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Eliminating the Suffering and Death Due to Cancer

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Switching Adjuvant Breast Cancer Therapy from Tamoxifen to Exemestane Proves Beneficial

A new study has found a strong benefit of an aromatase inhibitor (AI) as adjuvant therapy in postmenopausal breast cancer patients. Published last week in the *New England Journal of Medicine*, the study found that switching adjuvant therapy after two to three years from tamoxifen to the AI exemestane significantly improved disease-free survival at approximately two and a half years' follow-up. Conducted under the auspices of the Intergroup Exemestane Study (IES), the results were made available at the recommendation of the study's data and safety monitoring board following the second interim data analysis review.

More than 4,700 patients—all of whom had primary, estrogen-receptor-positive breast cancer—were enrolled in the double-blind, randomized trial, with slightly less than half assigned to undergo the midstream switch in adjuvant therapy from tamoxifen to exemestane. After a median follow-up of nearly 31 months, there were 266 first events (defined as breast cancer recurrence, contralateral breast cancer, or death) in the tamoxifen group and 183 in the exemestane group, leading to a 32 percent relative reduction in the risk of an event and an overall benefit

(continued on page 2)

Director's Update

Annual Cancer Center Directors' Retreat

On Monday, March 8, National Cancer Institute (NCI) convened a cancer centers directors' retreat in which 59 of 61 NCI-designated cancer centers participated. The purpose of the retreat was to discuss future opportunities and challenges and the critically important role that the cancer centers play in the National Cancer Program. New technology initiatives and ongoing implementation of the report of the NCAB P30/P50 Ad Hoc Working Group (chaired by Drs. Joe Simone and Art Nienhuis) were central themes. The retreat included the cancer center directors in strategic discussions to facilitate the discovery, development, delivery continuum.

In the late 1960s, 12 cancer centers were NCI-funded. With the enactment of the National Cancer Act in

TYPES OF NCI-DESIGNATED CANCER CENTERS

Comprehensive Cancer Centers: Conduct programs in all three areas of research—basic, clinical, and prevention and control research—as well as community outreach and education programs.

Clinical Cancer Centers: Conduct programs in clinical research and may also have programs in other research areas.

Cancer Centers (formerly Basic Science Cancer Centers): Focus on basic or cancer control research but do not have clinical oncology programs.

(continued on page 2)

(Breast Cancer continued from page 1)

of disease-free survival of 4.7 percent. Because these are early release results, the authors explained, it is too soon to expect a statistically significant difference in overall survival. Patients in the exemestane group also had a reduced risk of contralateral breast cancer, endometrial cancer, and other primary cancers.

"These findings are consistent with results from two other large, adjuvant trials testing AIs, some smaller adjuvant trials, and trials comparing AIs to tamoxifen for metastatic disease," said Dr. Jeff Abrams, associate chief of medicine in the NCI Cancer Therapy Evaluation Program. The extent and early appearance of the benefit "is impressive," he added.

The two large trials Dr. Abrams referred to had different designs than the IES. In the ATAC trial, published in *The Lancet* in June 2002, there was a statistically significant improvement in disease-free survival for postmenopausal women who received adjuvant monotherapy with the AI anastrozole compared to tamoxifen. The Food and Drug Administration has since approved anastrozole for monotherapy in this patient population. In a study published last November in the *New England Journal of Medicine*, use of the AI letrozole in postmenopausal women who successfully underwent five years of monotherapy with tamoxifen yielded a statistically significant reduction in breast-cancer-related events compared to placebo.

As a result of these trials, the most effective role of AIs and tamoxifen in adjuvant therapy in postmenopausal women has been hotly debated. An American Society of Clinical Oncology working group has recommended five years of monotherapy with tamoxifen as the preferred adjuvant therapy. But the results of the IES study, the trial's authors argued, challenge "the concept of five years of monotherapy with endocrine agents after the surgical treatment of primary breast cancer."

Data are still lacking for AIs on overall survival, however, and there are unanswered questions about long-term toxicity, Dr. Abrams explained, including whether long-term estrogen deprivation (AIs work by decreasing the blood levels of estrogen) causes other symptoms.

Despite these lingering questions, AIs definitely have an important role in the treatment of breast cancer, he added. "AIs are a good choice for women with hormone-sensitive breast cancer, either as first-line treatment or as a switch-over after some period of time," he said. "Whether switching or going with an AI from the start is best will have to be decided by future research." A number of such studies are under way, including a European trial testing both letrozole and tamoxifen in monotherapy and midstream-switching regimens.

"Future trial results should help us resolve the question of whether AIs should totally replace tamoxifen or whether they should both be used in sequence," Dr. Abrams said. "And with more time, the ATAC trial will provide information on AI long-term side effects." ◆

(Director's Update continued from page 1)

1971, the Cancer Centers Program formally established and funded 15 additional cancer centers. "The National Cancer Institute should closely study the use of cancer research centers," the legislation stated, "for it is here that many impressive research findings are being and will be uncovered. It is also here that the effectiveness of these findings can be proved." In fact, our cancer centers have become extraordinary gravitational forces attracting intellectual capital, financial resources, and programmatic opportunities.

A significant portion of NCI's funding portfolio is vested in these cancer centers. To their great credit, the centers have leveraged this investment with contributions from academic institutions and private philanthropy to build programs in cancer research, nanotechnology, prevention, care, and education that receive worldwide acclaim. How are we then going to optimally utilize this enormous resource? By greater integration among cancer centers and greater coordination with NCI and health delivery systems. To assist in this integration and coordination among the cancer centers, a significant outcome of the retreat was enthusiastic agreement to immediately begin to adopt the cancer Biomedical Informatics Grid (caBIG) for clinical research. caBIG can immediately offer the cancer centers Web-based clinical trials protocol sharing, clinical trials data capture tools, and participant registry based on common vocabularies and data elements. Additionally, retreat participants discussed how to manage planned technology development to maximize capabilities across the cancer community. NCI continues to foster more integration among the intramural and extramural clinical research enterprises and state and regional cancer programs. We need to encourage geographic associations of groups that will increase their impact by affiliation—particularly in underserved areas.

Guidelines for the cancer centers are undergoing revision to simplify and provide for a more streamlined review process. Other priority areas:

- Allow salary support for clinical researchers who actively engage in translational research
- Provide more appropriate support

(continued on page 6)

Cancer Research Highlights

Symposium Celebrates 30 Years of U.S.-Japan Cooperation on Cancer Research

The two keynote speakers at the March 1-2 Molecular Cancer Therapeutics Symposium, sponsored by NCI and the Japan Society for the Promotion of Science, had different topics but similar messages: Cancer researchers must reconsider old assumptions. The symposium was held to celebrate 30 years of cooperation between the United States and Japan in cancer research and included presentations from Japanese and U.S. researchers on a wide range of research related to molecular therapeutics.

Mounds of genomics data on the 110 identified human cancers will be collected and analyzed in the coming years, said Dr. Robert Weinberg, of the Whitehead Institute and Massachusetts Institute of Technology, in his address. "This provokes the question of whether…any fundamental laws [will] be developed that will help us understand all of these various kinds of human cancer," he said. An essential part of developing such laws, he added, is to look more closely at the tumor microenvironment. For example, mounting evidence suggests that stromal cells play an important role in tumor pathogenesis. A number of studies conducted in the United States and Japan have shown how, in mice, stromal fibroblasts interact with cancer cells to significantly accelerate tumor growth and cancer progression. Dr. Weinberg also cited laboratory studies that have pointed to other important elements in the microenvironment, such as specific transcription factors that may help cancer cells acquire attributes that help to promote their proliferation and metastasis.

In terms of future research, such elements, he said, "take the focus away from disrupting autonomous circuits within cancer cells to an additional consideration of how the cancer cells…are recruiting and subverting normal cells [around them] in order to accelerate their own agenda of tumorigenesis."

In her keynote speech, Dr. Julie Buring, of Brigham and Women's Hospital in Boston, discussed some of the controversy surrounding instances where observational studies have appeared to conflict with randomized clinical trials that addressed the same issue. Although such inconsistencies are to be expected, she said, divergent findings can also be a symptom of trials that aren't necessarily attempting to answer the same question.

Observational and randomized trials that looked at the effect of beta-carotene on cancer risk, for example, yielded discrepant findings. The observational studies found a benefit, while randomized trials did not, and in some cases even revealed adverse effects. But the design of the randomized trials, Dr. Buring noted, may very well have been the telling factor. The observational studies, for instance, included people who had a long-term diet high in fruits and vegetables, whereas the randomized trials involved giving high-dose beta-carotene supplements to participants.

The discrepant findings could have meant that the randomized trials were doing what they are supposed to do: confirm or disprove an observational finding. "But maybe [the randomized trial investigators] made the wrong leap," she said. Perhaps the observed benefit in fruits and vegetables came from more than just beta-carotene, she added, and the synergy of the nutrients from the fruits and vegetables was lost.

Looking forward, Dr. Buring said, investigators must thoroughly consider factors like patient characteristics, agent characteristics, and underlying biology up front when designing clinical trials on the basis of observational study results.

Breast Cancer Sister Study Going Nationwide

The National Institute of Environmental Health Sciences (NIEHS) is rolling out a nationwide research effort to uncover possible environmental and genetic causes of breast cancer. The NIEHS "Sister Study," now running in four states—Arizona, Florida, Missouri, and Rhode Island—is recruiting the sisters of women diagnosed with breast cancer to study shared cancer risks. Recruitment throughout the United States will begin later this year, with an eventual goal of 50,000 volunteers.

NIEHS researchers are enrolling women, aged 35 to 74, who have not had breast cancer themselves but have a sister diagnosed with the disease. During the Sister Study—the only long-term study of its kind—participants will be followed for 10 or more years in hopes of finding why sisters are more likely to develop breast cancer. Scientists speculate that this higher risk could be caused by shared genes, a common diet, a common environment in youth, or even common gene-environment interactions.

(continued on page 4)

(Cancer Highlights continued from page 3)

There will also be increased efforts to enroll minority women as they, too, are known to be at greater risk for developing breast cancer. For example, African American women aged 30-59 have the highest breast cancer death rate. Dr. Dale Sandler, NIEHS Epidemiology Branch chief and principal study investigator, said, "We hope that a long-term study with many racially and ethnically diverse women will yield new results that will benefit future generations."

For more information about the Sister Study or to enroll, go to http://www.sisterstudy.org or call toll free 1-877-474-7837.

Freezing Ovarian Tissue for Later Transplantation May Restore Fertility

Researchers in New York reported an intriguing finding last week that may offer hope for women who become infertile as a result of cancer treatments like chemotherapy or radiotherapy. In a brief paper published in the March 13 issue of *The Lancet*, a team from the NewYork-Presbyterian Hospital/Weill Cornell Medical Center reported on a case in which they cryopreserved ovarian tissue from a 30-year-old woman with breast cancer before she underwent chemotherapy. Six years later, after the woman had undergone successful treatment for cancer, the tissue was thawed and transplanted beneath the skin of her abdomen. The patient's ovarian function returned after three months.

Over the next eight months, the team was able to retrieve eight viable oocytes for use in in-vitro fertilization with her husband's sperm. From this, one four-cell embryo was produced and transferred to the patient's uterus. She did not, however, become pregnant. In a news release, the lead

(continued on page 6)

Special Report

Regional Symposia Develop Pathways for Applying Nanotechnology to Cancer Research

Earlier this month, cancer biologists, engineers, chemists, and clinicians convened at two cancer nanotechology symposia to develop a vision for integrating nanotechnology into cancer research. Several leading investigators from the public and private sectors participated in these meetings, which were held at the Salk Institute for Biological Studies in La Jolla, Calif., and the Fred Hutchinson Cancer Research Center (FHCRC) in Seattle, Wash. In addition to promoting new types of multidisciplinary teamwork, these symposia allowed NCI to obtain input on its Cancer Nanotechnology Plan (CNP), a strategic approach for developing new nanotechnology tools to accelerate clinical and research advances. Complete agendas for both meetings are available from NCI's Office of Technology and Industrial Relations Web site.

At these symposia, Dr. Mauro Ferrari, professor of biomedical engineering and internal medicine at Ohio State University, presented seven key strategic challenges to be addressed in the CNP: fundamental science, prevention and control, early detection, imaging diagnostics, multifunctional therapeutics, nanosystems for quality of life, and training. He also described NCI's plan for a laboratory focusing on biological characterization of nanoparticles. This laboratory will catalyze a confluence of nanotechnology and cancer research by developing protocols for validation, comparison, and objective evaluation of nanodevices for cancer and by creating a public database for research dissemination.

Several presentations at both meetings elaborated on CNP's seven strategic challenges. At the La Jolla symposium, the keynote speakers highlighted the need for multifunctional nanoparticles. Dr. Leroy Hood, president of the Institute for Systems Biology, spoke about how a diverse panel of interventions is required to address the multiple malfunctions that lead to cancer. The second keynote speaker, Dr. James R. Baker, Jr., director of the Center for Biologic Nanotechnology at the University of Michigan Medical School, described how a single type of nanoparticle can be engineered to have diverse capabilities for detecting cancer, delivering therapies, and monitoring the efficacy of treatments.

In Seattle, the keynote talks focused on the need to develop nanodevices to enable cancer imaging. Dr. Douglas Hanahan, professor in the Department of Biochemistry and Biophysics at the University of California, San Francisco, described the use of imaging techniques in mouse models to identify molecular targets and to monitor the ability of drugs to influence these targets. Dr. Samuel Wickline, professor of medicine,

(continued on page 5)

(Special Report continued from page 4)

physics, and biomedical engineering at Washington University in St. Louis, discussed the functionality of multivalent lipid-based nanoparticles to target angiogenesis for imaging and therapy.

At the conclusion of the Seattle symposium, Dr. Ferrari and FHCRC Director Dr. Lee Hartwell led a roundtable discussion that identified several scientific priorities that should be considered within the framework of the CNP, including monitoring modifications of biological response during therapy to help shorten the pathway to regulatory approval, developing new models for studying cancer, detecting cancer earlier in its natural history through imaging or serum-based methods, providing new approaches for contrasting tumor tissue to normal tissue at important stages of tumor development, and accelerating the detection of therapeutic efficacy.

Building on the success of the La Jolla and Seattle meetings, NCI plans to convene additional cancer nanotechnology symposia over the next several months. In addition to promoting new cross-disciplinary dialogue, these symposia will help engage the extramural scientific community in NCI's planning efforts to ultimately bring a new nanotechnology toolkit to the nation's cancer researchers. ◆

Be sure to check the *NCI Cancer Bulletin* next week for information on NCI's activities at the 2004 AACR annual meeting!

A Conversation with Dr. Mauro Ferrari

Dr. Mauro Ferrari, professor of biomedical engineering and internal medicine, Ohio State University, is a leader in the field of biomedical nanotechnology. Dr. Ferrari is currently working as an expert consultant at NCI's Office of Technology and Industrial Relations to help develop a strategy for incorporating nanotechnology tools into cancer research.

How would you describe the relevance of nanotechnology to cancer researchers?

Nanotechnology provides a new toolkit for investigating critical questions in cancer research. For example, nanoparticles are being used as powerful contrast agents that improve the ability of imaging technologies to detect molecular changes in tumors.

How did you become interested in applying nanotechnology specifically to cancer?

I became interested in applying nanotechnology to cancer because nanodevices are extremely well suited to tracking biological changes associated with cancer. Nanotechnology builds functional entities at the atomic and molecular scales; therefore, it can track cancer progression at the level of the molecule, the cell, and/or the tissue. These characteristics allow nanotechnology to "beat cancer at its own game" by providing multiple opportunities for interfering with cancer growth before the disease can evolve into a life-threatening condition.

What is the most promising near-term application of nanotechnology to cancer?

Nanotechnology has several promising near-term applications in cancer prevention, early detection, imaging, and smart therapeutics. One of the areas that I am particularly optimistic about is the possibility of using nanoparticles to monitor drug response. Nanoparticles can help monitor subtle alterations in tumor biology that track cancer progression and can help establish valid markers of clinical benefit for cancer therapies. In addition, nanotechnology-based diagnostics could significantly advance the early detection of cancer. ◆

(Director's Update continued from page 2)

for critical underfunded activities such as tissue banks, data management, and regulatory compliance

- Continue to study the value of site visits
- Recognize collaborations with SPOREs, cooperative groups, and networks
- Develop economies of scale by centralizing Institutional Review Boards
- Create shared core resources

The chance to share ideas among NCI leadership and the cancer center directors provided a valuable opportunity to synergize and integrate this important resource of the National Cancer Program; I plan to repeat it annually. I also reported on the retreat at the joint Board of Scientific Advisors/Board of Scientific Counselors meeting yesterday. For additional information on the cancer centers and a list of the directors, see http://www3.cancer.gov/cancercenters/ ◆

Dr. Andrew von Eschenbach
Director, National Cancer Institute

(Cancer Highlights continued from page 4)

investigator, Dr. Kutluk Oktay, said the research "represents a potentially significant reproductive advancement in two respects: first, women can preserve their fertility by freezing their ovarian tissue, and second, pregnancy may be possible even after the tissue remains frozen for a long time."

In an editorial that accompanied the study, Prof. Johan Smitz from the Centre for Reproductive Medicine, University Hospital of the Vrije Universiteit Brussels, Belgium, offered words of caution. Because of many unknowns related to cryopreservation and screening tissue for transplant, he wrote, this option "should still be presented as experimental to patients." ◆

Featured Clinical Trial

Ovarian Cancer Prevention and Early Detection Study

Name of the Trial

Prospective Screening Study of Risk-Reducing Salpingo-oophorectomy and Longitudinal CA-125 Screening in Participants at Increased Genetic Risk of Ovarian Cancer (GOG-0199). See the protocol summary at http://cancer.gov/clinicaltrials/GOG-0199.

Principal Investigator

Dr. Mark H. Greene of NCI's Clinical Genetics Branch, DCEG

Dr. Mark H. Greene
Principal Investigator

Why Is This Trial Important?

Ovarian cancer is the fifth leading cause of cancer death among U.S. women. The lifetime risk of ovarian cancer in the general population is about 1.4 percent by age 70. But, women with mutations in the *BRCA1* or *BRCA2* genes face cumulative risks of 16-40 percent. For these women, preventive removal of the ovaries and fallopian tubes does lower the risk of ovarian and breast cancer, but the magnitude of these reductions is still uncertain.

Neither the impact of preventive surgery on quality of life, nor the consequences of premature menopause, have been carefully studied in women at high risk. At present, there is no proven screening strategy shown to decrease mortality due to ovarian cancer.

This national trial, conducted with the Gynecologic Oncology Group and the Cancer Genetics Network, will more precisely quantify the extent of cancer risk reduction after preventive surgery, assess both quality of life and incidence of non-cancer diseases related to premature menopause, and evaluate a novel approach to ovarian cancer screening based on quantitative assessment of changes in CA-125 over time.

"About 30 percent of women with ovarian cancer survive longer than five years," said Dr. Greene. "But, if diagnosed and treated before the cancer spreads beyond the ovaries, 90-95 percent of patients live longer than five years. Developing effective prevention and early detection methods is crucial in fighting this disease, particularly for women who are at much greater risk."

Who Can Join This Trial?

The trial seeks to enroll 1,800 women aged 30 or over who are at increased risk of ovarian cancer, either because they or a close relative have a BRCA1 or BRCA2 mutation or because of a strong family history of ovarian and/or breast cancer. See the full list of eligibility criteria at http://cancer.gov/clinicaltrials/GOG-0199.

Where Is This Trial Taking Place?

Multiple study sites are enrolling patients in this trial. See the list of sites at http://cancer.gov/clinicaltrials/GOG-0199.

Who to Contact

Call the Gynecologic Oncology Group at 1-800-225-3053 to learn which sites have opened this trial or view the study Web site at http://ovariancancer.GOG199.cancer.gov/. ◆

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

Notes

NCI Meetings on Real-Time Health Research Using e-Technology

The Health Promotion Research Branch of NCI has sponsored two meetings with nationally recognized researchers to discuss the topic of real-time health research using e-technology. The first conference, entitled "The Science of Real-Time Data Capture: Self-Reports in Health Research," was held Sept. 5-7, 2003, and brought together researchers from a variety of disciplines to discuss the theory, methodology, and application of real-time research in self-reported health. A summary, meeting presentations, and speaker biographies are highlighted at http://dccps.cancer.gov/hprb/real-time/index.html. A follow-up working group meeting, entitled "Capturing Physical Activity and Diet in Real-Time," was held Jan. 22 to focus specifically on real-time research with these two key health behaviors, which are central to cancer prevention and control.

Information garnered from these meetings has been used in the development of the NIH Roadmap initiatives "Meetings and Networks for Methodological Development in Interdisciplinary Research" and "Dynamic Assessment of Patient-Reported Chronic Disease Outcomes." In addition, ideas and recommendations from the meetings are informing the development of the NCI energy balance initiatives. For further information about these meeting and activities, visit the above Web sites or contact Dr. Audie Atienza at (301) 402-8246 or atienzaa@mail.nih.gov.

NCI Sponsors Breast Cancer and the Environment Research Centers Meeting

The Epidemiology and Genetics Research Program of the Division of Cancer Control and Population Sciences (DCCPS) hosted the second research planning meeting of the Breast Cancer and the Environment Research Centers (BCERC) on Feb. 25-26 in Washington, D.C. The four centers recently were funded jointly by the National Institute of Environmental Health Sciences and NCI.

The centers and principal investigators are the Fox Chase Cancer Center, Philadelphia, Dr. Jose Russo; Michigan State University, East Lansing, Dr. Sandra Z. Haslam; the University of Cincinnati, Dr. Sue C. Heffelfinger; and the University of California, San Francisco ("Bay Area Center"), Dr. Robert A. Hiatt.

Functioning as a consortium of basic scientists, epidemiologists, research translational units, and community advocates within and across centers, BCERC will investigate mammary gland development in animals and young girls to determine vulnerability to environmental agents that may influence breast cancer development in adulthood. NCI program support, to parallel the multidisciplinary breadth of BCERC, is being provided by DCCPS and the Division of Cancer Biology.

Feigal Leaving NCI

Dr. Ellen Feigal, acting director of the

Division of Cancer Treatment and Diagnosis (DCTD), leaves NCI in April to join the Translational Genomics Research Institute in Phoenix, Ariz., as Vice President of Clinical Sciences and Deputy Scientific Director.

A medical oncologist with a background in AIDS research, Dr. Feigal joined the Cancer Therapy Evaluation Program 12 years ago. She oversaw clinical trials on lung cancer and head and neck cancers and created the NCI AIDS malignancy clinical trials program. She has continued to head the program, which directs the national AIDS and Cancer Specimen Resource and sponsors the premier annual, international meeting in this field.

Dr. Feigal became DCTD deputy director in 1997 and acting director in 2001. Under her leadership, the division has focused on revamping clinical trials and fostering public-private partnerships; enhancing and expanding the cancer imaging program; and using genomic, gene expression, and other data to develop molecularly targeted drugs.

PDQ® Clinical Trials Database Grows

NCI and the National Library of Medicine (NLM) are collaborating to expand the number of cancer clinical trials available in NCI's PDQ database. The source of the new trials is NLM's ClinicalTrials.gov database; as of March 2, almost 200 new trials have been added. ClinicalTrials.gov was created in response to the FDA Modernization Act of 1997, which requires that information about phase II and III trials evaluating treatments for serious or life-threatening illnesses that are conducted under an FDA Investigational New Drug application must be included in a single repository.

PDQ has been the source of most of the cancer clinical trials in ClinicalTrials.gov since that database's inception. However, ClinicalTrials.gov obtains trial information from other sources, including the pharmaceutical and biotech industries. This exchange of information between NCI and NLM will provide a closely matched set of cancer clinical trials on the cancer.gov and ClinicalTrials.gov Web sites. ◆

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
Jun 1-3	National Cancer Advisory Board
Jun 24-25	NCI Board of Scientific Advisors

Selected Upcoming Meetings of Interest

Date	Meeting	Speakers
Mar 17-18	Imaging in Oncology	Dr. Ellen Feigal, Acting Director, Division of Cancer Treatment and Diagnosis
Mar 19	Director's Seminar Series: Biotechnology and NCI: Partners in Bringing Patients the Next Generation of Cancer Therapy	Carl B. Feldbaum, President, Biotechnology Industry Organization
Mar 9-12	UCSF Comprehensive Cancer Center's Cancer Prevention Seminar	Dr. Peter Greenwald, Director, Division of Cancer Prevention
Mar 21-25	43rd Annual Meeting of the Society of Toxicology	Dr. J. Carl Barrett, Director, Center for Cancer Research
Mar 24-27	25th Anniversary Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine	Dr. Robert T. Croyle, Director, Division of Cancer Control and Population Sciences
Mar 24-28	9th Biennial Symposium on Minorities, the Medically Underserved & Cancer	Dr. Andrew C. von Eschenbach, Director; Dr. Anna Barker, Deputy Director, Advanced Technologies and Strategic Partnerships; Dr. Harold P. Freeman, Director, Center to Reduce Cancer Health Disparities

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.

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