Section III
Breast Cancer Research Program

Vision: To eradicate breast cancer.

Mission: To foster new directions, address neglected issues, and bring new investigators into the field of breast cancer research.

Appropriations for Peer-Reviewed Research: $1.04B in FY92–00, $175M in FY01, and $150M in FY02 in congressional funds; $3.1 in FY99–00, $2.4M in FY01, and $1.5M in FY02 from the Stamp Out Breast Cancer Act

Funding Summary: 2,837 awards from the FY92–00 appropriations; 380 awards from the FY01 appropriation; ~325 awards anticipated from the FY02 appropriation

The Disease

Cancer of the breast is the most commonly diagnosed cancer in women, accounting for 30% of all cancers in women. In 2002, approximately 203,500 women in the United States will receive a diagnosis of invasive breast cancer and 54,300 women will be diagnosed with breast cancer in situ. Additionally, about 1,500 new cases of breast cancer will be diagnosed in men. Breast cancer is the second leading cause of death in women. Approximately 39,600 women and 400 men are projected to die from breast cancer this year.[1]

Program Background

The Department of Defense (DOD) Breast Cancer Research Program (BCRP) was established in fiscal year 1992 (FY92) by Appropriations Conference Committee Report No. 102-328, which provided $25 million (M) for research on breast cancer screening and diagnosis for military women and family members. In 1993, grassroots advocates led by the National Breast Cancer Coalition (NBCC) influenced public policy, which led to a FY93 $210M congressional appropriation for peer-reviewed breast cancer research. After being assigned responsibility for administering the FY93 appropriation for breast cancer, the U.S. Army Medical Research and Materiel Command (USAMRMC) sought the advice of the National Academy of Sciences (NAS) to develop a sound investment strategy for the congressional appropriation. A NAS Institute of Medicine committee thoroughly studied the major considerations and, in 1993, issued a report that outlined a two-tier review process and investment strategy for the $210M appropriation. (See Section I for more detail.)[2]

The BCRP has challenged the research community to eradicate breast cancer. Instead of focusing on specific areas of research, the BCRP focuses on offering specific funding mechanisms to address unmet needs in the research community, as illustrated by the pyramid depicted in Figure III-1. The foundation of the pyramid is the training of investigators in breast cancer research. The next level of the pyramid is ideas; research starts with thousands of ideas, not all of which will lead to fruitful areas of investigation. Idea Awards have been and continue to be a major emphasis of the BCRP. The middle of the research pyramid is traditional research

Figure III-1. BCRP Funding "Philosophy"

"The consumer/scientist partnership brings exciting new perspectives to the breast cancer problem that is encouraging innovation and bold new approaches focused on understanding, treating, and preventing breast cancer."

—Lynn Matrisian, Ph.D.
Professor and Chair,
Vanderbilt University
School of Medicine
FY02 Integration
Panel Chair

projects offered by other funding agencies; these projects are often the major emphasis of a laboratory. Approaching the pyramid's summit are Translational Awards. The BCRP focuses efforts at the critical juncture between basic research and the potential clinical applications of such research. Translational Awards have become an emphasis of the BCRP in recent years. Finally, the pinnacle of the pyramid represents the research studies that make it to a clinical trial. Awards have been made across all areas of laboratory, clinical, behavioral, and epidemiological research, including all disciplines within the basic, clinical, psychosocial, behavioral, sociocultural, and environmental sciences; nursing; occupational health; alternative therapies; public health and policy; and economics.

From FY92–02, Congress appropriated almost $1.37 billion (B) to fund peer-reviewed breast cancer research through the BCRP. A total of 3,217 awards have been made through FY01 across the categories of research, training/recruitment, and infrastructure. Each fiscal year's

[1] *American Cancer Society - Cancer Facts and Figures 2002.*

[2] *Institute of Medicine, Strategies for Managing the Breast Cancer Research Program: A Report to the U.S. Army Medical Research and Development Command, 1993.*

investment strategy is focused on the program's vision to eradicate breast cancer. Appendix B, Table B-1, summarizes the congressional appropriations and the investment strategy executed by the BCRP for FY01–02. Additional details of the FY92–00 programs may be found in the DOD CDMRP Annual Reports of September 1999, September 2000, and September 2001.

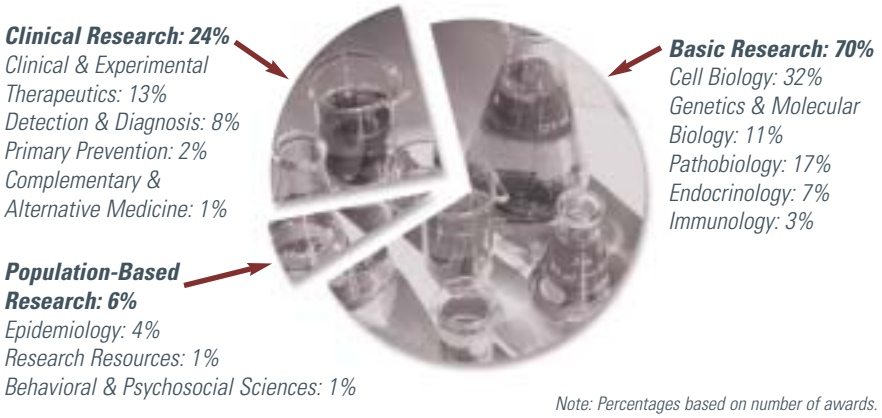
FY01 Program

In FY01, the DOD BCRP was continued with a congressional appropriation for $175M for peer-reviewed breast cancer research. Additionally, $2.4M was received as a result of the Stamp Out Breast Cancer Act of 1997 (Public Law 105-41). The programmatic vision was implemented by requesting proposals in four award categories: (1) research, (2) infrastructure, (3) training/recruitment, and (4) innovator. Table III-1 provides a summary of the FY01 BCRP award categories and mechanisms in terms of proposals received, number of awards, and dollars invested. As illustrated in Figure III-2, the portfolio of research supported by the BCRP is diverse.

Table III-1. Funding Summary for the FY01 BCRP

Category and Award Mechanism	Number of Proposals Received	Number of Awards	Investment
Research			
Clinical Bridge	*60*	*11*	*$4.4M*
CTR	*16*	*1*	*$1.7M*
Idea	*891*	*167*	*$76.5M*
Infrastructure			
Prior Year Behavioral Center of Excellence	*N/A*	*N/A*	*$.5M*
Breast Cancer Center of Excellence Awards	*19*	*5*	*$32.3M*
Training/Recruitment			
Career Development	*99*	*28*	*$7.8M*
HBCU/MI Partnership Training	*3*	*0*	*0.0*
Predoctoral Traineeships	*158*	*104*	*$6.6M*
Postdoctoral Traineeships	*172*	*56*	*$8.4M*
Undergraduate Summer Training Program	*7*	*3*	*$.5M*
Innovator	*75*	*5*	*$13.8M*
Total	***1,500***	***380***	***$152.5M***

As in previous years, a central theme of the BCRP was innovation. Emphasis was again placed on support of Idea Awards. A well-recognized backbone of the BCRP's portfolio, Idea Awards are intended to encourage innovative approaches to breast cancer research. In FY01, 167 Idea Awards were funded totaling $76.5M. Because of the innovative nature of the Idea Awards, the $2.4M received as a result of the Stamp Out Breast Cancer Act[3] were used to fund an additional 5 Idea Awards.



Note: Percentages based on number of awards.

Figure III-2. FY01 BCRP Portfolio by Research Area

In FY01, two new exciting award mechanisms were offered – Innovator Awards and Breast Cancer Center of Excellence Awards. Innovator Awards were structured to provide talented individuals from any field of study the freedom to pursue creative, potentially breakthrough research that could ultimately accelerate the eradication of breast cancer. These awards supported individuals with up to $3M for a period of up to 4 years to explore new avenues in the field of breast cancer research. Highlights of the five funded individuals are detailed in the box story on page III–4.

The other new award mechanism offered in FY01 was the Breast Cancer Center of Excellence Awards. This infrastructure award was intended to support the establishment of multi-institutional collaborations among

[3] *Institute of Medicine, Strategies for Managing the Breast Cancer Research Program: A Report to the U.S. Army Medical Research and Development Command, 1993.*

FY01 Innovator Award Recipients

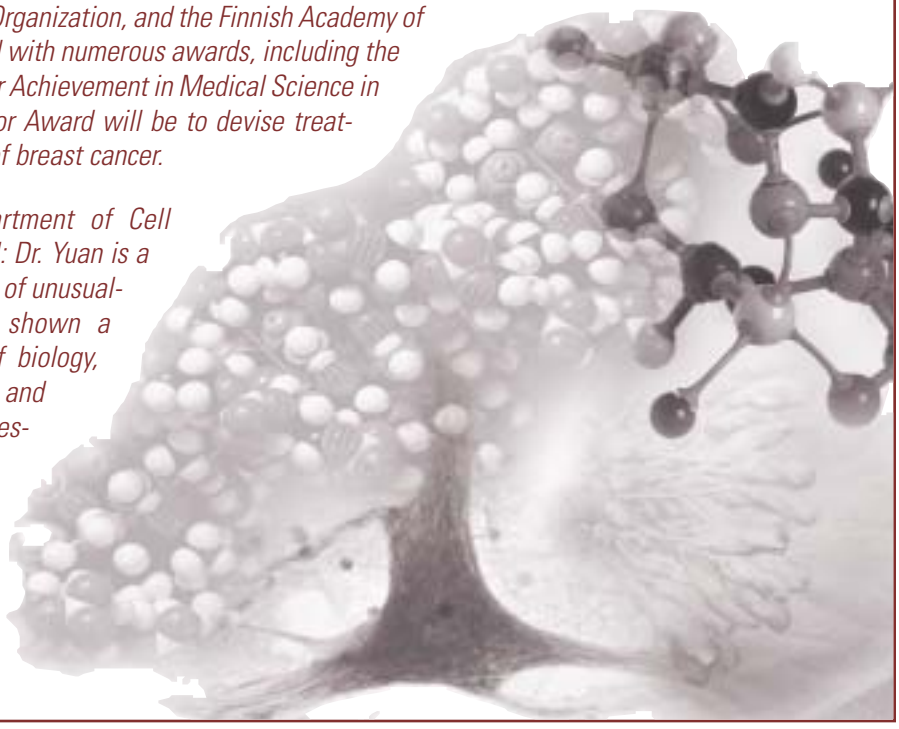
Mina J. Bissell, Ph.D., *Life Sciences Division Director and Senior Staff Scientist, Ernest Orlando Lawrence Berkeley National Laboratory: Dr. Bissell has been a visionary in her views on the importance of cell microenvironment, and was the first to show that the extracellular matrix is necessary for the proper functioning and differentiation of mammary epithelial tissue. She has a distinguished record of innovative thinking and achievements. Dr. Bissell has received numerous awards including the Ernest Orlando Lawrence Award from the U.S. Department of Energy, the Eli Lily/Clowes Award of the American Association for Cancer Research (AACR), and an honorary doctorate from the Pierre & Marie Curie University in Paris. Through her Innovator Award, Dr. Bissell will investigate how aggressive breast cancer cell lines could be brought under control using signaling inhibitors.*

Gerald J. Diebold, Ph.D., *Professor of Physical Chemistry, Brown University: Dr. Diebold is a new and original thinker and prolific inventor in physical chemistry who has engendered enormous international respect. He is the Director of International Photoacoustic and Photothermal Society, and has served on the Advisory Committee for the Ninth International Conference on Photoacoustic and Photothermal Phenomena and the U.S. Department of Energy Review Board for Environmental Science. Dr. Diebold was a winner of the Alcoa Foundation Research Award. Dr. Diebold seeks to develop a new method of breast tissue imaging based on an electroacoustic effect known as ultrasonic vibration potential. This is a new and unique approach to imaging that differs completely from the normal reflection phenomenon of ultrasound currently in use.*

Gregory J. Hannon, Ph.D., *Associate Professor, Cold Spring Harbor Laboratory: Dr. Hannon is a highly gifted scientist whose research history includes a number of groundbreaking discoveries. He has done significant work on cell-cycle control, and has cloned genes of recognized importance to cancer. Capitalizing on his studies of the mechanisms of double-stranded RNA-induced gene silencing, Dr. Hannon will search the human genome for proteins that are selectively required for the survival of breast cancer cells. The ultimate goal is the identification of novel targets for breast cancer treatment.*

Erkki Ruoslahti, M.D., Ph.D., *Distinguished Professor, The Burnham Institute: Dr Ruoslahti's research is characterized by its innovation and his ability to bring risky new strategies to fruition. He has made seminal contributions to the understanding of mechanisms of cell adhesions to the substratum and how these interactions are perturbed in cancer. Dr. Ruoslahti is a member of the U.S. National Academy of Sciences, the American Academy of Arts and Sciences, the European Molecular Biology Organization, and the Finnish Academy of Sciences. His research has been recognized with numerous awards, including the Gairdner Foundation International Award for Achievement in Medical Science in 1997. The focus of Dr. Ruoslahti's Innovator Award will be to devise treatment strategies targeting the vasculature of breast cancer.*

Junying Yuan, Ph.D., *Professor, Department of Cell Biology, Harvard University Medical School: Dr. Yuan is a highly innovative investigator with a record of unusually creative accomplishments. She has shown a remarkable ability to enter new areas of biology, fully immerse herself in each new field, and make important contributions. She is unquestionably a leader in the field of apoptosis. For her Innovator Award, Dr. Yuan will identify molecules that allow human cells to undergo aging and eventual death. Identification of such molecules will play a major role in future therapies for breast cancer.*



highly accomplished scientists from diverse backgrounds to focus on a major scientific problem in breast cancer. Five Breast Cancer Center of Excellence Awards were made to leading institutions across the nation in an effort to support the establishment of a directed multi-institutional collaboration among scientists.

The Vision for the FY02 Program

In FY02, Congress again appropriated $150M for peer-reviewed breast cancer research. The FY02 BCRP continues to emphasize innovation, training, and translational research. In addition to offering nine established award mechanisms, four new mechanisms were launched to support areas underrepresented in breast cancer research. These new mechanisms are highlighted below:

- Biotechnology Clinical Partnership Awards were offered to form a partnership between a biotechnology company and academic institution or health care organization to perform a Phase 1 or 2 clinical trial in breast cancer therapeutics or chemoprevention.
- Exploration Awards were designed to explore an untested, innovative concept in breast cancer research.
- Clinical Research Nurse Awards were launched to prepare nurses for careers in breast cancer clinical research.
- Physician-Scientist Training Awards were established to support training for breast cancer clinical research physicians.

In response to two FY02 BCRP Program Announcements, 1,883 proposals were received electronically, as detailed in Table III-2.

Scientific peer review sessions were conducted in July, August, and October 2002. Programmatic review is scheduled for November 2002 and January 2003. Approximately 325 awards are anticipated.

Era of Hope 2002

The Era of Hope 2002 meeting held September 25–28, 2002 at the Orange County Convention Center in Orlando, Florida marked the 10th anniversary and the third Era of Hope meeting for the BCRP. With over 1,500 attendees, this meeting provided a forum for researchers in different fields and research areas to share their ideas and identify promising new directions in breast cancer research. Participation of breast cancer survivors was an integral part of the meeting.

The Era of Hope 2002 provided an unprecedented opportunity to highlight the contributions of the BCRP grantees in pushing the boundaries and advancing discoveries in breast cancer research, and to reflect on promising, innovative avenues of research for the upcoming decade. Over 170 BCRP grantees highlighted their most recent scientific accomplishments in the symposia sessions and 1,262 awardees presented poster sessions. Media coverage of the Era of Hope 2002 meeting reflected the broad scope of the research funded by the DOD, as well as the unique aspects of the BCRP. Media coverage of the meeting was extensive and included 11 on-site reporters, over 35 newspaper, internet, and wire stories, and over 15 radio and television interviews. The Era of Hope 2002 abstracts are available on the CDMRP web site at http://cdmrp.army.mil.

Table III-2. Award Mechanisms Offered and Proposals Received for the FY02 BCRP

Category and Award Mechanism	Number of Proposals Received
Research	
Biotechnology Clinical Partnership	*3*
CTR	*15*
Exploration	*200*
Idea	*1,084*
Infrastructure	
C-CTR	*3*
Breast Cancer Center of Excellence Awards	*10*
Training/Recruitment	
Clinical Research Nurse	*24*
HBCU/MI Partnership Training	*5*
Physician-Scientist Training	*18*
Predoctoral Traineeships	*227*
Postdoctoral Traineeships	*238*
Undergraduate Summer Training Program	*12*
Innovator	*44*
Total	***1,883***

Scientific Outcomes and Advances

The BCRP research portfolio comprises many different types of projects, including support for innovative ideas, infrastructure building to facilitate clinical trials, and training breast cancer researchers.

The outcomes of BCRP-funded research can be gauged, in part, by the number of resultant publications, abstracts/presentations, and patents/licensures reported by awardees to date. This information is summarized in Table III-3.

The following projects represent a sample of the many exciting developments that are resulting from research funded by the BCRP. These examples represent the work of dedicated individuals from graduate students who are just beginning their careers through established breast cancer researchers.

Particle-Mediated IL-12 Gene Transfer in Breast Cancer.
Ning-Sun Yang, Ph.D., Institute of Molecular Biology, Academia Sinica Taipei, Taiwan and Alexander Rakhmilevich, M.D., Ph.D., University of Wisconsin: Tumor metastasis in visceral organs is the leading cause of death in breast cancer patients. Progress in cancer research suggests that immunotherapy, a form of therapy that stimulates the patient's own immune system to destroy cancerous cells, offers a promising strategy for the treatment of metastatic breast cancer. One approach involves boosting the existing antitumor immune response with the use of cytokines, such as interleukin-12 (IL-12). However, in early clinical trials using IL-12, systemic administration of the cytokine resulted in severe side effects in patients. Using a new approach developed at PowderJect Vaccines, Inc., Dr. Yang and colleagues explored a gene therapy based approach to minimize side effects, called particle-mediated gene transfer, for the treatment of metastatic breast cancer. Particle-mediated gene transfer is accomplished by the delivery of DNA-coated gold particles directly into skin cells in vivo. Transfected cells then produce the gene product (in this case IL-12) from the DNA injected into them. Results from this study (1) suggest that particle-mediated IL-12 gene therapy, alone or in combination with other immunological approaches, may be a promising treatment of breast cancer and (2) have paved the way for the first clinical trial using in vivo particle-mediated gene transfer initiated at the University of Wisconsin.

Table III-3. FY93-99 BCRP Award Outcomes

Number of Awards	2,264
Publications in Scientific Journals	>5,000
Abstracts/Presentations at Professional Meetings	>2,800
Patents/Licensures (including applications)	>130

Genetic Susceptibility to Breast Cancer.
Shiv S. Pillai, M.D., Ph.D., Massachusetts General Hospital: Many researchers believe that genetic susceptibility plays a role in the development of most human cancers. BCRP-supported investigator, Dr. Pillai, set out to ascertain whether the failure to inherit alleles of the Human Leucocyte Antigen (HLA) class II genes, genes that are integral to the normal function of the immune response, is linked to the development of breast cancer. Dr. Pillai and colleagues molecularly analyzed 4 HLA class II alleles, HLA DPB1, DQB1, DRB1, and DRB3, in 176 Caucasian women diagnosed with early onset breast cancer and 215 ethnically matched controls, and determined that two of the alleles, HLA DQB*03032 and HLA DRB1*11 were significantly overrepresented in controls as compared with patients, suggesting that these alleles may have protective roles in human breast cancer.

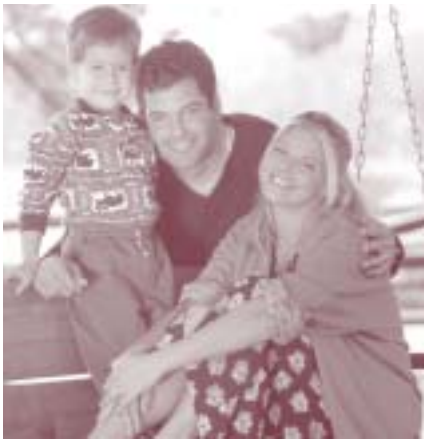
Genomic Instability in Breast Cancer Cells.
Marietta Y.W.T. Lee, Ph.D., New York Medical College: At the New York Medical College, BCRP-supported investigators are isolating and characterizing proteins involved in cell cycle control and DNA replication by binding assays to the conserved peptide sequence of the proliferating cell nuclear antigen (PCNA), a binding target for proteins involved in DNA replication, repair, and cell cycle control. Dr. Lee and colleagues have identified a novel peptide sequence that acts as a PCNA-binding motif not isolated as in the original. This peptide sequence was present on DNA polymerase delta and on many proteins that are involved in DNA replication, repair, and cell cycle control. Upon examination of DNA polymerase delta involvement in breast tumors, Dr. Lee showed that cellular responses to DNA damage include a transcriptional repression of the DNA polymerase delta gene and the active protein complex isolated from breast cancer cells was associated with tumor suppressor genes, suggesting that tumor suppressor genes play a role in DNA replication and/or repair.

"I always experience great pride when introducing myself as the Program Manager for the DOD's Breast Cancer Research Program. If I play some small role in diminishing the pain and suffering caused by this disease, it will be a high point of my professional career."

—Richard Kenyon, Ph.D., BCRP Program Manager

Inhibition of Breast Cancer Cell Growth by Citrus Limonoids.
Ted Vandenberg, M.D., and Najla Guthrie, Ph.D., University of Western Ontario: Citrus limonoids are a class of chemically related compounds present in citrus fruit. Limonoids have been shown to have anti-cancer activity and can inhibit breast cancer cellular proliferation in estrogen receptor negative (ER-) and positive (ER+) cells. In this study, BCRP investigators injected nude mice with either ER- or ER+ human breast cancer cells that were allowed to establish solid tumors. The mice were given limonoids to observe their effects on the proliferation of established and resected tumors, respectively. The researchers found that limonoids, particularly limonin, slowed tumor growth and were able to prevent or delay the regrowth of resected tumors in these models. Limonoids also reduced the incidence of lung metastases. There was a differential effect of limonoids on ER- and ER+ tumors. The investigators also studied the mechanism by which limonoids inhibit cellular proliferation. Citrus limonoids induced cell cycle arrest in G2M, but the relative potency was different for each limonoid. These compounds did not induce apoptosis. These results suggest that citrus juice components may be beneficial in the prevention of mammary cancer.

Family Intervention for Young Women with Breast Cancer.
Sally E. Tarbell, Ph.D., University of Pittsburgh: Work supported by this BCRP award is assessing the impact of breast cancer on the families of premenopausal women with early



stage breast cancer. Using a pilot study consisting of 34 families, including 62 children, ages 3-12, Dr. Tarbell and colleagues assessed parental adjustment, family coping, and the adjustment of preschool and school-age children. Based on the study data, Dr. Tarbell and colleagues were able to develop a basic psychosocial intervention involving breast cancer patients and their spouses and implemented an expanded intervention that adds groups for children. The baseline data on the 34 families revealed that the psychosocial functioning of 91% of the premenopausal women was within normal limits, whereas 41% of spouses exhibited psychological distress. Women endorsed using the coping methods more often than their spouses and both scored in the moderate range on the coping strategies. Eighty-five percent of the children showed few emotional or behavioral problems; however, school-age girls showed lower scoring in scholastic competence than boys. Overall the families showed competency in coping, with a subset of families experiencing distress on measures of psychosocial functioning and family coping.

Potential Anti-Cyclin D1 Therapy for Breast Cancer.
Piotr Sicinski, M.D., Ph.D., Dana Farber Cancer Institute: Cyclin D1 is a member of the cyclin family of proteins, which are part of the cell cycle machinery. The majority of human breast cancers overexpress cyclin D1. BCRP award recipient, Dr. Sicinski of the Dana Farber Cancer Institute, had previously developed genetically modified mice lacking cyclin D1, and had found that these mice develop essentially normally. This finding, along with the evidence of a role for cyclin D1 in breast cancer, suggested to the investigator that the removal of cyclin D1 might selectively shut off the proliferation of breast tumor cells while sparing other cells. To test this idea, Dr. Sicinski and his colleagues crossed the mice lacking cyclin D1 with four different strains of cancer-prone, genetically modified mice. The strains used overexpress the v-Ha-Ras, Neu, Myc, or Wnt-1 oncogenes. The researchers found that animals lacking cyclin D1 were resistant to breast cancers induced by the Neu and Ras oncogenes. In contrast, the cyclin D1-deficient mice were fully susceptible to breast cancers induced by the Myc, and Wnt-1. These results showed that in mammary epithelial cells, the Neu-Ras pathway is completely dependent on cyclin D1 for malignant transformation in mammary glands. Therefore, it might be possible to design highly specific anti-cyclin D1 therapy for treating human breast cancers that overexpress Neu-Ras.

Summary

Since 1992, the BCRP has been responsible for managing $1.37B in - appropriations, which has resulted in 3,217 awards for FY92–01. The focus of the DOD BCRP spans a spectrum of research, including basic, clinical, behavioral, environmental sciences, and alternative therapy studies. The BCRP benefits Americans by maximizing resources. The program offers awards that benefit the current needs of the patient and research communities while not duplicating efforts of other agencies. Scientific achievements that are the direct result of DOD BCRP awards have contributed toward the eradication of breast cancer.

"Because of your funding, I was able to make several key discoveries in breast cancer genetics in the last 6 years. I am particularly appreciative because our novel reseach hypotheses do not fair well in traditional funding agencies so it was vitally important that we did receive DOD funds. Your funding breast cancer research helps us help our patients."

—Charis Eng, M.D., Ph.D., F.A.C.P.
Dorothy E. Klotz Chair of Cancer Research
The Ohio State University
BCRP Award Recipient

FY02 Integration Panel Members

Chair, Lynn Matrisian, Ph.D.: Professor and Chair, Department of Cancer Biology, Vanderbilt University School of Medicine, and Program Leader of the Host Tumor Interaction Program of the Vanderbilt-Ingram Cancer Center. Served on the Board of Directors of the American Association for Cancer Research.

Chair Elect, Patricia Steeg, Ph.D.: Chief, Women's Cancers Section, Laboratory of Pathology, National Cancer Institute, National Institutes of Health.

Chair Emeritus, Dennis Slamon, M.D., Ph.D.: Executive Vice-Chair for Research for the Department of Medicine, Professor of Medicine, and Chief of the Division of Hematology-Oncology, University of California at Los Angeles School of Medicine. Director of Clinical Research, Jonsson Comprehensive Cancer Center, University of California at Los Angeles.

Anna Barker, Ph.D.: President and Chief Executive Officer, BIO-NOVA, Inc. Member of the Board of Directors and Chairperson of the Science Policy and Legislative Affairs Committee of the American Association for Cancer Research. Member of the Board of Directors, National Coalition for Cancer Research.

Wendie Berg, M.D., Ph.D.: Associate Professor of Diagnostic Radiology and Director of Breast Imaging, University of Maryland.

Leslie Bernstein, Ph.D.: AFLAC, Inc.; Chair in Cancer Research and Professor, Department of Preventive Medicine, Senior Associate Dean for Faculty Affairs, Scientific Director, Cancer Surveillance Program of Los Angeles County, Keck School of Medicine of the University of Southern California.

Edward Bresnick, Ph.D.: Professor Emeritus of Pharmacology and former Vice-Chancellor for Research, University of Massachusetts Medical School and current Adjunct Professor of Biochemistry, Dartmouth Medical School. Served as President of the American Association for Cancer Research.

Laurie Fajardo, M.D.: Director, Breast Imaging, The Johns Hopkins University.

Henry Fuchs, M.D.: Vice President, Clinical Affairs, IntraBiotics Pharmaceuticals, Inc.

Barbara Given, F.A.A.N., Ph.D.: Professor, School of Nursing, Senior Research Scientist, Institute for Managed Care, College of Human Medicine, Michigan State University and Research Scientist for the Walther Cancer Institute, Indianapolis, Indiana.

William Hait, M.D., Ph.D.: Professor of Medicine and Pharmacology and Director, The Cancer Institute of New Jersey, and Associate Dean for Oncology Programs, University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School.

M. Carolina Hinestrosa: Consumer; Co-Founder and Director of Programs, Nueva Vida, the first Spanish-language support and referral network for Latinas with breast cancer in the Washington, DC, metropolitan area.

Peter Jones, Ph.D., D.Sc.: Director, Norris Comprehensive Cancer Center, University of Southern California.

Laurence Kolonel, M.D., Ph.D.: Professor of Public Health, Deputy Director and Director of Cancer Etiology Program, Cancer Research Center of Hawaii, University of Hawaii.

Ngina Lythcott, Dr.P.H.: Consumer; Breast Cancer Liaison, National Black Women's Health Project; Associate Dean, Mailman School of Public Health, Columbia University. Former Dean of the College, Swarthmore College and former Assistant Professor of Community and Family Medicine at Dartmouth Medical School and Morehouse School of Medicine. Member, Steering Committee, National Cancer Action Plan for Breast Cancer.

Daniel Medina, Ph.D.: Professor, Department of Molecular and Cellular Biology, Baylor College of Medicine.

Abram Recht, M.D.: Associate Professor of Radiation Oncology, Harvard Medical School.

William Redd, Ph.D.: Professor, Mount Sinai School of Medicine, New York. Associate Director, Ruttenberg Cancer Center, Mt. Sinai-NYU Medical Center.

Rosemary Rosso, J.D.: Consumer; Senior Attorney at the Federal Trade Commission. Member of the National Breast Cancer Coalition and the Baltimore/Washington Breast Cancer Group.

George Sledge, M.D.: Professor of Medicine and Pathology at Indiana University School of Medicine and Ballvé-Lantero Professor of Oncology (Endowed Chair). Vice-Chair of the Breast Cancer Committee. Editor-in-Chief of Clinical Breast Cancer.

Fran Visco, Esq.: Consumer; Attorney; President and Member of the Board of Directors of the National Breast Cancer Coalition. Member of the President's Cancer Panel. Co-Chair of the National Action Plan on Breast Cancer. Member of the National Cancer Policy Board.

Geoffrey Wahl, Ph.D.: Professor, The Salk Institute for Biological Studies. Adjunct Professor, Biology Department, University of California, San Diego.