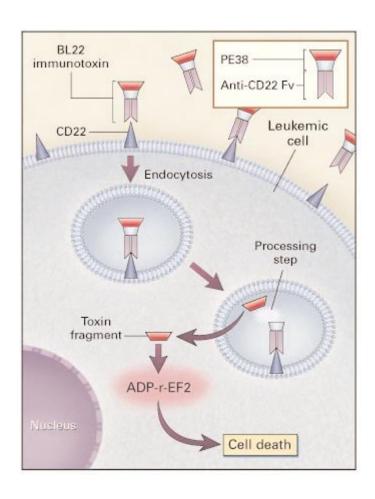
Division of Extramural Activities Annual Report 2001



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Foreword

The paramount goal of the National Cancer Institute (NCI) is to develop the knowledge base that will ultimately lead to the prevention or elimination of cancer and to translate that knowledge to applications in the general population. Ultimately, this process translates into three activities—discovery, development, and delivery. Among the most important contributors to these activities are the outstanding extramurally funded scientists supported by the NCI through grants, contracts, and cooperative agreements.

The Division of Extramural Activities (DEA) is one of the NCI's five extramural Divisions and carries the major responsibility for

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 the NCI's overall scientific goal of reducing the burden of cancer, but also acknowledges the hundreds of researchers who have selflessly 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 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 6,000 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. (A directory of Cancer Information Sources on the Internet, including selected DEA and NCI Web sites, is included in Appendix G.)

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

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

In FY2001, the NCI received 8,544 grant applications for referral. 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). (See Table I for specific data relating to the referral of FY2001 applications.) During FY2001, the Program Coordination and Referral Branch (PCRB), 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 42 NCI extramural research program areas. The RO must also track, in real time, the review status of all applications assigned to the NCI. The RO distributes all the applications directly reviewed by the DEA for the NCI. These include P01 Program Projects, P30 Centers, P20 Planning Grants, P50 Specialized Centers, R13 Conference Grants, R03 Small Grants, T32 Training Grants, certain R01s, and U series Cooperative Agreement applications. These applications are sent to one of the two 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.

Thus, 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 Referral Officers also provide "one-stop shopping" for applicants who are uncertain about whom 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 the extramural community in navigating NIH and NCI Web pages to obtain current information, forms, and guidelines.

Progress continued in FY2001 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. The system, which is one of the functions of the new NCI Online Workplace (NOW) was put in place in FY2001 and is undergoing some fine-

tuning. An additional module was added in FY2001. This is an electronic Awaiting Receipt of Application (ARA) module that allows program staff to electronically initiate an ARA, obtain the required level of authority, and send the ARA to the RO for approval. The system maintains a record of the ARA.

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—even those 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 IRG subcommittee or 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 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 four 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.

In FY2001, 2,658 reviewers served on 213 occasions on either the IRG or SEPs to review applications (see Appendix C). Members are selected because they are authorities in fields relevant to biomedical research or because they represent an informed consumer perspective.

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, research-related grants and cooperative

agreements, and contract proposals relating to scientific areas relevant to cancer. Government-employed SRAs within the DEA manage the scientific review of applications, including the selection of peer reviewers and the overall administration of the peer-review process.

Two Branches within the DEA manage peer-review activities for NCI-reviewed applications: the Grants Review Branch (GRB) and the Special Review and Resources Branch (SRRB). The GRB is primarily responsible for the peer review of a variety of types of unsolicited multiproject and career development grant applications (see **Table 2**) and manages the seven subcommittees of the NCI IRG (see **Appendix B**). The GRB is also responsible for review of applications for some special Reviewed Program Announcements (PARs), such as the Institutional Career Development (K12) program and the Special Programs of Research Excellence (SPOREs). The SRRB organizes and manages peer review primarily for grant applications in response to specific RFAs and most special PARs, and for contract proposals 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 are also provided to the NCAB, as required. Each applicant Principal Investigator receives a report in the form of the summary statement.

In FY2001, the DEA organized, managed, and reported the review of a total of 1,849 grant and cooperative agreement applications (see **Table 2**) and 78 contract proposals (see **Table 18**). 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 73 SEP meetings for review of grants or contracts, and 120 site visits.

Grants Review Branch

The DEA GRB organizes, manages, and reports on the scientific peer review of applications for multidisciplinary research program projects, centers, and cooperative clinical trials; institutional training grants and career development awards; and other special purpose grant mechanisms, such as small research grants and conference grants. The GRB also manages the seven subcommittees of the NCI IRG.

Most of the reviews conducted by the GRB involve complex, multidisciplinary applications. The review format for these applications typically entails a two-tier review. The first tier of the review usually involves either a site visit to the applicant's institution or a teleconference with an expert review panel; this provides an opportunity for the reviewers to question the applicant directly and clarify issues in the application, thereby enhancing the review process. The review panels 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 "parent committees" for the final scoring of applications after expert panel reviews: Subcommittee A is the parent committee for CCSG (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 (U10) applications. The other two subcommittees, F and G, review all career development, training, and education grant applications submitted to the NCI.

During FY2001, the 7 subcommittees of the NCI IRG reviewed a total of 634 applications of various types, requesting a total of \$1,430,073,963 in direct costs for all years (Table 3). The subcommittees' FY2001 workload therefore represents a decrease of approximately 4 percent in the number of applications reviewed. Several offsetting factors influenced the number of applications reviewed by the subcommittees. During FY2001, the review of small grant (R03) applications submitted in response to program announcements in behavioral research, cancer genetics, and cancer epidemiology was shifted from the chartered subcommittees to SEPs in order to avoid overloading the committees and to ensure appropriate expertise for the R03 applications. In addition, new guidelines issued by the NCI's Cancer Treatment and Evaluation Program (CTEP) changed the format of the U10 cooperative clinical research agreement applications for the clinical cooperative groups; the application for the Operations Center now supports the clinical sites. rather than each clinical site submitting an independent application. These two developments resulted in a decrease in the total number of applications reviewed by Subcommittees D, E, and H. However, applications in response to new initiatives from the Cancer Training Branch contributed to significant increases in FY2001 in both the number and diversity of career development and training applications reviewed by Subcommittees F and G. The workload for Subcommittee F increased 17 percent, and the workload of Subcommittee G increased 22.5 percent in FY2001. This increase is projected to continue in FY2002 and FY2003.

The overall review workload for the subcommittees included, among others, applications for 15 CCSGs (P20 and P30), 358 career development ("K") awards of various types, 79 Institutional Training Grants (T32), 95 Research Program Project Grants (P01), 96 Education projects (R25), and 2 Cooperative Clinical Research Agreements (U10).*

A significant proportion of the effort of the GRB during FY2001 was associated with the review of CCSG applications and Program Project (P01) Grant applications. The GRB organized and managed the review of 13 Cancer Center (P30) and 2 Cancer Center Planning Grant (P20) applications requesting a total of more than \$213 million in direct costs. All 13 of the P30 Cancer Center application reviews involved site visits.

SRAs in the GRB also organized and managed the review of 95 new, recompeting, amended, and supplemental Program Project (P01) applications (Table 4) requesting more than \$136 million in direct costs for the first year (Table 6). Eighty-three of the program project applications were reviewed by 1 of the 3 P01 subcommittees of the NCI IRG, and 12 were reviewed by SEPs, due mainly to member conflicts with the IRG. Fifty-six of the reviews involved site visits for new and recompeting applications (Table 5). Eight of the applications were revised 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 have easily addressable problems—to submit a 20-page "response" to the previous critique. The APR response is evaluated at the next review cycle, potentially saving several months for the applicants. The APR response counts as one of the two allowable revisions to an application.

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

In all, more than 1,000 reviewers with expertise from the most basic cellular and molecular biology to the most complex clinical cancer research areas were required for all of the P01 review panels organized by GRB.

In addition, in FY2001, GRB also had responsibility for the peer review of applications received for the NCI SPOREs. 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 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 FY2001, the GRB organized and managed SEPs for the review of 28 SPORE applications for research in prostate, genitourinary, lung, skin, and breast cancers. These applications requested a total of more than \$382 million. The SRAs who organize the SPORE reviews routinely conduct orientation conference calls with all of the reviewers before the applications are sent to explain the special features of the program and the special review criteria for applications. The GRB recruited an experienced clinical immunologist to assist with review of applications in lymphoma, myeloma, and leukemia during FY2001. As this program continues to expand, GRB anticipates adding at least one more SRA to organize and manage these important and complex reviews during FY2002.

During FY2001, GRB also successfully continued several initiatives to improve or streamline review procedures for applications for program projects, centers, and cooperative clinical trials groups. The Chief of the Research Programs Review Section and the SRAs for the IRG Subcommittees (C, D, and E) responsible for program project review organized the first joint orientation session for new members of the committees in August 2001. 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 the three subcommittees, featuring a keynote address by the NCI Deputy Director for Extramural Science, brief overviews of the P01 portfolio of each of the NCI extramural Divisions, and several exercises, led by the subcommittee SRAs, designed to help the reviewers establish consistent scoring calibration standards 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 on which NCI program staff could base funding decisions for program project applications. GRB anticipates making the orientation for new members and the plenary session of the three program project subcommittees an annual event.

An important attribute of the DEA is its ability to cross-train staff to manage reviews in various scientific areas as needs arise, and during FY2001, there was expanded emphasis on cross-training SRAs and support staff in different review formats and types. In particular, the Chief of GRB's Research Programs Review Section trained two SRAs from the SRRB in the review of program projects with site visits. An orientation to the logistics of program project review preparation and documentation was also provided for the support staff in the SRRB. As this cross-training continues in FY2002, GRB anticipates training additional SRAs from SRRB.

GRB review staff have continued to work with staff of the Cancer Centers Branch to improve the review of CCSG applications by modifying the Guidelines or review procedures. The review of the research-related aspects of comprehensiveness, the first step in the award of the

Comprehensive designation to recipients of CCSGs, has been improved by placing the responsibility for that recommendation with Subcommittee A. Site visit teams are asked to comment generally on the depth and breadth of research in each of the three areas of basic, clinical, and prevention, control, and population sciences, as well as on the interactive research that bridges those three areas. The parent subcommittee, however, now makes the final recommendation based on its judgment of the adequacy of the depth and breadth of research in the three areas and on the evidence of strong interactive collaborations bridging these sciences. The parent committee is a more appropriate venue for this recommendation since its members have both the corporate memory and Cancer Center involvement to ensure continuity in standards of evaluation.

Another issue related to comprehensiveness was the difficulty in defining what research appropriately falls within the category of prevention, control, and population science. At the request of members of Subcommittee A, GRB review staff discussed this issue with the leadership of the Division of Cancer Control and Population Sciences. Working with the leadership of the Division of Cancer Prevention and the Cancer Centers Branch, they developed a clearer definition of population-related research that will be incorporated into the next CCSG Guidelines revision.

Review staff have also transferred to the parent committee, with the concurrence of the Cancer Centers Branch, the final responsibility for making overall budget recommendations on CCSG applications. This should ensure a more uniform application of the review criteria to all applicants.

GRB review staff have also been working to address the growing number of applications submitted for review by Subcommittees F and G. This growth is the result of the introduction of a number of new education and training mechanisms in the past few years. To accommodate this increased workload, the charters for both subcommittees have been changed to increase the number of members on each. In addition, the membership at each meeting is supplemented by temporary members with the expertise necessary to provide a full and fair review for each application. This ensures that each reviewer has a reasonable review workload so that each can devote adequate attention to assigned applications. In addition, based on ongoing monitoring of the number and diversity of applications by GRB and the Cancer Training Branch, plans are in progress to establish a new NCI IRG subcommittee in the training and education area in order to better distribute the workload.

In the interim, GRB review staff have introduced a number of new procedures to reduce the burden on reviewers and make meetings more efficient. Reviewers are asked to post their premeeting evaluations on a secure Internet Web site so other reviewers can see the comments of their colleagues prior to the meeting. This serves to focus and shorten the discussion of each application without reducing its thoroughness. Applications and the supplemental materials submitted with them are now being put on compact disks (CDs) to simplify access for nonassigned reviewers; assigned reviewers continue to receive hard copies of applications. Finally, machine-readable score sheets have been introduced to increase the accuracy of final scores.

The SRA for Subcommittee H (Clinical Cooperative Groups) has continued to work closely with the staff of the Clinical Investigations Branch of the NCI Clinical Trials Evaluation Program on final modifications of the current interim guidelines for review of Clinical Cooperative Group applications. In addition, the SRA has been addressing the issues involved in the review of the

U10 application to be submitted by the Children's Oncology Group, which was recently formed through the merger of the four previous cancer cooperative groups that addressed pediatric malignancies. Foremost among these is the potential for conflict of interest or the appearance of conflict of interest, since almost all pediatric oncology research clinicians in the United States, Canada, and western Europe are now members of this merged group.

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 (Information for Management, Planning and Analysis, and Coordination), during FY2001. The Chief of the GRB, an SRA from the SRRB, and a support staffer from the GRB served on the IMPAC II Review Users' Group to test new programming for uploading final summary statements into the database. In addition, GRB support staff continue to serve on the trans-NIH User Group for the Committee Management (CM) Module in the new NIH IMPAC II database system. The CM module is a critical element in preparing for and reporting on peer reviews, and the User Group has identified solutions for problems and suggested several enhancements to the system.

Finally, there were several staffing changes during FY2001. Dr. Martin Goldrosen, who had been the SRA for Subcommittee D, the parent committee for clinical program project grant review, left the GRB to become Chief of Review for the NIH National Center for Complementary and Alternative Medicine. Dr. William Merritt replaced him as the SRA for Subcommittee D. Several new SRAs and support staff were hired to fill important vacancies in program project and SPORE review.

Special Review and Resources Branch

As described above, the SRRB is responsible for the peer review of the majority of the initiatives issued by the NCI. (The GRB reviews training and most center and career development initiatives, and NIH's CSR provides peer review of some NCI PAs.) These initiatives are linked to the "research opportunities" and "challenges" articulated in the Bypass Budget that the Institute sends to the President each year. For the FY2001 Bypass Budget, the Institute identified six areas of research 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 Communication.

Six NCI challenges were also highlighted:

- Investigator-Initiated Research
- Centers, Networks, and Consortia
- National Clinical Trials Program

- Informatics and Information Flow
- Emerging Trends in Cancer
- Training, Education, and Career Development.

These opportunities and challenges translated into a variety of initiatives in FY2001, not only for academic research centers, but also for the small business community. Following approval by the NCI Executive Committee and the BSA (unlike RFAs, PAs are not approved by the BSA), program staff—assisted by the DEA 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, 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 9 through 14 summarize the RFAs, PAs, and PARs published and the RFAs, PAs, and Master Agreements reviewed by the SRRB in FY2001. Table 14 represents those applications submitted in response to PAs, the review of which is shared by SRRB and GRB

In February 2001, the NCAB concurred with the review results of 32 SRRB-reviewed initiatives, 26 of which were directly related to the Bypass Budget; in June 2001, 18 of 20 RFA/PAR initiatives were related to the Bypass Budget; and in September 2001, 20 of 21 RFA/PAR initiatives were related to the Bypass Budget. In considering the specific initiatives, the breakdown for all of FY2001 is as follows:

Research Opportunities**	# of RFAs/PARs		
Genes and the Environment	2		
Cancer Imaging	19		
Defining the Signatures of Cancer Cells	2		
Molecular Targets of Prevention and Treatment10			
Research on Tobacco and Tobacco-Related Cancers2			
Challenge Initiative	# of RFAs/PARs		
Challenge Initiative Cancer Centers, Networks, and Consortia	<u> </u>		
	5		
Cancer Centers, Networks, and Consortia	5		

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 homes for peer review of applications assigned to the NCI. In the past, most PAs for single-project research grant mechanisms

^{*} 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.

(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 standing CSR IRGs. This has led to the issuance of more PARs for which ad hoc peer-review groups with the discipline-appropriate expertise provided by SEPs are specifically recruited. Considerable effort is required to recruit a wide range of individuals with expertise to cover all aspects of the initiative.

Highlights of SRRB reviews for FY2001 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 for the meetings of their two collaborating colleagues. An Internet-accessible database that listed all the contacted reviewers minimized the repetitive calling of the same potential reviewer.

The other significant project was the BAA 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 four 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 are then placed in a pool (of qualified offerors) that the NCI can draw upon to perform specific 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 FY2001 is shown in Table 18.

Scanning of Applications to Increase Efficiency

SRRB has continued its work in helping the Institute convert the paper copies of the applications it receives to digital format. Between October 2000 and October 2001, approximately 10,500 applications or proposals were converted to digital format. This process, carried out by a contractor, has been the first step in producing a paradigm shift in the peer review, grants administration, and scientific coding activities of the Institute. Each of these three activities is now operating using images scanned under DEA's auspices.

In the peer-review part of the process, significant progress has been made. Working closely with the AISB, the Division has made strides in "reducing to practice" the use of CDs for peer review. CDs were prepared for the use of six peer-review teams, which included ad hoc RFA/PA reviews by SRRB and program project parent committee, SPORE, and training committee reviews conducted by the GRB. The response to the experiments from the reviewer community has been

overwhelming approval, gratitude, and enthusiasm. However, significant technical issues were identified. For the reviewers, hardware compatibility (i.e., Mac vs. PC) was the most significant issue. This problem has been solved.

For DEA staff, the development of a logistics infrastructure is key in order to routinize the CD production process. Again, AISB staff played the dominant role in working out the step-by-step technical details of a DEA CD production process for peer review.

The success realized in the above efforts allowed the Division to reexamine the number of paper copies of applications being produced for peer-review purposes. For some of the mechanisms (such as the R21/R33 technology applications) the print order was reduced by 70 percent. However, since DEA reviews only about 12 percent of the applications assigned to NCI, the real savings in printing cost will come when the CSR adopts the CD approach for peer review. This activity is expected to begin on a large scale in FY2003, when the NIH Office of Research Services will have been scanning all NIH applications for about one year.

Second, the electronic files produced by the DEA scanning project are being incorporated into the electronic grant folders used by the Grants Administration Branch (GAB) of NCI. The integration of the scanned applications into the GAB folders has been facilitated by the fact that the DEA scanning contractor has been involved with GAB for two prior years in generating the GAB electronic folders. As pointed out in last year's annual report, our ability to tailor the DEA scanning operation with GAB's needs allowed for a less problematic use of the DEA files. Since GAB had been scanning used file copies of the NCI applications for the electronic folders, DEA has been able to provide GAB with "clean" copies of the applications. In addition GAB has been relieved of the costs of paying for the application scanning process for their purposes.

Third, the Research Analysis and Evaluation Branch (RAEB) performs an important function for the Institute by linking budget information (paid grants) to the various kinds of science supported by the Institute—i.e., it scientifically codes the applications. During 2001, RAEB moved away from the use of paper copies of unfunded applications and has begun to rely on the digital images produced under the DEA scanning contract. (The coding of unfunded applications is less detailed than that of funded applications.) This shift, although requiring some retraining on the part of the RAEB staff, has facilitated the coding process for this cohort of applications. Text-search engines are being tested to determine whether the funded digital applications may be electronically searched with the same detail as that of the current hand-searching approach.

Supporting Peer-Review Consultants

Ensuring that highly qualified individuals are available for expert review of 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 processes payments for their travel and other expenses. The SREA Office also approves and processes payments for other activities related to review, including contract-supported ticketing services. During FY2001, the SREA Office authorized 2,658 consultant reimbursement vouchers and 410 nonconsultant other vouchers for travel ticketing, meeting room rental, and teleconfernences.
During FY2001, 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 109 preports. Also, during FY2001, 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 speed up the processing of travel invoices and eliminate the duplicative verification process that in the past caused severe backlogs.
Several consultants were available to participate in more than one review meeting. The SREA \Box Office also began utilizing the CSR as the checkwriters for participating NIH institutions, allowing quicker voucher reimbursement to consultants. \Box
In addition, the SREA office advises consultants, NCI staff, and the SREA fiduciary 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 Committee Management Office for the NCI FOP, consultant services, and financial management reports for IRG and SREA.
The SREA Coordinator volunteered to participate in the planning and establishment of the first NIH SREA Coordinating Committee. This group meets monthly to discuss SREA procedures and is presently working on the first Standard Operating Procedure for the NIH SREA community to standardize procedures and provide guidance and consistency within the SREA offices and among all the Institutes in standardizing SREA procedures.
This little-known support function is critical to the success of the peer-review system because any perror, inconvenience, or delay in reimbursement that reviewers experience is likely to discourage their future service. The high quality and accuracy of the work from this office is reflected by the small number of complaints and the speed with which such rare problems are resolved. Excellent sustomer 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. A primary responsibility of 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 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 FY2001.)

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 FY2001, 2,658 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 132 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.)

The 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 provide guidance and information to staff and external groups on specific NIH policies related to the operation of working groups and ad hoc consultants operating under the direction of some of NCI's chartered Federal advisory committees. NCI working groups provide scientific expertise through chartered committees to the NCI Director and Division Directors on a range of matters related to the cancer experience. The Director's Working Groups, Program Review Groups, and Progress Review Groups serve as vehicles for nationally known researchers and advocates to provide feedback to the Institute on current trends and new opportunities in cancer research and patient care.

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). 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 four 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 may also 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 has 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 Policy 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 CMO provides consultation services to NCI staff on administrative and technical aspects of committee management and adherence to provisions of the Federal Advisory Committee Act. The Office works closely with 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; provides logistical support for NCAB meetings; and facilitates committee-related travel. In addition, the Office is responsible for the committee management requirements of the eight chartered NCI committees and their standing subcommittees.

The CMO advised various Division and Institute personnel on establishing procedures for operating the chartered Federal advisory committees and related subcommittees and working groups. Additionally, staff served as advisors on issues related to conflicts of interest, selection and recruitment of viable committee members, and management of committee records.

CMO staff continue to participate in various NIH-wide IMPAC II software application user group meetings and pilots, including the vouchering module and the first fully automated committee financial reporting function. In FY2001, the CMO continued to develop in-house IMPAC II training information geared towards assisting NCI staff in efficiently using the IMPAC II 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 consultant 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, Special Populations Research, and Science Policy; 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 and DEA consultant database. 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. 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. Ms. Diane Bronzert, formerly Branch Chief of the Clinical Grants and Contracts Branch, Division of Cancer Treatment and Diagnosis, joined DEA this year as the new Associate Director of ORRPC.

The DEA manages and coordinates the BSA, which is charged with the concept review of all new 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 workload. Concepts for PAs and reissued RFAs do not require BSA approval, but are considered instead by the NCI Executive 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. In FY2001, to facilitate this evaluation, the ORRPC, with the technical assistance of AISB, managed and enhanced 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 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 are also 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, a major goal of the DEA has been to develop a Web-based information tracking system to provide staff with all essential information on program initiatives, from concept through publication of the full text, and, ultimately, to the tracking of outcomes. In addition to the development of an Intranet version for NCI staff, it was recognized that Internet access to published initiatives would serve as a valuable resource for extramural scientists. The production version software application for this information was delivered in FY2000 and is being maintained.

Information Resources Management

The 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 with all components of the NCI, NIH, and reviewer and applicant communities.

All of the Division's Information Technology and Information Systems contracts have been 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 FY2001, the following specific accomplishments are highlighted:

- Developed a Web-based software application to allow program staff to associate selected codes with applications in their portfolios
- Completed the redesign and development of a new DEA Internet Web site
- Developed and deployed a system to produce advance copies of uploaded summary statements at the user's desktop in PDF (portable document format)
- ■□Developed an Intranet Web site to allow staff to access and search scanned applications
- ■☐ Initiated design and development of a new DEA Intranet Web site
- Coordinated the deployment of an application developed by the CSR for the printing and scanning of grant application scoring sheets for review meetings
- Developed a Web-based software application to track NCI Extramural Science Administrator training for the Office of the Deputy Director, DEA
- Developed an annual report to apprise the BSA of the outcomes of RFA and RFP concepts reviewed by the Board.

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

- ■□NCI Information Systems and Technology Branch
- ■□NCI Extramural Information Systems Advisory Group
- ■□NCI Information Resources Advisory Committee
- ■□NCI Quality 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 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 in order 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 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. In FY2001, in addition to answering a range of ad hoc information requests and producing its many regular reports, RAEB assumed a new NCI-mandated responsibility: Before issuing an RFA, NCI Program Directors are required to determine from RAEB the current level of funding for the proposed RFA concept. These concepts are complex and usually involve interplay of several very specific areas of research.

These capabilities are based on a sophisticated system of indexing, in which staff in the Research Documentation Section analyze grant applications in order 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 maintain currency with these interests. In FY2001, RAEB added new SIC Codes for Telemedicine, Nonviral Biological Carcinogenesis, Supportive Therapy, Human Genetic Testing Research, Bioterrorism Research, and the single SIC Code "Vaccines" was divided into Vaccine Research, Vaccine Development, Vaccine Testing, and Vaccine Production. A critical characteristic of these data is comparability from one fiscal year to the next. Total NCI research funding comparisons for various cancers and AIDS are presented in Table 15. Changes in funding between FY2000 and FY2001 for selected SIC Codes and organ sites are presented in Tables 16 and 17.

In FY2001, RAEB indexers profiled more than 2,700 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 3,000 funded grants and contracts in FY2001. Also, in response to a request from NCI's Office of Science Planning and Assessment, RAEB began applying Common Scientific Outline codes to funded grant applications this year. In addition, the Branch now consistently documents the academic and medical specialties of each funded application's Principal Investigator.

The Technical Operations Section (TOS) manages RAEB's Fiscal Linked Analysis of Research Emphasis (FLARE) grants management database, ensuring the reliability and completeness of its contents. TOS continued to work with contractors and AISB to refine the FLARE computer application in FY2001. The Section designed, tested, and implemented a computerized grant document-tracking module. TOS tested and managed the FLARE module for computerized calculation of batch indexing for Clinical Cooperative Group, Community Clinical Oncology Program, and P30 Cancer Center grants. TOS assumed a number of maintenance tasks from the FLARE contractor in FY2001, including download of IMPAC II data.

Highlights of FY2001

- RAEB is now responsible for advising NCI Program Directors on the current level of funding for a proposed RFA concept.
- RAEB indexers profiled more than 2,700 unfunded applications.
- RAEB staff indexed more than 3,000 funded grants and contracts.
- RAEB added new Special Interest Categories:
 - ♦ Telemedicine
 - ♦ Biological Carcinogenesis, Nonviral
 - Supportive Therapy
 - ♦ Genetic Testing Research, Human
 - ♦ Bioterrorism Research
 - ♦ Vaccine Research
 - Vaccine Development
 - Vaccine Testing
 - Vaccine Production.
- RAEB now applies Common Scientific Outline codes to grant applications.
- RAEB now documents the Principal Investigator's academic and medical speciality for each funded application.
- RAEB continued to work with contractors and AISB to refine and expand the functions of RAEB's 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 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 FY2001, 40 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 mismanagement, and financial conflict of interest involving NCI-supported research. Thus, the DEA Director functions as the NCI Research Integrity Officer and receives from the appropriate sources all documents related to misconduct for transmittal and reporting to relevant sources. In FY2001, six cases of alleged scientific misconduct were opened by the Office of Research Integrity and referred to the Director, DEA. Four cases were closed, and two were found to involve misconduct.

Other major policy developments managed by the Office of the Director, DEA, in FY2001 included the implementation and rollout of issues as diverse as:

- Implementation of data-sharing requirements on awards
- Study of R21 and R03 grant award mechanisms
- Evaluation of policies for grants supporting new investigators
- Control of cost increases on Type 2 competing continuation requests
- Allocation of resources for R01 grants in excess of \$1 million direct costs annually
- Implementation of policies governing human embryonic stem cell research.

Finally, in FY2001, the DEA continued deployment of consumer advocates in chartered clinical peer-review settings, adding more consumers to the peer review of the NCI P30 Cancer Centers Core Grant program, the U10 Clinical Cooperative Group program, and the P01 Program Project Grant program. Critical to the success of the National Cancer Program is the two-tiered review of research applications, in which scientific and technical merit are evaluated in the first tier, and programmatic relevance is evaluated in the second tier. Consumer advocates participated in the first level of review, performed by an IRG subcommittee or SEP, and also served on selected site visits. The DEA OD facilitates consumer participation in scientific merit review by refining and distributing two pivotal guides, the *NCI Consumer's Guide to Peer Review* and the *NCI Consumer's Cancer Dictionary for Peer Review*, for consumers appointed to an IRG subcommittee, SEP, or site visit team, and by monitoring use of and feedback from consumer participants in conjunction with the NCI Director's Consumer Liaison Group.

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.

^{*} Joined in 2001.

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 GRB, SRRB, and PCRB.

Diane Bronzert*	Associate Director
Catherine Battistone*	Program Analyst
Renetta Turner [†]	Program Analyst
Alma Carter	Technical Assistant
Angela Greer	Secretary

^{*} Joined in 2001.

[†] Left in 2001.

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; 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.

Linda Quick-Cameron	Committee Management Officer
Shari Adams [†]	Committee Management Assistant
Linda Coleman*	Committee Management Specialist
Andrea Collins	Deputy Committee Management Officer
Earline Jackson	Administrative Technician
Hing Lee	Accounting Technician
Kerry Peasland	Program Specialist
Lisa Rustin*	Committee Management Specialist

^{*} Joined in 2001.

[†] Left in 2001.

Special Review and Resources 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.
- Serves as liaison with the CSR at the NIH to ensure appropriate referral of applications to the Institute and their distribution and assignment to appropriate program units.

Kirt Vener, Ph.D.Chief

Special Review Unit

Kenneth Bielat, Ph.D	Scientific Review Administrator
Jennifer DeGroff*	Program Support Assistant
Juana Diaz*	Program Support Assistant
Kimberly Farrall-Cragg	Program Support Assistant
Paul Gallourakus	Program Support Assistant
Sherwood Githens, Ph.D	Scientific Review Administrator
Madeleine Hemmings*	Program Support Assistant
C. Michael Kerwin, Ph.D., M.P.H	Scientific Review Administrator
Sarah King-Mitchell	Contracts Technical Assistant

^{*} Joined in 2001.

Gerald Lovinger, Ph.D	Scientific Review Administrator
John Makulowich*	Program Support Assistant
Timothy Meeker, M.D	Scientific Review Administrator
Laura Monzon*	Program Support Assistant
Thu Nguyen	Program Support Assistant
Lalita Palekar, Ph.D.	Scientific Review Administrator
Joyce Pegues, Ph.D.	Scientific Review Administrator
Phuong Pham	Program Analyst
Mary Jane Slesinsky, Ph.D	Scientific Review Administrator
Thomas Vollberg, Ph.D	Scientific Review Administrator
Review Processing and Distribution Unit	
Barbara Beckwith	Grants Technical Assistant
Adrian Bishop	Student Temporary Employee Program
Robert Kruth	Mail and File Clerk
Clara Murphy	Technical Assistant
Michael Shatarsky	Grants Management Analyst

^{*} Joined in 2001.

Program Coordination and Referral Branch

- Serves as the information and coordinating point within 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.
- 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
David Contois*	.Referral Officer
Toby Friedberg	.Referral Liaison
Rashmi Gopal-Srivastava, Ph.D	.RFA/PA Coordinator

^{*} Joined in 2001.

Leota Hall*	Referral Officer
Florence Hoffmann	Referral Officer
Natacha P. Lassègue	Program Analyst
Michelle Trout*	Program Support Assistant
Deborah Bielat*	Program Support Assistant

^{*} Joined in 2001.

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 need for proposed RFAs by comparing RFA concepts with existing NCI-supported research and with unsolicited applications.

Rosemary Cuddy	, 	Branch	Chief
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Inquiry and Reporting Section

- 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 Gaston	Chief	
Stacy Harper-Avilla	Technical Information Specialist	* Joined in 2001.

Research Documentation Section

- 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.

Brenda Underwood	Chief
Stacy Harper-Avilla [†]	Biologist
Edward Kyle	Biologist
Nancy Lohrey	Biologist
Tyrone Wilson	Biologist

Technical Operations Section

- 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 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	Chief	
Catherine Battistone [†]	Computer Specialist	
Gail Blaufarb	Technical Information Specialist	
Linda Brown	Computer Assistant	† Left in 2001.

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 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 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 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. Seach	.Chief
Carlene Neil-Allman*	Secretary

^{*} Joined in 2001.

Application Development and Operations Section

- Analyzes and coordinates life-cycle development of software for the Division; develops and designs applications to support the Division's business practices, including user guides.
- Develops, administers, and monitors contracts for acquisition, support, and maintenance of database systems.
- Administers office automation contracts as well as DEA-wide Blanket Purchase Agreements for microcomputer equipment maintenance and supplies.
- Formulates office automation policy, system development, and IMPAC II operations.
- Coordinates internal user groups and the provision of training for specific DEA applications and the use of office automation equipment technology.

Gregory Fischetti	Section Chief
Deborah Buranich	Computer Specialist
Charles Conley	Computer Specialist
Teresa Park*	Computer Specialist
Hector Reyes*	Computer Specialist

Information Management Section

- 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 freely available 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	Section Chief
Kichelle Green	Management Assistant
Lorrie Smith	Computer Specialist
Elaine Taylor	Computer Specialist

^{*} Joined in 2001.

Grants Review Branch

- Coordinates planning and execution of project site visits and the scientific and technical merit review of applications for multidisciplinary Research Program Projects, Centers, Cooperative Clinical Trials, Training, Career Development, Conferences, and other grant mechanisms.
- Manages the chartered NCI IRG, which is composed of seven subcommittees, and establishes others, as required, including ad hoc review committees, to accomplish the scientific and technical merit peer review of grant applications.
- Identifies and selects qualified experts to serve on review committees.
- Provides SRAs and support staff for scientific and technical merit peer-review committees.
- Serves as the information and coordination center for all grant applications pending review by the NCI IRG.
- Coordinates grant review activities with staff of other NCI Divisions, other DEA Branches, and the CSR, NIH.

Olivia Preble Bartlett, Ph.D	Chief
Tiffany Jenifer*	Program Specialist (Instructor)
Willie Johnson	Program Specialist

Research Programs Review Section

- Plans, manages, and assists in the scientific merit peer review of research program grant applications by chartered and ad hoc review committees.
- Arranges for and participates in onsite assessments of the research capabilities and facilities of selected applicants for research program grants.
- 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.

Virginia Wray, Ph.D	Chief
Shakeel Ahmad, Ph.D*	Scientific Review Administrator
Renee Brooks	Program Support Specialist
Mary Fletcher, Ph.D	Scientific Review Administrator
Martin Goldrosen, Ph.D	Scientific Review Administrator
Monica Green*	Program Support Assistant
Christopher Hatch, Ph.D.†	Scientific Review Administrator

^{*} Joined in 2001.

[†] Left in 2001.

Sharon Macauley	Program Support Assistant
William Merritt, Ph.D	Scientific Review Administrator
Joyce Simms*	Program Support Assistant
Michael Small, Ph.D	Scientific Review Administrator
Cheryl Smith*	Program Support Assistant
Kamilah Smith	Program Support Assistant
Barbara Thompson*	Program Support Assistant
Peter Wirth, Ph.D	Scientific Review Administrator

Research Resources Review Section

- Plans, manages, and assists in the scientific merit review of research resource grant applications by chartered and ad hoc grant review committees.
- 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.

David E. Maslow, Ph.D	Chief
Courtney Banks	Program Support Assistant
Mary Bell, Ph.D.	Scientific Review Administrator
Danielle Brown	Program Support Assistant
Gail Bryant, M.D	Scientific Review Administrator
Linda Edwards	Program Support Assistant
Deborah Jaffe, Ph.D	Scientific Review Administrator
Deneen Mattocks*	Program Support Assistant
Bratin Saha, Ph.D.*	Scientific Review Administrator
Linda Southworth	Program Support Assistant
Harvey Stein, Ph.D	Scientific Review Administrator
Zenia Vilensky	Lead Program Support Assistant
Chanee Williams	Program Support Assistant
Brian Wojcik, Ph.D	Scientific Review Administrator

^{*} Joined in 2001.

Appendix A: Glossary of Acronyms

AISB	Applied Information Systems Branch	EVS	Enterprise Vocabulary System
APR	Accelerated Peer Re-Review	FACA	Federal Advisory Committee Act
ARA	Awaiting Receipt of Application	FIRST	First Independent Research Support and Transition Award
AREA	Academic Research Enhancement Award	FLARE	Fiscal Linked Analysis of Research Emphasis
BAA	Broad Agency Announcement	FOIA	Freedom of Information Act
BSA	Board of Scientific Advisors	FOP	Financial Operating Plan
BSC	Board of Scientific Counselors	GAB	Grants Administration Branch
CCSG	Cancer Center Support Grant	GRB	Grants Review Branch
CIT	Center for Information Technology	IC	Institute/Center
CMO	Committee Management Office	ICMIC	In Vivo Cellular and Molecular Imaging
CRISP	Computer Retrieval of Information on Scientific Projects	IDeA	Centers Institutional Development Award
CSR	Center for Scientific Review	IMPAC	Information for Management, Planning,
СТЕР	Cancer Therapy Evaluation Program		Analysis, and Coordination
cui	Concept Unique Identifiers	IRDB	IMPAC II Reporting Database
CURE	Continuous Umbrella of Research Experience	IRG	Initial Review Group
DARPA	Defense Advanced Research Projects Agency	IRM	Information Resources Management
DCLG	Director's Consumer Liaison Group	ISTB	Information Services Technology Branch
DEA	Division of Extramural Activities	LAN	Local Area Network
DEAIS	DEA Information System	MAA	Master Agreement Announcement
DHHS	Department of Health and Human Services	MARC	Minority Access to Research Careers
EAB	Extramural Advisory Board	MBRS	Minority Biomedical Research Support

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MCA	Multicomponent Application	POR	Patient-Oriented Research
MERIT	Method to Extend Research in Time	PRG	Progress Review Group
MTDD	Molecular Target Drug Discovery	RAEB	Research Analysis and Evaluation Branch
NCAB	National Cancer Advisory Board	REAP	Research Enhancement Awards Program
NCI	National Cancer Institute	RFA	Request for Applications
NCRR	National Center for Research Resources	RFP	Request for Proposals
NIH	(NIH)	RO	Referral Office
	National Institutes of Health	SBIR	Small Business Innovation Research
NOW	NCI Online Workplace	SEP	Special Emphasis Panel
NRSA	National Research Service Award	SIC	Special Interest Category
OD	Office of the Director	SPORE	Specialized Program of Research Excellence
OER	Office of Extramural Research (NIH)	SRA	Scientific Review Administrator
OPERA	Office of Policy for Extramural Research Administration (NIH)	SREA	Scientific Review and Evaluation Award
ORRPC	Office of Referral, Review, and Program Coordination	SRRB	Special Review and Resources Branch
PA	Program Announcement	STTR	Small Business Technology Transfer Research
PAR	Reviewed Program Announcement	TOS	Technical Operations Section
PCRB	Program Coordination and Referral Branch	TTURC	Transdisciplinary Tobacco Use Research Center
PHS	Public Health Service (DHHS)	URL	Uniform Resource Locator

Appendix B: List of Chartered Committees, Fiscal Year 2001

President	's (Cancer	Panel
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Harold P. Freeman, M.D.North General Hospital, New York, NY

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Executive Secretary

National Cancer Advisory Board

Chair

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Frederick P. Li, M.D	Dana-Farber Cancer Institute
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The Honorable James McGreevey	Mayor, Woodbridge Township, New Jersey
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Amelie G. Ramirez, Dr. P.H	Baylor College of Medicine
	Forward Ventures, San Diego, CA
	National Coalition for Cancer Survivorship

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	U.S. Food and Drug Administration
	U.S. Department of Labor
	National Institutes of Health
	fice of Science and Technology Policy, The White House
	lational Institute of Environmental Health Sciences, NIH
The Honorable lommy Inompson	Department of Health and Human Services
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	U.S. Consumer Product Safety Commission
	U.S. Environmental Protection Agency
	U.S. Department of Veterans Affairs
	National Institute for Occupational Safety and Health
Lugene 3cliwatt2, M.D	u.3. Department of Labor
Executive Secretary	
Marvin R. Kalt. Ph.D	National Cancer Institute

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Waun Ki Hong, M.D.	The University of Texas M.D. Anderson Cancer Center
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	International Myeloma Foundation
	American Cancer Society
Phillip A. Sharp, Ph.D	Massachusetts Institute of Technology
Craig A. Thompson, Ph.D	University of Pennsylvania
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Robert E. Wittes, M.D	National Cancer Institute
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Susan J. Waldrop	National Cancer Institute

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Chair

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	The University of Arizona College of Medicine
	University of California, Irvine
Esther H. Chang, Ph.D.	Georgetown University Medical Center
	Drug Development Consultant
	St. Jude Children's Research Hospital
Mary Beryl Daly, M.D., Ph.D.	Fox Chase Cancer Center
	University of California, San Francisco
	Harvard Medical School
Waun Ki Hong, M.D	The University of Texas M.D. Anderson Cancer Center
<u> </u>	Albert Einstein College of Medicine
Tyler Jacks, Ph.D	Massachusetts Institute of Technology
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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
	Hospital of the University of Pennsylvania
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	Simone Consulting
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	Arizona Cancer Center
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	Fox Chase Cancer Center
Elias A. Zerhouni, M.D	The Johns Hopkins University School of Medicine
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Paulette S. Gray, Ph.D	National Cancer Institute

NCI Listens: BSA at National Association Meetings

American Society for Therapeutic Radiology and	d Oncology (ASTRO)
Boston, Massachusetts, October 22–26, 2000 NCI Listens, Wednesday, October 25, 2000	
W. Gillies McKenna, M.D., Ph.D. (Chair)	Hagnital of the University of Pennsylvania
Paulette S. Gray, Ph.D.	
Richard D. Klausner, M.D.	
Robert E. Wittes, M.D.	NCI
American Society of Preventive Oncology (ASPC	O)
New York, New York, March 11–13, 2001	
NCI Listens, Monday, March 12, 2001	
Mary Beryl Daly, M.D., Ph.D. (Chair)	
David S. Alberts, M.D.	, .
Hoda Anton-Culver, Ph.D. Paulette S. Gray, Ph.D.	,
Peter Greenwald, M.D., Dr.P.H.	
Robert A. Hiatt, Ph.D.	
Nancy E. Mueller, Sc.D	
Society of Behavioral Medicine (SBM)	
Seattle, Washington, March 22–24, 2001	
NCI Listens, Friday, March 23, 2001	
David B. Abrams, Ph.D. (Chair)	Brown University
Robert T. Croyle, Ph.D.	
Paulette S. Gray, Ph.D.	
Caryn E. Lerman, Ph.D. Barbara Rimer, Dr.P.H.	, , , , , , , , , , , , , , , , , , , ,
Daivala Killiei, Di.F.H.	NCI
American Association for Cancer Research (AAG	TR)
New Orleans, Louisiana, March 24–28, 2001	
NCI Listens, Tuesday, March 27, 2001	
Susan B. Horwitz, Ph.D. (Chair)	Albert Finstein College of Medicine
Hoda Anton-Culver, Ph.D.	
Marvin R. Kalt, Ph.D.	NCI
Brian W. Kimes, Ph.D.	
Enrico Mihich, M.D.	
Dinah Singer, Ph.D.	NCI
Oncology Nursing Society (ONS)	
Oncology Nursing Society (ONS)	
San Diego, California, May 17–20, 2001 NCI Listens, Saturday, May 19, 2001	
	University of California Con Errorian
Christine Miaskowski, R.N., Ph.D., F.A.A.N. (Chair)	
Mary McCabe, R.N., M.S.N.	
Claudette Varrichio, R.N., Ph.D.	

NCI Board of Scientific Counselors

NCI/BSC Subcommittee A—Clinical Sciences and Epidemiology

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	Boston University School of Public Health
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	Louisana State University Health Sciences Center
Stanley R. Hamilton, M.D	
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	Baylor College of Medicine
	University of North Carolina at Chapel Hill, School of Medicine
	University of Michigan Medical Center
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	University of Rochester School of Medicine and Dentistry
	Detroit Medical Center
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· ·	University of California, San Francisco, Cancer Center
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Executive Secretary	
Florence E. Farber, Ph.D	National Cancer Institute
Abby B. Sandler, Ph.D	National Cancer Institute
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NCI/BSC Subcommittee B—Basic Sciences

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Craig B. Thompson, M.D	University of Pennsylvania Cancer Center
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	University of Vermont, College of Medicine
	Memorial Sloan-Kettering Cancer Center
	Tufts University School of Medicine
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,	Washington University
	Fox Chase Cancer Center
	University of North Carolina, Chapel Hill
, :	University of California, Berkeley
,	University of California, San Francisco
	Harvard University
, ,	
,	The Univerity 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

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Kerry Dewey, M.A.Breast Cancer Resource Network Gena LovePeople Living Through Cancer, Inc. Daniel Moore, Susler, McNutt, Wrigley, and Root Karen G. PackerMarshalltown Cancer Research Center Nyrvah Richard......Self-Help for Women With Breast or Ovarian Cancer Susan Stewart Leukemia Society of America Doug E. UlmanLance Armstrong Foundation Brad Zebrack, M.S.W., M.P.H., Ph.D..........National Coalition for Cancer Survivorship

Executive Secretary

NCI Initial Review Group Scientific Review Committees

Subcommittee A—Cancer Centers

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Harold L. Moses, M.D	Vanderbilt-Ingram Cancer Center
Members	
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Deborah J. Bowen, Ph.D	Fred Hutchinson Cancer Research Center
Michael A. Caligiuri, M.D	Ohio State University Comprehensive Cancer Center
Graham A. Colditz, M.P.H., M.D	
Julie Y. Djeu, Ph.D	University of South Florida College of Medicine
	New York Medical College
Judith C. Gasson, Ph.D	
David W. Golde, M.D	Memorial Sloan-Kettering Cancer Center
William N. Hait, M.D	The Cancer Institute of New Jersey
James N. Ihle, Ph.D	St. Jude Children's Research Hospital
Candace S. Johnson, Ph.D	University of Pittsburgh Cancer Institute
	University of Texas Health Science Center
Jonathan Leis, Ph.D	Case Western Reserve University School of Medicine
Michael W. Lieberman, M.D., Ph.D	Baylor College of Medicine
Andrea Manni, M.D	Pennsylvania State University
Jonie A. Mayer, Ph.D	San Diego State University
Raymond E. Meyn, Jr., Ph.D	University of Texas M.D. Anderson Cancer Center
	Ohio State University Comprehensive Cancer Center
Nancy J. Rabb-Traub, Ph.D	
	Lineberger Comprehensive Cancer Center
Derek Raghavan, M.D., Ph.D.	
Catalina Ramos, M.D	Y-ME National Breast Cancer Organization
Steven T. Rosen, M.D.	Northwestern University Cancer Center
Giovanni Rovera, M.D	The Wistar Institute
Thomas A. Sellers, Ph.D.	Mayo Cancer Center, Mayo Clinic and Foundation
	University of Wisconsin, Madison
Eric J. Stanbridge, Ph.D	
Jean Y. Wang, Ph.D	University of California, San Diego
David A. Williams, M.D	Indiana University Cancer Center, Indiana University
James K. Wilson, M.D.	
David W. Yandell, Sc.D	University of Vermont
Scientific Review Administrator	
David Maslow, Ph.D.	National Cancer Institute

Subcommittee C—Basic and Preclinical

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William F. Morgan, Ph.D	University of Maryland School of Medicine
Members	
Chi V. Dang, M.D., Ph.D	The Johns Hopkins University, School of Medicine
Manuel O. Diaz, M.D	Loyola University Medical Center
Anatoly Dritschilo, M.D	Georgetown University Medical School
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	
Hsing-Jien Kung, Ph.D	
	University of Pennsylvania School of Medicine
•	
•	.University of Medicine and Dentistry of New Jersey Medical School
	University of California, San Franciscio Cancer Center
•	New York University Medical Center
	University of Arizona College of Medicine, Arizona Cancer Center
Vito Quaranta, M.D	
	Ohio State University College of Medicine
•	
<u> </u>	
	Thomas Jefferson University, Kimmel Cancer Center
,	Fox Chase Cancer Center
Scientific Review Administrator	
Michael Small, Ph.D	

Subcommittee D—Clinical Studies

Cbair	
	r

Nathan A. Berger, M.D	Case Western Reserve University School of Medicine
Members	
Kenneth C. Anderson, M.D	Dana-Farber Cancer Institute
	The University of Texas M.D. Anderson Cancer Center
	Ohio State University Comprehensive Cancer Center
Nathan A. Berger, M.D	
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David P. Carbone, M.D., Ph.D	Vanderbilt University Cancer Center
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	University of Maryland Medical Center
	The Johns Hopkins Oncology Center
,	Health Sciences Center, University of Colorado
	Wayne State University
	University of Maryland Medical Center
	Ontario Cancer Institute, Princess Margaret Hospital
	Stanford University School of Medicine
	The University of Texas M.D. Anderson Cancer Center
	University of Pittsburgh Graduate School of Public Health
	Virginia Commonwealth University
Julie M. Vose, M.D	University of Nebraska Medical Center
Scientific Review Administrators	
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William Merritt, Ph.D	National Cancer Institute

Subcommittee E—Cancer Epidemiology, Prevention, and Control

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Past Chair
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Loic Le Marchand, M.D., Ph.DUniversity of Hawaii, Cancer Research Center of Hawaii
Charles R. Meyer, Ph.D
Elaine A. Ostrander, Ph.D. Fred Hutchinson Cancer Research Center
Michael B. Sporn, M.D
Terry M. Therneau, Ph.D
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	Dartmouth Medical School
,	University of Pennsylvania School of Medicine
	Memorial Sloan-Kettering Cancer Center
	University of Washington Medical Center
	University of Wisconsin, Madison
,	University of Nebraska Medical Center
• /	Fox Chase Cancer Center
	University of Texas Southwestern Medical Center
	University of New Mexico Health Sciences Center
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•	City of Hope National Medical Center
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Subcommittee G—Education

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	SUNY Health Science Center
	Memorial Sloan-Kettering Cancer Center
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•	Brigham and Women's Hospital
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Appendix C: NCI Initial Review Group Consultants, FY2001

1. Consultants Serving as Temporary Members on IRG Subcommittees in FY2001

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	Brugge, Joan S., Ph.D.	
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D	Dennis, James W., Ph.D.	
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	Gewirtz, Alan M., M.D., Ph.D.	•
	Gillespie, G. Yancey, Ph.D.	·
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	Glode, L. Michael, M.D.	·
	Godwin, Andrew, Ph.D.	,
	Goldblatt, Sidney A., M.D.	
	Goodman, Gary E., M.D.	•
	Goodwin, J. Wendall, M.D.	•
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	Grandis, Jennifer R., M.D.	•
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84 Appendix C-3: Consultants Serving on SEPs

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	Heimburger, Douglas C., M.D.	University of Alabama School of Medicine
	Hein, David W., Ph.D.	University of Louisville School of Medicine
	Hellstrom, Ingegerd E., M.D., Ph.D.	Pacific Northwest Research Institute
	Herlyn, Dorothee Maria, D.Sc., D.V.M.	The Wistar Institute
	Hettich, Robert L., Ph.D.	Oak Ridge National Laboratory
	Holiday, David B., Ph.D.	University of Texas Health Center
	Hollingsworth, Michael A., Ph.D.	University of Nebraska/Eppley Institute for Cancer Research
	Holt, Jeffrey T., M.D.	Vanderbilt University School of Medicine
	Hook, Magnus A., Ph.D.	Texas A&M Institute of Biosciences and Technology
	Hoon, Dave S.B., Ph.D.	John Wayne Cancer Institute
	Hooper, Herbert H., Ph.D.	ACLARA Biosciences, Inc.
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	Hoyt, Danny R., Ph.D.	lowa State University
	Humphrey, Peter A., M.D., Ph.D.	Washington University/Barnes-Jewish Hospital
	Hutchins, Gary D., Ph.D.	•
	Hynynen, Kullervo H., Ph.D.	•
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	lannotti, Ronald, Ph.D.	,
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	Kallenbach, Neville R., Ph.D.	
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	Kinghorn, Alan Douglas, D.Sc., Ph.D.	
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	Ludwig, Logan T., Ph.D.	,
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Roberson, Noma L., Ph.D.	· · · · · · · · · · · · · · · · · · ·
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		Center
T	Tamanoi, Fuyuhiko, Ph.D.	University of California, Los Angeles
	Tan, Tse-Hua, Ph.D.	
	Tan, Wai-Yuan, Ph.D.	, -
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	Thompson, Timothy C., Ph.D.	
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	Turner, Nancy A., Ph.D.	•
	Turner, Namey A., 111.D.	Dattelle Columbus Laboratories
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90 Appendix C-3: Consultants Serving on SEPs

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	Watkins, Simon C., Ph.D.	University of Pittsburgh School of Medicine
	Weaver, John B., Ph.D.	Dartmouth-Hitchcock Medical Center
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	Weber, Michael J., Ph.D.	University of Virginia School of Medicine
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	Wiley, Henry Steven, Ph.D.	Pacific Northwest National Laboratory
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	Willson, Richard C., Ph.D.	University of Houston
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	Winkler, Matthew M., Ph.D.	Ambion, Inc.
	Witherspoon, Yvonne, B.A	Harvard Medical School/Dana-Farber Cancer Institute
	Wong, George Y. C., Ph.D.	Strang Cancer Prevention Center
	Wu, Jinn, Ph.D.	XenoBiotics Laboratory, Inc.
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	Young, Robert C., M.D.	Fox Chase Cancer Center
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	Zeller, Mitchell, J.D.	American Legacy Foundation
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Total number of Reviewers: 512

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 the NCI Director with respect to the activities carried out by and through the Institute and on policies pertaining to these activities. It may 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 FY2001, the Board heard presentations and discussed and provided advice on a variety of topics and NCI activities, such as:

- NCI Office of Management—Update
- Trends in Research Management Support
- Division of Basic Sciences Program—Update
- Mouse Models of Human Cancer Consortium—Update
- Progress Review Group Report: Brain Tumors
- Division of Clinical Sciences—Update and Clinical Center Plans
- New Strategies in Hematopoietic Stem Cell Transplantation
- The IL-15/IL-15 Receptor System: Relevance to Leukemia Pathogenesis and the Immunotherapy of Cancer
- Defining New Cancer Types by Gene Expression Profiling
- Advances in the Treatment of HIV-Associated Lymphomas
- Nonmeyeloablative Stem Cell Transplantation as Allogenic Immunotherapy for Treatment of Refractory Renal Cell Carcinoma
- Interpretation of Human Genome Sequence Data
- American Association for Cancer Research—Update
- Gender and Minority Accrual to Clinical Trials
- Interagency Cooperation in Cancer Control
- Protection of Human Subjects—Research Update
- Update on Clinical Trials
- Progress Review Group Report: Pancreatic Cancer
- High-Visibility Studies in Environmental Cancer: Risks Associated With Cell Phones and Breast Implants
- Gene Silencing via RNA Interference
- Policy Update: Common Approaches to Early Phase Data Safety and Monitoring Practices
- New Horizons in Health: An Integrative Approach, and Implications for Cancer Research
- Early Detection Research Network—Update.

Appendix D: Activities of the NCAB

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 at National Meetings ("NCI Listens" Reports)
- NCI Center for Bioinformatics—Update
- Informatics Issues Important to Cancer Centers—Update
- Program Review Group Report: 5 A Day for Better Health Program Evaluation
- Office of Technology and Industrial Relations—Update
- Molecular Signatures of Infectious Agents—Workshop Report
- Clinical Trials Restructuring Initiative—Update
- Specialized Programs of Research Excellence—Update
- Division of Cancer Biology Program—Sexennial Review Report
- Early Detection Research Network—Status Report.

RFA Concepts Approved

Division of Cancer Treatment and Diagnosis

- Shared Resources for Scientists Without NCI-Funded Cancer Centers
- Pilot Program for Underserved Medical Institutions: Radiation Oncology Partnerships

Division of Cancer Control and Population Sciences

Centers of Excellence in Cancer Communications Research

Cooperative Agreements Approved

Division of Cancer Treatment and Diagnosis

Tissue Resources for Cancer Research

Combined RFA/Cooperative Agreements Approved

Division of Cancer Prevention

- Chemoprevention of Tobacco-Related Cancers in Former Smokers: Preclinical Studies
- Chemoprevention of Tobacco-Related Cancers in Former Smokers: Clinical Studies

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; Guidelines
- F31 Predoctoral Fellowship—Students With Disabilities; Guidelines
- 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

- KO1 The Howard Temin Award; Guidelines
- KOI Mentored Career Development Award for Underrepresented Minorities

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

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

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

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

KO8 Mentored Clinical Scientists Development Award

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

KO8 Minorities in Clinical Oncology

K12 Institutional Clinical Oncology Research Career Development Award

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

K22 The NCI Transition Career Development Award for Underrepresented Minorities

To provide support to outstanding newly trained basic or clinical investigators to develop their independent research skills through a two-phase program: an initial period involving an intramural appointment at the NIH and a final period of support at an extramural institution. The award is intended to facilitate the establishment of a record of independent research by the investigator in order 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 three to four years at the NCI followed by an extramural funding mechanism (K22) to support their research program for two years at the extramural institution to which they are recruited.

K23 Mentored Patient-Oriented Research Career Development Award

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

P Series: Research Program Projects and Centers

POI Research Program Projects

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

P20 Exploratory Grants

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

P30 Center Core Grants

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

P41 Biotechnology Resource Grant Program

P50 Specialized Center Grants

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

R Series: Research Projects

ROI Research Project

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

RO3 Small Research Grants

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

R13 Conferences

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

R15 The NIH Academic Research Enhancement Awards (AREA)

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

R18 Research Demonstration and Dissemination Projects

To provide support designed to develop, test, and evaluate health service activities, and to foster the application of existing knowledge for the control of categorical diseases.

R2 I 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

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.

R29 First Independent Research Support and Transition (FIRST) Award

The FIRST Award has been discontinued across NIH.

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 six months/\$100,000 for Phase I, and two 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

SO6 Minority Biomedical Research Support (MBRS)

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

\$15 Small Instrumentation Grants Program

T Series: Training Programs

T15 Continuing Education Training Program

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.

T34 MARC Undergraduate NRSA Institutional Grants

To enable minority institutions to make National Research Service Awards to individuals selected by them for undergraduate research training in the biomedical and behavioral sciences.

U Series: Cooperative Agreements

UOI Research Projects

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

U10 Cooperative Clinical Research—Cooperative Agreements

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

U13 Conference—Cooperative Agreements

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.

- U42 Animal (Mammalian and Nonmammalian) Model, and Animal and Biological Materials (NCRR)
- U43 Small Business Innovative Research Grant (SBIR/Phase I)
- U44 Small Business Innovative Research Grant (SBIR/Phase II)

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.

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/index.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 Program Announcements, 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), FY2001 *

	Activity	Totals by	Αp	Applications by NCAB Round			
Mechanism	Code	Activity	Jan	May	Aug	Sep	
Research Facilities Construction Grants	C06	1	0	0	0	1	
Predoctoral Individual National Research Service Award	F31	34	0	16	0	18	
Postdoctoral Individual National Research Service Award	F32	309	95	113	0	101	
National Research Service Award for Senior Fellows	F33	6	1	4	0	I	
Research Scientist Development Award—Research & Training	КОТ	65	21	23	0	21	
Research Scientist Award	K05	13	4	8	0	I	
Cancer Prevention, Control & Population Sciences Center Development Award	К07	70	16	31	0	23	
Clinical Investigator Award	KO8	142	37	54	0	51	
Physician Scientist Award (Program)	KI2	10	10	0	0	0	
Career Transition Award	K22	20	9	5	0	6	
Mentored Patient-Oriented Research Development Award	K23	43	16	14	0	13	
Midcareer Investigator Award in Patient-Oriented Research	K24	15	7	3	0	5	
Mentored Quantitative Research Career Development	K25	5	2	ı	0	2	
Research Program Projects	POI	100	30	39	0	31	
Exploratory Grants	P20	95	45	13	0	37	
Center Core Grants	P30	38	9	26	0	3	
Biotechnology Resource Grant Program	P41	2	1	0	0	1	
Specialized Center	P50	35	П	7	0	17	
Research Project	ROI	4,469	1,409	1,510	73	1,477	
Small Research Grants	RO3	228	64	94	1	69	
Conferences	R13	144	40	48	0	56	
Academic Research Enhancement Awards (AREA)	R15	53	14	25	0	14	
Research Demonstration and Dissemination Projects	R18	2	2	0	0	0	
Exploratory/Developmental Grants	R2 I	909	253	208	97	351	
Resource-Related Research Projects	R24	25	0	25	0	0	
Education Projects	R25	99	31	40	0	28	
First Independent Research Support and Transition (FIRST) Award**	R29	I	1	0	0	0	
Exploratory/Developmental Grants Phase II	R33	59	15	9	4	31	
(continued)							

^{*} Source: IMPAC II. Includes NCI primary and secondary assigned applications and withdrawn applications; excludes deleted applications. Of the 8,544 applications received during the year, 2,645 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.

^{**} FIRST Award (R29) has been discontinued across NIH.

Table 1. Applications Received for Referral by the NCI (by Mechanism), FY2001, continued

	Activity	Totals by	Ap	plications b	y NCAE	Round
Mechanism	Code	Activity	Jan	May	Aug	Sep
Method to Extend Research in Time (MERIT) Award	R37	14	5	3	0	6
Small Business Technology Transfer (STTR) Grants—Phase I	R4 I	87	32	34	0	21
Small Business Technology Transfer (STTR) Grants—Phase II	R42	15	3	6	0	6
Small Business Innovation Research Grants (SBIR)—Phase I	R43	863	267	298	0	298
Small Business Innovation Research Grants (SBIR)—Phase II	R44	210	62	76	0	72
James A. Shannon Director's Award	R55	7	0	4	0	3
Minority Biomedical Research Support—MBRS	S06	4	2	I	0	ı
Continuing Education Training Program	T15	1	0	I	0	0
Institutional National Research Service Award	T32	82	32	30	0	20
Research Project (Cooperative Agreements)	uoı	206	104	15	79	8
Cooperative Clinical Research (Cooperative Agreements)	uio	20	18	0	0	2
Animal (Mammalian and Nonmammalian) Model, and Animal and Biological Materials Resource Cooperative Agreements (NCRR)	U42	10	0	0	0	10
Small Business Innovation Research (SBIR) Cooperative Agreements—Phase I	U43	1	0	1	0	0
Specialized Center (Cooperative Agreements)	U54	24	24	0	0	0
Exploratory Grants—Cooperative Agreement (NCI)	U56	8	8	0	0	0
Overall Totals		8,544	2,700	2,785	254	2,805

Table 2. All Applications Reviewed by the NCI (by Mechanism), FY2001*

	Activity	Totals by	Applicat	ions by NO	CAB Round	
Mechanism	Code	Activity	Jan	May	Sep	Amount Funded
Research Scientist Development Award—Research and Training	КОІ	65	21	22	22	\$2,066,631
Research Scientist Award	K05	13	4	8	I	553,506
Academic/Teacher Award	К07	70	16	31	23	2,649,089
Clinical Investigator Award	K08	123	35	46	42	3,559,306
Physician Scientist Award (Program)	K12	10	10	0	0	954,374
Career Transition Award	K22	20	9	5	6	593,844
Mentored Patient-Oriented Research Development Award	K23	37	15	12	10	922,209
Midcareer Investigator Award in Patient-Oriented Research	K24	15	7	3	5	543,386
Mentored Quantitative Research Career Development	K25	4	2	0	2	133,472
Research Program Projects	POI	94	29	36	29	69,850,799
Exploratory Grants	P20	77	44	2	31	5,519,368
Center Core Grants	P30	34	5	26	3	40,718,420
Specialized Center	P50	35	11	7	17	23,117,875
Research Project	ROI	68	25	4	39	20,493,221
Small Research Grants	RO3	211	63	78	70	5,052,752
Conferences	R13	92	25	20	47	1,254,989
Exploratory/Developmental Grants	R2 I	332	152	41	139	11,646,836
Resource-Related Research Projects	R24	24	0	24	0	4,186,103
Education Projects	R25	96	31	37	28	6,281,735
First Independent Research Support and Transition (FIRST) Award	R29	l	I	0	0	0
Exploratory/Developmental Grants Phase II	R33	47	15	5	27	3,287,651
Small Business Technology Transfer (STTR) Grants—Phase I	R4 I	11	4	5	2	438,545
Small Business Technology Transfer (STTR) Grants—Phase II	R42	I	0	0	I	496,681
Small Business Innovation Research Grants (SBIR)—Phase I	R43	112	32	45	35	4,991,122
Small Business Innovation Research Grants (SBIR)—Phase II	R44	21	6	10	5	2,532,909
Continuing Education Training Program	T15	1	0	I	0	49,609
Institutional National Research Service Award	T32	79	29	30	20	11,414,266
Research Project (Cooperative Agreements)	uoı	104	98	6	0	13,339,961
Cooperative Clinical Research (Cooperative Agreements)	uio	20	18	0	2	37,237,177
Specialized Center (Cooperative Agreements)	U54	24	24	0	0	7,296,631
Exploratory Grants—Cooperative Agreement (NCI)	U56	8	8	0	0	1,401,311
Overall Totals		1,849	739	504	606	\$282,583,778

^{*} Includes withdrawn applications.

Table 3. Applications Reviewed by the NCI IRG Subcommittees, FY2001

Subcommittee	Number of Applications		Number Scored	Percent Scored	Direct Costs Recommended
A (P20, P30)	15	\$213,050,177	15	100	\$157,975,241
C (PO1, RO3, R13)	37	233,724,541	37	100	184,069,260
D (POI)	19	132,465,259	19	100	121,841,821
E (PO1, RO1, RO3, R13, UO1)	54	325,906,404	51	94	319,668,285
F (K01, K08, K22, K25, R13, T32)	281	236,043,620	273	97	214,568,595
G (K05, K07, K12, K22, K23, K24, R25) 223	204,529,883	218	98	197,275,930
H (U10, R01, U01)	5	84,354,079	5	100	70,658,679
Totals	634	\$1,430,073,963	618	97	\$1,266,057,811

Table 4.
Summary of Investigator-Initiated PO1 Applications Reviewed for Each NCAB Meeting, FY2001*

Type of Application	Jan 2001 NCAB	May 2001 NCAB	Oct 2001 NCAB	Total for FY2001
New	2	15	12	29
New Amended	6	6	6	18
Recompeting	12	7	10	29
Recompeting Amended	9	6	2	17
Supplement	0	2	0	2
Total for Each NCAB Round	29	36	30	95

Table 5.
Summary of Review Formats for Unsolicited Program Project Applications Reviewed, FY2001

NCAB Meeting	Number of Applications	IRG Review	SEP Review	Site Visit	Tele- conference	Applicant Interview	Committee**	Accelerated Peer Review
January	29	27	2	14	15	2	0	2
May	36	32	4	22	13	0	I	3
October	30	24	6	20	9	0	2	3
Total	95	83	12	56	37	2	3	8

^{*} Includes all applications reviewed; some may have been withdrawn at a later date.

^{**} Applications reviewed by the IRG without a prior site visit, teleconference, or applicant interview.

Table 6.
Summary of Unsolicited Program Project Grant Applications, by NCI Program Division, FY2001

Division/NCAB Round	Number of Applications	First Year Direct Costs Requested	First Year Direct Costs Recommended	Number Awarded	First Year Total Costs Awarded
	, applications	nequested	Recommended	/ Warded	, (warded
Division of Cancer Biol	ogy				
January	14	\$17,146,598	\$16,632,534	5	\$9,737,209
May	14	19,993,296	17,984,711	4	8,004,704
October	9	14,963,771	14,537,569	4	10,182,861
Total	37	52,103,665	49,154,814	13	27,924,774
Division of Cancer Con	itrol and Popul	ation Sciences			
January	l l	2,260,131	2,143,769	0	0
May	6	6,721,238	6,624,396	2	2,096,112
October	1	1,447,482	1,447,482	0	0
Total	8	10,428,851	10,215,647	2	2,096,112
Division of Cancer Pred	ventíon				
January	5	6,695,257	6,297,879	3	6,659,922
May	3	6,447,440	3,474,595	ı	1,584,709
October	2	2,781,682	2,381,328	0	0
Total	10	15,924,379	12,153,802	4	8,244,631
Division of Cancer Trea	itment and Dia	anosis			
Division of Cancer Trea	ntment and Dia		14.980.344	6	10.064.660
January		15,637,806 17,108,652	14,980,344	6	10,064,660
January May	9	15,637,806			
Division of Cancer Treat January May October Total	9	15,637,806 17,108,652	15,370,363	6	12,622,843

Table 7.
Summary of NCI Grant Awards (by Mechanism), FY2001

		Dollars in	Thousands	Percent of	NCI Total	Competing	Competing	Success
Mechanism	Number	Dollar	Avg. Cost	Number	Dollar	Requested	Awarded	Rate (%)
RPGs RO1—Traditional Research Projects	3,234	\$1,008,200	\$312	52.71	40.51	3,290	834	25.30
PO1—Program Project Grants	178	301,115	1,692	2.90	12.10	84	35	41.70
RO3—Small Grants	122	9,024	74	1.99	0.36	230	87	37.80
R15—AREA Grants	3	358	119	0.05	0.01	29	3	10.30
R21—Exploratory/Developmental Research	231	42,326	183	3.76	1.70	440	133	30.20
R29—FIRST Awards	211	23,738	113	3.44	0.95	1	0	0.00
R33—Phased Innovation Grants Phase II	49	23,883	487	0.80	0.96	32	6	18.80
R35—Outstanding Investigator Grants	1	2,186	2,186	0.02	0.09	0	0	0.00
R37—MERIT Awards	61	26,682	437	0.99	1.07	15	15	100.00
R55—Shannon Awards	3	300	100	0.05	0.01	3	3	100.00
U19, U01— Cooperative Agreements (not RFAs)	18	14,873	826	0.29	0.60	11	5	45.50
Total Pool	4,111	1,452,685	353	67.00	58.37	4,135	1,121	27.10
PO1, RO1, RO3, R21,R33, UO1—RFAs	83	35,170	424	1.35	1.41	66	29	43.90
UO1, U19, U42 Cooperative Agreements—RFAs	177	115,054	650	2.88	4.62	99	26	26.30
Total RFAs/CAs	260	150,224	578	4.24	6.04	165	55	33.30
Total RPG Pool	4,371	1,602,909	367	71.24	64.41	4,300	1,176	27.30
	300	71,555	239	4.89		755	227	30.10
R43, R44, U43, U44—SBIRs R41, R42—STTRs					2.88	95		
	328	4,278	153	0.46	3.05	850	24	25.30
Total SBIRs/STTRs	528	75,833	231	5.35	3.05	850	201	29.50
Program Evaluation	4.000	17,861	201	76.50	60.17	E 150	1.427	27.71
Total Research Project Grants	4,699	1,696,603	361	76.58	68.17	5,150	1,427	27.71
Centers P20—Exploratory Grants	18	3,719	207	0.29	0.15	34	13	38.20
P20, P50—SPORES	29	76,844	2,650	0.47	3.09	31	11	35.50
P30, P40, P41, U42—Core Clinical	52	172,065	3,309	0.85	6.91	29	15	51.70
P30—Core Basic	8	16,333	2,042	0.13	0.66	l I	1	100.00
U54—Specialized Centers (CAs)	3	10,771	3,590	0.05	0.43	19	3	15.80
Total Centers	110	279,732	2,543	1.79	11.24	114	43	37.70
Other D43, R13—Conference Grants/	27	2	2.4		2.22	l	7.0	27.22
Research International Grants in Epidemiology	87	2,111	24	1.42	0.08	112	76	67.90
RO9, UO9—Scientific Evaluation	1	5,850	5,850	0.02	0.24	0	0	0.00
R24/U24—Research/Resource Grants	53	29,339	554	0.86	1.18	40	19	47.50
S06—Minority Biomedical Research Support	0	3,479	0	0.00	0.14	0	0	0.00
T15—Training Conference Grants	2	202	101	0.03	0.01	'	I	100.00
U10—Clinical Cooperative Groups	138	154,261	1,118	2.25	6.20	5	3	60.00
U56—Exploratory Grants (CAs)	4	1,042	261	0.07	0.04	8	4	50.00
Total "Other," Other Research	285	196,284	689	4.64	7.89	166	103	62.00
K01—Temin Awards	76	10,398	137	1.24	0.42	59	19	32.20
K05—Established Investigator Awards	5	550	110	0.08	0.02	14	5	35.70
K07—Preventive Oncology Awards	57	6,309	111	0.93	0.25	53	20	37.70
KO8—Mentored Clinical Scientists	123	14,500	118	2.00	0.58	114	28	24.60
K12, K14—Mentored Career Awards	21	8,409	400	0.34	0.34	11	3	27.30
K22—Clinical Research Track	8	1,191	149	0.13	0.05	15	5	33.30
K23—Mentored Patient-Oriented Research (POR)	33	4,291	130	0.54	0.17	37	11	29.70
K24—Mid-Career Investigator in POR	34	3,796	112	0.55	0.15	19	5	26.30
K25—Mentored Quantitative Research	1	133	133	0.02	0.01	1	1	100.00
K30—Institutional Curriculum Awards	0	1,600	0	0.00	0.06	0	0	0.00
R25—Cancer Education	91	21,740	239	1.48	0.87	73	30	41.10
Total Manpower, Other Research	449	72,917	162	7.32	2.93	396	127	32.10
Total Other Research	734	269,201	367	11.96	10.82	562	230	40.90
NRSA T32, T34, T35, T36—Institutional NRSAs	201	51,344	255	3.28	2.06	76	35	46.10
F30, F31, F32, F33, F34—NRSA Fellowships	177	6,583	37	2.88	0.26	279	81	29.00
Total NRSA (Manpower)	378	57,927	153	6.16	2.33	355	116	32.70
Control Cancer Control (various activity codes)	215	183,665	854	3.50	7.38	78	40	51.30
Cancer Control (Valious activity Codes)	213	103,003	037	3.30	1.30	10	TU	21.30
Construction (C06)	0	1,500	0	0.00	0.06	1	0	0.00

Table 8. Average Total Cost of RPG Awards, by Division, FY1999, FY2000, FY2001

	<u>FY1999</u>			FY2000	<u> </u>	FY2001		Percen	t Change	<u>2</u>	
							'00–'0 I		·99	'99 <mark>–'</mark> 01	
	Numbe	r Cost	Numbe	er Cost	Number	Cost	No.	Cost	No.	Cost	
ROI Average	e Cost of	Award Data									
NCI Overall	2,796	\$275,000	3,011	\$295,000	3,234	\$312,000	07.4	05.8	15.7	13.5	
DCB	1,631	253,000	1,780	270,000	1,838	280,000	03.3	03.7	12.7	10.7	
DCP	80	517,000	65	552,000	122	423,000	88.0	-23.0	52.5	-18.2	
DCTD	794	244,000	852	266,000	915	281,000	07.4	05.6	15.2	15.2	
DCCPS	291	411,000	313	449,000	357	494,000	14.1	10.0	22.7	20.2	
POI Average	e Cost of	Award Data									
NCI Overall	169	\$1,477,000	179	\$1,599,000	178	1,692,000	-00.6	05.8	05.3	14.6	
DCB	68	1,236,000	66	1,343,000	61	1,451,000	-07.6	08.0	-10.3	17.4	
DCP	7	1,890,000	8	2,076,000	11	1,776,000	37.5	-14.5	57.1	-06.0	
DCTD	80	1,615,000	87	1,723,000	91	1,754,000	04.6	01.8	13.8	08.6	
DCCPS	14	1,612,000	18	1,693,000	15	2,169,000	17.0	28.0	07.1	34.6	

DCBDivision of Cancer Biology

DCPDivision of Cancer Prevention

DCTDDivision of Cancer Treatment and Diagnosis

DCCPS......Division of Cancer Control and Population Sciences

Table 9. Requests for Applications (RFAs) Published by the NCI, FY2001

RFA	Title	Division	Mechanism	Date of Publication
CA-01-016	Development of High-Yield Technologies for Isolating Exfoliated Cells in Body Fluids	Division of Cancer Prevention	R41, R42, R43, R44	11/15/00
CA-01-017	Research in State and Community Tobacco Control Interventions	Division of Cancer Control and Population Sciences	ROI	10/19/00
CA-01-018	Exposure Assessment Methods for Cancer Research	Division of Cancer Control and Population Sciences	R2 I	12/20/00
CA-01-019	Centers of Excellence in Cancer Communications Research (CECCRs)	Division of Cancer Control and Population Sciences	P50	02/05/01
CA-01-020	Shared Resources for Scientists not at NCI Funded Cancer Centers	Division of Cancer Treatment and Diagnosis	R24	02/14/01
CA-01-026	NCI Scholars Program	Office of the Deputy Director for Extramural Sciences	K22	02/12/01
CA-02-001	Tissue and Biological Fluids Bank of HIV-Related Malignancies	Division of Cancer Treatment and Diagnosis	uoı	04/24/01
CA-02-003	Community Clinical Oncology Program	Division of Cancer Prevention	uio	04/02/01
CA-02-004	Minority-Based Community Clinical Oncology Program	Division of Cancer Prevention	uio	04/02/01
CA-02-005	Comprehensive Minority Institution/ Cancer Center Partnership	Office of the Deputy Director for Extramural Sciences	U54	03/19/01
CA-02-006	Planning Grant for Minority Institution/ Cancer Center Partnership	Office of the Deputy Director for Extramural Sciences	P20	03/19/01
CA-02-007	Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership	Office of the Deputy Director for Extramural Sciences	U56	03/19/01
CA-02-008	Chemoprevention of Tobacco-Related Cancer in Former Smokers: Preclinical Trials	Division of Cancer Prevention	RO1, R21	04/19/01
CA-02-009	Chemoprevention of Tobacco-Related Cancer in Former Smokers: Clinical Trials	Division of Cancer Prevention	uoı	04/19/01
CA-02-010	Cancer Intervention and Surveillance Modeling Network (CISNET)	Division of Cancer Control and Population Sciences	uoı	07/09/01

Table 10.
Program Announcements (PAs) Published by the NCI, FY2001

PA	Title	Division	Mechanism	Date of Publication
PA-01-010	Exploratory Studies in Cancer Detection, Prognosis and Prediction	Division of Cancer Treatment and Diagnosis	R2 I	10/31/00
PA-01-015	Correlative Studies Using Specimens From Multi-Institutional Prevention and Treatment Trials	Division of Cancer Treatment and Diagnosis	RO1, R21	11/13/00
PA-01-020	Molecular and Cellular Biology of Metastatic Tumor Cells	Division of Cancer Biology	R2 I	11/21/00
PA-01-021	Small Grants Program for Cancer Epidemiology	Division of Cancer Control and Population Sciences	RO3	11/28/01
PA-01-030	Exploratory/Developmental Grants for Diagnostic Cancer	Division of Cancer Treatment and Diagnosis	R2 I	12/08/00
PA-01-042	Non-Mammalian Organisms as Models for Anticancer Drug Discovery	Division of Cancer Treatment and Diagnosis	RO1, R21	01/10/01
PA-01-091	Flexible System to Advance Innovative Research (FLAIR) for Cancer Discovery by Small Business	Division of Cancer Treatment and Diagnosis	R41, R42 R43, R44	05/27/01
PA-01-094	Models for HIV Disease and AIDS-Related Malignancies	Division of Cancer Biology	R01, R21	05/16/01

Active NCI PAs may be found on the Internet at: http://deainfo.nci.nih.gov/extra/pa/index.htm.

Table 11.
Program Announcements With Specific Referral (PARs) Published by the NCI, FY2001

PAR	Title	Division	Mechanism	Date of Publication
PAR-01-003	Innovative Toxicology Models for Drug Evaluation: Exploratory/Developmental Grants (R21, R33) and Phased Innovation Award (R21/R33)	Division of Cancer Treatment and Diagnosis	R21, R33, R21/R33	10/25/00
PAR-01-004	Innovative Toxicology Models for Drug Evaluation: SBIR/STTR	Division of Cancer Treatment and Diagnosis	R41, R42, R43, R44	10/25/00
PAR-01-016	NCI Mentored Career Development Award for Underrepresented Minorities	Office of the Deputy Director for Extramural Science	КОІ	11/13/00
PAR-01-019	Development of High-Yield Technologies for Isolating Exfoliated Cells in Body Fluids	Division of Cancer Prevention	R2 I	11/15/00
PAR-01-021	Small Grants Program for Cancer Epidemiology	Division of Cancer Control and Population Sciences	RO3	11/28/00
PAR-01-045	Cancer Molecular Target Discovery: Exploratory Grants	Division of Cancer Treatment and Diagnosis	R2 I	02/02/01
PAR-01-046	Cancer Molecular Target Discovery: Competing Supplements	Division of Cancer Treatment and Diagnosis	PO1, RO1, R37, UO1	02/06/01
PAR-01-061	Phased Application Awards in Cancer Prognosis and Prediction	Division of Cancer Treatment and Diagnosis	R21/R33	03/01/01
PAR-01-062	Cancer Prognosis & Prediction: SBIR/STTR Initiative	Division of Cancer Treatment and Diagnosis	R41, R42, R43, R44	03/01/01
PAR-01-063	Review and Analysis of Tobacco Industry Documents	Division of Cancer Control and Population Sciences	ROI	03/07/01
PAR-01-074	NCI Transition Career Development Award for Underrepresented Minorities	Office of the Deputy Director for Extramural Science	K22	03/27/01
PAR-01-101	Development of Novel Technologies for In Vivo Imaging (Phased Innovation Award)	Division of Cancer Treatment and Diagnosis	R21/R33	05/29/01
PAR-01-102	Development of Novel Technologies for In Vivo Imaging (SBIR/STTR)	Division of Cancer Treatment and Diagnosis	R41, R42, R43, R44	05/29/01
PAR-01-104	Innovative Technologies for the Molecular Analysis of Cancer: Phased Innovation Award	Office of the Director	R21/R33	05/31/01
PAR-01-105	Innovative Technologies for the Molecular Analysis of Cancer: SBIR/STTR	Office of the Director	R41, R42, R43, R44	05/31/01
PAR-01-106	Applications of Innovative Technologies for the Molecular Analysis of Cancer: Phased Technology Application Award	Office of the Director	R21/R33	05/31/01
PAR-01-107	Applications of Innovative Technologies for the Molecular Analysis of Cancer (SBIR/STTR)	Office of the Director	R41, R42, R43, R44	05/31/01
PAR-01-110	Specialized Programs of Research Excellence in Human Cancer for the Year 2002	Office of the Deputy Director for Extramural Science	P50	06/20/01
PAR-01-134	NCI Transition Career Development Award	Office of the Deputy Director for Extramural Science	K22	09/04/01
PAR-01-135	Cancer Prevention, Control, Behavioral and Population Sciences Career Development Award	Office of the Deputy Director for Extramural Science	К07	09/04/01

Table 12.

RFA Applications Reviewed by the NCI (by Mechanism),

FY2001*

112001										
	DEA	A satisface	Ар	plicatio	ns by B	Board		Direct Cos	sts, First Year	
Mechanism	RFA Number	Activity Code	Totals	Jan	May	Sep	Requested all Yea	rs Requested	Recommended	Paid**
Specialized Center (Cooperative Agreements)	CA00-001	U54	20	20	0	0	\$139,181,001	\$19,733,521	\$11,056,930	\$2,996,237
Research Project (Cooperative Agreements)	CA00-002	uoı	60	60	0	0	293,247,778	17,458,275	11,139,109	3,038,216
Research Project (Cooperative Agreements)	CA01-001	uoı	15	15	0	0	21,482,443	3,136,583	2,704,311	1,326,774
Specialized Center (Cooperative Agreements)	CA01-002	U54	4	4	0	0	22,275,886	2,980,787	1,480,289	4,300,394
Exploratory Grants	CA01-003	P20	32	32	0	0	16,440,773	3,509,185	2,400,312	2,164,992
Cooperative Clinical Research (Cooperative Agreements)	CA01-004	uio	13	13	0	0	142,470,595	51,604,900	51,604,900	24,492,244
Cooperative Clinical Research (Cooperative Agreements)	CA01-005	uio	5	5	0	0	6,863,420	1,355,714	1,355,714	1,141,274
Research Project (Cooperative Agreements)	CA01-006	uoı	10	10	0	0	71,019,831	12,365,884	12,365,884	3,169,556
Career Transition Award	CA01-007	K22	4	4	0	0	0	0	0	0
Exploratory Grants—Cooperative Agreement (NCI)	CA01-008	U56	8	8	0	0	14,748,047	1,725,939	1,679,613	1,401,311
Research Program (Cooperative Agreements)	CA01-009	uoı	10	10	0	0	46,095,590	6,362,686	5,910,873	4,620,270
Exploratory Grants	CA01-010	P20	12	12	0	0	17,663,900	3,464,297	3,178,397	2,392,038
Resource-Related Research Project	CA01-012	R24	23	0	23	0	101,342,468	24,999,600	16,914,107	4,186,103
Specialized Center	CA01-014	P50	6	0	0	6	59,518,415	9,025,409	9,025,409	0
Exploratory Grants	CA01-015	P20	31	0	0	31	3,421,581	2,321,695	2,189,213	712,088
Small Business Innovation Research Grants (SBIR), Phase I	CA01-016	R43	4	0	0	4	596,020	491,140	99,500	0
Research Project	CA01-017	RO1	35	0	0	35	97,017,012	19,448,488	13,595,482	2,835,761
Exploratory/Developmental Grants	CA01-018	R2 I	46	0	0	46	25,066,893	5,890,000	4,645,000	2,027,729
Overall Totals			338	193	23	122	\$1,078,451,653	\$185,874,103	\$151,345,043	\$60,804,987

^{*} Includes withdrawn applications.

^{**} Dollar sums are not complete, since some grants may be paid in future years.

Table 13.
PA SEP Applications Reviewed by the NCI (by Mechanism), FY2001*

	DA.	A agricultur	<u>Ap</u>	plicatio	ns by B	oard	Direct Costs, First Year			
Mechanism	PA Number	Activity Code	Totals	Jan	May	Sep	Requested all Year	s Requested	Recommended	Paid**
Mentored Patient-Oriented Research Development Award	PA00-004	K23	2	I	0	1	\$1,150,950	\$232,100	\$108,350	\$0
Institutional National Research Service Award	PA00-103	T32	1	0	1	0	2,413,108	388,564	388,564	296,631
Small Research Grants	PA01-021	RO3	31	0	0	31	4,406,937	1,525,000	1,125,000	488,923
Research Project	PA98-028	ROI	4	4	0	0	37,732,411	3,900,329	3,900,329	3,157,335
Mentored Patient-Oriented	PA98-052	K23	1	ī	0	0	656,100	121,500	0	0
Research Development Award										
Small Research Grants	PAR00-025	RO3	95	35	38	22	14,268,056	4,750,000	3,650,000	2,563,186
STTR Grants—Phase I	PAR00-030	R41	4	0	4	0	1,997,892	911,069	718,446	221,641
SBIR Grants—Phase I	PAR00-030	R43	21	0	21	0	9,356,842	4,311,736	2,888,636	1,117,340
SBIR Grants—Phase II	PAR00-030	R44	3	0	3	0	3,585,909	752,382	650,382	С
Education Projects	PAR00-033	R25	5	3	2	0	6,446,767	1,174,501	308,841	С
Exploratory/Developmental Grants	PAR00-060	R2 I	92	92	0	0	27,475,318	9,075,000	7,075,000	3,164,110
STTR Grants—Phase I	PAR00-061	R41	2	2	0	0	235,813	173,826	133,813	93,121
SBIR Grants—Phase I	PAR00-061	R43	10	10	0	0	2,019,914	1,402,927	513,670	598,630
SBIR Grants—Phase II	PAR00-061	R44	3	3	0	0	3,013,956	1,697,318	645,348	387,976
Research Project	PAR00-062	ROI	8	8	0	0	6,835,567	1,200,000	700,000	541,188
FIRST Award	PAR00-062	R29	1	1	0	0	252,200	75,000	0	C
Physician Scientist Award (Program)	PAR00-063	K12	- 1	1	0	0	2,256,984	232,200	232,200	250,776
Exploratory/Developmental Grants	PAR00-079	R2 I	20	11	0	9	5,600,931	1,975,001	1,975,001	862,974
Specialized Center	PAROO-087	P50	11	0	0	11	150,880,841	20,200,344	17,607,345	6,785,135
Exploratory/Developmental Grants	PAR00-089	R2 I	63	28	0	35	87,492,194	6,462,253	3,658,855	892,571
Exploratory/Developmental Grants Phase II	PAR00-089	R33	25	8	0	17	44,812,391	13,456,574	12,965,884	С
STTR Grants—Phase I	PAR00-090	R41	2	0	0	2	217,439	185,388	90,188	C
SBIR—Grants Phase I	PAR00-090	R43	27	12	0	15	6,849,741	3,073,758	1,727,460	1,086,921
SBIR—Grants Phase II	PAR00-090	R44	2	1	0	1	2,100,038	199,933	99,965	C
Education Projects	PARO0-137	R25	10	0	10	0	1,096,076	906,073	335,923	297,192
SBIR—Grants Phase II	PARO0-137	R44	3	0	3	0	2,644,010	268,850	74,765	99,998
Exploratory/Developmental Grants	PAR01-003	R2 I	12	0	12	0	10,056,087	1,227,868	1,032,490	507,713
Exploratory/Developmental Grants Phase II	PARO 1-003	R33	1	0	1	0	1,497,676	367,372	367,372	С
SBIR—Grants Phase I	PARO 1-004	R43	9	0	9	0	2,403,007	1,437,096	1,194,696	533,997
Exploratory/Developmental Grants	PAR01-019	R2 I	5	0	0	5	1,386,700	500,000	400,000	148,292
Small Research Grants	PAR98-023	RO3	20	0	20	0	2,847,980	978,407	628,414	242,705
Small Research Grants	PAR99-006	RO3	51	17	18	16	6,748,745	2,501,984	1,795,725	897,814
Career Transition Award	PAR99-094	K22	1	0	0	1	456,026	140,756	140,756	C
Exploratory/Developmental Grants	PAR99-100	R2 I	45	7	13	25	65.671.011	4,589,472	3,130,040	1,809,235
Exploratory/Developmental Grants Phase II	PAR99-100	R33	5	1	1	3	5,306,118	1,514,621	1,514,621	(
STTR Grants—Phase I	PAR99-101	R41	2	2	0	0	434,489	181,541	181,541	123,783
SBIR—Grants Phase I	PAR99-101	R43	28	7	9	12	5,868,235	3,646,366	1,495,751	638,662
SBIR—Grants Phase II	PAR99-101	R44	10	2	4	4	14,952,184	3,306,332	2,597,973	1,889,735
Exploratory/Developmental Grants	PAR99-102	R2 I	48	14	16	18	76,178,688	4,843,300	3,433,346	796,022
Exploratory/Developmental Grants Phase II	PAR99-102	R33	16	6	3	7	31,598,758	8,475,873	7,434,186	2,022,450
STTR Grants—Phase I	PAR99-103	R41	1	0	1	0	342,327	199,950	0	C
SBIR—Grants Phase I	PAR99-103	R43	11	2	5	4	2,892,354	1,638,740	841,190	317,154
Academic/Teacher Award	PAR99-108	K07	3	0	2	1	1,751,990	315,188	315,188	131,792
Research Project	PAR99-114	ROI	9	9	0	0	14,711,072	2,981,796	2,981,796	2,267,327
Specialized Center	PAR99-167	P50	18	11	7	0	234,364,836	32,623,007	28,750,186	16,255,543
Overall Totals				299	203	240		\$150,121,295	\$119,809,236	\$51,487,872

^{*} Includes withdrawn applications.

^{**} Dollar sums are not complete, since some grants may be paid in future years.

Table 14.
Non-RFA PA SEP Applications Reviewed by the NCI (by Mechanism), FY2001*

	A satisface		<u>Applic</u>	ations b	<u>Board</u>		Direct Costs, First Year				
Mechanism	Activity Code	Totals	Jan	May	Sep	Requested all Years	Requested	Recommended	Paid**		
Clinical Investigator Award	K08	ı	Ţ	0	0	\$588,875	\$117,775	\$0	\$0		
Research Program Projects	POI	13	2	5	6	162,582,724	20,053,293	18,598,151	1,384,883		
Center Core Grants	P30	21	0	21	0	25,210,846	5,539,767	5,315,007	1,820,137		
Research Project	ROI	1	0	0	1	11,809,009	1,997,297	1,997,297	0		
Conferences	R13	85	21	18	46	3,915,288	2,097,358	2,112,357	565,294		
Resource-Related Research Projects	R24	1	0	1	0	4,794,492	738,305	738,305	0		
Small Business Innovation Research Grants (SBIR)—Phase I	R43	I	1	0	0	99,350	79,000	0	0		
Research Project (Cooperative Agreements)	uoı	4	0	4	0	13,509,549	3,302,922	2,981,928	0		
Overall Totals		127	25	49	53	\$222,510,133	\$33,925,717	\$31,743,045	\$3,770,314		

^{*} Includes withdrawn applications.

^{**} Dollar sums are not complete, since some grants may be paid in future years.

Table 15.
Trends in Funding for Various Research Areas (Dollars in Millions)

Research Area	1997	1998	1999	2000	2001
Total NCI Budget	\$2,389.1	\$2,551.3	\$2,891.0	\$3,311.1	\$3,740.0
AIDS	224.7	225.9	239.2	244.1	239.1
Brain and CNS	46.1	54.3	63.5	71.9	80.7
Breast Cancer	332.0	348.7	387.2	438.7	475.2
Cervical Cancer	55.8	58.0	66.3	67.0	72.6
Colorectal Cancer	103.2	121.0	152.9	175.8	207.4
Head and Neck Cancers	38.5	41.9	45.9	47.0	50.0
Hodgkin's Disease	8.1	8.3	8.2	9.4	10.2
Leukemia	91.2	103.4	122.2	141.7	154.0
Liver Cancer	35.3	38.1	39.8	46.2	54.5
Lung Cancer	132.4	139.8	151.0	175.0	206.5
Melanoma	43.3	50.3	60.1	67.9	71.8
Multiple Myeloma	*	*	*	18.0	19.7
Non-Hodgkin's Lymphoma	52.7	57.1	66.2	70.4	79.5
Ovarian Cancer	41.7	40.8	56.5	65.5	76.9
Pancreatic Cancer	10.2	14.2	17.3	20.0	21.8
Prostate Cancer	82.3	86.9	135.7	203.2	258.0
Stomach Cancer	9.3	8.2	7.6	8.2	9.0
Uterine Cancer	8.1	12.2	13.8	16.0	18.8

^{*} Not tracked.

Table 16.

Special Interest Category (SIC) Dollars for FY2001—
Percent Change From FY2000*

Special Interest Category (SIC)	2000 Grants	2001 Grants	Percent Change	2000 Contracts	2001 Contracts	Percent Change	2000 Totals	2001 Totals	Percent Change
Acquired Immune Deficiency	\$33,290,734	\$30,178,570	-9.35	\$5,741,677	\$5,552,875	-3.29	\$39,032,411	\$35,731,445	-8.46
doptive Cell Immunotherapy	40,957,990	54,038,845	31.94	0	0		40,957,990	54,038,845	31.94
dv. Manufacturing Technology	28,393,608	22,650,296	-20.23	1,449,523	2,280,914	57.36	29,843,131	24,931,210	-16.46
ging	90,104,632	111,511,570	23.76	3,568,635	4,288,016	20.16	93,673,267	115,799,586	23.62
Iternative Medicine, Direct	18,788,019	22,487,573	19.69	293,632	1,309,367	345.92	19,081,651	23,796,940	24.71
Iternative Medicine, Indirect	27,633,364	28,206,026	2.07	2,689,477	600,213	-77.68	30,322,841	28,806,239	-5.00
Jzheimers Dementia	134,440	712,086	429.67	0	0		134,440	712,086	429.67
urthritis	830,956	525,144	-36.80	13,518	0	-100.00	844,474	525,144	-37.81
sbestos	2,201,782	1,468,410	-33.31	0	0		2,201,782	1,468,410	-33.31
taxia Telangiectasia	5,835,519	6,377,560	9.29	0	70,000		5,835,519	6,447,560	10.49
utoimmune Diseases	5,175,101	6,121,649	18.29	13,518	27,527	103.63	5,188,619	6,149,176	18.5
ehavior Research, Direct	181,767,930	198,496,112	9.20	2,710,648	3,315,371	22.31	184,478,578	201,811,483	9.40
ioengineering	141,868,102	213,564,969	50.54	11,784,827	24,262,167	105.88	153,652,929	237,827,136	54.78
iological Response Modifiers	628,475,494	637,679,013	1.46	42,246,161	46,062,079	9.03	670,721,655	683,741,092	1.9
iomaterials Research	9,111,571	12,077,508	32.55	1,456,500	2,754,385	89.11	10,568,071	14,831,893	40.35
irth Defects	13,531,030	10,289,795	-23.95	27,646	76,288	175.95	13,558,676	10,366,083	-23.5
one Marrow Transplantation	75,398,524	67,242,722	-10.82	34,215	0	-100.00	75,432,739	67,242,722	-10.8
reast Cancer Detection	79,009,993	77,682,291	-1.68	4,276,840	4,488,224	4.94	83,286,833	82,170,515	-1.3
reast Cancer Education	15,559,388	17,436,053	12.06	0	106,755	1.51	15.559.388	17,542,808	12.7
reast Cancer Epidemiology	51,723,542	59,488,529	15.01	2,580,067	3,737,780	44.87	54,303,609	63,226,309	16.4
reast Cancer Genetics	66,961,071	69,754,670	4.17	974,428	1,751,642	79.76	67,935,499	71,506,312	5.20
reast Cancer Prevention			13.11						19.7
	23,430,255	26,501,037		1,861,458	3,790,133	103.61	25,291,713	30,291,170	
reast Cancer Rehabilitation	11,214,288	12,704,463	13.29	0	0	4.53	11,214,288	12,704,463	13.2
reast Cancer Screening	33,293,107	30,797,950	-7.49	957,400	1,000,734	4.53	34,250,507	31,798,684	-7.1
reast Cancer Treatment	105,098,600	125,885,138	19.78	5,731,580	6,699,684	16.89	110,830,180	132,584,822	19.6
reast Cancer—Basic	98,131,649	103,258,330	5.22	1,930,478	805,504	-58.27	100,062,127	104,063,834	4.0
ancer Survivorship	72,779,923	110,834,449	52.29	3,055,198	2,547,142	-16.63	75,835,121	113,381,591	49.5
arcinogenesis, Environmental	425,505,033	460,386,298	8.20	37,546,344	38,806,843	3.36	463,051,377	499,193,141	7.8
ervical Cancer Education	3,943,884	2,875,322	-27.09	0	0		3,943,884	2,875,322	-27.0
hemoprevention	77,570,332	87,852,536	13.26	30,147,237	30,497,643	1.16	107,717,569	118,350,179	9.8
hemotherapy	326,604,298	345,463,751	5.77	9,814,345	26,385,611	168.85	336,418,643	371,849,362	10.5
hild Health	34,967,134	39,961,876	14.28	4,273,467	1,831,611	-57.14	39,240,601	41,793,487	6.5
hildhood Cancers	110,684,706	115,533,390	4.38	165,371	47,060	-71.54	110,850,077	115,580,450	4.2
linical Trials, Diagnosis	40,198,044	47,170,393	17.34	21,924,115	21,228,951	-3.17	62,122,159	68,399,344	10.1
linical Trials, Prevention	63,570,427	53,610,220	-15.67	13,537,511	13,749,438	1.57	77,107,938	67,359,658	-12.6
linical Trials, Therapy	336,078,893	343,992,499	2.35	3,556,764	7,859,885	120.98	339,635,657	351,852,384	3.6
linical Trials, Other	7,960,770	9,040,036	13.56	767,833	367,693	-52.11	8,728,603	9,407,729	7.7
ombined Treatment Modalities	255,643,981	230,278,274	-9.92	29,457	0	-100.00	255,673,438	230,278,274	-9.9
iabetes	5,173,231	5,152,356	-0.40	0	0		5,173,231	5,152,356	-0.40
iagnosis	349,416,595	409,834,044	17.29	32,232,305	32,683,199	1.40	381,648,900	442,517,243	15.9
Viagnostic Imaging	162,131,173	191,658,854	18.21	16,072,308	19,367,150	20.50	178,203,481	211,026,004	18.42
liethylstilbestrol	193,943	168,885	-12.92	990,000	919,728	-7.10	1,183,943	1,088,613	-8.0
Vioxin	898,717	1,176,288	30.89	0	0		898,717	1,176,288	30.89
continued)									

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

Table 16. Special Interest Category (SIC) Dollars for FY2001—Percent Change From FY2000, continued

Special Interest Category (SIC)	2000 Grants	200 l Grants	Percent Change	2000 Contracts	2001 Contracts	Percent Change	2000 Totals	2001 Totals	Percent Change
DNA Repair	95,525,780	119,512,548	25.11	476,500	119.877	-74.84	96,002,280	119,632,425	24.61
Drug Development	285,335,487	323,066,785	13.22	32,388,514	48,116,585	48.56	317,724,001	371,183,370	16.83
Drug Resistance	80,532,735	84,045,970	4.36	138,874	212,005	52.66	80,671,609	84,257,975	4.45
Drugs-Natural Products	109,401,200	117,723,931	7.61	3,749,713	2,291,555	-38.89	113,150,913	120,015,486	6.07
Endocrinology	122,316,867	137,280,270	12.23	4,197,273	6,507,888	55.05	126,514,140	143,788,158	13.65
EpidBiochemical	212,008,489	241,573,239	13.95	7,613,750	11,591,599	52.25	219,622,239	253,164,838	15.27
Gene Therapy Clinical	72,412,788	15,608,158	-78.45	571,143	0	-100.00	72,983,931	15,608,158	-78.61
Helicobacter	1,848,263	2,043,806	10.58	0	0	-100.00	1,848,263	2,043,806	10.58
Hematology	331,360,505	371,307,415	12.06	5,395,469	3,849,396	-28.66	336,755,974	375,156,811	11.40
Hematopoietic Stem Cell Research	85,709,669	86,508,848	0.93	34,215	0	-100.00	85,743,884	86,508,848	0.89
Hormone Replacement Rx	8,271,626	9,312,758	12.59	0	0	-100.00	8,271,626	9,312,758	12.59
Hospice	1,921,446	1,631,747	-15.08	0	0		1,921,446	1,631,747	-15.08
latrogenesis	54,837,750	55,422,201	1.07	1,019,457	1,742,154	70.89	55,857,207	57,164,355	2.34
Infant Mortality	966,933	874,643	-9.54	0	0	70.89	966,933	874,643	-9.54
						C 42			
Information Dissemination Interferon	176,892,452 28,578,168	206,600,804 30,732,837	7.54	84,001,790	89,403,158	6.43	260,894,242	296,003,962 30,732,837	7.54
			-5.25			2.16			-5.22
Mammography	37,514,580	35,546,409		549,523	532,160	-3.16	38,064,103	36,078,569	
Metastasis Mind/Barta Barranta	161,583,613	204,140,797	26.34	846,596	1,752,221	106.97	162,430,209	205,893,018	26.76
Mind/Body Research	12,232,691	11,496,467	-6.02	0	0	12.15	12,232,691	11,496,467	-6.02
Molecular Disease	933,311,922	1,036,211,253	11.03	17,672,984	14,765,290	-16.45	950,984,906	1,050,976,543	10.51
Neurofibromatosis	671,189	123,168	-81.65	27,646	6,288	-77.26	698,835	129,456	-81.48
Neurofibromatosis, Related	6,177,027	3,909,631	-36.71	0	0		6,177,027	3,909,631	-36.71
Magnetic Resonance Imaging	36,588,566	59,418,389	62.40	0	0		36,588,566	59,418,389	62.40
Nursing	7,586,381	7,783,431	2.60	0	0		7,586,381	7,783,431	2.60
Vitamin A	25,729,269	20,103,753	-21.86	180,582	249,221	38.01	25,909,851	20,352,974	-21.45
Vitamin C	4,685,945	5,042,409	7.61	239,350	250,184	4.53	4,925,295	5,292,593	7.46
Vitamins, Other	14,845,576	12,413,643	-16.38	391,995	250,184	-36.18	15,237,571	12,663,827	-16.89
Nutrition	156,362,547	166,036,640	6.19	5,563,323	7,003,494	25.89	161,925,870	173,040,134	6.86
Nutrition Monitoring	30,684,336	37,655,854	22.72	957,400	3,391,635	254.25	31,641,736	41,047,489	29.73
Obesity	19,094,788	24,412,132	27.85	0	53,377		19,094,788	24,465,509	28.13
Occupational Cancer	13,952,050	14,643,231	4.95	1,644,628	1,842,111	12.01	15,596,678	16,485,342	5.70
Oncogenes	466,030,715	494,908,236	6.20	4,027,346	5,324,228	32.20	470,058,061	500,232,464	6.42
Organ Transplant Research	85,367,209	76,238,755	-10.69	34,215	822,426	2,303.70	85,401,424	77,061,181	-9.77
Osteoporosis	1,132,262	1,287,965	13.75	0	0		1,132,262	1,287,965	13.75
P53	87,106,787	98,703,903	13.31	1,965,539	2,244,701	14.20	89,072,326	100,948,604	13.33
Pain	8,744,081	10,031,119	14.72	0	0		8,744,081	10,031,119	14.72
Palliative Care	16,344,950	14,758,958	-9.70	0	0		16,344,950	14,758,958	-9.70
Pap Testing	12,719,084	13,235,326	4.06	2,211,999	371,914	-83.19	14,931,083	13,607,240	-8.87
Pesticides	1,757,522	3,624,649	106.24	1,547,354	1,248,416	-19.32	3,304,876	4,873,065	47.45
Population Research	11,823,308	10,439,957	-11.70	0	0		11,823,308	10,439,957	-11.70
Prevention, Primary	222,290,089	252,251,073	13.48	33,264,692	36,878,661	10.86	255,554,781	289,129,734	13.14
RadElectromagnetic Fields	1,077,678	202,904	-81.17	0	0		1,077,678	202,904	-81.17
RadIonizing	41,497,268	39,545,455	-4.70	542,139	858,412	58.34	42,039,407	40,403,867	-3.89
RadLow-Level Ionizing	20,569,602	16,323,130	-20.64	184,166	0	-100.00	20,753,768	16,323,130	-21.35
RadNon-Ionizing	31,237,877	32,614,611	4.41	366,499	853,796	132.96	31,604,376	33,468,407	5.90
RadNon-lonizing Dx or Rx	47,505,467	75,539,731	59.01	0	0		47,505,467	75,539,731	59.01
RadUV	27,794,336	30,109,926	8.33	366,499	853,796	132.96	28,160,835	30,963,722	9.95
Radiotherapy	192,645,950	186,129,161	-3.38	559,244	532,160	-4.84	193,205,194	186,661,321	-3.39
Radon	2,399,966	2,663,660	10.99	0	0		2,399,966	2,663,660	10.99

(continued)

Table 16. Special Interest Category (SIC) Dollars for FY2001—Percent Change From FY2000, continued

Special Interest Category (SIC)	2000 Grants	200 I Grants	Percent Change	2000 Contracts	2001 Contracts	Percent Change	2000 Totals	2001 Totals	Percent Change
Rare Diseases	21,016,110	30,002,699	42.76	527,646	879,260	66.64	21,543,756	30,881,959	43.35
				· · · · · · · · · · · · · · · · · · ·		00.04			
Ras Inhibitors	8,514,570	7,935,689	-6.80	0	606,331		8,514,570	8,542,020	0.32
Rehabilitation	21,034,354	21,677,142	3.06	2,176,998	2,219,715	1.96	23,211,352	23,896,857	2.95
Resources	242,347,387	334,403,102	37.99	107,889,051	134,425,385	24.60	350,236,438	468,828,487	33.86
Rural Populations	16,949,725	19,135,158	12.89	14,179,297	14,903,826	5.11	31,129,022	34,038,984	9.35
Sexually Transmitted Diseases	36,576,335	35,466,974	-3.03	2,211,999	3,268,520	47.76	38,788,334	38,735,494	-0.14
Smokeless Tobacco	6,328,341	8,255,406	30.45	85,382	0	-100.00	6,413,723	8,255,406	28.71
Smoking and Health	94,109,190	104,961,706	11.53	2,881,075	4,398,006	52.65	96,990,265	109,359,712	12.75
Smoking Behavior	69,833,197	69,414,259	-0.60	2,683,611	2,247,823	-16.24	72,516,808	71,662,082	-1.18
Smoking, Passive	2,245,238	3,195,135	42.31	150,000	78,300	-47.80	2,395,238	3,273,435	36.66
Structural Biology	226,911,759	271,979,013	19.86	122,131	40,059	-67.20	227,033,890	272,019,072	19.81
Surgery	136,154,060	129,601,515	-4.81	221,953	1,498,869	575.31	136,376,013	131,100,384	-3.87
Taxol	63,343,132	65,996,775	4.19	31,374	32,166	2.52	63,374,506	66,028,941	4.19
Telehealth	50,655,200	89,809,323	77.30	47,717,076	50,967,918	6.81	98,372,276	140,777,241	43.11
Therapy	793,336,287	870,131,599	9.68	50,095,071	65,199,968	30.15	843,431,358	935,331,567	10.90
Tropical Diseases	5,885,288	6,009,550	2.11	595,949	104,798	-82.41	6,481,237	6,114,348	-5.66
Tuberculosis	39,573	45,302	14.48	0	0		39,573	45,302	14.48
Tumor Markers	262,966,749	359,406,893	36.67	12,755,363	12,961,700	1.62	275,722,112	372,368,593	35.05
Tumor Necrosis Factor	17,087,882	20,937,103	22.53	0	3,462		17,087,882	20,940,565	22.55
Underserved Populations	59,933,063	75,689,392	26.29	17,052,212	15,905,038	-6.73	76,985,275	91,594,430	18.98
Virus-Hhv8	4,525,712	10,517,347	132.39	155,268	0	-100.00	4,680,980	10,517,347	124.68
Virus Cancer Research	182,120,780	175,759,100	-3.49	5,318,068	5,796,104	8.99	187,438,848	181,555,204	-3.14
Virus-Epstein-Barr	19,267,249	16,983,409	-11.85	27,646	6,288	-77.26	19,294,895	16,989,697	-11.95
Virus-Genital Herpes	2,731,858	980,918	-64.09	0	0		2,731,858	980,918	-64.09
Virus-Herpes	46,602,279	44,719,400	-4.04	210,560	12,576	-94.03	46,812,839	44,731,976	-4.45
Virus-HHV6	275,812	63,771	-76.88	27,646	6,288	-77.26	303,458	70,059	-76.91
Virus-HTLV-I	4,653,881	4,585,199	-1.48	595,949	104,798	-82.41	5,249,830	4,689,997	-10.66
Virus- HTLV -II	287,730	282,943	-1.66	0	0		287,730	282,943	-1.66
Virus- HTLV -Unspec.	1,094,797	218,552	-80.04	595,949	104,798	-82.41	1,690,746	323,350	-80.88
Virus-Papilloma	34,806,030	37,779,646	8.54	990,340	3,149,070	217.98	35,796,370	40,928,716	14.34
Virus-Papova	45,861,060	47,508,362	3.59	990,340	3,149,070	217.98	46,851,400	50,657,432	8.12

Table 17.
Organ Site-Specific Dollars for FY2001—Percent Change From FY2000*

Site Category	2000 Grants	2001 Grants	Percent Change	2000 Contracts	2001 Contracts	Percent Change	2000 Totals	2001 Totals	Percent Change
Adrenal	\$1,316,111	\$1,835,756	39.48	\$0	\$0		\$1,316,111	\$1,835,756	39.48
All Sites**	37,288,750	49,817,049	33.60	23,418,242	26,973,956	15.18	60,706,992	76,791,005	26.49
Anus	2,783,716	3,771,168	35.47	0	0		2,783,716	3,771,168	35.47
Bladder	14,590,172	21,639,646	48.32	1,904,864	2,051,105	7.68	16,495,036	23,690,751	43.62
Blood	2,451,376	1,811,202	-26.11	0	35,000		2,451,376	1,846,202	-24.69
Bone Marrow	19,780,964	21,391,584	8.14	0	0		19,780,964	21,391,584	8.14
Bone, Cartilage	11,797,036	14,391,897	22.00	51,910	0	-100.00	11,848,946	14,391,897	21.46
Brain	56,533,116	64,438,566	13.98	775,866	712,635	-8.15	57,308,982	65,151,201	13.68
Breast	372,922,609	420,581,887	12.78	15,785,582	19,129,296	21.18	388,708,191	439,711,183	13.12
Buccal Cavity	4,674,916	4,459,279	-4.61	2,422,110	454,636	-81.23	7,097,026	4,913,915	-30.76
Colon, Rectum	167,286,368	182,552,289	9.13	17,412,483	15,298,482	-12.14	184,698,851	197,850,771	7.12
Central Nervous System	9,754,299	10,799,147	10.71	178,784	31,439	-82.42	9,933,083	10,830,586	9.04
Cervix	52,908,583	55,646,463	5.17	4,304,731	5,888,191	36.78	57,213,314	61,534,654	7.55
Connective Tissue	5,774,100	5,535,330	-4.14	0	0		5,774,100	5,535,330	-4.14
Embryonic Tissue, Cells	11,102,785	9,467,501	-14.73	48,056	0	-100.00	11,150,841	9,467,501	-15.10
Erythrocytes	993,452	1,123,696	13.11	0	0		993,452	1,123,696	13.11
Esophagus	7,524,296	12,086,969	60.64	2,431,858	3,541,288	45.62	9,956,154	15,628,257	56.97
Eye	1,471,322	1,596,475	8.51	0	0		1,471,322	1,596,475	8.51
Gall Bladder	148,194	169,162	14.15	0	0		148,194	169,162	14.15
Gastrointestinal Tract	6,941,150	13,315,454	91.83	1,492,165	947,158	-36.52	8,433,315	14,262,612	69.12
Genital System, Female	1,938,952	1,707,350	-11.94	495,000	459,865	-7.10	2,433,952	2,167,215	-10.96
Genital System, Male	1,557,961	2,197,552	41.05	1,462,446	1,139,865	-22.06	3,020,407	3,337,417	10.50
Head and Neck	15,462,924	16,535,052	6.93	102,896	191,066	85.69	15,565,820	16,726,118	7.45
Heart	4,032,589	5,244,788	30.06	296,486	298,168	0.57	4,329,075	5,542,956	28.04
Hodgkin's Lymphoma	8,909,294	8,467,163	-4.96	0	4,588		8,909,294	8,471,751	-4.91
Invertebrate Tissue, Cells	12,111,874	14,585,781	20.43	0	0		12,111,874	14,585,781	20.43
Kaposi's Sarcoma	17,774,484	18,734,908	5.40	155,268	0	-100.00	17,929,752	18,734,908	4.49
Kidney	11,568,695	14,319,717	23.78	491,580	359,143	-26.94	12,060,275	14,678,860	21.71
Larynx	1,200,582	1,387,440	15.56	0	0		1,200,582	1,387,440	15.56
Leukemia	133,689,004	142,979,270	6.95	1,477,334	767,644	-48.04	135,166,338	143,746,914	6.35
Leukocytes	61,369,892	69,241,380	12.83	0	972,260		61,369,892	70,213,640	14.41
Liver	43,780,615	49,439,717	12.93	3,098,283	3,207,659	3.53	46,878,898	52,647,376	12.31
Lung	152,852,559	178,514,571	16.79	12,480,444	14,782,144	18.44	165,333,003	193,296,715	16.91
Lymph Node	726,682	750,268	3.25	0	0		726,682	750,268	3.25
Lymphatic System	3,260,555	2,664,440	-18.28	0	0		3,260,555	2,664,440	-18.28
Melanoma	54,613,911	60,576,181	10.92	2,159,999	2,486,500	15.12	56,773,910	63,062,681	11.08
Muscle	5,626,404	8,439,049	49.99	0	0		5,626,404	8,439,049	49.99
Myeloma	18,286,835	15,062,070	-17.63	0	9,176		18,286,835	15,071,246	-17.58
Nervous System	3,255,019	3,625,268	11.37	27,646	6,288	-77.26	3,282,665	3,631,556	10.63
Neuroblastoma	13,219,411	13,374,765	1.18	24,719	0	-100.00	13,244,130	13,374,765	0.99
Non-Hodgkin's Lymphoma	60,393,210	70,093,377	16.06	2,147,418	2,107,711	-1.85	62,540,628	72,201,088	15.45
Nose, Nasal Passages	1,089,003	1,065,629	-2.15	0	0		1,089,003	1,065,629	-2.15

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

^{**} Research applicable to all sites.

Table 17. Organ Site-Specific Dollars for FY2001—Percent Change From FY2000, continued

	2000	2001	Percent	2000	2001	Percent	2000	2001	Percent
Site Category	Grants	Grants	Change	Contracts	Contracts	Change	Totals	Totals	Change
Ovary	58,397,926	66,435,126	13.76	7,309,631	5,893,599	-19.37	65,707,557	72,328,725	10.08
Pancreas	20,052,868	18,751,462	-6.49	0	481,674		20,052,868	19,233,136	-4.09
Parathyroid	296,328	302,761	2.17	0	0		296,328	302,761	2.17
Penis	89,647	659,708	635.90	0	0		89,647	659,708	635.90
Pharynx	2,100,013	2,268,913	8.04	10,382	0	-100.00	2,110,395	2,268,913	7.51
Pituitary	1,384,669	1,759,885	27.10	0	0		1,384,669	1,759,885	27.10
Plant Tissue, Cells	547,278	565,847	3.39	0	0		547,278	565,847	3.39
Platelets	1,225,495	554,711	-54.74	0	0		1,225,495	554,711	-54.74
Prostate	170,506,783	223,576,342	31.12	12,963,718	14,306,539	10.36	183,470,501	237,882,881	29.66
Reticuloendothelial System	29,392,280	27,358,067	-6.92	2,723,282	2,629,943	-3.43	32,115,562	29,988,010	-6.62
Respiratory System	2,344,612	3,428,953	46.25	0	0		2,344,612	3,428,953	46.25
Retinoblastoma	975,546	1,877,505	92.46	0	0		975,546	1,877,505	92.46
Skin	48,159,789	51,157,321	6.22	1,537,033	2,168,240	41.07	49,696,822	53,325,561	7.30
Small Intestine	1,752,742	1,798,719	2.62	0	0		1,752,742	1,798,719	2.62
Spleen	373,011	346,319	-7.16	0	0		373,011	346,319	-7.16
Stomach	4,232,998	3,967,752	-6.27	1,707,520	2,010,235	17.73	5,940,518	5,977,987	0.63
Testis	5,238,279	6,160,001	17.60	0	0		5,238,279	6,160,001	17.60
Thymus	900,584	1,139,085	26.48	27,646	6,288	-77.26	928,230	1,145,373	23.39
Thyroid	4,103,106	3,330,988	-18.82	60,775	81,532	34.15	4,163,881	3,412,520	-18.04
Trachea, Bronchus	307,646	372,540	21.09	1,146,414	672,692	-41.32	1,454,060	1,045,232	-28.12
Urinary System	235,403	629,770	167.53	0	0		235,403	629,770	167.53
Uterus	15,481,637	16,903,933	9.19	902,847	835,607	-7.45	16,384,484	17,739,540	8.27
Vagina	115,285	717,998	522.80	0	0		115,285	717,998	522.80
Vascular	32,497,271	40,523,773	24.70	434,422	374,341	-13.83	32,931,693	40,898,114	24.19
Wilms Tumor	3,363,848	3,768,844	12.04	0	0		3,363,848	3,768,844	12.04

Table 18.
Reviewed Requests for Proposals (RFPs)¹ and Master Agreement Announcements (MAAs)²

Announcement Number	Announcement Title	Workload Round
Trans-NIH	SBIR Phase 1 and 2 Contract proposals (Omnibus Solicitation)	5/01
RFP N01-CO-12400	Recompetition of the existing contracts for management and operation of the Frederick Cancer Research and Development Center—Operations and Technical Support ³	1/01
MAA NO1-CN-850884-72	Efficacy Studies	5/01
MAA NO1-CN-85093-20	Evaluation of Chemoprevention of In Vitro Screening Assays	5/01
RFP NO1-CM-17004-54	Software for Ultrasound Imaging	5/01
RFP N01-CO-17016-32 ⁴	Fundamental Technologies for the Development of Biomolecular Sensors—Broad Agency Announcement (BAA)	10/01
RFP N01-CO-17014-32	Novel Technologies for Noninvasive Detection, Diagnosis, and Treatment of Cancer	5/01
RFP NO1-CP-11005-50	Human Papillomavirus Type 16 Vaccine Trial in Costa Rica	5/01
MAA NO1-CN-85080-39	Phase I Studies of Chemopreventive Agents	5/01
RFP N01-CP-11021-38	Natural History of Human T-Lymphotrophic Virus Type I in the Caribbean	10/01
RFP NO1-CM-17004-28	Ultrasound Research Interface	10/01
MAA NO1-CP-01003	Record Linkage Master Agreement Annual Resolicitation	10/01
RFP NO1-CP-11014-38	Studies of the Mayak and Techa River Cohort in Russia	10/01

NOTE: Contract review results are not reported to the NCAB; however, because of the timing of the review work performed by DEA, contract reviews are interdigitated with grant reviews for planning purposes.

^{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.} Sixty-six responses were submitted for all MAA, SBIR, and BAA initiatives, and 12 proposals were submitted for the RFPs (excluding the BAA).

^{3.} This contract was in excess of one billion dollars over a seven-year period.

^{4.} Although submitted in response to an RFP, the BAA proposals were investigator-initiated, and thus were similar to an R01. NASA was a cosponsor of this initiative.