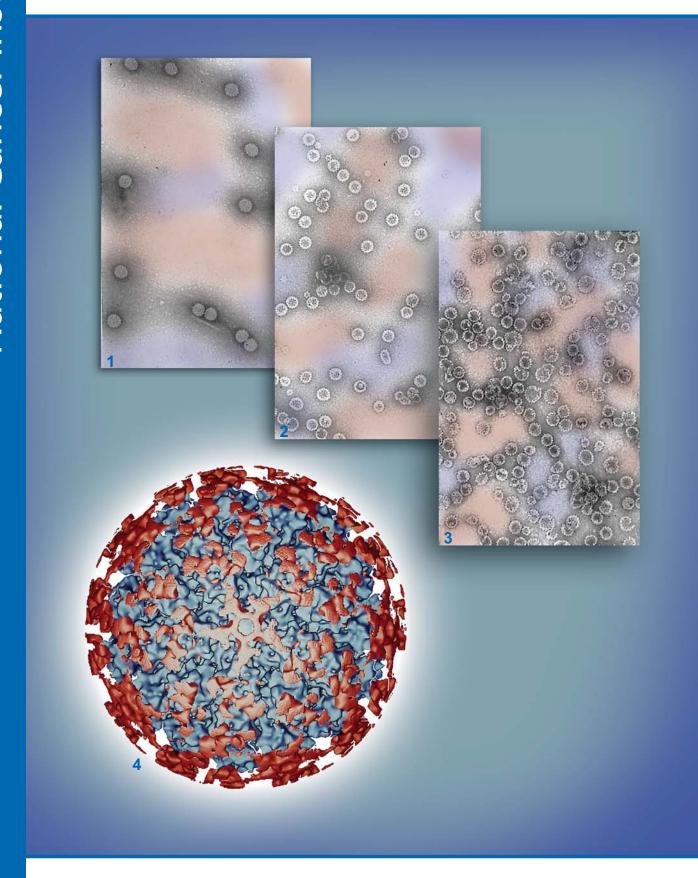
# Division of Extramural Activities Annual Report 2005



# A Vaccine To Prevent Cervical Cancer and Other Diseases Caused by HPV Infection

Research supported by the National Cancer Institute and other public sector agencies has shown that virtually all cases of cervical cancer, which is the second most common cause of female deaths from cancer worldwide, are attributable to persistent infection by a subset of human papillomaviruses (HPVs). The etiologic role of HPV implied that an effective prophylactic vaccine might be able to prevent this disease and other benign and malignant conditions induced by HPV. The presence of viral oncogenes in HPVs and the difficulties associated with propagating HPV suggested that a subunit vaccine approach would be preferred. The breakthrough observation in HPV vaccine development was that the viral L1 major capsid protein, when expressed in insect cells via a recombinant baculovirus vector, could self-assemble into virus-like particles (VLPs) that morphologically resembled authentic virions and induced high titers of neutralizing antibodies, which are usually the cornerstones of prophylactic vaccines. In animal papillomavirus models, strong protection against viral challenge was induced by immunization with L1 VLPs from the homologous virus, but not with denatured VLPs, which failed to induce neutralizing antibodies, or with L1 VLPs of a heterologous virus. Immune IgG could transfer protection, further implicating neutralizing antibodies as conferring protection. Human clinical trials indicated that L1 VLP vaccines were well tolerated and conferred close to 100 percent protection, lasting at least 3.5 years, against persistent infection and disease induced by the HPV types targeted by the vaccines. A commercial quadrivalent vaccine composed of L1 VLPs from HPV6, 11, 16, and 18 (Gardasil™, manufactured by Merck) was licensed by the Food and Drug Administration in 2006 for females 9-26 years old. HPV 16 and 18 account for about 70 percent of cervical cancer, but HPV6 and 11 account for about 90 percent of genital warts. Thus, the quadravalent vaccine has the potential to prevent a majority of cervical cancers, and an even higher proporton of genital warts. A bivalent commercial vaccine composed of L1 VLPs from HPV16 and 18, which primarily targets cervical cancer and its precursors, is also in phase III trials (Cervarix<sup>™</sup>, manufactured by GlaxoSmithKline).

Cover Images: 1. Authentic bovine papillomavirus virions; 2. Bovine papillomavirus-like particles; 3. Human papillomavirus-like particles; 4. 3-D reconstruction of cryo-electron micrograph of authentic papillomavirus virion (blue) coated with neutralizing antibody (red). Images 1-3 courtesy of Drs. Doug Lowy and John Schiller, NCI. Image 4 courtesy of Benes Trus, CIT, NIH, and Dr. John Schiller, NCI. Narrative: Courtesy of Dr. Doug Lowy, NCI.

#### References:

Kirnbauer R, Booy F, Cheng N, Lowy DR, and Schiller JT. Papillomavirus L1 major capsid protein self-assembles into virus-like particles that are highly immunogenic. Proc Natl Acad Sci USA 1992;89:12180-4.

Breitburd F, Kirnbauer R, Hubbert NL, Nonnenmacher B, Trin-Dinh-Desmarquet C, Orth G, Schiller JT, and Lowy DR. Immunization with virus-like particles from cottontail rabbit papillomavirus (CRPV) can protect against experimental CRPV infection. J Virol 1995;69:3959-63.

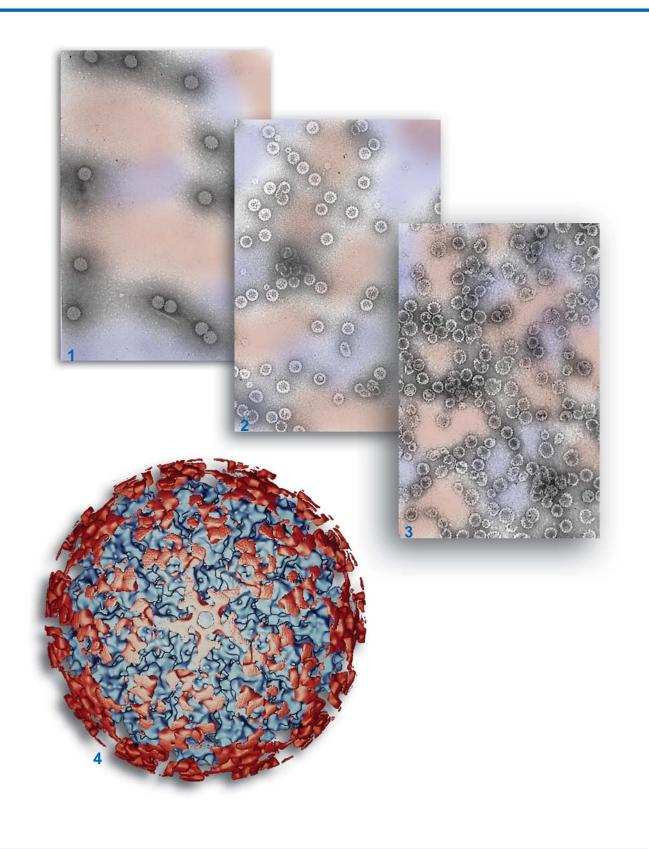
Suzich JA, Ghim S, Palmer-Hill FJ, White WI, Tamura JK, Bell J, Newsome JA, Jenson AB, and Schlegel R. Systemic immunization with papillomavirus L1 protein completely prevents the development of viral mucosal papillomas. *Proc Natl Acad Sci USA* 1995;92:11553-7.

Villa LL, Costa RL, Petta CA, Andrade RP, Ault KA, Giuliano AR, Wheeler CM, Koutsky LA, Malm C, Lehtinen M, Skjeldestad FE, Olsson SE, Steinwall M, Brown DR, Kurman RJ, Ronnett BM, Stoler MH, Ferenczy A, Harper DM, Tamms GM, Yu J, Lupinacci L, Railkar R, Taddeo FJ, Jansen KU, Esser MT, Sings HL, Saah AJ, and Barr E. Prophylactic quadrivalent human papillomavirus (types 6, 11, 16, and 18) L1 virus-like particle vaccine in young women: a randomised double-blind placebo-controlled multicentre phase II efficacy trial. *Lancet Oncol* 2005;6:271-8.

Mao C, Koutsky LA, Ault KA, Wheeler CM, Brown DR, Wiley DJ, Alvarez FB, Bautista OM, Jansen KU, and Barr E. Efficacy of human papillomavirus-16 vaccine to prevent cervical intraepithelial neoplasia: a randomized controlled trial. *Obstet Gynecol* 2006;107:18-27.

Harper DM, Franco EL, Wheeler C, Moscicki A-B, Romanowski B, Roteli-Martins CM, Jenkins D, Schuind A, Costa Clemens SA, and Dubin G. Sustained efficacy up to 4-5 years of a bivalent L1 virus-like particle vaccine against human papillomavirus types 16 and 18: follow-up from a randomised control trial. *Lancet* 2006;367:1247-55.

# Division of Extramural Activities Annual Report 2005



# Contents

Foreword .		V
Introductio		
Overview c	of the Division of Extramural Activities	3
Special Act	ivities in the Office of the Director, DEA	5
Grant Refe	rral: A First Point of Contact for NCI Grantees and Applications	7
Organizatio	Publication	
Table Ia.	Requests for Applications (RFAs) Published by the NCI in FY2005 Sorted by Date	
	of Publication	53
Table 1b.	Requests for Applications (RFAs) Published by the NCI in FY2005 Sorted	
Table 2.	NCI Participation in Trans-NIH Requests for Applications (RFAs), FY2005	54
Table 3a.		
	of Publication	54
Table 3b.		
	by Division and Office	55
Table 4.		г.с
T.I.I. F		
Table 5.		5 /
Table 6.		ΕO
Table 7.	Applications Parisayed by NCLIPC Subsammittees and Special Emphasis Danals (SEDs)	59
lable /.		61
Table 8.		01
idule 6.		61
Table 9.	Summary of Uncoligited POL Applications Pavioused Sorted by NCI Program Division	01
iable 5.	FV2005	62
Table 10.	Requests for Applications (REAs) Reviewed by the NCI/DEA FY2005	63
Table 11.		
Table 12.	Average Total Cost and Number of RPG† Awards by Division	02
idole 12.	FY2002-FY2005	68
Table 13.	Summary of NCI Grant Awards by Mechanism FY2005	70
Table 14.	NCI Special Interest Category (SIC) Dollars for FY2001-FY2005—Applial Percent Change	73
Table 15.	NCI Organ Site-Specific Dollars for FY2001-FY2005—Annual Percent Change	76
Table 16.		
Annandiy A	Activities of the National Cancer Advisory Roard	90
Appendix A		ou rs
Appendix C		
Appendix C		
Appendix E		
Appendix F		
Appendix C		157
* *PPCHUIA C	· • • • • • • • • • • • • • • • • • • •	· · · · · · /

<sup>†</sup> Research Project Grant.



#### **Foreword**

Last year, for the first time since 1930 when collection of mortality statistics on cancer in the United States began, the number of cancer deaths in the United States decreased. Though the decrease was modest, it was nevertheless an historic marker of our progress against cancer. Years of dedicated intramural and extramural research sponsored by the National Cancer Institute (NCI) have greatly contributed to this progress. Such research has unearthed a combination of enhanced prevention strategies, earlier detection, and better treatment once the disease has been diagnosed, which has led to the first documented downturn in cancer deaths.

The NCI continues to promote and support such advances in research. Our investment in scientists and their science through the peer review

system of individual grants allows for the flexibility and creativity that has yielded and will continue to yield great dividends. The Division of Extramural Activities (DEA) plays a crucial role in supporting NCI's goal of excellence in peer review. By coordinating the scientific review of extramural research prior to funding, and by providing systematic surveillance of that research after awards are made, the DEA consistently provides the highest quality and most effective scientific peer review and oversight of extramural research.

I offer my congratulations and gratitude to the many dedicated DEA staff that have contributed to this annual report, as well as to the coordination of the extramural enterprise.

John E. Niederhuber, 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 and current applicants;
- Coordinate and assist in the development and publication 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 research.

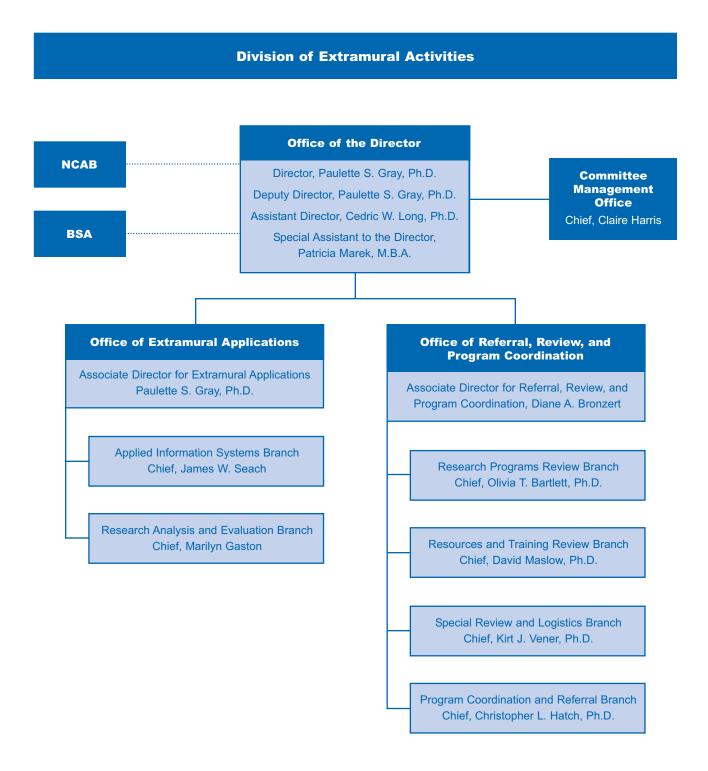
In essence, the DEA is the organizational component of the NCI that coordinates the scientific and merit review of extramural research by peer review groups and advisory boards before funding and provides systematic surveillance of that research after awards are made. In this latter role, the DEA assists 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 the development and dissemination of 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.\*<sup>†</sup>

This DEA annual report describes activities that occurred during Fiscal Year (FY) 2005 (October 1, 2004—September 30, 2005). Receipt, referral, and review of grant applications generally occur from 1 to 3 months prior to either January, May, or September NCAB meetings. Applications are therefore, normally reviewed in the fall, spring, or summer prior to a January, May, or September 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 (NCAB) and the concept review of all new and reissued RFAs and RFPs with the Board of Scientific Advisors (BSA) (see **Appendixes A and B**). In addition, the DEA tracks new funding initiatives proposed by other NIH Institutes, Centers, and Federal 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 for 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), an established NIH service center, provides oversight of all NCI chartered advisory committee, working groups, task forces, chartered review groups, the National Center for Complementary and Alternative Medicine Council, and a DHHS chartered advisory committee. The CMO ensures that the NCI and client Institutes operate within the appropriate Federal Advisory Committee Act (FACA), the Government in Sunshine Act, and various other policies, procedures, and guidelines. The CMO supports 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, Notices, and RFPs, and, finally, through the peer review of grant applications and contract proposals. The **Office of Referral, Review, and Program Coordination** (ORRPC) with four branches was established within the DEA for coordination of grant referral, for development and issuance of NCI program initiatives, and for the management of review activities. Review activities include the organization and management of peer review for all RFAs, research and development RFPs, and Program Announcements with Special Receipt (PARs) using specialized research grant and cooperative agreement mechanisms. The program coordination responsibilities of the DEA, in cooperation with NCI Extramural Program Divisions and Offices, extend to the development of all new extramural program guidelines and funding opportunities.

Another program coordination activity is the development and maintenance 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 NCI Internal Referral Guidelines, which 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 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** (OEA), 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 (http://deainfo.nci.nih.gov/funding.htm) and NCI limited-access Intranet versions.

## 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 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 that 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 DEA Director has the authority to grant this waiver. In FY2005, 27 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 research 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 research misconduct for transmittal and reporting to relevant sources. In FY2005, eight cases of alleged research misconduct were opened by the Office of Research Integrity, DHHS, and referred to the Director, DEA. Four cases were closed, and none of the cases were found to involve misconduct. The other cases are open, pending resolution.

## Program Coordination: A Resource for New Initiatives

As the NCI plans new strategic initiatives, the DEA performs critical functions for the NCI and its "customers" by providing expert assistance to NCI program staff members as they work to develop and publish funding opportunity announcements (FOAs) for scientific initiatives (also called Requests for Applications [RFAs] and Program Announcements [PAs]). In providing this service, members of the **Program Coordination and Referral Branch** (PCRB) work with the NCI program directors to appropriately write, organize, format, and edit their FOAs. To maintain consistency and completeness, all new NCI FOAs and guidelines are centrally edited and cleared through the DEA before being forwarded to the NIH Office of Extramural Research for approval and publication in the *NIH Guide for Grants and Contracts*. The services provided by the PCRB in preparing such announcements materially ensure accuracy, clarity, quality control, and timeliness throughout the development and publication processes. PCRB staff members also facilitate the dissemination of operating policies and procedures pertaining to extramural programs.

**Tables 1a** and **1b** show the variety of RFAs issued by the NCI in Fiscal Year (FY) 2005, and **Table 2** lists RFAs issued by other NIH institutes or centers that the NCI has joined as a participating partner. **Tables 3a** and **3b** show the variety of PAs issued by the NCI in FY 2005, and **Table 4** lists PAs issued by other NIH institutes or centers that the NCI has joined as a participating partner.

In 2005, the NIH began the process of transitioning to the electronic (instead of paper-based) submission of grant applications through Grants.gov (http://www.grants.gov), which is the Federal Government's online grant application submission portal of the Federal Government. The DEA will have the lead role in helping the NCI and its customers transition to the electronic submission of all types of grant applications over a 2-year period (i.e., from October 2005 through October 2007). During 2005, PCRB staff members were heavily involved in the reissuance of ongoing initiatives and the development of FOAs to accept the first electronic submissions of conference grant (R13) applications and the small business innovation research (SBIR) and small business technology transfer research (STTR) grant applications submitted in December 2005.

# Grant Referral: A First Point of Contact for NCI Grantees and Applications

In Fiscal Year (FY) 2005, the NCI received more than 12,000 grant applications for referral (see **Table 5**). These included applications for 50 different types of funding award mechanisms (see Appendix E), including the Investigator-Initiated Research Project (R01), Career Development Awards (K series), Research Program Project (P01), Cancer Center Support Grant (CCSG, P30), Specialized Program of Research Excellence (SPORE, P50), Small Research Project (R03), Exploratory/Developmental Project (R21); Phased Innovation Project (R21/R33); Small Business Technology Transfer (STTR) Grant (R41/42), Small Business Innovation Research (SBIR) Grant (R43/44), and U-series (Cooperative Agreements) mechanisms. 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 50 percent, while increases in R01, R21, and R03 have been 40 percent, 130 percent, and 103 percent, respectively (see **Figure 1**).

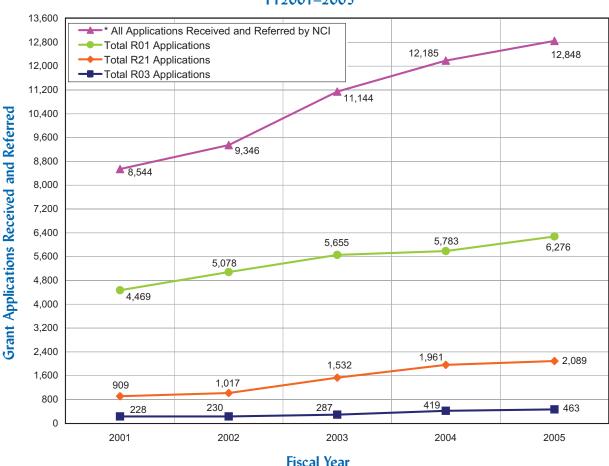


Figure 1. Receipt and Referral of NCI Applications\*
FY2001–2005

<sup>\*</sup> Includes NCI Primary applications received and referred.

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, DEA's **Program Coordination and Referral Branch** (PCRB) is responsible for receipt, referral, and assignment of applications, as well as for program (i.e., scientific initiative and funding opportunity) development functions. Upon receipt of primary and secondary assignments of applications 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 (and even other DHHS research funding agencies, such as the Agency for Healthcare Research and Quality [AHRQ] and the Centers for Disease Control and Prevention [CDC]). In 2005, PCRB referral staff members, in conjunction with program staff persons in virtually all of the NCI extramural research program areas, accomplished a complete revision and update of the NCI Internal Referral Guidelines.

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 those for P01 Program Projects, P30 Cancer Centers, P20 Planning Grants, P50 Specialized Centers, R13 Conference Grants, R03 Small Grants, certain R21/R33 Phased Innovation Grants, T32 Training Grants, certain R01 Research Project Grants, and U-series Cooperative Agreement awards.

The PCRB is often the first point of contact for applicants. It is the receipt point for the recipient of Letters of Intent (L01) from potential applicants for multiproject Program Grants (P01) and Conference Grants (R13). It is also the information and coordinating center for the submission of applications for the Academic Research Enhancement Award (AREA, R15) grants for research at institutions and organizations that have little or no current NIH grant award support; applicants contact PCRB for information about the program at the NCI, their eligibility to apply, the relevance of their proposed research to the missions of the various NCI programs, and the names and contact information of NCI program staff members who might be interested in their research and able to guide them in the application process.

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 (e.g., opportunities, mechanisms, policies, processes, procedures), new initiatives announced as RFAs or PAs (i.e., FOAs), and the review process. 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 applications and 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 managing the peer review of investigator-initiated Research Project (R01) grants and fellowships. It is less widely known, however, that grant applications representing more than 50 percent of the NCI's extramural budget are reviewed by chartered peer review groups that are directly formed and managed within the NCI by the DEA. Peer 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 peer reviewers who serve on CSR study sections. In contrast, members of the NCI IRG are selected by DEA review staff, with suggestions from program staff. All chartered DEA review subcommittee members are approved by the Director, NCI, based on their knowledge of the various disciplines and fields related to cancer. There are nine 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 grant applications received in response to RFAs or Program Announcements with Special Receipt (PARs) or other special applications. Members of such panels are selected on a one-time, as-needed basis to review specific grant applications, cooperative agreement applications, or contract proposals. (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 FY2005, the DEA organized, managed, and reported the review of a total of 2,401 grant and cooperative agreement applications assigned to NCI, 31 applications reviewed by the NCI for NIAID (see Table 6) and 471 NCI contract proposals (see Table 16). There were 444 fewer grant and contract proposals reviewed in FY2005 as compared with FY2004 (see Figure 2). The FY2005 change may be attributed to a decrease in the number of new RFA initiatives and transfer of several PARs involving imaging technology and SBIR/STTR applications to CSR for review (see Figure 5). Although the number of grant applications decreased, the actual workload remained at a similar level because of a doubling in complex multi-project applications (see Figure 3). Table 7 provides a summary of the applications reviewed by NCI IRG subcommittees and Special Emphasis Panels. Twenty-four meetings of the NCI IRG subcommittees were convened to review and evaluate grant applications of various types. In addition, there were 84 SEP meetings for review of grants or contracts, and 125 site visits (47 SEP and 78 IRG meetings). Approximately 2,000 reviewers served on either the parent IRG subcommittees or SEPs in FY2005 (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.

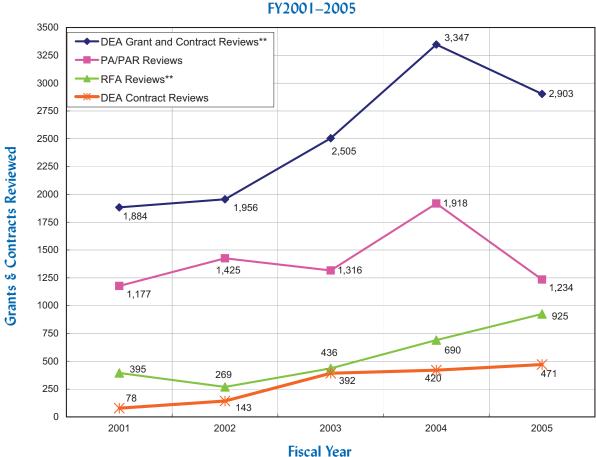


Figure 2. DEA Review Workload\*

Withdrawn applications are not included.

<sup>\*\*</sup> There were 31 applications reviewed by the NCI for the NIAID.

#### Bypass Budget Goals and Initiatives

Each year, the NCI identifies several broad priority categories that serve as the framework for strategic planning and budget development. In 2005, those categories were integrated to more closely align the research 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 four areas. These include: A. Core Scientific Areas; B. Areas of Public Health Emphasis; C. Platforms for Discovery, Development, and Delivery, and D. Enablers of Discovery, Development, and Delivery. As shown below, in FY2005 the Bypass Budget Initiatives translated into a variety of Funding Opportunity Announcements (FOAs), RFA, PA, or PAR initiatives, not only for academic research centers, but also for the small business community. These initiatives represent new research opportunities and areas of special emphasis for investigators. See **Tables 10 and 11** for the list of RFAs, PAs and PARs, number of applications reviewed by DEA in FY2005, and those initiatives that were linked to specific Bypass Goals.

FY2005 Bypass Budget Goals and Initiatives\*

Research Initiatives		
A.	Core Scientific Areas	# of RFAs/PARs
1.	Genes and the Environment	none
2.	Signatures of the Cancer Cell and Its Microenvironment	27/0
3.	Molecular Targets of Prevention, Diagnosis and Treatment	29/0
4.	Cancer Imaging and Molecular Sensing	6/1
В.	Areas of Public Health Emphasis	
5.	Tobacco and Tobacco-Related Cancers	none
6.	Energy Balance	2/0
7.	Quality of Cancer Care	4/0
8.	Cancer-Related Health Disparities	10/0
9.	Aging and Cancer	2/0
10.	Cancer Survivorship	2/0
C.	Platforms for Discovery, Development, and Delivery	
11.	Investigator-Initiated Research	14/1
12.	Centers, Networks, and Consortia	7/0
13.	Clinical Trials Program	8/4
D.	Enablers of Discovery, Development, and Delivery	
14.	Bioinformatics	10/3
15.	Communication	1/0

<sup>\*</sup> See Tables 10 and 11 for RFA, PAR, and PA titles, respectively linked to the above Bypass Budget Initiatives. A single RFA may include multiple bypass initiatives or research areas. For example, the National Cooperative Drug Discovery Groups for the Treatment of Cancer (see Table 10) includes elements of four initiatives identified above: 3, 4, 12, and 13.

<sup>†</sup> Funding Opportunity Announcement.

#### Highlights From Initiatives Reviewed by NCI in FY2005

#### Nanotechnology RFAs

During FY2005, the DEA coordinated the review of applications received in response to three Requests for Applications in the area of nanotechnology. In November and December, 2004, the NCI published RFAs for multidisciplinary U54 Centers of Cancer Nanotechnology Excellence, R01 Cancer Nanotechnology Platform Partnerships, and F32/F33 applications for Multidisciplinary Career Development in Cancer Nanotechnology Research. Because of the complexity of the RFAs, including specific eligibility and review criteria, DEA staff participated with NCI program staff in the NCI Office of Technology and Industrial Relations, which issued the RFAs, in a pre-application briefing for potential applicants. The briefing was held at the NIH Natcher Conference Center in February 2005. See **Table 10** for more information.

The review of the Centers for Cancer Nanotechnology Excellence applications (28 U54 applications) represented a unique peer review challenge due to the number and size of the applications, the diverse nature and complexity of the proposed research, and the very compressed receipt and review schedule. The applications averaged 600 pages in length and contained an average of seven projects and six core resources; in total, there were more than 400 separate components to review. The large number of potential assignments (approximately 900) necessitated the recruitment of 96 reviewers with expertise in multiple scientific disciplines. An invaluable collaboration was established between the Research Programs Review Branch and the Research Analysis and Evaluation Branch to facilitate the identification of potential reviewers with appropriate expertise and the planning of review logistics. In addition, staff in the Special Review and Logistics Branch (SRLB) played a major role in the development and implementation of several computer-based tools for identification of reviewer conflicts and assignment of reviewers. The review plan included coordination of teleconference calls for orienting reviewers to the initiative-specific goals and review criteria and a separate teleconference to triage poor applications. The actual review meeting began with a joint session with the entire panel to score one application for the purpose of standardizing scoring behavior among all reviewers. The panel was then divided into two equivalent groups for concurrent review sessions for the remaining 27 applications.

#### Loan Repaymant Plan

Another highlight of DEA reviews for FY2005 includes the Loan Repayment Program (LRP). The LRP is a Congressionally mandated program funded through the contract mechanism that is intended 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 sends the applications to the Center for Scientific Review for referral of 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, staff conducted a three-part virtual meeting in which assigned reviewers submitted their evaluations electronically and those evaluations were then made available to all reviewers, and the applications were scored electronically. A total of approximately 300 potential reviewers were contacted, and 145 actually served. As shown in Table 16 of the 471 proposals reviewed, 276 proposals responded to the Clinical Research RFP and 85 proposals responded to the Pediatric Research RFP. As a result of the review, 170 proposals were funded.

#### Early Detection Research Network

An important initiative for the NCI over the past several years has been the identification of biomarkers of cancer at its earliest stages so that treatment may be started early in the disease process to maximize the possibility of a favorable outcome. The EDRN (Early Detection Research Network) program was established in 1999 to lead the effort in identifying and testing new biomarkers. In 2005, DEA reviewed the following major initiatives as a part of this activity. As shown in **Table 10**, these were: Early Detection Research Network: Clinical Epidemiology and Validation Centers (CA-05-005); Early Detection Research Network: Biomarkers Reference Laboratories (CA-05-009); Early Detection Research Network: Biomarkers Development Laboratories (CA-05-023); and Early Detection Research Network: Data Management and Coordinating Center (CA-05-501). These four initiatives, which involved the peer review of 71 applications, required the SRLB staff to contact 315 potential reviewers before 70 consultants finally agreed to participate in one of the four review meetings. The NIH Director noted in his 2007 NIH Budget Request that the EDRN has identified a number of biomarkers that allow for the earlier detection of breast, prostate, colon, lung, and other cancers.

#### Cancer-Related Health Disparities Research

Cancer-related health disparities have been a major focus for the NCI. There are significant cultural, demographic, and other issues that continue to contribute to poor outcomes in minority cancer patients. Thus, the NCI has emphasized this research area through eight RFA initiatives reviewed in 2005, each of which had a slightly different focus (see **Table 10**). The Comprehensive Minority Institution/Cancer Center Partnership (CA-05-021) has been a very successful program in supporting collaborative research between minority institutions and established cancer centers. The Planning Grant for Minority Institution/Cancer Center Collaboration (CA-05-020) and Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership (CA-05-022) also have provided funds to develop new collaborations and partnerships. Other initiatives relevant to health disparities include: Community Networks to Reduce Cancer Disparities Through Education, Research and Training (CA-05-012); Reducing Barriers to Effective Symptom Management and Palliative Care (CA-05-013); Minority-Based Community Clinical Oncology Program (CA-05-015): Patient Navigator Program (CA-05-019); and Breast Cancer Surveillance Consortium (CA-05-502). In 2005, 165 reviewers ultimately participated in the review of 205 applications. In addition, a Resources and Training Review Branch SRA served on the NCI Committee on Cancer Health Disparities and also was on the Planning Committee for the Workshop entitled, "Enhancing Interactions to Reduce Cancer Health Disparities."

#### Trans NIH Initiatives

The NCI conducted the review of a major biodefense initiative, RFA-AI-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 (NIAID), which is the lead NIH Institute for support of bioterrorism-related research. In the summer and fall of 2005, 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 were assigned the full-time task of managing

the review of these applications. Thirty-one multi-component center applications were submitted that were composed of 149 research projects and 171 cores. The SRAs shared recruitment of the panel, and split the responsibilities by dividing the application and panel members to conduct reviewer assignments and mailing of the review materials. Due to the breadth of the science that was submitted, 95 reviewers (including 10 mail reviewers) were recruited to perform the review. The review plan included coordination of teleconference calls for orienting reviewers to the initiative-specific goals and review criteria. The review staff completed summary statements from the June 20-22, 2005, meeting in time for the NIAID Council meeting on August 8, 2005.

#### 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 it includes three review branches. The review branches are responsible for organizing, managing, and reporting the scientific peer review of applications for a wide variety of grant mechanisms and topics. Reviews are conducted by one of the nine subcommittees of the NCI Initial Review Group (IRG) or by specially convened Special Emphasis Panels (SEP) as shown in Table 7.

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 six subcommittees of the NCI Initial Review Group (IRG). The Research Programs Review Branch (RPRB) has primary responsibility for review of unsolicited applications for program project grants (P01s), for Specialized 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 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 6) and together manage the nine 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 involving Institute-managed review (PARs), and contract proposals submitted in response to 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 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 some of these applications, including the Cancer Center Support Grants (P30), Cooperative Clinical Trials Grants (U10), and Program Project Grants (P01), involves a two-tier review process. The first tier of the review involves 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 review formats 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. Six of the nine 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 committees" for review of Cooperative Clinical Trials (primarily U10) applications. The other four subcommittees of the NCI IRG, Subcommittees F, G, I, and J, review all of the career development, training, education, and Population and Patient-Oriented Training grant applications submitted to the NCI.

#### Applications Reviewed by NCI IRG and SEPs

During FY2005, the nine subcommittees of the NCI IRG reviewed a total of 824 applications using 33 different grant and cooperative agreement mechanisms with requests for a total of \$528,360,392 in direct costs for the first year, and more than \$2,699,012,741 for all years (see **Tables 6 and 7**). The FY2005 IRG workload was very similar to the FY2004 workload (824 versus 830). In addition, during FY2005 a variety of Special Emphasis Panels (SEPs) were responsible for reviewing a total of 1,577 applications submitted in response to RFAs or applications otherwise unique to the NCI, with requests for a total of \$848,259,279 in direct costs for the first year, and \$4,041,740,642 for all years (see **Table 7**). This represented a 13 percent decrease in applications reviewed by SEPs compared to FY2004.

#### Research Programs Review Branch

Program Project Applications (PO1)

A significant proportion of the effort of the RPRB during FY2005 was associated with the review of unsolicited P01 applications. The SRAs in the RPRB organized and managed the review of 134 new, recompeting, amended, and supplemental P01 applications (see **Table 8**), continuing the high level of P01 workload that the NCI has seen since FY2002, as shown in **Figure 3**. Fifty percent of the applications were amended. The 134 applications requested \$303 million in total costs for the first year (see **Table 9**). IRG Subcommittees C, D, and E reviewed 123 program project applications, while 11 were reviewed by Special Emphasis Panels, due to IRG member conflicts.

During FY2005, the RPRB continued the "cluster" review process, which was begun during FY 2004, for the first tier of review for P01 applications. In this review process, two to four P01 applications on closely related topics were reviewed together by one review panel with expertise in all of the applications, rather than constituting a separate review panel for each individual application. The cluster review panel members met to discuss the applications and via teleconference asked key questions of applicants prior to scoring each component of the application.

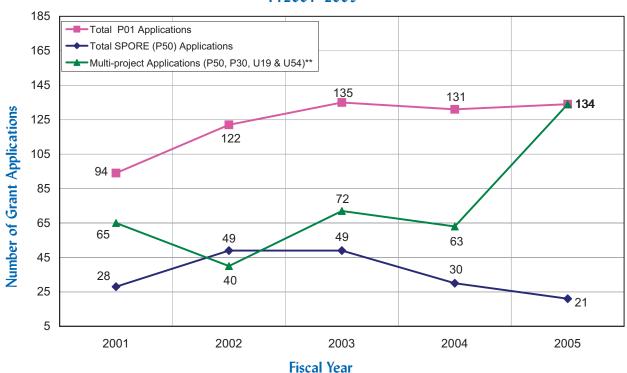


Figure 3. P01, P50 (SPORE) and Other Multi-Project Research Applications Reviewed\*
FY2001–2005

During the summer of 2005, RPRB staff did a formal analysis of the P01 cluster review format. The rationale for implementing the cluster review format during FY 2004 had been to reduce time and effort required by reviewers and NCI staff for review of P01 applications, reduce the total number of reviewers required, promote scoring consistency and spreading of scores, and reduce NCI costs associated with P01 review. To determine if these goals were achieved, data from three NCAB rounds involving cluster review (September 2004, January 2005, and May 2005) were compared to data from the three NCAB rounds just prior to implementing the cluster review format (September 2003, January 2004, and May 2004), which had an individual review panel for each P01 application.

For the three cluster review rounds, there was a significant decrease in the total number of review panels required (56 vs 125) as well as the number of reviewers on those review panels (969 vs 1398) compared to the previous three review rounds. However, the number of reviewers assigned to each application actually rose slightly, from 11 to 12 per application, due to "cross assignment" of reviewers on each cluster review panel to more than one application. The total number of reviewers at each of the "parent" committee meetings also fell 14 percent, from 371 to 319, since fewer "reporters" were required from each cluster review panel. A decrease in the number of review panels and number of reporters also resulted in an increase in the consistency of the review process for the P01 applications. There was also some broadening in the pattern of priority scores for P01 applications as a result of the cluster review process, and a slight increase in the mean score.

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

<sup>\*\*</sup> There were 31 applications reviewed by the NCI for the NIAID.

Feedback was received from approximately 600 of the reviewers who participated in cluster review panels during the September 2004, January 2005, and May 2005 NCAB review rounds. The reviewers indicated that there was a good match between their expertise and their review assignments, that all necessary expertise was present on the cluster panels, that the grouping of the applications into clusters according to science was appropriate, and that all applications received a complete, fair, and appropriate review. Initial issues with the teleconference equipment and arrangements were addressed by RPRB staff. Nevertheless, many reviewers felt that the cluster review process was highly repetitive and that the teleconference with the applicants did not add significant value to the review.

Cost analysis showed that, despite inflation from 2004 to 2005, implementing cluster reviews for P01 applications had saved the NCI approximately \$220,000. Most of this savings was in the NCI RMS budget, due to decreased NCI review and program staff travel. There was also a significant decrease in costs for reviewer travel, honorarium and per diem, and a decrease in costs for teleconferences. The costs for reviewer lodging and for meeting rooms increased somewhat, since the Washington, DC, metropolitan area is a high-cost area.

Based on this analysis, NCI DEA reconvened the NCI P01 Working Group, which included representatives from the DEA and the four NCI extramural program Divisions, to make recommendations on ways to further streamline P01 review. Although cost savings were not a driving force behind the initial implementation of the cluster review format, NIH-wide changes in the way review costs are managed were implemented October 1, 2005, which made cost savings more important.

The NCI P01 Working Group endorsed continuation of cluster reviews for P01 applications, elimination of the teleconference with the applicants, and streamlined review (i.e., "triage" and unscoring) of very weak applications. The Working Group also recommended implementing a single tier, "paper only" review process for P01 applications, similar to the review process that is used for P50 SPORE applications and applications received in response to Requests for Applications (RFAs), in which 6 to 10 P01 applications in a broad topic area, such as molecular mechanisms of cancer, would be reviewed together by one review panel.

As FY 2005 drew to a close, the NCI Extramural Division Directors approved these recommendations, and RPRB P01 review staff began preparations to implement this new P01 review process.

During FY2005, the RPRB also continued several other initiatives to improve review procedures for program project applications, which included holding joint orientation sessions for new members of the three P01 "parent" subcommittees and plenary sessions of all committee members. The plenary session included exercises designed to help the reviewers establish consistent scoring calibration standards that are applicable across the three committees, regardless of scientific discipline. The outcome of the plenary session was 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.

#### Specialized Centers of Research Excellence (P50)

During FY2005, 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 FY2005, the RPRB organized and managed Special Emphasis Panels for the review of a total of 21 SPORE applications for research in Myeloma (1), Genitourinary (3), Breast (12), Ovarian (2), and Gynecologic (3) cancer (see Figure 3). These 21 applications requested almost \$38.4 million in direct costs for the first year of support and total direct costs of more than \$237 million for all years of support. As shown in Figure 3, the number of SPORE applications reviewed by the RPRB continued to decrease in FY2005 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. 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.

#### Conference Grants (R13)

During FY2005, 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 75 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.

#### Resources and Training Review Branch

The RTRB, which administers six NCI IRG subcommittees (A, F, G, H, I, and J), 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.

#### **NCI Cancer Centers**

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. Based on the final report presented to the NCAB in February 2003, new Guidelines were prepared with considerable input from DEA staff, especially in those areas affecting application preparation and peer review. They were approved in September 2004, and the first applications to be reviewed using these new Guidelines were received in February 2005. The DEA prepared documents to assist reviewers in the transition to the new Guidelines, including a list of major changes and a summary of review criteria and their appropriate component for evaluation of consortia and partnerships. RTRB review staff members instituted modifications of the review process, such as use of poster sessions for shared resource presentations, limited time for program presentations, staff selection of protocols for review, and simplified review of budgets, which have reduced the burden on peer reviewers. 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 FY2005, Subcommittee A reviewed 12 CCSG applications.

#### Training and Career Development

There was continued growth in the number of individual career development applications reviewed by RTRB in FY2005 (see Figure 4) albeit at a slower rate. Between 2001 and 2004, the number of career development applications reviewed in the DEA increased by 55 percent (339 to 525); in 2005 the number reviewed was 562, an increase of 7 percent for just that year. In contrast, the number of institutional training grant applications, which had increased from 181 to 198 between 2001 and 2004 (9 percent), was 201 in 2005, an increase of 1 percent. The increases over the last 5 years are due, in part, to the increased number of mechanisms available and to the increased information disseminated about them. Recently, several factors have led to a severe increase in the workload for reviewers of training and career development applications. For example, reduced success rates have increased the number of amended applications each round, increases in the number of basic scienceoriented applications, increases in applications proposing research in population and clinical areas, and additional work from newly approved K99/R00 career development awards, all contributed to increases in the review workload of the existing subcommittee. After discussions with the leadership and staff of the Cancer Training Branch, a new subcommittee was created 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 ensure 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 ensure fair reviews of applications that are in conflict with members on one of the subcommittees. The new Subcommittee J was officially chartered in July 2005, although it met as an SEP throughout 2005.

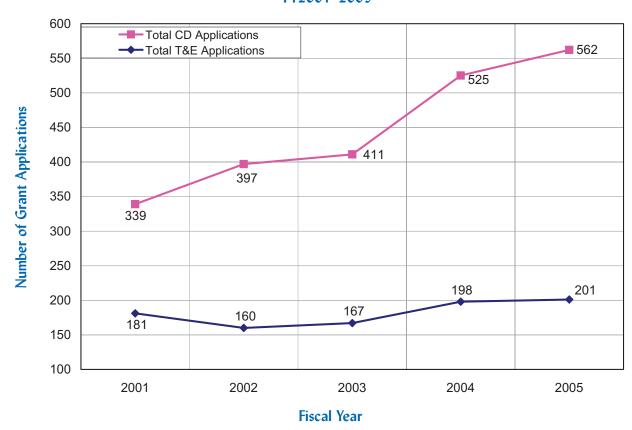


Figure 4. Numbers of Career Development (CD) and Training and Education (T&E) Applications Reviewed\*
FY2001–2005

#### Clinical Cooperative Groups

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 with the addition of the Clinical Trials Working Group (CTWG) initiatives. The SRA has started work on the inclusion of the CTWG initiatives in the development of a Clinical Cooperative Groups Grant Application Review Guide. The piloted new review format for the Clinical Cooperative Groups has met with great success. Most 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 Draft Clinical Trials Cooperative Group Program Guidelines. During FY2005, two competitive Clinical Cooperative Groups were reviewed and two Clinical Cooperative Groups competed for supplemental funds to their Operations Office award. The subcommittee also evaluated a large U24 cooperative resource, the International Breast Cancer Study Group. The SRA for Subcommittee H has been actively involved in a cross-branch initiative, DEA Checklist Working Group, to assess training workflow and efficiency between SRAs and DEAS staff. The SRA for Subcommittee H also has been involved in a trans-NIH initiative, Peer

CD mechanisms: K01, K05, K07, K08, K22, K23, K24, K25.

T&E mechanisms: R25, T32, K12.

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

Review JAD, to improve the IMPAC II Peer Review Module. In this capacity, she has assisted in other review-related activities. She also has assisted the Research Programs Review Branch (RPRB) in review activities during this time period.

#### Other RTRB Activities

To assist reviewers in preparing for their participation in peer review, Reviewer Guides were being prepared for all of the application types reviewed by the RTRB. This was 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 mechanism-specific guides have been completed for all education, training, and career development types of applications that are reviewed in the RTRB, and for the cancer centers 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, since this branch organizes and manages peer review primarily for grant applications submitted in response to specific NCI RFAs, contract proposals submitted in response to specific Requests for Proposals (RFPs), and Program Announcements with special reviews (PARs). These reviews are conducted with SEPs and involve recruiting the appropriate scientific expertise for each review meeting. At the January, May, and September 2005 NCAB meetings, 22, 19, and 17 DEA-reviewed initiatives directly related to the Bypass Budget were recommended for funding. Most of the RFA initiatives were reviewed by SRLB staff.

Following approval by the NCI Executive Committee and BSA, program staff, assisted by the DEA staff, prepare the initiatives for publication 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. **Table 10** lists the RFAs reviewed by DEA in FY2005. **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 and PCRB during FY2005 are shown in **Table 16**.

#### **Technology Research Applications**

The NCI developed a 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 7 years. In FY2005, 324 technology R21/R33 and R01 grant applications were reviewed under seven RFAs, which was a growth rate of 50 percent as compared to

<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.

FY2001 (see Figure 5). In 2005, there was a major change in the review of SBIR applications (R41, R42, R43, R44). This change involved a decision to not renew one PAR and to move several major program announcements from NCI to CSR review. These announcements included: Flexible System to Advance Innovative Research for Cancer by Drug Discovery (FLAIR), Cancer Prognosis and Prediction, and Development of Novel Technologies for *In Vivo* Imaging. Together, these three initiatives accounted for 322 of the 410 SBIR applications reported in the DEA FY2004 Annual Report. The program announcements issued for the Innovative Technology for the Molecular Analysis of Cancer (IMAT) were converted to Requests for Applications and review of SBIR applications for the IMAT initiatives remained with the DEA. Overall, the change in the review locus to CSR for three initiatives resulted in a significant drop in SBIR applications reviewed by DEA in FY 2005 (see Figure 5).

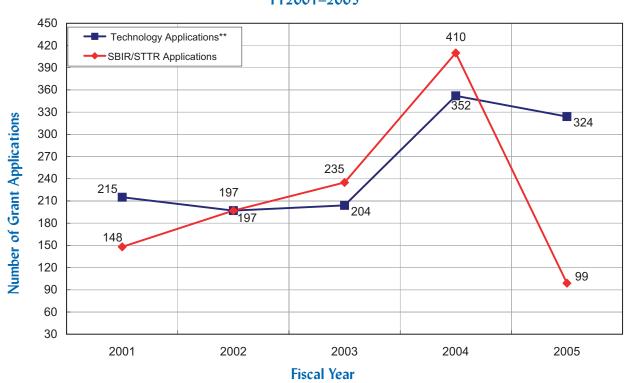


Figure 5. Technology Initiatives Applications Reviewed\* FY2001–2005

Multi-Component Research Applications

**Figure 3**, which describes the historic and current workload for multi-component applications, demonstrates a 113 percent increase in FY 2005 when compared to FY 2004. This "spike" is due to three major initiatives. First, 2005 was the year that the National Cooperative Drug Discovery Groups (NCDDG) for the treatment of cancer were recompeted. This initiative accounted for 37 applications. Second, as described on page 13, the DEA assisted another IC, NIAID, by performing the review of 31 U19 applications that were submitted in response to a Bioshield Initiative, "Centers for Medical Countermeasures against Radiation." Finally, 28 applications submitted in response to

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

the RFA, "Centers for Nanotechnology Excellence," were reviewed. These three initiatives account for 96 applications of the 134 multi-component applications that were reviewed in 2005. Because multi-component applications may include projects, cores, training, and developmental projects, each application may be the equivalent of reviewing 10-12 R01s. Thus, the increase in workload related to multi-component applications more than offset the decrease in SBIR/STTR applications in FY2005.

#### **Small Grant Programs**

Several recurring initiatives are stimulating increased interest in the applicant community. The small grant (R03) PARs include programs in cancer prevention (PAR02-176, PAR04-147), cancer epidemiology (PAR03-010), and behavior research in cancer control (PAR04-020). These initiatives support many new investigators and pilot studies. In FY2003, those announcements attracted 166 applications (*Division of Extramural Activities Annual Report 2003*). In FY2005, those same initiatives attracted 400 applications, an increase of 141 percent. The first-year funding request for the FY2003 application cohort was approximately \$12.4 million; for FY2005, the first-year funding request was approximately \$60 million (see Table 11).

#### Research and Development Contract Proposals

The DEA reviewed 471 research and development (R&D) contract proposals (including 361 Loan Repayment Program applications) in response to 31 RFPs. Twenty three of those 31 RFPs were part of the Omnibus Solicitation for Small Business Innovation Research (SBIR) published each fall (15 Phase I Topics and 8 Phase II topics) (**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. Phase II SBIR proposals can only be submitted at the request of the IC. 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.

#### SRLB Teamwork, Communication, and Other Activities

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 respond to questions relating to the review process. Prior to the receipt of applications, program staff participate in the review planning process to ensure that all relevant issues are discussed. After the review committee is assembled, 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.

In addition, the SRLB, acting in collaboration with the PCRB or the NCI Office of Acquisitions, often serves as a resource to program staff during the drafting of initiatives. Review staff members are consultants for critically reading the document with suggestions for editing, and with regard to applying review policy in the formation of initiative-specific review criteria. Notably in FY2005, SRLB staff provided support to program staff for the reissuance of the Innovative Molecular

Analysis Technologies (IMAT) RFAs and the NCI Nanotechnology initiatives, as well as attending the annual IMAT meeting.

The SRLB formed partnerships with several other DEA branches in accomplishing its mission during FY2005. Initiatives for Medical Countermeasures Against Radiation and Nanotechnology benefited from support of the RAEB for the identification of prospective reviewers. Members of the RPRB partnered with a SRLB SRA in conducting the nanotechnology reviews, and a member of the PCRB led the review of Loan Repayment Program applications using methods developed in SRLB.

SRLB staff are active in working with NCI staff across all of the Divisions through working groups and participating in research meetings. An SRLB staff member was an active member of the NCI Integration and Implementation Imaging Committee and the NCI R21/R33 Working Group. SRLB staff regularly participate in the Extramural Advisory Board and the Small Business Program Managers monthly meetings. Other activities include participation by the SRLB Branch Chief in the NCI Breast Pre-Malignancy Steering Committee and the NCI Strategic Plan Committee.

#### Other Extramural Review Activities

Several DEA staff participated in three training sessions organized by the NCI Office of Liaison Activities (OLA) to train patient advocates in NCI's Consumer Advocates in Research and Related Activities (CARRA) program on peer review. The 2½-day-long training sessions were held in April, July, and October 2005, and included about 25 CARRA members at each session. The training focused on preparing CARRA members to participate in scientific peer review of clinical research applications and represent the perspective of the human subject populations involved in the research. Staff members from the Research Programs Review Branch, the Special Review and Logistics Branch, and the Resources and Training Review Branch advised OLA staff and their training contractors on the curriculum, prepared materials for handouts, and taught sections of the course related to: deciding to participate in peer review; understanding the expectations of CARRA members during the review process; describing the "anatomy" of a grant application; explaining the peer review criteria; and preparing critiques. Each training session culminated in a mock peer review, during which scientists from local Washington, DC, area universities "play-acted" as reviewers, a DEA staff member "play-acted" as the SRA, and CARRA members "play-acted" as consumer/patient advocate reviewers and thus had opportunities to practice their new skills in simulated situations that mimicked real peer reviews.

In FY2005, 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.

DEA staff are involved in the transition from paper to electronic grant submissions representing the NCI on NIH committees. The Chief, PCRB, was a member of the NIH SF424 Electronic Grant Applications Working Group for the purpose of keeping the NCI fully involved in the development,

implementation, and anlysis of the transition to and use of electronic grant applications by applicants, reviewers, and NIH/NCI staff. An RPRB SRA served on an NIH working group to identify review and programmatic issues in converting from Form 398 to Form 424.

The Chief, PCRB, was also a member of an NIH Guide Process Working Group that was commissioned in 2005 by the NIH Extramural Policy Management Committee (EPMC) for the purpose of improving the publication processes for Early Notices, Notices, PAs, and RFAs. Their recommendations to EPMC and to the NIH OD Office of Extramural Research were approved and implemented, and the implemented changes quickly yielded improvements in the efficiency and timeliness of publication processes for funding opportunity announcements.

The Chief, RPRB, also represented the NCI on the NIH Review Policy Committee (RPC), and on the RPC steering committee. The Associate Director, ORRPC, represented the NCI on the NIH Locus of Review Working Group charged with providing greater consistency across the NIH on the assignment of specific grant mechanisms to CSR or IC review. The Chief, RPRB, served on a trans-NIH committee to consider ways to shorten the NIH review cycle. This committee was charged by the CSR Director with devising a way to decrease the traditional 9–10 month NIH receipt and review schedule to allow applicants to resubmit applications that missed the payline for the very next NIH receipt date. The committee recommended a pilot of a significantly shortened review cycle for unsolicited research project grant (R01) applications from new investigators (R01\* applications). This pilot was announced in the *NIH Guide for Grants and Contracts* on November 30, 2005. The NCI also is conducting a pilot with the behavior small grant PAR.

The Chief, SRLB, chaired a NIH Grant Appendices Working Group charged with making recommendations on the submission of appendix material. Recommendations included allowing the electronic submission of appendix material with special initiatives and including only a publication list with links to the publicly available online journal for electronic grant submissions.

The Associate Director, ORRPC, served as one of the NCI representatives on the NIH Clinical Workforce Steering Committee, a subcommittee of the NIH Roadmap committee for Re-engineering the Clinical Research Enterprise. She also served on the NIH Multiple PI Working Group that is piloting the first initiatives using multiple PIs this year. The committee issued a Request for Information (RFI) asking the research community to provide input on implementation plans for multiple PI applications in July 2005. The results of the RFI survey are available on the Multiple PI Web page: http://grants2.nih.gov/grants/multi pi/.

An RPRB SRA also was on the trans-NIH committee to organize the first NIH-wide SRA education and training retreat in almost 10 years. The retreat was held in the NIH Natcher Conference Center, and focused on improving the peer review process and recent changes in review policies and processes.

The Chief, RTRB, served on the NIH Division of Quality Assurance Advisory Committee in support of the NIH Division of Extramural Activities Support (DEAS). The Director, DEA, served as the NCI representative on the NIH DEAS Advisory Committee.

# **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 FY2005 according to the extramural division and office. **Table 13** presents a summary for FY2005 of total funding of NCI grant awards by mechanism. Trends in grant funding according to scientific discipline and organ site are described on page 35 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 FY 2005, 4,909 consultant reimbursement vouchers and 470 nonconsultant vouchers for travel ticketing, meeting room rental, and teleconferences were authorized, and a total of 5,379 checks were processed to reimburse consultants and pay for meeting rooms and other expenses.

During the last quarter of FY2005, the Committee Management Officer served as a member of the SREA Transition/Implementation Team charged with developing and implementing the changes to the new Scientific Review Evaluation Activities program. The CMO was responsible for providing advice on current FACA rules and regulations as well as the best options for reimbursing peer review members and establishment of new IMPAC II processes.

The Team made recommendations to the NIH Deputy Director for Management on the following: CCR/DUNS implementation and developed detailed instructions for the entire NIH Peer Review Community; analyzed current reimbursements costs across ICs and recommended a flat rate for reviewers modeled after the National Science Foundation and the Department of Defense; analyzed several different prong approaches regarding use of a logistics contractor, payment of airline tickets, hotel lodging and OFM and reviewer reimbursement; and analyzed the impact of these changes on the NIH Peer Review Community and Extramural staff. Additionally, the Team developed the Standard Operating Procedures and the CMO gave detailed presentations to the following: NCI C, D, E Cluster Meetings Reviewers, DEA SRA and DEAS Staff, NIH Committee Management Officers, and developed a detailed NCI DEA SOP and provided training to DEA SRAs and DEAS staff. This ultimately helped to introduce the new system to the NIH and NCI peer review community.

The SREA Office oversaw the major effort of closing out the SREA Chairman's Grant Award during the last quarter of FY2005. This entailed coordination of staff to review more than 3,000 outstanding vouchers to determine whether reimbursement was needed.

Additionally, during the first half of FY2005, SREA staff continued to serve on the NIH SREA Coordinating Committee. This group held bimonthly meetings to discuss SREA procedures and streamline processes. 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 was 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 has remained a constant goal of the NCI SREA staff.

# **NCI** Advisory Boards



**NCAB Members** 



Retiring NCAB Chair, Dr. John Niederhuber, with Drs. von Eschenbach and Von Hoff



PCP Chair, Dr. LaSalle Leffall, Jr., and Dr. von Eschenbach

Continued on page 32.

# **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 nine
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 to the BSA. (See **Appendixes A**and **B** for highlights of the activities of these Boards in FY 2005.)

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 FY2005, more than 2,200 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 clinical trials, 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 soci-

ety 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.

**Boards of Scientific Counselors (Basic Sciences, and Clinical Sciences and Epidemiology).** In FY2005, the NCI received approval to establish the subcommittees under the **BSC** as two separate Federal advisory committees. The BSCs, managed through the Office of the Director (OD), NCI, advise 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). These groups of scientific experts from outside the NCI evaluate the performance and productivity of NCI staff scientists through periodic site visits to intramural laboratories and provide 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 as Chair; Chair, NCAB; Chair, PCP; Chairs of the BSCs (Basic Sciences, and Clinical Sciences and Epidemiology); Chair, BSA; and Chair, DCLG. Nonvoting ex officio members include NCI Deputy Directors 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 nine 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.

## Other Advisory Groups

**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 concerns by: (1) identifying new or unmet scientific opportunities; (2) reviewing current research programs; (3) providing expert opinions to address research opportunities and hasten progress. These groups report to the NCI through a chartered Federal advisory committee (see <a href="http://deainfo.nci.nih.gov/advisory/pog/progress/index.htm">http://deainfo.nci.nih.gov/advisory/pog/progress/index.htm</a>).

# **NCI Advisory Boards (Continued)**



**BSA Members** 



Retiring BSA Member, Dr. Tom Curran, with Drs. von Eschenbach and Young



Retiring BSA Member, Dr. David Abrams, with Drs. von Eschenbach and Young



Retiring BSA Member, Dr. William Kaelin, Jr., with Drs. von Eschenbach and Young



Retiring BSC Chair, Dr. Frederick Alt, with Dr. von Eschenbach

# **Committee Management Activities**

The Committee Management Office (CMO) coordinates the general administration of NCI's chartered Federal advisory committees and serves as a Service Center to the DHHS Secretary's Advisory Committee on Genetics, Health, and Society and the National Center for Complementary and Alternative Medicine (NCAAM) Council. 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 members 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 Web Module. The IMPAC II Module is being redesigned as a Webbased application and will be a more user-friendly and intuitive system. In FY2005, the CMO continued to provide in-house IMPAC II training to DEA staff on *Coding Meeting Attendees in IMPAC II*. The user-friendly booklet the CMO created for the training 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 continues to be the recommended tool that is 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 accessible on OFACP's Web Site.

As a result of a new Office of Federal Advisory Committee Policy on the Membership and Management of Subcommittees of National Advisory Councils, Program Advisory Committees, and Board of Scientific Counselors, the CMO pursued the establishment of the BSC as two separate Federal advisory committees. Approval was received by the DHHS to establish the BSC subcommittees as separate entities.

The recommendations of the National Cancer Advisory Board Clinical Trials Working Group called for an advisory body to advise on the NCI clinical trials enterprise. The CMO met with OFACP staff to convey NCI's need for the establishment of a clinical trials advisory committee and ensured approval would be sought expeditiously at the Department and GSA. The CMO developed the Clinical Trials Advisory Committee charter so that the NCI can effectively put in place an advisory body that will make recommendations on the conduct, oversight, and implementation of clinical trials across the Institute.

Additionally in FY2005, the CMO helped with the reorganization of NCI IRG Subcommittee G—Education and the establishment of NCI IRG Subcommittee J—Population and Patient-Oriented Training.

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:

- CM Web Module—This committee provided advice on the development of new business practices for the CM Web Version of the Module.
- OFACP Service Center Committee—This committee developed standard operating procedures for NIH Committee Management Service Centers to follow.
- SREA Standard Operating Procedures Committee—This committee developed the new standard operating procedures for all ICs at the NIH to follow.
- SREA Transition/Implementation Team—This team developed and implemented changes to the new Scientific Review Evaluation Activities Program.

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.

In addition, the DEA CMO continued to conduct briefings with the NCI Divisions, the NCI Offices of Liaison Activities, and NCI senior management on the use of working groups associated with chartered committees. Specifically, briefings were held to discuss the implementation of the NCAB Clinical Trials Working Group recommendations and establishment of the Translational Research Working Group. Consultation with NCI Senior staff included providing advice on FACA, editing of numerous documents describing the formation of new clinical trials implementation groups to ensure FACA language was being used appropriately, and analyzing documents on the creation of implementation committees, steering committees, and disease-specific committees.

# 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. The RAEB reviews both unfunded applications and funded extramural grants supported by the NCI to consistently link scientific categories to budget categories on all institute programs.

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. A critical characteristic of these data is comparability from one fiscal year to the next. Trends in funding between FY2001 and FY2005 for selected SIC Codes and organ sites are presented in **Tables 14 and 15.** 

RAEB staff act as DEA or NCI representatives on NCI or NIH-wide scientific reporting initiatives. These groups and committees deal with various aspects of NIH grants and contracts or tracking and reporting on areas of special interest to the NIH, NCI, or Congress. In 2005, the RAEB assumed responsibility for bi-annual reporting of NCI compliance with Congressional Health Disparities reporting requirements, and served as the NCI liaison for the NIH Knowledge Management for Disease Coding Initiative.

#### **FY2005 Highlights include:**

- (1) Major review and update of Special Interest Categories, adding new SICs at the request of the Department and NIH for:
- Biomedical Computing
- Cost Effectiveness
- Effectiveness Research
- Ethics
- Fertility
- Genetic Testing Research, Human
- Genomics
- Health Literacy
- Healthcare Delivery
- Math Models
- Metabolomics
- Molecular Imaging
- Pharmacogenetics
- Proteomics
- Registries

#### (2) In addition,

- RAEB conducted a comprehensive update of Radiology categories.
- RAEB scientific staff evaluated more than 8,000 funded and unfunded applications.
- RAEB coordinated with FMB to update and align budget reporting categories between DEA and FMB reporting systems.
- RAEB assumed responsibility for bi-annual reporting of NCI compliance with Congressional Health Disparities reporting requirements.
- RAEB assisted DEA Review Branches in finding qualified scientists to serve as reviewers for high-profile and multi-project RFAs that cover broad areas of science, as well as assisted in the management of the review activities.
- RAEB was appointed as the NCI liaison for the NIH Knowledge Management for Disease Coding 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 FY2005, the following specific accomplishments are highlighted:

- Collaborated with NCI's ISCS (Information Systems and Computer Services) to prepare and transfer main DEA file servers to the NCI, and prepare for network domain migration by performing migration tests to verify user permissions, login scripts, and file share locations.
- Created a Web application to assist in the verification of RFA/PA data that will be published on DEA's Internet site.
- Developed enhanced user authentication for DEA applications using NIH network login, and implemented user role management, which enables various levels of capabilities and permissions for DEA applications.
- Consolidated the NCI Committee Management Office online reporting tools into one Web application.
- Created ECARES (Extramural Customer Assistance Request System) quarterly reports for each
  of the four DEA branches.
- Performed enhancements, upgrades, and maintenance on the following production systems:
  - DEA Internet and Intranet:
    - Updated DEA's Web searching capability provided by FirstGov.gov to take advantage of the latest features.
    - Divided the Board of Scientific Counselors Web Site into separate sites to provide more distinct information: (1) Board of Scientific Counselors for Basic Sciences; and (2) Board of Scientific Counselors for Clinical Sciences and Epidemiology.
    - Created "SRA Resources" Web Site with a collection of nine sub-sections to provide a comprehensive source of information for the Scientific Review Administrators (SRAs).
    - Implemented Cascading Style Sheet (CSS) technology for all newly developed Web sites.

- Enhanced both segments of the Standard Docs/RPDU Web-based application. The Standard Docs portion is an application for DEA review staff to enable the merging of IMPAC II data into MS Word or Corel WordPerfect documents and labels. The RPDU (Mailroom) portion provides the means to assemble lists of grant applications received by the DEA for referral and archiving purposes.
- Enhanced and upgraded the Fiscal-Linked Analysis of Research Emphasis (FLARE) application by adding new features that included:
  - Ability to code grants at the Subproject level.
  - Functionality to automate the mapping of RAEB FLARE SIC (Special Interest Category) and organ site codes to NIH Office of Budget disease category.
  - Began to convert historical data (1990 back to 1937) into the FLARE database.
  - Enhanced the procedures of distributing FLARE data to various NCI groups.

FLARE provides the functionality allowing the RAEB staff to consistently input disease coding data, search for disease-related data, and respond to requests from various sources, both internal and external to the NCI. The system provides a basis for budget projections and serves as a resource for the dissemination of information about cancer. It disseminates information on cancer by distributing the disease coding data in various configurations to sources internal and external to NCI via various Web sites, centralized databases, and other means.

Implemented an advanced utility to improve the search engine for searching text and key words in the NCI Funded Research Portfolio Application. This application enables various user groups to search information regarding the NCI funded grants.

Enhanced and upgraded the Reviewer CD application by implementing administrative controls over the operation of jobs; added support to include several new types of documents; and implemented a tabbed user interface for logical grouping of operations and more efficient navigation. Also, installed and configured an additional and more advanced CD burning appliance that operates in parallel with the existing one. This addition allows multiple job requests to be routed to different destinations, which reduces completion time. Reviewer CD is a Web-based application that allows review staff to create customized CDs (Compact Discs) containing grant applications and other related materials for the grant reviewers.

Continued to support the Program Coding application and initiated the design and development of the next version with several new features such as: optimized batch coding; implementing coding rules; implementing roll forward for coding; implementing expiration of codes and code types; and providing additional options for system administration functions. Currently, the new version is in a testing environment. Program Coding is a Web-based application that allows users to code or index grants using an NCI organization's scientific codes.

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 Institute Information Systems Advisory Group
- NCI Change Management Group
- NCI Knowledge Management for Disease Coding (KMDC)—Working Group

- NCI Intranet Advisory Board
- NCI Leadership Focus Group
- eRA Technical Coordinators Group
- IMPAC II Joint Applications Development and Critical Design Review Groups
- NIH Electronic Council Book and Query View Reporting Steering Committee
- NIH Architecture Review Board
- NIH Automatic Data Processing Extramural Coordination Committee
- NIH A-76 Preplanning Teams
- NIH A-76 Requirements Document Committees
- NIH Knowledge Management for Disease Coding (KMDC)—Technical Advisory Group (TAG)

# 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.	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 Director
Carlene Neil-Allman*	Program Analyst
Carolyn Craig*	Program Analyst
Bernadette Monacelli	Secretary
Wendy Jones*	Secretary
Lisa Verikios	Secretary
Barbara Hider <sup>†</sup>	Secretary
Joshua Rhoderick	Receptionist

<sup>\*</sup> Left in 2005.

<sup>†</sup> Joined in 2005.

## 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
Earline Jackson*	Program Analyst
David Alperin	Program Analyst
Linda Coleman*	Committee Management Specialist
Hing Lee	Committee Management Specialist
Kerry Peasland*	Committee Management Specialist
Lisa Rustin	Committee Management Specialist
Malaika Staff <sup>†</sup>	Committee Management Specialist
Linda Southworth	Committee Management Specialist

<sup>\*</sup> Retired in 2005.

<sup>&</sup>lt;sup>†</sup> Joined in 2005.

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

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

Diane Bronzert	Associate Director
Catherine Battistone	Program Analyst
Linda Brown**	Program Specialist
Angela Collick*	Program Specialist

<sup>\*</sup> Left in 2005.

<sup>\*\*</sup> Transferred from RAEB to ORRPC in 2005.

## 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.

Kirt Vener, Ph.D......Chief

#### **Special Review Unit**

.Deputy Chief
.Scientific Review Administrator
.Program Support Assistant
.Scientific Review Administrator
.Scientific Review Administrator
.Scientific Review Administrator
Scientific Review Administrator
Scientific Review Administrator
.Scientific Review Administrator
.Program Analyst
.Scientific Review Administrator
Scientific Review Administrator

<sup>\*</sup> Left in 2005.

<sup>&</sup>lt;sup>†</sup> Joined in 2005.

# Review Processing and Distribution Unit

Adrian Bishop	Mail and File Clerk
Robert Kruth	Mail and File Clerk
Clara Murphy	Program Assistant

## 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 include all RFAs, PAs, and Notices submitted for publication in the *NIH Guide for Grants and Contracts*, and as of November 2005, for the SBIR and STTR mechanisms, also on Grants.gov (which is a Federal-wide online portal for electronic submission of grant applications).
- Coordinates the development and periodic revision of referral guidelines within the NCI for both external and internal 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.
- Serves as liaison to the CSR, NIH, to ensure the appropriate referrals (i.e., assignments) of grant
  applications to the Institute and the transfers of grant applications between the NCI and other
  NIH Institutes and Centers.
- 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 (including corrections of
  application assignments and numbers, which is done in collaboration with NCI program staff,
  CSR referral staff, and referral staff of other ICs and agencies) and for acceptance of grant
  assignments.
- Serves as the NCI contact point and liaison to involved parties at the NIH (including the NCI program staff members, the relevant NCI Division Directors, the Chief of the NCI Office of Grants Administration, the Chief of the NCI Office of Acquisitions, and the NIH OD Office of Extramural Research) for approval of the use of cooperative agreement mechanisms and for conversion of grants to cooperative agreements.
- Works with NCI program and review staff and with NIH referral liaisons to address unresolved referral and review issues with the CSR and other NIH Institutes and Centers.
- Receives and distributes advance copies of applications for Program Project (P01) grants, applications for conference (R13) grants, and applications submitted in response to RFAs and PAs, and coordinates this information with review and program staff.
- Receives Letters of Intent from applicants (principal investigators) intending to submit large budget grants (including, but not limited to, program projects and cooperative agreements for clinical trials) and also from prospective R13 (conference grant) applicants.

- Coordinates approvals (and disapprovals) of the NCI to sponsor the submission of individual conference (R13) grant applications.
- 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.
- Maintains database records of prospective large budget grant and conference grant applications for each council round.
- 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.
- Serves as the primary point of contact and assistance at the NCI for applicants who wish to apply for an Academic Research Enhancement Award (i.e., the NIH R15 grant mechanism).
- Manages the peer reviews of the large numbers of NIH Loan Repayment Program (contract) proposals that are received each year and assigned to the NCI (currently about 400 proposals per year).
- 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.
- Provides data and data analyses on funding opportunities and on the receipt and referral of grant applications to NCI senior staff members and committees.

Christopher L. Hatch, Ph.D	Chief, CSR Referral Liaison
David Contois	Referral Officer
Leota Hall	Referral Officer, CSR Referral Liaison
Natacha P. Lassègue	Program Analyst
Kimberly Morris	Program Support Assistant
Sonya Roberson, Ph.D.*	RFA/PA Coordinator, Scientific Review Administrator
Bratin Saha, Ph.D. <sup>†</sup>	Referral Officer, Scientific Review Administrator

Joined PCRB in 2005.

<sup>\*</sup> Transferred to RTRB in 2005.

# 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	Scientific Review Administrator
Ashley Church*	Office Automation Clerk
Mary Fletcher, Ph.D*	Scientific Review Administrator
Monica Green§	Program Specialist
Tiffany Jenifer*	Program Specialist (Instructor)
Willie Johnson*	Program Specialist
Wlodek Lopaczynski, M.D., Ph.D.**	Scientific Review Administrator
William Merritt, Ph.D	Scientific Review Administrator
Hasnaa Shafik, M.D., Ph.D	Scientific Review Administrator
Michael Small, Ph.D.	Scientific Review Administrator
Shamala Srinivas, Ph.D	Scientific Review Administrator
Barbara Thompson*	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 2005.

<sup>§</sup> Transferred from NIH OD OER DEAS to RPRB in 2005.

<sup>\*\*</sup>Joined in 2005.

## 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
Lynn Amende, Ph.D.	Scientific Review Administrator
Robert Bird, Ph.D	Scientific Review Administrator
Gail Bryant, M.D.	Scientific Review Administrator
Deborah Jaffe, Ph.D.	Scientific Review Administrator
Ilda McKenna, Ph.D	Scientific Review Administrator
Isla Norwood <sup>†</sup>	Program Specialist
Raymond Petryshyn, Ph.D.	Scientific Review Administrator
Sonya Roberson, Ph.D*	Scientific Review Administrator

<sup>\*</sup> Transferred from PCRB to RTRB in 2005.

<sup>&</sup>lt;sup>†</sup> Joined in 2005.

## 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 research projects.
- Analyzes the distribution of funds among research areas; these analyses serve as a basis for budget projections.
- Reports and answers inquiries on the scientific and budgetary aspects of Institute-funded research, including research grants, center grants, training 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 Chief
Edward Kyle	Deputy Branch Chief

#### **Research Documentation**

- Analyzes and indexes grants and contracts for the Branch's computerized systems.
- Analyzes extramural projects for relevance to SICs and Anatomic Sites to determine the officially reported figures for Institute support and to provide a basis for budget projections.
- Ensures that terms and categories for indexing are updated and reflect current trends in cancer research, and maintains a thesaurus of term definitions.
- Maintains liaison with other offices within the Institute to ensure consistent reporting of data.
- Monitors the results of Institute grant-supported research.
- Assists other NCI organizations by indexing NCI research projects for attributes other than SICs and Sites, for example, CSO Codes, AIDs Categories, and so on.

Edward Kyle	Lead Biologist
Bethany Buschling <sup>†</sup>	Biologist
Catherine Carneal*	Biologist
Lisa Krueger	Biologist
Bernard Whitfield	Biologist
Tyrone Wilson	Biologist

<sup>\*</sup> Left in 2005.

<sup>&</sup>lt;sup>†</sup> Joined in 2005.

#### Technical Operations, Inquiry and Reporting

- Provides specialized data querying, archiving, and reporting functions for the Division, the Financial Management Branch, and the Institute.
- Coordinates Institute data reporting with the NCI Financial Data Branch, NIH Population Tracking and Inclusion Committee, and others.
- Answers inquiries from Congress, the public, the press, and others concerning any phase of Institute-supported work.
- Conducts in-depth analyses of extramural research data, including trends analysis.
- Identifies emerging priority areas for data collection and analysis.
- Manages RAEB's FLARE grants documentation and indexing database, ensuring reliability and completeness of its contents. Maintains and updates archival document files.
- Works with contractors and the AISB to refine RAEB's computer applications to meet the Branch's needs, and resolve FLARE computer application problems for the Branch.
- Manages RAEB's personnel support functions.

Gail Blaufarb	Lead Biologist
Stacy Harper-Avilla	Biologist
Clarissa Douglas <sup>†</sup>	Program Specialist
Linda Brown*	Computer Assistant

<sup>\*</sup> Left in 2005 to join ORRPC.

<sup>&</sup>lt;sup>†</sup> Joined in 2005.

## **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.

ı	amae 1	\Y/	Seach		hie	٠f

#### **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.

Amir Sahar-Khiz	Team Leader
Kichelle Green	Management Assistant
	Information Technology Specialist
Elaine Taylor	Information Technology Specialist

Table 1a. Requests for Applications (RFAs) Published by the NCI in FY2005 Sorted by Date of Publication

Date of Publication	RFA	Mechanism	Title	Division and Office
11/2/2004	CA05-021	U54	Comprehensive Minority Institution/Cancer Center Partnership	OCTR
11/3/2004	CA05-022	U56	Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	OCTR
11/30/2004	CA05-026	R01	Cancer Nanotechnology Platform Development	OTIR
12/1/2004 7/13/2005	CA05-025 CA06-010	F32, F33	Multidisciplinary Career Development in Cancer Nanotechnology Research	OTIR
12/2/2004	CA05-024	U54	Centers of Cancer Nanotechnology Excellence	OTIR
12/6/2004	CA06-005	R41, R42, R43, R44	Innovative Technologies for Molecular Analysis of Cancer (SBIR/STTR)	OTIR
12/8/2004	CA06-004	R21, R33	Innovations in Cancer Sample Preparation	OTIR
12/9/2004	CA06-002	R21, R33	Innovative Technologies for the Molecular Analysis of Cancer	OTIR
12/9/2004	CA06-003	R21, R33	Applications of Emerging Technologies for Cancer Research	OTIR
12/16/2004	CA06-006	R41, R42, R43, R44	Applications of Emerging Technologies for Cancer Research (SBIR/STTR)	OTIR
12/16/2004	CA06-007	R41, R42, R43, R44	Innovations in Cancer Sample Preparation (SBIR/STTR)	OTIR
2/14/2005	CA06-502	R01, R21	AIDS Malignancy Clinical Trial Consortium	DCTD

Table 1b. Requests for Applications (RFAs) Published by the NCI in FY2005 Sorted by Division and Office

Division and Office	RFA	Mechanism	Title	Date of Publication
DCTD	CA06-502	R01, R21	AIDS Malignancy Clinical Trial Consortium	2/14/2005
OCTR	CA05-021	U54	Comprehensive Minority Institution/Cancer Center Partnership	11/2/2004
OCTR	CA05-022	U56	Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	11/3/2004
OTIR	CA05-026	R01	Cancer Nanotechnology Platform Development	11/30/2004
OTIR OTIR	CA05-025 CA06-010 CA05-024	F32, F33 U54	Multidisciplinary Career Development in Cancer Nanotechnology Research Centers of Cancer Nanotechnology Excellence	12/1/2004 7/13/2005 12/2/2004
OTIR	CA06-005	R41, R42, R43, R44	Innovative Technologies for Molecular Analysis of Cancer (SBIR/STTR)	12/6/2004
OTIR	CA06-004	R21, R33	Innovations in Cancer Sample Preparation	12/8/2004
OTIR	CA06-002	R21, R33	Innovative Technologies for the Molecular Analysis of Cancer	12/9/2004
OTIR	CA06-003	R21, R33	Applications of Emerging Technologies for Cancer Research	12/9/2004
OTIR	CA06-006	R41, R42, R43, R44	Applications of Emerging Technologies for Cancer Research (SBIR/STTR)	12/16/2004
OTIR	CA06-007	R41, R42, R43, R44	Innovations in Cancer Sample Preparation (SBIR/STTR)	12/16/2004

Table 2. NCI Participation in Trans-NIH Requests for Applications (RFAs), FY2005

Sorted by Date of Publication

Date of Publication	RFA	Mechanism	Title	Division and Office
10/26/2004	DK04-013	R01, R21	Site Specific Approaches to Prevention or Management of Pediatric Obesity	DCCPS
10/29/2004	OD05-001	K07	Strengthening Behavioral and Social Science in Medical Schools	DCCPS
11/19/2004	AI05-001	U01	Leadership for HIV/AIDS Clinical Trials Networks	DCTD
2/10/2005	AI05-002	U01, U19	Units for HIV/AIDS Clinical Trials Networks	DCTD
5/5/2005	HD05-025	U01	Global Network for Women's and Children's Health Research	DCCPS
6/30/2005	NR-06-001	R01	Research on Research Integrity	DCP
9/8/2005	HG05-007	U01	Completion of a Comprehensive Mouse Knockout Resource	DCB
9/20/2005	DK05-014	R01, R21	The Obese and Diabetic Intrauterine Environment: Long-Term Metabolic or Cardiovascular Consequences in the Offspring	n DCP

Table 3a. Program Announcements (PAs) Published by the NCI in FY2005 Sorted by Date of Publication

Date of Publication	PA	Mechanism	Title	Division and Office
11/2/2004	PAR05-011	K22	NCI Transition Career Development Award to Promote Diversity	OCTR/ CMBB
11/22/2004	PA05-017	R01, R21	Decision Making in Cancer: Single-Event Decisions	DCCPS
2/17/2005	PAR05-042	P50	Specialized Programs of Research Excellence (SPOREs) in Human Cancer for Year 2005-2006	OCTR/ OSB
3/3/2005	PA05-062	R01, R21	Correlative Studies with Specimens from Multi-Site Trials	DCTD
3/8/2005	PAR05-065	R25	Cancer Education Grant Program	OCTR/ TR
5/20/2005	PAR05-114	R21	Quick Trials for Imaging and Image-Guided Interventions: Exploratory Grants	DCTD
5/26/2005	PA05-116	R03, R21	Pilot Studies in Pancreatic Cancer	DCTD
6/20/2005	PA05-125	R01, R21	Diet-Induced Changes in Inflammation as Determinants of Colon Cancer	DCP
7/13/2005	PA05-138	P01	Etiology, Prevention, and Treatment of Hepatocellular Carcinoma	n DCB
7/28/2005	PAR05-145	K05	Established Investigator Award in Cancer Prevention & Control	
8/18/2005	PAR05-156	P50	Specialized Programs of Research Excellence (SPOREs) in Human Cancer for Year 2006	
9/16/2005	PA05-165	R21	Exploratory Studies in Cancer Detection, Diagnosis, and Prognosis	DCTD

Table 3b. Program Announcements (PAs) Published by the NCI in FY2005 Sorted by Division and Office

Division and Office	PA	Mechanism	Title	Date of Publication
DCB	PA05-138	P01	Etiology, Prevention, and Treatment of Hepatocellular Carcinoma	7/13/2005
DCCPS	PA05-017	R01, R21	Decision Making in Cancer: Single-Event Decisions	11/22/2004
DCP	PA05-125	R01, R21	Diet-Induced Changes in Inflammation as Determinants of Colon Cancer	6/20/2005
DCTD	PA05-062	R01, R21	Correlative Studies with Specimens from Multi-Site Trials	3/3/2005
DCTD	PAR05-114	R21	Quick Trials for Imaging and Image-Guided Interventions: Exploratory Grants	5/20/2005
DCTD	PA05-116	R03, R21	Pilot Studies in Pancreatic Cancer	5/26/2005
DCTD	PA05-165	R21	Exploratory Studies in Cancer Detection, Diagnosis, and Prognosis	9/16/2005
OCTR/CMBB	PAR05-011	K22	NCI Transition Career Development Award to Promote Diversity	11/2/2004
OCTR/OSB	PAR05-042	P50	Specialized Programs of Research Excellence (SPOREs) in Human Cancer for Year 2005-2006	2/17/2005
OCTR/OSB	PAR05-156	P50	Specialized Programs of Research Excellence (SPOREs) in Human Cancer for Year 2006	8/18/2005
OCTR/TR	PAR05-065	R25	Cancer Education Grant Program	3/8/2005
OCTR/TR	PAR05-145	K05	Established Investigator Award in Cancer Prevention and Control	7/28/2005

Table 4. NCI Participation in Trans-NIH Program Announcements (PAs), FY2005

Sorted by Date of Publication

Date of Publication	PA	Mechanism	Title	Division and Office
10/18/2004	PA05-004	R01, R21	Symptom Clusters in Cancer and Immune Disorders	DCP
12/10/2004	PA05-027	R01	Research on Mind-Body Interactions and Health	DCCPS
12/17/2004	PA05-029	R01	Social and Cultural Dimensions of Health	DCCPS
1/24/2005	PA05-041	R41, R42, R43, R44	Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) to Improve the Chemistry and Targeted Delivery of RNAi Molecules	DCTD
3/30/2005	PAR05-080	R01	Tools for Zebrafish Research	DCB
4/11/2005	PAR05-085	R01, R03, R21	Understanding and Treating Tuberous Sclerosis Complex	DCB
4/15/2005	PA05-090	R01, R03, R21	Methodology and Measurement in the Behavioral and Social Sciences	DCCPS
5/6/2005	PA05-103	R21	Pilot and Feasibility Program Related to the Kidney	DCB
6/30/2005	PAR05-133	T15	Short-Term Courses in Human Embryonic Stem Cell Culture Techniques	DCB
7/14/2005	PAR05-140	D43	AIDS International Training and Research Program	DCTD
7/15/2005	PA05-141	R01, R15, R21	Basic and Preclinical Research on Complementary and Alternative Medicine (CAM)	DCP/ OCCAM
7/20/2005	PA05-142	R01, R21	Biobehavioral Methods to Improve Outcomes Research	DCCPS
7/22/2005	PA05-143	K23	Mentored Patient-Oriented Research Career Development Award	OCTR/ TR
8/10/2005	PAR05-152	R21	CAM at Minority or Health Disparities Research Centers	DCP
8/18/2005	PA05-155	R01, R21	The Secretory Pattern of Senescent Cells	DCB

Table 5. Applications Received for Referral by the NCI/DEA (by Mechanism), FY2005\*†

	A -41: -14: -		Applications by Board		
Mechanism	Activity Code	Totals by Activity	Jan	May	Sep
International Training Grant in Epidemiology (Fogarty International Center)	D43	6	0	6	0
Predoctoral Individual National Research Service Award (NRSA)	F31	83	0	48	35
Postdoctoral Individual National Research Service Award	F32	502	110	218	174
National Research Service Award for Senior Fellows	F33	7	1	4	2
National Research Service Award for Senior Fellows	F34	1	0	1	0
Resources Project Grant (NLM)	G08	1	0	0	1
Research Scientist Development Award—Research and Training	K01	179	58	57	64
Research Scientist Development Award—Research	K02	1	0	0	1
Research Scientist Award	K05	11	5	3	3
Academic/Teacher Award	K07	175	50	35	90
Clinical Investigator Award	K08	142	50	51	41
Physician Scientist Award (Program)	K12	13	12	1	0
Career Transition Award	K22	73	24	29	20
Mentored Patient-Oriented Research Development Award	K23	57	14	25	18
Midcareer Investigator Award in Patient-Oriented Research	K24	20	10	5	5
Mentored Quantitative Research Career Development	K25	19	5	9	5
Research Program Project	P01	146	46	51	49
Exploratory Grant	P20	32	0	0	32
Center Core Grant	P30	37	9	24	4
Biotechnology Resource Grant Program	P41	2	1	1	0
Specialized Center	P50	28	11	12	5
Research Project	R01	6,276	1,906	2,224	2,146
Small Research Grant	R03	463	129	186	148
Conference	R13	124	28	50	46
Academic Research Enhancement Awards (AREA)	R15	100	39	38	23

(Continued)

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications and withdrawn applications. Does not inlcude 747 applications received for referral but not accepted for review.

<sup>†</sup> FY2005 includes receipt, referral, and review activities occurring between October 1, 2004, and September 30, 2005.

Table 5. Applications Received for Referral by the NCI/DEA (by Mechanism), FY2005\*† (Continued)

			Applications by Board		
Mechanism	Activity Code	Totals by Activity	Jan	May	Sep
Exploratory/Developmental Grants	R21	2,089	615	753	721
Resource-Related Research Project	R24	1	0	0	1
Education Project	R25	98	26	39	33
Exploratory/Developmental Grant Phase II	R33	82	22	39	21
Clinical Trial Planning Grant	R34	1	0	1	0
Method to Extend Research in Time (MERIT) Award	R37	19	11	6	2
Small Business Technology Transfer (STTR) Grant—Phase I	R41	192	61	59	72
Small Business Technology Transfer (STTR) Grant—Phase II	R42	39	10	18	11
Small Business Innovation Research Grant (SBIR)—Phase I	R43	940	325	305	310
Small Business Innovation Research Grant (SBIR)—Phase II	R44	338	112	116	110
James A. Shannon Director's Award	R55	2	2	0	0
High Priority, Short Term Project Award	R56	4	2	2	0
Minority Biomedical Research Support—(MBRS)	S06	3	0	3	0
Research and Institutional Resources Health Disparities Endowment Grants—Capacity Building Grant	S21	5	0	0	5
Research and Student Resources Health Disparities Endowment Grant—Educational Program	S22	1	0	0	1
Continuing Education Training Program	T15	2	0	2	0
Institutional National Research Service Award	T32	105	48	38	19
Research Project (Cooperative Agreement)	U01	263	110	142	11
Cooperative Clinical Research (Cooperative Agreement)	U10	40	32	1	7
Research Program (Cooperative Agreement)	U19	49	39	1	9
Resource-Related Research Project (Cooperative Agreement)	U24	18	17	0	1
Specialized Center (Cooperative Agreement)	U54	49	0	14	35
Exploratory Grants—Cooperative Agreement	U56	10	0	0	10
Total		12,848	3,940	4,617	4,291

Table 6. Grant and Cooperative Agreement Applications Reviewed by the NCI/DEA (by Mechanism), FY2005\*

	A -45 34		Applications by Board		
Mechanism	Activity Code	Totals by Activity	Jan	May	Sep
Postdoctoral Individual National Research Service Award	F32	4	0	0	4
National Research Service Award for Senior Fellow	F33	1	0	0	1
Research Scientist Development Award—Research and Training	K01	169	56	55	58
Research Scientist Award	K05	8	3	3	2
Academic/Teacher Award	K07	122	48	35	39
Clinical Investigator Award	K08	118	39	45	34
Physician Scientist Award (Program)	K12	13	12	1	0
Career Transition Award	K22	73	24	29	20
Mentored Patient-Oriented Research Development Award	K23	42	8	19	15
Midcareer Investigator Award in Patient-Oriented Research	K24	15	8	3	4
Mentored Quantitative Research Career Development	K25	15	4	6	5
Research Program Project	P01	134	44	46	44
Exploratory Grant	P20	32	0	0	32
Center Core Grant	P30	12	3	5	4
Specialized Center	P50	27	10	12	5
Research Project	R01	139	2	52	85
Small Research Grant	R03	400	120	137	143
Conference	R13	70	17	27	26
Exploratory/Developmental Grant	R21	276	62	152	62
Education Project	R25	93	24	38	31
Exploratory/Developmental Grants—Phase II	R33	58	14	30	14
Small Business Technology Transfer (STTR) Grant—Phase I	R41	8	3	1	4
Small Business Technology Transfer (STTR) Grant—Phase II	R42	3	0	3	0
Small Business Innovation Research Grant (SBIR)—Phase I	R43	77	21	25	31
Small Business Innovation Research Grant (SBIR)—Phase II	R44	11	6	3	2
Continuing Education Training Program	T15	1	0	1	0

(Continued)

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. Withdrawn applications have been subtracted from the total count. Of the 2,401 applications reviewed during the year, 101 applications were withdrawn, 700 were not recommended for further consideration by initial review committee, and an additional 828 received scores in the bottom 33 percent and were not submitted for NCAB action. Does not include 31 applications reviewed by the NCI for the NIAID.

Table 6. Grant and Cooperative Agreement Applications Reviewed by the NCI/DEA (by Mechanism), FY2005\*(Continued)

	A 41 14		Applications by Board		
Mechanism	Activity Code	Totals by Activity	Jan	May	Sep
Institutional National Research Service Award	T32	95	45	31	19
Research Project (Cooperative Agreement)	U01	233	107	124	2
Cooperative Clinical Research (Cooperative Agreement)	U10	40	32	1	7
Research Program (Cooperative Agreement)	U19	37	37	0	0
Resource-Related Research Project (Cooperative Agreement)	U24	17	16	0	1
Specialized Center (Cooperative Agreement)	U54	48	0	13	35
Exploratory Grant (Cooperative Agreement)	U56	10	0	0	10
Total		2,401	765	897	739

Table 7. Applications Reviewed by NCI IRG Subcommittees and Special Emphasis Panels (SEPs), FY2005\*

			Total Costs			
NCI IRG Subcommittee	Types of Applications Reviewed	Number of Applications	Requested First Year	Requested All Years		
A—Cancer Centers	P30	12	\$69,650,903	\$374,837,484		
C—Basic and Preclinical	P01, R01	47	85,161,202	444,319,719		
D—Clinical Studies	P01, R01	63	144,853,273	737,493,146		
E—Cancer Epidemiology, Prevention and Control	P01, R01, U01, U24	36	76,616,061	372,274,603		
F—Manpower and Training	K01, T32	252	52,391,309	293,436,402		
G—Education	K01, K05, K07, K22, K23, K24	195	26,185,334	130,340,716		
H—Clinical Trials	R01, U10	12	45,267,194	226,395,319		
I—Career Development	F32, F33, K01, K08, K22, K23, K25, R13, T15	207	28,235,116	119,915,352		
J—Population and Patient-Oriented Training <sup>†</sup>		0	0	0		
Subtotal-NCI IRG Subcommittees		824	\$528,360,392	\$2,699,012,741		
All SEPs Subtotal SEPs	K05, K07, K08, K12, K22, K24, P01, P20, P50, R01, R03, R13, R21, R25, R33, R41, R42, R43, T32, U01, U10, U19, U24, U54, U56	1,577	\$848,259,279	\$4,041,740,642		
IRG & SEP Totals		2,401	\$1,376,619,671	\$6,740,753,383		

<sup>\*</sup> Source: IMPACII. There were 101 withdrawn applications subtracted from the total count. † Formed in late FY2005.

Table 8. Summary of Investigator-Initiated PO1 Applications Reviewed for Each NCAB Meeting, FY2005

Type of Application	January 2005	May 2005	September 2005	FY 2005 Total	
New	7	13	13		
New Amended	11	13	12	36	
Recompeting	14	8	4	26	
Recompeting Amended	10	9	13	32	
Supplement	1	3	2	6	
Supplement Amended	1			1	
Total	44	46	44	134	

Table 9. Summary of Unsolicited P01 Applications Reviewed by NCI in FY2005

Sorted by NCI Program Division

		Total Costs			
Program Division	Number of Applications	First Year Requested Total Costs	Total Costs for Requested Period		
Division of Cancer Biology (DCB)	41	\$77,365,558	\$403,170,677		
Division of Cancer Control and Population Sciences (DCCPS)	6	14,872,698	73,792,716		
Division of Cancer Prevention (DCP)	9	19,944,408	104,255,341		
Division of Cancer Treatment and Diagnosis (DCTD)	78	191,163,794	986,030,563		
Total	134	\$303,346,458	\$1,567,249,297		

Table 10. Requests for Applications (RFAs) Reviewed by the NCI/DEA, FY2005\*

				Applications by NCAB Round			Round	Total Costs	
Title of Initiative	Bypass Initiative	RFA Number	Activity Codes	Totals	Jan	May	Sept	Requested First Year	Requested Total Years
Strategic Partnering to Evaluate Cancer Signatures	2	CA04-015	U01	25	25	0	0	\$55,992,790	\$282,219,462
National Cooperative Drug Discovery Groups (NCDDGs) for the Treatment of Cancer	3,4,12,13	CA05-001	U19	37	37	0	0	45,420,337	225,776,438
Innovation Technologies for the	2,3,11,14	CA06-002	R21	91	26	40	25	19,512,321	39,267,705
Molecular Analysis of Cancer II	2,3,11,14	CA05-002	R33	22	3	10	9	13,166,874	31,616,307
Applications of Emerging	2,3,11,14	CA06-003	R21	82	26	32	24	16,014,981	115,963,399
Technologies for Cancer Research	2,3,11,14	CA05-003	R33	28	8	17	3	16,632,963	48,960,969
Innovations in Cancer Sample	2,3,11,14	CA06-004	R21	28	10	13	5	4,965,961	24,594,813
Preparation	2,3,11,14	CA05-004	R33	8	3	3	2	27,707,021	7,861,422
The Early Detection Research Network: Clinical Epidemiology	00444	0105.005	U01	14	14	0	0	16,858,834	90,473,238
and Validation Centers	2,3,4,14	CA05-005	U24	1	1	0	0	23,824	23,824
	2,3,11,14	CA06-005 CA05-006	R41	4	2	0	2	0	1,030,301
Innovative Technologies for			R42	1	0	1	0	933,843	1,627,729
Molecular Analysis of Cancer SBIR			R43	25	11	8	6	310,300	4,525,164
			R44	6	3	2	1	969,912	8,262,619
Applications of Emerging Techologies for Cancer Research SBIR	2,3,11,14	CA06-006 CA05-007	R41	4	1	1	2	0	335,282
			R42	1	0	1	0	94,500	877,265
			R43	31	6	13	12	0	3,546,580
			R44	3	1	1	1	199,944	3,571,701
		CA06-007 CA05-008	R42	1	0	1	0	194,565	2,300,888
Innovations in Cancer Sample Preparation SBIR/STTR	2,3,11,14		R43	14	4	4	6	0	2,089,435
Troparation object the			R44	2	2	0	0	726,917	2,040,188
The Early Detection Research Network: Biomarker Reference Laboratory	2,3,4	CA05-009	U24	5	5	0	0	2,341,670	13,392,238
Transdisciplinary Research on Energetics and Cancer Centers	6,8,9	CA05-010	U54	13	0	13	0	29,752,723	150,703,484
Coordination Center for TREC Centers	6,8,9	CA05-011	U01	3	0	3	0	2,845,935	14,351,415
Community Networks to Reduce Cancer Disparities Through Education, Research, and Training	8	CA05-012	U01	65	65	0	0	51,161,306	260,061,867
(Continued)									

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. There were 54 withdrawn applications subtracted from the total count.

Table 10. Requests for Applications (RFAs) Reviewed by the NCI/DEA, FY2005\* (Continued)

				Applications by NCAB Round		Total Costs			
	Bypass	RFA	Activity					Requested	Requested
Title of Initiative	Initiative	Number	Codes	Totals	Jan	May	Sept	First Year	Total Years
Reducing Barriers in Symptom Management and Palliative Care	7	CA05-013	R01	32	0	32	0	\$16,674,256	\$70,667,111
			R21	35	0	35	0	5,406,736	10,774,311
Community Clinical Oncology Program	13	CA05-014	U10	22	22	0	0	28,876,413	152,655,321
Minority-Based Community Clinical Oncology Program	8,13	CA05-015	U10	8	8	0	0	5,550,242	27,015,297
Support for Human Specimen Banking in NCI-Supported Cancer Clinical Trials	2,3,11,13	CA05-017	U24	9	9	0	0	14,641,595	74,518,547
Cancer Intervention and Surveillance Modeling Network	7,8,10,13,15	CA05-018	U01	22	0	22	0	5,248,384	26,629,990
Patient Navigator Intervention Research Program	7,8,13	CA05-019	U01	40	0	40	0	29,837,584	154,902,754
Planning Grant for Minority Institution/Cancer Center Collaboration	8,11,12,13	CA05-020	P20	32	0	0	32	5,618,593	22,839,540
Comprehensive Minority Institution/Cancer Center Partnership	8,11,12	CA05-021	U54	7	0	0	7	9,253,712	50,046,504
Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	8,11,12	CA05-022	U56	10	0	0	10	3,770,966	19,587,840
Early Detection Research Network: Biomarkers Developmental Laboratories	2,3,4	CA05-023	U01	50	0	50	0	36,584,519	190,853,740
Centers of Cancer Nanotechnology Excellence	3,4,12	CA05-024	U54	28	0	0	28	144,859,239	694,829,410
Multidisciplinary Career	3,4,11	CA05-025	F32	4	0	0	4	0	0
Development in Cancer Nanotechnology Research	0,7,11	CA05-025	F33	1	0	0	1	0	0
Cancer Nanotechnology Platform	3,4,11	CA05-026	R01	62	0	0	62	51,613,357	243,416,169
Development	3,4,11		R43	1	0	0	1	909,012	4,208,170
EDRN: Clinical Data Management Coordinating Center	2,3,12	CA05-501	U01	1	1	0	0	1,999,839	9,999,537
Breast Cancer Surveillance Consortium Infrastructure	7,8,10,12, 13	CA05-502	U01	8	0	8	0	3,282,374	17,355,704
Circulating Cells in Cancer Detection	2,3,4	CA06-001	R43	6	0	0	6	0	702,866
Centers for Medical Counter- measures Against Radiation **	N/A	AI04-045	U19	31	0	31	0	\$141,009,726	\$706,102,318

<sup>\*\*</sup> Reviewed by the NCI for the NIAID.

Table 11. Program Announcements (PAs) Reviewed by the NCI/DEA,  ${\rm FY2005}^{\,*}$ 

				Applicat	ions by	NCAR	Round	Total C	Costs
Title of Initiative	Bypass Initiative	PA Number	Activity Codes	Totals	Jan	May	Sept	Requested First Year	Requested Total Years
Mentored Clinical Scientist			K07	2	0	2	0	\$247,847	\$1,266,639
Development Award (K08)	N/A	PA00-003	K08	100	35	38	27	14,161,109	68,515,551
			K07	2	2	0	0	236,686	1,186,302
Mentored Patient Oriented Research Career Development	N/A	PA00-004	K08	1	0	1	0	131,706	658,530
Award			K23	37	8	17	12	5,527,927	27,199,987
Midcareer Investigator Award in Patient-Oriented Research (K24)	N/A	PA00-005	K24	5	5	0	0	760,009	3,923,670
Mentored Research Scientist Development Award - K01	N/A	PA00-019	K01	7	3	1	3	1,011,973	5,007,456
Academic Career Award (K07)	N/A	PA00-070	K07	1	0	1	0	257,350	1,335,608
NIH National Research Service Award Institutional Research Training Grants (T32)	N/A	PA02-109	T32	30	12	9	9	8,404,645	50,260,844
Mentored Quantitative Research Career Development Award	4	PA02-127	K25	13	3	5	5	1,723,550	8,153,845
Clinical Cancer Therapy and Prevention Research	13	PA04-046	R01	4	0	0	4	3,763,543	13,740,894
Midcareer Investigator Award in Patient-Oriented Research	N/A	PA04-107	K24	6	0	3	3	1,323,551	6,184,534
Midcareer Investigator Award In Patient-Oriented Research	N/A	PA98-053	K24	2	2	0	0	277,001	1,418,560
Cancer Education Grant Program	N/A	PAR00-033	R25	1	0	1	0	612,096	3,226,809
Established Investigator Award in Cancer Prevention, Control, Behavioral and Population Research	N/A	PAR00-039	K05	1	1	0	0	141,101	707,983
The Howard Temin Award	N/A	PAR00-066	K01	2	0	1	1	237,351	1,440,146
NCI Transition Career Development Award	N/A	PAR01-134	K22	3	3	0	0	404,640	1,213,876
Cancer Prevention, Control, Behavioral and Population Sciences Career Development Award	N/A	PAR01-135	K07	5	1	4	0	666,112	3,369,453
Mentored Clinical Scientist Award for Underrepresented Minorities	N/A	PAR03-002	K08	7	1	1	5	1,009,392	5,156,981
Mentored Patient-Oriented Research for Underrepresented Minorities	N/A	PAR03-006	K23	4	0	1	3	551,607	2,831,151
Small Grants Program for Cancer Epidemiology	11, 14	PAR03-010	R03	104	38	26	40	7,958,930	15,436,609
(Continued)									

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. There were 39 withdrawn applications subtracted from the total count.

Table 11. Program Announcements (PAs) Reviewed by the NCI/DEA, FY2005\* (Continued)

				Applications by NCAB Round			Total Costs		
				Applicat	ions by	/ NCAB	Round	Total C	Costs
Title of Initiative	Bypass Initiative	PA Number	Activity Codes	Totals	Jan	May	Sept	Requested First Year	Requested Total Years
NCI Mentored Career Development Award for Underrepresented Minorities	5,6,7,8,10	PAR03-016	K01	40	10	14	16	\$4,550,361	\$25,826,526
Cancer Education Grant Program	N/A	PAR03-093	R25	55	16	30	9	16,235,061	77,332,411
NCI Transition Career Development Award for Underrepresented Minorities	N/A	PAR03-101	K22	15	5	9	1	2,305,321	6,996,193
The Howard Temin Award	N/A	PAR03-104	K01	116	42	36	38	14,311,461	82,176,978
Cancer Education and Career Development Program	N/A	PAR03-148	R25	24	7	7	10	9,721,654	57,121,667
Established Investigator Award in Cancer Prevention, Control, Behavioral and Population Sciences	N/A	PAR03-149	K05	7	2	3	2	1,329,401	6,898,044
Industry-Academic Partnerships for Development of Biomedical Imaging Systems	4	PAR03-157	R21	23	0	23	0	5,527,457	10,591,781
Specialized Program of Research Excellence (SPOREs) in Human Cancer for the Year 2004	13	PAR03-158	P50	21	4	12	5	55,623,640	390,126,300
Conference Grants	N/A	PAR03-176	R13	62	17	27	18	2,564,996	6,784,236
Small Grants Progam for Behavioral Research in Cancer Control	5,6,7,10	PAR04-020	R03	91	32	28	31	6,938,188	13,506,484
Colorectal Cancer Screening in	4.0	D. D. J. O. O.	R01	29	0	16	13	16,609,431	72,972,982
Primary Care Practice	10	PAR04-036	R21	17	0	9	8	3,401,567	6,217,030
NCI Transition Career Development Award	N/A	PAR04-040	K22	51	15	20	16	7,218,158	21,667,489
Cancer Prevention, Control, Behavioral and Population Sciences Cancer Development Award	N/A	PAR04-055	K07	111	44	28	39	14,186,884	70,942,041
In Vivo Cellular and Molecular Imaging Centers (ICMICs)	4	PAR04-069	P50	6	6	0	0	12,668,739	64,095,537
Paul Calabresi Award for Clinical Oncology	N/A	PAR04-096	K12	12	11	1	0	6,052,896	41,521,526
Cancer Prevention Research Small Grant Program	N/A	PAR02-176 PAR04-147	R03	205	50	83	72	15,766,690	31,093,049

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. There were 39 withdrawn applications subtracted from the total count.

Table 11. Program Announcements (PAs) Reviewed by the NCI/DEA, FY2005\* (Continued)

				Applications by NCAB Round		Total	Costs		
Title of Initiative	Bypass Initiative	PA Number	Activity Codes	Totals	Jan	May	Sept	Requested First Year	Requested Total Years
NCI Transition Career Development Award to Promote Diversity	N/A	PAR05-011	K22	3	0	0	3	\$397,136	\$1,214,426
Cancer Education (R25E) Program	N/A	PAR05-065	R25	9	0	0	9	2,718,662	12,633,522
Total				1,234	375	457	402	\$247,535,829	\$1,221,953,650

<sup>\*</sup> Source: IMPACII. Includes NCI Primary and Secondary assigned applications. There were 39 withdrawn applications subtracted from the total count.

Table 12. Average Total Cost and Number of Research Project Grant Awards, FY2002-FY2005

Sorted by Division

	F	Y2002	F	Y2003	F	Y2004	F	Y2005	Percent 02-	
	No.	Average Cost	No.	Average Cost	No.	Average Cost	No.	Average Cost	No.	Average Cost
R01 Average Cost of Av	vard Data	1								
NCI Overall	3,377	\$324,000	3,573	\$338,000	3,780	\$338,000	3,848	\$341,000	13.9%	5.2%
DCB	1,941	291,000	2,028	304,000	2,139	305,000	2,132	306,000	9.8%	5.2%
DCP	126	431,000	151	452,000	169	412,000	203	418,000	61.1%	-3.0%
DCTD	916	295,000	973	306,000	1,027	314,000	1,057	319,000	15.4%	8.1%
DCCPS	389	502,000	418	518,000	441	501,000	453	502,000	16.5%	0.0%
OD (CRCHD, OCCAM, OCTR, etc.)	5	1,799,000	3	2,886,000	4	N.A.	3	N.A.	N.A.	N.A.
P01 Average Cost of Av	ard Data	ı								
NCI Overall	173	1,836,000	178	1,891,000	177	1,946,000	176	1,924,000	1.7%	4.8%
DCB	63	1,571,000	70	1,651,000	66	1,702,000	67	1,717,000	6.3%	9.3%
DCP	13	1,931,000	12	2,014,000	13	2,065,000	15	2,047,000	15.4%	6.0%
DCTD	80	1,995,000	83	1,988,000	86	2,040,000	84	2,027,000	5.0%	1.6%
DCCPS	16	2,015,000	13	2,321,000	12	2,375,000	9	2,358,000	-43.8%	17.0%
OD (CRCHD, OCCAM, OCTR, etc.)	1	1,715,000		N.A.		N.A.	1	1,426,000	N.A.	N.A.
R03 Average Cost of Av	vard Data	1								
NCI Overall	186	76,000	203	75,000	240	75,000	223	76,000	19.9%	0.0%
DCB	3	90,000	3	85,000	7	76,000	5	70,000	66.7%	-22.2%
DCP	81	77,000	74	74,000	137	74,000	85	76,000	4.9%	-1.3%
DCTD	3	78,000	1	72,000	5	80,000	5	82,000	66.7%	5.1%
DCCPS	99	75,000	125	74,000	91	76,000	128	76,000	29.3%	1.3%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
R21 Average Cost of Av	vard Data	1								
NCI Overall	309	187,000	360	188,000	425	183,000	430	178,000	39.2%	-4.8%
DCB	30	138,000	37	149,000	70	157,000	75	150,000	150.0%	8.7%
DCP	18	191,000	24	166,000	76	151,000	42	176,000	133.3%	7.9%
DCTD	236	196,000	231	200,000	241	202,000	240	193,000	1.7%	-1.5%
DCCPS	25	148,000	41	157,000	37	177,000	72	153,000	188.0%	3.4%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.	27	205,000	1	277,000	1	455,000	N.A.	N.A.

(Continued)

Table 12. Average Total Cost and Number of Research Project Grant Awards, FY2002-FY2005 (Continued)

Sorted by Division

	F	Y2002	F	Y2003	F	Y2004	F	Y2005	Percent 02-	Change 05
	No.	Average Cost	No.	Average Cost	No.	Average Cost	No.	Average Cost		verage
U01/U19 Average Cost of	of Award	Data								
NCI Overall	216	\$770,000	198	\$898,000	174	\$942,000	164	\$969,000	-24.1%	25.8%
DCB	20	758,000	20	809,000	27	748,000	27	782,000	35.0%	3.2%
DCP	9	1,143,000	10	938,000	9	907,000	10	831,000	11.1%	-27.3%
DCTD	136	701,000	121	902,000	103	952,000	85	1,076,000	-37.5%	53.5%
DCCPS	51	880,000	47	903,000	35	1,060,000	42	902,000	17.6%	2.5%
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
R13 Average Cost of Aw	ard Data	3								
NCI Overall	83	26,000	108	23,000	112	19,000	99	23,000	19.3%	-11.5%
DCB	44	11,000	48	11,000	56	9,000	55	9,000	25.0%	-18.2%
DCP	8	15,000	11	14,000	13	13,000	13	14,000	62.5%	-6.7%
DCTD	19	40,000	30	20,000	22	20,000	13	33,000	-31.6%	-17.5%
DCCPS	8	43,000	12	53,000	15	26,000	10	63,000	25.0%	46.5%
OD (CRCHD, OCCAM, OCTR, etc.)	4	123,000	7	82,000	6	110,000	8	64,000	100.0%	-48.0%
U10 Average Cost of Aw	ard Data	a—Includes (	Cancer C	ontrol						
NCI Overall	210	1,225,000	151	1,654,000	139	1,785,000	136	1,732,000	-35.2%	41.4%
DCB		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	73	1,269,000	0.0%	-1.4%
DCTD	137	1,183,000	78	2,026,000	65	2,373,000	63	2,266,000	-54.0%	11.8%
DCCPS		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
OD (CRCHD, OCCAM, OCTR, etc.)		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
P30 Average Cost of Aw		-Includes (	Cancer Co							
NCI Overall	63	3,215,000	63	3,596,000	63	3,798,000	63	3,945,000	0.0%	22.7%
DCB		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
DCP	2	729,000	2	728,000	2	960,000	2	818,000	0.0%	12.2%
DCTD		N.A.		N.A.		N.A.		N.A.	N.A.	N.A.
DCCPS	0	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	61	3,982,000	0.0%	21.3%
P50 Average Cost of Aw										
NCI Overall	43	2,706,000	66	2,377,000	83	2,204,000	76	2,197,000	76.7%	-18.8%
DCB		N.A.		N.A.	6	2,189,000		N.A.	N.A.	N.A.
DCP		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	7	1,984,000	40.0%	-9.9%
DCCPS	4	2,603,000	12	2,042,000	12	1,830,000	12	1,868,000	200.0%	-28.2%
OD (CRCHD, OCCAM, OCTR, etc.)	34	2,792,000	47	2,518,000	58	2,278,000	57	2,292,000	67.6%	-17.9%

Table 13. Summary of NCI Grant Awards by Mechanism, FY2005

			Dollars in	housands	% of NC				
	Mechanism	Award Count	Dollar	Average Cost	Number	Dollar	Competing Requested	Competing Awarded	Succes Rate
Research	Project Grants (RPG)								
	R01—Traditional Research Grants	3,848	1,312,762	341	54.7%	40.4%	4,038	809	20.0%
	P01—Program Project Grants	176	338,660	1,924	2.5%	10.4%	116	39	33.6%
	R03—Small Grants	223	16,894	76	3.2%	0.5%	350	89	25.4%
	R21—Exploratory/ Developmental Grants	430	76,566	178	6.1%	2.4%	1,240	213	17.2%
	R33—Phased Innovation Grant (Phase 2)	88	36,250	412	1.3%	1.1%	16	4	25.0%
	R56—Bridge Award	1	407	407	0.0%	0.0%	1	1	100.0%
	R37—MERIT Award	74	40,007	541	1.1%	1.2%	15	15	100.0%
	R15—Academic Research Enhancement Awards (AREA)	20	4,091	205	0.3%	0.1%	59	20	33.9%
	R55—Shannon Awards	2	200	100	0.0%	0.0%	2	2	100.0%
	Program Evaluation (tap)		58,721			1.8%			
	Request for Applications—RFA (R01, R21, R03, R33, P01)	121	47,556	393	1.7%	1.5%	387	64	16.5%
	RFA—Cooperative Agreements (U01, U19)	s 133	123,847	931	1.9%	3.8%	94	31	33.0%
	Cooperative Agreements— not RFA	31	35,149	1,134	0.4%	1.1%	7	5	71.4%
	Small Business Innovation Research (U43, U44, R43, R44 —SBIR	4) 231	86,579	375	3.3%	2.7%	944	120	12.7%
	Small Business Technology Transfer Research (R41, R42)- STTR	_ 34	11,196	329	0.5%	0.3%	160	16	10.0%
	Subtotal, RPG	5,412	2,188,885	404	77.0%	67.3%	7,429	1,428	19.2%
enters									
	CORE	61	247,708	4,061	0.9%	7.6%	15	15	100.0%
	P20 Exploratory		7,555			0.2%			
	SPORE	57	133,025	2,334	0.8%	4.1%	17	4	23.5%
	Specialized Centers (Cooperative Agreement)	27	39,726	1,471	0.4%	1.2%	25	7	28.0%
	Specialized Centers (Nanotechnology)	7	26,238	3,748	0.1%	0.8%	28	7	25.0%
	Subtotal, Centers	152	454,252	2,989	2.2%	14.0%	85	33	38.8%

(Continued)

Table 13. Summary of NCI Grant Awards by Mechanism, FY2005 (Continued)

				<u> Thousands</u>	% of NC				0
		ward ount	Dollar	Average Cost	Number	Dollar	Competing Requested	Competing Awarded	Succes Rate
Other Research	U13—Conference (Cooperative Agreement)	1	17	17	0.0%	0.0%			
(A)	D43, R13—Conference Grants	95	1,883	20	1.4%	0.1%	70	52	74.3%
	T15—Training Conference Grants	3	338	113	0.0%	0.0%	2	1	50.0%
	R24, U24—Research Resource Grant	51	28,178	553	0.7%	0.9%	10	9	90.0%
	U10—Clinical Cooperative Group	63	142,847	2,267	0.9%	4.4%	3	2	66.7%
	S06—Minority Biomedical Research Support		3,367			0.1%			
	R09, U09—Scientific Evaluation		8,621			0.3%			
	U56—Exploratory Grants— Cooperative Agreement	29	12,487	431	0.4%	0.4%	2	2	100.0%
	Subtotal, Other Research (A)	242	197,738	817	3.4%	6.1%	87	66	75.9%
Other	R25—Cancer Education	101	34,581	342	1.4%	1.1%	96	17	17.7%
Research (B)— Career Awards	K08—Mentored Clinical Scientist	141	17,841	127	2.0%	0.5%	118	25	21.2%
Awarus	K07—Preventive Oncology Award	110	13,529	123	1.6%	0.4%	104	26	25.0%
	K12, K14—Mentored Career Award	13	7,436	572	0.2%	0.2%	13	2	15.4%
	K01—Temin Award	127	17,734	140	1.8%	0.5%	135	30	22.2%
	K22—Clinical Research Track	35	5,344	153	0.5%	0.2%	63	12	19.0%
	K23—Mentored Patient-Oriented Research Career Development	60	7,533	126	0.9%	0.2%	43	8	18.6%
	K24—Mid-Career Investigator in Patient-Oriented Research Award	d 16	2,306	144	0.2%	0.1%	14	5	35.7%
	K25—Mentored Quantitative Research Career Development Award	9	1,227	136	0.1%	0.0%	19	5	26.3%
	K30—Institutional Curriculum Award		1,147			0.0%			
	K05—Established Investigator in Cancer Prevention and Control	20	2,554	128	0.3%	0.1%	8	2	25.0%
	Subtotal, Other Research (B) —Career Awards	632	76,651	144	7.6%	2.4%	517	115	22.2%
	Subtotal, Other Research (A+B)	874	308,970	354	12.4%	9.5%	700	198	28.3%

(Continued)

Table 13. Summary of NCI Grant Awards by Mechanism, FY2005 (Continued)

Total, All NCI Grants	7,030	3,251,215	462	100.0%	100.0%	8,901	1,862	20.9%
Subtotal, Cancer Con	ntrol 222	231,809	1,044	3.2%	7.1%	263	80	30.4%
Cancer Control Special Populations	al 33	24,819	752	0.5%	0.8%	105	33	31.4%
Cancer Prevention and	d Control 189	206,990	1,095	2.7%	6.4%	158	47	29.7%
Cancer Control								
Subtotal, NRSA	370	67,299	182	5.3%	2.1%	424	123	29.0%
NRSA Nanotechnolog Fellowships	у 3	142	47	0.0%	0.0%	5	3	60.0%
F30, F31, F32, F33, F NRSA Fellowship	34— 195	8,267	42	2.8%	0.3%	329	79	24.0%
T32, T34, T35, T36— NRSA Institutional Awa		58,890	342	2.4%	1.8%	90	41	45.6%
Ruth Kirschstein National Resea	arch Service Awa	ards (NRSA)						
Mechanism	Award Count	Dollars in Dollar	Thousands Average Cost	% of NO Number	Dollar	Competing Requested	Competing Awarded	Success Rate
				0/ 53:5	N. T. ( )			

Table 14. NCI Special Interest Category (SIC) Dollars for FY2001-FY2005 – Annual Percent Change\*

· ·				,		• 1	•
Special Interest Categories (SIC)	2001	2002	2003	2004	2005	Average Dollar Change/Yr.	Average Percent Change/Yr.
Adoptive Cell Immunotherapy	54,038,845	62,020,806	65,348,655	70,375,002	70,072,700	4,008,464	6.85
Adv. Manufacturing Technology	24,931,210	14,271,896	9,841,911	12,662,969	16,171,766	-2,189,861	-4.36
Aging	115,799,586	139,110,456	165,960,180	160,302,073	171,633,181	13,958,399	10.77
AIDS	60,108,228	60,954,602	119,070,648	130,840,621	131,010,836	17,725,652	26.69
Alternative Medicine, Direct	23,796,940	32,950,143	57,481,994	62,596,463	59,802,451	9,001,378	29.34
Alternative Medicine, Indirect	28,806,239	29,685,596	28,482,503	33,406,568	25,822,838	-745,850	-1.60
Alzheimer's Dementia	712,086	1,030,384	1,621,994	1,558,931	1,536,040	205,989	24.19
Arctic Research	3,040,138	2,824,330	4,052,599	3,477,543	2,227,788	-203,088	-3.43
Arthritis	525,144	1,120,913	1,584,332	1,515,693	1,007,647	120,626	29.24
Asbestos	1,468,410	1,836,892	4,491,877	2,255,176	2,728,981	315,143	35.21
Ataxia Telangiectasia	6,447,560	7,950,411	6,837,168	4,569,973	4,746,714	-425,212	-5.00
Autoimmune Diseases	6,149,176	7,067,297	8,686,585	9,958,212	9,037,735	722,140	10.81
Behavior Research	226,317,414	238,366,446	275,849,766	284,166,605	295,139,435	17,205,505	6.98
Bioengineering	237,827,136	281,461,832	294,659,713	293,329,685	207,349,791	-7,619,336	-1.68
Bioinformatics	65,933,728	100,558,934	104,554,183	124,834,295	147,062,040	20,282,078	23.42
Biological Carcinogenesis, Non-Viral	1,752,242	2,598,885	5,797,028	6,128,334	5,956,723	1,051,120	43.57
Biological Response Modifiers	683,741,092	701,465,562	741,430,361	750,275,261	887,217,706	50,869,154	6.93
Biomaterials Research	14,831,893	23,938,815	33,558,137	39,745,363	37,785,085	5,738,298	28.77
Birth Defects	10,366,083	8,368,607	8,859,294	8,894,762	9,889,474	-119,152	-0.46
Bone Marrow Transplantation	67,242,722	65,937,038	62,342,401	57,457,088	49,480,615	-4,440,527	-7.28
Breast Cancer Detection	82,170,515	88,646,269	90,193,676	97,976,659	101,390,086	4,804,893	5.43
Breast Cancer Early Detection	28,898,616	32,888,952	37,243,747	43,101,816	48,551,540	4,913,231	13.86
Breast Cancer Education	17,542,808	15,776,265	16,917,838	19,386,970	19,854,753	577,986	3.54
Breast Cancer Epidemiology	62,368,195	67,786,774	69,296,280	70,470,523	63,832,544	366,087	0.80
Breast Cancer Genetics	71,506,312	78,890,543	76,659,752	77,442,317	81,815,294	2,577,246	3.54
Breast Cancer Prevention	30,291,170	30,679,526	34,660,141	32,510,070	32,360,672	517,376	1.90
Breast Cancer Rehabilitation	12,704,463	12,294,656	13,111,191	15,549,473	18,220,763	1,379,075	9.80
Breast Cancer Screening	31,798,684	27,483,358	27,174,072	26,554,448	25,913,420	-1,471,316	-4.85
Breast Cancer Treatment	132,584,822	145,793,684	151,796,777	155,143,128	154,285,405	5,425,146	3.93
Breast Cancer, Basic	104,063,834	124,478,880	141,314,873	143,663,931	143,175,326	9,777,873	8.62
Cancer Survivorship	113,381,591	123,650,648	159,528,445	144,326,030	145,043,558	7,915,492	7.26
Carcinogenesis, Environmental	499,193,141	519,803,912	534,983,057	540,898,673	542,772,539	10,894,850	2.13
Cervical Cancer Education	2,875,322	1,988,194	449,332	4,271,351	4,178,353	325,758	185.04
Chemoprevention	118,350,179	137,699,833	171,216,267	187,160,162	187,622,217	17,318,010	12.56
Chemoprevention, Clinical	51,828,752	57,915,038	64,878,256	61,170,813	63,463,878	2,908,782	5.45
Chemotherapy	371,849,362	405,576,212	440,643,645	465,719,189	479,353,115	26,875,938	6.58
Child Health	41,793,487	42,750,912	46,876,216	53,727,243	61,887,153	5,023,417	10.44
Childhood Cancers	115,580,450	134,662,114	145,491,219	155,350,035	159,567,547	10,996,774	8.51
Chronic Myeloproliferative Disorders	18,671,299	20,780,473	27,032,001	30,942,794	36,959,663	4,572,091	18.82
Clinical Trials, Diagnosis	68,399,344	91,207,850	130,311,300	125,946,948	113,103,165	11,175,955	15.67
Clinical Trials, Other	9,407,729	11,642,674	15,562,589	24,130,327	54,757,357	11,337,407	59.85
Clinical Trials, Prevention	67,359,658	65,484,612	79,553,001	71,998,187	68,628,972	317,329	1.13
Clinical Trials, Therapy	351,852,384	383,915,169	411,687,228	419,641,529	401,297,009	12,361,156	3.48
Combined Treatment Modalities	230,278,274	242,999,243	233,777,421	315,475,918	330,666,739	25,097,116	10.37
Diabetes	5,152,356	7,375,423	7,548,368	6,353,949	10,440,254	1,321,975	23.49
Diagnosis	442,517,243	502,737,788	564,021,884	580,801,202	618,317,471	43,950,057	8.81
(Continued)			<u> </u>	-			
(551464)							

<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 FY2001-FY2005 – Annual Percent Change (Continued)

Special Interest Categories (SIC)	2001	2002	2003	2004	2005	Average Dollar Change/Yr.	Average Percent Change/Yr.
Diagnostic Imaging	211,026,004	237,057,220	277,178,915	294,539,520	317,336,979	26,577,744	10.82
Diethylstilbestrol	1,088,613	2,110,511	1,443,103	1,677,478	2,222,054	283,360	27.74
Dioxin	1,176,288	1,203,176	1,184,362	1,258,661	194,225	-245,516	-19.39
DNA Repair	119,632,425	133,358,200	153,415,262	163,589,431	157,358,768	9,431,586	7.33
Drug Development	371,183,370	404,887,431	447,881,008	516,896,095	559,855,963	47,168,148	10.85
Drug Discovery	29,984,314	39,935,561	46,425,752	54,828,594	66,215,930	9,057,904	22.08
Drug Resistance	84,257,975	91,682,326	106,373,506	115,298,251	120,398,474	9,035,125	9.41
Drugs-Natural Products	120,015,486	135,213,972	136,685,224	138,003,587	132,933,883	3,229,599	2.76
Early Detection	165,943,634	183,145,249	245,520,500	271,300,826	301,025,316	33,770,421	16.47
Endocrinology	143,788,158	161,408,991	186,968,577	178,585,401	183,285,587	9,874,357	6.56
Energy Balance	†	†	29,829,583	26,440,260	38,184,297	4,177,357	16.53
Epidemiology, Biochemical	253,164,838	251,966,498	245,341,226	219,502,809	206,718,733	-11,611,526	-4.86
Epidemiology, Environmental	216,029,411	223,777,515	218,722,428	215,241,204	218,875,075	711,416	0.36
Epigenetics	21,692,693	18,498,512	51,759,530	65,005,515	94,971,910	18,319,804	59.19
Gene Mapping, Human	227,153,900	234,642,282	247,040,795	217,496,425	182,663,241	-11,122,665	-4.85
Gene Mapping, Non-Human	89,416,780	100,405,277	94,748,524	80,515,173	67,952,386	-5,366,099	-5.99
Gene Transfer, Clinical	15,608,158	19,026,602	20,278,841	20,661,840	17,254,725	411,642	3.47
Genetic Testing Research, Human	209,668,514	222,300,181	225,895,895	191,499,674	196,298,554	-3,342,490	-1.27
Genomics	†	†	14,134,782	16,217,856	24,245,008	5,055,113	32.12
Health Promotion and Care	177,300,353	181,819,192	214,599,231	211,627,936	238,467,719	15,291,842	7.97
Helicobacter	2,043,806	2,155,965	4,242,773	4,423,309	3,815,249	442,861	23.20
Hematology	375,156,811	416,103,247	445,442,843	447,179,086	450,398,699	18,810,472	4.77
Hematopoietic Stem Cell Research	86,508,848	89,663,101	95,335,267	99,710,757	105,121,325	4,653,119	5.00
Hormone Replacement Therapy	9,312,758	12,170,912	13,502,323	12,859,852	14,254,242	1,235,371	11.93
Hospice	1,631,747	1,554,969	5,429,050	6,272,396	8,671,792	1,760,011	74.56
latrogenesis	57,164,355	53,708,534	58,816,401	54,060,109	56,013,837	-287,630	-0.25
Infant Mortality	874,643	415,516	137,648	131,431	216,858	-164,446	-14.72
Information Dissemination	296,003,962	327,420,863	364,362,635	365,997,428	390,365,620	23,590,415	7.25
Magnetic Resonance Imaging	59,418,389	67,609,501	83,051,490	67,077,228	69,701,604	2,570,804	5.33
Mammography	36,078,569	34,681,607	36,033,787	38,427,220	36,724,102	161,383	0.56
Metastasis	205,893,018	253,373,096	296,031,487	309,340,607	310,478,648	26,146,408	11.19
Mind/Body Research	11,496,467	11,405,866	16,186,181	20,374,850	19,535,017	2,009,638	15.72
Molecular Disease	1,050,976,543	1,170,777,839	1,262,060,208	1,339,620,569	1,432,200,446	95,305,976	8.06
Molecular Targeted Therapy	35,856,332	47,514,280	57,225,106	86,681,914	168,524,743	33,167,103	49.71
Nanotechnology	75,632,102	126,332,277	156,533,223	162,067,173	160,886,764	21,313,666	23.44
Neurofibromatosis	4,039,087	5,720,563	5,297,104	4,440,584	5,441,436	350,587	10.15
Nursing Research	7,783,431	9,702,363	11,916,138	12,314,520	12,875,140	1,272,927	13.84
Nutrition	173,040,134	190,887,074	212,521,117	211,442,595	225,476,479	13,109,086	6.94
Nutrition, Fiber	12,213,332	12,665,694	12,613,110	11,497,589	10,944,448	-317,221	-2.59
Nutrition Monitoring	41,047,489	38,850,410	36,098,086	25,273,055	27,724,349	-3,330,785	-8.18
Obesity	24,465,509	28,476,238	31,488,991	29,053,667	47,654,377	5,797,217	20.82
Occupational Cancer	16,353,324	13,853,744	15,206,346	11,920,612	12,431,237	-980,522	-5.71
Oncogenes	500,232,464	551,639,242	620,478,436	634,237,576	650,329,143	37,524,170	6.88
Organ Transplant Research	77,061,181	75,564,744	72,356,860	73,412,458	65,746,345	-2,828,709	-3.79
Osteoporosis	1,287,965	1,372,960	1,168,234	1,141,017	1,657,557	92,398	8.66
Pain	10,031,119	9,302,205	14,411,836	17,002,607	20,644,937	2,653,455	21.77
Palliative Care	14,758,958	16,548,850	21,296,057	22,501,723	24,483,291	2,431,083	13.82
(Continued)	. 1,700,000	10,040,000	21,200,007	,501,120	21,100,201	<u>_</u> , <del>10</del> 1,000	10.02

(Continued

<sup>†</sup> Coding not requested or required.

Table 14. NCI Special Interest Category (SIC) Dollars for FY2001-FY2005 – Annual Percent Change (Continued)

Special Interest Categories (SIC)	2001	2002	2003	2004	2005	Average Dollar Change/Yr.	Average Percent Change/Yr.
Pap Testing	13,607,240	13,654,479	14,509,718	17,012,637	18,343,787	1,184,137	7.92
Pediatric Research	191,713,838	163,639,187	215,691,002	227,132,843	240,263,190	12,137,338	7.06
Pesticides	4,873,065	4,284,987	4,131,483	3,576,795	2,300,012	-643,263	-16.19
Prevention, Primary	289,129,734	319,636,000	363,759,578	392,570,979	407,329,290	29,549,889	9.01
Proteomics	†	†	16,447,068	23,290,691	37,141,648	10,347,290	50.54
Radiation, Electromagnetic Fields	202,904	467,375	495,945	427,464	580,932	94,507	39.64
Radiation, Ionizing	40,403,867	42,101,953	40,875,195	39,238,254	43,059,514	663,912	1.76
Radiation, Ionizing Radiotherapy	186,661,321	215,846,842	203,836,509	222,200,058	233,258,022	11,649,175	6.01
Radiation, Non-Ionizing	33,468,407	34,240,777	36,893,495	39,381,363	38,469,271	1,250,216	3.62
Radiation, Non-Ionizing DX or RX	75,539,731	88,065,469	98,809,611	82,190,194	107,407,913	7,967,046	10.66
Radiation, UV	30,963,722	32,083,519	35,021,219	37,662,847	36,599,581	1,408,965	4.37
Radon	2,663,660	3,062,288	2,247,435	311,741	2,064,419	-149,810	116.11
Rare Diseases	30,881,959	38,638,903	41,841,085	42,994,896	41,827,984	2,736,506	8.36
Rehabilitation	23,896,857	23,997,685	25,558,259	28,124,501	33,264,360	2,341,876	8.81
Rural Populations	36,785,996	41,581,846	43,782,335	42,209,191	49,888,988	3,275,748	8.23
Sexually Transmitted Diseases	38,735,494	41,861,170	46,790,495	49,370,699	53,246,020	3,627,632	8.30
Smokeless Tobacco	8,255,406	9,187,608	8,052,530	3,235,635	3,157,981	-1,274,356	-15.82
Smoking and Health	109,359,712	132,181,616	136,772,177	140,691,633	131,902,138	5,635,607	5.24
Smoking Behavior	71,662,082	74,377,943	78,958,064	77,398,392	65,185,509	-1,619,143	-1.95
Smoking, Passive	3,273,435	5,229,306	6,088,321	6,163,806	5,646,628	593,298	17.26
Structural Biology	272,019,072	305,817,182	341,881,210	370,571,496	382,597,297	27,644,556	8.96
Surgery	131,100,384	140,614,550	135,887,501	137,281,620	102,248,250	-7,213,034	-5.15
Taxol	66,028,941	73,334,203	71,638,234	79,061,172	67,584,901	388,990	1.15
Telehealth	115,999,693	142,577,583	136,729,979	137,081,094	122,527,280	1,631,897	2.11
Therapy	935,331,567	1,031,798,021	1,126,832,535	1,217,391,826	1,272,641,374	84,327,452	8.02
Tropical Diseases	6,114,348	9,238,519	11,812,651	10,255,864	11,102,730	1,247,096	18.51
Tumor Markers	372,368,593	424,350,478	489,114,837	451,794,712	434,204,129	15,458,884	4.42
Underserved Populations	91,594,430	102,897,644	130,143,998	138,519,933	177,574,214	21,494,946	18.36
Vaccine Development	10,004,710	11,587,466	14,453,579	21,617,405	27,059,011	4,263,575	28.82
Vaccine Production	543,699	392,138	774,562	1,976,306	1,693,418	287,430	52.62
Vaccine Research	34,472,922	39,766,490	39,445,936	41,596,477	40,521,325	1,512,101	4.35
Vaccine Testing	27,876,903	32,958,589	43,526,814	44,774,687	45,170,380	4,323,369	13.51
Virus Cancer Research	181,555,204	180,659,962	196,287,543	194,880,644	191,052,843	2,374,410	1.37
Virus, Epstein-Barr	16,989,697	21,842,219	23,278,988	23,134,534	24,534,511	1,886,204	10.14
Virus, Genital Herpes	980,918	791,268	666,153	670,672	507,354	-118,391	-14.70
Virus, Hepatitis B	12,282,212	11,227,777	10,387,770	8,795,216	7,739,861	-1,135,588	-10.85
Virus, Hepatitis C	4,209,225	3,747,069	4,715,540	4,263,315	4,890,912	170,422	5.00
Virus, Herpes	44,731,976	49,648,779	51,778,550	53,522,401	52,021,227	1,822,313	3.96
Virus, HHV6	70,059	48,563	40,917	42,500	51,916	-4,536	-5.10
Virus, HHV8	10,517,347	12,455,991	17,787,658	17,648,098	19,069,528	2,138,045	17.13
Virus, HTLV-I	4,689,997	6,502,070	8,443,640	7,369,926	8,734,324	1,011,082	18.57
Virus, HTLV-II	282,943	272,629	15,161	39,299	246,497		147.09
Virus, HTLV-II Virus, HTLV-Unspecified	323,350	272,029	69,094	72,443	76,253	-9,112 -61,774	-22.40
Virus, Papilloma Virus, Papova	40,928,716	39,498,156	49,870,165 61,875,739	51,897,332	56,846,619	3,979,476	9.09
, I	50,657,432	49,274,609		65,462,575	69,718,574	4,765,286	8.79
Virus, SV40	4,923,898	1,813,705	8,645,371	10,130,358	10,464,181	1,385,071	83.49
Vitamin A	20,352,974	26,006,509	22,486,845	22,194,566	23,874,074	880,275	5.13
Vitamin C	5,292,593	6,379,668	6,809,996	5,566,346	5,490,209	49,404	1.91
Vitamins, Other	12,663,827	13,889,605	21,073,817	19,859,860	23,430,615	2,691,697	18.41

Table 15. NCI Organ Site-Specific Dollars for FY2001-FY2005 – Annual Percent Change

Site Category	2001	2002	2003	2004	2005	Average Dollar Change/Yr.	Average Percent Change/Yr.
Adrenal	1,835,756	2,461,533	3,960,952	2,593,630	2,717,779	220,506	16.32
Anus	3,771,168	2,830,955	4,356,693	6,178,964	6,313,360	635,548	18.24
Bladder	23,690,751	27,301,423	29,375,431	29,192,500	25,392,413	425,416	2.30
Bone Marrow	21,391,584	19,677,230	18,738,105	16,859,731	17,969,897	-855,422	-4.06
Bone, Cartilage	14,391,897	17,247,451	22,398,965	21,436,315	20,296,744	1,476,212	10.02
Brain	65,151,201	83,839,618	95,279,466	105,526,751	101,434,991	9,070,948	12.30
Breast	439,711,614	481,369,725	499,135,321	514,406,565	510,552,531	17,710,229	3.87
Buccal Cavity	4,913,915	5,228,865	5,622,264	6,480,376	5,494,543	145,157	3.50
Central Nervous System	10,830,586	17,612,827	18,946,339	20,699,745	17,192,652	1,590,517	15.63
Cervix	61,534,654	60,044,335	72,057,870	72,682,867	75,787,307	3,563,163	5.68
Childhood Leukemia	40,086,718	47,525,099	47,389,916	48,088,942	45,113,301	1,256,646	3.39
Colon, Rectum	197,850,771	239,871,854	243,188,189	245,543,444	238,230,314	10,094,886	5.15
Connective Tissue	5,535,330	7,857,870	7,572,951	7,094,659	7,558,119	505,697	9.64
Embryonic Tissue, Cells	9,467,501	10,165,631	7,746,541	6,559,473	5,318,429	-1,037,268	-12.67
Esophagus	15,628,257	16,192,090	19,039,683	19,382,040	20,378,823	1,187,642	7.03
Eye	1,596,475	2,504,907	2,432,688	1,513,506	2,465,231	217,189	19.78
Gall Bladder	169,162	222,092	757,328	872,737	899,162	182,500	72.64
Gastrointestinal Tract	14,278,898	13,671,557	15,872,991	19,597,757	21,145,926	1,716,757	10.80
Genital System, Female	2,167,215	2,355,030	1,935,489	5,172,691	4,794,366	656,788	37.70
Genital System, Male	3,337,417	2,718,076	3,167,731	2,262,682	4,243,858	226,610	14.24
Head and Neck	16,726,118	26,533,478	35,716,098	44,167,285	44,641,240	6,978,781	29.49
Heart	5,542,956	6,634,127	6,774,839	4,909,069	4,452,774	-272,546	-3.76
Hodgkin's Lymphoma	8,471,751	11,314,844	15,895,958	16,247,077	16,354,733	1,970,746	19.23
Kaposi Sarcoma	18,734,908	16,570,217	18,753,497	18,688,727	20,071,159	334,063	2.17
Kidney	14,678,860	19,229,812	23,012,397	22,618,493	24,984,890	2,576,508	14.86
Larynx	1,387,440	1,538,946	1,239,045	777,411	491,395	-224,011	-20.65
Leukemia	143,746,914	169,411,195	192,741,377	196,638,676	201,052,444	14,326,383	8.97
Liver	49,834,636	54,405,285	54,925,839	54,341,107	52,888,388	763,438	1.60
Lung	193,525,572	224,762,518	254,003,512	253,490,911	245,457,301	12,982,932	6.44
Lymph Node	750,268	678,029	418,211	1,247,100	4,350,116	899,962	99.77
Lymphatic System	2,664,440	2,068,357	1,772,709	1,130,650	424,632	-559,952	-33.83
Melanoma	63,062,681	75,164,281	83,252,560	86,725,177	94,558,088	7,873,852	10.79
Muscle	8,439,049	9,793,642	10,585,789	9,961,120	9,250,584	202,884	2.78
Myeloma	15,071,246	18,118,361	23,458,037	21,375,570	25,085,863	2,503,654	14.54
Nervous System	3,631,556	3,523,660	2,947,832	2,859,805	2,909,612	-180,486	-5.14
Neuroblastoma	13,374,765	16,908,206	23,109,752	22,723,369	22,004,713	2,157,487	14.57
Non-Hodgkin's Lymphoma	72,201,088	79,556,172	87,701,313	91,103,091	94,545,180	5,586,023	7.02
Nose, Nasal Passages	1,065,629	2,019,221	1,889,287	2,435,202	1,759,357	173,432	21.05
	72,328,725	87,731,619	94,278,381	93,598,684	91,509,918	4,795,298	6.45
Ovary Pancreas	19,233,136	31,603,349	40,665,106	50,924,876	64,697,347	11,366,053	36.32
Parathyroid					186,052		2.22
Penis	302,761 659,708	144,535 555,233	103,368 570,915	206,013 1,007,097	1,777,028	-29,177 279,330	34.96
Pharynx	2,268,913	3,054,679	3,496,979	3,610,213	3,405,521	284,152	11.67
Prostato	1,759,885 237,882,832	2,330,309	2,223,903	1,958,668	1,904,001	36,029	3.28
Prostate  Prostate  Prostate  Prostate  Prostate		259,183,447	282,162,848	283,487,876	281,876,087	10,998,314	4.43
Respiratory System	3,428,953	2,231,189	1,752,342	477,322	447,805	-745,287	-33.83
Reticuloendothelial System	29,988,010	25,012,807	22,633,635	19,752,858	16,748,919	-3,309,773	-13.51
Retinoblastoma	1,877,505	2,013,370	2,275,980	2,470,155	3,716,422	459,729	19.82

(Continued)

Table 15. NCI Organ Site-Specific Dollars for 2001-2005 – Annual Percent Change (Continued)

Site Category	2001	2002	2003	2004	2005	Average Dollar Change/Yr.	Average Percent Change/Yr.
Salivary Glands	282,586	439,828	335,590	305,461	247,997	-8,647	1.04
Skin	53,325,561	57,899,330	60,107,917	63,687,265	63,603,865	2,569,576	4.55
Small Intestine	1,934,219	1,940,181	2,744,882	1,592,051	1,956,314	5,524	5.67
Spleen	346,319	334,096	397,133	561,467	314,378	-7,985	3.18
Stomach	5,977,987	8,653,038	10,410,995	9,841,719	9,259,931	820,486	13.42
Testis	6,160,001	5,435,641	6,182,273	6,584,671	6,138,620	-5,345	0.43
Thymus	1,145,373	1,011,485	830,245	625,911	1,102,792	-10,645	5.49
Thyroid	3,412,520	3,948,141	4,832,175	5,729,563	6,696,420	820,975	18.38
Trachea, Bronchus	1,045,232	779,957	156,675	256,373	272,569	-193,166	-8.84
Urinary System	629,770	703,615	540,930	263,840	360,645	-67,281	-6.48
Uterus	17,739,540	21,863,181	24,399,854	24,678,691	29,654,053	2,978,628	14.04
Vagina	717,998	690,010	542,925	571,670	922,677	51,170	10.37
Vascular	41,016,604	51,851,720	49,015,750	44,089,096	35,543,894	-1,368,178	-2.12
Wilms Tumor	3,768,844	4,499,303	4,773,264	4,243,617	3,394,348	-93,624	-1.41

Table 16. Requests for Proposals (RFPs) Reviewed by NCI/DEA, FY2005\*

Announcement Number	Announcement Title	Workload Round	No. of Proposals
RFP N44 CM47037-54 (Topic 190 PhaseII)	A New Expression System for G Protein Coupled Receptors	2/05	1
Topic 187 (Phase II)	Expert vs. User-Tailored Interactive Media	2/05	1
Topic 189 (Phase II)	Real-Time Cancer Communication Data Collection	2/05	2
Topic 183 (Phase II)	Microfluidic/Microsphere Flow Cytometer for Detection and Quantification of Viral Antibodies	2/05	2
Topic 194 (Phase II)	Development and Application of High-Throughput Proteomics Technologies	2/05	2
Topic 192 (Phase II)	New Technologies for Monitoring the Tumor Microenvironment	2/05	2
Topic 206	Methods for Innovative Pharmaceutical Manufacturing and Quality Assurance	5/05	3
Topic 207	Synthesis Modules for Radio Pharmaceutical Production	5/05	5
Topic 208	Targetry Systems for Production of Research	5/05	4
Topic 209	Establishment of Benchmark Data Sets for Radiotherapy Quality Assurance	5/05	2
Topic 181 (Phase II)	Clinical Trials Data Collection Using Hand-Held Technology	5/05	1
Topic 211	Developing Item Response Theory Software for Outcomes and Behavioral Measurement		5
Topic 212	Integrating Patient-Reported Outcomes in Clinical Oncology Practice	5/05	7
Topic 197	Early Detection Research Network—Bioinformatics Research Program (EDRN-BRP)		5
Topic 196	Antibody Array for Cancer Detection	5/05	5
Topic 203	Development of a Database and Candidate Gene, Protein, and Biochemical Pathway Nomination Software for Tobacco-Related Disease and Tobacco Addiction Investigations		2
Topic 204	Plant Genomic Models for Establishing Physiological Relevance of Bioactive Components as Cancer Protectants	5/05	6
Topic 198 (Phase II)	Chemical Optimization and Structure-Activity Relationships	5/05	1
Topic 198	Chemical Optimization and Structure-Activity Relationships	5/05	1
Topic 213	Portable e-Technology Tools for Real-Time Energy Balance Research	5/05	9
Topic 214	Systems to Enhance Data Collection and Medication Compliance in Clinical Trials		11
Topic 205	Metabolomics for Early Cancer	5/05	3
Topic 210	Using Social Marketing to Disseminate Evidence-Based Energy Balance Intervention Approaches to Worksites	5/05	4
N01-CN-55006-72	Preclinical Efficacy and Intermediate Endpoints Assays	5/05	3
(Continued)			

<sup>\*</sup> NCI reviewed a total of 471 proposals. The proposals were in response to RFPs (25), the 2005 SBIR contract solicitations—Phase II (13), the 2005 SBIR contract solicitations (72), and the Loan Repayment Program (361).

Table 16. Requests for Proposals (RFPs) Reviewed by NCI/DEA, FY2005\* (Continued)

Announcement Number	Announcement Title	Workload Round	No. of Proposals
RFP N01PC45025-40	SEER Expansion Renewals	5/05	4
Topic 195	Virtual Microscopy for the Early Detection of Cancer	10/05	1
N01-CM-57018-16	Early Therapeutic Development with Phase II Emphasis	10/05	11
N01-CP-55009-39	Laboratory Assessment of Tobacco Use Behavior and Exposure Toxins— New Tobacco Products Promoted to Reduce Harm	10/05	2
N01-CP-51010-66	Continuation of Follow-Up of DES-Exposed Cohorts	10/05	5
NOT-OD-04-060	Loan Repayment Program for Clinical Research (L30)	8/05	276
NOT-OD-04-061	Loan Repayment Program for Pediatric Research (L40)	8/05	85
Total			471

# 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 7,291 applications in FY2005.

The Board heard presentations, discussed, and provided advice on a variety of topics and NCI activities in FY2005, such as:

- NCI Director's Report
- President's Cancer Panel Report
- Legislative Update
- New NIH Clinical Center
- Report: Cancer Biomedical Informatics Grid
- Initiative for Discovery of Clinical Biomarkers
- P30/P50 Implementation Plan: SPORES
- Mini-Symposium: Integration of Extramural and Intramural Research Programs
- Interagency Oncology Task Force: Medical and Postdoctoral Fellowship Training Program
- Overview: NCI Intramural Clinical Research Activities
- Update: Breast and Prostate Cancer Cohort Consortium
- Update: FDA/NCI Task Force
- Overview: National Advanced Technologies Initiative (NATIc)
- Overview: NCI-Supported Health Care Delivery Research and Resources
- Proteomic Profiling Identifies Prognostic Subsets in Rhabdomyosarcoma
- Progress in the Development of Cell Transfer Immunotherapy for Patients With Cancer
- Update: Human Cancer Genome Project
- Harmonizing Processes and Policies for NCI-Supported Biorepositories

- Evidence Report on Recruitment of Underrepresented Populations to Cancer Clinical Trials
- Epigenetic Concepts in Cancer

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, and the President's Cancer Panel.

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 FY2005:

- Report of the Director
- NCI/Congressional Relations
- The Case for Early Detection
- Improving Care Delivery Through Translation of Evidence-Based Interventions Into Practice
- Final Report: NCAB Advanced Biomedical Technology Working Group
- BSA at National Meetings Report
- BSA Concepts Review Report
- Cancer Genome Anatomy Project 2
- An Analysis of NCI-Supported Biospecimen Resources
- Final Report: NCAB Clinical Trials Working Group
- Update: CanCORS Initiative
- Status Report: National Biospecimen Network
- Tumor Microenvironment Mini-Symposium
- Update: National Lung Screening Trial (NLST)
- Mini-Symposium: Current State of Cancer Proteomics
- Bioethics and the Future of Biorepositories

## **RFA Concepts Approved**

## Division of Cancer Control and Population Sciences

- The Molecular Epidemiology of Pancreatic Cancer
- Breast/Ovarian Cancer Family Registries (B-CFR)

#### Division of Cancer Treatment and Diagnosis

- Small Animal Imaging Resource Projects (SAIRPs)
- Blood and Marrow Transplant Clinical Trials Network (BMTCTN)

## **RFP** Concepts Approved

#### Office of the Director

- NCI Best Case Series: Developmental Support and Prospective Research Projects
- Clinical Proteomic Technologies Initiative

## Division of Cancer Treatment and Diagnosis

• Early Therapeutics Development With Phase II Emphasis

## Combined RFA/Cooperative Agreements Approved

## Division of Cancer Treatment and Diagnosis

AIDS Malignancies Clinical Trials Consortium

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)

Boston, MA, April 13-16, 2005

NCI Listens, Thursday, April 14, 2005

Robert Croyle, Ph.D	National Cancer Institute
Paulette S. Gray, Ph.D	National Cancer Institute
Jane C. Weeks, M.D	

## American Association for Cancer Research (AACR)

Anaheim, CA, April 16-20, 2005

NCI Listens, Tuesday, April 19, 2005

Ester H. Chang, Ph.D	Georgetown University Medical Center
James Doroshow, M.D	National Cancer Institute
Paulette S. Gray, Ph.D.	National Cancer Institute
William N. Hait, Ph.D.	The Cancer Institute of New Jersey
Susan B. Horwitz, Ph.D.	Albert Einstein College of Medicine
Suresh Mohla, Ph.D.	National Cancer Institute
Carolyn Strete, Ph.D.	National Cancer Institute

# Appendix C: List of Chartered Committees, FY2005

President's Cancer Panel	
Chair	
	Howard University College of Medicine
	,
Members	
	Lance Armstrong Foundation
Margaret L. Kripke, Ph.D	
Executive Secretary	
	National Cancer Institute
,	
Past Executive Secretary	
Maureen O. Wilson, Ph.D	National Cancer Institute
National Cancer Advisory Board	
Acting Chair	
Daniel D. Von Hoff, M.D., F.A.C.P	Translational Genomics Research Institute
Dest Chair	
Past Chair	
John E. Mederhaber, M.D	diliversity of wisconsili school of Medicine
Members	
Samir Abu-Ghazaleh, M.D	
James O. Armitage, M.D.	
Moon S. Chen, Jr., Ph.D., M.P.H	
Kenneth H. Cowan, M.D., Ph.D	University of Nebraska, Eppley Institute for Cancer Research
Jean B. deKernion, M.D	University of California at Los Angeles, School of Medicine
Ralph S. Freedman, M.B.B.Ch., Ph.D	
James H. French, Jr., M.D	The Center for Plastic Surgery
Kathryn Giusti	Multiple Myeloma Research Foundation
•	
Eric S. Lander, Ph.D	Whitehead Institute, Massachusetts Institute of Technology
• • • • • • • • • • • • • • • • • • •	St. Jude Children's Research Hospital
	Independent Consultant
	Mayo Comprehensive Cancer Center
	University of Connecticut Health Center
	AFLAC Cancer Center

Ex Officio Members of the National Cancer Advi	·
The Honorable Elaine Chao, M.B.A	
Lester M. Crawford, D.V.M., Ph.D	U.S. Food and Drug Administration
	U.S. Environmental Protection Agency
	National Institute for Occupational Safety and Health
Michael O. Leavitt	U.S. Department of Health and Human Services
Rachel Levinson	Office of Science and Technology Policy, The White House
Kenneth Olden, Ph.D.	National Institute of Environmental Health Sciences, NIH
Ari Patrinos, Ph.D.	
The Honorable Dr. Jonathan Perlin	U.S. Department of Veterans Affairs
The Honorable Dr. Robert H. Roswell	U.S. Department of Veterans Affairs
David A. Schwartz, M.D	National Institute of Environmental Health Sciences, NIH
Hal Stratton	U.S. Consumer Product Safety Commission
The Honorable Tommy Thompson	U.S. Department of Health and Human Services
Andrew C. von Eschenbach, M.D	U.S. Food and Drug Administration
The Honorable Dr. William Winkwerder, Jr	U.S. Department of Defense
Elias A. Zerhouni, M.D.	National Institutes of Health
Alternates to Ex Officio Members of the Nationa	Al Cancer Advisory Roard
	National Institute of Environmental Health Sciences, NIH
<i>Y</i> .	National Institutes of Health
,	
	Office of Science and Technology Policy
	U.S. Environmental Protection Agency
	SNational Institute for Occupational Safety and Health
Executive Secretary	
Paulatta S. Gray Ph. D.	National Cancer Institute

# NCI Advisory Committee to the Director

#### Chair

#### Members

Frederick W. Alt, Ph.D.	The Children's Hospital
LaSalle D. Leffall, Jr., M.D.	Howard University College of Medicine
John E. Niederhuber, M.D.	University of Wisconsin School of Medicine
Margaret A. Tempero, M.D.	University of California, San Francisco
Thea D. Tlsty, Ph.D.	University of California, San Francisco
Doug E. Ulman	Lance Armstrong Foundation
Robert C. Young, M.D.	Fox Chase Cancer Center

#### **Ex Officio Members**

### **Executive Secretary**

# NCI Board of Scientific Advisors

## Members

embers	
David B. Abrams, Ph.D.	
David S. Alberts, M.D.	The University of Arizona College of Medicine
Hoda A. Anton-Culver, Ph.D	
Kirby I. Bland, M.D.	University of Alabama at Birmingham
Esther H. Chang, Ph.D.	Georgetown University Medical Center
	Drug Development Consultant
Tom M. Curran, Ph.D	St. Jude Children's Research Hospital
Raymond N. DuBois, M.D., Ph.D	Vanderbilt University Medical Center
Shelton H. Earp, III, M.D	Lineberger Comprehensive Cancer Center
Kathleen M. Foley, M.D.	Memorial Sloan-Kettering Cancer Center
	UCLA, Jonsson Comprehensive Cancer Center
	Lawrence Berkeley National Laboratory
William N. Hait, M.D., Ph.D.	The Cancer Institute of New Jersey
•	
Susan B. Horwitz, Ph.D	Albert Einstein College of Medicine
	Memorial Sloan-Kettering Cancer Center
William G. Kaelin, Jr., M.D.	Dana-Farber Cancer Institute and Harvard Medical School
	Pancreatic Cancer Action Network, Inc.
	Johns Hopkins Oncology Center
	Stanford University School of Medicine
,	Vanderbilt University School of Medicine
	University of California, San Francisco
	Mayo Medical School
	Fred Hutchinson Cancer Research Center
	Friends of Cancer Research
	University of Texas M.D. Anderson Cancer Center
Jane C. Weeks, M.D.	

## **Executive Secretary**

# Board of Scientific Counselors for Clinical Sciences and Epidemiology, NCI

~	

·	
mbers	
Leslie Bernstein, Ph.D.	
Martin J. Blaser, M.D	New York University School of Medicir
David P. Carbone, M.D., Ph.D	Vanderbilt University School of Medicin
	Louisiana State University Health Sciences Cente
Leland W. Chung, Ph.D	Emory University School of Medicir
Chi V. Dang, M.D., Ph.D	The Johns Hopkins University School of Medicir
	Fred Hutchinson Cancer Research Cente
Elizabeth T. Fontham, Dr.P.H	Louisiana State University Health Sciences Cente
Barbara A. Gilchrest, M.D	Boston University School of Medicin
Stanley R. Hamilton, M.D	University of Texas M.D. Anderson Cancer Center
Richard Hoppe, M.D	Stanford University School of Medicin
Elizabeth M. Jaffee, M.D	The Johns Hopkins University School of Medicin
Laurence N. Kolonel, M.D., Ph.D	University of Hawa
Bruce R. Korf, M.D., Ph.D	University of Alabama at Birmingha
Theodore S. Lawrence, M.D., Ph.D	University of Michiga
Susan A. Leigh, B.S.N., R.N	
Maria Elena Martinez, Ph.D	University of Arizon
Susan T. Mayne, Ph.D	
Daniel M. Medina, Ph.D	Baylor College of Medicir
Monica Morrow, M.D	Fox Chase Cancer Center
	Memorial Sloan-Kettering Cancer Cente
Alice P. Pentland, M.D	
Arthur T. Porter, M.D	Wayne State University, Detroit Medical Cent
Timothy R. Rebbeck, Ph.D	University of Pennsylvania School of Medicir
Eric K. Rowinsky, M.D	University of Texas Health Science Center at San Anton
Charles L. Sawyers, M.D	University of California at Los Angeles, School of Medicir
David T. Scadden, M.D	Harvard Medical Scho
Steven G. Self, Ph.D	Fred Hutchinson Cancer Research Center
Paul M. Sondel, M.D., Ph.D	
Ann D. Thor, M.D	University of Oklahoma Health Sciences Center
Michael Thun, M.D	

## **Executive Secretary**

# Board of Scientific Counselors for Basic Sciences, NCI

Chair	
Thea D. Tlsty, Ph.D	
<u> </u>	·
Past Chair	
Frederick W. Alt, Ph.D.	The Children's Hospital
Members	
•	The Pennsylvania State University
	Brown University
	University of Pittsburgh School of Medicine
	Brandeis University
	The Salk Institute for Biological Studies
,	
	Northwestern University
Dan R. Littman, M.D., Ph.D	New York University Medical Center
	University of Vermont, College of Medicine
Dinshaw J. Patel, Ph.D.	Memorial Sloan-Kettering Cancer Center
Frank J. Rauscher III, Ph.D.	The Wistar Institute Cancer Center
Martine F. Roussel, Ph.D	St. Jude Children's Research Hospital
Leona D. Samson, Ph.D	Massachusetts Institute of Technology
Robert F. Siliciano, M.D., Ph.D.	The Johns Hopkins University School of Medicine
Harinder Singh, Ph.D.	University of Chicago, Howard Hughes Medical Institute
Ronald I. Swanstrom, Ph.D	University of North Carolina at Chapel Hill
Joseph R. Testa, Ph.D	Fox Chase Cancer Center
Jeffrey M. Trent, Ph.D	Translational Genomics Research Institute
Cheryl L. Walker, Ph.D	Univerity of Texas M.D. Anderson Cancer Center
	Stanford University
Eileen White, Ph.D.	Howard Hughes Medical Institute
	Stowers Institute for Medical Research
Executive Secretary	
Florence E. Farber, Ph.D	National Cancer Institute

## NCI Director's Consumer Liaison Group

Chair	
Doug E. Ulman	Lance Armstrong Foundation
Members	
Margaret L. Anthony, R.N., M.S.	Yul Brynner Head and Neck Foundation
	Y-ME National Breast Cancer Organization
William P. Bro	Kidney Cancer Association
Lourie Campos, M.P.A.	Community Health Partnership
Nancy Davenport-Ennis	Patient Advocate Foundation
Bobbi de Cordova-Hanks	Women's Center of Jacksonville
Beverly L. Laird, Ph.D	Susan G. Komen Breast Cancer Foundation
Sylvia M. Ramos, M.D., M.S	People Living Through Cancer
Eric T. Rosenthal, A.B	Evoca Talk Reports
Mary Jackson Scroggins, M.A	Ovarian Cancer National Alliance
Sue Sumpter, R.N., M.S.	

## **Executive Secretary**

Brooke Hamilton......National Cancer Institute

Marissa Weiss, M.D. Living Beyond Breast Cancer
Celeste Whitewolf, J.D. Native People's Circle of Hope
James E. Williams, M.S. Pennsylvania Prostate Cancer Coalition

## Past Executive Secretary

# NCI Initial Review Group Scientific Review Committees

# Subcommittee A—Cancer Centers

Chair	
James K. Willson, M.D	University of Texas Southwestern Medical Center
Members	
Carlos L. Arteaga, M.D.	Vanderbilt-Ingram Cancer Center
	Albert Einstein College of Medicine
	The Johns Hopkins University School of Medicine
	Memorial Sloan-Kettering Cancer Center
	Hope Through Grace, Inc.
	University of North Carolina at Chapel Hill
William L. Carroll, M.D	New York University School of Medicine
	Harvard Medical School, Channing Laboratory
Walter J. Curran, Jr., M.D	Thomas Jefferson University
Timothy J. Eberlein, Jr., M.D	Washington University School of Medicine
Michele F. Follen, M.D., Ph.D.	University of Texas M.D. Anderson Cancer Center
Janet A. Houghton, Ph.D	St. Jude Children's Research Hospital
Francine Renee Huckaby, M.P.H	
Robert B. Jenkins, M.D., Ph.D	Mayo Cancer Center
Hsing-Jien Kung, Ph.D.	University of California, Davis Cancer Center
	University of Chicago, Cancer Research Center
James R. Marshall, Ph.D.	
	Duke University Medical Center
	Northwestern University School of Medicine
	Fred Hutchinson Cancer Research Center
,	University of Pennsylvania, Abramson Cancer Center
	Georgetown University Medical Center
	University of California, San Francisco
	Wistar Institute
	University of Iowa, Holden Comprehensive Cancer Center
	People Living Through Cancer
David W. Yandell, Sc.D	
Scientific Review Administrator	

David Maslow, Ph.D. ......National Cancer Institute

## Subcommittee C—Basic and Preclinical

		_
	L _	±
u	ทล	Ir

Denise A. Galloway, Ph.D. .....Fred Hutchinson Cancer Research Center

Members	
Hamid Band, M.D., Ph.D.	Evanston Northwestern Healthcare Research Institute
Dafna Bar-Sagi, Ph.D	State University of New York at Stony Brook
Richard F. Borch, M.D., Ph.D.	Purdue University
John L. Cleveland, Ph.D	St. Jude Children's Research Hospital
Robert H. Getzenberg, Ph.D	The Johns Hopkins Hospital
	Lerner Research Institute
Scott W. Hiebert, Ph.D.	Vanderbilt University School of Medicine
Dave S. Hoon, Ph.D.	John Wayne Cancer Institute
C	
	Texas Tech University Health Sciences Center
• •	University of Kentucky Medical Center
	University of Massachusetts Medical School
	University of California, Irvine
	Columbia University College of Physicians and Surgeons
	University of California, San Franciscio Cancer Center
	New York University Medical Center
	Duke University Medical Center
	Albany Medical College
	The Scripps Research Institute
	University of North Carolina at Chapel Hill
	West Virgina University
	Brown University School of Medicine
	Northwestern University Cancer Center
•	University of Massachusetts Medical School, Worcester
	University of Pittsburgh School of Medicine
	Medical University of South Carolina
1	Children's Hospital of Los Angeles
Louis M. Weiner, M.D.	Fox Chase Cancer Center

#### **Scientific Review Administrator**

Michael Small, Ph.D. ......National Cancer Institute

## Subcommittee D—Clinical Studies

Mitchel S. Berger, M.D., F.A.C.S.	University of California, San Franscisco
ast Chair	
Robert S. Negrin, M.D.	Stanford University School of Medicine
Members	
	Duke University Medical Cente
	Mayo Clinic College of Medicine
	Ohio State University Medical Cente
	The Johns Hopkins University School of Medicine
	University of Michiga
	Roswell Park Cancer Institut
	Case Western Reserve University School of Medicine
	Virginia Commonwealth Universit
John G. Gribben, M.D.	Dana-Farber Cancer Institut
	AstraZenec
Carl H. June, M.D., Ph.D.	University of Pennsylvania School of Medicine
	Henry Ford Hospita
Gloria C. Li, Ph.D	Memorial Sloan-Kettering Cancer Cente
Fei-Fei Liu, M.D.	University of Toronto
	Roger Williams Cancer Cente
Herbert K. Lyerly, M.D	Duke University Medical Cente
	Univerisity of California, Los Angele
Stephen D. Nimer, M.D	Memorial Sloan-Kettering Cancer Cente
Nancy L. Oleinick, Ph.D	Case Western Reserve University School of Medicine
James Lloyd Omel, M.D	Physician (Retired
Gina R. Petroni, Ph.D	University of Virginia Health System
Andrew A. Raubitschek, Ph.D	City of Hope National Medical Cente
Carol K. Redmond, Ph.D	University of Pittsburgh Graduate School of Public Health
A. Keith Stewart, M.D	Mayo Clini
Donald L. Trump, M.D	Roswell Park Cancer Institut
Jeanne P. Young, B.A	Childhood Brain Tumor Foundation

## Subcommittee E—Cancer Epidemiology, Prevention, and Control

## Chair

#### Members

Marianne Berwick, Ph.D.	
William J. Blot, Ph.D.	International Epidemiology Institute
John R. Finnegan, Jr., Ph.D.	University of Minnesota School of Public Health
Gary E. Fraser, Ph.D.	Loma Linda University School of Health Research
	American Association of Blood Banks
Kyungmann Kim, Ph.D.	
	University of Texas M.D. Anderson Cancer Center
	Lombardi Comprehensive Cancer Center
Barbara C. Pence, Ph.D.	Texas Tech University Health Sciences Center
	University of Connecticut Health Center
John M. Pezzuto, Ph.D	Purdue University
Noma L. Roberson, Ph.D.	Roberson Consulting International
Marjorie Romkes, Ph.D	University of Pittsburgh
Paolo G. Toniolo, M.D., M.P.H.	New York University School of Medicine
Tor D. Tosteson, Sc.D.	Dartmouth Medical School
	Washington University School of Medicine
Chung S. Yang, Ph.D.	Rutgers University College of Pharmacy

#### Scientific Review Administrator

<sup>\*</sup>Retired August 18, 2005.

# Subcommittee F—Manpower and Training

Member and Chair Jeffrey T. Holt, M.D	University of Colorado
Part Chair	
Past Chair	University of California, Los Angeles Medical Center
James 3. Economou, M.D., Fil.D	diliversity of California, Los Angeles Wedical Center
Members	
	University of Virginia School of Medicine
	The Ohio State University
Marila Cordeiro-Stone, Ph.D	
Gerard M. Doherty, M.D	University of Michigan
Weimin Fan, M.D., M.P.H.	Medical University of South Carolina
James W. Freeman, Ph.D	
Michael M. Graham, M.D., Ph.D	
Ronald E. Kalil, Ph.D	
Diana E. Lake, M.D	Memorial Sloan-Kettering Cancer Center
Gregory D. Longmore, M.D	
	The Wistar Institute
	University of Colorado Health Sciences Center
•	University of Minnesota Cancer Center
	Indiana University School of Medicine
	Brown University
	New Jersey Medical School
Alice Yu, M.D., Ph.D	
Scientific Review Administrator	
Lynn M. Amende, Ph.D	National Cancer Institute

# Subcommittee G—Education

Co-Chairs	
	Ph.DUniversity of Central Florida School of Nursing
	······································
Members	
Jose M. Esteban, M.D., Ph.D	Providence Hospital Cancer Center
Richard E. Gallagher, Ph.D	Wayne State University School of Medicine
Jeffrey J. Guidry, Ph.D	Texas A&M University
Wanda E. Hardman, Ph.D	Louisiana State University
	Tufts University
	University of Kentucky College of Medicine
Patricia Dolan Mullen, Dr.P.H	
Ana M. Navarro, Ph.D	
	Memorial Sloan-Kettering Cancer Center
Billy U. Philips, Jr., M.P.H., Ph.D	
Douglas Ross, M.D., Ph.D	University of Maryland School of Medicine
Vernon K. Sondak, M.D	University of Michigan Comprehensive Cancer/Geriatrics Center
Sandra E. Ward, Ph.D., R.N	University of Wisconsin School of Nursing
Katharine A. Whartenby, Ph.D	
Scientific Review Administrator	
Ilda M. McKenna, Ph.D	National Cancer Institute

## Subcommittee H—Clinical Trials

Chair James A. Stewart, M.D	University of Wisconsin-Madison
D Cl. :	
Past Chair  Daniel I Sargant Dh D	Maya Clinia and Faundation
Daniei J. Sargent, Ph.D	
Members	
	Ohio State University School of Medicine and Public Health
	Josephine Ford Cancer Center
•	
	Patient Advocate, Oakland, CA
•	Princess Margaret Hospital
	State University of New York
Stephanie J. Green, Ph.D	Pfizer Inc.
Stuart A. Grossman, M.D	Johns Hopkins Oncology Center
Sheilah K. Hurley, M.A	Independent Consultant
William R. Jewell, M.D	
Charles E. Kahn, Jr., M.D	Medical College of Wisconsin
Peggy A. Lambert, M.S	
Ann Marilyn Leitch, M.D	
Kevin T. Lewis, M.B.A	
	.N
Paul A. Meyers, M.D	Memorial Sloan-Kettering Cancer Center
	Emory University
Lisa A. Newman, M.D	
	Oregon Health and Science University
	University of California at San Francisco, Comprehensive Cancer Center
	University of Wisconsin, Madison Comprehensive Cancer Center
	llex Oncology, Inc.
Lari B. Wenzel, Ph.D	
Colonia Con Designa Alleita	
Scientific Review Administrator	Also Long Long
Deboran K. Jaffe, Ph.D	National Cancer Institute

## Subcommittee I—Career Development

			٠	
	h	3	п	
•	ш	О	ш	

Mary-Ann Bjornsti, Ph.D. ......St. Jude Children's Research Hospital

#### Members

Deepak Bastia, Ph.D	Medical University of South Carolina
Powel Brown, M.D., Ph.D.	Baylor College of Medicine
Malaya B. Chatterjee, Ph.D	University of Cincinnati Medical Center
Edward Copelan, M.D	The Ohio State University College of Medicine
Jeffrey A. Drebin, M.D., Ph.D	University of Pennsylvania School of Medicine
Michael R. Freeman, Ph.D	Harvard Medical School
Rafael A. Fridman, Ph.D	
Marc F. Hansen, Ph.D	University of Connecticut Health Center
Jeffrey P. Kirscher, Ph.D.	
Jonathan S. Lewin, M.D	The Johns Hopkins University School of Medicine
Jeffrey F. Moley, M.D	
John O. Ojeifo, M.D., Ph.D.	Georgetown University School of Medicine
Reshma Taneja, Ph.D	Mount Sinai School of Medicine
Theresa L. Whiteside, Ph.D.	University of Pittsburgh Cancer Institute

#### Scientific Review Administrator

# Subcommittee J—Population and Patient-Oriented Training\*

Co-Chairs	
Karen Dow Meneses, Ph.D.	
Scott A. Waldman, M.D., Ph.D.	Thomas Jefferson University
Members	
Elisa V. Bandera, M.D., Ph.D	
Susan D. Block, M.D.	Dana-Farber Cancer Institute
Jennifer J. Griggs, M.D	
	Marshall University School of Medicine
Joel B. Mason, M.D	Tufts University
	Markey Cancer Center
Ana M. Navarro, Ph.D	
Sara H. Olson, Ph.D	Memorial Sloan-Kettering Cancer Center
Douglas Ross, M.D., Ph.D.	University of Maryland School of Medicine
Suzanne C. Segerstrom, Ph.D	
Debra C. Thaler-Demers, R.N.	Stanford University Hospital and Clinics
	University of Utah School of Medicine
Sandra E. Ward, Ph.D	
Scientific Review Administrator	
Ilda M. McKenna, Ph.D	National Cancer Institute

<sup>\*</sup> This subcommittee was formed in late FY2005.

### **Initial Review Group Subcommittees**



Subcommittee A—Cancer Centers



Subcommittee C—Basic and Preclinical



Subcommittee E—Cancer Epidemiology, Prevention, and Control

Continued on page 102.

### Initial Review Group Subcommittees (Continued)



Subcommittee G—Education



Subcommittee H—Clinical Trials



Subcommittee I—Career Development

## Appendix D: NCI Initial Review Group Consultants, FY2005

# 1. Consultants Serving as Temporary Members on IRG Subcommittees in FY2005

A		
A	Aaronson, Stuart A., M.D	
		.University of Texas M.D. Anderson Cancer Center
	Ali-Osman, Francis, Ph.D.	.Duke University
	Altman, John D., M.D., Ph.D.	.Emory University
	Anderson, Carolyn J., Ph.D	.Washington University School of Medicine
	Anderson, Kathryn H., Ph.D	.Florida International University
	Armstrong, Floyd Daniel, Ph.D	.University of Miami School of Medicine
	Armstrong, Scott A., M.D., Ph.D.	.Children's Hospital Boston
	Auerbach, Robert, Ph.D	.University of Wisconsin
	Avrin, David, M.D., Ph.D.	•
_		,
B	Ballman, Karla, Ph.D	.Mayo Clinic College of Medicine, Rochester
	Balogh, Lajos Peter, Ph.D	.University of Michigan at Ann Arbor
	Band, Hamid, M.D., Ph.D	.Evanston Northwestern Healthcare
	Bandera, Elisa V., M.D., Ph.D	.University of Medicine and Dentistry of New Jersey
	Barr, Frederic G., M.D., Ph.D	.University of Pennsylvania
	Bar-Sagi, Dafna, M.S	.State University of New York
	Barsegov, Valeri A., Ph.D	.University of Maryland College Park Campus
	Barsevick, Andrea M., R.N	.Fox Chase Cancer Center
	Bastia, Deepak, Ph.D	.Medical University of South Carolina
	Baylin, Stephen B., M.D	Johns Hopkins University
	Bear, Harry D., M.D., Ph.D.	.Virginia Commonwealth University
	Belinsky, Steven A., Ph.D.	,
	Benbrook, Doris M., Ph.D.	
	Benjamín, Laura E., Ph.D.	,
	*	.University of California, Los Angeles School of Medicine
	Berger, Ann M., Ph.D.	,
	Berger, Mitchel S., M.D.	•
	Bertics, Paul J., Ph.D.	,
	Berwick, Marianne, Ph.D	•
		.University of Maryland, Baltimore County Campus
		Brookhaven Science Association-Brookhaven Laboratory
	Block, Susan D., M.D.	,
		.University of Texas M.D. Anderson Cancer Center
	Bolskar, Robert D., Ph.D.	,
	Borch, Richard F., M.D., Ph.D.	
	Bouton, Amy H., Ph.D.	
	Bouvet, Michael, M.D.	
		,
	Bowers, William J., Ph.D.	.university of Kochester

Royd	, Jeff A., Ph.D	Sloan-Kettering Institute for Cancer Research
,	well, Vivien, Ph.D	
	it, Robert K., Ph.D.	
_	n, Bob, Ph.D.	,
	icardi, F. Charles., M.D.	,
	Lydia P., Ph.D.	
	ette, Everette C., Ph.D.	
	in, Alex B., Ph.D.	•
-	e, Steven D., Ph.D.	
		,
	s, Linda J., M.D.	•
	weller, John H., Ph.D	,
Бугпе	e, Celia, Ph.D	.Georgetown university
C Capol	bianco, Anthony J., Ph.D.	.Wistar Institute
Carbo	one, David P., M.D., Ph.D.	.Vanderbilt University
Cella,	, David F., Ph.D	.Evanston Northwestern Healthcare Research Institutes
Chan	g, Helena R., M.D., Ph.D.	.University of California, Los Angeles
Chau	dhary, Preet M., M.D., Ph.D	.University of Pittsburgh at Pittsburgh
Chun	g, Fung-Lung, Ph.D	.Georgetown University
Cleve	eland, John L., Ph.D.	.St. Jude Children's Research Hospital
Clohis	sy, Denis R., M.D	.University of Minnesota, Twin Cities
Coetz	zee, Gerhard A., Ph.D	.University of Southern California
Colac	echio, Thomas, M.D	.Dartmouth Hitchcock Medical Center
Colen	man, William B., Ph.D	.University of North Carolina, Chapel Hill
Colon	nna, Marco, M.D	.Washington University
Cory,	Joseph G., Ph.D.	.East Carolina University
Costa	a, Jose C., M.D	.Yale University
Curle	y, Robert W., Ph.D	.Ohio State University
Curra	an, Walter J., M.D.	.American College of Radiology
D Dalta	on William S. M.D. Ph.D.	.H. Lee Moffitt Cancer Center and Research Institute
	erck, Yves A., M.D., Ph.D.	
	on, Peter C., M.D., Ph.D.	
		.University of Colorado, Denver/Health Sciences Center at Aurora
•	ark-Wahnefried, Wendy, Ph.D.	•
	irdo, Sally J., M.D	•
	lerio, Stephen V., M.D., Ph.D.	•
	erbeck, Frank, M.D.	
	rsio, John F., M.D., Ph.D.	•
•	erty, Gerard M., M.D.	,
Drebi	in, Jeffrey A., M.D., Ph.D.	.wasnington university
E Eaton	n, Kathryn A., D.V.M., Ph.D.	.University of Michigan at Ann Arbor
	, , ,	
	Michael J., M.D., Ph.D	.Dana-Farber Cancer Institute
Eische	•	
	Michael J., M.D., Ph.D.	.University of Nebraska Medical Center

	Emelianov, Stanislav Y., Ph.D	University of Texas, Austin
	Erickson, Kent L., Ph.D.	University of California, Davis
F	5 2	
Г	Fantini, Sergio, Ph.D.	•
	Ferrara, James L. M., M.D.	,
	Ferrone, Soldano, M.D., Ph.D.	•
	Figlin, Robert, M.D.	,
	Fike, John R., Ph.D.	•
	Finn, Olivera J., Ph.D.	,
	Flint, Jonathan, M.D.	•
	Fontanesi, James, M.D.	,
	Foreman, Kimberly E., Ph.D.	,
	Fotedar, Arun, M.D., Ph.D.	•
	Fridman, Rafael A., Ph.D.	•
	Friedman, Eileen A., Ph.D	•
	•	University of Texas M.D. Anderson Cancer Center
	Furnari, Frank B., Ph.D.	Ludwig Institute for Cancer Research
G	Gamliel, Ziv, M.D	University of Maryland Medical Center
	Garrard, William T., Ph.D.	
	Gendler, Sandra J., Ph.D.	•
	Gerwick, William H., Ph.D.	,
	Getzenberg, Robert H., Ph.D.	,
	Giaccia, Amato J., Ph.D.	•
	Girotti, Albert W., Ph.D.	,
	Glaser, Ronald M., Ph.D.	
	Gold, David V., Ph.D.	,
	Goldberg, Zelanna, M.D.	,
	Gomer, Charles J., Ph.D.	•
	Goodrich, David W., Ph.D.	
	Gospodarowicz, Mary K., M.D.	•
	Gottesfeld, Joel M., Ph.D.	
		• •
	Graziano, Stephen L., M.D.	Virginia Commonwealth University
	Griggs, Jennifer J., M.D.	•
	Grochow, Louise Barnett, M.D.	•
	Groden, Joanna L., Ph.D.	•
		•
	Grunberg, Steven M., M.D	university of vermont
Н	Haines, Dale S., Ph.D	Temple University
	Hellstrom, Ingegerd E., M.D., Ph.D	Pacific Northwest Research Institute
	Henderson, Janet E., Ph.D	Center for Bone and Periodontal Research
	Henry, Roland G., Ph.D	University of California, San Francisco
	Herbst, Roy S., M.D., Ph.D.	University of Texas M.D. Anderson Cancer Center
	Hess, Kenneth R., Ph.D.	University of Texas M.D. Anderson Cancer Center
	Heston, Warren D., Ph.D	Case Western Reserve University
	Hichwa, Richard D., Ph.D	University of Iowa
	Hiebert, Scott W., Ph.D.	Vanderbilt University

	Hill, Richard P., Ph.D.	.University of Toronto
	Hoon, Dave S.B., Ph.D.	.John Wayne Cancer Institute
	Hoopes, P. Jack, D.V.M., Ph.D.	.Dartmouth Medical School
	Howe, James R., M.D.	.University of Iowa
	Howett, Mary K., Ph.D	.Pennsylvania State University, Hershey Medical Center
	Huckaby, Francine Renee, M.P.H.	.University of Alabama, Birmingham
L	Irwin, Meredith, M.D	.University of Toronto
J	Jacobsen, Paul B., Ph.D.	.University of South Florida
	Jaeckle, Kurt A., M.D	.University of Texas M.D. Anderson Cancer Center
	Jaffee, Elizabeth M., M.D	Johns Hopkins University
	Jaffray, David A., Ph.D.	• •
	Jessup, John M., M.D	•
	Johnson, Bryon D., Ph.D	,
	Johnson, Edward M., Ph.D	
	Johnson, Linda B., OTH	
	Jones, David A., Ph.D	•
	Junck, Larry R., M.D	•
		, 3
K	Kamen, Barton A., M.D., Ph.D.	.Cancer Institute of New Jersey
	Kane, Susan E., Ph.D	•
	Kasahara, Noriyuki, M.D., Ph.D.	•
	Kennedy, Ronald C., Ph.D	.Texas Tech University
	,	.H. Lee Moffitt Cancer Center and Research Institutes
	Kitchell, Barbara E., D.V.M., Ph.D	
	Kreuter, Matthew W., Ph.D	,
	Krown, Susan E., M.D	,
	Krupinski, Elizabeth A., Ph.D.	.University of Arizona
	Kruse, Carol A., Ph.D.	.La Jolla Institute for Molecular Medicine
	Kulesz-Martin, Molly F., Ph.D	.Oregon Health & Science University
	Kyprianou, Natasha, Ph.D.	.University of Kentucky
L	Landsittel, Douglas P., Ph.D	• ,
	Lang, James C., Ph.D.	•
	•	.University of Massachusetts Medical School, Worcester
		.University of Texas Health Sciences Center, San Antonio
	Lee, Eva Y., Ph.D	,
	Lee, Sam W., Ph.D	·
	Leeper, Dennis B., M.D., Ph.D.	,
	Lenkinski, Robert E., Ph.D.	
	Levine, Alexandra M., M.D	,
	Lewin, Jonathan S., M.D.	, · · ·
	Lieberman, Howard B., Ph.D	•
	Lieberman, Paul M., Ph.D	.Wistar Institute
	Lilge, Lothar, Ph.D	•
	Link, Brian K., M.D.	.University of Iowa
	Link, Charles J., M.D	.Newlink Genetics, Inc.

	Liv. Vong lun M.D. Dh.D.	University of Tayon M.D. Andarran Canaan Cantan
	Lorusso, Patricia M., D.O., M.D.	.University of Texas M.D. Anderson Cancer Center
	Lowe, Scott W., Ph.D.	•
	Lowe, Scott w., Fil.D	Cold Spring Marbor Laboratory
M	Macklin, Ruth, Ph.D.	.Albert Einstein College of Medicine
	Magnotta, Vincent A., Ph.D	· · · · · · · · · · · · · · · · · · ·
	Magun, Bruce E., Ph.D.	,
	Malkas, Linda H., Ph.D.	- · · · · · · · · · · · · · · · · · · ·
	Malloy, Craig R., M.D.	,
	Mankoff, David A., M.D., Ph.D.	,
		.University of Texas Health Sciences Center, San Antonio
	Martin, Brian, M.P.A.	,
	Martin, Jeffrey N., M.D.	,
	Maziak, Donna, M.D	,
	McGlave, Philip B., M.D	,
	McGrath, Patrick C., M.D.	,
	Melnick, Ari M., M.D.	, ,
	Meltzer, Paul S., M.D., Ph.D.	,
	Mesa, Ruben A., M.D.	
		.University of Texas M.D. Anderson Cancer Center
	•	Pennsylvania State University Hershey Medical Center
	Miller, Andrew H., M.D	
	Miller, Vincent A., M.D.	,
	Minden, Mark D., M.D., Ph.D.	
		.University of Colorado Denver/Health Sciences Center at Aurora
	Molnar-Kimber, Katherine L., Ph.D	,
		.Mount Sinai School of Medicine of New York University
	Moran, Richard G., Ph.D	,
		.University of Maryland, Baltimore Professional School
	•	.University of Medicine and Dentistry of NJ, R.W. Johnson Medical School
	Moscow, Jeffrey A., M.D.	,
	Mossman, Brooke T., Ph.D.	,
	Motamedi, Massoud, Ph.D	,
	Mulder, Kathleen M., Ph.D	,
	Murphy, William Joseph., Ph.D	, ,
× 1	. ,	,
N	Nasca, Philip C., Ph.D	.University of Massachusetts, Amherst
	Nephew, Kenneth P., Ph.D	.Indiana University School of Medicine
	Nolta, Jan A., Ph.D	.Washington University
	Norris, James S., Ph.D	.Medical University of South Carolina
	Noy, Noa, Ph.D	.Cornell University, Ithaca
	Nucifora, Giuseppina, Ph.D	.University of Chicago
0	O'Drian Cathenina A DI D	University of Torre M.D. Anderson Committee
		.University of Texas M.D. Anderson Cancer Center
	O'Dorisio, M. Susan., M.D., Ph.D.	,
	Ochs, Michael F., Ph.D.	
	Olson, John A., M.D., Ph.D.	•
	Olsson, Carl A., M.D	.Columbia University

	Osheroff, Neil, Ph.D.	•
	Osley, Mary Ann., Ph.D.	
	Ostrer, Harry, M.D., Ph.D.	,
	Ostrowski, Michael C., Ph.D	,
	Ozer, Harvey L., M.D.	.University of Medicine and Dentistry of New Jersey
P	Pallavicini, Maria G., Ph.D.	.University of California, San Francisco
	Parra-Medina, Deborah M., Ph.D	,
	Pasternack, Gary R., M.D., Ph.D.	,
	Pellicer, Angel G., M.D., Ph.D.	,
	Pence, Barbara C., Ph.D	,
	Penn, Linda Z., Ph.D.	,
	Perez-Soler, Roman, M.D	
	Petrelli, Nicholas J., M.D.	•
	Piazza, Gary A., Ph.D.	
	Pierce, John P., Ph.D.	
	Pizzo, Salvatore V., M.D., Ph.D.	,
	Plate, Janet M., Ph.D.	,
		.University of Texas M.D. Anderson Cancer Center
	Posner, Marshall R., M.D	,
	Price, Ronald R., Ph.D	
	Prossnitz, Eric R., Ph.D.	,
	Pumiglia, Kevin M., Ph.D.	, and the second
	Purdy, James A., Ph.D	,
Q	Quaranta, Vito, M.D	Vanderbilt University
R	Raab-Traub, Nancy J., Ph.D.	.University of North Carolina, Chapel Hill
	Radich, Jerry P., M.D	,
	Ramsden, Dale A., Ph.D	
	Raubitschek, Andrew A., M.D	,
	Reader, Steven, Ph.D	•
	Reed, Shelby, Ph.D	,
	Reid, Mary E., Ph.D	·
	Ribas, Antoni, M.D.	•
	Rigas, Basil A., M.D.	.State University New York, Stony Brook
	Roberts, Charles T., Ph.D	•
	Robertson, Erle S., Ph.D	· · · · · · · · · · · · · · · · · · ·
	Robertson, Fredika M.,	, ,
	Romkes, Marjorie, Ph.D	•
	*	.University of Texas M.D. Anderson Cancer Center
		,
		•
		·
	Rundell, M. Kathleen, Ph.D	,
	Rosmarin, Alan G., M.D	.Rhode Island Hospital .Introgen Therapeutics, IncUniversity of Medicine and Dentistry of NJ, R.W. Johnson Medical School

C		
5	Sahler, Olle Jane Z., M.D.	,
	Salisbury, Jeffrey L., Ph.D	Mayo Clinic College of Medicine, Rochester
	Samuel, Charles E., Ph.D.	University of California, Santa Barbara
	Samuels, Robert J.,	. National Alliance of Breast Cancer Organization
	Sandmaier, Brenda Marie, M.D	. Fred Hutchinson Cancer Research Center
	Scott, Jamie K., M.D., Ph.D.	. Simon Fraser University
	Scotto, Kathleen W., Ph.D.	University of Medicine and Dentistry of New Jersey
	Segerstrom, Suzanne C., Ph.D	University of Kentucky
	Seiden, Michael V., M.D., Ph.D	Massachusetts General Hospital
	Shamsuddin, Abulkalam M., M.D., Ph.D	University of Maryland School of Medicine
	Shaw, Edward G., M.D.	Wake Forest University
	Shen, Xuetong, Ph.D.	University of Texas M.D. Anderson Cancer Center
	Shively, John E., Ph.D.	City of Hope National Medical Center
	Shrikant, Protul A., Ph.D.	Roswell Park Cancer Institute Corporation
	Sinsheimer, Janet S., Ph.D.	University of California Los Angeles
	Smith, Gilbert P., BOTH	MCMC, LLC, Medical Care Ombudsman Program
	Smythe, W. Roy., M.D.	Texas A&M University Health Science Center
	Solomon, Keith R., Ph.D.	•
		.H. Lee Moffitt Cancer Center and Research Institutes
	Spangler, John G., M.D.	,
	Sparano, Joseph A., M.D.	•
	Srour, Edward F., Ph.D.	•
	Stanbridge, Eric J., Ph.D.	,
	Stanley, Pamela M., Ph.D.	•
	•	University of Massachusetts Medical School, Worcester
	Storkus, Walter J., M.D., Ph.D.	,
	,	University of Medicine and Dentistry of New Jersey
	-	University of Medicine and Dentistry of New Jersey
	Sugden, William M., Ph.D	,
	•	. University of Arkansas Medical Sciences, Little Rock
	Swanson, Scott J., M.D.	Mount Sinai Medical Center
Т	T : D   D   D	M COUCH LONGE ON VIII O
•		Mount Sinai School of Medicine of New York University
	Tangen, Catherine M., Dr.P.H.	
	Taylor, Jeremy MG., Ph.D.	,
	Tebbi, Cameron K., M.D.	•
	Terry, Michael A., Ph.D.  Tew, Kenneth D., Ph.D.	•
	Thaler-Demers, Debra K., R.N.	•
		•
	Tindall, Donald J., Ph.D.  Tonks, Nicholas K., Ph.D.	
		,
	Torchilin, Vladimir P., Ph.D.	·
	Torti, Frank M., M.D.	•
	Traphell, Bruce C., M.D.	•
	Traub, Linton M., Ph.D.	,
	Triche, Timothy J., M.D., Ph.D.	Novelix Pharmaceuticals, Inc.

Triozzi, Pierre L., M.D
Troxel, Andrea B., Ph.D
Truitt, Robert L., Ph.D Medical College of Wisconsin
Hallet, Nobell 2., This
Van Ness, Brian G., Ph.D
Vannier, Michael W., M.D
Verhey, Lynn James, Ph.D
Vile, Richard G., Ph.D
Volpert, Olga V., Ph.D
Von Mehren, Margaret, M.D Fox Chase Cancer Center
von Mehren, Margaret, M.D
Wadler, Scott H., M.D
Wang, Jean Y., Ph.D
Ward, John H., M.D
Weiner, Louis M., M.D
Weiner, Ronald E., Ph.D
Weiss, Geoffrey R., M.D
Welch, Michael J., M.D., Ph.D
Westendorf, Jennifer J., Ph.D
Wilburn, Louella S
1 0
Wingard, John R., M.D
Workman, Jerry L., Ph.D
Wu, Jie, Ph.D
Xiao, Hua, M.D., Ph.D
Xu, Yan, Ph.D
Yandell, David W., Ph.D
Yang, Chung S., Ph.D Rutgers the State University of New Jersey, New Brunswick
Yee, Douglas, M.D
Yoo, George H., M.D
Yu, Dihua, M.D., Ph.D
id, Dilida, M.D., Th.D
Zimbrick, John D., Ph.D

Total Number of D-1 Reviewers: 334

# 2. Consultants Serving as Ad Hoc Committee Members on IRG Site Visit Teams in FY2005

_		
Α	Abraham, Robert T., Ph.D	.Cyntellect, Inc.
	Altman, Norman Harry, V.M.D	.University of Miami School of Medicine
	Andrews, Robert G., M.D	.Fred Hutchinson Cancer Research Center
	Antonia, Scott J., M.D	.H. Lee Moffitt Cancer Center and Research Institute
	Ashikaga, Taka, Ph.D	.University of Vermont and State Agricultural College
	Au, Jessie LS., M.D., Ph.D.	.Ohio State University
B	Baker, Henry J., D.V.M	.Auburn University at Auburn
	Baker, Vicki V., M.D., Ph.D	.University of Michigan Medical Center
	Bastia, Deepak, Ph.D	.Medical University of South Carolina
	Belk, Bonnie F., M.P.A.	.Private Practice
	Benson, Mitchell C., M.D	.Columbia University Health Sciences
	Bepler, Gerold, M.D., Ph.D	.H. Lee Moffitt Cancer Center and Research Institute
	Boggan, James E., M.D	.University of California at Davis
	Bond, Jeffrey P., Ph.D	.University of Vermont and State Agricultural College
	Bondy, Melissa L., Ph.D	.University of Texas M.D. Anderson Cancer Center
	Borch, Richard F., M.D., Ph.D	.Purdue University, West Lafayette
	Bourdon, Mario A., Ph.D	.La Jolla Institute for Molecular Medicine
	Bowen, Deborah J., Ph.D	.Fred Hutchinson Cancer Research Center
	Bronson, Roderick T., D.V.M	.Tulane University of Louisiana
	Bryant, Joseph L., D.V.M	.University of Maryland Biotechnology Institute
	Bryant, Peter J., Ph.D	.University of California, Irvine
	Butel, Janet S., Ph.D	.Baylor College of Medicine
	Caligiuri, Michael A., M.D., Ph.D.	.Ohio State University
	Capen, Charles C., D.V.M., Ph.D.	.Ohio State University
	Carducci, Michael A., M.D., Ph.D.	,
	Casagrande, John Thomas, Dr.P.H	•
	Catalano, Paul J., Sc.D	
	Caterina, Michael J., M.D., Ph.D.	• •
	Champion, Victoria L., Ph.D., R.N	,
	Cho, Kathleen R., M.D	,
	Christman, Judith K., Ph.D.	,
	Clohisy, Denis R., M.D	•
	Cody, Vivian, Ph.D	
	Cohen, Edward P., M.D.	,
	Cory, Joseph G., Ph.D.	•
	Creek, Kim E., Ph.D.	•
	Cullen, Kevin J., M.D	
	Curley, Robert W., Ph.D.	.Ohio State University
D	D ' DI A DI D	The second of th
U	Damania, Blossom A., Ph.D.	,
	Darling, Michael W	•
	Davis, Jerry K., D.V.M., Ph.D	.Puraue University

	Dent, Paul, Ph.D.  Devere White, Ralph W., M.D.  Dhir, Rajiv, M.D.  Djeu, Julie Y., Ph.D.  Dove, William F., Ph.D.  Drabkin, Harry A., M.D.	.University of California, Davis .University of Pittsburgh at Pittsburgh .University of South Florida .University of Wisconsin, Madison
E	Egelman, Edward H., Ph.D.	.University of Virginia, Charlottesville
F	Fox, Bernard A., Ph.D.	.Louisiana State University Health Sciences Center .Providence Portland Medical Center .University of Texas M.D. Anderson Cancer Center
G	Garewal, Harinder S., M.D., Ph.D. Garrard, William T., Ph.D. Gehan, Edmund A., Ph.D. Gentleman, Robert C., Ph.D. Geoghegan, Cynthia, B.A. Gerlach, Robert, Ph.D. Gerson, Stanton L., M.D., Ph.D. Gerwick, William H., Ph.D. Getzenberg, Robert H., Ph.D. Gimotty, Phyllis A., Ph.D. Girotti, Albert W., Ph.D. Goldring, Mary B., Ph.D. Gottesfeld, Joel M., Ph.D. Green, Sylvan B., M.D., Ph.D. Guy, Barbara B., Ph.D.	.University of Texas Southwest Medical Center, Dallas .Georgetown University Medical Center .Fred Hutchinson Cancer Research Center .Georgetown University Medical Center .Cleveland Clinic Foundation .Virxsys Corporation .University of California, San Diego .Johns Hopkins University .University of Pennsylvania .Medical College of Wisconsin .Beth Israel Deaconess Medical Center .Scripps Research Institute .Case Western Reserve University
Н	Heerema, Nyla A., Ph.D.  Heitjan, Daniel F., Ph.D.  Held, William A., Ph.D.  Henderson, Janet E., Ph.D.  Hilsenbeck, Susan G., Ph.D.	.Fred Hutchinson Cancer Research Center .Eastern Virginia Medical School .University of Chicago, Pritzker School of Medicine .Ohio State University .University of Pennsylvania .Roswell Park Cancer Institute Corporation .Center for Bone and Periodontal Research .Baylor College of Medicine .Pennsylvania State University Hershey Medical Center .St. Louis University .British Columbia Cancer Agency .Fronter Science

I	Iritani, Brian M., D.V.M., Ph.D.	.University of Washington
J	Jenkins, Robert B., M.D., Ph.D.  Johnson, Candace S., Ph.D.  Jones, David A., Ph.D.  June, Carl H., M.D.  Jung, Jae U., Ph.D.	.Roswell Park Cancer Institute Corporation .University of Utah .University of Pennsylvania
K	Kan-Mitchell, June K., Ph.D. Kaufman, Russel E., M.D. Kepner, James L., Ph.D. Kim, Kyungmann, Ph.D. Kiviat, Nancy B., M.D. Knowles, Barbara B., Ph.D. Knutson, Keith L., Ph.D. Kong, Tony Ah-Ng, Ph.D. Kruse, Carol A., Ph.D. Kuo, Macus T., Ph.D.	.Wistar Institute .Roswell Park Cancer Institute Corporation .University of Wisconsin, Madison .University of Washington .The Jackson Laboratory .Mayo Clinic College of Medicine, Rochester .Rutgers University College of Pharmacy
L	Ladisch, Stephan, M.D.  Lattime, Edmund C., Ph.D.  Lazo, John S., Ph.D.  Le, Chap T., Ph.D.  Lewis, Jason S., Ph.D.  Lichtor, Terence R., M.D., Ph.D.  Lieberman, Michael, M.D., Ph.D.  Liu, P.Y., Ph.D.  Lomax, Randy, M.A.  London, Jack W., Ph.D.  Lowry, Diana	.Robert Wood Johnson School of Medicine and Dentistry of New Jersey .University of Pittsburgh at Pittsburgh .University of Minnesota, Twin Cities .Washington University .Rush University Medical Center .Baylor College of Medicine .Fred Hutchinson Cancer Research Center .Melanoma Research Foundation .Thomas Jefferson University
M	Macoska, Jill A., Ph.D.  Malkas, Linda H., Ph.D.  Mantyh, Patrick W., Ph.D.  Marshall, James R., Ph.D.  Maurer, Barry J., M.D., Ph.D.  McGarry, Michael P., Ph.D.  Mesri, Enrique A., Ph.D.  Minden, Mark D., M.D., Ph.D.  Mori, Motomi, Ph.D.  Morse, Michael A., M.D.  Moscow, Jeffrey A., M.D.  Mukhtar, Hasan, Ph.D.  Murphy, William Joseph, Ph.D.	Indiana University-Purdue University at Indianapolis  University of Minnesota, Twin Cities  Roswell Park Cancer Institute Corporation  Children's Hospital, Los Angeles  Roswell Park Cancer Institute Corporation  University of Miami School of Medicine  Princess Margaret Hospital  Oregon Health and Science University  Duke University  University of Kentucky  University of Wisconsin, Madison

N	Nelson, Peter S., M.D.	Fred Hutchinson Cancer Research Center
	Neugut, Alfred I., M.D., Ph.D.	
	Nowak, Norma J., Ph.D.	Roswell Park Cancer Institute Corporation
0	Oberyszyn, Tatiana M., Ph.D.	.Ohio State University
	Ochs, Michael F., Ph.D.	•
	O'Neill, Brian P., M.D., Ph.D.	.Brown University
	Ostrer, Harry, M.D., Ph.D.	.New York University School of Medicine
	Ou, Jing-Hsiung J., Ph.D.	,
		.University of Medicine and Dentistry of New Jersey
	Ozols, Robert F., M.D., Ph.D.	
P	Paskett, Electra D., Ph.D.	. Ohio State University
	Patchell, Roy A., M.D., Ph.D.	•
	Perez-Soler, Roman, M.D.	
	Peters, Jeffrey M., Ph.D	•
	Pieper, Russ O., Ph.D	
	Pierce, John P., Ph.D.	,
	Plate, Janet M., Ph.D.	,
	Pledger, W.J., Ph.D.	.H. Lee Moffitt Cancer Center and Research Institute
	Powell, Robert S., M.A.	.University of Miami School of Medicine
Q	Quaranta, Vito, M.D.	.Vanderbilt University
R	Rabson, Arnold B., M.D	.University of Medicine and Dentistry of New Jersey
R	Rabson, Arnold B., M.D	. University of Medicine and Dentistry of New Jersey . Northwestern University
R	Rademaker, Alfred W., Ph.D.	.Northwestern University
R		.Northwestern University .Cleveland Clinic Foundation
R	Rademaker, Alfred W., Ph.D	Northwestern University Cleveland Clinic Foundation City of Hope/Beckman Research Institute
R	Rademaker, Alfred W., Ph.D.  Raghavan, Derek, M.D., Ph.D.  Raubitschek, Andrew A., M.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute
R	Rademaker, Alfred W., Ph.D.  Raghavan, Derek, M.D., Ph.D.  Raubitschek, Andrew A., M.D.  Rauscher, Frank J., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital
R	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine .University of Michigan Comprehensive Cancer Center .Wayne State University
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D. Sellers, Thomas A., Ph.D.	Northwestern UniversityCleveland Clinic FoundationCity of Hope/Beckman Research InstituteWistar InstituteCase Western Reserve UniversityWistar InstituteUniversity of Rochester Cancer CenterColumbia University Health SciencesUniversity of North CarolinaRhode Island HospitalUniversity of California, Los AngelesUniversity of California, IrvineUniversity of Michigan Comprehensive Cancer CenterWayne State UniversityH. Lee Moffitt Cancer Center and Research Institute
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D. Sellers, Thomas A., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine .University of Michigan Comprehensive Cancer Center .Wayne State University
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D. Sellers, Thomas A., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine .University of Michigan Comprehensive Cancer Center .Wayne State University .H. Lee Moffitt Cancer Center and Research Institute .H. Lee Moffitt Cancer Center and Research Institute
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D. Sellers, Thomas A., Ph.D. Seto, Edward, Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine .University of Michigan Comprehensive Cancer Center .Wayne State University .H. Lee Moffitt Cancer Center and Research Institute .H. Lee Moffitt Cancer Center and Research Institute
	Rademaker, Alfred W., Ph.D. Raghavan, Derek, M.D., Ph.D. Raubitschek, Andrew A., M.D. Rauscher, Frank J., Ph.D. Remick, Scot C., M.D. Riethman, Harold C., Ph.D. Rosenblatt, Joseph D., M.D. Rosenfeld, Steven S., M.D., Ph.D. Rosenman, Julian G., M.D., Ph.D. Rosmarin, Alan G., M.D. Roth, Michael D., M.D. Sandri-Goldin, Rozanne M., Ph.D. Sayre, James W., Ph.D. Schottenfeld, David, M.D. Schwartz, Ann G., Ph.D. Sellers, Thomas A., Ph.D. Seto, Edward, Ph.D. Shull, James D., Ph.D.	.Northwestern University .Cleveland Clinic Foundation .City of Hope/Beckman Research Institute .Wistar Institute .Case Western Reserve University .Wistar Institute .University of Rochester Cancer Center .Columbia University Health Sciences .University of North Carolina .Rhode Island Hospital .University of California, Los Angeles .University of California, Irvine .University of Michigan Comprehensive Cancer Center .Wayne State University .H. Lee Moffitt Cancer Center and Research Institute .H. Lee Moffitt Cancer Center and Research Institute .University of Nebraska Medical Center .Vanderbilt University Medical School

	Stein, Gary S., Ph.D. Storer, Barry E., Ph.D. Stout, C. David, Ph.D. Sugden, William M., Ph.D.	.Memorial Sloan-Kettering Cancer Center .Northwestern University .City of Hope/Beckman Research Institute .University of California, Irvine .Yeshiva University .Indiana University-Purdue University at Indianapolis .University of Massachusetts Medical School, Worcester .Fred Hutchinson Cancer Research Center .Scripps Research Institute .University of Wisconsin, Madison .University of Arkansas Medical Sciences Center, Little Rock
T	Terry, Michael A., Ph.D.  Tew, Kenneth D., Ph.D.  Tindall, Donald J., Ph.D.  Townsend, Alan J., Ph.D.	.Novelos Therapeutics, Inc. .Mayo Clinic College of Medicine, Rochester
u	Ullrich, Stephen E., Ph.D.	.University of Texas M.D. Anderson Cancer Center
V	Vail, David M., D.V.M.  Vallera, Daniel A., Ph.D.  Vannier, Michael W., M.D.  Varella-Garcia, Marileila, Ph.D.  Verma, Ajit K., Ph.D.  Verma, Inder M., Ph.D.	.University of Minnesota .University of Chicago .University of Colorado, Denver .University of Wisconsin
W	Wasik, Mariusz A., M.D.	.University of Pennsylvania .Mount Sinai School of Medicine of New York University .University of Virginia, Charlottesville .Wayne State University .Baylor College of Medicine .University of Virginia, Charlottesville .Baylor College of Medicine .University of Michigan at Ann Arbor .University of Arizona .University of Pennsylvania .Ontario Cancer Institute
Y	Yi, Qing, M.D., Ph.D.	.University of Texas M.D. Anderson Cancer Center
Z	Zhang, Michael Q., Ph.D.	.Cold Spring Harbor Laboratory

Total Number of D-2 Reviewers: 203

### 3. Consultants Serving on Special Emphasis Panels (SEPs) in FY2005

A		
A	Aaronson, Stuart A., M.D	.Mount Sinai School of Medicine of New York University
	Abboud, Camille N., M.D., Ph.D	<i>,</i>
	Abdel-Nabi, Hani H., M.D., Ph.D.	.State University of New York, Buffalo
	Abraham, Edward H., M.D	.Adenylate Diagnostics, LLC
	Abraham, George N., M.D., Ph.D	.University of Rochester
	Abrams, Judith, M.D., Ph.D	.Wayne State University
	Ackerman, Eric J., Ph.D	.Battelle Pacific Northwest Laboratories
	Ackerman, Terry A., Ph.D	.University of North Carolina
	Adams, Mary L., Ph.D	.University of Texas, Austin
	Adams-Campbell, Lucile L., Ph.D	.Howard University
	Adjei, Alex A., M.D., Ph.D	.Mayo Clinic College of Medicine, Rochester
	Affonso, Dyanne D., Ph.D	.University of Hawaii, Hilo
	Agarwal, Rajesh, Ph.D	.University of Colorado, Denver
	Agnew, Brian J., Ph.D.	.Molecular Probes, Inc.
	Agrawal, Babita, Ph.D	.University of Alberta
	Agrawal, Krishna C., Ph.D	.Tulane University of Louisiana
	Aguiar, Ricardo C., M.D., Ph.D	.University of Texas Health Science Center, San Antonio
	Ahles, Tim A., Ph.D	.Dartmouth College
	Ahmed, Farid E., Ph.D	.East Carolina University
	Ahmed, Nayaz, Ph.D	.LKT Laboratories, Inc.
	Ahn, Jeonghoon, Ph.D	.University of Southern California
	Ahnen, Dennis J., M.D	.Ludwig Institute for Cancer Research
	Akporiaye, Emmanuel T., Ph.D	.University of Arizona
	Albala, Joanna S., Ph.D	.University of California, Davis
	Albino, Anthony P., Ph.D	.Institute for Cancer Prevention
	Ali-Osman, Francis, Ph.D	.Duke University
	Alvarez, Ronald D., M.D	.University of Alabama, Birmingham
	Ambinder, Richard F., M.D., Ph.D	.Johns Hopkins University
	Ambrosone, Christine B., Ph.D	.American Association for Cancer Research
	Andersen, Bogi, M.D	.University of California, Irvine
	Andersen, M. Robyn, Ph.D	.Fred Hutchinson Cancer Research Center
	Anderson, Carolyn J., Ph.D	.Washington University School of Medicine
	Anderson, Garth R., Ph.D	.Roswell Park Cancer Institute Corporation
	Anderson, Kenneth C., M.D	.Dana-Farber Cancer Institute
	Anderson, Peter M., M.D., Ph.D	.Mayo Medical School Foundation
	Androphy, Elliot J., M.D	.University of Massachusetts Medical School, Worcester
	Andruss, Bernard, Ph.D	.Ambion, Inc.
	Andrykowski, Michael A., R.N., Ph.D.	.University of Kentucky
	Angeletti, Ruth Hogue, Ph.D	.Yeshiva University
	Antonia, Scott J., M.D	.H. Lee Moffitt Cancer Center and Research Institute
	Antoun, Mikhail D., Ph.D	.University of Puerto Rico
	Aplenc, Richard, M.D	.Children's Hospital of Philadelphia
	Arai, Andrew E., M.D.	.National Heart, Lung, and Blood Institute
	Arap, Wadih, M.D., Ph.D	.University of Texas M.D. Anderson Cancer Center

	Arber, Daniel A., M.D.	.Stanford University Hospital
	Arenaz, Pablo, Ph.D	.University of Texas, El Paso
	Argyropoulos, George, Ph.D	.Louisiana State University
		.University of Texas M.D. Anderson Cancer Center
	Armstrong, Deborah K., M.D	Johns Hopkins University
	Armstrong, Floyd Daniel, Ph.D	.University of Miami
	Arora, Neeraj K., Ph.D	•
	Arrick, Bradley A., M.D., Ph.D.	•
	Ashendel, Curtis L., Ph.D	•
		.University of Vermont and State Agricultural College
	Atkins, Michael B., M.D	,
		.University of Texas M.D. Anderson Cancer Center
	Auborn, Karen J., Ph.D.	•
	Auerbach, Robert, Ph.D	
	Austin, Robert H., Ph.D.	,
		.University of Medicine and Dentistry of New Jersey
B	Babaian, Richard J., M.D.	.University of Texas M.D. Anderson Cancer Center
	Babich, John W., Ph.D	•
	Babu, John S., D.V.M., Ph.D.	
	Bachmann, Andre S., Ph.D	
	Backman, Vadim, Ph.D	•
	Bae, You Han, Ph.D	,
	Baezconde-Garbanati, Lourdes, Ph.D	,
		.University of Texas Health Science Center, San Antonio
	Baker, David C., M.D., Ph.D.	•
	Baker, Nathan A., Ph.D.	,
	Baker, Vicki V., M.D., Ph.D.	,
	Balaban, Barbara J	,
	Balch, R. Curtis, Ph.D	•
		.H. Lee Moffitt Cancer Center and Research Institute
	Ball, Louise M., Ph.D	
	Ballman, Karla, Ph.D	,
	Balogh, Lajos Peter, Ph.D	,
	Balon, Thomas W., Ph.D	· -
	Balter, James M., M.D., Ph.D	
	Band, Hamid, M.D., Ph.D.	· -
	Banks, William A., M.D., Ph.D.	
	Banks, William L., Ph.D	•
	Bao, Gang, Ph.D	,
	Baquet, Claudia R., M.D., Ph.D.	
	Barany, Francis, M.D., Ph.D.	• •
	Barg, Frances K., Ph.D	,
	Barile, Frank A., Ph.D.	
	Baron, Andre T., Ph.D.	•
	Batra, Surinder Kumar, Ph.D	·
	Batt, Carl A., Ph.D.	•
		——————————————————————————————————————

Bauer, Brent A., M.D	Mayo Clinic College of Medicine, Rochester
Baum, Stanley, M.D	,
Baumbach, Lisa L., Ph.D.	· · · · · · · · · · · · · · · · · · ·
Baxter-Lowe, Lee Ann A., Ph.D	,
Bearman, Gregory H., Ph.D.	•
Becich, Michael J., M.D., Ph.D.	•
Beck, J. Robert, M.D	,
Beck, William T., Ph.D.	
Becker, Christopher H., Ph.D.	,
Behm, Frederick G., M.D.	
Beitz, Alvin J. Ph.D	•
Bellamy, Scarlett, Ph.D	,
Benaron, David A., M.D	, ,
Benbrook, Doris M., Ph.D.	·
Bennett, Jill A., Ph.D	,
Bennett, William P., M.D.	,
Bentley, William E., Ph.D.	, .
Berens, Michael E., Ph.D.	Translational Genomics Research Institute
Berezney, Ronald, Ph.D	State University of New York, Buffalo
Berger, Mitchel S., M.D.,	University of California, San Francisco
Berger, Nathan A., D.V.M., M.D	Case Western Reserve University
Berger, Sondra H., Ph.D	University of South Carolina
Bergman, Ira, M.D., Ph.D.	University of Pittsburgh, Pittsburgh
Bernacki, Ralph J., Ph.D	Roswell Park Cancer Institute Corporation
Bernstein, Jonine Lisa, Ph.D	Sloan-Kettering Institute for Cancer Research
Berridge, Marc S., Ph.D	3D Imaging, LLC
Berry, Donna L., R.N., Ph.D	Oncology Nursing Society
Bertino, Joseph R., M.D	The Cancer Institute of New Jersey
Bertone-Johnson, Elizabeth R., Ph.D	University of Massachusetts, Amherst
Besson, Guy M., Ph.D	ForeVision Technologies Corporation
Bestor, Timothy H., Ph.D.	Columbia University Health Sciences
Bhagwat, Ashok S., Ph.D	,
Bickell, Nina A., M.D	 Mount Sinai School of Medicine of New York University
Biegon, Anat, Ph.D.	$. \ . Brookhaven \ Science \ Association-Brookhaven \ Laboratory$
Bies, Robert R., Ph.D	University of Pittsburgh
Bigbee, William L., Ph.D	· · · · · · · · · · · · · · · · · · ·
	Pennsylvania State University Hershey Medical Center
Bjorner, Jakob B., M.D., Ph.D.	•
Black, Margaret E., Ph.D.	- · · · · · · · · · · · · · · · · · · ·
Blackburn, George L., M.D., Ph.D	
Blanchard, Rebecca L., Ph.D	
Block, Susan D., M.D	
Bloom, Joan R., Ph.D	University of California, Berkeley
Boardman, Lisa A., M.D	,
Bogen, Steven A., M.D., Ph.D.	
Boggan, James E., M.D.	
•	University of Texas M.D. Anderson Cancer Center
Bolinger, Lizann, Ph.D	University of Iowa

Panavida Paniamin Ph D	University of Colifornia Lee Angeles
Bonavida, Benjamin, Ph.D.	,
Boothman, David A., Ph.D.	•
Bornhop, Darryl J., Ph.D.	•
Bos, Timothy J., Ph.D.	-
Boss, Gerry R., M.D.	
Bourne, David, Ph.D.	•
Bouvet, Michael, M.D.	,
Bowen, Deborah J., Ph.D.	
Bowers, William J., Ph.D.	•
Boyajian, Richard Nishan	
Boyd, Jeff A., Ph.D.	
Brachmann, Rainer K., M.D.	,
Bradley, Cathy J., Ph.D.	-
Brahmbhatt, Dhaval J	• •
Bram, Richard J., M.D., Ph.D	•
Brandt, Cynthia A., M.D	
Brannon-Peppas, Lisa, Ph.D.	•
Brat, Daniel J., M.D., Ph.D.	, ,
Brenan, Colin J.H., Ph.D.	BioTrove, Inc.
Brenna, James T., Ph.D.	Cornell University, Ithaca
Brenner, Malcolm K., M.D., Ph.D.	Baylor College of Medicine
Brett, John A., Ph.D.	University of Colorado, Denver
Brewer, Molly A., D.V.M, M.D	University of Arizona
Bright, Robert K., Ph.D	Texas Tech University Health Sciences Center
Brink, Susan G., Ph.D.	Healthmark Multimedia, LLC
Broaddus, Russell R., M.D., Ph.D.	University of Texas M.D. Anderson Cancer Center
Brock, Graham J., Ph.D	Ordway Research Institute, Inc.
Brodeur, Garrett M., M.D	Children's Hospital of Philadelphia
Brodie, Angela M., Ph.D	University of Maryland
Brooks, Antone L., Ph.D.	Battelle, Pacific NW Labs
Brooks, Mai Nguyen, M.D	University of California, Los Angeles
Brousseau, Louis C., Ph.D.	Quantum Logic Devices
Brown, C. Perry, Ph.D	Florida A&M University
Brown, Jean, R.N., Ph.D.	State University of New York, Buffalo
Brown, Jeremy, M.D.	George Washington University
Brown, Kathlynn C., Ph.D	
Brown, Powel, M.D., Ph.D.	
Broxmeyer, Hal E., M.D., Ph.D	Indiana University-Purdue University, Indianapolis
Bruce, James Edward, Ph.D	·
Bruck, Hugh A., Ph.D.	
-	University of Texas M.D. Anderson Cancer Center
Bruner, Deborah W., Ph.D., R.N.	•
Buatti, John M., M.D.	
Buchanan, George R., M.D	•
Buchsbaum, Donald J., Ph.D.	,
Bukowski, Ronald M., M.D	
Bulik, Robert J., Ph.D.	
	University of Texas Health Science Center, Houston
=, v •,	story of total redshif ocieties ocities, riodoton

	Bumgarner, Roger E., Ph.D	.University of Washington
	Burdette, Everette C., Ph.D.	,
	Burgess, Kevin, Ph.D	•
	Burghardt, Thomas P., Ph.D.	.Mayo Clinic College of Medicine, Rochester
	Burke, Harry B., M.D., Ph.D.	,
	Burns, David Michael, M.D.	,
	Burns, Fredric J., Ph.D.	,
	Burns, Linda J., M.D	•
	Burt, Randall W., M.D	.University of Utah
	Butler, Grace L., Ph.D.	,
	Butler, Robert W., Ph.D.	
	Butt, Tauseef R., Ph.D.	,
	Byrd, John C., M.D.	.Ohio State University
	Byrns, Patricia J., M.D	.University of Colorado, Denver
	,	,
C	Caan, Bette J., Ph.D.	.Kaiser Foundation Research Institute
	Cairns, Paul, Ph.D	.Fox Chase Cancer Center
	Cairo, Mitchell S., M.D.	.Columbia University Health Sciences Center
	Caldwell, Charles W., M.D., Ph.D.	.Ellis Fischel Cancer Center
	Caligiuri, Michael A., M.D., Ph.D.	.Ohio State University
	Call, Katherine M., Ph.D.	.Sanofi-Aventis
	Campbell, Catherine, Ph.D	.SRA International, Inc.
	Cao, Weiguo, Ph.D.	.Clemson University
	Caplan, Arthur L., Ph.D	.University of Pennsylvania
	Capuano, Saverio V., D.V.M	.Magee-Women's Hospital of University of Pittsburgh
	Carbone, David P., M.D., Ph.D	.Vanderbilt University
	Carbone, Michele, M.D., Ph.D	.Loyola University of Chicago
	Carey, Lisa A., M.D., Ph.D.	.University of North Carolina, Chapel Hill
	Carey, Robert	.RPC Associates, Inc.
	Carroll, William L., M.D.	.New York University School of Medicine
	Carter, Christopher A., Ph.D.	.Southern Research Institute
	Castleberry, Robert P., M.D	.University of Alabama, Birmingham
	Catalano, Susan M., Ph.D.	.Acumen Pharmaceuticals, Inc.
	Chalmers, Jeffrey J., Ph.D.	.Ohio State University
	Champlin, Richard E., M.D	.University of Texas M.D. Anderson Cancer Center
		.University of Texas M.D. Anderson Cancer Center
	Chapman, Paul B., M.D.	· ·
	Chen, Chu, Ph.D.	
	Chen, George T.Y., Ph.D.	•
	Chen, James K., Ph.D.	•
	Chen, Wen-Tien, Ph.D.	
	Chen, Wen Y., Ph.D.	• ,
	Chen, Xi, Ph.D.	•
	Chen, Xinbin, D.V.M., Ph.D.	,
	Chenevert, Thomas L., Ph.D.	,
	Chen-Kiang, Selina Y., Ph.D.	,
		Louisiana State University Health Science Center, Shreveport
	Cheung, Vivian G., M.D	.Children's Hospital of Philadelphia

Chia David I Dh D	University of California Lee Angelee
Chian Chia Ling Ph.D.	,
Chlahawaki Rayan T. M.D. Ph.D.	Los Angeles Biomedical Research Institute at Harbor
Choice Age A.	,
	. Pennsylvania State University Hershey Medical Center
Christian, Bradley, Ph.D.	,
Christiani, David C., M.D., Ph.D.	•
Christie, Debra W., Ph.D.	,
Chu, Fong-Fong, Ph.D.	, .
•	University of Connecticut School of Medicine and Dentistry
Clarke, Robert R., Ph.D.	,
Clawson, Gary A., M.D., Ph.D.	•
•	University of Texas M.D. Anderson Cancer Center
Cleary, Margot P., Ph.D.	
Cleaver, Vicki L	•
Cline, Rebecca J., Ph.D.	
Close, David R., M.D.	
Cobb, Nathaniel, M.D.	
Cobos, Everardo, M.D	,
Cody, Michael J., Ph.D.	•
Coffman, James A., Ph.D.	,
Cohen, Leonard A., Ph.D.	
Colcher, David Morris, Ph.D.	, .
Colditz, Graham A., M.D.	•
Collins, Scott D., Ph.D.	•
Colonna, Marco, M.D.	,
Cominelli, Fabio, M.D., Ph.D.	,
Conaway, Mark R., Ph.D.	, -
Conley, Virginia M., Ph.D.	•
•	. Rutgers the State University of New Jersey, New Brunswick
Connolly, Denise C., Ph.D.	
Conti, Peter S., M.D., Ph.D.	•
•	
Copelan, Edward A., M.D.	·
Corey, David R., Ph.D.	
Coronado, Gloria D., Ph.D.	
	Louisiana State University Health Science Center, New Orleans
Correia, John A., Ph.D.	Nassachusetts General HospitalFederation of American Societies for Experimental Biology
	· · · · · · · · · · · · · · · · · · ·
Craighead Hayald C. Ph.D.	•
Craighead, Harold G., Ph.D.	,
Crain, Pamela F., Ph.D.	,
Craiu, Abie, Ph.D.	,
Crawford, Stephanie Y., Ph.D.	· -
Creek, Kim E., Ph.D.	,
Crichton, Dan J., Ph.D.	• •
Cronin, Maureen T., Ph.D.	
Crosby, Margaree S., Ed.D	Ciemson University

		Indiana University-Purdue University, Indianapolis
	Croy, Robert G., Ph.D.	- ·
	Cruciani, Ricardo, M.D., Ph.D.	Beth Israel Medical Center, New York
	Cruz Correa, Marcia R., M.D., Ph.D.	University of Puerto Rico Medical Sciences
	Cullis, Christorpher A., Ph.D	Case Western Reserve University
D	Daling, Janet R., Ph.D.	Fred Hutchinson Cancer Research Center
	Dalton, Jo Ann, R.N.	Emory University
	Dalton, William S., M.D., Ph.D.	. H. Lee Moffitt Cancer Center and Research Institute
	Danielson, Catherine, OTH	Colorado River Head and Neck Cancer Support Group
	Danks, Mary K., Ph.D.	St. Jude Children's Research Hospital
	Dannals, Robert F., Ph.D.	Johns Hopkins University
	Das Gupta, Tapas K., M.D., Ph.D.	University of Illinois, Chicago
	Daskalakis, Constantine, Ph.D	Thomas Jefferson University
	Datta, Milton W., M.D	Emory University
	Dave, Digant P., Ph.D.	University of Texas, Arlington
	Davidson, Nancy E., M.D., Ph.D.	Johns Hopkins University
	Davie, James R., M.D., Ph.D.	University of Manitoba
	Davis, Mellar P., M.D	Cleveland Clinic Foundation
	Davis-King, Donna T., Ph.D.	Charles Drew University
	Davisson, Vincent J., Ph.D.	Indigo Biosystems, Inc.
	Day, Billy W., Ph.D.	University of Pittsburgh, Pittsburgh
	Deapen, Dennis M., Ph.D	University of Southern California
	Deen, Dennis F., Ph.D.	University of California
	De La Monte, Suzanne M., M.D.	Rhode Island Hospital
	Deluca, Paul M., Ph.D.	University of Wisconsin, Madison
	Denberg, Thomas D., M.D., Ph.D.	University of Colorado, Denver
	Denis, Gerald V., Ph.D.	Boston University School of Medicine
	Dennis, John U., D.V.M.	Duke University
	Descour, Michael R., Ph.D.	University of Arizona
	Deshong, Philip, Ph.D.	University of Maryland College Park Campus
	Devere White, Ralph W., M.D	University of California, Davis
	Devine, Scott E., Ph.D.	Emory University
	Dewerd, Larry A., Ph.D.	•
	Dhir, Rajiv, M.D.	,
	Diamond, Alan M., Ph.D.	,
	Dicker, Adam Paul, M.D., Ph.D	,
	Dickson, Robert B., Ph.D.	,
	Diefenbach, Andreas, M.D., Ph.D.	,
	Dietrich, Allen, M.D.	. ,
	Dignan, Mark B., Ph.D.	
	•	University of Texas M.D. Anderson Cancer Center
	Disaia, Philip J., M.D.	, , , , , ,
	Distefano, Mark D., Ph.D.	•
	Djuric, Zora, Ph.D.	,
	Does, Mark D., Ph.D	,
	Doherty, Gerard M., M.D.	,
	Doktycz, Mitchel J., Ph.D.	UT-Battelle, LLC-Oak Ridge National Laboratory

Dougherty, Thomas J., Ph.D. . . . . . . . . . . . . Roswell Park Cancer Institute Corporation Eastman, Alan R., Ph.D. . . . . . . . . . . . . . . . . Dartmouth College Eisenberger, Mario A., M.D. . . . . . . . . . . . . . . . . Johns Hopkins University Ellerton, John A., M.D. . . . . . . . . . . . . Southern Nevada Cancer Research Foundation Elliott, Thomas E., M.D., Ph.D., R.N. . . . . . . . . . . Duluth Clinic Eppard, Wayland, B.A. . . . . . . . . . . . . . . . North Central Cancer Treatment Group Esterowitz, Leon, Ph.D. . . . . . . . . . . . . . . . . . National Science Foundation Etzioni, Ruth B., Ph.D. . . . . . . . . . . . . . Fred Hutchinson Cancer Research Center Fabry, Mary E., Ph.D. . . . . . . . . . . . . . . . . . Yeshiva University Fatouros, Panos P., Ph.D. . . . . . . . . . . . . Virginia Commonwealth University Feldman, Benjamin, Ph.D. . . . . . . . . . . . . . . . . . Medical Research Council Feldman, Henry A., Ph.D. . . . . . . . . . . . New England Research Institutes, Inc. 

Feng, Ziding, Ph.D.	Fred Hutchinson Cancer Research Center
Fenoglio-Preiser, Cecilia M., M.D.	
Fenselau, Catherine C., Ph.D.	
	University of Texas Health Science Center, San Antonio
Ferris, Greg	,
Ferrone, Soldano, M.D., Ph.D.	_
Finkelstein, Dianne M., Ph.D	•
Finkelstein, Jacob N., Ph.D.	·
Finn, Ronald D., Ph.D.	,
Fisher, Paul G., M.D.	
Fishman, David, M.D	,
Fitzgerald, Thomas J., M.D	University of Massachusetts Medical School, Worcester
Fitzpatrick, Frank A., Ph.D	•
Fleischman, Aaron J., Ph.D	
Flocke, Susan A., Ph.D	Case Western Reserve University
Foley, Kathleen M., M.D	Memorial Sloan-Kettering Cancer Center
Fong, Timothy C., Ph.D.	Becton, Dickinson Immunocyrometry System
Fonseca, Rafael, M.D	Mayo Clinic College of Medicine, Rochester
Foos, David Howard, M.S	Kodak Research Laboratories
Fortina, Paolo M., M.D., Ph.D.	Thomas Jefferson University
Fotedar, Arun, M.D., Ph.D.	Sidney Kimmel Cancer Center
Fountain, Augustus W., Ph.D.	United States Military Academy
Frackelton, Raymond A., Ph.D	Roger Williams Hospital
Francis, David M., Ph.D	Ohio State University
Franck, Richard W., Ph.D	Hunter College
Frankel, Arthur, M.D., Ph.D	Scott and White Memorial Hospital
Frank-Kamenetskii, Maxim D., Ph.D	Boston University Charles River Campus
Franklin, Wilbur A., M.D.	University of Colorado Health Sciences Center
Franks, Melissa M., Ph.D.	Wayne State University
Freitas, Michael A., Ph.D.	Ohio State University
Frenkel, Krystyna, Ph.D.	New York University Medical Center
Fresco, Jacques R., Ph.D.	Princeton University
Frey, Eric C., Ph.D.	Johns Hopkins University
Freyer, James P., Ph.D.	University of California, Los Alamos National Laboratory
Freytag, Svend O., Ph.D	Henry Ford Health System
Friedman, Henry S., M.D.	Duke University
Friedrich, Christopher, Ph.D	University of Mississippi Medical Center
Frost, Marlene H., Ph.D	Mayo Clinic College of Medicine, Rochester
Fuchs, Ephraim J., M.D.	Johns Hopkins University
Fueyo, Juan, Ph.D., M.D.	University of Texas M.D. Anderson Cancer Center
Furge, Kyle A., Ph.D.	Van Andel Research Institute
Futscher, Bernard W., Ph.D	University of Arizona
Gaasterland, Terry, Ph.D	,
Gabrielson, Edward W., M.D	•
	Mount Sinai School of Medicine of New York University
Gajewski, Thomas F., M.D., Ph.D.	,
Galbraith, David W., Ph.D.	University of Arizona

G

Ganapathi, Ram N., Ph.D	Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Ganjei, J. Kelly, B.S.	,
Gann, Peter H., M.D.	
Garner, Elizabeth, M.D., Ph.D	Brigham and Women's Hospital
	University of Texas M.D. Anderson Cancer Center
•	Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Gasson, Judith C., M.D., Ph.D.	,
Gaston, Sandra M., Ph.D.	. Beth Israel Deaconess Medical Center
Gatley, Samuel John, Ph.D	. Brookhaven Science Association, Brookhaven Laboratory
Gau, Vincent J., Ph.D.	Gene Fluidics, Inc.
Gazdar, Adi F., M.D	University of Texas SW Medical Center, Dallas
Geller, Berta M., E.D.D.	University of Vermont and State Agricultural College
Gelovani, Juri G., M.D., Ph.D	Sloan-Kettering Institute for Cancer Research
Geng, Lei, Ph.D	University of Iowa
George, John S., Ph.D.	University of California, Los Alamos National Laboratory
Gerald, William L., M.D., Ph.D	. Sloan-Kettering Institute for Cancer Research
Gerlach, Robert, Ph.D	Cleveland Clinic Foundation
Gershenwald, Jeffrey E., M.D	University of Texas M.D. Anderson Cancer Center
Gershman, Susan T., Ph.D.	. Massachusetts Department of Public Health
Gettig, Elizabeth A., M.S	University of Pittsburgh, Pittsburgh
Gewirtz, Alan M., M.D., Ph.D.	University of Pennsylvania
Ghandehari, Hamid, Ph.D	University of Maryland
Ghosh, Kaushik, Ph.D	George Washington University
Giaccia, Amato J., Ph.D	. Stanford University
Gibbs, Richard A., Ph.D	Purdue University, West Lafayette
Gibson, Raymond E., Ph.D	. Merck Research Laboratories
Giesler, R. Brian, Ph.D	Indiana University-Purdue University, Indianapolis
Gilchrist, Gerald S., M.D	Mayo Medical School Foundation
Gillespie, G. Yancey, Ph.D	University of Alabama, Birmingham
Gillison, Maura L., M.D., Ph.D	. Johns Hopkins University
Gimotty, Phyllis A., Ph.D.	University of Pennsylvania
Gimzewski, James K., Ph.D	University of California, Los Angeles
Giralt, Sergio A., M.D	University of Texas M.D. Anderson Cancer Center
Given, Barbara A., Ph.D., R.N.	Michigan State University
Gjerset, Ruth A., Ph.D	. Sidney Kimmel Cancer Center
Glass, Andrew G., M.D.	Kaiser Foundation Research Institute
Glynn, Thomas J., Ph.D	Cancer Science and Trends
Godwin, Andrew K., Ph.D.	Fox Chase Cancer Center
Goff, R. Blake, Ph.D.	Vical, Inc.
Gogal, Robert M., D.V.M	Virginia College of Osteopathic Medicine
Goggins, Michael G., M.D	. Johns Hopkins University
Gold, David V., Ph.D	Center for Molecular Medicine and Immunology
Gold, Leslie I., Ph.D	New York University Medical Center
Goldberg, Bennett B., Ph.D.	Boston University Charles River Campus
Goldberg, Judith D., Ph.D.	New York University School of Medicine
Goldenring, James R., M.D., Ph.D	Vanderbilt University
Goldfarb, Adam N., M.D	University of Virginia, Charlottesville
Goldin, Barry R., Ph.D	Tufts University, Boston

C II I M . M DI D	A 17 1
Goldrick, Marianna M., Ph.D.	
Gollin, Susanne M., Ph.D.	,
Gollnick, Sandra O., Ph.D.	•
Gololobov, Mikhail, Ph.D.	č
Golovlev, Val V., Ph.D.	
Gomer, Charles J., Ph.D.	
Gomez, Leo S., Ph.D.	•
Gonzalez Burchard, Esteban G., M.D	,
Gooding, Linda R., Ph.D	·
Goodlett, David Robinson, Ph.D	,
Goodrich, David W., Ph.D.	•
Gooley, Ted A., Ph.D.	Fred Hutchinson Cancer Research Center
Gore, Steven D., M.D., Ph.D.	Johns Hopkins University
Goyal, Tanya M., Ph.D	Rutgers the State University of New Jersey, New Brunswick
Grainger, David W., Ph.D	Colorado State University, Fort Collins
Grando, Sergei A., M.D., Ph.D.	University of California, Davis
Grant, Marcia L., Ph.D., R.N	City of Hope, Beckman Research Institute
Grant, Steven, M.D	Virginia Commonwealth University
Graves, Barbara J., Ph.D.	University of Utah
Greco, William R., Ph.D	Roswell Park Cancer Institute Corporation
Green, Daniel M., M.D.	Roswell Park Cancer Institute Corporation
Green, Mark A., Ph.D	Purdue University, West Lafayette
	University of Connecticut School of Medicine and Dentistry
Greipp, Philip R., M.D.	•
Grem, Jean, M.D	•
Grimson, Eric, Ph.D.	•
Grizzle, William E., M.D., Ph.D.	· · · · · · · · · · · · · · · · · · ·
Grufferman, Seymour, M.D.	,
Grunberg, Steven M., M.D.	,
Grundfest, Warren S., M.D.	•
Grupp, Stephan A., M.D., Ph.D.	,
Guidry, Jeffery J., Ph.D.	·
Gunatilaka, Leslie, Ph.D.	,
Guo, Baochuan, Ph.D.	,
Gustafson, David H., Ph.D.	<del>-</del> '
Guthold, Martin, Ph.D.	,
	•
Gutierrez, Peter L., Ph.D.	
Haab, Brian B., Ph.D.	Van Andel Research Institute
Haddad, Bassem R., M.D	
Halazonetis, Thanos D., D.D.S., Ph.D.	-
Hall, Jeff M., Ph.D.	
Hamilton, Thomas C., Ph.D.	•
Hammond, Elizabeth H., M.D.	
Hammons, George J., Ph.D.	•
Hampton, James, M.D.	•
Handgretinger, Rupert, M.D., Ph.D.	,
	•
Hank, Jacquelyn A., Ph.D	university of wisconsin Centers

Н

Hargreaves, Margaret K., Ph.D. . . . . . . . . . . . Meharry Medical College Harris, Randall E., M.D., Ph.D. . . . . . . . . Ohio State University Hartline, Jo Ann, M.P.H. . . . . . . . . . . . . . . . . Select Statistical Center Heinrich, Michael C., M.D. .......Oregon Health and Science University Herman, James G., M.D. . . . . . . . . . . . Johns Hopkins University Medical School Hettich, Robert L., Ph.D. . . . . . . . . . . . . . . . Oak Ridge National Laboratory Hickey, Matthew S., Ph.D. . . . . . . . . . . . . . . . . . Colorado State University, Fort Collins Hilliard, Julia K., Ph.D. . . . . . . . . . . . . . . . . SW Foundation for Biomedical Research Hinds, Philip W., Ph.D. . . . . . . . . . . . New England Medical Center Hospitals Hlatky, Lynn R., Ph.D. . . . . . . . . . . . . . . . . . St. Elizabeth's Medical Center of Boston Hnatowich, Donald J., Ph.D. . . . . . . . . . . . . . Feinstein Institute for Medical Research Ho, Gloria Yf, Ph.D. . . . . . . . . . . . . . . . Yeshiva University Hockenbery, David M., M.D. . . . . . . . . . Fred Hutchinson Cancer Research Center Hoh, Jan H., Ph.D. . . . . . . . . . . . . . John Hopkins University School of Medicine Holmgren, Robert A., Ph.D. . . . . . . . . . . . . . Northwestern University 

Hoon, Dave S.B., Ph.D.	.John Wayne Cancer Institute
Hoopes, P Jack, D.V.M., Ph.D.	.Dartmouth Medical School
Hopf, Harriet W., M.D	.University of California, San Francisco
Hord, Norman G., Ph.D	.Michigan State University
Hortobagyi, Gabriel N., M.D	.University of Texas M.D. Anderson Cancer Center
Horton, John, M.D.	.H. Lee Moffitt Cancer Center and Research Institute
Hosking, James D., Ph.D	.University of North Carolina, Chapel Hill
Hoskins, William J., M.D.	•
Houghton, Alan N., M.D	•
Houldin, Arlene D., Ph.D., R.N	· ·
Houlette, Judy Kasey, M.A	,
Howe, Louise R., Ph.D	••
Howell, Gillian M., Ph.D	,
Hrushesky, William J., M.D	
Hsu, Edward W., Ph.D.	
	Rutgers the State University of New Jersey, New Brunswick
Hu, Yinling, Ph.D.	•
Huang, Chuanshu, M.D., Ph.D.	,
Huang, Peng, M.D., Ph.D.	,
Huang, Ruo-Pan, M.D., Ph.D.	,
Huang, Tim H., Ph.D.	,
Hubbell, F. Allan, M.D.	,
Humphrey, Peter A., M.D., Ph.D.	,
Humphrey, Rachel, M.D	
• •	Louisiana State University Health Science Center, New Orleans
Hurley, Karen E., Ph.D.	,
Hurst, Robert E., Ph.D.	<u> </u>
Hutchins, Gary D., Ph.D.	,
Huth, James F., M.D.	, , , , , , , , , , , , , , , , , , , ,
Hyslop, Terry M., Ph.D.	,
, in the state of	The made selection direction,
Iden, Charles R., Ph.D	.State University of New York, Stony Brook
Iglehart, James D., M.D	.Dana-Farber Cancer Institute
Im, Eun-Ok, Ph.D., R.N	.University of Texas, Austin
Inadomi, John M., M.D	.University of Michigan, Ann Arbor
Ip, Edward H., Ph.D.	.Wake Forest University
Israel, Barbara A., Ph.D.	.Platypus Technologies, LLC
Issa, Jean-Pierre J., M.D	.University of Texas M.D. Anderson Cancer Center
Ittmann, Michael M., M.D., Ph.D	.New York University
Izumi, Tadahide, Ph.D.	Louisiana State University Health Science Center, New Orleans
Jackson, Sharon A., Ph.D.	.Wake Forest University Health Sciences
Jacobberger, James W., Ph.D.	,
Jacobs, Michael A., Ph.D.	•
Jacobs, Russell E., Ph.D.	•
Jacobson, Elaine L., Ph.D.	Ο,
Jacobson, Stephen C., Ph.D.	,
Jain, Rakesh K., Ph.D.	,
,	

	James, Charles D., Ph.D	.Mayo Clinic College of Medicine, Rochester
	Janjan, Nora A., M.D	.University of Texas M.D. Anderson Cancer Center
	Jatoi, Aminah, M.D	Mayo Clinic College of Medicine, Rochester
	Jeffery, Elizabeth H., Ph.D.	.University of Illinois, Urbana-Champaign
	Jenkins, Robert B., M.D., Ph.D.	.Mayo Clinic College of Medicine, Rochester
	Jensen, Roy A., M.D.	.University of Kansas Medical Center
	Jeraj, Robert, Ph.D	.University of Wisconsin, Madison
	Jewell, William R., M.D.	•
	Jiang, Stephen P., B.A.	,
	Johnson, Bruce E., M.D	•
	Johnson, Linda B., B.S	
	Johnson, Valen E., Ph.D	.University of Texas Health Science Center, Houston
	Jones, Dean P., Ph.D	•
	Jones, Jeffrey P., Ph.D	, , , , , , , , , , , , , , , , , , ,
	Jones, Richard J., M.D	,
	Jouridine, Linda A., Ph.D.	• ,
	Ju, Jingfang, Ph.D	•
	Juliano, Rudolph L., Ph.D	,
	June, Carl H., M.D.	, , ,
		, ,
K	Kafadar, Karen, Ph.D	.University of Colorado, Denver
	Kalinski, Pawel, M.D., Ph.D.	•
	Kaluzny, Arnold D., Ph.D.	,
	Kanade, Takeo, Ph.D.	•
	Kang, Kyung A., Ph.D.	,
	Kangarlu, Alayar, Ph.D	•
	Kantoff, Philip W., M.D.	,
	Kaplan, Alan M., Ph.D	
	•	.University of Texas M.D. Anderson Cancer Center
	Karagas, Margaret R., Ph.D.	•
	Karam, Lisa, Ph.D.	· ·
	Karellas, Andrew, Ph.D	
	Karrison, Theodore, M.D., Ph.D.	.University of Chicago
	Kashani-Sabet, Mohammed, M.D	.University of California, San Francisco
	Kasid, Usha N., Ph.D	.Georgetown University
	Kaste, Sue C., D.O	,
	Katti, Kattesh V., Ph.D	.University of Missouri, Columbia
	Kaufman, Howard L., M.D.	.Columbia University Health Sciences Center
	Kaul, Karen L., M.D., Ph.D.	.Evanston Northwestern Healthcare
	Keating, Christine D., Ph.D	.Pennsylvania State University, University Park
	Keefe, Francis J., Ph.D	
	Keegan, Achsah D., Ph.D	.University of Maryland, Baltimore School of Medicine
	Kehrer, James P., Ph.D	.Washington State University
	Kelder, Steven H., Ph.D.	,
		.University of Massachusetts Medical School, Worcester
	Kelly, Thomas F., Ph.D.	•
	Kern, Scott E., M.D.	
	Khan, Mohamed K., M.D., Ph.D.	. ,
		·

Vhon Saama A M.D.	Nouthugatama Univansity
Khan, Seema A., M.D.	•
Khatri, Vijay P., M.D., M.D.	•
Khokha, Rama, Ph.D.	•
Khuri, Fadlo R., M.D.	,
Killackey, Maureen A., M.D., Ph.D.	
Killen, Joel D., M.D., Ph.D.	•
	. University of Texas M.D. Anderson Cancer Center
Kim, Helen, Ph.D.	,
Kim, Raymond, Ph.D.	•
Kimler, Bruce F., Ph.D.	•
Kinsel, Gary R., Ph.D.	•
Kinter, Michael T., Ph.D.	
Kipps, Thomas J., M.D., Ph.D.	· · · · · · · · · · · · · · · · · · ·
Kirk, Bernadette L., Ph.D.	,
	.University of Medicine and Dentistry of New Jersey
Kiselev, Maxim Y., Ph.D.	
•	.State University of New York, Downstate Medical Center
Kiviat, Nancy B., M.D.	, .
Klassen, Ann C., Ph.D.	•
Klein, Eric, M.D	,
Klingemann, Hans G., M.D., Ph.D.	
Klonoff, Elizabeth A., Ph.D	,
Knight, Linda C., Ph.D	•
	.New York Hospital-Cornell University Medical Center
Knutson, Keith L., Ph.D.	,
Kochevar, Gerald J., M.D.	.Texas A&M University Health Science Center
Kong, Tony Ah-Ng, Ph.D.	.Rutgers University College of Pharmacy
Konigsberg, William H., Ph.D.	.Yale University
Kontos, Christopher D., M.D.	.Duke University
Koos, Robert D., Ph.D.	.University of Maryland, Baltimore School of Medicine
Kopelman, Raoul, Ph.D	.University of Michigan, Ann Arbor
Korneluk, Robert G., Ph.D.	.Children's Research Institute
Korzekwa, Kenneth R., Ph.D	.Merck Research Laboratories
Kosinski, Andrzej S., Ph.D.	.Duke University
Koumenis, Constantinos, Ph.D	.Wake Forest University Health Sciences Center
Krebs, Joseph F., Ph.D.	.Ambion, Inc.
Kreiger, Robert I., Ph.D.	.University of California, Riverside
Kremsky, Jonathan N., Ph.D	.Prime Organics, Inc.
Kricka, Larry J., Ph.D.	.University of Pennsylvania
Krischer, Jeffrey P., Ph.D.	.University of South Florida
Krishnamurthy, Savitri, M.D.	.University of Texas M.D. Anderson Cancer Center
Kristal, Bruce S., Ph.D.	Winifred Masterson Burke Medical Research Institute
Krohn, Kenneth A., Ph.D.	.University of Washington
Kron, Stephen J., M.D., Ph.D.	.University of Chicago
Kufta, Conrad V., M.D	,
Kulldorff, Martin, Ph.D	
Kuller, Lewis H., M.D., Ph.D.	,
	.H. Lee Moffitt Cancer Center and Research Institute
-	

	Kunicki, Thomas J., Ph.D.	.Scripps Research Institute
	Kuntz, Karen M., Ph.D	• •
	Kurzrock, Razelle, M.D	.University of Texas M.D. Anderson Cancer Center
	Kuzel, Timothy M., M.D	Northwestern University
L	Ladisch, Stephan, M.D	.Children's Research Institute
	Lai, Shenghan, M.D., Ph.D	.University of Miami School of Medicine
	Lal, Ratneshwar, Ph.D	.University of California, Santa Barbara
	Lambert, Paul F., Ph.D	.University of Wisconsin, Madison
	Lance, M. Peter, M.D	.University of Arizona
	Land, Stephanie R., Ph.D	.University of Pittsburgh
	Landers, James P., Ph.D	.University of Virginia, Charlottesville
	Landsittel, Douglas P., Ph.D	.Duquesne University
	Lange, Beverly J., M.D	.Children's Hospital of Philadelphia
	Langer, Mark, M.D.	.Indiana University-Purdue University, Indianapolis
	Lantz, Paula M., Ph.D	.University of Michigan, Ann Arbor
	Largaespada, David A., Ph.D	.University of Minnesota, Twin Cities
	Larson, Ronald G., Ph.D	.University of Michigan
	Larson, Steven M., M.D., Ph.D	.Memorial Sloan-Kettering Cancer Center
	Lasalle, Janine M., Ph.D	.University of California, Davis
	Lau, Derick H., M.D., Ph.D.	.University of California, Davis
	Law, Meng, M.D	New York University School of Medicine
	Leary, James F., Ph.D	.Purdue University
	Lechago, Juan, M.D., Ph.D.	.Baylor College of Medicine
	Lechner, Suzanne C., Ph.D	.University of Miami
	Lee, Chung, Ph.D	Northwestern University
	Lee, Jack, D.D.S., Ph.D.	.University of Texas M.D. Anderson Cancer Center
	Lee, Jeffrey R., M.D	Medical College of Georgia
	Lee, Robert J., Ph.D.	.Ohio State University
	Lee, Stephen C., Ph.D	.Ohio State University
	Lee, Ving J., Ph.D	.ADESIS, Inc.
	Lehmann, Harold P., M.D., Ph.D	.Johns Hopkins University
	Leite, John F., Ph.D	Invitrogen Corporation
		.University of Massachusetts Medical School, Worcester
	Lenz, Heinz Josef, M.D	.University of Southern California
	Leo, Gerald	.Kimmel Cancer Center
	Leonowich, John A., Ph.D.	.Department of Energy
	Lerner, Seth, M.D	.Baylor College of Medicine
	Lesser, Martin L., Ph.D.	.New York University
	Levenson, Richard M., M.D	Cambridge Research and Instrumentation
	Levin, Bernard, M.D	.University of Texas, M.D. Anderson Cancer Center
	Levin, David L., M.D., Ph.D	.University of California, San Diego
	Levin, Theodore R., M.D	.Kaiser Foundation Research Institute
	Levinson, Arnold H., Ph.D.	.University of Colorado, Denver
	Levy, Barcey Thurston, M.D., Ph.D.	,
	Lewis, Norman G., Ph.D	•
	Li, Jian, Ph.D.	,
	Li, Jun, Ph.D	• ,

1. W. C. M.D.	2. ( 111 ( )
Li, King C., M.D	,
Li, Sara, Ph.D.	•
Li, Yanchun, Ph.D.	,
Liang, Zhi-Pei, Ph.D.	,
Liau, Linda M., M.D., Ph.D.	,
Liber, Howard L., Ph.D	•
Lieberman, David A., M.D.	,
Lieberman, Howard B., Ph.D	,
Lieh-Lai, Mary W., M.D.	·
Liff, Jonathan M., Ph.D.	, ,
Lightdale, Charles J., M.D.	
Lim, Megan S., M.D., Ph.D.	University of Utah
Limbach, Patrick A., Ph.D	University of Cincinnati
Lin, Haiqun, M.D., Ph.D.	•
Line, Bruce R., M.D	University of Maryland System
Link, Brian K., M.D.	University of Iowa
Liu, P.Y., Ph.D.	. Fred Hutchinson Cancer Research Center
Liu, Rui H., M.D., Ph.D.	Cornell University, Ithaca
Lizardi, Paul M., Ph.D.	. Yale University School of Medicine
Lobert, Sharon A., Ph.D., R.N	University of Mississippi Medical Center
Loechler, Edward L., Ph.D	. Boston University Charles River Campus
Loeppky, Richard N., Ph.D.	University of Missouri, Columbia
Lokeshwar, Vinata B., Ph.D.	University of Miami
Lomax, Randy, M.A.	Melanoma Research Foundation
Lopez-Berestein, Gabriel G., M.D	. University of Texas M.D. Anderson Cancer Center
Lorensen, William E., M.S	General Electric
Lorusso, Patricia M., M.D.	Wayne State University
Lothstein, Leonard,, Ph.D	. University of Tennessee Health Science Center
Lotze, Michael T., M.D., Ph.D.	. University of Pittsburgh Medical Center
Louie, Stan Gee, Ph.D.	University of Southern California
Lovett, Michael, Ph.D.	Washington University
Lowe, John B., Ph.D.	University of Iowa
Lu, H. Peter, Ph.D.	. Battelle Pacific Northwest Laboratories
Luborsky, Judith L., Ph.D.	TSI Mason Laboratories
Lucito, Robert D., Ph.D.	Cold Spring Harbor Laboratory
Lukasik, Victoria M., D.V.M	University of Arizona
Lunney, June R., Ph.D., R.N.	West Virginia University
Lyerly, Herbert Kim, M.D.	,
Lynch, Charles F., M.D., Ph.D.	•
Lyons-Weiler, James F., Ph.D.	
M. Com V. DL D	
Ma, Grace X., Ph.D	Temple University
	•
MacDonald, Ruth S., Ph.D.	lowa State University
MacDonald, Ruth S., Ph.D	lowa State University Hospital Necker
MacDonald, Ruth S., Ph.D.  MacIntyre, Elizabeth, M.D.  Mackey, Michael A., Ph.D.	lowa State University Hospital Necker University of Iowa
MacDonald, Ruth S., Ph.D.  MacIntyre, Elizabeth, M.D.  Mackey, Michael A., Ph.D.  Macleod, Carol L., Ph.D.	lowa State University Hospital Necker University of Iowa National Cancer Institute
MacDonald, Ruth S., Ph.D.  MacIntyre, Elizabeth, M.D.  Mackey, Michael A., Ph.D.	lowa State UniversityHospital NeckerUniversity of IowaNational Cancer InstituteUniversity of Arkansas for Medical Science

M

Maitra, Anirban, M.D.	Johns Hopkins University
Makoul, Gregory T., Ph.D	•
Makrigiorgos, G.M., Ph.D.	Dana-Farber Cancer Institute
Malkas, Linda H., Ph.D.	Indiana University-Purdue University, Indianapolis
Malkhosyan, Sergei R., Ph.D	Burnham Institute
Mallapragada, Surya K., Ph.D	lowa State University
Manchester, Marianne, Ph.D	Scripps Research Institute
Mandelson, Margaret T., Ph.D	Center for Health Studies
Manfredi, James J., Ph.D	Mount Sinai School of Medicine of New York University
Mankoff, David A., M.D., Ph.D	University of Washington
Manne, Sharon L., Ph.D	Sloan-Kettering Institute for Cancer Research
Manni, Andrea, M.D	Pennsylvania State University Hershey Medical Center
Marcus, Stevan, Ph.D	University of Texas M.D. Anderson Cancer Center
Mariadason, John M., Ph.D	Montefiore Medical Center, Bronx, NY
Markman, Maurie, M.D	University of Texas M.D. Anderson Cancer Center
Marrogi, Aizen J., M.D.	GRL, Inc.
Marshall, James R., Ph.D	Roswell Park Cancer Institute Corporation
Martin, Melissa Carol, M.S	Therapy Physics, Inc.
Marziali, Andre, Ph.D	University of British Columbia
Mathis, J. Michael, Ph.D	Louisiana State University Health Science Center, Shreveport
Mathur, Subbi P., Ph.D	Medical University of South Carolina
Mattern, Michael R., Ph.D.	Progenra, Inc.
Matthay, Katherine K., M.D	University of California, San Francisco
Matthews, Alicia K., Ph.D., R.N	University of Illinois, Chicago
Matthews, Charles E., Ph.D	Vanderbilt University
May, Judith	Y-ME National Breast Cancer Organization
McCaffrey, David J., Ph.D.	University of Mississippi
McCarty, Kenneth S., M.D., Ph.D	,
McCaul, Kevin D., Ph.D	North Dakota State University
McChesney, James D., Ph.D	Tapestry Pharmaceuticals, Inc.
McClain, Larry D., Ph.D.	Diagnostic Biomarkers, Inc.
McClatchey, Will, Ph.D	University of Hawaii, Manoa
McConkey, David J., Ph.D	University of Texas Health Science Center, Houston
McCormick, David L., Ph.D	
McCoy, G. David, Ph.D	,
McDonald, Paige A., Ph.D	
McGregor, William G., M.D	•
McGuire, John J., Ph.D	·
McIntosh, Martin W., Ph.D	
McIntyre, James O., Ph.D.	•
McKay, Paul P	
McLennan, Ian J., Ph.D	,
McMasters, Kelly M., M.D., Ph.D	. ,
McNeel, Douglas G., M.D., Ph.D.	•
McNeil, Ann E., R.N.	•
McNiece, Ian K., Ph.D.	• ,
McNorney, Colleen A., Ph.D	
McWeeney, Shannon K., Ph.D	Oregon Health and Science University

Mead, Keith T., Ph.D.	. Mississippi State University
	H. Lee Moffitt Cancer Center and Research Institute
Mehta, Rajendra G., Ph.D.	
	Mount Sinai School of Medicine of New York University
Melancon, Donald James, Ph.D	•
Melese, Teri, Ph.D.	,
Melnikow, Joy A., M.D.	,
Mendonca, Paulo Ricardo, Ph.D	,
Mercola, Dan, M.D., Ph.D.	University of California, Irvine
Metaxas, Dimitris N., Ph.D	•
Mettlin, Curtis J., Ph.D	Roswell Park Cancer Institute Corporation
Metzker, Michael L., Ph.D	Merck Research Laboratories
Meyn, Raymond E., Ph.D	University of Texas M.D. Anderson Cancer Center
Mezrich, Reuben S., M.D., Ph.D	University of Maryland Baltimore School of Medicine
Michalek, Arthur M., Ph.D	Roswell Park Cancer Institute Corporation
Mifflin, Theodore E., Ph.D	University of Virginia, Charlottesville
Miglioretti, Diana L., Ph.D	Center for Health Studies
Mikkelsen, Ross B., Ph.D	Virginia Commonwealth University
Miller, John H., Ph.D	Washington State University
Mills, Sherry L., M.P.H	ABT Associates, Inc.
Milner, Thomas E., Ph.D	University of Texas, Austin
Minko, Tamara, Ph.D	Rutgers the State University of New Jersey, New Brunswick
Minna, John D., M.D	American Association for Cancer Research
Mirvish, Sidney S., Ph.D	University of Nebraska Medical Centers
Mirzadeh, Saed, Ph.D	Oak Ridge National Laboratory
Mitchell, Edith P., M.D., Ph.D	Thomas Jefferson University
Mitra, Sankar, Ph.D	University of Texas Medical Branch
Moen, Phillip T., Ph.D	One Cell Systems, Inc.
Mohapatra, Shyam S., M.D., Ph.D	University of South Florida
Moinpour, Carol M., Ph.D.	Fred Hutchinson Cancer Research Center
Molloy, Janelle A., Ph.D	Mayo Clinic College of Medicine, Rochester
	Indiana University-Purdue University, Indianapolis
Mooney, Kathleen H., Ph.D., R.N	Oncology Nursing Society
Moon-Howard, Joyce J., Ph.D	,
Moore, Anna, Ph.D	Massachusetts General Hospital
Moorman, Patricia G., Ph.D	•
Moran, Richard G., Ph.D.	,
	University of Connecticut School of Medicine and Dentistry
Morgan, Jennifer F., MOTH	,
-	University of Maryland, Baltimore School of Medicine
Morisky, Donald E., Ph.D	,
Morris, Michael D., Ph.D	,
Morrow, Gary R., Ph.D	•
Morse, Michael A., M.D	•
	University of Medicine and Dentistry of NJ-R.W. Johnson Medical School
Morton, William R., D.V.M., Ph.D	,
Moscicki, Anna-Barbara, M.D	University of California, San Francisco

Moses, William W., Ph.D. . . . . . . . . . . . . . . Berkley National Laboratory for Life Science Moysich, Kirsten B., Ph.D. . . . . . . . . . . . . . . . Roswell Park Cancer Institute Corporation Muddiman, David C., Ph.D. . . . . . . . . . . . . . North Carolina State University, Raleigh Mueller, Beth A., Ph.D. . . . . . . . . . . . . . . Fred Hutchinson Cancer Research Center Mullin, James M., Ph.D. . . . . . . . . . . . Lankenau Institute for Medical Research Myers, James R., Ph.D. . . . . . . . . . . . . Oregon State University Nagase, Hiroki, M.D., Ph.D. . . . . . . . . . . . . . Roswell Park Cancer Institute Corporation Nair, Madhavan P., Ph.D. ......State University of New York, Buffalo Nelson, Randall W., Ph.D. . . . . . . . . . . . . . . . . . Intrinsic Bioprobes, Inc. Nelson, William G., M.D., Ph.D. . . . . . . . . . . . American Urological Association Newcomb, Elizabeth W., Ph.D. . . . . . . . . . . . New York University Medical Center Nicholson, Henry Stacy, M.D. ......Oregon Health and Science University Nitiss, John L., Ph.D. . . . . . . . . . . . . . . . . St. Jude Children's Research Hospital Nowell, Susan A., Ph.D. . . . . . . . . . . . . . . . . . Roswell Park Cancer Institute Corporation 

O	O'Connell, Mary A., Ph.D.	New Mexico State University
	O'Connell, Peter, Ph.D.	,
		University of North Carolina, Lineberger Cancer Center
	O'Neal, D. Patrick, Ph.D.	,
	O'Reilly, Richard J., M.D.	•
	O'Riordan, David L., Ph.D.	· ·
	Ojeifo, John O., M.D., Ph.D.	•
	Ojima, Iwao, Ph.D.	,
	Okuyemi, Kolawole S., M.D.	
	Oliver, Janet M., Ph.D.	,
	Olivi, Alessandro, M.D	•
	Olopade, Olufunmilayo I., M.D.	•
	Omel, James Lloyd, M.D.	,
	Omenn, Gilbert S., M.D., Ph.D.	
	Ong, Tiong S., M.D.	, 8
	Orlando, Maria, Ph.D.	•
	Ostrer, Harry, M.D., Ph.D.	•
	Cotter, Harry, M.E., File.	. There fork differently believe of Medicine
P	Pace, Lorraine, M.S.	Breast Cancer Help, Inc
-	Page, David L., M.D.	•
	Pallavicini, Maria G., Ph.D.	,
	Pandey, Akhilesh, M.D., Ph.D.	•
	•	University of Arkansas Medical Sciences Center, Little Rock
	Pardo, Francisco S., M.D., Ph.D.	•
	Park, Kinam, Ph.D.	,
		University of Texas M.D. Anderson Cancer Center
	Parker, William B., M.D., Ph.D.	•
	Pasa-Tolic, Ljiljana, Ph.D.	•
	Paskett, Electra D., Ph.D.	•
		University of Texas M.D. Anderson Cancer Center
	Pate, Russell R., Ph.D.	•
	Patriotis, Christos F., Ph.D.	•
	Patterson, Gregory M., Ph.D.	
	Patz, Edward F., M.D.	
	Paulson, K. Eric, Ph.D.	•
	Pearman, Timothy, Ph.D.	•
	Peehl, Donna M., Ph.D.	•
	Pellicer, Angel G., M.D., Ph.D.	•
	Pelling, Jill C., Ph.D.	•
	Pence, Barbara C., Ph.D.	
	Pence, William H., Ph.D.	•
	Peng, Junmin, Ph.D.	,
	Penichet, Manuel L., M.D., Ph.D.	•
	Pennell, Christopher A., Ph.D.	
	Perez, Carlos A., M.D.	•
	Perez-Soler, Roman, M.D.	,
	. c. c_ corer, morning mile	· · · · · · · · · · · · · · · · · · ·

Pergolizzi, Robert G., Ph.D.	Weill Medical College of Cornell University
Perkins, Edward L., Ph.D.	,
Persons, Derek A., M.D., Ph.D.	•
Peterson, Karen E., Ph.D.	•
Peterson, Leif E., Ph.D	•
Petroni, Gina R., Ph.D	,
Piazza, Gary A., Ph.D.	, ,
Piccirillo, Jay F., M.D	
Pieper, Rembert, Ph.D	,
Pierce, J. Michael, Ph.D	
Pili, Roberto, M.D.	,
Pinto, Harlan A., M.D., Ph.D.	,
Pishko, Michael V., Ph.D.	•
Plate, Janet M., Ph.D.	
Platsoucas, Chris D., Ph.D	Temple University
Pleasure, David E., M.D	University of California, Davis
Pledger, W.J., Ph.D.	H. Lee Moffitt Cancer Center and Research Institute
Plevritis, Sylvia K., Ph.D	Stanford University
Pogue, Brian William, Ph.D	Dartmouth College
Pohl, Nicola L., Ph.D	Fluorous Technologies, Inc.
Pollack, Jonathan R., M.D., Ph.D	Stanford University
Pollock, Brad H., Ph.D	University of Texas Health Science Center, San Antonio
Pollock, John C., Ph.D	College of New Jersey
Pomper, Martin G., M.D., Ph.D.	Johns Hopkins University
Poole, Leslie B., Ph.D	,
Popple, Richard A., Ph.D.	,
Porter, David L., M.D	, ,
Porter, Laura S., Ph.D	,
Posner, Marshall R., M.D.	
Powell, Charles A., M.D	,
Powell, Marianne Broome, Ph.D.	,
Price, Ronald R., Ph.D.	,
Prigerson, Holly G., Ph.D.	
Pumiglia, Kevin M., Ph.D	Albany Medical College of Union University
Qualman, Stephen J., M.D.	Children's Research Institute
Quan, Zoe S., Ph.D.	
Quesenberry, Peter J., M.D.	-
,, , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·
Rabkin, Samuel D., Ph.D.	Massachusetts General Hospital
Radich, Jerry P., M.D	Fred Hutchinson Cancer Research Center
Rahman, Irfan, Ph.D.	University of Rochester
Raí, Shesh N., Ph.D	St. Jude Children's Research Hospital
Rajski, Scott R., Ph.D	University of Wisconsin, Madison
Rakowski, William, Ph.D	Miriam Hospital
Raleigh, James A., Ph.D	University of North Carolina, Chapel Hill

Q

R

Rao, Anita	Concultant
Raubitschek, Andrew A., M.D.	
Raychaudhuri, Pradip, Ph.D	, .
Read, G. Sullivan, Ph.D.	,
Reader, Steven, Ph.D.	,
Redenbaugh, Keith, Ph.D.	,
Redmond, Carol K., Ph.D.	•
	,
Redondo, Jose P., Ph.D.	
Reed, Eddie, M.D	,
	, 6
Reis, Isildinha Marques, Ph.D.	,
	Louisiana State University Health Science Center, New Orleans
Repasky, Elizabeth A., Ph.D.	
Resing, Katheryn A., Ph.D.	,
Reuben, James M., Ph.D.	•
Reya, Tannishtha, Ph.D.	,
Reynolds, Charles Patrick, M.D., Ph.D	•
	•
Richards, Nigel Gordon John, Ph.D	•
Richman, Carol M., M.D.	
	•
Richmond, Robert C., Ph.D.	
Riggins, Gregory J., M.D., Ph.D.	·
Ringquist, Steven M., Ph.D.	,
Rios, Elena V., M.D.	•
Risendal, Betsy C., Ph.D.	,
Ritenbaugh, Cheryl K., Ph.D.	
Rivard, Mark J., Ph.D	•
Roberge, Michel, Ph.D.	•
•	,
Roberts, Charles T., Ph.D.	-
Robinson, Daniel R., Ph.D.	•
Roden, Richard, Ph.D.	,
Rodi, Diane J., Ph.D.	.University of Maryland, Baltimore School of Medicine
Rodland, Karin D., Ph.D.	
Rodriguez-Bigas, Miguel, M.D	
Rogatko, Andre, Ph.D.	,
Rogers, Adrianne E., M.D.	•
Rogers, Buck E., Ph.D.	
Rohr, Jurgen, Ph.D.	-
Romano, Louis J., Ph.D.	,
	•
Romkes, Marjorie, Ph.D	,
Root, Richard T., M.S.	
Rose, Julia H., Ph.D.	,
Rosen, Coleman W., M.S.	.Naudinell'Cd II, LLC

Rundell, M. Kathleen, Ph.D. . . . . . . . . . . . . . . . Northwestern University Russo, Jose, M.D. . . . . . . . . . . . . . . . . Fox Chase Cancer Center Sanders, Jean E., M.D. . . . . . . . . . . . . . . . . Fred Hutchinson Cancer Research Center Sawicki, Janet A., Ph.D. . . . . . . . . . . . . . . . . . Lankenau Institute for Medical Research Scheinberg, David A., M.D., Ph.D. . . . . . . . . . . . Sloan-Kettering Institute for Cancer Research Schmidt, Ann Marie, M.D., Ph.D. . . . . . . . . . . . . . Columbia University College Physicians and Surgeons Schnoll, Robert A., Ph.D. . . . . . . . . . . . . . . . . Fox Chase Cancer Center Schuller, Hildegard M., D.V.M., Ph.D. . . . . . . . . Tennessee College of Veterinary Medicine

Schumacher, Karen L., Ph.D., R.N.  Schwartz, Ann G., Ph.D.  Schwartz, David C., Ph.D.  University of Wisconsin. Madison  Schwartz, Gary G., M.D., Ph.D.  Schwartz, Jeffrey L., Ph.D.  Schwartz, Jeffrey L., Ph.D.  University of Washington  Schwartz, Stephen Marc, Ph.D.  Schwartz, Stephen Marc, Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Semmen, Oliver John, Ph.D.  Semon, Oliver John, Ph.D.  Sernov, Serguei Y., M.D., Ph.D.  Sernov, Serguei Y., M.D., Ph.D.  Sernov, Johnsham S., M.D., Ph.D.  Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, D.  Shaw, Saed, M.D.  Shaw, Saed, M.S.  Shaw, Saed, Shaw, Shaw, Shaw, Shaw, Shaw, Shaw,
Schwartz, David C., Ph.D.  Schwartz, Gary G., M.D., Ph.D.  Schwartz, Jeffrey L., Ph.D.  University of Wisconsin, Madison  Schwartz, Jeffrey L., Ph.D.  University of Washington  Schwartz, Joel L., D.M.D., M.D.  Schwartz, Stephen Marc, Ph.D.  University of Washington  Schwartz, Stuart, Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Children's Hospital of Philadelphia  Semenov, Serguei Y., M.D., Ph.D.  MWI, LLC  Semmes, Oliver John, Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Liniversity of North Carolina, Chapel Hill  Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Johns Hopkins School of Public Health  Shaaban, Aimen F., M.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Johns Hopkins School of Public Health  Sharon, Jacqueline, Ph.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  University of Massachusetts, Lowell  Sheai, M.S. aced, M.D., Ph.D.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  University of Maryland, Baltimore School of Medicine  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Johns Hopkins University  Silecti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simone, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Schwartz, Gary G., M.D., Ph.D. Schwartz, Jeffrey L., Ph.D. University of Washington Schwartz, Joel L., D.M.D., M.D. University of Washington Schwartz, Stephen Marc, Ph.D. Case Western Reserve University Scott, Charles B., Ph.D. Children's Hospital of Philadelphia Semenov, Serguei Y., M.D., Ph.D. MWI, LLC Semmes, Oliver John, Ph.D. Serody, Jonathan S., M.D., Ph.D. University of North Carolina, Chapel Hill Sevick-Muraca, Eva M., Ph.D. Seymour, Lesley K., M.D., Ph.D. National Cancer Institute Canada CTG, Queens University Shaaban, Aimen F., M.D. Johns Hopkins School of Public Health Shannon, Jackilen, Ph.D. Johns Hopkins School of Public Health Shannon, Jacqueline, Ph.D. Shaw, Edward G., M.D. Shaw, Edward G., M.D. Wake Forest University Shea, Thomas B., Ph.D. University of Massachusetts, Lowell Sheikh, M. Saeed, M.D., Ph.D. University of Maryland, Baltimore School of Medicine Shelby, Jane, Ph.D. University of Maryland, Baltimore School of Medicine Sherman, Simon, Ph.D. University of Maryland, Baltimore School of Medicine Shelby, Jane, Ph.D. University of Maryland, Baltimore School of Medicine Sherry, A. Dean, Ph.D. University of Nebraska Medical Center Sherry, A. Dean, Ph.D. University of Southern California Shibata, Darryl K., M.D. University of Southern California Shibata, Darryl K., M.D. University of Southern California Shibata, Darryl K., M.D. University of Colorado, Denver Shuman, Marc A., M.D. University of Colorado, Denver Shuman, Marc A., M.D. University of Colifornia, San Francisco Shyr, Yu, Ph.D. University of California, San Francisco Shyr, Yu, Ph.D. University of California, San Diego Silver, Robert B., Ph.D. Marine Biological Laboratory Simone, Frank Peter, M.S. American Type Culture Collection Simmen, Rosalia C., Ph.D. Arkansas Children's Hospital Research Institute
Schwartz, Jeffrey L., Ph.D.  Schwartz, Joel L., D.M.D., M.D.  Schwartz, Stephen Marc, Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Children's Hospital of Philadelphia  Semenov, Serguei Y., M.D., Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Seyick-Muraca, Eva M., Ph.D.  Seyon, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Johns Hopkins School of Public Health  Shanon, Jackilen, Ph.D.  Shave, For H.D.  Shave, For M.D.  Shave, For H.D.  Seyon University of Washington  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shap.  Shap.  Shap.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  University of Massachusetts, Lowell  Shelthar, Raj, Ph.D.  University of Maryland, Baltimore School of Medicine  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  H.D.  University of Nobraska Medical Center  Sherry, A. Dean, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  Huniversity of Southern California  Shibata, Darryl K., M.D.  University of Southern California  Shibata, Darryl K., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Johns Hopkins Linevesity  Silletti, Steven A., Ph.D.  Marine Biological Laboratory  Simone, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Schwartz, Joel L., D.M.D., M.D.  Schwartz, Stephen Marc, Ph.D.  Schwartz, Stuart, Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Children's Hospital of Philadelphia  Semenov, Serguei Y., M.D., Ph.D.  MWI, LLC  Semmes, Oliver John, Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Luniversity of North Carolina, Chapel Hill  Sevick-Muraca, Eva M., Ph.D.  Saylor College of Medicine  Seymour, Lesley K., M.D., Ph.D.  Luniversity of Wisconsin, Madison  Shah, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Sharon, Jacqueline, Ph.D.  Shave, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Sheikh, M. Saeed, M.D., Ph.D.  Luniversity of Maryland, Baltimore School of Medicine  Shekhar, Raj, Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  University of Nebraska Medical Center  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherman, Simon, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  University of Southern California  Shibats, Anthony F., M.D., Ph.D.  Wayne State University  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Vanderbilt University Medical School  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Schwartz, Stephen Marc, Ph.D.  Schwartz, Stuart, Ph.D.  Case Western Reserve University  Scott, Charles B., Ph.D.  Children's Hospital of Philadelphia  Semenov, Serguei Y., M.D., Ph.D.  MWI, LLC  Semones, Oliver John, Ph.D.  Eastern Virginia Medical School  Serody, Jonathan S., M.D., Ph.D.  Luniversity of North Carolina, Chapel Hill  Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  National Cancer Institute Canada CTG, Queens University  Shaaban, Aimen F., M.D.  Johns Hopkins School of Public Health  Shahn, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Oregon Health and Science University  Shave, Edward G., M.D.  Shaw, Edward G., M.D.  Wake Forest University  Shea, Thomas B., Ph.D.  University of Massachusetts, Lowell  Shekhar, Raj, Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Southern California  Shields, Anthony F., M.D.  Huniversity of Southern California  Shields, Anthony F., M.D.  Pennsylvania State University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Vanderbilt University  Silletti, Steven A., Ph.D.  Marine Biological Laboratory  Siminone, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Schwartz, Stuart, Ph.D.  Case Western Reserve University Scott, Charles B., Ph.D.  Children's Hospital of Philadelphia Semenov, Serguei Y., M.D., Ph.D.  MWI, LLC Semmes, Oliver John, Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Liniversity of North Carolina, Chapel Hill Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  National Cancer Institute Canada CTG, Queens University Shaaban, Aimen F., M.D.  Liniversity of Wisconsin, Madison Shah, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health Shannon, Jackilen, Ph.D.  Seyton, Jacqueline, Ph.D.  Seyton, Jacqueline, Ph.D.  Boston University Medical Campus Shaw, Edward G., M.D.  Wake Forest University Shea, Thomas B., Ph.D.  Liniversity of Massachusetts, Lowell Sheikh, M. Saeed, M.D., Ph.D.  Lystate Medical University Shekhar, Raj, Ph.D.  Lystate Medical University Shekhar, Raj, Ph.D.  Lystate Medical University Shery, A. Dean, Ph.D.  Lywyoming Research Innovations, Inc. Sherman, Simon, Ph.D.  Lywyoming Research Innovations, Inc. Sherman, Simon, Ph.D.  Lyniversity of Nebraska Medical Center Sherry, A. Dean, Ph.D.  Lyniversity of Southern California Shields, Anthony F., M.D., Ph.D.  Lyniversity of Colorado, Denver Shuman, Marc A., M.D.  Lyniversity of California, San Francisco Shyr, Yu, Ph.D.  Lyniversity of California, San Francisco Shyr, Yu, Ph.D.  Lyniversity of California, San Diego Silver, Robert B., Ph.D.  Marine Biological Laboratory Simione, Frank Peter, M.S.  American Type Culture Collection Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Scott, Charles B., Ph.D.  Semenov, Serguei Y., M.D., Ph.D.  Semenov, Serguei Y., M.D., Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Jacqueline, Ph.D.  Sovick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Jacqueline, Ph.D.  Soregon Health and Science University  Sharon, Jacqueline, Ph.D.  Soston University Medical Campus  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Sheikh, M. Saeed, M.D., Ph.D.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony F., M.D., Ph.D.  Wayne State University, University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Semenov, Serguei Y., M.D., Ph.D.  Semmes, Oliver John, Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Sevick-Muraca, Eva M., Ph.D.  Saylor College of Medicine  Seymour, Lesley K., M.D., Ph.D.  National Cancer Institute Canada CTG, Queens University Shaaban, Aimen F., M.D.  Shaaban, Aimen F., M.D.  Shah, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Oregon Health and Science University  Sharon, Jacqueline, Ph.D.  Soston University Medical Campus  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  Upstate Medical University  Shekhar, Raj, Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Southern California  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony E., M.D., Ph.D.  University of Colorado, Denver  Shurnan, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Johns Hopkins University  Medical School  Sidver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Semmes, Oliver John, Ph.D.  Serody, Jonathan S., M.D., Ph.D.  Sevick-Muraca, Eva M., Ph.D.  Seynour, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Shaylor College of Medicine  Seymour, Lesley K., M.D., Ph.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Aimen F., M.D.  Shaban, Aimen S., M.D., Ph.D.  Shaban, Aimen S., M.D., Ph.D.  Shaban, Aimen S., M.D.  Shaban, Keerti V., M.D., Ph.D.  Shaban, Seynour, Delbert S., Shaban, Seynour, Shaban, Shaban, Seynour, Shaban, S
Serody, Jonathan S., M.D., Ph.D.  Sevick-Muraca, Eva M., Ph.D.  Seyick-Muraca, Eva M., Ph.D.  Seynour, Lesley K., M.D., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  Shaban, Aimen F., M.D.  Shah, Keerti V., M.D., Ph.D.  Shah, Kehran, Jacqueline, Ph.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  She, Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  University of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Texas Dallas  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony F., M.D., Ph.D.  Wayne State University, University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Sevick-Muraca, Eva M., Ph.D.  Seymour, Lesley K., M.D., Ph.D.  National Cancer Institute Canada CTG, Queens University Shaaban, Aimen F., M.D.  University of Wisconsin, Madison  Shah, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Oregon Health and Science University  Sharon, Jacqueline, Ph.D.  Boston University Medical Campus  Shaw, Edward G., M.D.  Wake Forest University  Shea, Thomas B., Ph.D.  University of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  Ulniversity of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Texas Dallas  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony F., M.D., Ph.D.  Wayne State University  Shriver, Mark D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu., Ph.D.  Vanderbilt University  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simone, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Seymour, Lesley K., M.D., Ph.D.  National Cancer Institute Canada CTG, Queens University Shaaban, Aimen F., M.D.  Luniversity of Wisconsin, Madison  Shah, Keerti V., M.D., Ph.D.  Johns Hopkins School of Public Health  Shannon, Jackilen, Ph.D.  Oregon Health and Science University  Sharon, Jacqueline, Ph.D.  Boston University Medical Campus  Shaw, Edward G., M.D.  Wake Forest University  Shea, Thomas B., Ph.D.  Luniversity of Massachusetts, Lowell  Sheikh, M. Saeed, M.D., Ph.D.  Luniversity of Maryland, Baltimore School of Medicine  Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  Luniversity of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  Luniversity of Texas Dallas  Shibata, Darryl K., M.D.  Luniversity of Southern California  Shields, Anthony E., M.D., Ph.D.  Wayne State University  Shriver, Mark D., Ph.D.  Luniversity of Colorado, Denver  Shuman, Marc A., M.D.  Luniversity of California, San Francisco  Shyr, Yu, Ph.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  Luniversity of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shaaban, Aimen F., M.D.  Shah, Keerti V., M.D., Ph.D.  Shamnon, Jackilen, Ph.D.  Shav, Edward G., M.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shea, Thomas B., Ph.D.  Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Sheyoming Research Innovations, Inc.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shibata, Namyl K., M.D.  Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  Marine Biological Laboratory  Simone, Frank Peter, M.S.  Arkansas Children's Hospital Research Institute
Shah, Keerti V., M.D., Ph.D.  Shahn, Keerti V., M.D., Ph.D.  Shannon, Jackilen, Ph.D.  Sharon, Jacqueline, Ph.D.  Sharon, Jacqueline, Ph.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shewan, Simon, Ph.D.  Sherman, Simon, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Shory Robert B., Ph.D.  Marine Biological Laboratory  Simone, Frank Peter, M.S.  Arkansas Children's Hospital Research Institute
Shannon, Jackilen, Ph.D.  Sharon, Jacqueline, Ph.D.  Boston University Medical Campus  Shaw, Edward G., M.D.  Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shebelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  Sherry, A. Dean, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shriver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, M.D.  Shuman, M.D.  Shuman, M.D.  Shuman, M.D.  Shuman, M.D.  Shibata, Darryl K.  Shroyer, Kenneth Reed, M.D.  Shibata, Daryl K.  Shibata, Daryland, Baltimore School of Medical Center  Sheklica Luniversity  Shibata, Daryland, Baltimore School of Medical Center  Sheklica Luniversity  Shibata, Daryland, Baltimore School of Medical Center  Sheklica Luniversity  Shibata, Daryland, Baltimore School of Medical University  Shibata, Daryland, Baltimore School of Medical
Sharon, Jacqueline, Ph.D.  Shaw, Edward G., M.D.  Shaw, Edward G., M.D.  Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Sheward, Simon, Ph.D.  Sheward, Simon, Ph.D.  Sheward, Simon, Ph.D.  Sheward, Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shields, Anthony F., M.D.  Shriver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Shero, Sh
Shaw, Edward G., M.D.  Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Kenneth Reed, M.D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Shyn, Yu, Ph.D.  Shorn Janes Ph.D.  Shorn Janes Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shields, Anthony F., M.D., Ph.D.  Shields, Anthony F., M.D., Ph.D.  Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shuman, Marc A., M.D.  Shorn Janes University Medical School  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shea, Thomas B., Ph.D.  Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shekhar, Raj, Ph.D.  Shelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Kenneth Reed, M.D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shyn, Yu, Ph.D.  Shyn, Yu, Ph.D.  Shyn, Yu, Ph.D.  Shyn, Steven A., Ph.D.  Shyn, Steven Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Sheikh, M. Saeed, M.D., Ph.D.  Shekhar, Raj, Ph.D.  Luniversity of Maryland, Baltimore School of Medicine Shelby, Jane, Ph.D.  Wyoming Research Innovations, Inc. Sherman, Simon, Ph.D.  Luniversity of Nebraska Medical Center Sherry, A. Dean, Ph.D.  Luniversity of Texas Dallas Shibata, Darryl K., M.D.  Luniversity of Southern California Shields, Anthony F., M.D., Ph.D.  Wayne State University Shriver, Mark D., Ph.D.  Pennsylvania State University, University Park Shroyer, Kenneth Reed, M.D., Ph.D.  Luniversity of Colorado, Denver Shuman, Marc A., M.D.  Luniversity of California, San Francisco Shyr, Yu, Ph.D.  Vanderbilt University Medical School Sidransky, David, M.D.  Johns Hopkins University Silletti, Steven A., Ph.D.  Luniversity of California, San Diego Silver, Robert B., Ph.D.  Marine Biological Laboratory Simione, Frank Peter, M.S.  American Type Culture Collection Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shekhar, Raj, Ph.D.  Shelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Sherman, Simon, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shibata, Anthony F., M.D., Ph.D.  Shiver, Mark D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  Arkansas Children's Hospital Research Institute
Shelby, Jane, Ph.D.  Sherman, Simon, Ph.D.  University of Nebraska Medical Center  Sherry, A. Dean, Ph.D.  University of Texas Dallas  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony F., M.D., Ph.D.  Wayne State University  Shriver, Mark D., Ph.D.  Pennsylvania State University, University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Vanderbilt University Medical School  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Sherman, Simon, Ph.D.  Sherry, A. Dean, Ph.D.  University of Texas Dallas  Shibata, Darryl K., M.D.  University of Southern California  Shields, Anthony F., M.D., Ph.D.  Wayne State University  Shriver, Mark D., Ph.D.  Pennsylvania State University, University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Vanderbilt University Medical School  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Arkansas Children's Hospital Research Institute
Sherry, A. Dean, Ph.D.  Shibata, Darryl K., M.D.  Shibata, Darryl K., M.D.  Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shriver, Menneth Reed, M.D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  Arkansas Children's Hospital Research Institute
Shibata, Darryl K., M.D.  Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Silver, Rosalia C., Ph.D.  Shibata, Darryl K., M.D.  Wayne State University  State University, University Park  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shields, Anthony F., M.D., Ph.D.  Shriver, Mark D., Ph.D.  Pennsylvania State University, University Park  Shroyer, Kenneth Reed, M.D., Ph.D.  University of Colorado, Denver  Shuman, Marc A., M.D.  University of California, San Francisco  Shyr, Yu, Ph.D.  Vanderbilt University Medical School  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  University of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shriver, Mark D., Ph.D
Shroyer, Kenneth Reed, M.D., Ph.D.  Shuman, Marc A., M.D.  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Simione, Frank Peter, M.S.  Shroyer, Kenneth Reed, M.D.  Luniversity of California, San Francisco  Vanderbilt University Medical School  Sidransky, David, M.D.  Johns Hopkins University  Silletti, Steven A., Ph.D.  Luniversity of California, San Diego  Silver, Robert B., Ph.D.  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shuman, Marc A., M.D.  Shuman, Marc A., M.D.  Shyr, Yu, Ph.D.  Sidransky, David, M.D.  Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Simione, Frank Peter, M.S.  Simmen, Rosalia C., Ph.D.  Luniversity of California, San Diego  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Shyr, Yu, Ph.D
Sidransky, David, M.D
Silletti, Steven A., Ph.D.  Silver, Robert B., Ph.D.  Simione, Frank Peter, M.S.  Simmen, Rosalia C., Ph.D.  Luniversity of California, San Diego  Marine Biological Laboratory  Simione, Frank Peter, M.S.  American Type Culture Collection  Simmen, Rosalia C., Ph.D.  Arkansas Children's Hospital Research Institute
Silver, Robert B., Ph.D
Simione, Frank Peter, M.S
Simmen, Rosalia C., Ph.D
·
onnoni Sassanara E.i i ilib
Simon, Scott Irwin, Ph.D
Simoneau, Anne R., M.D
Sims, Millicent
Singer, Mendel E., Ph.D
Singh, Karan P., Ph.D
Singh, Sheo, Ph.D
Sison, Cristina P., Ph.D
Siuzdak, Gary E., Ph.D
Sixbey, John W., M.D Louisiana State University Health Science Center, Shreveport
Skipper, Paul L., Ph.D

Sklar, Charles A., M.D	Sloan-Kettering Institute for Cancer Research
	University of Texas Health Sciences Center, San Antonio
Slater, Michael D., Ph.D.	,
Sligh, James E., M.D., Ph.D.	,
Sloan, Jeff A., Ph.D.	,
Smith, Brian Richard, M.D.	,
Snetselaar, Linda G., Ph.D.	,
So, Peter T., Ph.D.	,
Soliman, Amr, M.D., Ph.D.	•
	H. Lee Moffitt Cancer Center and Research Institute
Song, Chang W., Ph.D.	
Sorensen, Glorian C., Ph.D.	,
Sorenson, George D., M.D.	
Sowa, Marianne Barbara, Ph.D.	· ·
Speicher, David W., Ph.D.	,
•	
Speyer, James, M.D.	•
Spink, David C., Ph.D.	•
Spriggs, David R., M.D.	· ·
Squire, Jeremy A., Ph.D.	
Staab, Edward V., M.D.	•
Stadler, Walter M., M.D.	,
Stamp, Velma Grant, B.A	,
Stanbridge, Eric J., Ph.D.	,
Stapleton, Sandra Joan, M.S	
Stein, C.A., M.D., Ph.D	
•	University of Massachusetts Medical School, Worcester
Stein, John P., M.D.	,
Stern, David F., Ph.D	,
Sternfeld, Barbara, Ph.D	
Stevens, Victoria L., Ph.D	,
Stoica, Adriana, Ph.D	,
Stokoe, David H., Ph.D.	University of California, San Francisco
Stotts, R.C., Ph.D., R.N.	University of Tennessee Health Science Center
Strano, Michael S., Ph.D.	University of Illinois, Urbana-Champaign
Strickland, Carolyn June, Ph.D., R.N	University of Washington
Strickler, Howard D., M.D	Yeshiva University
Su, Ying-Hsiu, Ph.D	Drexel University College of Medicine
Subramanian, Manny R., Ph.D	Best Medical International, Inc.
Sun, Duxin, Ph.D	Glycomex Technologies, LLC
Sun, Luzhe, Ph.D	University of Texas Health Science Center, San Antonio
Sundaram, Sujatha, Ph.D	Virginia Commonwealth University
Suntharalingam, Nagalingam, Ph.D	Thomas Jefferson University Hospital
Swaan, Peter W., Ph.D	University of Maryland, Baltimore School of Medicine
Swanson, Basil I., M.D., Ph.D	University Of California, Los Alamos National Laboratory
Sweeney, Christopher J., M.D	Indiana University-Purdue University, Indianapolis
Swenerton, Kenneth Douglas, M.D	University of British Columbia
Szmacinski, Henryk, Ph.D	Microcosm, Inc.
Sznol, Mario, M.D	Vion Pharmaceuticals, Inc.

т	T.I. I. I. D. D.	A Dr
	Tabb, Joel, Ph.D.	-
	Takayama, Shinichi, M.D., Ph.D.	
	Takayama, Shuichi, Ph.D.	,
	Takimoto, Chris H., M.D., Ph.D.	• *
	Talavera, Gregory A., M.D., Ph.D.	,
	Tan, Wai-Yuan, Ph.D.	,
	Tang, Careen K., Ph.D.	,
	Tang, Cha-Mei, Ph.D	
	Tanguay, Robert L., Ph.D.	•
	Tanjasiri, Sora P., Ph.D.	,
	Tao, Lianhui, M.D., Ph.D.	,
	Taylor, Ann G., R.N.	.Cornell University Medical Center
	Taylor, Clive R., M.D., Ph.D.	.University of Southern California
	Taylor, Jeremy Mg, Ph.D.	.University of Michigan, Ann Arbor
	Taylor, Richard E., Ph.D	.University of Notre Dame
	Taylor, Russell H., Ph.D.	.Johns Hopkins University
	Taylor, Wendell C., Ph.D	.University of Texas Health Science Center, Houston
	Tenforde, Thomas S., Ph.D	.National Council on Radiation Protection & Measurements
	Teno, Joan M., M.D.,	.Brown University
	Teschendorf, Bonnie, Ph.D	.American Cancer Society
	Teufel-Shone, Nicolette I., Ph.D	.University of Arizona
	Tew, Kenneth D., Ph.D	.Novelos Therapeutics, Inc.
	Tewson, Timothy J., Ph.D	.University of Iowa
	Thomas, James P., M.D., Ph.D.	.University of Wisconsin, Madison
	Thomas, Sara Moody, Ph.D	.Louisiana State University Health Science Center, New Orleans
	Thomas, T.J., Ph.D.	.University of Medicine and Dentistry of NJ-R.W. Johnson Medical School
	Thompson, E.A., Ph.D.	.Mayo Clinic College of Medicine Jacksonville
	Thorp, Richard L	.Multi-Media Systems, Inc.
	Thorsen, Todd A., Ph.D.	.Massachusetts Institute of Technology
	Thrall, Brian D., Ph.D	.Battelle Pacific Northwest Laboratory
	Threadgill, David W., Ph.D	.University of North Carolina, Chapel Hill
	Thundat, Thomas George, Ph.D	.UT-Battelle, LLC-Oak Ridge National Laboratory
	Timchalk, Charles A., Ph.D	
	Tlsty, Thea D., Ph.D	.University of California, San Francisco
	Toburen, Larry H., Ph.D	.East Carolina University
	Tollestrup, Kristine, Ph.D	·
	Toretsky, Jeffrey A., M.D.	.Naviscan Pet Systems, Inc.
	Toscano, William A., Ph.D	,
	Tracy, J. Kathleen, Ph.D	.University of Maryland, Baltimore School of Medicine
	Trask, Peter C., Ph.D	,
	Trauth, Jeanette M., Ph.D.	.University of Pittsburgh, Pittsburgh
	Traxler, Carol Bloomquest, Ph.D	,
	Treadway, Joseph A., Ph.D.	•
	Triche, Timothy J., M.D., Ph.D.	•
	True, Lawrence D., M.D	
	Truitt, Robert L., Ph.D.	,
	, =-,=	

	Tsao, Ming-Sound, M.D. Tsui, Benjamin M., Ph.D. Tucker, Thomas C., Ph.D. Turchi, John J., Ph.D. Turker, Mitchell S., Ph.D. Turner, Leigh, Ph.D. Tweardy, David J., M.D. Tycko, Benjamin, M.D., Ph.D.	.Johns Hopkins University .University of Kentucky .Indiana University-Purdue University, Indianapolis .Oregon Health and Science University .McGill University .Baylor College of Medicine
u	Underwood, Willie, M.D., Ph.D.  Unger, Elizabeth R., M.D., Ph.D.  Unger, Gretchen M., Ph.D.  Urban, Nicole D., Ph.D.	.Centers for Disease Control and Prevention .Genesegues, Inc.
V	Vadaparampil, Susan T., Ph.D.  Vaughan, William P., M.D.  Velie, Ellen M., Ph.D.  Verlee, Donald, Ph.D.  Vicini, Paolo, Ph.D.  Vickers, Andrew J., Ph.D.  Vieweg, Johannes W. G., M.D.  Villanueva, Augusta M., Ph.D.  Villarreal, Roberto, M.D., Ph.D.  Virnig, Beth A., Ph.D.  Virnig, Beth A., Ph.D.  Visuri, Steven R., Ph.D.  Visuri, Steven R., Ph.D.  Vogel, Carl-Wilhelm E., M.D., Ph.D.  Vogelbaum, Michael A., M.D., Ph.D.  Vogt, Peter K., Ph.D.  Vohra, Yogesh K., Ph.D.  Voldman, Joel, Ph.D.  Von Kalle, Christof, M.D., Ph.D.  Vose, Julie M., M.D., Ph.D.  Vose, Julie M., M.D., Ph.D.	.Michigan State University .Abbott Laboratories .University of Washington .Sloan-Kettering Institute for Cancer Research .Duke University .Drexel University .University of Texas Health Science Center .University of Miami .University of Minnesota, Twin Cities .Prodesse, IncUniversity of Toronto .University of Hawaii, Manoa .Case Western Reserve University .University of Chicago Medical Center .Scripps Research Institute .University of Alabama, Birmingham .Massachusetts Institute of Technology .University of Missouri, Columbia .Cincinnati Children's Research Foundation .University of Nebraska Medical Center
W	Wachsman, William, M.D., Ph.D. Wade, Amy B., M.D. Waggoner, Alan S., Ph.D. Wahba, Grace, Ph.D. Wahl, Richard L., M.D. Wainwright, William H., Ph.D. Walborg, Earl F., Ph.D. Waldman, Frederic M., M.D., Ph.D.	.University of Michigan .Mellon Pitts Corporation .University of Wisconsin, Madison .Johns Hopkins University .Wyeth Ayerst Research .Dermigen, Inc.

Waldman, Scott A., M.D., Ph.D.	Thomas lefferson University
Walker, Gilbert C., Ph.D.	,
Waller, Edmund K., M.D., Ph.D.	,
Wallner, Paul E., D.O.	, ,
Walters, Karina L., Ph.D.	
Wang, Binghe, M.D., Ph.D.	,
Wang, Kenneth K., M.D.	
Wang, Peng George, Ph.D.	,
Wang, Tao, Ph.D.	•
	. Virginia Polytechnic Institute and State University
Ward, John H., M.D.	,
Ward, Pamela, Ph.D.	,
Ward, Sandra E., Ph.D., R.N.	,
Ware, Carl F., Ph.D.	,
Washington, Mary K., M.D., Ph.D.	· · · · · · · · · · · · · · · · · · ·
Weber, Michael J., Ph.D.	•
Weeks, Eric R., Ph.D.	,
Wei, Wei-Zen, Ph.D.	,
Wei, Yen, Ph.D.	,
Weichert, Jamey P., M.D., Ph.D.	,
•	. Ernest Orlando Lawrence Berkley National Laboratory
Weinberg, Andrew D., Ph.D.	,
Weinberg, David S., M.D.,	
Weiner, Bryan J., Ph.D.	
Weiner, George J., M.D.	,
Weiss, Geoffrey R., M.D.	,
Weiss, Heidi, Ph.D.	,
Weissfeld, Joel L., M.D.	,
Weissman, Sherman M., M.D.	,
Weston, Brent W., M.D.	•
Westphall, Michael S., Ph.D.	•
Wheatley, Barnarese, M.P.H.	•
Wheatley, Margaret A., Ph.D.	,
White, Forest M., Ph.D.	,
White, John G., Ph.D.	ε,
White, Lisa L., Ph.D.	,
Whiteside, Theresa L., Ph.D.	
Wickstrom, Eric, Ph.D.	,
	University of Medicine and Dentistry of New Jersey
Wiener, Erik C., Ph.D.	
Wiernik, Peter H., M.D.	,
Wiggins, Charles L., Ph.D.	, ,
Wilburn, Louella S., M.S.	,
Wilkie, Diana J., Ph.D., R.N.	
Willey, James C., M.D.	,
•	. Louisiana State University Health Science Center, New Orleans
Williams, Valerie S.L., Ph.D.	•
willidilis, valetie 3.L., FII.D.	. NTI FIEGIUI JOIUUOIIS

Williamson, John S., Ph.D	,
Williard, Paul G., Ph.D	.Brown University
Willman, Cheryl L., M.D	.University of New Mexico
Wilson, Barbara A., Ph.D	.Jackson State University
Wilson, Brian C., Ph.D	.University of Toronto
Wilson, James M., M.D., Ph.D	.University of Pennsylvania
Wilusz, Jeffrey, Ph.D	,
Winick, Naomi J., M.D	•
Wiseman, Robert W., Ph.D.	,
Witherspoon, Yvonne, B.A.	,
Witzig, Thomas E., M.D.	
	,
Wolinsky, Steven M., M.D.	,
Woloschak, Gayle E., Ph.D.	•
•	.University of Texas M.D. Anderson Cancer Center
Wong, Gilbert Y., M.D.	,
	.University of Vermont and State Agricultural College
Woodle, Martin C., Ph.D	
Woods, Virgil L., M.D.	,
Wooley, Karen L., Ph.D.	.Washington University
Woolley, Adam T., Ph.D.	.Brigham Young University
Woster, Patrick M., Ph.D	.Wayne State University
Wriggers, Willy R., Ph.D.	.University of Texas Health Science Center, Houston
Wright, Daniel G., M.D	.National Institute of Diabetes and Digestive and Kidney Diseases
Wright, Kenneth L., Ph.D	.H. Lee Moffitt Cancer Center and Research Institute
Wu, Albert W., M.D	
	.University of Texas M.D. Anderson Cancer Center
	,
Yan, Lin, Ph.D	.Protein Technologies International
	Rutgers the State University of New Jersey, New Brunswick
Yee, Douglas, M.D	, ,
Yeung, Anthony T., Ph.D.	,
Yoon, Kyonggeun, Ph.D.	
Young, Charles Y., Ph.D.	,
Young, James F., Ph.D.	,
roung, James F., Ph.D.	.wedimmune inc.
7.1.1.C. A.C. MOTH	11.5 10.1 5 111 61
Zahrbock, Cary A.C., MOTH	
Zaider, Marco, Ph.D.	
Zangar, Richard C., Ph.D.	
Zanzonico, Pat B., Ph.D	•
Zapka, Jane G., Ph.D	•
Zborowski, Maciej, Ph.D	.Case Western Reserve University
Zebala, John A., M.D., Ph.D.	•
Zelterman, Daniel, Ph.D	.Yale Cancer Center
Zeltzer, Lonnie K., M.D	.University of California, Los Angeles
Zemel, Richard S., Ph.D	.University of Arizona
Zhan, Lin, Ph.D	,
Zhang, Jian-Ting, Ph.D	,
5.	, , , , , , , , , , , , , , , , , , , ,

Y

Z

# 146 Appendix D-3: Consultants Serving on SEPs

Zhang, Peilin, M.D., Ph.D.	.West Virginia University
Zhao, Shaying, Ph.D	.University of Georgia
Zharov, Vladimir P., Ph.D	.University of Arkansas Medical Sciences Center, Little Rock
Zheng, Tongzhang, M.D., Ph.D	.Yale University
Zheng, Wei, M.D., Ph.D	.Vanderbilt University
Zheng, Xiaofeng Steven, Ph.D	University of Medicine and Dentistry of NJ-R.W. Johnson Medical School
Zheng, Yi, Ph.D	.Children's Hospital Medical Center, Cincinnati
Zhou, Jin-Rong, Ph.D	.Beth Israel Deaconess Medical Center
Zuna, Rosemary E., M.D.	.University of Oklahoma Health Sciences Center

Total Number of D-3 Reviewers: 1,400

# 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.

#### **KOI** 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.

#### K08 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.

#### KO8 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

#### **U01** 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	DCEG	Division of Cancer Epidemiology and Genetics	
ACD	Advisory Committee to the Director	DCLG	Director's Consumer Liaison Group	
AHRQ	Agency for Healthcare Research and Quality	DCP	Division of Cancer Prevention	
AISB	Applied Information Systems Branch	DCTD	Division of Cancer Treatment and Diagnosis	
ARA	Awaiting Receipt of Application	DEA	Division of Extramural Activities	
AREA	Academic Research Enhancement Award	DEAS	Division of Extramural Activities Support	
BRSG	Biomedical Research Support Grant	DHHS	U.S. Department of Health and Human Services	
BSA	Board of Scientific Advisors	DOD	Department of Defense	
BSC	Board of Scientific Counselors	<b>ECARES</b>	Extramural Customer Assistance Request System	
CaBIG	Cancer Bioinformatics Grid	EDD	Extramural Division Directors	
CAM	Complementary and Alternative Medicine	EDRN	Early Detection Research Network	
CARRA	Consumer Advocates in Research and	EPMC	Extramural Program Management Committee	
CCD	Related Activities	eRA	Electronic Research Administration	
CCR	Center for Cancer Research	ESA	Extramural Science Administrator	
CCSG	Cancer Center Support Grant	FACA	Federal Advisory Committee Act	
CD	Career Development	FDA	U.S. Food and Drug Administration	
CD	Compact Disk	FDG	fluoro-2-deoxy-D-glucose	
CDC	Centers for Disease Control and Prevention	FLARE	Fiscal Linked Analysis of Research Emphasis	
CEGP	Cancer Education Grant Program	FOA	Funding Opportunity Announcements	
CIT	Center for Information Technology	FOP	Financial Operating Plan	
CM	Committee Management	FY	Fiscal Year	
CMBB	Comprehensive Minority Biomedical Branch	GSA	General Services Administration	
CMCR	Centers for Medical Countermeasures Against Radiation	HHV	Human Herpesvirus	
CMO	Committee Management Office	HTLV	Human T-Cell Lymphoma/Leukemia Virus	
CMS	Centers for Medicare and Medicaid Services	IC	Institute/Center	
CMUG	Committee Management Users Group	ICMIC	In Vivo Cellular and Molecular Imaging Center	
CRCHD	Center to Reduce Cancer Health Disparities	IDeA	Institutional Development Award	
CSR	Center for Scientific Review	IMAT	Innovative Technology for the Molecular Analysis of Cancer	
CSS	Cascading Style Sheet	IMPAC		
СТ	Computed Tomography	IIVIPAC	Information for Management, Planning, Analysis, and Coordination—database	
СТЕР	Cancer Therapy Evaluation Program	IRG	Initial Review Group	
CTWG	Clinical Trials Working Group	IRM	Information Resources Management	
DCB	Division of Cancer Biology	ISCS	Information Systems and Computer Services	
DCCPS	Division of Cancer Control and Population Sciences	ISTB	Information Services Technology Branch	

IT	Information Technology	PCRB	Program Coordination and Referral Branch
LOI	Letter of Intent	PET	Positron Emission Tomography
KMDC	Knowledge Management for Disease Coding	PET-CT	Positron Emission Tomography-Computed
LRP	Loan Repayment Program		Tomography
MBRS	Minority Biomedical Research Support	PHS	Public Health Service (DHHS)
MERIT	Method to Extend Research in Time	PRG	Progress Review Group
MION	Monocrystalline Iron Oxide Nanoparticle	RAEB	Research Analysis and Evaluation Branch
MRI	Magnetic Resonance Images	R&D	Research and Development
NCAB	National Cancer Advisory Board	REAP	Research Enhancement Awards Program
NCCAM	National Center for Complementary and	RFA	Request for Applications
	Alternative Medicine	RFI	Request for Information
NCDDG	National Cooperative Drug Discovery Groups	RFP	Request for Proposals
NCI	National Cancer Institute	RO	Referral Officer
NCRR	National Center for Research Resources	RPC	Review Policy Committee
NIAID	National Institute of Allergy and Infectious Diseases	RPDU	Review Processing and Distribution Unit
NIII		RPG	Research Project Grant
NIH	National Institutes of Health	RPRB	Research Programs Review Branch
NLM	National Library of Medicine	RTRB	Resources and Training Review Branch
NOW	NCI Online Workplace	SBIR	Small Business Innovation Research
NRSA	National Research Service Award	SBM	Society of Behavioral Medicine
NSF	National Science Foundation	SEER	Surveillance, Epidemiology, and End Results
OCCAM	Office of Cancer Complementary and Alternative Medicine	SEP	Special Emphasis Panel
OCTR	Office of Centers, Training and Resources	SIC	Special Interest Category
OD	Office of the Director	SIG	Shared Instrumentation Grant
OEA	Office of Extramural Applications	SOP	Standard Operating Procedure
OER	Office of Extramural Research	SPORE	Specialized Program of Research Excellence
OFACP	Office of Federal Advisory Committee Policy	SRA	Scientific Review Administrator
OLA	Office of Liaison Activities	SREA	Scientific Review and Evaluation Award
OPERA	Office of Policy for Extramural Research	SRLB	Special Review and Logistics Branch
	Administration	STTR	Small Business Technology Transfer Research
ORRPC	Office of Referral, Review, and Program Coordination	TAG	Technical Advisory Group
OSB	Organ Systems Branch	T&E	Training and Education
OTIR	Office of Technology and Industrial Relations	TGEN	Translational Genomics Research Institute
PA	Program Announcement	TREC	Transdisciplinary Research on Energetics
PAR	Reviewed Program Announcement	TDWG	and Cancer
PCP	President's Cancer Panel	TRWG	Translational Research Working Group
		UV	Ultraviolet

# Appendix G: Cancer Information Sources on the Internet

#### NCI Web Site

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 <a href="http://cancer.gov/">http://cancer.gov/</a>.

#### **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.

# Advisory Boards and Groups

#### 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/flash/fum/training.htm

#### 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.

## **Funding Opportunities**

#### 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/Public/QueryForm

A visitor can search the database for information about research grant and contract awards made by the National Cancer Institute. It includes awards for the current and past 5 fiscal years. The Web site provides the ability to search the database in various ways, including a text search of the project abstract and a search of the Special Interest Category (SIC) and anatomic site codes assigned to the project.

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

Extramural events and updates.

#### NIH Web Sites

http://www.nih.gov

http://era.nih.gov/ElectronicReceipt/

http://grants1.nih.gov/grants/policy/policy.htm

http://grants.nih.gov/grants/guide/index.htm

http://grants.nih.gov/training/extramural.htm

An electron	nic version of this docun from the Internet at ht	nent can be viewed a tp://deainfo.nci.nih.ş	and downloaded gov/





November 2006