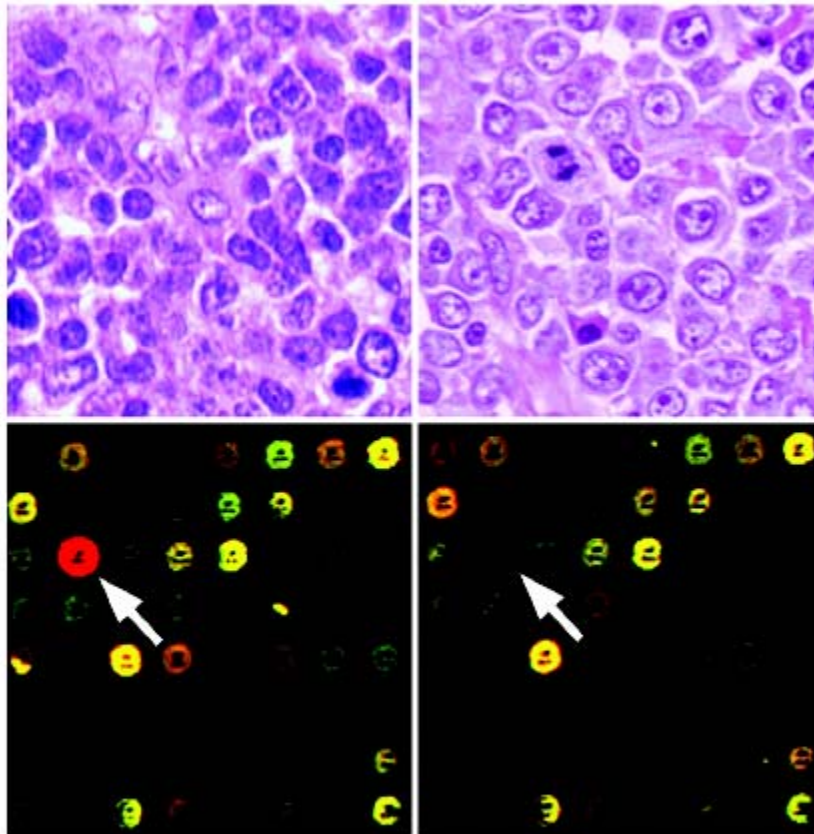


Division of Extramural Activities
Annual Report 2002



National Institutes of Health

National Cancer Institute

Molecular Diagnosis of Cancer

Gene expression profiling using DNA microarrays is a technology that arose as a consequence of the Human Genome Project. With DNA microarrays, it is possible to determine the activity (“expression”) of tens of thousands of genes in parallel on microarray plates. The expression of genes influences the biological behavior of a cell because it dictates which proteins the cell can make and gives cells their unique characteristics. In the DNA microarray images shown at the bottom of the cover illustration, each spot represents a different human gene. Red, yellow, and green spots indicate that a gene is expressed at high, intermediate, and low levels, respectively. The pattern of expression of all of the genes in a cell constitutes its gene expression “profile.” Using DNA microarrays, different types of normal and malignant cells can be distinguished from one another because they have distinct gene expression profiles.

Shown at the top of the cover illustration are photomicrographs of lymph node biopsies from two patients with diffuse large B cell lymphoma. The tumor at the right belongs to the germinal center B cell-like subgroup of diffuse large B cell lymphoma. Patients with this lymphoma type have a relatively favorable 5-year survival rate of 59% following multi-agent chemotherapy. The tumor at the left belongs to the activated B cell-like subgroup of diffuse large B cell lymphoma. Patients with this lymphoma type have a less favorable 5-year survival rate of 31%. Although the tumors from these patients were indistinguishable histologically, they had striking differences in their gene expression profiles, as exemplified by the microarray images shown below each lymphoma subgroup. Gene expression profiling has therefore revealed that the diagnostic category of diffuse large B cell lymphoma actually harbors more than one molecularly distinct disease. DNA microarray technology holds great promise for classifying different cancers, defining molecular subtypes of a tumor, optimizing treatment strategies, and monitoring clinical response to treatment.

Cover Illustration:

Courtesy of Louis M. Staudt, M.D., Ph.D., Chief, Lymphoid Malignancies Section, Metabolism Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health.

Reference:

Staudt LM. Molecular diagnosis of the hematologic cancers. N Engl J Med 2003;348:1777-85.



Foreword

Since Congress passed the National Cancer Act in 1971, we have been experiencing exponential growth in our knowledge of cancer. That scientific knowledge base, which is a primary responsibility of the National Cancer Institute (NCI), is the first stage along a continuum of discovery, development, and delivery that will ultimately take us to the goal I have challenged myself and the entire cancer community to reach by the year 2015—the elimination of suffering and death from cancer. The knowledge that we discover, whether at the level of the gene, molecule, cell, tissue, organ, individual, or population, feeds development—the process of creating tools and interventions to reduce the cancer burden—with the end result being delivery, the process of disseminating, facilitating, and promoting evidence-based prevention, detection, diagnosis, and treatment practices and policies.

The NCI is committed to exploiting that discovery-development-delivery strategy to achieve the 2015 challenge goal. In large measure, this will be accomplished through the efforts of outstanding NCI extramural scientists who have and will continue to enhance the scientific knowledge base. The NCI Division of Extramural Activities (DEA), carries a major responsibility for strengthening the scientific knowledge base by conducting the scientific review of applications for support of extramural research; managing and coordinating the Institute's advisory activities, including the Presidentially appointed National Cancer Advisory Board and the Board of Scientific Advisors; formulating, coordinating, and disseminating operating policies pertaining to extramural programs; and analyzing and reporting on all extramural research programs funded by the NCI.

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

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

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

Introduction

The mission and responsibilities of the NCI Division of Extramural Activities (DEA) affect, in some way, all extramural scientists receiving research or training support from the NCI. The DEA is centrally involved in all aspects of grant development and tracking, from original conception of research and training programs for introduction in the extramural community, to issuance of announcements of such programs, to receipt and referral of incoming applications, to review and final approval of the applications, to coding and tracking after disbursement of funds. In brief, the DEA was established to:

- Provide advice and guidance to potential applicants
- Refer incoming grant applications to appropriate programs within the NCI
- Provide the highest quality and most effective scientific peer review and oversight of extramural research
- Coordinate and administer advisory activities, such as the National Cancer Advisory Board (NCAB) and Board of Scientific Advisors (BSA), related 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, and policies to expedite funding
- Track the NCI research portfolio (more than 6,445 research and training awards) using consistent, budget-linked scientific information to provide a basis for budget projections and to serve as a resource for the dissemination of information about cancer.

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

* See **Appendix A** for a glossary of acronyms used in this report.

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

Grant Referral: DEA as the First Point of Contact with the NCI

In Fiscal Year (FY) 2002, the NCI received 9,346 grant applications for referral (see **Table 1**). These included applications for 43 different types of funding award mechanisms (see **Appendix F**), including Clinical Investigator Awards (K08), Research Program Projects (P01), Cancer Center Support Grants (CCSGs) (P30), Research Projects (R01), and Small Business Innovation Research (SBIR) Grants (R43). During FY2002, the **Program Coordination and Referral Branch** (PCRB) in the DEA was responsible for receipt, referral, and assignment of applications, as well as other program development functions.

Upon receipt of a primary or secondary assignment to the NCI by the National Institutes of Health (NIH) Center for Scientific Review (CSR), the DEA Referral Officer (RO) assigns all incoming applications to one of the 45 NCI extramural research program areas. The RO also must track, in real time, the review status of all applications assigned to the NCI. The RO distributes all of the applications directly reviewed by the DEA for the NCI. These applications include P01 Program Projects, P30 Centers, P20 Planning Grants, P50 Specialized Centers, R13 Conference Grants, R03 Small Grants, T32 Training Grants, certain R01 Research Project Grants, and U series Cooperative Agreement applications. These applications are sent to one of the three DEA Review Branches for assignment to individual Scientific Review Administrators (SRAs) and to one of the seven subcommittees of the NCI Initial Review Group (IRG) or to a Special Emphasis Panel (SEP), as described later.

The DEA is often the first point of contact for applicants and the recipient of Letters of Intent from potential applicants for multiproject Program Grants (P01) and Conference Grants (R13). It is also the only point of receipt for distribution to program staff of Research Supplements for Underrepresented Minorities, Supplements to Promote Reentry Into Biomedical and Behavioral Research Careers, Research Supplements for Individuals with Disabilities, and Supplements for the Continuous Umbrella of Research Experience (CURE) program for underrepresented minorities (available for R25, K12, and P30 parent grants). In addition, the RO receives and distributes advance copies of applications from investigators submitting P01s or responding to Requests for Applications (RFAs) and certain Program Announcements (PAs).

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

Progress continued in FY2002 toward the objective of a paper-free referral system. Working with the NCI Office of Informatics and contractors, the staff of the DEA Applied Information Systems Branch (AISB) and the ROs have brought this project to the point where all referral actions—those done by the ROs as well as those done by program staff—are completed electronically using an efficient, user-friendly, Web-based system that maintains records of actions. The system, which is one of the functions of the new NCI Online Workplace (NOW), was put in place in FY2001. Amended and competing continuation (Type 2) applications are referred automatically to the cancer activity that accepted the previously submitted application.

Electronic reports using data from Information for Management, Planning, Analysis, and Coordination (IMPAC II) have been developed and are available (using Oracle Discoverer) to meet the various RO requests.

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's research is maintained through peer review and a quality control process in which experts in the field review and score proposals for research. The peer-review mechanism helps ensure that the NCI uses its resources wisely and funds research that has the potential to make a significant contribution to science and medicine. The NCI's extramural programs and activities are funded primarily through peer-reviewed grants and cooperative agreements. Programs 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 is performed by either an NIH CSR study section or an NCI Initial Review Group (IRG) subcommittee or 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 NCAB.

Most investigators are familiar with the NIH CSR study sections, which have primary responsibility for investigator-initiated Research Project (R01) grants and fellowships. It is less widely known, however, that applications representing more than 50 percent of the NCI's extramural budget are reviewed by groups directly formed and managed within the NCI by the DEA. Routing for review to either the CSR or the DEA is usually decided by the choice of award mechanism. In either case, the NCAB, also managed by the DEA, has statutory responsibility to perform the second level of review, which considers additional factors of mission and relevance.

The NCI has no direct input into the selection of reviewers who serve on CSR study sections. In contrast, members of the NCI IRG are selected by NCI review staff and approved by the Director, NCI, based on their knowledge in the various disciplines and fields related to cancer. The DEA-managed NCI IRG has seven specialized subcommittees for review of scientific areas. 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 B** and at the following Internet address: <http://deainfo.nci.nih.gov/advisory/irg.htm>.) IRG members are appointed for varying terms of service, which may be up to 4 years on specific subcommittees. SEPs may be formed by the DEA to review RFAs or unique applications. Members of such panels are selected on a one-time, as-needed basis to review specific applications, proposals, or proposed solicitations. (Additional information about the NCI SEPs can be accessed at the following Internet address: <http://deainfo.nci.nih.gov/advisory/sep.htm>.) In addition, applications for Cancer Center, Cooperative Group, or Program Project support normally require a site visit to the applicant institution by members of the appropriate IRG subcommittee and ad hoc consultants.

Both the SEPs and the IRG advise the Director, NCI, on the scientific and technical merit of applications for grants for research and research training as well as for research-related grants and cooperative agreements, and for 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.

In FY2002, the DEA organized, managed, and reported the review of a total of 1,972 grant and cooperative agreement applications (see **Table 2**) and 151 contract proposals (see **Table 17**). Twenty meetings of the NCI IRG subcommittees were convened to review and evaluate grant applications of various types (see **Table 3**). In addition, there were 80 SEP meetings for review of grants or contracts, and 128 site visits.

In FY2002, 2,465 reviewers served on 200 occasions on either the IRG or SEPs to review applications (see **Appendix C**). Members are selected because they are authorities in relevant fields of biomedical research or because they represent informed consumer perspectives.

Peer Review Functions

The review units in the DEA are responsible for organizing, managing, and reporting the scientific peer review of applications for a wide variety of grant mechanisms. In the past, two Branches within the DEA managed peer-review activities for NCI-reviewed applications: the Grants Review Branch (GRB) and the Special Review and Logistics Branch (SRLB). During FY2002, the Grants Review Branch was reorganized into two branches in response to the Department of Health and Human Services and the NIH “delaying” initiative. 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 four subcommittees of the NCI Initial Review Group (IRG) (see **Table 3**). The remainder of the GRB became the **Research Programs Review Branch (RPRB)**, with primary responsibility for review of unsolicited applications for program project grants (P01s), for applications for Special Programs of Research Excellence (SPORs) (P50s) in various organ sites, and for conference grant applications. The RPRB also manages the three subcommittees of the NCI IRG that are responsible for review of program project grant applications and the internal NCI R13 Review Committee. These branches are primarily responsible for the peer review of a variety of types of unsolicited multiproject and career development grant applications (see **Table 2**) and together manage the seven subcommittees of the NCI IRG (see **Appendix B**). The **Special Review and Logistics Branch (SRLB)** organizes and manages peer review primarily for grant applications in response to specific RFAs, Program Announcements with special receipt dates and Institute review (PARs), and contract proposals submitted in response to specific Requests for Proposals (RFPs); most of these reviews are conducted by SEPs. The review units in the DEA prepare the summary reports of the evaluations and recommendations for each site visit or review committee meeting and distribute these reports to program officials, the NIH data management system, and NCI’s Records Management Center. Details of the summary statements also are provided to the NCAB, as required. Each primary Principal Investigator applicant receives a report in the form of the summary statement.

Many of the reviews conducted by the RPRB and the RTRB involve complex multidisciplinary applications. The review format for these applications usually involves a two-tier review. The first tier of the review is usually either a site visit to the applicants’ institution or a teleconference by an expert review panel; this provides an opportunity for the reviewers to question the applicants directly in order to clarify issues in the application, thereby enhancing the review process. The review panel members prepare a draft review report, which is then considered, along with the application, by the relevant subcommittee of the NCI IRG. Five of the seven NCI

subcommittees of the NCI IRG serve as the “parent committees” for final scoring of applications after expert panel reviews: Subcommittee A is the “parent committee” for Cancer Center Support Grant (P30) applications; Subcommittees C, D, and E are the “parent committees” for Program Project (P01) grant applications; and Subcommittee H is the “parent committee” for review of Cooperative Clinical Trials (primarily U10) applications. The other two subcommittees, Subcommittees F and G, review all of the career development, training, and education grant applications submitted to the NCI.

During FY2002, the seven subcommittees of the NCI IRG reviewed a total of 670 applications of various types with requests for a total of \$341,368,677 in direct costs for the first year, and more than \$1.802 billion for all years (see **Table 3**). The FY2002 workload of the subcommittees therefore represents an increase of approximately 5.7 percent in the number of applications reviewed by the subcommittees, due mainly to the increased number of program project applications for Subcommittee C and career development applications for Subcommittees F and G.

A significant proportion of the effort of the **Research Programs Review Branch** during FY2002 was associated with the review of unsolicited P01 applications. The SRAs in the RPRB organized and managed the review of 117 new, recompeting, amended, and supplemental P01 applications (see **Table 4**), a 23 percent increase over the number of P01 applications in FY2001. The 117 applications involved requested more than \$151 million in direct costs for the first year (see **Table 6**). One hundred and four of the program project applications were reviewed by IRG Subcommittees C, D, and E, the three P01 subcommittees of the NCI IRG; 12 were reviewed by Special Emphasis Panels, due mainly to member conflicts with the IRG. Sixty-seven of the reviews involved site visits for new and recompeting applications (see **Table 5**). Five of the applications were amended applications submitted for Accelerated Peer Review (APR). The APR process allows eligible applicants, those whose applications received scores within a few points of the payline and that have very easily addressable problems, to submit a 20-page “response” to the previous critique. The APR response is evaluated at the very next review cycle, potentially saving several months in the review process for the applicants. The APR response counts as one of the two allowable revisions to an application.

In all, almost 1,200 reviewers with expertise from the most basic cellular and molecular biology to the most clinical cancer research areas were required for all of the individual P01 review panels organized by RPRB SRAs.

During FY2002, RPRB successfully continued several initiatives to improve review procedures for applications for program projects. The Deputy Chief of the Research Programs Review Branch, who is the P01 review coordinator for the DEA, and the SRAs for the IRG Subcommittees (C, D, and E) responsible for program project review organized the second annual joint orientation session for new members of the committees in August 2002. An orientation notebook, with policies, procedures, suggestions, and case studies, was provided for each new subcommittee member. This new member orientation was followed by a plenary session of all of the reviewers on these three subcommittees, which featured a keynote address by the NCI Director and several exercises, led by the subcommittee SRAs, which were designed to help the reviewers establish consistent scoring calibration standards that are applicable across the three committees regardless of scientific discipline. The outcomes of this plenary session were more consistent review practices and scoring patterns across the three subcommittees, and therefore better information for NCI program staff to base funding decisions for program project

applications. This is important because support of P01s accounted for approximately 18 percent of the entire NCI extramural budget in FY2002.

RPRB projects that the number of P01 applications will continue to increase, straining the resources of the DEA and requiring ever increasing numbers of senior scientists as reviewers. Therefore, as FY2002 drew to a close, RPRB staff were working closely with the Director, ORRPC, to convene an NCI working group on P01s, with representation from DEA and the four extramural program Divisions, to consider review options for P01s for the future.

In FY2002, 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 applications focus on translational research directly applicable to human disease in various organ sites. This important program is currently in the third year of a transition from an RFA-driven program to an investigator-initiated program; by 2005, there will be one receipt date each year for applications addressing each specific tumor site. During FY2002, the RPRB organized and managed Special Emphasis Panels for the review of a total of 51 SPORE applications for research in prostate cancer, gastrointestinal cancer, head and neck cancer, brain cancer, breast cancer, gynecologic cancers, and lymphoma, an 82 percent increase over the number of SPORE applications reviewed during FY2001. These 51 applications were requests for almost \$93 million in direct costs for the first year of support. Based on the current schedule for SPORE application receipt in FY2003 and beyond, the RPRB expects the SPORE review workload to continue to increase at a rapid rate.

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.

During the summer of 2002, the Director of NCI convened a Working Group of senior extramural investigators to make recommendations concerning the Cancer Centers and the SPOREs. RPRB staff prepared information and presented SPORE review options for the P30/P50 Working Group. The recommendations of the Working Group will be the subject of additional RPRB activity in FY2003.

During FY2002, the RPRB also continued to conduct the reviews for R13 applications for support for a wide variety of scientific conferences. Fifty-nine applications representing requests for more than \$1.74 million in direct costs for the first year were reviewed 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 four times a year, so that conference organizers can plan more effectively.

DEA also maintained a leadership role in the design and implementation of the Peer Review Module of the new central NIH extramural database, called IMPAC II, during FY2002. The Chief of the RPRB, an SRA from the SRLB, and a support staff member from the RPRB served on the IMPAC II Review Users' Group (RUG) to test new programming for uploading final summary statements into the database. An RPRB SRA served on the task force to design and test a new internet-assisted review module that will be part of IMPAC II. This module will allow reviewers to log in through the NIH eRA Commons and post their preliminary critiques and preliminary scores on a secure Web site prior to the review meeting. This system will allow reviewers to preview the other critiques for their assigned applications and will focus the discussions during the review meeting more effectively. In addition, an RPRB support staff

member continues to serve on the trans-NIH User Group for the Committee Management (CM) Module in the new NIH IMPAC II database system, and on the working group designing a Web-based upgrade to the CM module. The CM module is a critical element in preparing for and reporting on peer reviews, and the User Group has identified resolutions for problems and suggested several enhancements to the system.

The **Resources and Training Review Branch** (RTRB), which administers four NCI IRG subcommittees (A, F, G, and H), has the responsibility for multidisciplinary cancer centers, cooperative clinical trials, institutional training and education grants, and career development awards. Staff of this branch also participate in the review of other funding mechanisms within the DEA. Although this change took place in mid-2002, the activities of the branches are described separately.

The reviews conducted by the committees within RTRB are of two types. For the complex, multidisciplinary applications such as cancer center support grants (P30s) and multi-institutional clinical trial cooperative groups cooperative agreements (U10s), the review format generally involves a two-step initial review. The first step of the review has involved either a site visit to the applicant institution or a presentation to a committee in the Washington area. This group of experts serves as a fact-finding body to update the application and to clarify issues in the application based on 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 committee—NCI IRG Subcommittee A for cancer centers and Subcommittee H for clinical trials. The scoring by a parent committee provides for a more uniform evaluation of applications than scoring by individual review teams.

Shortly after his appointment as NCI Director, Dr. von Eschenbach established a P30/P50 Working Group composed of leaders of the cancer research community, who are sensitive to issues facing both reviews and applicants, to study the P30 Cancer Center Support Grant together with the P50 SPORE award to determine how to continue supporting these important methods of funding translational research in a more restricted funding environment. A presentation was made to the Working Group on issues that the Committee is facing as applications for Cancer Center Support Grants grow in length, and there is an increase in numbers of research programs described, shared resources for which funding is proposed, and overall support requested. Means of streamlining the review process, without compromising the rigor of the review, also were discussed with the Committee. A final report is to be presented to the NCAB in early 2003.

Subcommittees F and G review all education, training, and career development grant applications within the DEA. These applications include a large number of different funding mechanisms divided between Subcommittee F (T32, K01, K08, K22) and Subcommittee G (R25, K05, K07, K22, K23, K24). Each of these sets of applications is reviewed in one meeting by the chartered committee supplemented by temporary reviewers with appropriate expertise to ensure that every application is evaluated by experts in its field.

The number of applications being reviewed in Subcommittees F and G has continued to grow. This is due, in part, to the increased number of mechanisms available and to the increased information disseminated about them. In addition to a number of procedures introduced last year to streamline the review process to reduce the burden on the review teams, a third committee is being formed to address unresolved issues.

Another issue of concern with regard to the applications reviewed in Subcommittees F and G was the compression of scores. This made it more difficult for funding decisions to be made because many applications received scores that were very close to each other. In addition, it was misleading to applicants because scores that appeared numerically to be very favorable may in fact have been ranked in a low percentile of all the applications of its type. To address this concern, a new scoring paradigm was developed in which reviewers were asked to rate, across the full rating scale, each application on its merit relative to the full population of applications of its type. Reviewers also were encouraged to rate as unscored any application that they judged to be in the lower half of applications of its type. Although unscored applications received the reviewers' comments, the applications were not discussed at the meeting, thereby shortening its duration.

This problem of score compression and the proposed new procedure was explained to the reviewers in writing and in a teleconference with the reviewers prior to the review meetings, and discussed further at the beginning of the meeting. The median score for both committees improved significantly, with a fuller range of scores used, fewer applications were rated as better than 150, and a sufficient number were rated as unscored to shorten the duration of the meeting.

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) on updating the Clinical Trials Cooperative Group Program Guidelines. In addition, the review of the U10 application submitted by the Children's Oncology Group, which was recently formed through the merger of the four previous pediatric oncology groups, was successfully completed. Challenging to this review was the potential for conflicts of interest, as most pediatric oncology research clinicians in the United States, Canada, and Western Europe are members of the merged group. To reduce the reviewer burden of the current review format, the SRA has been actively involved in the pilot of a new review format for the Clinical Cooperative Groups. Two Cooperative Groups will take part in this pilot, which will involve a direct presentation by the group under review to Subcommittee H after an onsite review of their statistics and data management centers.

The **Special Review and Logistics Branch** (SRLB) organizes and manages peer review primarily for grant applications submitted in response to specific NCI RFAs and most special PARs, and for contract proposals submitted in response to specific Requests for Proposals (RFPs); most of these reviews are conducted by SEPs.

Each year, the National Cancer Institute identifies several broad priority areas that serve as the framework for strategic planning and budget development. **Extraordinary Opportunities for Investment** are areas of discovery that build upon the most important recent developments in knowledge and technology and hold promise for making significant progress against all cancers. **NCI Challenges** are areas of emphasis that focus investment on improving the resources and mechanisms available to support research, furthering the preparation of the people needed to conduct research, enhancing access to research information and technology, and maximizing the sharing of discovery and collaboration among researchers and clinicians. The "opportunities" and "challenges" are articulated in the NCI Bypass Budget that is sent to the President each year. For the FY2002 Bypass Budget, the Institute identified the following:

Six areas of **extraordinary opportunities**:

- Genes and the Environment
- Cancer Imaging
- Defining the Signatures of Cancer Cells: Detection and Diagnosis
- Molecular Targets of Prevention and Treatment
- Research on Tobacco and Tobacco-Related Cancers
- Cancer Communications.

In addition, eight **NCI challenges** also were highlighted:

- Investigator-Initiated Research
- Centers, Networks, and Consortia
- National Clinical Trials Program
- Informatics and Information Flow
- Emerging Trends in Cancer
- Cancer Training and Career Development
- Quality of Cancer Care (new for 2002)
- Reducing Cancer-Related Health Disparities (new for 2002).

These “opportunities” and “challenges” translated into a variety of initiatives in FY2002, not only for academic research centers, but also for the small business community. Following approval by the NCI Executive Committee and BSA (unlike RFAs, PAs are not approved by the BSA), program staff—assisted by the Program Coordination and Referral Branch—generate the initiatives that are published in the *NIH Guide for Grants and Contracts*.^{*} In an RFA, a specific, published dollar amount is set aside by the Institute, while in an Institute PAR (Institute Reviewed Program Announcement) there is no dollar set-aside and no requirement for BSA review. The reviews of all RFAs and PARs are managed by the SRAs of the DEA. **Tables 7** through **12** summarize the RFAs, PAs, and PARs published and the RFAs, PAs, and Master Agreements reviewed by the SRLB in FY2002. **Table 12** represents those applications submitted in response to PAs, the review of which is shared by SRLB, RPRB, and RTRB.

In February 2002, the NCAB concurred with the review results of 44 SRLB-reviewed initiatives, 41 of which were directly related to the Bypass Budget; in June 2002, 20 of 26 RFA/PAR initiatives were related to the Bypass Budget; and in September 2002, 28 of 31 RFA/PAR initiatives were related to the Bypass Budget. In considering the specific initiatives, the breakdown for all of FY2002 is as follows:[‡]

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

† Two multiproject initiatives were part of the RFAs.

‡ Tables 10 and 11 identify the “challenges” and “opportunities” as they relate to specific RFAs and PAs for FY2002.

<u>Research Opportunities[†]</u>	<u># of RFAs/PARs</u>
01 Cancer Imaging	0/7
02 Defining the Signatures of Cancer Cells.....	2/14
03 Molecular Targets of Prevention and Treatment	0/6
04 Research on Tobacco and Tobacco-Related Cancers	3/1
05 Cancer Communications.....	3/0
<u>Challenge Initiatives</u>	<u># of RFAs/PARs</u>
C1 Investigator-Initiated Research	0/2
C2 National Clinical Trials Program in Treatment/Prevention.....	10/10
C3 Studying Emerging Trends in Cancer	2/7
C4 Cancer Training and Career Development	0/8
C5 Quality of Cancer Care.....	1/0
C6 Reducing Cancer-Related Health Disparities.....	4/0

Breadth of Peer Review

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

Highlights of SRLB reviews for FY2002 include two major initiatives. The first was the simultaneous release of five RFAs relating to the identification of molecular targets for cancer therapy. Because of the extent of the initiatives, three SRAs were assigned to conduct the peer review. By coordinating the review meeting dates, the SRAs were able to recruit not only for their own meetings, but also for the meetings of their two collaborating colleagues. An Internet-accessible database that listed all of the contacted reviewers, minimized the repetitive calling of the same potential reviewer.

The other significant project was the BAA (a contract initiative) for Novel Technologies. This initiative was modeled after the long-range research projects of the Defense Advanced Research Projects Agency (DARPA), one of which developed into the Internet. To elicit participation of technology-oriented firms, measures were applied in accordance with the Procurement Integrity Act regarding the confidentiality of the information submitted. This made the initiative a

hybrid—part investigator-initiated research and part contract—which complicated the review process and necessitated the use of a waiver from the usual conflict-of-interest provisions.

In addition to the BAA described above, the Division reviewed nine RFPs (contract initiatives) and two Master Agreement Announcements (MAAs). RFPs are full proposals in which 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. The MAA is a mechanism by which offerors describe their capability to perform specified tasks. The review panel then determines whether they are qualified to perform the described tasks. Qualified offerors then are placed in a pool (of qualified offerors) from which the NCI can draw upon to perform tasks relevant to the MAA. The review of an RFP proposal is approximately five times more complicated than that of an MAA proposal. The list of RFPs and MAAs reviewed in FY2002 is shown in **Table 17**.

Scanning of Applications Into Electronic Records To Increase Efficiency

The DEA application scanning project highlighted in last year's report has been completed. Applications submitted for the February 1, 2002, and later receipt dates were scanned by a central facility for all NIH Institutes and Centers. These electronic records are now added to the IMPAC II dataset, creating a more complete centralized, enterprise-wide, information repository. The DEA continues to fund some scanning for contract proposals that are not part of the IMPAC II dataset.

Grant Funding

In **Table 13**, a comparison is made of the average cost and number of NCI R01 and P01 grants awarded in FY2000, 2001, and 2002 according to extramural division. **Table 14** presents a summary for FY2002 of total funding of NCI grant awards by mechanism. Trends in grant funding according to scientific area are described on page 25 and in **Tables 15 and 16**.

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)** Office, residing within the Committee Management Office (CMO), supports the NCI peer-review process by compensating consultants for their services on the NCI IRG or SEPs and by reimbursing them for their travel and other expenses (see **Appendices B and C**). The SREA Office also approves and processes payments for other activities related to review, including contract-supported ticketing services. During FY2002, the SREA Office authorized 3,215 consultant reimbursement vouchers and 578 nonconsultant other vouchers for travel ticketing, meeting room rental, and teleconferences.

During FY2002, the SREA Office continued to work with a contractor to further develop the program that allowed retrieval of Financial Operating Plan (FOP) data from IMPAC II (an NIH-wide committee management database). The IMPAC II Committee Management Voucher Module is now fully operational, and the SREA Office utilizes IMPAC II for the generation of all consultant and nonconsultant voucher reimbursements, FOPs, and Internal Revenue Service Form 1099 reports. Also, during FY2002, the SREA Office worked with the contractor to develop a program that will allow retrieval of financial and consultant reimbursement information from IMPAC II and streamline the reconciliation process. This process is in development. In addition, the SREA Office and the contractor are working with World Travel Services to develop a streamlined billing process to expedite the processing of travel invoices and eliminate the duplicative verification process that in the past caused severe backlogs.

The SREA Coordinator worked with other NIH Institute SREA Offices to participate in the planning and establishment of the first NIH SREA Coordinating Committee. Their goal was twofold: (1) to act as an advisory body to the Director, Office of Federal Advisory Committee Policy (OFACP), senior NIH Management officials, and the SREA community on SREA policy; and (2) to ensure consistent administration of SREA policies and procedures across the NIH. This group meets monthly to discuss SREA procedures and is presently working on the first Standard Operating Procedure (SOP) for the NIH SREA community to standardize procedures and provide guidance and consistency within the SREA offices and among all of the Institutes.

In addition, the SREA Office 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 IRG, SEP, and SREA.

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

DEA's Role in Advisory Activities

Beyond its central role in coordinating the peer review and referral of grants, perhaps the most far-reaching role the DEA plays across the NCI is the coordination and administration of NCI's eight chartered Federal advisory committees (see **Appendix B**). The activities of these advisory bodies are coordinated by the **Office of the Director**, DEA, and the **Committee Management Office**, DEA. A primary responsibility of the DEA is coordination of the activities of the NCAB, whose members are appointed by the President and whose responsibilities include conducting the second-level review of grants and cooperative agreements, as well as advising the NCI Director on policy for the conduct of the National Cancer Program. The DEA also coordinates administration of the BSA, the body responsible for the oversight and concept review of the extramural programs and initiatives of the NCI. As such, the DEA plays a major role in the development and issuance of PAs, PARs, and RFAs, the major extramural program initiatives used by the NCI. The DEA Director serves as Executive Secretary to the NCAB, and the Deputy Director, DEA, serves as Executive Secretary to the BSA. (See **Appendices D and E** for highlights of the activities of these Boards in FY2002.)

Each year, the NCI relies on hundreds 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 FY2002, 2,465 consultants were asked to serve as standing, temporary, and ad hoc members on NCI's advisory Boards and groups. These consultants participated in 125 committee meetings conducted by NCI staff. There were 142 site visits conducted under the NCI IRG subcommittees and Board of Scientific Counselors (BSC). The DEA performs a variety of administrative and management functions in support of these advisory committees and their members. Under the various chartered committees, working groups were formed to address several important areas of cancer research related to diverse populations, and cancer advocacy, treatment, prevention, communication, and education. (See **Appendix C** for a list of 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 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 affected by NCI policies. To this end, the NCI has established BSA-sponsored "NCI Listens" sessions at national association meetings (see **Appendix B**, p. 49). BSA members and NCI staff invite conference participants to join them for

these sessions. A brief presentation is given by NCI staff emphasizing the status of grant funding, the Bypass Budget, and the status of several new initiatives. The brief presentation is followed by an open question-and-answer period. The NCI is committed to providing a written response to the scientific society hosting the meeting concerning issues raised during the session. The BSA hopes that conference participants will take advantage of this opportunity to raise their concerns.

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

NCI Initial Review Group. The IRG, composed of seven 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 committees responsible for initial peer review.

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

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

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

Committee Management Activities

The **Committee Management Office (CMO)** is the DEA administrative unit that coordinates the general administration of the NCI's chartered Federal advisory committees. The CMO provides advice related to the provisions of the Federal Advisory Committee Act and other Federal, Department of Health and Human Services (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 provides 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 meetings; and facilitates committee-related travel.

CMO staff continue to participate in various NIH-wide Information for Management, Planning, Analysis, and Coordination (IMPAC II) software application user group meetings and pilots, including participation on the NIH Committee Management-Joint Application and Development Group (CMJAD) slated to provide advice on the redesign of the Committee Management Module. The IMPAC II Module is being redesigned as a Web-based application and will be a more user-friendly and intuitive system. In FY2002, the CMO continued to develop in-house IMPAC II training information, developed new guidelines geared towards assisting NCI staff in efficiently using the IMPAC II system, and conducted training for users of the system.

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 and vouchering and 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 Offices of Liaison Activities, and NCI management on the use of working groups associated with chartered committees. The CMO was actively involved in the guidance and support of various NCI working groups and NIH employee working groups related to the IMPAC II Module, the Data Quality and Control Initiative, and the SREA Coordinating Committee. Additionally, CMO staff participated in NIH Committee Management work groups and the Committee Management Users Group charged to redesign the IMPAC II Module.

Extramural Policy and Program Development

An important part of DEA's mission is providing effective and timely coordination of program initiatives from the initial concept stage through publication of RFAs, PAs, and RFPs and, finally, through the peer review of grant applications and contract proposals. The NCI's activity in this arena has grown, in proportion to the generous budget increases received by the Institute, to the point where a central unit, the **Office of Referral, Review, and Program Coordination (ORRPC)**, was established within DEA for coordination of program development, issuance, and review activities. The Associate Director, Ms. Diane Bronzert, serves as the overall coordinator for peer review functions for the Institute. ORRPC is responsible for (1) the coordination and management of review activities for grants, cooperative agreements, and contracts for the Institute; (2) the development of NCI policies and procedures as related to review of grants and contracts; (3) coordination of the second level of review with the National Cancer Advisory Board; (4) development of referral guidelines and grant referral to NCI programs; and (5) coordination of the development, preparation, clearance, and issuance of special NCI initiatives, including program announcements, requests for applications, and extramural policy statements through the *NIH Guide to Grants and Contracts*. ORRPC coordinates the activities of the Program Coordination and Referral Branch and the three review branches, Special Review and Logistics Branch, Resources and Training and Review Branch, and Research Programs Review Branch. At each stage of the development of new initiatives, DEA's ORRPC facilitates this coordination across the NCI's extramural Divisions, other NIH Institutes, and other relevant agencies of the Federal Government.

The DEA manages and coordinates the BSA, which is charged with the concept review of all new and reissued RFAs and RFPs (see **Appendix E**). In addition, the DEA tracks new initiatives proposed by other Institutes and agencies to consider possible NCI participation. The success of this operation is dependent on the development of clear Institute referral guidelines, also a DEA responsibility. Before the publication of an initiative, the DEA negotiates with the CSR, DEA review units, and other offices to coordinate scheduling, timelines, and workloads. Concepts for PAs do not require BSA approval, but are considered instead by the NCI Extramural Division Directors Committee.

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

Tracking and Coordinating Program Activities

The program coordination responsibilities of the DEA, in cooperation with NCI Extramural Program Divisions, extend to the development of all new extramural program guidelines. The DEA manages this activity in communication with the originating NCI program and the NIH Office of Extramural Research. To maintain consistency and completeness, all new NCI guidelines are centrally edited and cleared through the DEA before being forwarded for NIH approval and publication in the *NIH Guide for Grants and Contracts*. Because most program staff have limited experience in crafting an initiative in the precise format required by the Public Health Service (PHS) rules and regulations, the services provided by the DEA in preparing such announcements materially speeds their release, often eliminating a month or more from the process. Another program coordination activity is the development of referral guidelines for assignment of grant applications to the NCI. These guidelines, included in the *Referral Guidelines for Funding Components of PHS*, are critical to the development of program initiatives across the NIH, as well as to the prompt referral of unsolicited grant applications to the NCI. These guidelines differ from the internal referral guidelines, which also are coordinated by the ORRPC. The internal referral guidelines are vital to the prompt referral of grant applications to the appropriate NCI program area.

In addition to program coordination, the DEA has developed and maintained a Web-based information tracking system to provide staff with all essential information on program initiatives, from concept through publication of the full text, with the ultimate goal of tracking outcomes. In addition to the Intranet version for NCI staff, extramural scientists have access to an Internet version of published initiatives.

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 operates a computer support help desk 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 FY2002, the following specific accomplishments are highlighted:

- Enhanced the Extramural Science Administrator Training Tracking System (ESATTS) to permit NCI extramural staff the ability to enter their training data
- Completed redesign and development of a new DEA Intranet Web Site, which includes a search engine
- Developed a prototype Web-based software application for use by DEA review staff to enable the merging of IMPAC II data into MS Word or Corel WordPerfect documents
- Converted the Fiscal-Linked Analysis of Research Emphasis (FLARE) application to Java and added several features, which has resulted in a higher level of stability and performance. FLARE is being used by RAEB for coding grants, searching, and reporting.
- Completed development of a Web-based application to automate the process of assigning Special Interest Category (SIC) and Organ SITE codes for U10 and U30 grants
- Developed a Compact Disc version of the IRG reports for use by DEA staff at NCAB meetings and for archival purposes
- Developed an application to search PDF files on CD containing the listing of names and biographical information on members of the Consumer Advocates in Research and Related Activities (CARRA)
- Developed a Web-based application to allow Review Staff to create customized CDs containing grant applications and other materials for the reviewers. This has helped to reduce the volume of paper being sent to the reviewers.
- Created a Project Management and Systems Documentation Web Site to enhance communications among AISB Staff and Contractors.

- Enhanced the annual BSA report on RFA and PA Concepts to include additional information and graphics.

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
- NIH Electronic Council Book Steering Committee
- IMPAC II Joint Applications Development and Critical Design Review Groups
- NIH Automatic Data Processing Extramural Coordination Committee.

Portfolio Tracking and Analysis

The DEA's **Research Analysis and Evaluation Branch (RAEB)** serves as the officially designated locus and contact for scientific information associated with NCI-supported research. The NCI needs consistent budget-linked scientific information across all its scientific programs to facilitate analysis of the Institute's portfolio, provide a basis for budget projections, and serve as a resource for the NCI to 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 daily requests for information from NCI staff, the broader NIH community, and requesters worldwide. The Branch also performs specialized custom searches on request.

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. The number of categories assigned to an individual grant varies from fewer than 10 to more than 50. SIC Codes are meant to describe in a consistent way the major scientific disciplines that are of stated or growing interest to the NIH, DHHS, Congress, and the public. SIC Codes are added throughout the year to retain currency with these interests. In FY2002, RAEB added new SIC Codes for Breast Cancer Early Detection, Childhood Leukemia, Chronic Myeloproliferative Disorders, Food Safety, Pediatric Research, and Virus-SV40. The single SIC Code Virus-Hepatitis B & C was divided into two separate SIC Codes. A critical characteristic of these data is comparability from one fiscal year to the next. Changes in funding between FY2001 and FY2002 for selected SIC Codes and organ sites are presented in **Tables 15 and 16**. In FY2002, RAEB indexers profiled more than 2,900 unfunded applications. The process of indexing unfunded applications, begun in FY1999, has greatly expanded the potential for analysis of the major categories found in these applications. RAEB staff profiled more than 2,700 funded grants and contracts in FY2002. The Branch now documents researchers' use of radioisotopes.

The Technical Operations staff manage RAEB Fiscal-Linked Analysis of Research Emphasis (FLARE) grants management database, assuring the reliability and complete-ness of its contents. The staff continued to work with contractors and AISB to refine the FLARE computer application in FY2002, managed the FLARE module for computerized calculation of indexing for Clinical Cooperative groups, Community Clinical Oncology Program, and P30 Centers grants, and assumed a number of maintenance tasks from the FLARE contractor in FY2002, including rollover of grant data from FY2002 to FY2003.

Highlights of FY2002 include:

- RAEB is now responsible for indexing all extramural AIDS grant applications.
- RAEB indexers profiled more than 2,900 unfunded applications.
- RAEB staff indexed more than 2,700 funded grants and contracts.
- RAEB added new Special Interest Categories:
 - Breast Cancer Early Detection

- Childhood Leukemia
- Chronic Myeloproliferative Disorders
- Food Safety
- Pediatric Research
- Virus-SV40
- RAEB now documents the use of radioisotopes in connection with grant applications.
- RAEB, with AISB, assumed most maintenance functions of the FLARE computer application.

Special Activities in the Office of the Director, DEA

In addition to managing and coordinating the various activities described in this report, the DEA **Office of the Director** (OD) has specific additional responsibilities to the NCI. First, the OD serves as 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 DEA serves as the coordinating center for submission of applications for special NIH-wide awards such as the James A. Shannon Director's Award, the Academic Research Enhancement Awards (AREAs), the Institutional Development Awards (IDeAs), and the Research Enhancement Awards Program (REAP).

Second, the DEA OD plays a critical role in the NCI's efforts 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 NCI Revitalization Act of 1993 mandates that women and members of minority groups be included as subjects in each research project, unless there are clear scientific or ethical reasons that inclusion is inappropriate with respect to the health of the subject or the purpose of the research. Administrative procedures allow NCI staff to resolve inclusion problems after initial review of applications that are otherwise highly meritorious. In the event a grantee believes the proposed study does not warrant or require inclusion of women or minority groups, he or she can apply for a waiver of this requirement. The Director of the DEA has the authority to grant this waiver. In FY2002, 69 applications with preliminary bars to award were received by the DEA. Through corrective action, all were brought into compliance before award.

Third, 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 scientific misconduct, misuse of human and animal research subjects, financial mis-management, and financial conflict of interest involving NCI-supported research. Thus, the DEA Director functions as the NCI Research Integrity Officer and receives from the appropriate sources all documents related to misconduct for transmittal and reporting to relevant sources. In FY2002, seven cases of alleged scientific misconduct were opened by the Office of Research Integrity and referred to the Director, DEA. Nine cases were closed, and two were found to involve misconduct.

Other major policy developments managed by the Office of the Director, DEA, in FY2002 included the implementation and rollout of issues as diverse as:

- A76 Study of extramural support positions
- Implementation of data-sharing requirements on awards over \$500,000 D.C.
- Study of R21 and R03 grant award mechanisms
- Evaluation of policies for grants supporting new R01 investigators
- Control of cost increases on Type 2 competing continuation requests
- Modifications to NCI Accelerated Executive Review of R01 applications
- Implementation of policies governing human embryonic stem cell research
- Recognition of NCI R37 Merit Awardees

- Funding Policy for research project grant mechanisms
- Evaluation of NCI large-scale award mechanisms for IOM Study.

A major policy undertaking was initiated in FY2002 in conjunction with the duties of the Director as Executive Secretary of the NCAB. This was to launch, at the direction of the Director, NCI, a review of the NCI P30 Cancer Center Support Grant and the P50 Specialized Center of Research Excellence (SPORE) programs. A blue ribbon panel co-chaired by Drs. Arthur Nienhuis and Joseph Simone was established to examine the utility and efficacy of these key programs, and how best to position them to play a leading role in the 21st century in continuing to increase the pace of discovery, development, and delivery of the promise of cancer research. The final report is expected by spring of 2003. Information can be found on the NCI Web Site at: <http://deainfo.nci.nih.gov/advisory/ncab/p30-p50/index.htm>.

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.
- Coordinates and manages the NCAB and the BSA.
- Initiates, coordinates, and implements Institute policies and procedures relating to grants and contracts review.
- Implements the NCI policies regarding extramural research integrity.
- Represents the NCI on extramural policy issues to the NIH.
- Advises the Executive Committee, NCI, on extramural implementation strategies.
- Coordinates with the NIH for all NCI extramural staff training requirements.

Marvin Kalt, Ph.D.Director
Paulette Gray, Ph.D.....Deputy Director and Associate Director,
Extramural Applications
Diane BronzertAssociate Director, Referral, Review, and Program
Coordination
Cedric Long, Ph.D.Assistant Director
Christopher Hatch, Ph.D.Senior Assistant to the Director
Elise KreissSenior Program Analyst
Patricia MarekProgram Analyst
Carolyn Craig*Program Analyst
Bernadette MonacelliSecretary
Donyelle Parrish.....Secretary
Wendy JonesSecretary
Jasen Converse.....Receptionist
Joshua Rhoderick*Receptionist

* Joined in 2002.

Office of Referral, Review, and Program Coordination, OD

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

Diane BronzertAssociate Director

Catherine Battistone.....Program Analyst

Alma Carter.....Technical Assistant

Angela Greer.....Secretary

Committee Management Office, OD

- Coordinates functionally related advisory activities across the Institute 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 consultation services to NCI staff on administrative and technical aspects of committee management; 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 is correctly entered into the database for preparation and submission of required annual reports to the President, DHHS, and NIH; provides logistical support for NCAB and BSA meetings; 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; reimbursing consultants for travel and other expenses; and approving and processing payments for other activities related to review such as meeting room rental and teleconferencing.

Claire Benfer*Committee Management Officer
Linda Coleman.....Committee Management Specialist
Andrea CollinsDeputy Committee Management Officer
Earline JacksonAdministrative Technician
Hing Lee.....Accounting Technician
April Mellinger*Committee Management Specialist
Kerry PeaslandProgram Specialist
Lisa RustinCommittee Management Specialist

* Joined in 2002.

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 to 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

Kenneth Bielat, Ph.D.Scientific Review Administrator
Jennifer DeGroffProgram Support Assistant
Juana DiazProgram Support Assistant
Kimberly Farrall-Cragg*Program Support Assistant
Paul GallourakusProgram Support Assistant
Angela Gantt†Review Technical Assistant
Sherwood Githens, Ph.D.Scientific Review Administrator
Madeleine HemmingsProgram Support Assistant
Marcus Johnson‡Review Technical Assistant
C. Michael Kerwin, Ph.D., M.P.H.Scientific Review Administrator
Sarah King-MitchellContracts Technical Assistant
Allonda Lord†Program Support Assistant
Gerald Lovinger, Ph.D.Scientific Review Administrator

* Left in 2002.

† Joined in 2002.

‡ Contractor.

John Makulowich*Program Support Assistant
 Timothy Meeker, M.D.Scientific Review Administrator
 Laura MonzonProgram Support Assistant
 Thu NguyenProgram Support Assistant
 Lalita Palekar, Ph.D.Scientific Review Administrator
 Joyce Pegues, Ph.D.Scientific Review Administrator
 Phuong PhamProgram Analyst
 Mary Jane Slesinsky, Ph.D.Scientific Review Administrator
 Latasha Stevens†Review Technical Assistant
 Iliana Valencia†Review Technical Assistant
 Thomas Vollberg, Ph.D.Scientific Review Administrator

Review Processing and Distribution Unit

Barbara Beckwith*Grants Technical Assistant
 Adrian BishopMail and File Clerk
 Robert KruthMail and File Clerk
 Clara MurphyProgram Assistant
 Michael ShatarskyGrants Management Analyst

* Left in 2002.

† Contractor.

Program Coordination and Referral Branch

- Serves as the information and coordinating point within the NCI for the clearance and tracking of all NCI extramural program initiatives.
- Coordinates the shared interests of all trans-NCI program initiatives through the CSR and other NIH Institutes and Centers.
- Coordinates clearance and publication of all RFAs, PAs, and Notices in the *NIH Guide for Grants and Contracts*.
- Coordinates the clearance of all NCI grant mechanism guidelines and policies through the NIH Office of Extramural Research.
- Serves as the NCI contact point for approval of the use of cooperative agreement mechanisms and for conversion of grants to cooperative agreements.
- Serves as liaison to the CSR, NIH, to ensure appropriate referral of applications to the Institute and their distribution and assignment to appropriate program units within the NCI.
- Coordinates development of referral guidelines within the NCI for internal and external use.
- Receives and distributes advance copies of applications for Program Project grants and applications submitted in response to RFAs and PAs, and coordinates this information with review and program staff.
- Receives letters of intent from principal investigators intending to submit large budget grants and from prospective R13 (conference grants applicants). Maintains a database of prospective large budget grants applicants.
- Processes ARAs (Awaiting Receipt of Application) through the NOW system to CSR.
- Automatically refers amended and competing continuation (Type 2) applications to the cancer activity that accepted the previously submitted application.
- Serves as the primary NCI information referral point for the extramural scientific community on a broad range of subjects, including grant guidelines, application information, new initiatives announced as RFAs or PAs, and the review process.
- Assists the extramural community in navigating the NIH and NCI Web pages to obtain current information, forms, and guidelines.
- Directs applicants to the appropriate Program Directors and SRAs for information on 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.
- Works with NCI program staff to address unresolved review and referral issues with the CSR and other Institutes and Centers.
- Coordinates requests from program staff for application status changes and for acceptance of grant assignments.

Ray Bramhall, Ph.D.Chief (CSR Referral Liaison)
David ContoisReferral Officer
Rashmi Gopal-Srivastava, Ph.D.RFA/PA Coordinator
Leota Hall.....Referral Officer
Florence Hoffmann/Pedersen.....Referral Officer (CSR Referral Liaison)
Natacha P. LassègueProgram Analyst
Michelle Trout*Program Support Assistant
Deborah BielatProgram Support Assistant

* Left in 2002.

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

Rosemary Cuddy.....Branch Chief

Marilyn GastonDeputy Branch Chief

Inquiry and Reporting Team

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

Marilyn GastonTeam Leader

Stacy Harper-AvillaTechnical Information Specialist

Research Documentation Team

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

Vacant Team Leader
Lisa Krueger* Biologist
Edward Kyle Biologist
Nancy Lohrey Biologist
Tyrone Wilson Biologist

Technical Operations Team

- Oversees Information Resource Management (IRM) for the Branch.
- Manages RAEB's FLARE grants documentation and indexing database, ensuring reliability and completeness of its contents.
- Performs computerized searches for ad hoc information requests to the Branch.
- Tracks documentation for grant applications, summary sheets, contract proposals, etc., in both physical and computerized formats.
- Prepares documentation for indexing by the Research Documentation Section.
- Maintains and updates archival document files, including transferring physical files to computer media.
- Serves as the liaison with contractors and AISB to resolve FLARE computer application problems for the Branch.
- Works with contractors and AISB to refine RAEB's computer applications to meet the Branch's needs.
- Manages RAEB's personnel support functions.

Dianne Ostrow Team Leader
Gail Blaufarb Technical Information Specialist
Linda Brown Computer Assistant
David Hyde* Technical Information Specialist

* Joined in 2002.

Applied Information Systems Branch

- Satisfies the information requirements of the Division and coordinates 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 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 Core Services of the NCI.
- Formulates DEA-specific office automation policy.
- Provides staff/lead users with technical support and training for DEA applications.
- Coordinates general use/support and training with Core 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.

James W. SeachChief

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 FischettiTeam Leader
Deborah Buranich.....Information Technology Specialist
Charles Conley.....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 allow openness and collaboration in accomplishing the information initiatives of the Division.
- Works with staff to ensure the current utility and linkages of documents placed on the Web.

Amir Sahar-Khiz.....Team Leader
Kichelle GreenManagement Assistant
Lorrie Smith.....Information Technology Specialist
Elaine Taylor.....Information Technology Specialist

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
Courtney Banks.....Program Support Assistant
Renee Brooks.....Program Support Specialist
Mary Fletcher, Ph.D.....Scientific Review Administrator
Monica Green.....Program Support Assistant
Michelle Higginbottom†Review Technical Assistant
Tiffany Jenifer.....Program Specialist (Instructor)
Willie JohnsonProgram Specialist
Deneen MattocksProgram Support Assistant
William Merritt, Ph.D.....Scientific Review Administrator
Bratin Saha, Ph.D.....Scientific Review Administrator
Joyce SimmsProgram Support Assistant
Michael Small, Ph.D.....Scientific Review Administrator
Cheryl Smith.....Program Support Assistant
Patricia Stream†Review Technical Assistant
Kimberly Walsh†Review Technical Assistant
Peter Wirth, Ph.D.....Scientific Review Administrator
Brian Wojcik, Ph.D.....Scientific Review Administrator

† Contractor.

Resources and Training Review Branch

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

David E. Maslow, Ph.D.Chief and Scientific Review Administrator
Mary Bell, Ph.D.Scientific Review Administrator
Robert Bird, Ph.D.Scientific Review Administrator
Danielle BrownProgram Support Assistant
Gail Bryant, M.D.Scientific Review Administrator
Linda EdwardsGrants Technical Assistant
Stephanie Glynn[‡]Review Technical Assistant
Deborah Jaffe, Ph.D.Scientific Review Administrator
Raymond Petryshyn, Ph.D.Scientific Review Administrator
Linda Southworth.....Program Support Assistant
Harvey Stein, Ph.D.Scientific Review Administrator
Zenia VilenskyLead Grants Technical Assistant
Chanee WilliamsGrants Technical Assistant

[‡] Contractor.

Appendix A: Glossary of Acronyms

ACRIN	American College of Radiology Imaging Network	DARPA	Defense Advanced Research Projects Agency
AISB	Applied Information Systems Branch	DCB	Division of Cancer Biology
APR	Accelerated Peer Review	DCCPS	Division of Cancer Control and Population Sciences
ARA	Awaiting Receipt of Application	DCEG	Division of Cancer Epidemiology and Genetics
AREA	Academic Research Enhancement Award	DCP	Division of Cancer Prevention
ATA	Academic/Teacher Award	DCTD	Division of Cancer Treatment and Diagnosis
BAA	Broad Agency Announcement	DEA	Division of Extramural Activities
BSA	Board of Scientific Advisors	DEAIS	DEA Information System
BSC	Board of Scientific Counselors	DHHS	Department of Health and Human Services
CARRA	Consumer Advocates in Research and Related Activities	ER	Estrogen Receptor
CCR	Center for Cancer Research	ERA	Electronic Research Administration Training Tracking System
CCSG	Cancer Center Support Grant	ESATTS	Extramural Science Administrator Training Tracking System
CD	Compact Disk	FIRST	First Independent Research Support and Transition Award
CECCRS	Centers of Excellence in Cancer Communications Research	FLARE	Fiscal Linked Analysis of Research Emphasis
CISNET	Cancer Intervention and Surveillance Monitoring Network	FOP	Financial Operating Plan
CIT	Center for Information Technology	GRB	Grants Review Branch
CM	Committee Management	IC	Institute/Center
CMO	Committee Management Office	ICMIC	In Vivo Cellular and Molecular Imaging Center
CSR	Center for Scientific Review	IDeA	Institutional Development Award
CTEP	Cancer Therapy Evaluation Program	IMPAC	Information for Management, Planning, Analysis, and Coordination – database
CURE	Continuous Umbrella of Research Experience		

Appendix A: Glossary of Acronyms

IOM	Institute of Medicine	PHS	Public Health Service (DHHS)
IRG	Initial Review Group	PRG	Progress Review Group
IRM	Information Resources Management	RAEB	Research Analysis and Evaluation Branch
ISTB	Information Services Technology Branch	RAID	Rapid Access to Intervention Development
JAD	Joint Application and Development	REAP	Research Enhancement Awards Program
MAA	Master Agreement Announcement	RFA	Request for Applications
MBRS	Minority Biomedical Research Support	RFP	Request for Proposals
MERIT	Method to Extend Research in Time	RO	Referral Office
NCAB	National Cancer Advisory Board	RPG	Research Program Grant
NCI	National Cancer Institute	RPRB	Research Programs Review Branch
NCRR	National Center for Research Resources (NIH)	RTRB	Resources and Training Review Branch
NIH	National Institutes of Health	RUG	Review Users' Group
NOW	NCI Online Workplace	SBIR	Small Business Innovation Research
NRSA	National Research Service Award	SBRB	Special Review and Resources Branch
NTROI	Network for Translational Research in Optical Imaging	SEER	Surveillance, Epidemiology and End Results
OD	Office of the Director	SEP	Special Emphasis Panel
OER	Office of Extramural Research (NIH)	SIC	Special Interest Category
OFACP	Office of Federal Advisory Committee Policy	SOP	Standard Operating Procedure
OPERA	Office of Policy for Extramural Research Administration (NIH)	SPORE	Specialized Program of Research Excellence
ORRPC	Office of Referral, Review, and Program Coordination	SRA	Scientific Review Administrator
PA	Program Announcement	SREA	Scientific Review and Evaluation Award
PAR	Reviewed Program Announcement	SRLB	Special Review and Logistics Branch
PCRB	Program Coordination and Referral Branch	STTR	Small Business Technology Transfer Research

Appendix B: List of Chartered Committees, FY2002

President's Cancer Panel

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LaSalle D. Leffall, Jr., M.D. Howard University College of Medicine, Washington, DC

Past Chair & Member

Harold P. Freeman, M.D. North General Hospital, New York, NY

Members

Lance E. Armstrong Lance Armstrong Foundation

Dennis J. Slamon, M.D., Ph.D. University of California at Los Angeles, School of Medicine

Frances M. Visco, Esq. National Breast Cancer Coalition, Washington, DC

Executive Secretary

Maureen O. Wilson, Ph.D. National Cancer Institute

National Cancer Advisory Board

Chair

John E. Niederhuber, M.D. University of Wisconsin School of Medicine

Past Chair

Phillip A. Sharp, Ph.D. Massachusetts Institute of Technology

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Richard J. Boxer, M.D. Medical College of Wisconsin

Moon S. Chen, Jr., M.P.H., Ph.D. University of California, Davis Cancer Center

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

Stephen C. Duffy American Academy of Facial Plastic and Reconstructive Surgery

Ralph S. Freedman, M.B.B.Ch., Ph.D. The University of Texas M.D. Anderson Cancer Center

James H. French, Jr., M.D. The Center for Plastic Surgery

Elmer E. Huerta, M.D., M.P.H. Washington Hospital Center

Howard K. Koh, M.D. Massachusetts Department of Public Health

Frederick P. Li, M.D. Dana-Farber Cancer Institute

Susan M. Love, M.D. University of California at Los Angeles, School of Medicine

The Honorable James E. McGreevey Mayor, Woodbridge Township, New Jersey

Sandra Millon-Underwood, R.N., Ph.D. University of Wisconsin at Milwaukee

Appendix B: List of Chartered

Arthur W. Nienhuis, M.D.	St. Jude Children's Research Hospital
Larry Norton, M.D.	Memorial Sloan-Kettering Cancer Center
Amelie G. Ramirez, Dr.P.H.	Baylor College of Medicine
Ivor Royston, M.D.	Forward Ventures, San Diego, CA
Lydia G. Ryan, M.S.N., P.N.P.	AFLAC Cancer Center
Ellen L. Stovall	National Coalition for Cancer Survivorship

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The Honorable J. Jarrett Clinton, M.D., M.P.H.	U.S. Department of Defense
Lester Crawford, D.V.M., Ph.D.	U.S. Food and Drug Administration
Thomas L. Garthwaite, M.D.	Department of Veterans Affairs
John Howard, M.D., M.P.H., J.D., LL.M.	National Institute for Occupational Safety and Health
Rachel Levinson.	Office of Science and Technology Policy, The White House
Thomas Moore, J.D.	Consumer Product Safety Commission
Kenneth Olden, Ph.D.	National Institute of Environmental Health Sciences, NIH
Ari Patrinos, Ph.D.	U.S. Department of Energy
The Honorable Tommy Thompson.	Department of Health and Human Services
The Honorable Christine Todd Whitman	Environmental Protection Agency
Elias A. Zerhouni, M.D.	National Institutes of Health

Alternates to Ex Officio Members of the National Cancer Advisory Board

Stephen K. Akiyama, Ph.D.	National Institute of Environmental Health Sciences, NIH
Michael A. Babich, Ph.D.	U.S. Consumer Product Safety Commission
Raye-Ann Dorn, M.P.H.	U.S. Department of Veterans Affairs
Peter Kirchner, Ph.D.	U.S. Department of Energy
Ruth L. Kirschstein, M.D.	National Institutes of Health
Alison Martin, M.D.	U.S. Food and Drug Administration
Hugh W. McKinnon, M.D.	U.S. Environmental Protection Agency
T. G. Patel, M.D.	U.S. Department of Veterans Affairs
Richard Pazdur, M.D.	U.S. Food and Drug Administration
John M. Powers, M.D.	U.S. Department of Defense
George Ruby, M.D.	U.S. Department of Labor
Anita L. Schill, Ph.D., M.P.H., M.A., R.N.	National Institute for Occupational Safety and Health
Eugene Schwartz, M.D.	U.S. Department of Labor

Executive Secretary

Marvin R. Kalt, Ph.D.	National Cancer Institute
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Appendix B: List of Chartered Committees, FY2002

NCI Advisory Committee to the Director

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

Members

Frederick R. Appelbaum, M.D. Fred Hutchinson Cancer Research Center

Waun Ki Hong, M.D. The University of Texas M.D. Anderson Cancer Center

Michael B. Kastan, Jr., M.D., Ph.D. St. Jude Children's Research Hospital

Barbara K. LeStage, M.S.H.P. American Cancer Society

John E. Niederhuber, M.D. University of Wisconsin School of Medicine

Phillip A. Sharp, Ph.D. Massachusetts Institute of Technology

Craig A. Thompson, M.D. University of Pennsylvania

Ex Officio Members

Marvin R. Kalt, Ph.D. National Cancer Institute

Alan S. Rabson, M.D. National Cancer Institute

Robert E. Wittes, M.D. National Cancer Institute

Executive Secretary

Lisa Stevens, Ph.D. National Cancer Institute

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Frederick R. Appelbaum, M.D. Fred Hutchinson Cancer Research Center

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David S. Alberts, M.D. The University of Arizona College of Medicine
Hoda A. Anton-Culver, Ph.D. University of California at Irvine
Esther H. Chang, Ph.D. Georgetown University Medical Center
Neil J. Clendeninn, M.D., Ph.D. Drug Development Consultant
Tom M. Curran, Ph.D. St. Jude Children's Research Hospital
Mary Beryl Daly, M.D., Ph.D. Fox Chase Cancer Center
Suzanne W. Fletcher, M.D. Harvard Medical School
Waun Ki Hong, M.D. The University of Texas M.D. Anderson Cancer Center
Susan B. Horwitz, Ph.D. Albert Einstein College of Medicine
Tyler Jacks, Ph.D. Massachusetts Institute of Technology
William G. Kaelin, Jr., M.D. Dana-Farber Cancer Institute and Harvard Medical School
Kenneth W. Kinzler, Ph.D. Johns Hopkins Oncology Center
Herbert Kressel, M.D. Beth Israel Deaconess Medical Center
Amy S. Langer, M.B.A. National Alliance of Breast Cancer Organizations
Caryn E. Lerman, Ph.D. University of Pennsylvania
W. Gilles McKenna, M.D., Ph.D. University of Pennsylvania School of Medicine
Christine A. Miaskowski, R.N., Ph.D., F.A.A.N. University of California at San Francisco
Enrico Mihich, M.D. Roswell Park Cancer Institute
John D. Minna, M.D. University of Texas Southwestern Medical Center
Nancy E. Mueller, Sc.D. Harvard School of Public Health
Franklyn G. Prendergast, M.D., Ph.D. Mayo Foundation
Richard L. Schilsky, M.D. University of Chicago
Ellen Sigal, Ph.D. Friends of Cancer Research
Joseph V. Simone, M.D. Simone Consulting
Louise C. Strong, M.D. The University of Texas M.D. Anderson Cancer Center
Peter K. Vogt, Ph.D. The Scripps Research Institute
Daniel D. Von Hoff, M.D. Arizona Cancer Center
Barbara L. Weber, M.D. University of Pennsylvania School of Medicine
Alice S. Whittemore, Ph.D. Stanford University
William C. Wood, M.D. Emory University Hospital
Robert C. Young, M.D. Fox Chase Cancer Center
Elias A. Zerhouni, M.D. The Johns Hopkins University School of Medicine

Executive Secretary

Paulette S. Gray, Ph.D. National Cancer Institute

NCI Listens: BSA at National Association Meetings

American Society of Preventive Oncology (ASPO)

Bethesda, MD, March 10-12, 2002

NCI Listens, Monday, March 11, 2002

Mary Beryl Daly, M.D., Ph.D. (<i>Chair</i>).....	Fox Chase Cancer Center
Peter Greenwald, M.D.	National Cancer Institute
Paulette S. Gray, Ph.D.	National Cancer Institute
Caryn E. Lerman, Ph.D. (<i>Chair</i>).....	University of Pennsylvania Health System
Nancy E. Mueller, Sc.D.	Dana-Farber Cancer Institute and Harvard School of Public Health
Barbara K. Rimer, Ph.D.	National Cancer Institute

American Association for Cancer Research (AACR)

San Francisco, CA, April 6-10, 2002

NCI Listens, Tuesday, April 9, 2002

Enricho Mihich, M.D. (<i>Chair</i>)	SUNY/Buffalo-Roswell Park Cancer Institute
Hoda Anton-Culver, Ph.D.	University of California at Irvine
Ellen G. Feigal, M.D.	National Cancer Institute
Paulette S. Gray, Ph.D.	National Cancer Institute
Marvin R. Kalt, Ph.D.	National Cancer Institute
Brian W. Kimes, Ph.D.	National Cancer Institute
Dinah Singer, Ph.D.	National Cancer Institute
Louise C. Strong, M.D.	M.D. Anderson Cancer Center
W. Gillies McKenna, M.D., Ph.D.	Hospital of the University of Pennsylvania
Andrew C. von Eschenbach, M.D.	National Cancer Institute

Oncology Nursing Society (ONS)

Washington, DC, April 18-21, 2002

NCI Listens, Friday, April 19, 2002

Christine Miaskowski, R.N., Ph.D., F.A.A.N. (<i>Chair</i>).....	University of California at San Francisco
Paulette S. Gray, Ph.D.	National Cancer Institute
Mary McCabe, R.N., M.S.N.	National Cancer Institute

Cold Spring Harbor Laboratories (CSHL)

Cold Spring Harbor, NY, August 14-18, 2002

NCI Listens, Friday, August 16, 2002

William G. Kaelin, Jr., M.D. (<i>Chair</i>)	Dana-Farber Cancer Institute and Harvard Medical School
Paulette S. Gray, Ph.D.	National Cancer Institute
Dinah Singer, Ph.D.	National Cancer Institute

NCI Board of Scientific Counselors

NCI/BSC Subcommittee A—Clinical Sciences and Epidemiology

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Michael B. Kastan, M.D., Ph.D. St. Jude Children’s Research Hospital

Members

Carlos L. Arteaga, M.D. Vanderbilt University
Leslie Bernstein, Ph.D. University of Southern California
Martin A. Cheever, M.D. Corixa Corporation
Michael L. Cleary, M.D. Stanford University School of Medicine
Ms. Deborah E. Collyar PAIR-Patient Advocates in Research
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Timothy Eberlein, M.D. Washington University School of Medicine
Elizabeth T. Fontham, D.P.H. Louisiana State University Health Sciences Center
Stanley R. Hamilton, M.D. University of Texas M.D. Anderson Cancer Center
Elizabeth Holly, Ph.D. University of California at San Francisco
David J. Hunter, Sc.D. Harvard School of Public Health
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Frank McCormick, Ph.D. University of California at San Francisco
Daniel M. Medina, Ph.D. Baylor College of Medicine
Beverly S. Mitchell, M.D. University of North Carolina at Chapel Hill, School of Medicine
James J. Mule, Ph.D. University of Michigan Medical Center
Olufunmilayo F. Olopade, M.B.B.S. University of Chicago Medical Center
Richard J. O’Reilly, M.D. Memorial Sloan-Kettering Cancer Center
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David A. Savitz, Ph.D. University of North Carolina
David T. Scadden, M.D. Harvard Medical School
Steven G. Self, Ph.D. Fred Hutchinson Cancer Research Center
Margaret A. Tempero, M.D. University of California, San Francisco Cancer Center
Michael Thun, M.D. American Cancer Society

Executive Secretary

Abby B. Sandler, Ph.D. National Cancer Institute

NCI/BSC Subcommittee B—Basic Sciences

Chair

Craig B. Thompson, M.D. University of Pennsylvania Cancer Center

Members

Rafi Ahmed, Ph.D. Emory University School of Medicine
Frederick W. Alt, Ph.D. The Children’s Hospital
Jon C. Clardy, Ph.D. Cornell University
Gideon Dreyfuss, Ph.D. University of Pennsylvania School of Medicine
E. Peter Geiduschek, Ph.D. University of California at San Diego
Sankar Ghosh, Ph.D. Yale University School of Medicine
Stephen P. Goff, Ph.D. Columbia University
Beatrice H. Hahn, M.D. University of Alabama
Stephen S. Hecht, Ph.D. University of Minnesota Cancer Center
Nouria T. Hernandez, Ph.D. Cold Spring Harbor Laboratory
David Housman, Ph.D. Massachusetts Institute of Technology
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Brooke T. Mossman, Ph.D. University of Vermont, College of Medicine
Dinshaw J. Patel, Ph.D. Memorial Sloan-Kettering Cancer Center
Suzanne B. Sandmeyer, Ph.D. University of California at Irvine
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Harinder Singh, Ph.D. University of Chicago, Howard Hughes Medical Institute
Ronald I. Swanstrom, Ph.D. University of North Carolina at Chapel Hill
Thea D. Tlsty, Ph.D. University of California at San Francisco
Gregory L. Verdine, Ph.D. Harvard University
Inder M. Verma, M.S.C., Ph.D. Salk Institute for Biological Studies
Cheryl L. Walker, Ph.D. The University of Texas M.D. Anderson Cancer Center
Eileen White, Ph.D. Howard Hughes Medical Institute

Executive Secretary

Florence E. Farber, Ph.D. National Cancer Institute

NCI Director's Consumer Liaison Group

Chair

Barbara K. LeStage, M.S.H.P. American Cancer Society

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Susan Lowell Butler, M.P.H., PH.D. Ovarian Cancer National Alliance
Kathy Giusti, M.B.A. Multiple Myeloma Research Foundation
Michael Katz, M.B.A. International Myeloma Foundation
Paula K. Kim Pancreatic Cancer Action Network, Inc.
Ruth Lin, R.N. Morristown Memorial Hospital
Gena Love People Living Through Cancer, Inc.
Christopher Pablo Kaiser Foundation Health Plan
Karen G. Packer Marshalltown Cancer Research Center
Henry A. Porterfield Us Too! International
Nyrvah Richard Self-Help for Women With Breast or Ovarian Cancer
Doug E. Ulman Lance Armstrong Foundation
Marissa Weiss, M.D. Living Beyond Breast Cancer
Brad Zebrack, M.S.W., M.P.H., Ph.D. National Coalition for Cancer Survivorship

Executive Secretary

Elaine Lee National Cancer Institute

NCI Initial Review Group Scientific Review Committees

Subcommittee A—Cancer Centers

Chair

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Stephen B. Baylin, M.D. Johns Hopkins University School of Medicine
 Deborah J. Bowen, Ph.D. Fred Hutchinson Cancer Research Center
 Michael A. Caligiuri, M.D. Ohio State University Comprehensive Cancer Center
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 Jill C. Pelling, Ph.D. University of Kansas Medical Center
 Nancy J. Raab-Traub, Ph.D. University of North Carolina at Chapel Hill
 Derek Raghavan, M.D., Ph.D. University of Southern California
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 Jean Y. Wang, Ph.D. University of California at San Diego
 David A. Williams, M.D. Indiana University Cancer Center, Indiana University
 James K. Wilson, M.D. Case Western Reserve University
 David W. Yandell, Sc.D. University of Vermont

Scientific Review Administrator

David Maslow, Ph.D. National Cancer Institute

Appendix B: List of Chartered Committees, FY2002

Subcommittee C—Basic and Preclinical

Chair

William F. Morgan, Ph.D. University of Maryland School of Medicine

Members

Dafna Bar-Sagi, Ph.D. State University of New York at Stony Brook
Olivera J. Finn, Ph.D. University of Pittsburgh School of Medicine
Denise A. Galloway, Ph.D. Fred Hutchinson Cancer Research Center
Mien-Chie Hung, Ph.D. The University of Texas M.D. Anderson Cancer Center
Ronald C. Kennedy, Ph.D. Texas Tech University Health Sciences Center
Howard B. Lieberman, Ph.D. Columbia University College of Physicians and Surgeons
Scott W. Lowe, Ph.D. Cold Spring Harbor Laboratory
Ruth J. Muschel, M.D., Ph.D. University of Pennsylvania School of Medicine
Susan L. Naylor, Ph.D. University of Texas Health Science Center
Harvey L. Ozer, M.D. ... University of Medicine and Dentistry of New Jersey Medical School
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Angel G. Pellicer, M.D., Ph.D. New York University Medical Center
Peter J. Polverini, DDS, DMSC University of Minnesota School of Dentistry
Garth Powis, D.Phil. University of Arizona College of Medicine, Arizona Cancer Center
Vito Quaranta, M.D. The Scripps Research Institute
Eddie Reed, M.D. West Virginia University
Gary S. Stein, Ph.D. University of Massachusetts Medical School
Bill M. Sugden, Ph.D. University of Wisconsin at Madison
Donald J. Tindall, Ph.D. Mayo Clinic and Foundation
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Louis M. Weiner, M.D. Fox Chase Cancer Center
Bernard E. Weissman, Ph.D. University of North Carolina

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Subcommittee D—Clinical Studies

Chair

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William T. Beck, Ph.D. University of Illinois at Chicago Cancer Center
J. Martin Brown, D.Phil. Stanford University School of Medicine
David P. Carbone, M.D., Ph.D. Vanderbilt University Cancer Center
Richard E. Champlin, M.D. The University of Texas M.D. Anderson Cancer Center
Alfred E. Chang, M.D. University of Michigan Medical School
Jose C. Costa, M.D. Yale University School of Medicine
Robert B. Diasio, M.D. University of Alabama Comprehensive Cancer Center
Harriett B. Eggert, B.S. Susan G. Komen Breast Cancer Foundation
Stephen J. Forman, M.D. City of Hope National Medical Center
Karen King-Wah Fu, M.D. University of California at San Francisco
Steven J. Grant, M.D. Virginia Commonwealth University
John G. Gribben, M.D. Dana-Farber Cancer Institute
Barbara W. Henderson, Ph.D. Roswell Park Cancer Institute
Helen Heslop, M.D. University of Maryland Medical Center
Elizabeth M. Jaffee, M.D. The Johns Hopkins Oncology Center
Roy B. Jones, M.D. Health Sciences Center, University of Colorado
Gloria C. Li, Ph.D. Memorial Sloan-Kettering Cancer Center
Patricia M. Lorusso, D.O. Wayne State University
Dana C. Matthews, M.D. University of Washington
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Carol K. Redmond, Ph.D. University of Pittsburgh Graduate School of Public Health
Rupert K. Schmidt-Ullrich, M.D. Virginia Commonwealth University
Keith A. Stewart, M.D. Princess Margaret Hospital
Herman D. Suit, M.D., Ph.D. Massachusetts General Hospital

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Subcommittee E—Cancer Epidemiology, Prevention, and Control

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Doris M. Benbrook, Ph.D. University of Oklahoma Health Sciences Center
William L. Bigbee, Ph.D. University of Pittsburgh, Graduate School of Public Health
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Karen M. Emmons, Ph.D. Dana-Farber Cancer Institute
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Michael J. Welch, Ph.D. Washington University School of Medicine

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Malaya Chatterjee, Ph.D..... University of Cincinnati Medical Center
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Michael R. Freeman, Ph.D..... Harvard Medical School, Enders Research Laboratories
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Seymour Grufferman, M.D., Dr.P.H. University of Pittsburgh
Marc F. Hansen, Ph.D..... University of Connecticut Health Science Center
Jeffrey T. Holt, M.D. University of Colorado Health Sciences Center
P. Jack Hoopes, Ph.D., D.V.M..... Dartmouth Medical School
Larry R. Kaiser, M.D. University of Pennsylvania School of Medicine
Jeffrey P. Krischer, Ph.D. University of South Florida
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Mary Ann Osley, Ph.D..... University of New Mexico Health Science Center
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Ann Roman, Ph.D. Indiana University School of Medicine
Kathleen Rundell, Ph.D. Northwestern University Medical Center
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Robert E. Bird, Ph.D. National Cancer Institute

Appendix B: List of Chartered Committees, FY2002

Subcommittee G—Education

Chair

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Members

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Karen Hassey Dow, Ph.D. University of Central Florida
Jose M. Esteban, M.D., Ph.D. Providence Hospital Cancer Center
Jeffrey J. Guidry, Ph.D. Texas A&M University
Lynn C. Hartmann, M.D. Mayo Clinic and Foundation
Curtis J. Mettlin, Ph.D. Roswell Park Cancer Institute
Patricia Dolan Mullen, D.R.P.H. University of Texas Health Science Center at Houston
Ana M. Navarro, Ph.D. University of California at San Diego, School of Medicine
Billy U. Philips, Jr., M.P.H., Ph.D. University of Texas Medical Branch at Galveston
Phyllis L. Pirie, Ph.D. University of Minnesota School of Public Health
William H. Redd, Ph.D. Mount Sinai School of Medicine, Rutenberg Cancer Center
Vernon K. Sondak, M.D. University of Michigan Comprehensive Cancer/Geriatrics Center
Cameron K. Tebbi, M.D. Tampa Children’s Hospital
John T. Vetto, M.D. Oregon Health and Science University
Scott A. Waldman, M.D., Ph.D. Thomas Jefferson University
Jeffrey N. Weitzel, M.D. City of Hope National Medical Center
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Subcommittee H—Clinical Trials**Chair**

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Members

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 Constance Baird, R.N. Healthcare Association of New York State
 Brent A. Blumenstein, Ph.D. Duke University School of Medicine
 John C. Byrd, M.D. Ohio State University School of Medicine and Public Health
 Walter M. Cronin, M.P.H. University of Pittsburgh, NSABP Biostatistical Center
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 Martin J. Edelman, M.D. University of Maryland Greenebaum Cancer Center
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 Craig R. Nichols, M.D. Oregon Health Sciences University
 Carolyn D. Runowicz, M.D. St. Luke Roosevelt Hospital Center
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 Marilyn L. Slovak, Ph.D. City of Hope National Medical Center
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Deborah R. Jaffe, Ph.D. National Cancer Institute

Appendix C: NCI Initial Review Group Consultants, FY2002

1. Consultants Serving as Temporary Members on IRG Subcommittees in FY2002

- A Adjei, Alex A., M.D., Ph.D. Mayo Clinic, Rochester
Ahles, Tim A., Ph.D. Dartmouth College
Aisner, Seena C., M.D. University of Medicine/Dentistry of New Jersey
Alarid, Elaine T., Ph.D. University of Wisconsin at Madison
Altman, Norman Harry, D.V.M. University of Miami
Ambros, Victor R., Ph.D. Dartmouth College
Amos, Christopher I., Ph.D. University of Texas, MD Anderson Cancer Center
Anderson, Carolyn J., Ph.D. Washington University, School of Medicine
Anderson, Wayne F., Ph.D. Northwestern University
Andersson, Borje S., M.D., Ph.D. Sandra Technology, Inc.
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Anver, Miriam R., Ph.D. SAIC Frederick-NCI Frederick Cancer Research
Arthur, R. Martin, Ph.D. Washington University
Ascoli, Mario, Ph.D. University of Iowa, College of Medicine
Atcher, Robert W., Ph.D. Los Alamos National Laboratory
Auerbach, Robert, Ph.D. University of Wisconsin at Madison
Augenlicht, Leonard H., Ph.D. Montefiore Medical Center (Bronx, NY)
Austin, Donald F., M.D. Oregon Health & Science University
- B Bailey, Howard H., M.D. University of Wisconsin, Madison
Baker, David C., Ph.D. Texas A&M University Health Science Center
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Balmain, Allan, Ph.D. University of California at San Francisco
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Bar-Sagi, Dafna, Ph.D. State University New York at Stony Brook
Bast, Robert C., M.D. University of Texas, MD Anderson Cancer Center
Bauer-Wu, Susan M., D.Sc., R.N. Dana-Farber Cancer Institute
Baum, Stanley, M.D. University of Pennsylvania
Becich, Michael J., M.D., Ph.D. University of Pittsburgh at Pittsburgh
Belk, Bonnie F., M.A., M.P.A. Private Practice
Bellen, Hugo J., Ph.D. Baylor College of Medicine
Benbrook, Doris M., Ph.D. University of Oklahoma, Health Sciences Center
Benson, Al B., M.D. Northwestern University
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Berger, Mitchel S., M.D. University of California at San Francisco
Bigbee, William L., Ph.D. University of Pittsburgh
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Birt, Diane F., Ph.D. Iowa State University of Science & Technology
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Appendix C-1: Consultants Serving as Temporary Members

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	Brugge, Joan S., Ph.D.	Federation of American Societies for Experimental Biology
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	Buka, Stephen L., Ph.D.	Harvard University, School of Public Health
	Burgess, Kevin, Ph.D.	Texas A&M University Health Science Center
	Burke, Harry B., M.D., Ph.D.	George Washington University
	Byrd, John C., M.D.	Ohio State University
C	Cagan, Ross L., Ph.D.	Washington University
	Carey, Thomas E., Ph.D.	University of Michigan at Ann Arbor
	Cassady, James R., M.D.	Lahey Hitchcock Medical Center
	Chamberlin, Helen M., Ph.D.	Ohio State University
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	Chen, David J., M.D., Ph.D.	University of California-Lawrence Berkeley Laboratory
	Chen, George T.Y., Ph.D.	University of Chicago
	Chin, Tom D.Y., M.D.	University of Kansas Medical Center
	Christie, Debra W., Ph.D.	University of Mississippi Medical Center
	Chute, Christopher G., M.D., Ph.D.	Mayo Clinic, Rochester
	Clark, Gary M., Ph.D.	Baylor College of Medicine
	Clarke, Robert R., Ph.D.	Georgetown University
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	Coffino, Philip, M.D., Ph.D.	Clontech Laboratories, Inc.
	Cohen, Alfred M., M.D.	University of Kentucky
	Cohen, Peter A., M.D.	Cleveland Clinic Foundation
	Copelan, Edward A., M.D.	Ohio State University
	Corry, Peter M., Ph.D.	William Beaumont Hospital
	Cowell, John K., Ph.D.	Roswell Park Cancer Institute
	Craft, Alan W., M.D.	Royal Victoria Infirmary Department of Child Health
	Croce, Carlo M., M.D.	Thomas Jefferson University
	Cunningham, Richard P., Ph.D.	State University of New York at Albany
	Currie, John L., M.D.	Dartmouth Medical School
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	Demple, Bruce F., Ph.D.	Harvard University, School of Public Health
	Dennis, James W., Ph.D.	Samuel Lunenfeld Research Institute
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	Erdman, John W., Ph.D.	University of Illinois
	Erickson, Kent L., Ph.D.....	University of California at Davis
	Erickson, Leonard C., Ph.D.	Indiana University Cancer Center
F	Fahs, Marianne C., Ph.D.....	New School University
	Feldman, Roy S., D.D.S., D.M.Sc.	University of Pennsylvania
	Felton, James S., Ph.D.	University of California-Lawrence Livermore National Laboratory
	Ferenczy, Alex, M.D.....	McGill University
	Ferrone, Soldano, M.D., Ph.D.	Roswell Park Cancer Institute
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	Forman, Stephen J., M.D.	City of Hope National Medical Center
	Foster, Thomas H., Ph.D.....	University of Rochester
	Freeman, James W., Ph.D.....	University of Texas Health Sciences Center at San Antonio
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	Fu, Karen King-Wah, M.D.	University of California at San Francisco
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	Geacintov, Nicholas E., Ph.D.	New York University
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	Goldberg, Judith D., M.D.	Bristol-Myers Squibb
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	Gomer, Charles J., Ph.D.....	Children's Hospital, Los Angeles
	Gospodarowicz, Mary K., M.D.	Princess Margaret Hospital
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	Grant, Steven J., M.D.....	Virginia Commonwealth University
	Gray, Robert J., Ph.D.....	Frontier Science & Tech Research Foundation, Inc.
	Grdina, David J., Ph.D.....	University of Chicago
	Gribben, John G., M.D.....	Dana-Farber Cancer Institute
	Gribskov, Michael R., Ph.D.....	General Atomics
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	Guidry, Jeffrey J., Ph.D.	Texas A&M University System

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- H Halazonetis, Thanos D., Ph.D.....Wistar Institute
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Appendix C-1: Consultants Serving as Temporary Members

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	Heston, Warren D., Ph.D.	Cleveland Clinic Foundation
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	Ho, Gloria Y., Ph.D.	Yeshiva University
	Ho, Shuk-Mei, Ph.D.	Wayne State University
	Hogge, Donna E., M.D., Ph.D.	British Columbia Cancer Research Center
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	Hollingsworth, Michael A., Ph.D.	University of Nebraska Medical Center
	Holt, Jeffrey T., M.D.	University of Colorado Health Sciences Center
	Holt, Peter R., M.D.	St. Luke's-Roosevelt Institute for Health Sciences
	Hom, David J., B.S.	Baylor College of Medicine
	Honn, Kenneth V., Ph.D.	Biomide Corporation
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	Horii, Steven C., B.A.	University of Pennsylvania
	Horwitz, Edwin M., M.D., Ph.D.	International Society for Cellular Therapy
	Houghton, Janet A., Ph.D.	St. Jude Children's Research Hospital
	Hughes, Chanita A., Ph.D.	University of Pennsylvania
	Huston, James S., Ph.D.	Intraimmune Therapies
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	Johnson, Linda B., B.S.	National Coalition for Cancer Survivorship
	Jones, Roy B., M.D., Ph.D.	University of Colorado Health Sciences Center
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	Kelly, Regis B., Ph.D.	University of California at San Francisco
	Kennedy, Ronald C., Ph.D.	University of Oklahoma Health Sciences Center
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	King, Bonnie L., Ph.D.	Yale University
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Appendix C-1: Consultants Serving as Temporary Members

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	Korngold, Robert, Ph.D.	Thomas Jefferson University
	Kow, Yoke W., Ph.D.	Emory University
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	Krontiris, Theodore G., M.D., Ph.D.	Beckman Research Institute
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	Kung, Hsing-Jien, Ph.D.	University of California, Davis Cancer Center
L	Lahue, Robert S., Ph.D.	University of Nebraska Medical Center
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	Leavitt, Dennis D., Ph.D.	University of Utah
	Lee, Eva Y., Ph.D.	University of California at Irvine
	Leslie, Kevin B., M.D., Ph.D.	Immgenics Pharmaceuticals, Inc.
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	Lillegard, Debra G., M.A.	Methodist Hospital Cancer Center
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Total Number of Reviewers: 1,129

Appendix D: Activities of the National Cancer Advisory Board

Originally established as the National Advisory Cancer Council in 1937, the NCAB consists of 18 members 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 over \$50,000 in direct costs, the Board reviewed a total of 4,085 applications in FY2002.

The Board heard presentations and discussed and provided advice on a variety of topics and NCI activities in FY2002, such as:

- NCI Cancer Progress Report
- Improving Palliative Care for Cancer: National Cancer Policy Board Report
- Progress Review Group Report: Leukemia, Lymphoma, and Myeloma
- New Clinical Research Center
- Medical Oncology Program—Update
- Melanoma Vaccine Trials
- Colorectal, Prostate, and Breast Cancer Vaccine Trials
- Clinical Proteomics
- Clinical and Molecular Targets
- Trans-NIH Neuro-Oncology Initiative
- Office of Policy Analysis and Response—Update
- Extramural Statistics and Policies—Update
- Progress Review Group Report: Gynecologic Cancers
- Progress Review Group Report: Lung Cancer
- Palliative Care Follow-Up
- Cancer Survivorship: Moving Beyond the Cure
- Understanding the Late Effects of Cancer Treatment: A Medical Oncologist's Perspective
- Neuropsychological Impact of Systemic Chemotherapy
- Stress Management: Effects on Quality of Life, Physiological Functioning and Health in Cancer Survivors
- Early Detection and Screening for Breast Cancer
- Quantifying Population Effects of Mammography

Appendix D: Activities of the

- New Approaches to Imaging
- Molecular Profiling of Breast Cancer
- Portfolio Transfers to National Institute of Biomedical Imaging and Bioengineering
- NCI Center for Bioinformatics—Update
- Center for Cancer Research Molecular Diagnostic Reference Lab—Update
- Implementation of NIH Human Embryonic Stem Cell Policies
- Policy Update on Peer Review Involving Human Subjects, Data Safety Monitoring, and Data Sharing
- Patient Privacy Regulations—Update
- Progress Review Group Report: Kidney and Bladder Cancers
- Overview of the National Cancer Surveillance System and the Latest Statistics
- Explaining Cancer Trends
- New Tools for Understanding Cancer Patterns
- New Tools for Cancer Planning: The State Cancer Profile
- Using Cancer Surveillance Data for Comprehensive Cancer Control
- The Hormonal Epidemiology of Breast Cancer
- Overview of Mechanisms of Hormone Action on Breast Cancer Information Service
- Normal Breast Development and the Origins of Breast Cancer
- Extramural Research on Hormones and Breast Cancer

The NCAB also received regular updates from the NCI Director, the NCI Office of Legislation and Congressional Activities, the President’s Cancer Panel, and the National Cancer Policy Board.

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

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

Appendix E: 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:

- BSA Concepts Review Report
- Molecular Profiling of Breast Cancer
- Spiral CT Partnership—Update
- BSA at National Meetings (“NCI Listens” Reports)
- NCI’s Decision-Making Process for Grant Allocation
- Subcommittee on Training Report: Communicating Training Opportunities
- Report on RFAs That Involve Large Initiatives
- BSA at National Meetings: Status Reports
- NCAB Ad Hoc Working Group on Research Project Grant Report
- RFA Reissuance Working Group Report
- Status Report: Clinical Trials Restructuring Initiative and Formation of the Cancer Trials Support Unit
- Mammography—A Continuing Controversy
- U.S. Preventive Services Task Force: New Recommendations on Screening for Breast Cancer
- Quantifying the Population Effect of Mammography: Performance and Outcomes
- Rapid Access to Intervention Development (RAID) Program Progress Report
- NIGMS/NCI Construction of New Beamlines for Macromolecular X-Ray Crystallography
- Marketing of NCI Training and Career Development Opportunities Program—Update
- Serum Proteomic Patterns: A New Paradigm for Early Cancer Detection
- Expansion of the Biomedical Imaging Program—Update
- Public/Private Partnerships: Overcoming the Barriers to Early Clinical Trials
- American College of Radiology Imaging Network (ACRIN)—Update and Future Plans

RFA Concepts Approved

Division of Cancer Treatment and Diagnosis

- Network for Translational Research in Optical Imaging (NTROI)
- Spiral CT Lung Cancer Screening Trial

Appendix E: NCI Grant Guidelines and

Division of Cancer Prevention

- Molecular Targets for Nutrients in Prostate Cancer Prevention
- Chemoprevention of ER-Cancers in Women at High Risk: Preclinical Studies
- DNA Methylation, Diet and Cancer Prevention

Division of Cancer Control and Population Sciences

- Centers for Population Health and Cancer

Division of Cancer Biology

- Molecular Interactions Between Tumor Cells and Bone

Office of the Deputy Director for Extramural Science

- Aging/Cancer Research Program Development in NCI Cancer Centers

Cooperative Agreements Approved

Division of Cancer Epidemiology and Genetics

- NCI Predoctoral Research Training Partnership Award

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

Appendix F: 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 Referral Office, Division of Research, or see the DEA Web page on Grants Guidelines and Descriptions at <http://deainfo.nci.nih.gov/flash/awards.htm>.

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

K01 The Howard Temin Award

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

K01 Mentored Career Development Award for Underrepresented Minorities

- To support scientists committed to research who are in need of both advanced research training and additional experience.
- K05 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.
- K07 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.
- K08 Mentored Clinical Scientists Development Award—Minorities in Clinical Oncology
- A specialized type of Mentored Clinical Scientist Developmental Awards (K08s) that support the development of outstanding clinical research scientists, with this type being reserved for qualified individuals from under-represented minority groups. Both types of K08 awards support periods of specialized study for clinically trained professionals who are committed to careers in research and who have the potential to develop into independent investigators. The K08 awards for Minorities in Clinical Oncology are distinct and important because they provide opportunities for promising medical scientists with demonstrated aptitudes who belong to under-represented minority groups to develop into independent investigators, or for faculty members who belong to under-represented minority groups to pursue research aspects of categorical areas applicable to the awarding unit(s), and aid in filling the academic faculty gaps in these shortage areas within health professions institutions in the United States.
- 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.

Appendix F: NCI Grant Guidelines

- 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 National Cancer Institute 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 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

P01 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

R01 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.

Appendix F: NCI Grant Guidelines

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 curriculum 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.

Appendix F: NCI Grant Guidelines

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 in-depth 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 in-depth development of R&D ideas whose feasibility have 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.

S Series: Research-Related Programs

- S06 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.
- S07 Biomedical Research Support Grants (NCRR BRSG)
As an example of this funding mechanism, the NIH issued a Request for Applications (RFA) in FY2003 in order 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 FY 1982. 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.
- T32 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

In order 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 in order 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 G: Cancer Information Sources on the Internet

DEA Web Sites

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

<http://deainfo.nci.nih.gov/index.htm>

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

<http://deainfo.nci.nih.gov/advisory/Boards.htm>

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

<http://deainfo.nci.nih.gov/advisory/pcp/pcp.htm>

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

<http://deainfo.nci.nih.gov/advisory/ncab.htm>

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

<http://deainfo.nci.nih.gov/advisory/ncabminmenu.htm>

Full text of NCAB meeting summaries.

<http://deainfo.nci.nih.gov/advisory/bsa.htm>

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

<http://deainfo.nci.nih.gov/advisory/bsaminmenu.htm>

Full text of BSA meeting summaries.

http://deainfo.nci.nih.gov/advisory/bsa/bsa_program/bsaprgr.htm

Program Review Group reports.

<http://deainfo.nci.nih.gov/advisory/bsc.htm>

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

<http://deainfo.nci.nih.gov/advisory/irg.htm>

Charter of the Initial Review Group; members of subcommittees.

<http://deainfo.nci.nih.gov/advisory/sep.htm>

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

<http://deainfo.nci.nih.gov/advisory/joint.htm>

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

Appendix G: Cancer Information Sources on

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

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

<http://deainfo.nci.nih.gov/advisory/dclg/dclg.htm>

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

<http://deainfo.nci.nih.gov/funding.htm>

Comprehensive information about funding for cancer research; lists of active PAs and RFAs; 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/FLAREPublic>

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

<http://deainfo.nci.nih.gov/whatsnew/news.htm>

Extramural events and updates.

NCI Web Sites

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

Table 1. Applications Received for Referral by the NCI (by Mechanism) , FY2002*

Mechanism	Activity Code	Totals by Activity	Applications by Board		
			Jan	May	Sep
Research Facilities Construction Grants	C06	1	0	0	1
Predocctoral Individual National Research Service Award	F31	45	0	21	24
Postdoctoral Individual National Research Service Award	F32	306	69	109	128
National Research Service Award for Senior Fellows	F33	7	2	3	2
Research Scientist Development Award—Research & Training	K01	102	32	26	44
Research Scientist Award	K05	7	4	2	1
Academic/Teacher Award (ATA)	K07	80	26	31	23
Clinical Investigator Award	K08	150	47	57	46
Physician Scientist Award (Program)	K12	9	8	0	1
Career Transition Award	K22	54	22	16	16
Mentored Patient-Oriented Research Development Award	K23	43	8	23	12
Midcareer Investigator Award in Patient-Oriented Research	K24	6	2	3	1
Mentored Quantitative Research Career Development Award	K25	1	0	1	0
Research Program Projects	P01	129	45	39	45
Exploratory Grants	P20	38	19	16	3
Center Core Grants	P30	18	10	3	5
Specialized Center	P50	71	30	24	17
Research Project	R01	5,078	1,655	1,668	1,755
Small Research Grants	R03	230	74	79	77
Conferences	R13	155	45	61	49
Academic Research Enhancement Awards (AREA)	R15	71	24	26	21
Exploratory/Developmental Grants	R21	1017	384	238	395
Resource-Related Research Projects	R24	39	34	5	0
Education Projects	R25	74	17	33	24
Exploratory/Developmental Grants Phase II	R33	66	19	24	23
Method to Extend Research in Time (MERIT) Award	R37	19	3	4	12
Small Business Technology Transfer (STTR) Grants—Phase I	R41	76	21	27	28
Small Business Technology Transfer (STTR) Grants—Phase II	R42	23	7	10	6
Small Business Innovation Research Grants (SBIR)—Phase I	R43	928	308	298	322
Small Business Innovation Research Grants (SBIR)—Phase II	R44	237	72	78	87

(Continued)

- Source: IMPACII. Includes NCI Primary and Secondary assigned applications and withdrawn applications. Excludes applications deleted for other funding considerations. Of the 9,346 applications received during the year, 2,831 were not

recommended for further consideration by the initial review committee, and an additional 1,637 received scores in the bottom 33 percent and were not submitted for NCAB action.

**Table 1. Applications Received for Referral by
the NCI (by Mechanism) ,
FY2002* (Continued)**

Mechanism	Activity Code	Totals by Activity	Applications by Board		
			Jan	May	Sep
James A. Shannon Director's Award	R55	6	3	3	0
Minority Biomedical Research Support—MBRS	S06	4	0	3	1
Biomedical Research Support Grants (NCRR)	S07	24	0	0	24
Biomedical Research Support Shared Instrumentation Grants (NCRR)	S10	2	0	2	0
Continuing Education Training Program	T15	6	1	1	4
Institutional National Research Service Award	T32	81	28	37	16
Research Project (Cooperative Agreements)	U01	83	17	27	39
Cooperative Clinical Research (Cooperative Agreements)	U10	23	20	0	3
Conference (Cooperative Agreement)	U13	3	2	1	0
Research Program (Cooperative Agreement)	U19	3	0	2	1
Resource Related Research Project (Cooperative Agreement)	U24	3	0	2	1
Specialized Center (Cooperative Agreements)	U54	8	4	0	4
Exploratory Grants—Cooperative Agreement (NCI)	U56	20	14	0	6
Overall Totals		9,346	3,076	3,003	3,267

Table 2. Applications Reviewed by DEA/NCI (by Activity), FY2002

Mechanism	Activity Code	Totals by Activity	Applications by Board		
			Jan	May	Sep
Research Scientist Development Award—Research & Training	K01	98	30	25	43
Research Scientist Award	K05	7	4	2	1
Academic/Teacher Award	K07	80	26	31	23
Clinical Investigator Award	K08	125	41	48	36
Physician Scientist Award (Program)	K12	9	8	0	1
Career Transition Award	K22	53	22	15	16
Mentored Patient-Oriented Research Development Award	K23	32	6	19	7
Midcareer Investigator Award in Patient-Oriented Research	K24	6	2	3	1
Research Program Projects	P01	124	41	38	45
Exploratory Grants	P20	22	14	8	0
Center Core Grants	P30	12	4	3	5
Specialized Center	P50	71	30	24	17
Research Project	R01	178	65	65	48
Small Research Grants	R03	206	53	77	76
Conferences	R13	61	16	21	24
Exploratory/Developmental Grants	R21	304	185	60	59
Resource-Related Research Projects	R24	39	34	5	0
Education Projects	R25	74	17	33	24
Exploratory/Developmental Grants Phase II	R33	58	17	19	22
Small Business Technology Transfer (STTR) Grants—Phase I	R41	13	6	2	5
Small Business Technology Transfer (STTR) Grants—Phase II	R42	5	1	1	3
Small Business Innovation Research (SBIR) Grants—Phase I	R43	162	67	36	59
Small Business Innovation Research (SBIR) Grants—Phase II	R44	30	7	6	17
Continuing Education Training Program	T15	2	1	0	1
Institutional National Research Service Award	T32	77	27	36	14
Research Project (Cooperative Agreements)	U01	72	17	25	30
Cooperative Clinical Research (Cooperative Agreements)	U10	23	20	0	3
Research Program (Cooperative Agreement)	U19	2	0	1	1
Resource-Related Research Project (Cooperative Agreements)	U24	3	0	2	1
Specialized Center (Cooperative Agreements)	U54	4	4	0	0
Exploratory Grants—Cooperative Agreement (NCI)	U56	20	14	0	6
Overall Totals		1,972	779	605	588

Table 3. Applications Reviewed by the NCI IRG Subcommittees for NCAB Meetings, FY2002

NCI IRG Subcommittee	Types of Applications Reviewed	Number of Applications*	First Year Direct Costs Requested	Total Direct Costs Requested
A—Cancer Centers	P30, P20	16	\$40,672,833	\$214,695,210
C—Basic and Preclinical Research	P01	59	68,278,272	347,406,686
D—Clinical Studies	P01, R01, U24	28	39,230,220	208,716,843
E—Cancer Epidemiology, Prevention, and Control	P01, R01, R13, R21, U01, U19	30	41,921,295	200,743,760
F—Manpower and Training	K01, K08, K22, K25, R13, T15, T32	329	51,698,514	264,978,199
G—Education	K05, K07, K12, K22, K23, K24, R25	201	37,753,087	193,851,536
H—Clinical Groups	U10, R01	7	61,814,456	372,266,200
Totals:		670	\$341,368,677	\$1,802,658,434

* Includes all applications reviewed; some may have been withdrawn later.

Table 4. Summary of Investigator-Initiated P01 Applications Reviewed for Each NCAB Meeting, FY2002

Type of Application	Jan 2002 NCAB	May 2002 NCAB	Oct 2002 NCAB	Total for FY2002
New	15	11	10	36
New Amended	6	10	7	23
Recompeting	8	12	13	33
Recompeting Amended	8	3	7	18
Supplement	3	2	2	7
Totals:	40	38	39	117

Table 5. Summary of Review Formats for Unsolicited Program Project Applications Reviewed, FY2002

NCAB Meeting	Number of Applications	IRG Review	SEP Review	Site Visit	Telephone Conference*	Applicant Interview	Accelerated Peer Review	Committee
January	40	34	6	22	13	5	2	0
May	38	35	3	24	14	0	2	0

October	39	35	4	21	13	4	0	1
Totals:	117	104	13	67	40	9	4	1

* Includes accelerated peer reviews conducted by telephone conference.

**Table 6. Summary of Unsolicited P01 Applications
by NCI Program
Division, FY2002**

Program Division	Number of Applications	First Year Direct Cost Requested	Total Requested Direct Cost
Division of Cancer Biology (DCB)	44	\$50,640,416	\$267,623,211
Division of Cancer Control and Population Sciences (DCCPS)	9	11,995,421	56,449,515
Division of Cancer Prevention (DCP)	6	10,636,398	52,291,138
Division of Cancer Treatment and Diagnosis (DCTD)	58	77,795,883	385,379,514
Grand Totals	117	\$151,068,118	\$761,743,378

**Table 7. Requests for Applications (RFAs)
Published by the NCI, FY2002**

RFA	Mechanism	Title	Division	Date of Publication
CA-02-002	U56	Cooperative Planning Grant for Cancer Disparities Research Partnership	Division of Cancer Treatment and Diagnosis	10/19/01
CA-02-011	U01	Early Clinical Trials of New Anti-Cancer Agents With Phase I Emphasis	Division of Cancer Treatment and Diagnosis	11/19/01
CA-03-001	U54	Cooperative Grant for Nutritional Modulation of Genetic Pathways Leading to Cancer	Division of Cancer Prevention	01/22/02
CA-03-002	U54	Network for Translational Research: Optical Imaging	Division of Cancer Treatment and Diagnosis	08/27/02
CA-03-003	R01	Molecular Targets for Nutrients in Prostate Cancer Prevention	Division of Cancer Prevention	2/13/02
CA-03-004	R01, R21	Chemoprevention of Tobacco-Related Cancers in Former Smokers: Preclinical Studies	Division of Cancer Prevention	2/12/02
CA-03-005	R01	Chemoprevention of Estrogen Receptor (ER) Negative Breast Cancer Preclinical Studies	Division of Cancer Prevention	03/21/02
CA-03-006	U01	Chemoprevention of Tobacco-Related Cancers in Former Smokers: Clinical Studies	Division of Cancer Prevention	03/28/02
CA-03-007	P50	Centers of Excellence in Cancer Communications Research	Division of Cancer Control and Population Sciences	03/21/02
CA-03-008	U56	Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	Office of Deputy Director for Extramural Science	03/28/02
CA-03-009	P20	Planning Grant for Minority Institution/ Cancer Center Collaboration	Office of Deputy Director for Extramural Science	03/28/02
CA-03-010	U54	Comprehensive Minority Institution/ Cancer Center Partnership	Office of Deputy Director for Extramural Science	03/28/02
CA-03-011	U10	Community Clinical Oncology Program	Division of Cancer Prevention	04/24/02
CA-03-012	U10	Minority-Based Community Clinical Oncology Program	Division of Cancer Prevention	04/24/02
CA-03-013	R01, R21	Molecular Interactions Between Tumor Cells and Bone	Division of Cancer Biology	05/09/02
CA-03-015	P50	In Vivo Cellular and Molecular Imaging Centers (ICMICs)	Division of Cancer Treatment and Diagnosis	08/07/02
CA-03-016	R01, R21	Diet, DNA Methylation and Other Epigenetic Events, and Cancer Prevention	Division of Cancer Prevention	09/27/02
CA-03-018	U56	Cooperative Planning Grant for Cancer Disparities Research Partnership Program	Division of Cancer Treatment and Diagnosis	08/28/02

Table 8. Program Announcements (PAs) Published by the NCI, FY2002

PA	Mechanism	Title	Division	Date of Publication
PA-02-001	R21	Exploratory Grant for Behavioral Research in Cancer Control	Division of Cancer Control and Population Sciences	10/01/01
PA-02-002	R01	Clinical Cancer Therapy Research	Division of Cancer Treatment and Diagnosis	10/02/01
PA-02-005	R01, R21	Economic Studies in Cancer Prevention, Screening and Care	Division of Cancer Control and Population Sciences	10/04/01
PA-02-006	R01, R21	Cancer Surveillance Using Health Claims-Based Data System	Division of Cancer Control and Population Sciences	10/04/01
PA-02-075	R41, R42, R43, R44	Innovative Toxicology Models: SBIR/STTR	Division of Cancer Treatment and Diagnosis	03/12/02
PA-02-086	R21	Development of High-Yield Technologies for Isolating Exfoliated Cells in Body Fluids	Division of Cancer Prevention	03/21/02

Table 9. Program Announcements with Special Referral (PARs) Published by the NCI, FY2002

PAR	Mechanism	Title	Division	Date of Publication
PAR-02-037	R03	Small Grant Program for Behavioral Research in Cancer Control	Division of Cancer Control and Population Sciences	12/13/01
PAR-02-040	R21	Developmental/Pilot Projects in Cancer Complementary and Alternative Medicine (CAM)	Office of Deputy Director for Extramural Science	12/17/01
PAR-02-042	R21	Colorectal Cancer Screening in Primary Care Practice	Division of Cancer Control and Population Sciences	12/20/01
PAR-02-051	R01	Cancer Therapy-Related Use of Genetically Engineered Mice	Division of Cancer Biology	01/28/02
PAR-02-052	R01, P01, U01	Competing Supplements for Organotypic Models of Cancer	Division of Cancer Biology	01/29/02
PAR-02-068	P50	Specialized Programs of Research Excellence (SPORES) in Pancreatic Cancer for the Year 2002	Office of Deputy Director for Extramural Science	02/25/02
PAR-02-074	R21, R33, R21/R33	Innovative Toxicology Models for Drug Evaluation: Exploratory/Developmental Grant and Phased Innovation Award	Division of Cancer Treatment and Diagnosis	03/12/02
PAR-02-126	P50	Specialized Programs of Research Excellence (SPORES) in Human Cancer for the Year 2003	Office of Deputy Director for Extramural Science	07/10/02
PAR-02-175	R01, P01, U01, P30	Diet, DNA Methylation and Other Epigenetic Events, and Cancer Prevention: Competing Supplements	Division of Cancer Prevention	09/27/02
PAR-02-176	R03	Cancer Research Small Grant Program	Division of Cancer Prevention	09/27/02
PAS-02-009	R01	Cohort Studies in Cancer Epidemiology	Division of Cancer Control and Population Sciences	10/11/01

**Table 10.RFA Applications Reviewed by the NCI
(by Mechanism) ,
FY2002***

Title of Initiative	RFA Number	Activity Code	Applications by NCAB Round				Direct Costs Requested	
			Totals	Jan	May	Sep	First Year	Initiative [†]
Resource-Related Research Projects	CA01-009	R24	1	0	1	0	\$29,800	NA
Centers of Excellence in Cancer Communications Research (CECCRS)	CA01-019	P50	20	20	0	0	31,121,201	O-6
Shared Resources for Scientists Not at NCI Funded Cancer Centers	CA01-020	R24	33	33	0	0	6,368,598	O-3
Career Transition Award	CA01-026	K22	8	8	0	0	80,000	
Tissue and Biological Fluids Bank of HIV Related Malignancies	CA02-001	U01	6	6	0	0	4,125,656	O-3
Cancer Disparities Research Partnerships Plan	CA02-002	U56	6	0	0	6	3,686,664	C-8
Community Clinical Oncology Program	CA02-003	U10	16	16	0	0	11,403,453	C-3
Minority-Based Community Oncology Program	CA02-004	U10	2	2	0	0	781,191	C-3
Comprehensive Minority Institution/Cancer Center Partnership	CA02-005	U54	4	4	0	0	2,608,834	C-8
Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	CA02-006	P20	14	14	0	0	1,577,179	C-8
Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	CA02-007	U56	14	14	0	0	3,475,818	C-8
Chemoprevention of Tobacco-Related Cancers in former Smokers: Preclinical Studies	CA02-008	R01	18	18	0	0	5,805,612	O-5
Chemoprevention of Tobacco-Related Cancers in former Smokers: Preclinical Studies	CA02-008	R21	1	1	0	0	100,000	O-5
Chemoprevention of Tobacco-Related Cancers in former Smokers: Preclinical Studies	CA02-009	U01	11	11	0	0	7,769,375	O-5
Cancer Intervention and Surveillance Monitoring Network (CISNET)	CA02-010	U01	17	0	17	0	2,650,690	C-5
Early Clinical Trials of New Anti-Cancer Agents With Phase I Emphasis	CA02-011	U01	30	0	0	30	13,660,039	C-3
Cooperative Family Registry for Colorectal Cancer Studies	CA02-501	U01	6	0	6	0	1,192,077	C-5
Pediatric Phase I/Pilot Consortium	CA02-503	U01	1	0	1	0	2,281,946	C-3
Letter RFA-Advanced Technology for Radiation Therapy	CA02-505	U24	2	0	2	0	2,054,339	NA
Disseminating Evidence Based Intervention Resource Products (Letter RFA)	CA02-506	R01	3	0	0	3	304,139	O-6
International Tobacco and Health Research and Capacity Building Program**	TW02-005	R01	63	0	63	0		
Cancer Research Network Across Healthcare Systems	CA02-507	U19	1	0	0	1	4,556,837	C-7
Overall Totals			209	147	22	40	\$105,553,456	

* Includes withdrawn applications.

** Not included in totals.

† Where applicable, the designation refers to a Bypass Budget “opportunity” or “challenge” initiative as noted on pp. 11 and 12.

**Table 11.PA Special Emphasis Panel Applications
Reviewed by the NCI
(by Mechanism) , FY2002***

Title of Initiative	RFA Number	Activity Code	Applications by NCAB Round				Direct Costs	
			Totals	Jan	May	Sep	Requested First Year	Initiative†
Mentored Patient-Oriented Research Development Award	PA00-004	K23	3	1	1	1	\$350,850	C-6
Academic/Teacher Award	PA00-070	K07	1	0	1	0	115,415	C-6
Institutional National Research Service Award	PA00-103	T32	1	0	1	0	189,908	C-6
Small Grants Program for Cancer Epidemiology	PA01-021	R03	73	24	28	21	3,583,000	NA
Non-Mammalian Organisms as Models for Anti-Cancer Drug Discovery	PA01-042	R01	30	15	0	15	6,764,345	O-4
Non-Mammalian Organisms as Models for Anti-Cancer Drug Discovery	PA01-042	R21	30	15	0	15	2,925,000	O-4
Flexible System to Advance Innovative Research (FLAIR) (STTR) Grants—Phase I	PA01-091	R41	8	4	0	4	2,231,178	O-4
Flexible System to Advance Innovative Research (FLAIR) SBIR—Phase I	PA01-091	R43	51	27	0	24	10,684,359	O-3
Flexible System to Advance Innovative Research (FLAIR) (SBIR)—Phase II	PA01-091	R44	7	2	0	5	2,956,494	O-3
Cancer Prevention Small Research Grants Program	PAR00-025	R03	76	20	29	27	3,800,000	NA
Cancer Education Grant Program	PAR00-033	R25	6	2	2	2	1,254,819	C-6
Physician Scientist Award (Program)	PAR00-063	K12	1	0	0	1	510,774	C-6
Cancer Education and Career Development Program	PAR00-064	R25	3	1	0	2	1,982,132	C-6
Exploratory Grants	PAR00-087	P20	1	0	1	0	1,882,449	C-3
SPORES: Brain, Head & Neck, GI, Prostate, Lymphoma	PAR00-087	P50	29	8	21	0	52,340,945	C-3
Innovative Toxicology Models for Drug Evaluation: Exploratory/Developmental Grants	PAR01-003	R21	6	0	6	0	596,912	NA
Innovative Toxicology Models for Drug Evaluation: Exploratory/Developmental Grants Phase II	PAR01-003	R33	3	0	3	0	741,396	NA
Innovative Toxicology Models for Drug Evaluation (STTR) Grants—Phase I	PAR01-004	R41	1	0	1	0	105,906	NA
Innovative Toxicology Models for Drug Evaluation (SBIR)—Phase I	PAR01-004	R43	10	0	10	0	1,704,246	NA
NCI Mentored Career Development Award for Underrepresented Minorities	PAR01-016	K01	1	0	1	0	125,550	C-6
Development of High Yield Technologies for Isolating Exfoliated Cells in Body Fluids	PAR01-019	R21	7	0	7	0	725,000	O-3
Phased Application Awards in Cancer Prognosis and Prediction	PAR01-061	R21	25	12	13	0	\$2,570,709	C-5

(Continued)

* Includes withdrawn applications.

† Where applicable, the designation relates to a Bypass Budget “opportunity” or “challenge” initiative as noted on pp. 11 and 12.

Table 11.PA Special Emphasis Panel Applications Reviewed by the NCI (by Mechanism), FY2002* (Continued)

Title of Initiative	RFA Number	Activity Code	Applications by NCAB Round				Direct Costs Requested	
			Totals	Jan	May	Sep	First Year	Initiative†
Phased Application Awards in Cancer Prognosis and Prediction (SBIR)—Phase II	PAR01-061	R33	4	2	2	0	\$1,255,890	C-5
Cancer Prognosis and Prediction—Phase I	PAR01-062	R41	1	0	1	0	122,557	C-5
Molecular Target Drug Discovery for Cancer	PAR01-045	R21	119	119	0	0	12,140,000	O-4
Molecular Target Drug Discovery for Cancer: Competing Supplements	PAR01-046	P01	1	1	0	0	142,337	O-4
Molecular Target for Drug Discovery: Competing Supplements	PAR01-046	R01	12	12	0	0	2,085,000	O-4
Small Business Innovation Research Grants (SBIR)—Phase I	PAR01-062	R43	9	2	7	0	792,526	C-5
Cancer Prognosis and Prediction (SBIR)—Phase II	PAR01-062	R44	2	1	1	0	158,266	C-5
Review and Analysis of Tobacco Industry Documents	PAR01-063	R01	26	12	0	14	6,061,136	O-5
Development of Novel Technologies for In Vivo Imaging	PAR01-101	R21	41	19	0	22	4,233,069	O-2
Development of Novel Technologies for In Vivo Imaging Phase II	PAR01-101	R33	13	4	0	9	3,920,180	O-2
Development of Novel Technologies for In Vivo Imaging (STTR) Grants—Phase I	PAR01-102	R41	2	1	0	1	313,658	O-2
Development of Novel Technologies for In Vivo Imaging (STTR) Grants—Phase II	PAR01-102	R42	2	1	0	1	172,417	O-2
Development of Novel Technologies for In Vivo Imaging (SBIR)—Phase I	PAR01-102	R43	32	21	0	11	3,492,416	O-2
Development of Novel Technologies for In Vivo Imaging (SBIR)—Phase II	PAR01-102	R44	8	1	0	7	1,882,081	O-2
Innovative Technologies for the Molecular Analysis of Cancer	PAR01-104	R21	33	7	15	11	3,340,588	O-3
Innovative Technologies for the Molecular Analysis of Cancer Phase II	PAR01-104	R33	17	6	6	5	6,995,907	O-3
Innovative Technologies for the Molecular Analysis of Cancer (STTR) Grants—Phase I	PAR01-105	R41	1	1	0	0	136,740	O-3
Innovative Technologies for the Molecular Analysis of Cancer (STTR) Grants—Phase II	PAR01-105	R42	1	0	0	1	563,070	O-3
Innovative Technologies for the Molecular Analysis of Cancer (SBIR)—Phase I	PAR01-105	R43	40	14	17	9	3,998,564	O-3
Innovative Technologies for the Molecular Analysis of Cancer (SBIR)—Phase II	PAR01-105	R44	7	2	1	4	1,243,388	O-3
Applications of Innovative Technologies for the Molecular Analysis of Cancer, Phased Innovation Award	PAR01-106	R21	39	10	19	10	4,005,382	O-3
Applications of Innovative Technologies for the Molecular Analysis of Cancer, Phase II	PAR01-106	R33	16	4	7	5	\$9,652,679	O-3

Table 11.PA Special Emphasis Panel Applications Reviewed by the NCI (by Mechanism), FY2002* (Continued)

Title of Initiative	RFA Number	Activity Code	Applications by NCAB Round				Direct Costs Requested	
			Totals	Jan	May	Sep	First Year	Initiative
Applications of Innovative Technologies for the Molecular Analysis of Cancer (STTR) Grants—Phase II	PAR01-107	R42	2	0	1	1	\$217,257	O-3
Applications of Innovative Technologies for the Molecular Analysis of Cancer (SBIR)—Phase I	PAR01-107	R43	12	3	2	7	1,440,325	O-3
Applications of Innovative Technologies for the Molecular Analysis of Cancer (SBIR)—Phase II	PAR01-107	R44	1	1	0	0	100,000	O-3
SPORE Planning Grant	PAR01-110	P20	1	0	1	0	1,722,089	C-3
SPORE: Brain, Breast, Uterine, Cervical	PAR01-110	P50	15	0	0	15	27,227,153	C-3
Academic/Teacher Award	PAR01-135	K07	1	0	1	0	126,000	C-6
Small Grants for Behavioral Research and Cancer Control	PAR02-037	R03	23	0	0	23	1,175,000	NA
Competing Supplements for Organotypic Models of Cancer	PAR02-052	P01	4	0	0	4	200,000	C-1
Competing Supplements for Organotypic Models of Cancer	PAR02-052	R01	12	0	0	12	575,000	C-1
Small Grants Program for Cancer Epidemiology	PAR99-006, 01-021	R03	32	9	19	4	1,598,585	C-5
Applications of Innovative Technologies for the Molecular Analysis of Cancer	PAR99-102	R21	1	0	0	1	100,000	O-2
Academic/Teacher Award	PAR99-108	K07	3	3	0	0	353,828	C-6
SPORE: Prostate, Breast	PAR99-167	P50	5	2	2	1	8,877,937	C-3
Overall Totals			911	389	227	295	\$208,562,412	

**Table 12. Non-RFA PA SEP Applications Reviewed by the NCI
(by Mechanism), FY2002***

Mechanism	Applications by NCAB Round Activity					Direct Costs	
	Code	Totals	Jan	May	Sep	Requested First Year	Requested Total Years
Research Program Projects	P01	14	6	3	5	\$19,314,168	\$126,637,684
Center Core Grants	P30	2	2	0	0	1,677,466	11,308,452
Specialized Center	P50	2	0	1	1	3,657,937	29,343,164
Research Project	R01	5	5	0	0	514,891	723,038
Small Research Grants	R03	2	0	1	1	100,000	299,000
Conferences	R13	59	16	21	22	1,632,955	3,170,495
Resource-Related Research Projects	R24	5	1	4	0	310,997	2,317,558
Exploratory/Developmental Grants—Phase II	R33	2	0	1	1	657,970	1,326,190
Small Business Innovation Research Grants (SBIR)—Phase I	R43	2	0	0	2	283,414	694,689
Small Business Innovation Research Grants (SBIR)—Phase II	R44	5	0	4	1	1,671,668	6,324,791
Research Project (Cooperative Agreements)	U01	5	0	5	0	6,985,911	46,052,523
Overall Totals		103	30	40	33	\$36,807,377	\$228,197,584

*Includes withdrawn applications.

Table 13. Average Total Cost of Research Program Grant Awards, by Division, FY2000, FY2001, FY2002

	<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>		<u>Percent Change</u>			
	Number	Cost	Number	Cost	Number	Cost	01-02		00-02	
							No.	Cost	No.	Cost
R01 Average Cost of Award Data										
NCI Overall	3,011	\$295,000	3,234	\$312,000	3,378	\$324,000	4.5	3.8	12.2	9.8
DCB	1,780	270,000	1,838	280,000	1,942	298,000	5.7	6.4	9.1	10.4
DCP	65	552,000	122	423,000	126	403,000	3.3	-4.7	93.8	-27.0
DCTD	852	266,000	915	281,000	918	288,000	0.3	2.5	7.7	8.3
DCCPS	313	449,000	357	494,000	389	497,000	9.0	0.6	24.3	10.7
P01 Average Cost of Award Data										
NCI Overall	179	1,599,000	178	1,692,000	173	1,836,000	-2.8	8.5	-3.4	14.8
DCB	66	1,343,000	61	1,451,000	63	1,571,000	3.3	8.3	.5	17.0
DCP	8	2,076,000	11	1,776,000	13	1,931,000	18.2	8.7	62.5	-7.0
DCTD	87	1,723,000	91	1,754,000	80	1,995,000	-12.1	13.7	-8.0	15.8
DCCPS	18	\$1,693,000	15	\$2,169,000	16	\$2,015,000	6.7	-7.1	-11.1	19.0

DCB.....Division of Cancer Biology

DCP.....Division of Cancer Prevention

DCTD....Division of Cancer Treatment and Diagnosis

DCCPS...Division of Cancer Control and Population Sciences

Table 14. Summary for NCI Grant Awards (by Mechanism) for FY2002

Mechanism	Award Count	Dollars in Thousands		% of NCI Total		Competing		Success Rate
		Dollar	Avg. Cost	Number	Dollar	Requested	Awarded	
RPG								
R01—Traditional Research Grants	3,378	1,093,908	324	52.41	39.20	3,301	844	25.6
P01—Program Projects	173	317,632	1,836	2.68	11.38	98	37	37.8
R03—Small Grants	186	14,115	76	2.89	0.51	228	100	43.9
R15—Academic Research Enhancement Awards (AREA)	10	1,478	148	0.16	0.05	38	10	26.3
R21—Exploratory/Developmental Research	309	57,633	187	4.79	2.07	758	187	24.7
R33—Phased Innovation Grant (Phase 2)	79	39,318	498	1.23	1.41	71	22	31.0
R29—First Awards	110	12,471	113	1.71	0.45			
R37—Merit Awards	65	29,445	453	1.01	1.06	13	13	100.0
R55—Shannon Awards	9	850	94	0.14	0.03	10	9	90.0
U19, U01—Cooperative Agreements	17	17,530	1,031	0.26	0.63	3	2	66.7
R01—Program Evaluation		45,273		0.00	1.62			
Total for RPG POOL Group	4,336	1,629,653	4,760	67.28	58.40	4,520	1,224	27.1
P01, R01, R03, R21, R33, U010—Request for Applications	68	28,458	419	1.06	1.02	28	15	53.6
U01, U19, U42—Cooperative Agreements (RFAs)	199	148,737	747	3.09	5.33	40	25	62.5
Total for RFA/Cooperative Agreements	267	177,195	1,166	4.14	6.35	68	40	58.8
U43, U44, R43, R44—Small Business Innovative Research	349	81,324	233	5.42	2.91	785	264	33.6
R41, R42—Small Business Technology Transfer	25	5,042	202	0.39	0.18	69	19	27.5
Total for SBIR/STTR	374	86,366	435	5.80	3.10	854	283	33.1
Total for RPG	4,977	1,893,214	6,361	77.22	67.85	5,442	1,547	28.4
Centers								
U54—Specialized Center (Cooperative Agreements)	12	16,847	1,404	0.19	0.60			
Comprehensive Core Grants	36	138,316	3,842	0.56	4.96	4	4	100.0
P20—Exploratory Grants	29	6,714	232	0.45	0.24	58		0.0
P30, P40, P41, U42—Core Clinical	13	45,145	3,473	0.20	1.62	8	7	87.5
P20, P50—Spores	34	94,897	2,791	0.53	3.40	68	23	33.8
P30—Core Basic	7	17,834	2,548	0.11	0.64	1	1	100.0
Total for CORE	131	319,153	14,290	2.03	11.46	139	35	25.2
Other								
U56—Exploratory Grants—Cooperative Agreement (NCI)	14	6,558	468	0.22	0.24	16	10	62.5
Research								
U10—Clinical Cooperative Groups	137	163,826	1,196	2.13	5.87	4	3	75.0
R09, U09—Scientific Evaluation	1	7,408	7,408	0.02	0.27			
S06—Minority Biomedical Research Support		3,980			0.00			0.14
R24, U24—Research/Resource Grant	65	32,395	498	1.01	1.16	40	19	47.5
T15—Training Conference Grants	2	204	102	0.03	0.01	1		0.0
Biomedical Research Support Grant		4,253			0.00			0.15
D43, R13—Conference Grants/International Training Grants in Epidemiology	81	1,989	25	1.26	0.07	77	60	77.9
Biomedical Research Support Shared Instrumentation Grants		1,880			0.00			0.07
Total for OTHER RESEARCH	300	222,493	9,697	4.65	7.97	138	92	66.7

**Table 14. Summary for NCI Grant Awards (by Mechanism)
for FY2002**

(Continued)

Mechanism	Award Count	Dollars in Thousands		% of NCI Total		Competing		Success Rate
		Dollar	Avg. Cost	Number	Dollar	Requested	Awarded	
Careers								
R25-Cancer Education	96	26,775	279	1.49	0.96	67	28	41.8
K01-Temin Award K01	86	11,739	137	1.33	0.42	76	28	36.8
K05-Established Invest. Award in Ca Prevention & Control K05	10	1,206	121	0.16	0.04	7	5	71.4
K07-Preventive Oncology Award K07	75	7,023	94	1.16	0.25	71	23	32.4
K08-Mentored Clinical Scientist K08	134	13,188	98	208	0.47	113	33	29.2
K25-Mentored Quantitative Research Career Dev Award K25	1	138	138	0.02	0.00	2		0.0
K12, K14-Mentored Career Award K12	11	7,715	701	0.17	0.213	8	4	50.0
K30-Institutional Curriculum Award K30		1,600			0.00			0.06
K23-Mentored Patient-Oriented Research Career Dev, A K23	44	4,673	106	0.68	0.17	32	14	43.8
K24-Mid-Career Investigator in Patient-Oriented Research A K24	37	4,226	114	0.57	0.15	10	4	40.0
K22-Clinical Research Track K22	22	3,359	153	0.34	0.12	41	14	34.1
Total for CAREERS	420	54,867	1,662	6.52	1.97	360	125	34.7
Total Other Research	816	304,135	11,638	12.66	10.90	565	245	43.4
NRSA								
T32, T34, T35, T36-NRSA Institution	197	58,455	297	3.06	2.09	79	44	55.7
F30, F31, F32, F33, F34-NRSA Fellowships	124	5,219	42	1.92	0.19	211	32	15.2
Total for NRSA	321	63,674	339	4.98	2.28	290	76	26.2
Control								
P20, P50, R01, R21, U01, U10, U19, U24 related to Cancer Prevention and Control,	182	191,598	1,053	2.82	6.87	59	28	47.5
Cancer Control Special Populations	18	16,610	923	0.28	0.60			
Construction								
C06-Construction		1,500		0.00	0.05			
Total NCI Grants	6,445	2,790,484	34,604	100.00	100.00	6,495	1,931	29.7

**Table 15.NCI Special Interest Category (SIC) Dollars
for FY2002—
Percent Change from FY2001***

Special Interest Category (SIC)	2001 Grants	2002 Grants	Percent Change	2001 Contracts	2002 Contracts	Percent Change	2001 Totals	2002 Totals	Percent Change
Acquired Immune Deficiency	\$30,178,570	\$26,853,112	-11.02	\$5,552,875	\$3,762,383	-32.24	\$35,731,445	\$30,615,495	-14.32
Adoptive Cell Immunotherapy	54,038,845	62,020,806	14.77	0	0		54,038,845	62,020,806	14.77
Adv. Manufacturing Technology	22,650,296	12,573,059	-44.49	2,280,914	1,698,837	-25.52	24,931,210	14,271,896	-42.75
Aging	111,511,570	130,562,127	17.08	4,288,016	8,548,329	99.35	115,799,586	139,110,456	20.13
Alternative Medicine, Direct	22,487,573	29,883,761	32.89	1,309,367	3,066,382	134.19	23,796,940	32,950,143	38.46
Alternative Medicine, Indirect	28,206,026	28,408,151	0.72	600,213	1,277,445	112.83	28,806,239	29,685,596	3.05
Alzheimers Dementia	712,086	1,030,384	44.70	0	0		712,086	1,030,384	44.70
Arthritis	525,144	1,120,913	113.45	0	0		525,144	1,120,913	113.45
Asbestos	1,468,410	1,836,892	25.09	0	0		1,468,410	1,836,892	25.09
Ataxia Telangiectasia	6,377,560	7,916,376	24.13	70,000	34,035	-51.38	6,447,560	7,950,411	23.31
Autoimmune Diseases	6,121,649	7,067,274	15.45	27,527	23	-99.92	6,149,176	7,067,297	14.93
Behavior Research, Direct	198,496,112	205,410,803	3.48	3,315,371	4,198,913	26.65	201,811,483	209,609,716	3.86
Bioengineering	213,564,969	248,182,230	16.21	24,262,167	33,279,602	37.17	237,827,136	281,461,832	18.35
Biological Response Modifiers	637,679,013	662,169,054	3.84	46,062,079	39,296,508	-14.69	683,741,092	701,465,562	2.59
Biomaterials Research	12,077,508	19,921,311	64.95	2,754,385	4,017,504	45.86	14,831,893	23,938,815	61.40
Birth Defects	10,289,795	8,353,572	-18.82	76,288	15,035	-80.29	10,366,083	8,368,607	-19.27
Bone Marrow Transplantation	67,242,722	65,937,038	-1.94	0	0		67,242,722	65,937,038	-1.94
Breast Cancer Detection	77,682,291	85,530,617	10.10	4,488,224	3,115,652	-30.58	82,170,515	88,646,269	7.88
Breast Cancer Education	17,436,053	15,775,726	-9.52	106,755	539	-99.50	17,542,808	15,776,265	-10.07
Breast Cancer Epidemiology	59,488,529	64,790,564	8.91	3,737,780	2,996,210	-19.84	63,226,309	67,786,774	7.21
Breast Cancer Genetics	69,754,670	78,160,277	12.05	1,751,642	730,266	-58.31	71,506,312	78,890,543	10.33
Breast Cancer Prevention	26,501,037	27,877,909	5.203	790,133	2,801,617	-26.08	30,291,170	30,679,526	1.28
Breast Cancer Rehabilitation	12,704,463	12,268,949	-3.430	0	25,707		12,704,463	12,294,656	-3.23
Breast Cancer Screening	30,797,950	27,483,358	-10.76	1,000,734	0	-100.00	31,798,684	27,483,358	-13.57
Breast Cancer Treatment	125,885,138	139,311,736	10.67	6,699,684	6,481,948	-3.25	132,584,822	145,793,684	9.96
Breast Cancer—Basic	103,258,330	124,002,636	20.09	805,504	476,244	-40.88	104,063,834	124,478,880	19.62
Cancer Survivorship	110,834,449	121,248,170	9.40	2,547,142	2,402,478	-5.68	113,381,591	123,650,648	9.06
Carcinogenesis, Environmental	460,386,298	489,132,687	6.24	38,806,843	30,671,225	-20.96	499,193,141	519,803,912	4.13
Cervical Cancer Education	2,875,322	1,988,194	-30.85	0	0		2,875,322	1,988,194	-30.85
Chemoprevention	87,852,536	108,460,873	23.46	30,497,643	29,238,960	-4.13	118,350,179	137,699,833	16.35
Chemotherapy	345,463,751	385,496,067	11.59	26,385,611	20,080,145	-23.90	371,849,362	405,576,212	9.07
Child Health	39,961,876	42,029,648	5.17	1,831,611	721,264	-60.62	41,793,487	42,750,912	2.29
Childhood Cancers	115,533,390	134,620,199	16.52	47,060	41,915	-10.93	115,580,450	134,662,114	16.51
Clinical Trials, Diagnosis	47,170,393	58,080,246	23.13	21,228,951	33,127,604	56.05	68,399,344	91,207,850	33.35
Clinical Trials, Prevention	53,610,220	54,760,830	2.15	13,749,438	10,723,782	-22.01	67,359,658	65,484,612	-2.78
Clinical Trials, Therapy	343,992,499	376,474,443	9.44	7,859,885	7,440,726	-5.33	351,852,384	383,915,169	9.11
Clinical Trials, Other	9,040,036	11,304,651	25.05	367,693	338,023	-8.07	9,407,729	11,642,674	23.76
Combined Treatment Modalities	230,278,274	242,999,243	5.52	0	0		230,278,274	242,999,243	5.52
Diabetes	5,152,356	7,215,043	40.03	0	160,380		5,152,356	7,375,423	43.15
Diagnosis	409,834,044	457,525,593	11.64	32,683,199	45,212,195	38.33	442,517,243	502,737,788	13.61
Diagnostic Imaging	191,658,854	208,649,190	8.86	19,367,150	28,408,030	46.68	211,026,004	237,057,220	12.34
Diethylstilbestrol	168,885	799,254	373.25	919,728	1,311,257	42.57	1,088,613	2,110,511	93.87
Dioxin	\$1,176,288	\$1,203,176	2.29	\$0	\$0		\$1,176,288	\$1,203,176	2.29

(Continued)

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

**Table 15.NCI Special Interest Category (SIC) Dollars
for FY2002—
Percent Change from FY2001 (Continued)**

Special Interest Category (SIC)	2001 Grants	2002 Grants	Percent Change	2001 Contracts	2002 Contracts	Percent Change	2001 Totals	2002 Totals	Percent Change
DNA Repair	\$119,512,548	\$132,131,096	10.56	\$119,877	\$1,227,104	923.64	\$119,632,425	\$133,358,200	11.47
Drug Development	323,066,785	372,377,063	15.26	48,116,585	32,510,368	-32.43	371,183,370	404,887,431	9.08
Drug Resistance	84,045,970	91,532,583	8.91	212,005	149,743	-29.37	84,257,975	91,682,326	8.81
Drugs-Natural Products	117,723,931	129,558,190	10.05	2,291,555	5,655,782	146.81	120,015,486	135,213,972	12.66
Endocrinology	137,280,270	156,203,671	13.78	6,507,888	5,205,320	-20.02	143,788,158	161,408,991	12.25
Epidemiology-Biochemical	241,573,239	241,511,924	-0.031	1,591,599	10,454,574	-9.81	253,164,838	251,966,498	-0.47
Gene Transfer Clinical	15,608,158	19,026,602	21.90	0	0		15,608,158	19,026,602	21.90
Helicobacter	2,043,806	2,155,965	5.49	0	0		2,043,806	2,155,965	5.49
Hematology	371,307,415	410,583,465	10.58	3,849,396	5,519,782	43.39	375,156,811	416,103,247	10.91
Hematopoietic Stem Cell Research	86,508,848	89,663,101	3.65	0	0		86,508,848	89,663,101	3.65
Hormone Replacement Rx	9,312,758	12,170,912	30.69	0	0		9,312,758	12,170,912	30.69
Hospice	1,631,747	1,554,969	-4.71	0	0		1,631,747	1,554,969	-4.71
Immunogenesis	55,422,201	52,363,969	-5.52	1,742,154	1,344,565	-22.82	57,164,355	53,708,534	-6.05
Infant Mortality	874,643	415,516	-52.49	0	0		874,643	415,516	-52.49
Information Dissemination	206,600,804	225,817,314	9.30	89,403,158	101,603,549	13.65	296,003,962	327,420,863	10.61
Interferon	30,732,837	32,284,204	5.05	0	0		30,732,837	32,284,204	5.05
Mammography	35,546,409	34,655,900	-2.51	532,160	25,707	-95.17	36,078,569	34,681,607	-3.87
Metastasis	204,140,797	250,350,433	22.64	1,752,221	3,022,663	72.50	205,893,018	253,373,096	23.06
Mind/Body Research	11,496,467	11,405,866	-0.79	0	0		11,496,467	11,405,866	-0.79
Molecular Disease	1,036,211,253	1,158,808,792	11.83	14,765,290	11,969,047	-18.94	1,050,976,543	1,170,777,839	11.40
Neurofibromatosis	123,168	779,543	532.91	6,288	0	-100.00	129,456	779,543	502.17
Neurofibromatosis, Related	3,909,631	4,941,020	26.38	0	0		3,909,631	4,941,020	26.38
Magnetic Resonance Imaging	59,418,389	66,882,447	12.56	0	727,054		59,418,389	67,609,501	13.79
Nursing Research	7,783,431	9,702,363	24.65	0	0		7,783,431	9,702,363	24.65
Vitamin A	20,103,753	23,883,101	18.80	249,221	2,123,408	752.02	20,352,974	26,006,509	27.78
Vitamin C	5,042,409	6,379,668	26.52	250,184	0	-100.00	5,292,593	6,379,668	20.54
Vitamins, Other	12,413,643	13,073,118	5.31	250,184	816,487	226.35	12,663,827	13,889,605	9.68
Nutrition	166,036,640	179,032,658	7.83	7,003,494	11,854,416	69.26	173,040,134	190,887,074	10.31
Nutrition Monitoring	37,655,854	38,850,410	3.17	3,391,635	0	-100.00	41,047,489	38,850,410	-5.35
Obesity	24,412,132	28,475,968	16.65	53,377	270	-99.49	24,465,509	28,476,238	16.39
Occupational Cancer	14,643,231	12,992,732	-11.27	1,842,111	861,012	-53.26	16,485,342	13,853,744	-15.96
Oncogenes	494,908,236	542,665,620	9.65	5,324,228	8,973,622	68.54	500,232,464	551,639,242	10.28
Organ Transplant Research	76,238,755	75,564,744	-0.88	822,426	0	-100.00	77,061,181	75,564,744	-1.94
Osteoporosis	1,287,965	1,372,960	6.60	0	0		1,287,965	1,372,960	6.60
P53	98,703,903	114,641,163	16.15	2,244,701	2,032,371	-9.46	100,948,604	116,673,534	15.58
Pain	10,031,119	9,302,205	-7.27	0	0		10,031,119	9,302,205	-7.27
Palliative Care	14,758,958	16,548,850	12.13	0	0		14,758,958	16,548,850	12.13
PAP Testing	13,235,326	13,578,109	2.59	371,914	76,370	-79.47	13,607,240	13,654,479	0.35
Pesticides	3,624,649	3,580,892	-1.21	1,248,416	704,095	-43.60	4,873,065	4,284,987	-12.07
Population Research	10,439,957	10,335,971	-1.00	0	0		10,439,957	10,335,971	-1.00
Prevention, Primary	252,251,073	286,005,520	13.38	36,878,661	33,630,480	-8.81	289,129,734	319,636,000	10.55
Radiation-Electromagnetic Fields	202,904	467,375	130.34	0	0		202,904	467,375	130.34
Radiation-Ionizing	39,545,455	41,945,036	6.07	858,412	156,917	-81.72	40,403,867	42,101,953	4.20
Radiation-Low-Level Ionizing	16,323,130	13,877,729	-14.98	0	0		16,323,130	13,877,729	-14.98
Radiation-Non-Ionizing	\$32,614,611	\$34,067,458	4.45	\$853,796	\$173,319	-79.70	\$33,468,407	\$34,240,777	2.31

(Continued)

**Table 15.NCI Special Interest Category (SIC) Dollars
for FY2002—
Percent Change from FY2001 (Continued)**

Special Interest Category (SIC)	2001 Grants	2002 Grants	Percent Change	2001 Contracts	2002 Contracts	Percent Change	2001 Totals	2002 Totals	Percent Change
Radiation-Non-Ionizing Dx or Rx	\$75,539,731	\$87,338,415	15.62	\$0	\$727,054		\$75,539,731	\$88,065,469	16.58
Radiation-UV	30,109,926	31,910,200	5.98	853,796	173,319	-79.70	30,963,722	32,083,519	3.62
Radiotherapy	186,129,161	215,427,906	15.74	532,160	418,936	-21.28	186,661,321	215,846,842	15.64
Radon	2,663,660	3,062,288	14.97	0	0		2,663,660	3,062,288	14.97
Rare Diseases	30,002,699	36,784,776	22.60	879,260	1,854,127	110.87	30,881,959	38,638,903	25.12
RAS Inhibitors	7,935,689	11,496,118	44.87	606,331	419,867	-30.75	8,542,020	11,915,985	39.50
Rehabilitation	21,677,142	21,727,475	0.23	2,219,715	2,270,210	2.27	23,896,857	23,997,685	0.42
Smokeless Tobacco	8,255,406	9,079,157	9.98	0	108,451		8,255,406	9,187,608	11.29
Resources	334,403,102	387,027,189	15.74	134,425,385	137,814,273	2.52	468,828,487	524,841,462	11.95
Rural Populations	19,135,158	26,641,779	39.23	14,903,826	14,940,067	0.24	34,038,984	41,581,846	22.16
Sexually Transmitted Diseases	35,466,974	40,417,819	13.96	3,268,520	1,443,351	-55.84	38,735,494	41,861,170	8.07
Smoking and Health	104,961,706	128,987,933	22.89	4,398,006	3,193,683	-27.38	109,359,712	132,181,616	20.87
Smoking Behavior	69,414,259	73,479,632	5.86	2,247,823	898,311	-60.04	71,662,082	74,377,943	3.79
Smoking, Passive	3,195,135	5,144,280	61.00	78,300	85,026	8.59	3,273,435	5,229,306	59.75
Structural Biology	271,979,013	300,907,474	10.64	40,059	4,909,708	12156.19	272,019,072	305,817,182	12.42
Surgery	129,601,515	139,416,973	7.57	1,498,869	1,197,577	-20.10	131,100,384	140,614,550	7.26
Taxol	65,996,775	73,218,250	10.94	32,166	115,953	260.48	66,028,941	73,334,203	11.06
Telehealth	89,809,323	78,386,738	-12.72	50,967,918	64,190,845	25.94	140,777,241	142,577,583	1.28
Therapy	870,131,599	971,888,124	11.69	65,199,968	59,909,897	-8.11	935,331,567	1,031,798,021	10.31
Tropical Diseases	6,009,550	8,553,908	42.34	104,798	684,611	553.27	6,114,348	9,238,519	51.10
Tuberculosis	45,302	46,587	2.84	0	0		45,302	46,587	2.84
Tumor Markers	359,406,893	411,307,341	14.44	12,961,700	13,043,137	0.63	372,368,593	424,350,478	13.96
Tumor Necrosis Factor	20,937,103	21,666,167	3.48	3,462	0	-100.00	20,940,565	21,666,167	3.47
Underserved Populations	75,689,392	87,086,363	15.06	15,905,038	15,811,281	-0.59	91,594,430	102,897,644	12.34
Virus-HHV8	10,517,347	12,455,991	18.43	0	0		10,517,347	12,455,991	18.43
Virus Cancer Research	175,759,100	176,999,020	0.71	5,796,104	3,660,942	-36.84	181,555,204	180,659,962	-0.49
Virus-Epstein-Barr	16,983,409	21,842,219	28.61	6,288	0	-100.00	16,989,697	21,842,219	28.56
Virus-Genital Herpes	980,918	791,268	-19.33	0	0		980,918	791,268	-19.33
Virus-Herpes	44,719,400	49,648,779	11.02	12,576	0	-100.00	44,731,976	49,648,779	10.99
Virus-HHV6	63,771	48,563	-23.85	6,288	0	-100.00	70,059	48,563	-30.68
Virus-HTLV-I	4,585,199	5,817,459	26.87	104,798	684,611	553.27	4,689,997	6,502,070	38.64
Virus-HTLV-II	282,943	272,629	-3.65	0	0		282,943	272,629	-3.65
Virus-HTLV-Unspec.	218,552	225,104	3.00	104,798	0	-100.00	323,350	225,104	-30.38
Virus-Papilloma	37,779,646	38,294,419	1.36	3,149,070	1,203,737	-61.77	40,928,716	39,498,156	-3.50
Virus-Papova	\$47,508,362	\$48,070,872	1.18	\$3,149,070	\$1,203,737	-61.77	\$50,657,432	\$49,274,609	-2.73

**Table 16.NCI Organ Site-Specific Dollars for FY2002–
Percent Change from FY2001***

Site Category	2001 Grants	2002 Grants	Percent Change	2001 Contracts	2002 Contracts	Percent Change	2001 Totals	2002 Totals	Percent Change
Adrenal	\$1,835,756	\$2,461,533	34.09	\$0	\$0		\$1,835,756	\$2,461,533	34.09
All Sites**	49,817,049	40,369,923	-18.96	26,973,956	39,767,269	47.43	76,791,005	80,137,192	4.36
Anus	3,771,168	2,830,955	-24.93	0	0		3,771,168	2,830,955	-24.93
Bladder	21,639,646	26,027,326	20.28	2,051,105	1,274,097	-37.88	23,690,751	27,301,423	15.24
Blood	1,811,202	973,156	-46.27	35,000	7,518	-78.52	1,846,202	980,674	-46.88
Bone Marrow	21,391,584	19,677,230	-8.01	0	0		21,391,584	19,677,230	-8.01
Bone, Cartilage	14,391,897	17,247,451	19.84	0	0		14,391,897	17,247,451	19.84
Brain	64,438,566	82,797,727	28.49	712,635	1,041,891	46.20	65,151,201	83,839,618	28.68
Breast	420,581,887	466,221,807	10.85	19,129,296	15,147,918	-20.81	439,711,183	481,369,725	9.47
Buccal Cavity	4,459,279	4,452,219	-0.16	454,636	776,646	70.83	4,913,915	5,228,865	6.41
Colon, Rectum	182,552,289	222,963,391	22.14	15,298,482	16,908,463	10.52	197,850,771	239,871,854	21.24
Central Nervous System	10,799,147	17,456,905	61.65	31,439	155,922	395.95	10,830,586	17,612,827	62.62
Cervix	55,646,463	56,185,149	0.97	5,888,191	3,859,186	-34.46	61,534,654	60,044,335	-2.42
Connective Tissue	5,535,330	7,857,870	41.96	0	0		5,535,330	7,857,870	41.96
Embryonic Tissue, Cells	9,467,501	10,165,631	7.37	0	0		9,467,501	10,165,631	7.37
Erythrocytes	1,123,696	1,017,898	-9.42	0	0		1,123,696	1,017,898	-9.42
Esophagus	12,086,969	15,633,684	29.34	3,541,288	558,406	-84.23	15,628,257	16,192,090	3.61
Eye	1,596,475	2,504,907	56.90	0	0		1,596,475	2,504,907	56.90
Gall Bladder	169,162	222,092	31.29	0	0		169,162	222,092	31.29
Gastrointestinal Tract	13,315,454	11,463,853	-13.91	947,158	2,207,704	133.09	14,262,612	13,671,557	-4.14
Genital System, Female	1,707,350	1,699,401	-0.47	459,865	655,629	42.57	2,167,215	2,355,030	8.67
Genital System, Male	2,197,552	978,638	-55.47	1,139,865	1,739,438	52.60	3,337,417	2,718,076	-18.56
Head and Neck	16,535,052	24,867,379	50.39	191,066	1,666,099	772.00	16,726,118	26,533,478	58.64
Heart	5,244,788	6,253,719	19.24	298,168	380,408	27.58	5,542,956	6,634,127	19.69
Hodgkins Lymphoma	8,467,163	11,314,840	33.63	4,588	4	-99.91	8,471,751	11,314,844	33.56
Invertebrate Tissue, Cells	14,585,781	13,247,408	-9.18	0	222,251		14,585,781	13,469,659	-7.65
Kaposi Sarcoma	18,734,908	16,402,643	-12.45	0	167,574		18,734,908	16,570,217	-11.55
Kidney	14,319,717	18,754,097	30.97	359,143	475,715	32.46	14,678,860	19,229,812	31.00
Larynx	1,387,440	1,538,946	10.92	0	0		1,387,440	1,538,946	10.92
Leukemia	142,979,270	167,559,408	17.19	767,644	1,851,787	141.23	143,746,914	169,411,195	17.85
Leukocytes	69,241,380	70,161,712	1.33	972,260	1,064,377	9.47	70,213,640	71,226,089	1.44
Liver	49,439,717	51,157,569	3.47	3,207,659	3,247,716	1.25	52,647,376	54,405,285	3.34
Lung	178,514,571	206,648,203	15.76	14,782,144	18,114,315	22.54	193,296,715	224,762,518	16.28
Lymph Node	750,268	678,029	-9.63	0	0		750,268	678,029	-9.63
Lymphatic System	2,664,440	2,068,357	-22.37	0	0		2,664,440	2,068,357	-22.37
Melanoma	60,576,181	72,703,068	20.02	2,486,500	2,461,213	-1.02	63,062,681	75,164,281	19.19
Muscle	8,439,049	9,793,642	16.05	0	0		8,439,049	9,793,642	16.05
Myeloma	15,062,070	17,356,968	15.24	9,176	761,393	8197.66	15,071,246	18,118,361	20.22
Nervous System	3,625,268	3,523,660	-2.80	6,288	0	-100.00	3,631,556	3,523,660	-2.97
Neuroblastoma	13,374,765	16,908,206	26.42	0	0		13,374,765	16,908,206	26.42
Non-Hodgkins Lymphoma	70,093,377	77,141,012	10.05	2,107,711	2,415,160	14.59	72,201,088	79,556,172	10.19
Nose, Nasal Passages	1,065,629	2,019,221	89.49	0	0		1,065,629	2,019,221	89.49
Ovary	\$66,435,126	\$78,133,675	17.61	\$5,893,599	\$9,597,944	62.85	\$72,328,725	\$87,731,619	21.30

(Continued)

* This table reports funding for research grants and contracts only; training grants and intramural projects are excluded.

** Research applicable to all sites.

**Table 16.NCI Organ Site-Specific Dollars for FY2002—
Percent Change from FY2001* (Continued)**

Site Category	2001 Grants	2002 Grants	Percent Change	2001 Contracts	2002 Contracts	Percent Change	2001 Totals	2002 Totals	Percent Change
Parathyroid	302,761	144,535	-52.26	0	0		302,761	144,535	-52.26
Penis	659,708	555,233	-15.84	0	0		659,708	555,233	-15.84
Pharynx	2,268,913	3,054,679	34.63	0	0		2,268,913	3,054,679	34.63
Pituitary	1,759,885	2,330,309	32.41	0	0		1,759,885	2,330,309	32.41
Plant Tissue, Cells	565,847	299,402	-47.09	0	0		565,847	299,402	-47.09
Platelets	554,711	766,283	38.14	0	0		554,711	766,283	38.14
Prostate	223,576,342	242,985,186	8.68	14,306,539	16,198,261	13.22	237,882,881	259,183,447	8.95
Reticuloendothelial System	27,358,067	24,077,970	-11.99	2,629,943	934,837	-64.45	29,988,010	25,012,807	-16.59
Respiratory System	3,428,953	2,231,189	-34.93	0	0		3,428,953	2,231,189	-34.93
Retinoblastoma	1,877,505	2,013,370	7.24	0	0		1,877,505	2,013,370	7.24
Skin	51,157,321	55,643,355	8.77	2,168,240	2,255,975	4.05	53,325,561	57,899,330	8.58
Small Intestine	1,798,719	1,940,181	7.86	0	0		1,798,719	1,940,181	7.86
Spleen	346,319	334,096	-3.53	0	0		346,319	334,096	-3.53
Stomach	3,967,752	6,555,573	65.22	2,010,235	2,097,465	4.34	5,977,987	8,653,038	44.75
Testis	6,160,001	5,330,602	-13.46	0	105,039		6,160,001	5,435,641	-11.76
Thymus	1,139,085	1,011,485	-11.20	6,288	0	-100.00	1,145,373	1,011,485	-11.69
Thyroid	3,330,988	3,948,141	18.53	81,532	0	-100.00	3,412,520	3,948,141	15.70
Trachea, Bronchus	372,540	386,225	3.67	672,692	393,732	-41.47	1,045,232	779,957	-25.38
Urinary System	629,770	703,615	11.73	0	0		629,770	703,615	11.73
Uterus	16,903,933	21,336,142	26.22	835,607	527,039	-36.93	17,739,540	21,863,181	23.25
Vagina	717,998	690,010	-3.90	0	0		717,998	690,010	-3.90
Vascular	40,523,773	51,333,578	26.68	374,341	518,142	38.41	40,898,114	51,851,720	26.78
Wilms Tumor	\$3,768,844	\$4,499,303	19.38	\$0	\$0		\$3,768,844	\$4,499,303	19.38

**Table 17. Reviewed Requests for Proposals (RFPs)¹
and Master Agreement Announcements (MAAs)²
in FY2002**

Announcement Number	Announcement Title	Workload Round
RFP N01CM27018-45	Early Clinical Trials of Imaging Agents	5/02
RFP N01-CP-21009-13	Effects of the Chernobyl Accident on Thyroid Cancer and Leukemia and Related Diseases	5/02
RFP N01-CO-27031-16:	Novel Technologies for the Detection, Diagnosis, and Treatment of Cancer (BAA)	5/02
RFP N01-CM-27004-19	Development of Dosage Forms and Delivery Systems for Anti-tumor Agents	5/02
Trans-NIH	SBIR Omnibus Solicitation Clinical Trials Data Collection Using Hand Held Technologies Area 181	5/02
RFP	SBIR Phase 2 Proposal	5/02
RFP	Loan Repayment Program	5/02
MAA N01-CP-01003-13	Record Linkage Studies Utilizing Resources in Population-Based Tumor Registries	10/02
MAA N01-CP-01005-50	Support Services for Studies of Emergent Cancer Issues	10/02
RFP N01-CN-25005-20	Recompetition: Surveillance, Epidemiology and End Results (SEER) Program	10/02
RFP N01-BC-27012-74	Early Phase Clinical Trial Protocols to Evaluate Safety and Immunogenicity of Human Papilloma Virus VLP Based Vaccines	10/02

¹ In terms of review complexity, a single RFP proposal is equivalent to a modest P01, while an MAA proposal is equivalent to an R01.

² There were 45 proposals submitted for all MAA, SBIR, and BAA initiatives; 27 proposals were submitted for the RFPs (excluding the BAA); and 79 responses were submitted in response to the Loan Repayment Program.