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NCI Launches New Integrative Cancer Biology Program

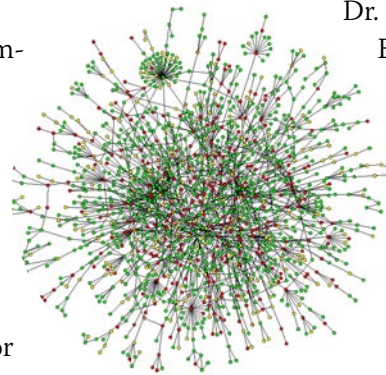
Every day, researchers make new discoveries about cancer that elucidate the disease process, but also demonstrate its increasing complexity. To address this complexity, the National Cancer Institute (NCI) has announced \$14.9 million in funding for the Integrative Cancer Biology Program (ICBP).

"We need to hone our efforts toward

an integrated approach to the study of cancer," said NCI Director

Dr. Andrew C. von

Eschenbach. "ICBP will take advantage of the explosion in research and technology to comprehensively weave together the disparate pieces of knowledge and reveal how cancer develops and progresses within the context of the human system."



(continued on page 2)

Pictured above: Mathematical models of the signaling networks that control a cell's function and destiny, such as this one, courtesy of Dr. Albert-László Barabási, of the University of Notre Dame, are just one of the integrative tools that the ICBP will support.

Director's Update

Clinical Trial System of Future

The recent voluntary recall of rofecoxib (Vioxx) by Merck & Co., Inc., illustrates all too well the importance of well-designed clinical trials and vigilant surveillance for any new drug or medical product. Some 3 years after FDA approval and widespread use, rofecoxib was found to be associated with a two-fold increased risk of cardiovascular toxicities in people who took the drug for 18 months or longer in a clinical trial to prevent colon adenomas. The recall has resulted in the careful review of

any cardiovascular effects of other drugs in the class of drugs known as COX-2 inhibitors.

COX-2 inhibitors have shown tremendous promise in the prevention and treatment of several different cancers. NCI is sponsoring more than 40 clinical trials with the COX-2 inhibitor celecoxib (Celebrex), most of which are phase I and include studies on cancer prevention and treatment. Based on the safety

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(Cancer Biology continued from page 1)

ICBP will work toward this goal by combining efforts from the entire spectrum of cancer researchers, from wet-lab biologists and computer scientists to epidemiologists and clinicians, through nine integrative biology centers: Massachusetts General Hospital, Dana-Farber Cancer Institute, Massachusetts Institute of Technology, Ohio State University, University Hospital of Cleveland, Duke University, Vanderbilt University Medical Center, Stanford University, and Lawrence Berkeley National Laboratory.

Each site will feature a team of investigators focused on a few specific events within the cancer process, such as the signaling networks that develop within and between cells as they become cancerous, the process by which a tumor cell invades neighboring tissues, and how cancer cells respond to drug or radiation treatment.

“The key aspect that sets the ICBP effort apart from other projects,” said Dr. Daniel Gallahan, Associate Director of NCI’s Division of Cancer Biology, “is the focus on building predictive cancer models, and not just analyzing data.” Each of the ICBP centers will apply their research findings to generate computer and mathematical models that simulate the various cancer processes they work on. While the centers will work individually, NCI intends that they also interact with one another, with other NCI programs, and with external groups, building a single comprehensive model of cancer as a biological system.

Another key aspect of ICBP will be the accessibility of the models and the data to the larger cancer research community, with ICBP centers

providing training and outreach, educating fellow researchers about their projects and teaching them how to use the modeling programs and other techniques. This outreach effort will also enable other scientists to validate the usefulness of the ICBP models as a predictive tool. One important collaborator will be NCI’s Cancer Biomedical Informatics Grid (caBIG) program, which will coordinate all the bioinformatics software needed by ICBP and provide NCI’s research partners access to the information generated by ICBP centers.

“One possible application of these models is that experiments and clinical trials traditionally conducted in a lab or clinic may be facilitated or performed through the use of these new models,” said Dr. Gallahan. “Our ultimate hope is that these models will provide us with a new way to examine and explore some of the basic properties of cancer and afford both basic and clinical researchers unique opportunities to understand and manage this disease.” ♦

(Director’s Update continued from page 1) concerns reported in the rofecoxib trials and the possibility that these concerns may extend to other COX-2 inhibitors, such as celecoxib, NCI is rapidly reviewing data from our studies of COX-2 inhibitors with our Data Safety Monitoring Boards (DSMBs), starting with the largest studies with the longest follow-up. And, as appropriate, we have added additional cardiovascular expertise to our prevention and treatment trial DSMBs.

Clinical trials are our most powerful weapons in the war against cancer. And the rofecoxib recall is further affirmation that our patients must be clearly informed about the safety and side effects of any new or experimental treatments or drugs they are

taking. It also highlights the need for evolution of our national clinical trials program.

In the future, clinical studies will routinely use advanced imaging techniques to get information in minutes about whether an intervention is achieving its intended aim. We will also know whether an intervention may be having unintended consequences or, in the case of COX-2 inhibitors, how they might best be used in individual patients. Taking advantage of the efficiencies offered by new imaging technologies and more powerful databases and monitoring systems, we will shorten the time it takes to complete large clinical studies by years, not just months, offering safe and effective treatments to patients far sooner than is currently possible. NCI will also provide leadership in the study of off-label uses of approved drugs and advocate for increased emphasis on post-market, phase IV trials, especially for chemoprevention drugs, where healthy patients will be taking these agents for long periods of time. Underlying these changes is the immediate need for electronic medical records and a national, integrated, health care monitoring system. NCI is in a position to advance the transformation of clinical research.

Our goal in all of this is to ensure we are providing the right intervention to the right patient for the right reasons, at the right location, at the right time, with outcomes that can be monitored in real time. We are going to be ambitious, aggressive, and smart, as we design a clinical trials program that establishes the principles of 21st century medicine, with patient safety always as the top priority. ♦

*Dr. Andrew C. von Eschenbach
Director, National Cancer Institute*



Cancer Research Highlights

Diabetes Increases Men's Risk of Liver, Pancreatic Cancer, Study Finds

Men who reported they have diabetes and take medication for it are at four times the risk of developing liver cancer compared with men without diabetes, according to study results presented last week at the American Association of Cancer Research (AACR) "Frontiers in Cancer Prevention Research" conference.

The case-control study—which involved nearly 3,300 men in Montreal, Canada, newly diagnosed with 1 of 12 types of cancer, and more than 500 healthy controls—also found that men who reported having diabetes and taking medication for it had more than two and a half times the risk of developing pancreatic cancer compared with men who did not have diabetes.

Overall, 24 percent of liver cancer patients, 16 percent of pancreatic cancer patients, and 8 percent of controls reported having diabetes. No association was found between diabetes and melanoma, non-Hodgkin's lymphoma, and stomach, colon, and prostate cancer. Men were asked about medication use for diabetes to minimize misclassification of disease. When only accounting for self-reports of diabetes without medication use, the associations between diabetes and liver and pancreatic cancer were reduced to three times the risk of developing liver cancer and two times the risk of developing pancreatic cancer.

The study confirms earlier findings of a link between diabetes and liver and pancreatic cancers, said study leader Dr. Marie-Claude Rousseau

of the University of Montreal. The next steps, she added, are to define the biological mechanisms by which diabetes may cause cancer, "if it's indeed causal," and perhaps focusing on liver and pancreatic cancer, "since these are the [cancers] coming most consistently from the literature."

Height May Be Another Risk Factor for Prostate Cancer

At the AACR prevention research conference last week, researchers from NCI and the Finnish National Public Health Institute presented data showing that, in male smokers, greater adult height is associated with an increased risk of prostate cancer. The data come from more than 29,000 participants in the Alpha-Tocopherol, Beta-Carotene Cancer Prevention (ATBC) Study, which examined the long-term effects of vitamin supplements in Finnish male smokers between 1985 and 1993, and is continuing to follow participants.

The men, aged 50 to 69 years, had their height and weight measured by a specially trained nurse, gave information on demographic, smoking, and medical factors, and completed a detailed food frequency questionnaire at the start of the ATBC study. After 17.4 years, a total of 1,346 cases of prostate cancer were identified. This analysis showed that, compared with the shortest men in the study, the risk for prostate cancer was approximately 20 percent higher among the tallest men. The tallest men also had a two-fold higher risk of advanced disease. "Our results help to clarify previous inconsistencies in the literature, and offer some insights into the etiology of prostate cancer," says Dr. Margaret Wright, one of the lead inves-

tigators from NCI's Division of Cancer Epidemiology and Genetics. "The possibility that height may be associated with prostate cancer risk should be studied further to evaluate whether taller men are particularly susceptible to advanced disease, but not early cancer."

Ductal Lavage May Not Detect Breast Cancer

Ductal lavage, a method for collecting cells from breast milk ducts, was thought to have potential as a screening tool for breast cancer after a previous study showed that milk ducts may contain diseased cells. But a study in the October 20 *Journal of the National Cancer Institute* shows that the method may not be sensitive enough for effective breast cancer screening. The research was sponsored by Cytoc Corporation, the Bluhm Family Program for Breast Cancer Prevention and Early Detection, and NCI.

In this pilot study, researchers performed ductal lavage on 44 breasts from 39 women prior to mastectomy. Thirty-two of the women already had been diagnosed with breast cancer, but seven had not yet been diagnosed and were undergoing mastectomy for prophylactic reasons. Analysis of the cells from ductal lavage showed poor agreement, in terms of cancer detection, when compared with the results of microscopic examination of breast tissue. Cancer cells were detected with the ductal lavage screen in only about half of the cases.

The researchers speculate that this may be because ducts that produced fluid were not proximal to the site of cancer, because ducts that contained cancer failed to yield fluid, or because the cancerous ducts that yielded fluid showed benign or mildly atypical cells. "Although further studies are warranted in women with early lesions," the authors write, "our results and those

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Community Update

Film on Childhood Cancer Has Big Ambitions

Watching Jen, a bright-eyed 7-year-old with chemo-induced thinning hair, her face reddened from tears, lying on her side as a doctor prepares to perform a spinal tap, the agony of her anticipation is wrenching. She knows all too well what is coming. As she recounted in the hallway on her way to the procedure, she has already had eight spinal taps since her leukemia treatment began.

The scene takes up just a few minutes of the approximately 500 hours of footage that two Dayton, Ohio-based filmmakers, Julia Reichert and Steven Bognar, are turning into a 6-hour documentary titled *A Lion in the House*, which follows 5 children with cancer and their families over 6 years. A 30-minute segment of the film was shown on the NIH campus last week as part of a lecture series sponsored by NCI's Center to Reduce Cancer Health Disparities (CRCHD). A wide-ranging documentary, *A Lion in the House* offers a first-hand glimpse at the barriers and difficulties faced by cancer patients who are poor or from underserved communities. Tim, a 15-year-old African American being treated for Hodgkin's lymphoma, for example, can't maintain his weight. It's not that the treatment isn't going well: He lives in a small apartment with his mother (who was forced to go on welfare after Tim became sick), his aunt, and three other children. There just isn't enough food to go around.

Although *A Lion in the House* isn't scheduled to be shown nationwide

on PBS-TV until early 2006, the experience of making the film led Ms. Reichert and Mr. Bognar to an important realization. "We didn't want to work on a film for 8 years and have it shown on TV only once," Ms. Reichert told the NIH audience. "That kept pushing us toward outreach."

That awareness led the filmmakers to secure funding from the Centers for Disease Control and Prevention and some non-profit groups, including the Lance Armstrong Foundation and the Rockefeller Foundation, to pursue using the film to raise awareness among the public and medical professionals about issues such as cancer care disparities, survivorship, and end-of-life care.

The documentary is important, said CRCHD Director Dr. Harold P. Freeman during the screening, because it provides a snapshot of the entire cancer experience. "It offers the opportunity to show the broader picture—a child's ordeal with cancer, a poor family—a universal story," he said. "Because if it occurs for these children, it occurs for everybody."

While much of the education and outreach is still in the planning stages, shorter clips from the documen-

tary—shot primarily at the Cincinnati Children's Hospital Medical Center—already are being pulled together into "educational modules" that speak to the filmmakers' goals to call national attention to health disparities, improve care, and strengthen support systems for childhood cancer patients and their families, especially those with socioeconomic challenges. Some modules have already been piloted with medical students and staff at Wright State University School of Medicine, where Ms. Reichert serves as a professor in both the Community Health and Theatre Arts departments.

Working with the Independent Television Service, which produces independent programming for PBS and was the initial source of funding for the film, Ms. Reichert and Mr. Bognar have begun to work more closely with the cancer community, bringing on partners such as the American Cancer Society and engaging in discussions with groups including the Oncology Nursing Society about developing continuing education materials based on the film. According to Dr. Emmanuel Taylor, of CRCHD's

Health Policy Branch, NCI likely will be engaged in activities such as offering technical assistance on developing and evaluating the educational modules, including those for patient navigators, oncology doctors and nurses, new cancer patients and their families, and policy makers.

The filmmakers have high hopes for this project. "This is the hardest film we've ever made," Mr. Bognar said. "But I think it will be the most rewarding film we'll ever make." ♦



A Conversation with Julia Reichert and Steven Bognar

Your stepdaughter, Julia's daughter, is a cancer survivor. How did that shape your approach to the film?

Steve: That experience really laid the groundwork for our ability to make this documentary. If we had not had our own connection to cancer, I don't think we would have understood the need to tell these stories or even felt we had the right to tell them.



What stands out to you most from this experience?

Julia: I found that the doctors and nurses were fabulous. In our culture, we complain a lot: "The doctors don't give us enough time. They don't listen to us. They're not very compassionate."

They were so compassionate and would really sit and listen. And the nurses were like angels. The way they could handle problems, calmly, and really help the families and kids get through very difficult things and come back with a smile, come back with a joke, and be positive—that was very profound for me.

Cancer's hard on everybody, but also it was surprising to see how much harder it is when economic circumstances are difficult. I never saw anybody getting less care because they were poor. It's what happens outside: the school system, the nutrition at home, transportation. That was a real wake-up call for me.

Is there one area in which you see the opportunity to have the biggest impact?

Julia: There are three areas. One is survivorship and to make people aware of the late effects. I think that can help save lives. And we really want to raise awareness about disparities, helping to support efforts around the country to get resources to the patients who need them the most. And the third thing really is getting better quality care for children facing the end of life.

What role do you hope the cancer community can play in this?

Steve: In many ways it's not that they are going to help us, but we hope that this project can help them. We hope to bring the lay public into a world that they don't get to see very often. Thanks to the generosity and courage of the families in the film, the public is hopefully going to have a very sensitive, compelling experience. And we hope that will create a lot of energy and emotion that will spur people to action. We realize this is just a movie; it's not going to cure cancer. But it could help bring more services and raise awareness about the issues that affect cancer patients, families, and caregivers. ♦

Funding Opportunities

Symptom Clusters in Cancer and Immune Disorders

PA-05-004

Application Receipt Dates: Jan. 2, May 1, and Sept. 1, 2005; Jan. 2, May 1, and Sept. 1, 2006; Jan. 2, May 1, and Sept. 1, 2007; Jan. 2, 2008

The ultimate goal of this program announcement is to build a body of science in symptom cluster identification and intervention in cancer and in immune disorders (acquired or autoimmune). This announcement invites applications to (a) identify and assess biobehavioral characteristics of symptom clusters, or (b) design and test interventions that lead to clear outcomes. A rationale for the choice of a symptom cluster is needed, not just co-occurrence of two or more symptoms. Studies at any point in the disease trajectory, or during the survivorship period, are encouraged. Eligible organizations include for-profit and not-for-profit, public or private organizations, units of state and local governments, eligible agencies of the federal government, domestic or foreign institutions/organizations, faith-based or community-based organizations, and Native American tribal organizations.

This funding opportunity will use the R01 and R21 award mechanism(s).

For more information see http://cric.nci.nih.gov/4abst.cfm?initiativeparfa_id=2340

Inquiries: Dr. Ann O'Mara—omaraa@mail.nih.gov

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The Effect of Racial and Ethnic Discrimination/Bias on Healthcare Delivery

PA-05-006

Application Receipt Dates: Jan. 10, May 10, and Sept. 10, 2005; Jan. 10, May 10, and Sept. 10, 2006; Jan. 10, May 10, and Sept. 10, 2007

The purposes of this Program Announcement (PA) are: (1) To improve the measurement of racial/ethnic discrimination in healthcare delivery systems through improved instrumentation, data collection, and statistical/analytical techniques; (2) to enhance understanding of the influence of racial/ethnic discrimination in healthcare delivery and its association with disparities in disease incidence, treatment, and outcomes among disadvantaged racial/ethnic minority groups; and (3) to reduce the prevalence of racial/ethnic health disparities through the development of interventions to reduce the influence of racial/ethnic discrimination on healthcare delivery systems in the United States.

This Program Announcement will use the Project Grant (R01), the Exploratory/Development (R21) and the Small Grant (R03) award mechanisms.

For more information see http://cricri.nih.gov/4abst.cfm?initiativeparfa_id=2360

Inquiries: Dr. Vickie L. Shavers—shaversv@mail.nih.gov ♦



Featured Clinical Trial

Treatment to Slow Tumor Progression in Children with Neurofibromatosis Type 1

Name of the Trial

Phase II Randomized Study of Tipifarnib in Pediatric Patients With Neurofibromatosis Type I and Progressive Plexiform Neurofibromas (NCI-01-C-0222G). See the protocol summary at <http://cancer.gov/clinicaltrials/NCI-01-C-0222G>

Principal Investigator

Dr. Brigitte Widemann, NCI Center for Cancer Research

Why is This Trial Important?

Neurofibromatosis Type 1 (NF1), one of the most common genetic disorders, affects 1 in every 3,500 individuals. NF1 is caused by changes in the gene that contains the instructions for making a protein called neurofibromin, which helps control tissue growth.

People with NF1 have an increased risk of developing benign and malignant tumors of the nervous system. About 25 percent of individuals with NF1 develop plexiform neurofibromas (PNs), benign tumors arising from the outer layer of nerves. Although benign, PNs involve multiple nerve branches and can grow to a very large size, causing pain, functional impairment, and even life-threatening complications.

In this phase II trial, PN tumor growth rates will be measured during treatment with the drug tipifarnib and a placebo. Tipifarnib belongs to a family of molecularly targeted agents

called farnesyltransferase inhibitors, which can inactivate certain proteins that promote tumor growth. The researchers hope that tipifarnib will delay or interrupt PN growth.

“We decided to focus on PNs because there is no effective drug treatment for these tumors,” said Dr. Widemann. “Complete surgical resection is the only standard treatment, but it isn’t

a viable option for most patients because PNs tend to be diffuse, invasive, and intertwined with vital structures like major blood vessels or nerves. It’s virtually impossible to remove the PN completely.”



Principal Investigator
Dr. Brigitte Widemann

Who Can Join This Trial?

Researchers seek to enroll 60 patients aged 3 to 25 who have been diagnosed with NF1 and have measurable progressive PNs. See the complete list of eligibility criteria at <http://cancer.gov/clinicaltrials/NCI-01-C-0222G>.

Where Is This Trial Taking Place?

Multiple study sites across the United States are enrolling patients. See the complete list at <http://cancer.gov/clinicaltrials/NCI-01-C-0222G>.

Whom to Contact

See the list of study contacts at <http://cancer.gov/clinicaltrials/NCI-01-C-0222G> or call NCI’s Cancer Information Service at 1-800-4-CANCER (1-800-422-6237). 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

NCI Sponsors Symposium on TV Portrayal of Cancer Research

On Nov. 9 from 9:00 a.m. to 12:00 p.m., NCI will sponsor a symposium describing how NCI has worked over the past 13 months through the Hollywood, Health & Society (HH&S) program to help TV writers and producers portray cancer research more accurately. The event will be held at the Natcher Conference Center on the NIH campus in Bethesda, Md., and feature in-depth panel presentations and discussions about NCI's outreach initiative to the entertainment industry. Funded by NCI and the Centers for Disease Control and Prevention, HH&S is a program at the Norman Lear Center at the University of Southern California (USC) Annenberg School for Communication that provides entertainment industry professionals with accurate and timely information for health storylines. The symposium will focus on recent efforts, outcomes, and plans for the future, and what attendees can do to help NCI get proactive messages and ideas placed in entertainment programming.

Obesity and Cancer Discussed with Latin American Journalists

Last week in Panama City, Panama, the NIH Fogarty International Center (FIC) and the Washington, D.C.-based International Center for Journalists sponsored a training event titled, "Public Health and Medical Reporting: A Workshop for Latin American Journalists." Twenty-five health reporters from Central and South America participated in scientific lectures and sessions on reporting on HIV/AIDS, obesity and cancer, mental health, and environmental health.

NCI's Dr. Rachel Ballard-Barbash discussed the epidemiologic basis of associations between energy balance and cancer, and described surveillance and prevalence of obesity and cancer in Latin America. Dr. Nomeli Nunez discussed the biological basis of energy balance and how mouse models are informing obesity and cancer research. Science writing was taught by journalists from the U.S. and Latin America, and by Kelly Blake of NCI and Robert Logan of the National Library of Medicine.

Dr. Susan Gottesman Receives Inaugural Alan Rabson Award

Dr. Susan Gottesman of CCR's Laboratory of Molecular Biology is the first recipient of the newly created Alan Rabson Award for NCI Intramural Cancer Research. The award was initiated in recognition of Dr. Rabson's dedication and enthusiasm for NCI and its intramural program during his 50-year tenure at NCI. The award recipient was selected by Dr. Rabson with assistance from the Intramural Advisory Board. Dr. Gottesman will present the first Rabson Award Lecture at the NCI Combined Intramural Retreat on Jan. 12–13, 2005. She will receive the award following her lecture.

Dr. Elise Kohn Honored as Clinical Teacher of Merit

Dr. Elise Kohn of CCR's Laboratory of Pathology, a top finalist for the 2004 Distinguished Clinical Teacher's Award, has been honored as a Clinical Teacher of Merit for her efforts in training fellows at NIH. The NIH Distinguished Clinical Teacher's Award is the highest honor bestowed collectively on an NIH senior clinician, staff clinician, or tenure-track/tenured clinical investigator by the NIH clinical fellows. ♦

(Research Highlights continued from page 3)
of others indicate that ductal lavage should not be recommended to high-risk women as a technique to detect cancer earlier than imaging modalities."

Stroke After Breast Cancer Linked to Chemotherapy, But Not to Tamoxifen

In two recent clinical trials, a disproportionate number of strokes occurred among women who received tamoxifen, a nonsteroidal hormone used to treat and prevent breast cancer, raising concerns that the hormone may be to blame. To examine this possibility, researchers from Kaiser Permanente Southern California and the Keck School of Medicine at the University of Southern California conducted a case-control study, funded by NCI, of first stroke after breast cancer. Study results appeared in the October 20 *Journal of the National Cancer Institute*.

All of the women in the study had been diagnosed with a first invasive breast cancer at Kaiser Permanente Southern California, and had a stroke some time later. The researchers matched medical records of 353 control patients to the records of 179 case patients, and also conducted interviews to determine the women's breast cancer treatment history, medical and reproductive history, and smoking status.

Analysis showed that neither tamoxifen nor radiation therapy was associated with the women's strokes, but that chemotherapy was. They give several possible explanations for the increased risk of stroke, including blood clots resulting from occult malignancies in women with aggressive cancer who are more likely to receive chemotherapy, as well as atherosclerotic disease resulting from the chemotherapeutic agents. "Although this study cannot generate specific recommendations," the authors wrote, "it seems logical that women with a history of chemotherapy may benefit from approaches to reduce stroke risk." ♦



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
Nov. 8-9	NCI Board of Scientific Advisors

Selected Upcoming Meetings of Interest

Date	Meeting	NCI Speakers
Oct. 29	2nd Annual Cancer Center Symposium at Baylor College of Medicine	Dr. Andrew C. von Eschenbach, Director
Nov. 4-6	Emerging Topics in Breast Cancer and the Environment Research	Dr. Robert Croyle, Director, Division of Cancer Control and Population Sciences
Nov. 6-10	12th p53 International Workshop	Dr. J. Carl Barrett, Director, Center for Cancer Research
Nov. 6-10	132nd Annual Meeting of the American Public Health Association	Dr. Harold P. Freeman, Director, Center to Reduce Cancer Health Disparities
Nov. 16	Reflections on the Causes of Health Disparities: Poverty, Culture, and Social Injustice	Dr. Harold P. Freeman, Director, Center to Reduce Cancer Health Disparities
Nov. 17-19	UICC World Conference for Cancer Organisations	Dr. Andrew C. von Eschenbach, Director; Dr. Mark Clanton, Deputy Director, Cancer Care Delivery Systems

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>.

The *NCI Cancer Bulletin* is produced by the National Cancer Institute (NCI). NCI, which was established in 1937, leads the national effort to eliminate the suffering and death due to cancer. Through basic, clinical, and population-based biomedical research and training, NCI conducts and supports research that will lead to a future in which we can identify the environmental and genetic causes of cancer, 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://www.cancer.gov>.

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