding for research grants and contracts only; training grants and intramural projects are excluded.

Table 15. NCI Organ Site-Specific Dollars for FY2004— Percent Change from FY2003\* (Continued)

Site Category	2003 Grants	2004 Grants	Percent Change	2003 Contracts	2004 Contracts	Percent Change	2003 Totals	2004 Totals	Percent Change
Nose, Nasal Passages	1,889,287	2,435,202	28.90	0	0		1,889,287	2,435,202	28.90
Ovary	80,445,298	83,344,934	3.60	13,833,083	10,253,750	-25.88	94,278,381	93,598,684	-0.72
Pancreas	39,271,824	50,042,251	27.43	1,393,282	882,625	-36.65	40,665,106	50,924,876	25.23
Parathyroid	103,368	206,013	99.30	0	0		103,368	206,013	99.30
Penis	570,915	1,007,097	76.40	0	0		570,915	1,007,097	76.40
Pharynx	3,496,979	3,610,213	3.24	0	0		3,496,979	3,610,213	3.24
Pituitary	2,223,903	1,958,668	-11.93	0	0		2,223,903	1,958,668	-11.93
Plant Tissue, Cells	417,169	196,473	-52.90	0	0		417,169	196,473	-52.90
Platelets	1,014,760	603,741	-40.50	0	0		1,014,760	603,741	-40.50
Prostate	261,534,830	267,184,277	2.16	20,628,018	16,303,599	-20.96	282,162,848	283,487,876	0.47
Reticuloendothelial Syste	em 22,633,635	19,752,858	-12.73	0	0		22,633,635	19,752,858	-12.73
Respiratory System	1,752,342	477,322	-72.76	0	0		1,752,342	477,322	-72.76
Retinoblastoma	2,275,980	2,470,155	8.53	0	0		2,275,980	2,470,155	8.53
Skin	58,036,360	62,563,078	7.80	2,071,557	1,124,187	-45.73	60,107,917	63,687,265	5.95
Small Intestine	2,744,882	1,592,051	-42.00	0	0		2,744,882	1,592,051	-42.00
Spleen	397,133	561,467	41.38	0	0		397,133	561,467	41.38
Stomach	9,819,892	9,270,798	-5.59	591,103	570,921	-3.41	10,410,995	9,841,719	-5.47
Testis	5,913,343	6,359,705	7.55	268,930	224,966	-16.35	6,182,273	6,584,671	6.51
Thymus	830,245	625,911	-24.61	0	0		830,245	625,911	-24.61
Thyroid	4,832,175	5,711,563	18.20	0	18,000		4,832,175	5,729,563	18.57
Trachea, Bronchus	156,675	256,373	63.63	0	0		156,675	256,373	63.63
Urinary System	540,930	263,840	-51.22	0	0		540,930	263,840	-51.22
Uterus	24,291,159	24,566,225	1.13	108,695	112,466	3.47	24,399,854	24,678,691	1.14
Vagina	542,925	571,670	5.29	0	0		542,925	571,670	5.29
Vascular	47,688,318	42,763,325	-10.33	1,327,432	1,325,771	-0.13	49,015,750	44,089,096	-10.05
Wilms Tumor	4,773,264	4,243,617	-11.10	0	0		4,773,264	4,243,617	-11.10

Table 16. Requests for Proposals (RFPs) Reviewed by NCI/DEA in FY2004\*

Contract Announcement Title—2004	Announcement Number	Workload Round	Number of Proposals
Efficacy Studies and Intermediate Endpoints in Animal Models	MAA N01-CN-25007-72	1/04	5
Preclinical Toxicology and Pharmacology of Drugs Developed for Cancer, AIDS, and AIDS-Related Illnesses	RFP N01-CM-37039-45	1/04	7
Pediatric Preclinical Testing Program	RFP N01-CN-37027-23	1/04	1
Novel Technologies for Noninvasive Detection, Diagnosis, and Treatment of Cancer	BAA - CO47010-16	5/04	7
Preparation of Radiolabeled Materials	RFP CM-47001-28	5/04	3
Virtual Microscopy for the Early Detection of Cancer	SBIR Topic 195	5/04	1
Clinical Trials Data Collection Using Hand-Held Technology	SBIR Topic 181	5/04	8
Biomedical Informatics System for Basic and Clinical Cancer Research	SBIR Topic 184	5/04	3
Development of an Analytical Information Management System	SBIR Topic 199	5/04	2
Development and Application of High-Throughput Proteomics Technologies	SBIR Topic 194	5/04	13
Chemical Optimization and Structure Activity Relationships	SBIR Topic 198	5/04	2
A Software Program to Develop Logic Models	SBIR Topic 200	5/04	2
Research-Based Health Information Communications Network Targeting Minorities	SBIR Topic 201	5/04	6
Development of Inhibitory Reagents for the Study of Protein Function	SBIR Topic 193	5/04	1
Target-Based High-Throughput Screening for the Identification of Radioprotectors	SBIR Topic 186	5/04	1
Technologies for the Study of Genetic Alterations	SBIR Topic 191	5/04	2
New Technologies for Monitoring the Tumor Microenvironment	SBIR Topic 192	5/04	3
Antibody Array for Cancer Detection	SBIR Topic 196	5/04	4
Develop ACR BIRADS/BCSC Standardized Computerized Mammography Data Systems	SBIR Topic 202	5/04	2
Loan Repayment		5/04	334
Epidemiological Studies of the Mayak River Cohorts	RFP CP41003-13	10/04	1
Epidemiological Studies of the Techa River Cohorts	RFP CP41005-13	10/04	1
Neuropsychological Testing for Children and Adults with Chronic Medical Illness	RFP RC-47007-30	10/04	1
Preclinical Pharmacological Studies of Antitumor and Anti-HIV Agents	RFP CM47015-45	10/04	10
Total			420

<sup>\*</sup> Note: Total 2004: 420 proposals were reviewed. Jan 04: one MAA (5 proposals); two RFPs (8 proposals). May 04: one BAA (7 proposals); one RFP (3 proposals); 14 SBIRs (50 proposals); two Loan Repayment Programs (334 reviewed). Oct 04: four RFPs (13 proposals).

# Appendix A: Activities of the National Cancer Advisory Board

Originally established as the National Advisory Cancer Council in 1937, the NCAB consists of 18 members who are appointed by the President and 12 nonvoting *ex officio* members. The NCAB advises, assists, consults with, and makes recommendations to the Secretary, DHHS, and to the NCI Director with respect to the activities carried out by and through the Institute and on policies pertaining to these activities. It is authorized to recommend support for grants and cooperative agreements, following technical and scientific peer review. The Director of the DEA serves as Executive Secretary of the NCAB. In fulfilling its role as the locus for second-level review of all peer-reviewed applications involving requests for more than \$50,000 in direct costs, the Board reviewed a total of 7,439 applications in FY2004.

The Board heard presentations, discussed, and provided advice on a variety of topics and NCI activities in FY2004, such as:

- NCI Director's Report
- President's Cancer Panel Report
- Legislative Update
- Ad Hoc Subcommittee on Biomedical Technology Workgroup Report: Advanced Technology Initiatives for Cancer
- The Science of Nanotechnology
- Current Ethics Issues
- Conflict of Interest Issues at NIH
- Grants Success Rate Report
- NCI International Activities
- New Mark Hatfield NIH Clinical Research Center
- PRG Report: Cancer Health Disparities
- NCI Bypass Budget Progress Report
- Center for Strategic Dissemination Update
- Office of Communications Update
- Subcommittee Reports: Activities and Agendas, Cancer Centers, Communications, Clinical Investigations, Planning and Budget

- Ad Hoc Subcommittee Reports: Bioinformatics and Vocabulary, Biomedical Technology, Communications, Confidentiality
- Director's and Joint Board Retreat Reports
- Strategic Leadership To Accelerate the Prevention and Cure of Cancer—The Vital Role and Responsibility of the AACR
- Current Imaging Issues, Including CT Colonography
- Sarcoma Progress Review Group Report
- NCI Annual Report and New Bypass Budget
- Tumor Microenvironment
- NCI Energy Balance Priorities: New Initiatives and Research Highlights
- Overview of CTEP Clinical Trials and Data
- Overview of Bioterrorism/Bioradiation Study and NCI/NIAID Collaborations
- Health Care Delivery Update
- NIH Roadmap Initiatives
- Cancer Nanotechnology Strategic Plan
- Clinical Trials Workgroup Status Report
- Fiscal 2004 Budget Update
- Nanotechnology Strategic Initiatives
- Task Force on Advanced Biomedical Technology Initiative
- Program Review of the Center for Cancer Research
- Role of DNA Breaks in Genomic Instability and Cancer
- TGF-Betas in Cancer Progression: Complex Roles and Therapeutic Opportunities
- Mapping Molecular Network Interconnections Using Protein Microarrays for Patient Tailored Therapy
- Oncologic Imaging: Anatomic, Functional, and Molecular

- Integrating Immunotherapy Into Cytotoxic Regimens: Pediatric Sarcomas as a Model
- Design, Development, and Delivery of Recombinant Vaccines for the Therapy of Human Carcinomas
- Intramural Re-Engineering Initiative
- Think Tank Task Forces for Long-Range Scientific Planning
- National Bio-Specimen Network Initiatives
- NCAB Retreat Report

As part of its mandate for oversight of NCI activities, the NCAB receives regular updates from the NCI Director, the NCI Office of Legislation and Congressional Activities, the President's Cancer Panel, and the National Cancer Policy Board.

Another major role of the Board is to monitor the overall advisory and oversight activities of the NCI as a whole. In that regard, it annually reviews the site visit outcomes of intramural review and the extramural RFA and RFP concepts acted upon by the BSA. The NCAB also participates in the framing of the annual NCI Bypass Budget and considers the impact of actualized priorities as expressed by the allocation of the annual operating budget.

The full text of recent NCAB meeting summaries is available on the NCI Web site at: http://deainfo.nci.nih.gov/advisory/ncabminmenu.htm.

## Appendix B: Activities of the Board of Scientific Advisors

The BSA provides scientific advice on a wide variety of matters concerning scientific program policy, progress, and future direction of NCI's extramural research programs, and concept review of extramural program initiatives.

In addition to approving a number of extramural program initiatives (see below), the BSA also heard presentations on the following in FY2004:

- Report of the Director
- NCI/Congressional Relations
- Grant Paylines and Trends in Applications
- Annual Ethics Overview and NIH Conflict of Interest Issues
- Current Ethics Issues
- NIH Roadmap Initiatives
- Summary of RPG Working Group Discussion
- Perspectives of the IOM Report
- Gene Expression Profiling of Lymphoid Malignancies and the Applications to Clinical Trials
- Applications of New Technologies in Clinical Research
- Evaluating Breast Cancer Screening Performance in Practice
- Management of Bio-Repository Initiative
- P30/P50 Working Group Report: P30 Implementation Plan
- Re-Evaluation of Paylist Report: Keep, Change, or Discard
- BSA at National Meetings
- Specimen Resources Subcommittee Update
- BSA Concepts Review Report
- Improving the Quality of Cancer Care
- Cancer Bioinformatics Grid (CaBIG) Update
- Clinical Trials for Cancer Prevention
- Clinical Trials Working Group Report
- NCI Alliance for Nanotechnology in Cancer
- Annual Report to the Nation on the Status of Cancer

- Management of Bio-Specimen Resources and FDA/NCI Task Force
- NCI/CMS Collaborative Activities

### **RFA Concepts Approved**

#### Office of the Director

- NCI Interdisciplinary Cancer Research Career Development (K25) Award for Quantitative Scientists
- NCI Alliance for Nanotechnology in Cancer

#### **Division of Cancer Prevention**

- Circulating Cells in Cancer Detection
- Reducing Barriers to Effective Symptom Management and Palliative Care

### Division of Cancer Control and Population Sciences

Transdisciplinary Research on Energetics and Cancer (TREC)

### **RFP Concepts Approved**

### Division of Cancer Control and Population Sciences

- Laboratory Assessment of Tobacco Use Behavior and Exposure to Toxins Among Users of New Tobacco Products Promoted To Reduce Harm
- Cancer Genetics Network

## Combined RFA/Cooperative Agreements Approved

#### Office of the Director

- Patient Navigation Research Program
- Community Networks To Reduce Cancer Disparities Through Education, Research, and Training

### Division of Cancer Treatment and Diagnosis

• Support for Human Specimen Banking in the Clinical Cooperative Groups—A Virtual National Specimen Bank

The full text of recent BSA meeting summaries is available on the NCI Web site at: http://deainfo.nci.nih.gov/advisory/bsaminmenu.htm.

### NCI Listens: BSA at National Association Meetings

#### Society of Behavioral Medicine (SBM)

Baltimore, MD, March 24-27, 2004 NCI Listens, Thursday, March 25, 2004

#### American Association for Cancer Research (AACR)

Orlando, FL, March 27-31, 2004

NCI Listens, Tuesday, March 30, 2004

#### **Oncology Nursing Society (ONS)**

Anaheim, CA, April 29-May 2, 2004

NCI Listens, Friday, April 30, 2004

Paula Kim...............Christine A. Miaskowski, R.N., Ph.D., F.A.A.N................Paulette S. Gray, Ph.D................

# Appendix C: List of Chartered Committees, FY2004

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Lester M. Crawford, D.V.M., Ph.D
Marianne Lamont Horinko
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Michael O. Leavitt

Rachel Levinson	Office of Science and Technology Policy, The White House
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	National Institute of Environmental Health Sciences, NIH
	U.S. Department of Veterans Affairs
	Consumer Product Safety Commission
· · · · · ·	
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Allen Dearry, Ph.D	National Institute of Environmental Health Sciences, NIH
Raynard Kington, M.D., Ph.D	National Institutes of Health
Peter Kirchner, Ph.D	
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	National Institute for Occupational Safety and Health
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<b>Executive Secretary</b>	
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Francine Renee Huckaby, M.P.H	University of Alabama at Birmingham
Candace S. Johnson, Ph.D	University of Pittsburgh Cancer Institute

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### Subcommittee C—Basic and Preclinical

Chair         Denise A. Galloway, Ph.D.       Fred Hutchinson Cancer Research Center
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James L. M. Ferrara, M.D.	
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Gloria C. Li, Ph.D.	
Lawrence G. Lum, M.D	
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### Subcommittee F—Manpower and Training

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Amy H. Bouton, Ph.D
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## Appendix D: NCI Initial Review Group Consultants, FY2004

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	Olson, Sara H., M.D., Ph.D.	
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	Pierce, John P., Ph.D.	· · · · · · · · · · · · · · · · · · ·
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	Gehan, Edmund A., Ph.D.	,
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	Gerlach, Robert, M.P.A., Ph.D.	
	Gewirtz, David A., Ph.D.	
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	Goff, Anne L., M.Ed.	•
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	Goldberg, Gregory I., Ph.D.	- ,
	Goldman, Anne Ipsen, Ph.D.	,
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Barton, Debra L., Ph.D.	,
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Millon-Underwood, Sandra N., Ph.D.	,
Mills, Sherry L., M.P.H.	
Minden, Mark D., M.D., Ph.D.	
Mirand, Amy L., Ph.D.	•
Mischel, Paul S., M.D.	,
Mishel, Merle H., Ph.D.	•
Mitchell, Edith P., M.D., Ph.D.	•
Mitra, Sankar, Ph.D.	,
Miyamoto, Suzanne, Ph.D.	,
Modugno, Francesmary, Ph.D.	,
Moin, Kamiar, Ph.D	•
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Moran, Elizabeth, Ph.D.	•
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Morgan, Jennifer F., MOTH	•
Morris, David R., Ph.D.	•
Moses, William W., Ph.D.	,
Moss, Steven F., M.D.	<u> </u>
	University of California-Los Alamos National Laboratory
Moyer, James D., Ph.D.	•
Moysich, Kirsten B., Ph.D.	
Mukhtar, Hasan, Ph.D.	•
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Muller-Sieburg, Christa E., Ph.D.	,
Munshi, Nikhil C., M.D., Ph.D.	,
Murphy, James R., Ph.D.	•
Mycek, Mary-Ann, Ph.D	
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	Myers, Cynthia D., Ph.D	.H. Lee Moffitt Cancer Center and Research Institute
	Mysliwiec, Pauline A., M.D	
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IN	Nabors, Louis B., M.D.	,
	Nace, G. Stephen, M.D.	,
	Nadkarni, Prakash M., M.D.	,
	Nair, Muraleedharan G., Ph.D	,
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	Nelson, Heidi D., M.D., Ph.D	.Providence Portland Medical Center
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	Nelson, Robert S., Ph.D.	.San Diego State University
	Nelson, Sarah J., Ph.D.	,
		.Indiana University-Purdue University at Indianapolis
	Newbold, Susan K., R.N	, , , , , , , , , , , , , , , , , , , ,
	Newcomb, Elizabeth W., Ph.D.	•
	Newcomer, Marcia E., Ph.D	•
	Newell, Jonathan C., Ph.D.	,
	Newman, Edward M., Ph.D.	,
	Nguyen, Bang H., Dr.P.H.	, .
	Nicholas, Barbara L., R.N.	
	Nichols, Craig R., M.D.	•
	Nicholson, Henry, M.D.	,
	Nickles, Robert J., Ph.D.	,
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	Nielsen, Ulrik B., Ph.D.	
	Nies, Mary A., Ph.D.	,
	Niland, Joyce C., Ph.D.	,
	Niles, Richard M., Ph.D.	•
	Nilsen-Hamilton, Marit, Ph.D.	,
	Ning, Ruola, Ph.D.	•
	Nitiss, John L., Ph.D	•
	Noonan, Frances P., Ph.D	,
	Noring, Lois E., R.N.	•
	Norman, Sandra L., Ph.D	.University of Pennsylvania
	Normolle, Daniel P., Ph.D	.University of Michigan
	North, William G., Ph.D.	.Dartmouth College
0	O'Brien, Mary K., Ph.D.	MCP Hahnemann University
	O'Brien, William D., M.D., Ph.D.	•
	O'Dorisio, M. Susan, M.D., Ph.D.	,
	O'Leary, Timothy J., M.D., Ph.D.	•
	C Learly, Timothy J., WI.D., FH.D.	American region y of rathology, IIIC.

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	Otis, Linda L., Ph.D.	University of Pennsylvania
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	Pan, Wei, Ph.D.	,
	Pan, Yingtian, Ph.D.	,
	Papke, Roger L., M.D., Ph.D.	,
	Pardo, Francisco S., M.D., Ph.D.	
	Paris, Mark J., Ph.D.	
	Paris, Pamela L., Ph.D.	. University of California, San Francisco
	Park, Elyse R., Ph.D.	,
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	Patt, Bradley E., Ph.D	Gamma Medica, Inc.
	Patterson, Ruth E., Ph.D	Fred Hutchinson Cancer Research Center
	Pavlovic, Vladimir, Ph.D	Rutgers The State University of New Jersey
	Pearman, Timothy, Ph.D	Tulane University
	Pederson, Linda L., Ph.D.	Drexel University
	Pellett, Philip E., Ph.D.	Cleveland Clinic Lerner College of Medicine-CWRU
	Pelling, Jill C., Ph.D.	,
	Pence, Barbara C., Ph.D.	Texas Tech University Health Science Center
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	Pereira, Edna F., Ph.D.	University of Maryland, Baltimore
	Pereira, Michael A., Ph.D.	•
	Perez-Perez, Guillermo I., M.D., Ph.D	,
	Pergolizzi, Robert G., Ph.D.	,
	Perkins, Edward L., Ph.D.	,
	Perry, David, Ph.D.	· · · · · · · · · · · · · · · · · · ·
	Perucho, Manuel C., Ph.D.	
	Petasis, Nicos A., Ph.D.	,
	Petersen, Gloria M., Ph.D.	Mayo Clinic College of Medicine, Rochester
	Peterson, Leif E., Ph.D.	,
	Petrick, Nicholas, Ph.D	U.S. Food and Drug Administration

	D. (( D :	Here is a CV and Part Co.
	Petroff, Brian K., Ph.D.	,
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	Pfarr, Curt M., Ph.D.	•
	Pfister, David G., M.D	
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	Platz, Elizabeth A., Ph.D.	,
	Plymate, Stephen R., M.D.	,
	Pogribny, Igor P., Ph.D.	,
	Pogue, Brian W., Ph.D.	
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	Polk, D. Brent, M.D.	•
	Pollack, Jonathan W., M.D., Ph.D.	,
	Pollard, Jeffrey C., Ph.D.	•
	Pollock, John G., Ph.D.	,
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R	Rabinovitch, Peter S., M.D., Ph.D	.University of Washington
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	Rai, Shesh, Ph.D.	,
	Rakhmilevich, Alexander, M.D., Ph.D	•
	Ramsey, Scott D., M.D., Ph.D.	,
	Rangnekar, Vivek M., Ph.D.	
	Rao, Chinthalapally V., Ph.D.	, ,
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	Raschke, William C., Ph.D.	,
	Ratliff, Timothy L., Ph.D.	,
	Raz, Avraham, Ph.D.	•
	Reader, Steven, Ph.D.	,
	Recklitis, Christopher J., Ph.D.	
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Reilly, Richard Todd, Ph.D	.Johns Hopkins University
Reiser, Jakob, Ph.D	.Louisiana State University Health Sciences Center at New Orleans
Reiter, Robert J., M.D	.University of California, Los Angeles
Ren, Bing, Ph.D.	.Ludwig Institute for Cancer Research
Resat, Marianne Sowa, Ph.D	.Pacific Northwest National Laboratory
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Rhodus, Nelson L., M.P.H., M.S	.University of Minnesota
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Richards, Nigel Gordan John, Ph.D	.University of Florida
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Ridge, John A., M.D., Ph.D	
Rimer, Barbara K., Dr.P.H.	.University of North Carolina at Chapel Hill
Rindfleisch, Thomas C., Ph.D	.Skolar, Inc.
Ripmeester, John A., Ph.D.	.National Research Council, Canada
Risendal, Betsy C., Ph.D.	
Ritenbaugh, Cheryl K., Ph.D.	.National College of Naturopathic Medicine
Rithidech, Kanokporn, Ph.D	.State University of New York at Stony Brook
Roach, Nancy	
Roberts, Charles T., Ph.D.	
Roberts-Gray, Cynthia R., Ph.D.	,
Robinson, Michelle A., D.M.D., M.A	
Rodgers, Wendy, Ph.D.	-
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Roemer, Peter B., Ph.D.	•
Rogers, Buck A., Ph.D.	
Romkes, Marjorie, Ph.D	,
Rosen, Eric L., M.D.	•
Rosen, Neal L., M.D., Ph.D.	,
Rosenbek, John C., Ph.D.	•
Rosenfeld, Steven S., M.D., Ph.D.	•
Ross, Susan R., Ph.D.	,
Rothman, Douglas L., Ph.D	, ,
Roussos, Stergios T., Ph.D.	•
Rowe, David T., Ph.D.	,
Rowitch, David H., M.D., Ph.D.	,
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	.University of Medicine and Dentistry of New Jersey
Ruccione, Kathy, R.N.	·
Rudolph, Johannes, Ph.D.	
Ruibao, Ren, Ph.D.	•
Runge-Morris, Melissa A., M.D.	•
Rush, John E., Ph.D.	·
Ruth, Thomas J., Ph.D.	c c,
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S	Sachs, David P., M.D.	Stanford University
	Sahler, Ollie Jane Z., M.D.	,
	Said, Jonathan W., M.D., Ph.D.	,
	Saigal, Christopher, M.D.	,
	Sanders, Jean E., M.D.	,
	Sarkar, Fazlul H., Ph.D.	,
	Sarkar, Susanta K., Ph.D.	•
	Sashin, Donald, Ph.D.	
	Satia, Jessie A., Ph.D.	,
	Sauro, Herbert M., Ph.D.	,
	Sawaya, Raymond E., M.D.	•••
	Schaffer, James David, Ph.D.	•
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	Schmiegelow, Kjeld, M.D.	.The University Hospital, Copenhagen
	Schnall, Mitchell D., M.D., Ph.D.	.University of Pennsylvania
	Schnoll, Robert A., Ph.D.	Fox Chase Cancer Center
	Schoen, Robert E., M.D., M.P.H.	.University of Pittsburgh
	Schoenberg, Mark P., M.D.	.Johns Hopkins University
	Schoenfeld, Philip S., M.D	.University of Michigan, Ann Arbor
	Scholnick, Steven B., Ph.D.	.Washington University
	Schrag, Deborah, M.D.	.Sloan-Kettering Institute for Cancer Research
	Schroeder, Jane, Ph.D.	•
	Schroy, Paul C., M.D., M.P.H.	.Boston Medical Center
	Schwartz, Anna L., Ph.D.	,
	Schwartz, Gary G., M.D., Ph.D.	•
	Schwartz, Jeffrey L., Ph.D.	· -
	Schwartz, Joel L., DOTH	· -
	Schwartz, Stuart, Ph.D.	,
	Scott, Charles B., Ph.D.	σ,
	Scott, Edward W., Ph.D.	,
	Searls, David B., Ph.D.	
	Semenov, Serguei Y., Ph.D.	
	Serody, Jonathan S., M.D., Ph.D.	•
	Seth, Arun, Ph.D	•
	Shalloway, David I., Ph.D.	
	Shamsuddin, Abulkalam M., M.D., Ph.D.	•
	Shannon, Jackilen, Ph.D.	
	Shapiro, Charles L., M.D.	,
	Shapiro, Geoffrey I., M.D., Ph.D.	,
	Sharlow, Elizabeth R., Ph.D.	
		.University of Arkansas Medical Sciences, Little Rock
	Shaw, Edward G., M.D.	
		.University of Texas M.D. Anderson Cancer Center
	Shi, Xiangrong, Ph.D.	•
	Shibata, Darryl K., M.D.	•
	Shields, Anthony F., M.D., Ph.D.	•
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Sidransky, David, M.D. .......Johns Hopkins University Singh, Raj, Ph.D. Sison, Cristina P., Ph.D. . . . . . . . . . . North Shore-Long Island Jewish Research Institute Sixbey, John W., M.D. . . . . . . . . . . Louisiana State University at Shreveport Smyth, Joshua M., M.D., Ph.D. ......North Dakota State University Spallone, Robert E., B.A. . . . . . . . . . . . . . . . . Fox Chase Cancer Center Spiegel, David, M.D. ......Stanford University Stevens, Victoria L., Ph.D. . . . . . . . . . . . . . . . . . American Cancer Society, Inc. Stick, Roberta S., DOTH ......Leukemia and Lymphoma Society Strickler, Howard D., M.D., M.P.H. . . . . . . . . . . . . Albert Einstein College of Medicine

Su, Yan A., M.D., Ph.D. . . . . . . . . . . . Loyola University at Chicago Syrjala, Karen L., Ph.D. . . . . . . . . . . . . . . . . Fred Hutchinson Cancer Research Center Taylor, Roger Edward, M.D. ........................Cookridge Hospital Taylor, Russell H., Ph.D. . . . . . . . . . . . . . . . . Johns Hopkins University Torok-Storb, Beverly J., Ph.D. . . . . . . . . . Fred Hutchinson Cancer Research Center Traynor, Dianne, B.S. . . . . . . . . . . . . Pediatric Brain Tumor Foundation of the United States . . . . . . . . . . . . . . . . Johns Hopkins University Treuth, Margarita S., Ph.D. Trimble, Cornelia L., M.D. ......Johns Hopkins University Tseng, Marilyn M., Ph.D. . . . . . . . . . . . . . Fox Chase Cancer Center Turker, Mitchell S., Ph.D. ....................Oregon Health and Science University Turkkan, Jaylan S., Ph.D. ......State University of New York at Buffalo

	Turkean James V. Dh.D.	.H. Lee Moffitt Cancer Center and Research Institute
	Tyagi, Suresh C., Ph.D.  Tyson, Charles A., Ph.D.	•
	ryson, Charles A., Ph.D.	.SKI IIITETIIATIOITAI
V	Vadaparampil, Susan T., Ph.D.	.H. Lee Moffitt Cancer Center and Research Institute
•	Vaidyanathan, Ganesan, Ph.D.	
	Valente, Philip T., M.D.	•
	Valentino, Daniel G., Ph.D.	•
	Valentovic, Monica A., Ph.D.	,
	Van Meir, Erwin G., Ph.D.	,
	Vannier, Michael W., M.D.	,
	Varani, James J., Ph.D.	,
	Varghese, Tomy, Ph.D.	,
	Vaughan, Thomas L., M.D., M.P.H.	•
	Veenstra, Timothy D., Ph.D.	
	Velicer, Wayne F., Ph.D.	
	Vera, David R., Ph.D.	,
	Verma, Ajit K., Ph.D.	
	Vieweg, Johannes W.G., M.D.	,
	Villanueva, Augusta M., Ph.D.	,
	Vimr, Eric R., Ph.D	•
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	Viswanath, Kasisomayajula, Ph.D	,
	Vitkin, Alex, Ph.D	
		.Utah-Battelle, LLCOak Ridge National Laboratory
	Voldman, Joel, Ph.D.	,
	Votaw, John R., Ph.D.	· · · · · · · · · · · · · · · · · · ·
	Vouros, Paul, Ph.D	•
	Vunjak-Novakovic, Gordana, Ph.D	,
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W	Wahl, Geoffrey M., Ph.D.	.Salk Institute for Biological Studies
	Wali, Ramesh K., Ph.D.	.Evanston Northwestern Healthcare
	Wallig, Matthew A., Ph.D.	.University of Illinois at Urbana
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	Wang, Tao, Ph.D.	.Medical College of Wisconsin
	Wang, Xiang-Dong, M.D., Ph.D.	•
	Wang, Yue J., M.D., Ph.D.	.Virginia Polytechnic Institute and State University
	Wangsness, Lori A	.Mayo Foundation
	Warburton, William K., Ph.D.	.X-ray Instrumentation Associates
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	Ward, John H., M.D.	.University of Utah
	Ward, Kenneth D., M.D., Ph.D.	.University of Hawaii at Manoa
	Ward, Pamela, Ph.D.	•
	Wargovich, Michael J., Ph.D.	
	Warren, Mary E., Ph.D.	.Genpathway, Inc.

Washington, Mary K., M.D., Ph.D	Vanderbilt University
Wasik, Mariusz A., M.D.	•
Weber, Michael J., Ph.D.	•
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Wei, Wei-Zen, Ph.D.	•
Weichert, Jamey P., M.D., Ph.D.	•
Weick, Martin P., Ph.D.	•
	. Ernest Orlando Lawrence Berkeley National Laboratory
Weinberg, Andrew D., Ph.D.	,
Weiner, Ronald E., Ph.D.	
Weiner, Susan L., Ph.D.	,
	Mount Sinai School of Medicine of New York University
Weis, Marcia R., MOTH	•
Weissman, Sherman M., M.D.	,
Welsh, Joellen, Ph.D.	,
Welsh, John T., Ph.D.	•
Wenzel, Lari B., Ph.D.	,
Westphall, Michael S., Ph.D.	•
Westra, William H., M.D.	•
Wetzel, Arthur W., Ph.D.	,
White, Donald B., Ph.D.	,
White, Forest M., Ph.D	•
Whiteside, Theresa L., Ph.D.	Ο,
Whitten, Pamela S., Ph.D.	,
Wiederhold, Mark D., M.D., Ph.D	Virtual Reality Medical Center
Wiemels, Joseph L., Ph.D.	University of California, San Francisco
Wiernik, Peter H., M.D.	Our Lady of Mercy Medical Center
Wiesenfeld, Martin, M.D	Cedar Rapids Oncology Project
Wiggs, Laurie, Ph.D.	Los Alamos National Laboratory
Wilbur, Joellen, Ph.D.	University of Illinois at Chicago
Williard, Paul G., Ph.D	Brown University
Wilson, Brian C., Ph.D	University of Toronto
Wilson, Thaddeus Andrew, Ph.D	University of Tennessee Health Science Center
Wilusz, Jeffrey, Ph.D.	Colorado State University, Fort Collins
Windsor, Richard A., Ph.D	George Washington University
Winn, Robert J., M.D.	Thomas Jefferson University
Wong, Albert J., M.D.	Thomas Jefferson University
Wong, Gilbert Y., M.D.	Mayo Clinic College of Medicine, Rochester
Wong, Lucas J., M.D.	Scott and White Memorial Hospital
Wood, Marie E., M.D., Ph.D.	,
Wood, Susan A., Ph.D.	· · · · · · · · · · · · · · · · · · ·
	Pennsylvania State University Milton S. Hershey Medical Center
Woodgett, James R., Ph.D.	Ontario Cancer Institute
Woods, Virgil L., M.D.	· · · · · · · · · · · · · · · · · · ·
Wrensch, Margaret R., Ph.D.	•
Wright, George B., Ph.D.	,
Wright, Kevin M., Ph.D.	•
Wright, Steven M., Ph.D.	Texas A&M University System

	Wu, Joseph D., Ph.D. Wu, Thomas C., M.D., Ph.D. Wu, Tzyy C., M.D., Ph.D. Wu, Xifeng, M.D., Ph.D. Wyrwicz, Alice M., Ph.D.	.Genentech, IncJohns Hopkins University .University of Texas M.D. Anderson Cancer Center
X	Xie, Keping, M.D., Ph.D	.University of Texas M.D. Anderson Cancer Center .Catholic University of America
Y	Yan, Lin, Ph.D. Yang, Chung S., Ph.D. Yang, Raymond S., Ph.D. Yang, Vincent W., M.D., Ph.D. Yankelevitz, David F., M.D. Yannelli, John R., Ph.D. Yawn, Barbara P., M.D., MOTH Yeatman, Timothy J., M.D. Yeazel, Mark W., M.D., M.P.H. Yee, Douglas, M.D. Yen, Yi-Fen, Ph.D. Younes, Mamoun, M.D. Young, Charles Y., Ph.D. Yu, Elena S., Ph.D. Yu, Herbert H., M.D., Ph.D. Yu, Yan, Ph.D. Yueh, Bevan, M.D.	Rutgers University, New Brunswick Colorado State University, Fort Collins Emory University Weill Medical College of Cornell University University of Louisville Olmsted Medical Group H. Lee Moffitt Cancer Center and Research Institute University of Minnesota, Twin Cities University of Minnesota General Electric Company Medical Systems Group Baylor College of Medicine Mayo Clinic College of Medicine, Rochester San Diego State University Yale University of Rochester
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Total Number of Reviewers: 1,256

Total Number of Times Reviewers Served: 1,667

# Appendix E: NCI Grant Guidelines and Descriptions

Below is a brief description of NIH grants, contracts, and extramural policy notices. Additional information about these and other administrative supplements to research grants, guidelines, study section rosters, and information on the Center for Scientific Review, NIH, may be obtained by contacting the NIH Referral Office, Division of Research, or see NCI's DEA Web page on Grants Guidelines and Descriptions at <a href="http://deainfo.nci.nih.gov/flash/awards.htm">http://deainfo.nci.nih.gov/flash/awards.htm</a>.

## C Series: Research Construction Programs

#### C06 Research Facilities Construction Grants

To provide matching Federal funds, up to 75 percent, for construction or major remodeling to create new research facilities. In addition to basic research laboratories, this may include, under certain circumstances, animal facilities and/or limited clinical facilities where they are an integral part of an overall research effort.

## F Series: Fellowship Programs

#### F31 Predoctoral Individual National Research Service Award (NRSA)

To provide predoctoral individuals with supervised research training in specified health and health-related areas leading toward a research degree (e.g., Ph.D.).

#### F31 Predoctoral Fellowship—Minority Students

A fellowship award that provides predoctoral minority students with supervised research training in specified health and health-related areas leading toward the research degree (e.g., Ph.D.).

#### F31 Predoctoral Fellowship—Students with Disabilities

A fellowship award that provides predoctoral students with disabilities with supervised research training in specified health and health-related areas leading toward the research degree (e.g., Ph.D.).

#### F32 National Research Service Award for Individual Postdoctoral Fellows

To provide postdoctoral research training to individuals to broaden their scientific background and extend their potential for research in specified health-related areas.

#### F33 National Research Service Award for Senior Fellows

To provide opportunities for experienced scientists to make major changes in the direction of research careers, broaden scientific backgrounds, acquire new research capabilities, enlarge command of an allied research field, or take time from regular professional responsibilities to increase capabilities to engage in health-related research.

# K Series: Career Development Programs

#### KOI The Howard Temin Award

An NCI-specific variant of the NIH Mentored Research Scientist Development Award that is designed to provide research scientists with an additional period of sponsored research experience as a way to gain expertise in a research area new to the applicant or in an area that would demonstrably enhance the applicant's scientific career.

## K01 Mentored Career Development Award for Underrepresented Minorities

To support scientists committed to research who are in need of both advanced research training and additional experience.

## KO5 Established Investigator Award in Cancer Prevention, Control, Behavioral, and Population Research

To support scientists qualified to pursue independent research that would extend the research program of the sponsoring institution, or to direct an essential part of this program.

## KO7 Cancer Prevention, Control, Behavioral, and Population Sciences Career Development Award

To support the postdoctoral career development of investigators who are committed to academic research careers in cancer prevention, control, behavioral, epidemiological, and/or the population sciences. It supports up to 5 years of combined didactic and supervised (i.e., mentored) research experiences to acquire the methodological and theoretical research skills needed to become an independent scientist. The very broad nature of the prevention, control, and population sciences makes it applicable to those individuals doctorally trained in the basic sciences, medicine, behavioral sciences, and public health. The K07 award has been expanded from a scope limited to "preventive oncology" to include the entire spectrum of fields that are of vital importance to cancer prevention and control such as nutrition, epidemiology, and behavioral sciences.

## KO8 Mentored Clinical Scientists Development Award

To provide the opportunity for promising medical scientists with demonstrated aptitude to develop into independent investigators, or for faculty members to pursue research in categorical areas applicable to the awarding unit, and to aid in filling the academic faculty gap in specific shortage areas within U.S. health professions institutions.

## K08 Mentored Clinical Scientists Development Award—Minorities in Clinical Oncology

A specialized type of Mentored Clinical Scientist Developmental Awards (K08s) that support the development of outstanding clinical research scientists, with this type being reserved for qualified individuals from under-represented minority groups. Both types of K08 awards support periods of specialized study for clinically trained professionals who are committed to careers in research and who have the potential to develop into independent investigators. The K08 awards for Minorities in Clinical Oncology are distinct and important because they provide opportunities for promising medical scientists with demonstrated aptitudes who belong to under-represented minority groups to develop into independent investigators, or for faculty members who belong to under-represented minority groups to pursue research aspects of categorical areas applicable to the awarding unit(s), and aid in filling the academic faculty gaps in these shortage areas within U.S. health professions institutions.

## K12 Institutional Clinical Oncology Research Career Development Award

To support a newly trained clinician appointed by an institution for development of independent research skills and experience in a fundamental science within the framework of an interdisciplinary research and development program.

#### K22 The NCI Transition Career Development Award for Underrepresented Minorities

To provide support to outstanding newly trained basic or clinical investigators to develop their independent research skills through a two-phase program: an initial period involving an intramural appointment at the NIH and a final period of support at an extramural institution. The award is intended to facilitate the establishment of a record of independent research by the investigator to sustain or promote a successful research career.

## K22 The NCI Scholars Program

To provide an opportunity for outstanding new investigators to begin their independent research careers, first within the special environment of the NCI and then at an institution of their choice. Specifically, this Program provides necessary resources to initiate an independent research program of 3 to 4 years at the NCI followed by an extramural funding mechanism (K22) to support their research program for 2 years at the extramural institution to which they are recruited.

## K23 Mentored Patient-Oriented Research Career Development Award

To provide support for the career development of investigators who have made a commitment to focus their research endeavors on patient-oriented research. This mechanism provides support for a 3-year minimum up to a 5-year period of supervised study and research for clinically trained professionals who have the potential to develop into productive clinical investigators.

## K23 Mentored Patient-Oriented Research Career Development Award for Underrepresented Minorities

To support the career development of investigators who have made a commitment to focus their research on patient-oriented research. This mechanism provides support for a period of supervised study and research for clinically trained professionals who have the potential to develop into productive clinical investigators in patient-oriented research.

## K24 Mid-Career Investigator Award in Patient-Oriented Research

To provide support for clinicians to allow them protected time to devote to patient-oriented research and to act as mentors for beginning clinical investigators. The target candidates are outstanding clinical scientists engaged in patient-oriented research who are within 15 years of their specialty training, who can demonstrate the need for a period of intensive research focus as a means of enhancing their clinical research careers, and who are committed to mentoring the next generation of clinical investigators in patient-oriented research.

#### K25 Mentored Quantitative Research Career Development Award

This award allows an independent scientist in a highly technical field of research to identify an appropriate mentor with extensive experience in cancer research and to receive the necessary training and career development required to become involved in multidisciplinary cancer research.

## P Series: Research Program Projects and Centers

#### POI Research Program Projects

To support multidisciplinary or multifaceted research programs that have a focused theme. Each component project should be directly related to and contribute to the common theme.

#### P20 Exploratory Grants

To support planning for new programs, expansion or modification of existing resources, and feasibility studies to explore various approaches to the development of interdisciplinary programs that offer potential solutions to problems of special significance to the mission of the NIH. These exploratory studies may lead to specialized or comprehensive centers.

## P30 Center Core Grants

To support shared use of resources and facilities for categorical research by investigators from different disciplines who provide a multidisciplinary approach to a joint research effort, or by investigators from the same discipline who focus on a common research problem. The core grant is integrated with the Center's component projects or Program Projects, though funded independently from them. This support, by providing more accessible resources, is expected to assure greater productivity than that provided through the separate projects and Program Projects.

## P50 Specialized Center Grants

To support any part of the full range of research and development from very basic to clinical; may involve ancillary supportive activities such as protracted patient care necessary to the primary research or R&D effort. This spectrum of activities comprises a multidisciplinary attack on a specific disease or biomedical problem area. These grants differ from Program Project grants in that they are usually developed in response to an announcement of the programmatic needs of an Institute or Division, and subsequently receive continuous attention from its staff. Centers also may serve as regional or national resources for special research purposes.

## R Series: Research Projects

#### **ROI** Research Project

Grants are awarded to institutions to allow a Principal Investigator to pursue a scientific focus or objective in his or her area of interest and competence. Institutional sponsorship assures the NIH that the institution will provide facilities necessary to conduct the research and will be accountable for the grant funds. Applications are accepted for health-related research and development in all areas within the scope of the NIH's mission.

## **R03** Small Research Grants

Small grants provide research support, specifically limited in time and amount, for activities such as pilot projects, testing of new techniques, or feasibility studies of innovative, high-risk research, which would provide a basis for more extended research.

#### R13 Conferences

The NIH provides funding for conferences to coordinate, exchange, and disseminate information related to its program interests. Generally, such awards are limited to participation with other organizations in supporting conferences rather than provision of sole support. Costs eligible for support include salaries, consultant services, equipment rental, travel, supplies, conference services, and publications. Prospective applicants are encouraged to inquire in advance concerning possible interest on the part of an awarding Institute/Center (IC), and to obtain more information on application procedures and costs.

#### R15 The NIH Academic Research Enhancement Awards (AREA)

To enhance the research environment of educational institutions that have not been traditional recipients of NIH research funds, this award provides limited funds to those institutions' faculty members to develop new research projects or expand ongoing research activities in health sciences and to encourage students to participate in the research activity. As funds are anticipated to continue to be available each year, the NIH is now inviting applications for AREA grants through a standing, ongoing Program Announcement.

## R21 Exploratory/Developmental Grants

To encourage the development of new research activities in categorical program areas. (Support generally is restricted in level of support and duration.)

## R24 Resource-Related Research Projects

To support research projects that will enhance the capability of resources to serve biomedical research.

## R25E Cancer Education Grant Program (CEGP)

A flexible, curriculum-driven program aimed at developing and sustaining innovative educational approaches that ultimately will have an impact on reducing cancer incidence, mortality, and morbidity, as well as on improving the quality of life of cancer patients. The CEGP accepts investigator-initiated grant applications that pursue a wide spectrum of objectives ranging from short courses; to the development of new curricula in academic institutions; to national forums and seminar series; to hands-on workshop experiences for the continuing education of health care professionals, biomedical researchers, and the lay community; to structured short-term research experiences designed to motivate high school, college, medical, dental, and other health professional students to pursue careers in cancer research. Education grants can focus on education activities before, during, and after the completion of a doctoral level degree, as long as they address a need that is not fulfilled adequately by any other grant mechanism available at the NIH, and are dedicated to areas of particular concern to the National Cancer Program.

## R25T Cancer Education and Career Development Program

To support development and/or implementation of a program related to a category in one or more of the areas of education, information, training, technical assistance, coordination, or evaluation.

## R33 Exploratory/Developmental Grants, Phase II

To provide a second phase for support of innovative exploratory and developmental research activities initiated under the R21 mechanism. Although only R21 awardees are generally eligible to apply for R33 support, specific program initiatives may establish eligibility criteria under which applications could be accepted from applicants who demonstrate program competency equivalent to that expected under R33.

## R37 Method to Extend Research in Time (MERIT) Award

To provide long-term grant support to investigators whose research competence and productivity are distinctly superior and who are highly likely to continue to perform in an outstanding manner. Investigators may not apply for a MERIT Award. Program staff and/or members of the cognizant National Advisory Council/Board will identify candidates for the MERIT Award during the course of review of competing research grant applications prepared and submitted in accordance with regular PHS requirements.

# Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

The NIH welcomes grant applications from small businesses in any biomedical or behavioral research area as described in the solicitations below. Support under the SBIR program is normally provided for 6 months/\$100,000 for Phase I, and 2 years/\$500,000 for Phase II. However, applicants may propose longer periods of time and greater amounts of funds necessary for completion of the project.

### R41 STTR Grants, Phase I

To support cooperative R&D projects between small business concerns and research institutions, limited in time and amount; to establish the technical merit and feasibility of ideas that have potential for commercialization.

#### R42 STTR Grants, Phase II

To support indepth development of cooperative R&D projects between small business concerns and research institutions, limited in time and amount, whose feasibility has been established in Phase I and that have potential for commercial products or services.

#### R43 SBIR Grants. Phase I

To support projects, limited in time and amount, to establish the technical merit and feasibility of R&D ideas that may ultimately lead to commercial products or services.

#### R44 SBIR Grants. Phase II

To support indepth development of R&D ideas whose feasibility has been established in Phase I that are likely to result in commercial products or services.

#### R55 James A. Shannon Director's Awards; Guidelines

To provide a limited award to investigators to further develop, test, and refine research techniques; perform secondary analysis of available data sets; test the feasibility of innovative and creative approaches; and conduct other discrete projects that can demonstrate their research capabilities and lend additional weight to their already meritorious applications.

## R56 High-Priority, Short-Term Project Award

Beginning in FY2005, this grant will fund, for 1 or 2 years, high-priority new or competing renewal R01 applications that fall just outside the limits of funding of the participating NIH Institutes and Centers; recipients of R56 awards will be selected by IC staff from R01 applications that fall at or near the payline margins. (Investigators may not apply for an R56 grant.)

## S Series: Research-Related Programs

#### SO6 Minority Biomedical Research Support (MBRS)

To strengthen the biomedical research and research training capability of ethnic minority institutions, and thus establish a more favorable milieu for increasing the involvement of minority faculty and students in biomedical research.

## SO7 Biomedical Research Support Grants (NCRR BRSG)

As an example of this funding mechanism, the NIH issued a Request for Applications (RFA) in FY2004 to provide short-term interim support for institutional activities that will strengthen oversight of human subjects research at institutions that receive significant NIH support for clinical research. Although there is considerable flexibility in the types of activities that could be supported under the BRSG program, this RFA emphasized the importance of efforts to enhance the protection of research subjects by means that will be sustained by the recipient institution after the award period ends. Awardees are also required to collaborate with other institutions conducting human subjects research and are not currently funded under this program, to share educational resources, computer technologies, best practices, etc. Although all NIH components supporting clinical research (including the NCI) are providing support for this program, it will be administered by the National Center for Research Resources (NCRR).

## S10 Biomedical Research Support Shared Instrumentation Grants (NCRR SIG)

The National Center for Research Resources (NCRR) initiated its competitive Shared Instrumentation Grant (SIG) Program in FY1982. Shared Instrumentation Grants provide support for expensive state-of-the-art instruments utilized in both basic and clinical research. This program is designed to meet the special problems of acquisition and updating of expensive shared-use instruments that are not generally available through other NIH funding mechanisms, such as the regular research project, program project, or center grant programs. Applications for funds to design or to advance the design of new instruments are not accepted. The objective of the program is to make available to institutions with a high concentration of NIH-supported biomedical investigators expensive research instruments that can only be justified on a shared-use basis and for which meritorious research projects are described.

## T Series: Training Programs

## T15 Continuing Education Training Grants

To assist professional schools and other public and nonprofit institutions in the establishment, expansion, or improvement of programs of continuing professional education, especially for programs of extensive continuation, extension, or refresher education dealing with new developments in the science and technology of the profession.

## NIH National Research Service Award—Institutional Research Training Grants

To enable institutions to make National Research Service Awards to individuals selected by them for predoctoral and postdoctoral research training in specified shortage areas.

## U Series: Cooperative Agreements

#### **UOI** Research Projects

To support a discrete, specified, circumscribed project to be performed by the named investigators in an area representing their specific interests and competencies.

#### U10 Cooperative Clinical Research—Cooperative Agreements

To support clinical evaluation of various methods of therapy and/or prevention in specific disease areas. These represent cooperative programs between participating institutions and Principal Investigators, and are usually conducted under established protocols.

#### U13 Conference—Cooperative Agreements

To coordinate, exchange, and disseminate information related to its program interests, an NIH Institute or Center can use this type of award to provide funding and direction for appropriate scientific conferences. These cooperative agreements allow the NCI to partner with one or more outside organizations to support international, national, or regional meetings, conferences, and workshops that are of value in promoting the goals of the National Cancer Program.

## U19 Research Program—Cooperative Agreements

To support a research program of multiple projects directed toward a specific major objective, basic theme, or program goal, requiring a broadly based, multidisciplinary, and often long-term approach.

## U24 Resource-Related Research Projects—Cooperative Agreements

To support research projects contributing to improvement of the capability of resources to serve biomedical research.

## U54 Specialized Center—Cooperative Agreements

To support any part of the full range of research and development from very basic to clinical; may involve ancillary supportive activities such as protracted patient care necessary to the primary research or R&D effort. The spectrum of activities comprises a multidisciplinary attack on a specific disease entity or biomedical problem area. These differ from program projects in that they are usually developed in response to an announcement of the programmatic needs of an Institute or Division and subsequently receive continual attention from its staff. Centers may also serve as regional or national resources for special research purposes, with assistance from staff of the funding component in identifying appropriate priority needs.

## U56 Exploratory Grants—Cooperative Agreements

To support planning for new programs, expansion or modification of existing resources, and feasibility studies to explore various approaches to the development of interdisciplinary programs that offer potential solutions to problems of special significance to the mission of the NIH. These exploratory studies may lead to specialized or comprehensive centers. Substantial Federal programmatic staff involvement is intended to assist investigators during performance of the research activities, as defined in the terms and conditions of award.

# Appendix F: Glossary of Acronyms

AACR	American Association for Cancer Research	DCCPS	Division of Cancer Control and Population Sciences
ACD	Advisory Committee to the Director	DCEG	Division of Cancer Epidemiology and Genetics
AISB	Applied Information Systems Branch	DCLG	Director's Consumer Liaison Group
ARA	Awaiting Receipt of Application	DCP	Division of Cancer Prevention
AREA	Academic Research Enhancement Award	DCTD	Division of Cancer Treatment and Diagnosis
ATA	Academic/Teacher Award	DEA	Division of Extramural Activities
BAA	Broad Agency Announcement	DEAIS	Division of Extramural Activities Information
BRSG	Biomedical Research Support Grant	DEAIS	System System
BSA	Board of Scientific Advisors	DEAS	Division of Extramural Activities Support
BSC	Board of Scientific Counselors	DHHS	U.S. Department of Health and Human Services
CaBIG	Cancer Bioinformatics Grid	EDD	Extramural Division Directors
ССОР	Community Clinical Oncology Program	EDRN	Early Detection Research Network
CCR	Center for Cancer Research	EPMC	Extramural Program Management Committee
CCSG	Cancer Center Support Grant	eRA	Electronic Research Administration
CD	Career Development	ESATTS	Extramural Science Administrator Training Tracking System
CD	Compact Disk	FACA	Federal Advisory Committee Act
CEGP	Cancer Education Grant Program	FDA	U.S. Food and Drug Administration
CIT	Center for Information Technology	FLAIR	Flexible System to Advance Innovative Research
CM	Committee Management	FLARE	Fiscal Linked Analysis of Research Emphasis
CMCR	Centers for Medical Countermeasures Against Radiation	FOP	Financial Operating Plan
CMO	Committee Management Office	FY	Fiscal Year
CMS	Centers for Medicare and Medicaid Services	GAO	Government Accountability Office
CMUG	Committee Management Users Group	GPRA	Government Performance and Results Act
COOP	Clinical Trials Cooperative Group Program	GSA	General Services Administration
CRCA	Clinical Research Curriculum Award	HHV	Human Herpesvirus
CRCHD			·
	Center to Reduce Cancer Health Disparities	HPV	Human Papillomavirus
CSR	Center for Scientific Review	HTLV	Human T-Cell Lymphoma/Leukemia Virus
СТЕР	Cancer Therapy Evaluation Program	IC	Institute/Center
CURE	Continuous Umbrella of Research Experience	ICMIC	In Vivo Cellular and Molecular Imaging Center
DCB	Division of Cancer Biology	IDeA	Institutional Development Award

IMPAC	Information for Management, Planning, Analysis, and Coordination—database	ORRPC	Office of Referral, Review, and Program Coordination
IOM	Institute of Medicine	OTIR	Office of Technology and Industrial Relations
IRG	Initial Review Group	PA	Program Announcement
IRM	Information Resources Management	PAR	Reviewed Program Announcement
ISTB	Information Services Technology Branch	PCP	President's Cancer Panel
IT	Information Technology	PCRB	Program Coordination and Referral Branch
LRP	Loan Repayment Program	PHS	Public Health Service (DHHS)
MAA	Master Agreement Announcement	PRG	Progress Review Group
MBCCO	Minority-Based Clinical Oncology Program	RAEB	Research Analysis and Evaluation Branch
MBRS	Minority Biomedical Research Support	REAP	Research Enhancement Awards Program
MEO	Most Efficient Organization	RFA	Request for Applications
MERIT	Method to Extend Research in Time	RFP	Request for Proposals
NCAB	National Cancer Advisory Board	RO	Referral Officer
NCI	National Cancer Institute	RPG	Research Project Grant
NCPB	National Cancer Policy Board	RPRB	Research Programs Review Branch
NCRR	National Center for Research Resources	RTRB	Resources and Training Review Branch
NIAID	National Institute of Allergy and	SBIR	Small Business Innovation Research
NIII	Infectious Diseases	SEP	Special Emphasis Panel
NIH	National Institutes of Health	SIC	Special Interest Category
NOW	NCI Online Workplace	SIG	Shared Instrumentation Grant
NRSA	National Research Service Award	SOP	Standard Operating Procedure
OCCAM	Office of Cancer Complementary and Alternative Medicine	SPORE	Specialized Program of Research Excellence
OCRT	Office of Centers, Training and Resources	SRA	Scientific Review Administrator
OD	Office of the Director	SREA	Scientific Review and Evaluation Award
ODDES	Office of the Deputy Director for	SRG	Scientific Review Group
OER	Extramural Sciences	SRLB	Special Review and Logistics Branch
	Office of Extramural Research	STTR	Small Business Technology Transfer Research
OFACP	Office of Federal Advisory Committee Policy	SV	Simian Virus
OGE	Office of Government Ethics	T&E	Training and Education
OMB	Office of Management and Budget	TREC	Transdisciplinary Research on Energetics
OPERA	Office of Policy for Extramural Research Administration	UV	and Cancer  Ultraviolet

## Appendix G: Cancer Information Sources on the Internet

## **DEA Web Sites**

The following Web sites are maintained by the DEA to provide detailed information to researchers and the public about NCI funding opportunities and the Advisory Boards and groups supported by the DEA.

## http://deainfo.nci.nih.gov/index.htm

DEA home page. Links to the individual DEA Web pages listed below; mission of the Division; contact information for DEA staff.

## http://deainfo.nci.nih.gov/advisory/Boards.htm

Links to the home pages of NCI's Advisory Boards.

#### http://deainfo.nci.nih.gov/advisory/pcp/pcp.htm

Charter of the President's Cancer Panel; meeting agendas; meeting minutes; annual reports.

#### http://deainfo.nci.nih.gov/advisory/ncab.htm

Charter of the National Cancer Advisory Board; members of subcommittees; meeting agendas.

## http://deainfo.nci.nih.gov/advisory/ncabminmenu.htm

Full text of NCAB meeting summaries.

#### http://deainfo.nci.nih.gov/advisory/bsa.htm

Charter of the Board of Scientific Advisors; members of subcommittees; meeting agendas.

## http://deainfo.nci.nih.gov/advisory/bsaminmenu.htm

Full text of BSA meeting summaries.

## http://deainfo.nci.nih.gov/advisory/bsa/bsa\_program/bsaprgr.htm

Program Review Group reports.

## http://deainfo.nci.nih.gov/advisory/bsc.htm

Charter of the Board of Scientific Counselors; members of subcommittees.

#### http://deainfo.nci.nih.gov/advisory/irg.htm

Charter of the Initial Review Group; members of subcommittees.

#### http://deainfo.nci.nih.gov/advisory/sep.htm

Charter of the Special Emphasis Panel; rosters of recent meetings.

## http://deainfo.nci.nih.gov/advisory/joint.htm

Charter of the Advisory Committee to the Director; meeting schedules, agendas, and minutes; members of NCI Director's Working Groups, Program Review Working Groups, and Progress Review Working Groups.

#### http://deainfo.nci.nih.gov/advisory/pog/progress/index.htm

Function and organization of Progress Review Groups; PRG reports and meeting schedules; members of PRGs.

## http://deainfo.nci.nih.gov/advisory/dclg/dclg.htm

Charter of the NCI Director's Consumer Liaison Group; meeting schedules, agendas, minutes, and meeting summaries.

#### http://deainfo.nci.nih.gov/funding.htm

Comprehensive information about funding for cancer research; lists of active PAs and RFAs; recently cleared concepts; grant policies and guidelines; downloadable application forms.

#### http://deainfo.nci.nih.gov/extra/pa/all pa.htm

Active PAs, with links to detailed descriptions.

## http://deainfo.nci.nih.gov/extra/rfa/index.htm

Active RFAs, with links to detailed descriptions.

## http://deainfo.nci.nih.gov/grantspolicies/index.htm

Links to full-text NCI and NIH policies related to grants and grant review (e.g., Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research and Instructions to Reviewers for Evaluating Research Involving Human Subjects in Grant and Cooperative Agreement Applications).

## http://deainfo.nci.nih.gov/flash/awards.htm

Grants Guidelines and Descriptions (descriptions of NCI funding mechanisms, with links to PAs, RFAs, guidelines, and supplemental materials).

## http://deais.nci.nih.gov/Query/QueryForm

NCI's Funded Research Portfolio database contains information about research grant and contract awards for the current and past 5 fiscal years. Searchable by text words contained in project abstracts and by Special Interest Category (SIC) and anatomic site codes.

#### http://deainfo.nci.nih.gov/whatsnew/news.htm

Extramural events and updates.

#### **NCI Web Sites**

The National Cancer Institute maintains a number of Web sites containing information about the Institute and its programs. All NCI Web sites, including those designed to provide cancer-related information to the general public and physicians, can be reached from the NCI home page at http://cancer.gov/.

cument can be viewed and downloaded http://deainfo.nci.nih.gov/





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