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Eliminating the Suffering and Death Due to Cancer

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NCI and Avon Foundation Award More than $7 Million for Breast Cancer Research

The Progress for Patients Award Program, a partnership between the National Cancer Institute (NCI) and the Avon Foundation, announced in September its most recent round of grants for innovative research focused on breast cancer. The grants were awarded as supplements to existing funding of four projects led by NCI-designated Special Programs of Research Excellence (SPORE) breast cancer investigators, one project led by ovarian SPORE investigators, and six projects at NCI-designated cancer centers.

"Through this private-public partnership we have demonstrated that common goals can help participating partners to support research that directly benefits patients, in this case through various clinical interventions," said Dr. Jorge Gomez, chief of NCI's Organ Systems Branch in the Office of Centers, Training, and Resources.

The Avon awards were launched in October 2001 when the Avon Foundation pledged $20 million to NCI to fund translational breast cancer research. With an application receipt, review, and funding announcement process that takes less than 6 months, delays common to

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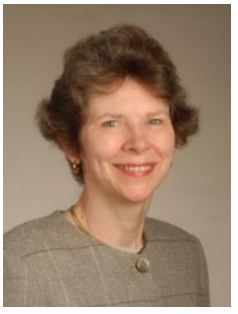
Director's Update

Adapting the Translational and Clinical Infrastructure to Meet Tomorrow's Challenges

In an analysis of cancer trends over decades, 5-year survival of patients with cancer has risen from approximately 20 percent in 1935 to 50 percent in 1971 to 64 percent by 2003. Although increased screening during this interval has influenced these survival trends, a very reliable endpoint, the number of cancer deaths per 100,000 Americans, has also been falling since about 1990.



Dr. Karen Antman

Deaths from lung cancer, for example, have been declining in men since 1991 and in women have plateaued since 1995, predictably following the substantial decrease in per capita cigarette consumption that began in the 1960s. Mortality from colorectal cancer has been declining for women since 1975 and for men since the 1980s.

One of the challenges we face is to accelerate these encouraging trends. Partnerships like those with Avon are one way of doing so, as are events

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other funding mechanisms are minimized. Each grant application is reviewed by a minimum of four reviewers, including scientific experts, statisticians, and patient advocates, who evaluate and score each application. Following these reviews, final recommendations on funding are forwarded from NCI to the Avon Foundation for their approval.

Because the Avon awards are 2-year grants, about half of the money given this year ($3.6 million) was for new research projects, and the other half ($3.8 million) funded awards from 2003. Of these totals, NCI contributed more than $900,000 for new projects and nearly $1.2 million for second-year funding of the 2003 projects. Avon's contribution was $2.7 million for new projects, plus $2.7 million for the 2003 projects.

The Avon Foundation is the charitable arm of Avon Products, Inc., which, through its Breast Cancer Crusade, is a major supporter of breast cancer awareness, research, and prevention. In the United States alone, Avon has raised more than $200 million for breast cancer research. Much of this money comes from Avon sales representatives through the "pink ribbon" product line, which includes gift-boxed lipsticks, pins, pens, mugs, and candles, all priced at $4 or less. Avon also raises money through the international Kiss Goodbye to Breast Cancer campaign, direct online donations, local fundraising programs, and a national series of fundraising walks. As a government research funding institution, NCI receives the money it grants through the Avon awards from Federal research appropriations.

"Funding goes directly to U.S. scientists who compete successfully for these awards," says Marydale Debor, chief advisor for the Avon Foundation's Breast Cancer Crusade program. "Avon Foundation funding will support early phase breast cancer clinical trials and other studies in prevention, diagnosis, and treatment; short-term clinical studies in human subjects; and recruitment and retention of minority and other medically underserved patients."

A total of 46 applications, many from collaborating institutions, were received for the 2004 Avon awards. The following projects received funding:

- HER (erb) Inhibitors in Untreated Operable Breast Cancer
- Markers of Short-Term Contralateral Breast Cancer Risk in Women with a History of Sporadic Breast Cancer
- A Phase II Trial of GW572016 for Brain Metastases in Patients with HER-2-Overexpressing Breast Cancer
- A Neoadjuvant Phase II Trial of GW572016 in Breast Cancer Patients: Biologic Correlative Study
- Effect of Aspirin on Mammographic Density
- Targeting the hCG-beta for Breast Cancer Immunotherapy
- Computer Aided Diagnosis Applied to Breast MRI
- Trastuzumab and Erlotinib in HER2+ Metastatic Breast Cancer
- Suramin in Combination with Paclitaxel in Advanced (Stage IIIB or IV) Metastatic Breast Cancer
- Grape Seed Extract, a Natural Aromatase Inhibitor
- Phase 2 Trial of Estradiol Therapy for Advanced Breast Cancer

Details about the 2004 awards and the Progress for Patients Awards Program can be found at http://www.avoncompany.com/women/avoncrusade. ◆

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such as Breast Cancer Awareness Month, which allow the research and advocacy communities to reach out to the public and patients in new and different ways.

Another important component of this effort will be the continued emphasis on translational research. Many models exist of optimum interactions between laboratory, clinical, and public health investigators. Translational research, described by some as "from bench to bedside," more accurately involves bidirectional interactions between laboratory and clinical and population science.

In addition to funding research grants, NCI also continues to fund infrastructure to facilitate translational research. NCI-designated cancer centers are the centerpiece of this infrastructure, serving as leaders in the discovery of the nature of cancer and development of more effective approaches to prevention, diagnosis, and therapy. Cancer centers also deliver medical advances to patients and their families, educate health care professionals and the public, and reach out to underserved populations. The National Cancer Advisory Board has recently approved new guidelines for NCI-designated cancer centers, which incorporate the recommendations made by its P30/P50 working group in February 2003. The new guidelines—posted on the NCI Web site at www3.cancer.gov/cancercenters/guide9_04.pdf—provide more flexibility to NCI-designated cancer centers. They include new sections on the formation of partnerships, consortium centers, and affiliations; staff investigator support for clinical investigators; and guidance on newer specialized resources, such as informatics and imaging. The

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guidelines for the SPORE program also are being revised and, like the cancer center guidelines, will reflect the P30/P50 working group's recommendations, including the formation of a parent committee that will review applications across cancer sites and provide a more global management function for the program.

Translational research also requires a cadre of investigators with the appropriate training. NCI remains committed to training the next generation in laboratory, clinical, and population science. To mitigate the impact of a flat budget for 2004, NCI initially supplemented the allocation to the training grant program by a total of $4 million. End-of-the-year money allowed funding of additional training grants. We also were able to provide a number of interim support awards to institutional grants that just missed the payline and had to resubmit. All in all an additional $8.6 million was awarded subsequent to the initial funding projections. NCI also received and reviewed 326 loan repayment applications, of which 176 (54 percent) were funded at a total of $8.2 million.

Whether through innovative partnerships with nonprofit groups or industry, the launch of initiatives such as the NCI Alliance for Nanotechnology in Cancer, or more flexible cancer center guidelines, our work must continuously overcome hurdles and address challenges. Hopefully these initiatives will be reflected in annual cancer trends, and patients and their families will reap the rewards. ◆

Dr. Karen Antman
NCI Deputy Director
Translational and Clinical Sciences

Spotlight

NCI Awards $7 Million to Georgia Researchers for Nanotechnology Partnership

As part of its ongoing efforts to accelerate the use of nanotechnology in cancer, NCI recently awarded a $7.1 million, 5-year grant to establish a collaborative, multidisciplinary partnership of academic and private sector research that will develop a new class of nanoparticles for molecular and cellular imaging. The goal of this Bioengineering Research Partnership is to develop biomedical nanotechnology, biomolecular engineering, and bioinformatics tools for identifying biomarkers for cancer and to use them to better understand cancer behavior and its relationship to clinical outcomes. The proposed research is broadly applicable to many types of malignant tumors, including breast cancer, colorectal cancer, and lymphoma, but a particular focus will be placed on the biological behavior of human prostate cancer.

"This new award will enable a powerful, nanotechnology-focused collaboration involving academia, private industry, and one of our cancer centers," said NCI Director Dr. Andrew C. von Eschenbach. "It is this type of alliance that will allow us to leverage the strengths of each sector to speed the development and application of nanotechnology-based tools to more accurately diagnose, treat, and prevent cancer."

The partnership's lead investigator, Dr. Shuming Nie, director of cancer nanotechnology at Emory University, is a long-time NCI grantee. He and his colleagues at Emory and the Georgia Institute of Technology have pioneered the development of quantum dots, nanometer-size semiconductor particles that can be used to "tag" virtually any biological molecule and study its behavior in living cells and organisms.

In this new initiative, Dr. Nie will partner with investigators from seven academic and clinical laboratories representing broad expertise in bioengineering, bioinformatics, tumor biology, bioanalytical chemistry, systems biology, oncology, pathology, and urology. In addition, private sector partner Cambridge Research and Instrumentation (CRI), based in Woburn, Mass., will contribute expertise in high-performance *in vivo* imaging.

The Bioengineering Research Partnership includes faculty from the Coulter Department of Biomedical Engineering at Georgia Tech and Emory; Emory's Winship Cancer Institute; the Departments of Urology, Radiation Oncology, and Pathology and Laboratory Medicine at Emory University School of Medicine; and scientists at CRI. ◆

Cancer Research Highlights

Breast Density and Mammography Sensitivity

A study funded by NCI and the American Cancer Society published in the October 5 *Journal of the National Cancer Institute,* shows that increased breast tissue density and rapid tumor growth are associated with decreased mammogram sensitivity and missed cancers in women aged 40–49.

Mammography is recommended for women who are in their 40s and older, but is less sensitive at detecting breast cancer in women at the younger end of this scale. To determine specific reasons for the lack of sensitivity, the research team, led by Dr. Diana S.M. Buist at Group Health Cooperative in Seattle, studied 576 women from the Breast Cancer Screening Program who were diagnosed with invasive breast cancer from 1988–1993. The women completed breast cancer risk factor questionnaires upon enrollment in the study and at the time of each subsequent mammogram; all diagnosed tumors were evaluated for the rate of tumor growth. At 12 and 24 months following the subject's baseline mammogram, researchers evaluated mammogram sensitivity while accounting for menopause status, body mass index, family history of breast cancer, hormone therapy use, time since last mammogram, tumor markers, breast density, and quality of mammographic images.

Researchers found that breast density accounted for most of the reduction (68 percent) in mammogram sensitivity in women aged 40–49 when looking at cancers occurring within 12 months. However, when these women were evaluated at 24 months, breast density accounted for 38 percent of the decline in sensitivity, while rapid tumor growth accounted for a 30 percent reduction.

Says Dr. Stephen Taplin of NCI, who also worked on the study, "These data begin to provide greater insight into how to improve mammography for women ages 40–49, and why a 2-year interval may be less effective. However, it is a study of detection, not mortality. Improvements must be tested for their effect on mortality."

Drug Combo Improves Outcomes in Prostate Cancer

Metastatic prostate cancer, found in 10–20 percent of men diagnosed with the disease each year, has a median survival period of less than a year. Patient care focuses on pain relief via radiation, narcotics, corticosteroids, and the chemotherapy drug mitoxantrone. However, two recent studies in the October 7 *New England Journal of Medicine* have found that a new chemotherapy regimen can improve survival and quality of life for these men.

In the first study, a combination of docetaxel with prednisone every 3 weeks, compared with mitoxantrone with prednisone at the same frequency, improved median survival (up to 18.9 months) and quality of life, while decreasing pain and serum PSA levels. Led by researchers at the University of Toronto and the Southwest Oncology Group, the study was sponsored by Aventis. Patients who received docetaxel showed better outcomes than those who received mitoxantrone, but the authors note that it was "at the cost of a higher incidence of adverse effects," including neutropenic fevers, cardiovascular and neurologic events, nausea, and metabolic disturbances.

The second study compared 3-week doses of docetaxel with estramustine to 3-week doses of mitoxantrone with prednisone. The trial, led by researchers at Columbia University and cosponsored by Aventis and NCI, found that the docetaxel combination increased median survival to 17.5 months and lowered mortality by 20 percent. The authors noted an increased rate of adverse events with docetaxel similar to those in the first study, and wrote, "These factors must be balanced when one is considering…first-line therapy for men with metastatic, androgen-independent prostate cancer."

Effectiveness of Shorter Therapy for Wilms' Tumor

Researchers from the International Society of Paediatric Oncology found that reducing the course of postoperative chemotherapy to 4 weeks produced equivalent survival rates compared with the standard 18-week treatment for stage I Wilms' tumor. Results of their 7-year study were published in the October 2 *Lancet*.

Wilms' tumor, a type of kidney cancer that affects infants and children, is considered curable in most cases, but common chemotherapy drugs have been associated with toxic effects to the liver and heart. Reducing intensity of chemotherapy by shortening treatment may reduce side effects and cost.

Researchers enrolled and randomized 410 patients between the ages of 6 months and 18 years with stage I intermediate-risk or anaplastic Wilms' tumor between 1993–2000. Event-free survival at 2 years was 91.4 percent in the standard group and 88.8 percent in the experimental group. Event-free survival at 5 years was similar: 88.3 percent in the standard group and 87 percent in the experimental group.

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The authors wrote that "reduction of postoperative chemotherapy is feasible for patients with stage I intermediate-risk or anaplastic Wilms' tumor while maintaining 2-year, event-free survival at about 90 percent and 5-year overall survival at about 95 percent."

Arylamines and Bladder Cancer Risk in Nonsmokers

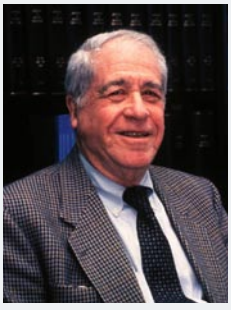
Results of a recent study indicate that exposure to arylamines, a family of known carcinogens previously associated with the increased risk of bladder cancer in smokers, is also a risk factor for bladder cancer in nonsmokers. The report, by Dr. Jinping Gan and colleagues at Massachusetts Institute of Technology, was published in the October 6 *Journal of the National Cancer Institute*.

Metabolites of certain drugs and pesticides, arylamines are found in cigarette smoke, permanent hair dyes, and other environmental sources. Studies have shown that cigarette smoking may contribute to at least 50 percent of current bladder cancer cases in the United States. However, previous research has also indicated that 4-ABP, a specific arylamine, is associated with bladder cancer in nonsmokers.

In this study, funded in part by NCI, researchers quantitatively measured the levels of arylamine adducts in the blood of 298 subjects with confirmed bladder cancer and 308 control subjects to assess exposures to nine different arylamines. Their results indicated that in addition to 4-ABP, three other arylamines may be independent risk factors for bladder cancer in nonsmokers. The authors note that exposure to arylamines may be the causal factor for most cases of bladder cancer in humans and conclude that because "arylamines may account for a substantial proportion of bladder cancers among the general population, identification of the environmental sources of these compounds is needed." ◆

A Conversation with Dr. Bernard Fisher

One of the most lauded breast cancer researchers of the last few decades, Dr. Bernard Fisher led the clinical trials that proved the benefit of lumpectomy and adjuvant chemotherapy in breast cancer patients and of tamoxifen for prevention in women at high risk for breast cancer. Last month, Dr. Fisher gave a grand rounds lecture to NIH Clinical Center fellows. He talks with the Bulletin *about some of the points he raised during the lecture.*



You talked about the difference in clinical research between a paradigm and normal science. What is the difference, exactly?

A paradigm is a collection of all of the information—lab experiments, clinical investigation, and so forth—that governs the treatment of a certain patient population. One can have very good research and very good clinical results, but if the community of practitioners is not willing to accept this, it doesn't become a paradigm. Initially with lumpectomy, a lot of people didn't accept our work. It was only after additional studies confirmed our findings that things changed. As far as prevention is concerned, there is very good information demonstrating that tamoxifen is of benefit in women at high risk, but the drug hasn't been accepted to the point where it's in universal use.

Most people who are doing research are doing "normal science." For example, everybody agrees that part of the paradigm of lumpectomy is postoperative radiation. But the questions now are: How much radiation? Do you give it focally or to the whole breast? Do you do brachytherapy? And then people write papers and say it's a new paradigm. It isn't. It's trying to perfect the existing paradigm. Normal science is necessary, but the work of paradigms is about looking at the bigger picture.

Were you ever surprised at the results of some your groundbreaking trials?

I was surprised about many of the things I found in my laboratory experiments. My involvement in clinical trials was not to do them as an entrepreneurial exercise. The early trials were done as an extension of what I was doing in the laboratory. It's what we now call "translational research." I think I'm one of the few people of my generation who was able to work in the lab and, at the same time, transfer the findings to the clinic and prove whether they had merit.

Can people do both basic and clinical research these days?

I think it is harder, frankly. The pace of the times in which we live makes it harder. I don't think I could possibly have done today what I did in those early years. I used to eat lunch with Jonas Salk regularly and he said it would have been impossible in the latter years of his life to do what he did earlier in his career. Today, clearly it would be even more difficult. ◆

Funding Opportunities

Planning Grant for Minority Institution/ Cancer Center Collaboration

RFA-CA-05-020
Application Receipt Date: Dec. 17, 2004
Letter of Intent Receipt Date: Nov. 17, 2004

NCI invites planning grant applications (P20s) to help researchers and faculty at Minority-Serving Institutions (MSIs) in collaboration with the researchers and faculty of NCI-designated Cancer Centers (or other institutions with highly organized, integrated research efforts focused on cancer) plan and implement focused collaborations in cancer research, cancer research training, or cancer education. The sole intent of this planning grant is to provide support for cancer projects and programs for a limited duration of time to perform feasibility studies and obtain preliminary data that will lead to the submission of specific competitive grant applications traditionally supported by NCI and others.

This PA's funding opportunity will use the NIH planning grant (P20) award mechanism(s).

For more information see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=2320

Inquiries: Dr. Sanya A. Springfield, springfs@mail.nih.gov; Dr. Nelson Aguila, aguilah@mail.nih.gov; Dr. Peter O. Ogunbiyi, ogunbiyp@mail.nih.gov ◆

Featured Clinical Trial

Immunotherapy for Patients with Metastatic Melanoma

Name of the Trial
Phase I/II Study of Interleukin-2 Gene-Modified Tumor Infiltrating Lymphocytes After Cyclophosphamide and Fludarabine in Patients With Metastatic Melanoma (NCI-03-C-0162). See the protocol summary at http://cancer.gov/clinicaltrials/NCI-03-C-0162.

Principal Investigators
Dr. Richard A. Morgan (protocol chair) and Dr. Steven A. Rosenberg, NCI Center for Cancer Research

Why Is This Trial Important?
Melanoma is cancer that forms in the melanocytes, cells that give skin its color. The prognosis for patients with melanoma that has spread to other parts of the body (metastasized) is poor.

Immunotherapy is treatment that stimulates the immune system's ability to fight disease. In one type of immunotherapy, patients are given tumor-infiltrating lymphocytes (TIL), disease-fighting white blood cells harvested from the patients' own tumors. The TIL are grown in the laboratory to increase their numbers and then injected back into the patients. Treatment with TIL, however, requires administration of interleukin 2 (IL-2) at the same time. IL-2 is a protein that helps TIL survive in the body, but has significant side effects when given by injection. In this trial, TIL that have been modified to make IL-2 are given to patients with metastatic melanoma after the patients have been treated with chemotherapy to reduce the number of existing white blood cells and make space for the incoming TIL cells.

Principal Investigator Dr. Richard Morgan

"For TIL to be successful, patients must receive IL-2 and, consequently, treatment has to be discontinued after a few days because of IL-2-related toxicity," said Dr. Morgan. "The challenge is to figure out how to give this potentially very beneficial treatment without concurrent IL-2 administration. Our solution is to genetically engineer TIL to produce its own IL-2. This should allow TIL to survive long enough in the body to produce a therapeutic effect without subjecting patients to the toxicity of intravenous IL-2."

Who Can Join This Trial?
Researchers seek to enroll 132 patients aged 18 and over who have metastatic melanoma that has not responded to standard therapy. See the list of eligibility criteria at http://cancer.gov/clinicaltrials/NCI-03-C-0162.

Where Is This Trial Taking Place?
The study will be conducted at the NIH Clinical Center in Bethesda, Md.

Who to Contact
Contact the NCI Clinical Studies Support Center (CSSC) at 1-888-NCI-1937. The call is toll free and confidential. ◆

An archive of "Featured Clinical Trial" columns is available at http://cancer.gov/clinicaltrials/ft-all-featured-trials.

Notes

President's Cancer Panel Meets in Ohio

On Sept. 27, the President's Cancer Panel held the second in its series of meetings on "Translating Research to Reduce the Burden of Cancer" at the Ohio State University Comprehensive Cancer Center in Columbus. Concerns voiced by participants included the need for more effective crossdisciplinary and crosscultural communication, public education on cancer as a disease process and the complexities of biomedical research, data sharing among researchers, and partnerships between academic medical centers and community organizations to disseminate research findings.

Individuals who testified emphasized the importance of prevention research; reporting accurately and clearly to the public about cancer discoveries; promoting clinical trials as a treatment of first choice, instead of last resort; addressing clinical burdens of community physicians and oncologists; and more rigorously studying strategies for implementing proven cancer discoveries in communities.

The panel will hold two more meetings, after which it will develop a report to the President and Congress outlining key issues and recommendations for better translating research to reduce the cancer burden.

NCI Hosts Seminar on Cancer and the Environment

The press office in the NCI Office of Communications held its 10th Science Writers' Seminar, "Cancer and the Environment," on October 7. Approximately 25 science and medicine reporters attended the seminar and about 120 people logged on to the videocast. Scientists from NCI and the National Institute for Environmental Health Sciences (NIEHS) discussed topics such as the interaction between genes and the environment and how scientists determine whether a substance causes cancer. Speakers included Drs. David Longfellow, Ken Cantor, and Ed Trapido, all of NCI, and Dr. Christopher Portier of NIEHS.

The press office plans to expand the seminar program this year, collaborating with NCI-designated cancer centers to hold frequent seminars in cities across the country. Journalists can get more information about the seminars by contacting the NCI press office at (301) 496-6641 or ncipressofficers@mail.nih.gov. ◆

Cancer Information Service: Answering Questions, Saving Lives

One of NCI's premier programs in reaching the public is the Cancer Information Service (CIS). In early October, CIS reached a historic milestone: It answered the10-millionth call since the service began in 1976.

"In 2003, CIS responded to 260,000 calls for information about all types of cancer," said Mary Anne Bright, CIS Associate Director. "We're very proud to be on the front line of providing service and information, and, quite literally saving lives."

One area of focus for CIS is educating women about the importance of breast cancer screening. In addition to responding to 33,000 calls about breast cancer so far this year, CIS also provides breast cancer education through its Partnership Program, which works with partners who have direct reach to minority and medically underserved communities. The CIS provides cancer information and education through its network of 14 regional offices. Although there is a special focus on reaching medically underserved and minority populations, CIS seeks to improve knowledge of cancer among the entire public.

"The more people that know about the importance of early detection, the greater the chance that they will take advantage of the many screening services available," said Ms. Bright. "By working with partners, we are educating women at the community level about mammography so that breast cancer can be detected at an earlier stage, when treatment is most successful."

CIS collaborates with diverse organizations that range from state comprehensive cancer control coalitions to educational institutions to the Indian Health Service. These partnerships have focused their attention on capacity building, technical assistance, data sharing, training, and evaluation.

For more information about CIS or on any of its programs, call 1-800-4-CANCER (TTY users: 1-800-332-8615). Trained information specialists are available Monday through Friday from 9:00 a.m. to 4:30 p.m. local time, and can provide information in either English or Spanish. Personalized online assistance is also available at www.cancer.gov Monday through Friday from 9:00 a.m. to 10:00 p.m. Eastern Time. ◆

Featured Meetings

This is a list of selected scientific meetings sponsored by NCI and other organizations. For locations and times and a more complete list of scientific meetings, including NCI's weekly seminars and presentations open to the public, see the NCI Calendar of Scientific Meetings at http://calendar.cancer.gov.

NCI Advisory Committee Upcoming Meetings

Date	Advisory Committee
Nov. 1	President's Cancer Panel
Nov. 4	NCI Director's Consumer Liaison Group

Selected Upcoming Meetings of Interest

Date	Meeting	NCI Speakers
Oct. 10-14	90th Annual Clinical Congress of the American College of Surgeons	Dr. Harold P. Freeman, Director, Center to Reduce Cancer Health Disparities
Oct. 12-16	Third International Conference on Tumor Microenvironment: Progression, Therapy and Prevention	Dr. Dinah S. Singer, Director, Division of Cancer Biology
Oct. 14-17	American Association for Cancer Education (AACE) 38th Annual Meeting (2004)—Eliminating Cancer Suffering and Death by 2015: The Essential Role for Education	Dr. Mark Clanton, Deputy Director, Cancer Care Delivery Systems; Dr. Shine Chang, Office of Preventive Oncology, Division of Cancer Prevention; Ms. Lenora Johnson, Director, Office of Education and Special Initiatives, Office of the Deputy Director for Extramural Science
Oct. 16-20	American Association for Cancer Research Special Conference: Third Annual International Conference on Frontiers in Cancer Prevention Research	Dr. Peter Greenwald, Director, Division of Cancer Prevention; Dr. Anna Barker, Deputy Director, Advanced Technologies and Strategic Partnerships
Oct. 20-21	10th Annual Cancer Research Symposium	Dr. Andrew C. von Eschenbach, Director

NCI Exhibits

NCI Exhibits are presented at various professional and society meetings. Further information about the NCI Exhibits program can be found at http://exhibits.cancer.gov.

This *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases.

For more information on cancer, call 1-800-4-CANCER or visit http://cancer.gov.

NCI Cancer Bulletin staff can be reached at ncicancerbulletin@mail.nih.gov.

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