NATIONAL CANCER INSTITUTE

NCI Cancer Bulletin

Eliminating the Suffering and Death Due to Cancer

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In this issue:

Researchers Discover a Unique Molecular Profile for Lung Cancer...1

Director's Update...1
- NCI's Tobacco Control Research Yields Results

Spotlight...3
- Young Adults and Flavored Cigarettes: A Bad Combination

Cancer Research Highlights...4
- Thalidomide Effective in Myeloma, But No Survival Advantage
- Biomarker Predicts Development of Precancerous Lung Disease
- Cigarette Sales See Record Drop

Funding Opportunities...5

Featured Clinical Trial...6
- Adjuvant Therapy for Stage II Colon Cancer

Notes...7
- Hartinger, Other NCI Employees Honored
- CCCT Staff Appointed
- Tucker Named Director of Human Genetics Program
- HIV/AIDS Awareness Day Observed

Cancer Center Profile...8
- Abramson Cancer Center of the University of Pennsylvania

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Researchers Discover a Unique Molecular Profile for Lung Cancer

A team of researchers has found that the expression pattern of certain microRNAs (miRNAs) may predict tumor aggressiveness in some patients with lung cancer. These findings indicate that miRNAs may represent a new class of diagnostic and prognostic tools for lung cancer, according to study results in the March 13 *Cancer Cell*.

miRNAs are small segments of RNA thought to control gene expression. Their actions could change the expression of cancer-related genes within a cell and lead to malignancies.

The researchers identified two miRNAs —*has-mir-155* and *has-let-7a-2*—that could be used as prognostic indicators in patients with adenocarcinoma of the lung. High levels of *has-mir-155* or low levels of *has-let-7a-2* were associated with poor prognosis. Specifically, overexpression of *has-mir-155* was the most significant indicator of this prognosis, independent of tumor stage. Although these miRNAs have been identified in other cancers, this is the first evidence linking *has-mir-155* to lung cancer.

A tumor with an overexpression of *has-mir-155* or reduced expression of *has-let-7a-2* would indicate the need for aggressive *(continued on page 2)*

Director's Update

Guest Update by Dr. Robert Croyle

NCI's Tobacco Control Research Yields Results

This is an exciting time in tobacco control research, particularly because of the excellent progress that has been made in smoking prevention and cessation.

Cigarette sales, for example, are at their lowest point in more than 5 decades. Our messages about the dangers of smoking and secondhand smoke exposure are being heard: more and more U.S. cities and states, not to mention many other countries, have passed laws that ban smoking in public establishments, including workplaces, restaurants, and bars.

But new challenges continue to arise. As the spotlight article in this week's *Cancer Bulletin* illustrates, tobacco products themselves are scientific moving targets. In addition to so-called flavored cigarettes, products like hookahs and bidis appear to be gaining popularity, particularly among young people. Furthermore, tobacco use is rising in the developing world as it is declining in the U.S. With such trends threatening to slow or even reverse our hard-fought gains, complacency is not an option.

NCI is committed *(continued on page 2)*

(Molecular Profile continued from page 1)
chemotherapy or radiation treatments. Other tumors that do not show high *has-mir-155* or low *has-let-7a-2* levels are less aggressive, and those patients might not require more therapy.

"This study is significant because it provides another tool for studying prognosis that is independent of tumor stage," said Dr. Curtis Harris, chief of the Laboratory of Human Carcinogenesis in NCI's Center for Cancer Research (CCR) and co-leader of this study. "Following surgery, 50 to 60 percent of patients with stage I lung cancer will develop metastatic disease within 5 years. This may indicate that there are micrometastases that have not been detected by imaging, scanning, or pathology.

"In the future, we can use miRNAs and other biological predictors to select patients who may need more aggressive treatment versus those who may not," Dr. Harris continued. "Additional studies confirming these results are the next step before incorporating miRNA analysis into routine clinical practice."

The study was a collaboration among researchers at Ohio State University Comprehensive Cancer Center, Jikei University School of Medicine in Tokyo, the National Cancer Center Research Institute in Tokyo, and NCI's CCR.

The researchers examined 104 pairs of primary tumor tissues and corresponding noncancerous lung tissues. Each tissue pair was obtained from the same patient to eliminate genetic differences between tumor and normal tissues.

Patterns of miRNA expression in each tumor and normal tissue pair were studied by microarray analysis. Five miRNAs displayed different expression levels in tumor tissues versus their controls and were selected for further study. Statistical analysis showed that patients with high *has-mir-155* or low *has-let-7a-2* had poorer survival than patients showing low *has-mir-155* or high *has-let-7a-2* expression. The difference in the prognosis of these two groups was highly statistically significant.

After examining tissue from lung cancer patients and following each patient to see how long they lived, researchers found that miRNA expression patterns were independent of tumor stage. When the scientists combined all clinical and molecular factors, they found that a high level of *has-mir-155* or a low level of *has-let-7a-2* was the most significant prognostic factor for an unfavorable patient outcome. ◆

By Lynette Grouse

(Director's Update continued from page 1)

to ensuring that we continue to see significant declines in tobacco use. As part of this effort, NCI is engaged in and funding important programs and initiatives that tackle prevention and cessation from several angles.

Among these are several successful collaborative efforts with the Centers for Disease Control and Prevention (CDC). Most recently, we worked together to launch the national smoking cessation quitline. Since its launch in November 2004, 1-800-QUIT-NOW has received 213,000 calls. There are now quitlines in 45 states, and by the end of 2006 we expect that all states will have a quitline with access through 1-800-QUIT-NOW.

NCI and CDC partnered with the Robert Wood Johnson Foundation to launch a project called Helping Young Smokers Quit. This project has gathered information on a representative sample of youth smoking-cessation programs throughout the U.S. and will evaluate whether these programs have helped youth quit smoking.

On the international front, NCI, the Fogarty International Center, and other NIH institutes are working to support the successful International Tobacco and Health Research and Capacity Building Program.

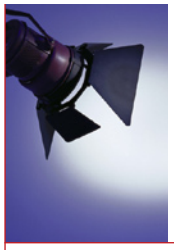
In the prevention arena, NCI is funding work by Dr. James Sargent and colleagues at Dartmouth on the link between smoking in movies and youth smoking behavior. The latest study, published last November, found that young people who watched the most smoking in movies were almost three times more likely to begin smoking than their peers who watched the least smoking.

Dr. Sargent's research has spurred meetings between state attorneys general and movie industry groups to discuss ways to curb the amount of smoking in movies.

There also is the research led by Dr. Caryn Lerman at the Transdisciplinary Tobacco Use Research Center at the University of Pennsylvania, cofunded by NCI and NIDA, which is opening new windows into smoking cessation treatment.

Dr. Lerman's group is focused on improving pharmacotherapy for smoking cessation by analyzing the neurobiological pathways involved in nicotine dependence. They have identified a key brain receptor associated with nicotine's physiologic "reward," as well as a genetic variant associated with increased ability to quit smoking. This provides new leads to developing more effective individualized smoking cessation treatments.

As these examples illustrate, NCI is pursuing a comprehensive, multidisciplinary approach to tobacco control research. I'm extremely optimistic about our efforts. We can continue to reduce tobacco use and, more importantly, reap the resulting public health benefits. ◆



Spotlight

Young Adults and Flavored Cigarettes: A Bad Combination

Tobacco counter-marketing campaigns have long focused on children and teenagers, both of whom have proven highly susceptible to the lure of cigarettes and smokeless tobacco. Several recent studies indicate that young adults—typically defined as those between the ages of 18 and 24—also are at increased risk for smoking initiation or progressing from the occasional cigarette to everyday use. That's a dangerous trend, researchers say, because young adults already have one of the highest smoking rates compared with other age groups.

It's also of concern, some tobacco control and public health researchers contend, because multiple analyses of internal tobacco industry research and other documents suggest that the industry is actively trying to nurture the increased consumption of cigarettes among young adults.

The tobacco industry has recognized the importance of making inroads among 18- to 24-year-olds at least since the 1980s, says Dr. Pamela Ling, an assistant professor of medicine at the University of California, San Francisco, who has authored several studies on smoking and young adults.

Industry focus on this group expanded considerably in the 1990s, especially in the wake of the legal restrictions against advertising and other promotions geared toward minors in the 1998 Master Settlement Agreement between U.S. states and the major tobacco firms. In fact, since that time, she explains, spending on cigarette marketing has actually increased, with a heavy concentration on 18- to 24-year-olds.

"Even though we generally think of most smokers starting before 18, more and more are starting between 18 and 25," Dr. Ling says.

In one nationwide survey done in 1999, for instance, there were two times as many 18- to 19-year-olds just beginning to smoke as there were 18-year-old established smokers.

Young adults also have the highest rates of "someday" or "occasional" smoking, notes Dr. M. Jane Lewis of the University of Medicine and Dentistry of New Jersey's School of Public Health.

"They often call themselves 'social smokers,' and don't consider themselves smokers," she says. "But we also know that young adults tend to think, 'I'm just doing this for now and I'll quit later.' They underestimate the power of nicotine and addiction."

A New Lure: Flavored Cigarettes

Young adult-focused marketing is pervasive, Dr. Ling and other researchers argue, and includes cigarette promotions in bars and clubs (including in those that are, by law, smoke free), advertising in magazines predominantly read by those 18 to 34 (such as *Cosmopolitan, Maxim*, and *Blender*), and sophisticated Web sites.

These tactics have been heavily employed for one of the most recent cigarette innovations, flavored cigarettes, which several studies have concluded target minors and young adults as the primary audience.

Currently, only R.J. Reynolds is marketing flavored cigarettes. Called Camel Exotic Blends, they include regularly available flavors, such as Twista Lime and Kauai Kolada, as well as seasonal offerings, like Winter MochaMint.

"The look and feel of the marketing around flavored cigarettes really says 'young adults,'" argues Dr. Lewis, who co-authored a paper on the marketing of flavored cigarettes last month in the *American Journal of Public Health (AJPH)*.

Typically packaged in brightly colored tins, the cigarettes have distinctive designs on them, making them ideal "badge products" that are highly visible in social situations, the *AJPH* study concluded. Magazine ads and other promotional items for Camel Exotics paint them as more hip than standard cigarettes, touting them as "sophisticated indulgences" that offer a more "pleasurable smoking experience."

Camel Exotics also has a Web site (for which users must register and verify they are 18) where visitors can find stores that sell Camel Exotics and get coupons or information on soon-to-be-released seasonal varieties or other special promotions.

On its corporate Web site, R.J. Reynolds addresses the development and marketing of its "specialty cigarettes"—which includes its flavored lines. A statement on the site notes that Camel Exotics only "represent

(continued on page 6)

Cancer Research Highlights

Thalidomide Effective in Myeloma, But No Survival Advantage

Current treatment for multiple myeloma entails a long and intricate chemotherapy regimen that includes one or two transplants with a patient's own stem cells accompanied by the drug melphalan. The anti-angiogenesis agent thalidomide has proven to be an effective component of therapy, but questions remain about where in the course of treatment it can best be used. In the March 9 *New England Journal of Medicine*, researchers report superior event-free and complete response rates when the drug was used before and during primary therapy and also thereafter for maintenance. Yet the controls who took no thalidomide lived just as long.

After 4.5 years, Dr. Bart Barlogie and colleagues from the University of Arkansas found that 56 percent of patients taking thalidomide had no adverse events—disease progression, relapse, or death from any cause—compared with 44 percent of controls following the same treatment regimen without the drug; and an even greater difference was seen in complete responses, 62 to 43 percent. But each group contributed comparably to the 190 patients who died during this time, "owing in part to significantly shorter survival after relapse in the thalidomide group," wrote the authors, 1.1 compared with 2.7 years. Further compromising the advantage for thalidomide were more serious adverse events, such as deep-vein thrombosis and severe peripheral neuropathy.

In an editorial, Drs. Michele Cavo and Michele Baccarani, of the University of Bologna in Italy, suggest one interpretation of the data was to reserve treatments such as thalidomide "for the sequential treatment of relapses as a means of controlling the growth or regrowth of tumor."

Biomarker Predicts Development of Precancerous Lung Disease

The circulating C-reactive protein (CRP) was shown to be an "excellent predictive" biomarker for progressive bronchial dysplasia—a precursor of lung cancer—in former and current smokers, according to a study in the March 1 *American Journal of Respiratory and Critical Care Medicine*.

The study, led by Dr. Don D. Sin of the University of British Columbia, measured baseline serum levels of CRP and other markers of inflammation in 65 subjects who had at least 1 site of bronchial dysplasia. The sites were also biopsied by the researchers. Additional bronchial biopsies at the same sites were taken 6 months later to determine if there was a worsening of the dysplastic lesions or new lesions.

"Half of the participants developed progressive dysplastic lesions after 6 months," the researchers report. "The baseline CRP levels in these participants were 64 percent higher than those without progressive disease." Among those with lower CRP levels (less than 0.5 mg/L), only 13 percent showed worsened conditions, compared with 54 percent with higher levels. "The odds of developing progressive disease were 9.6-fold higher in the latter than in the former group," the researchers add.

Although the results from the study need confirmation in larger, longer term trials, the researchers believe CRP, along with other prognostic methods, may be helpful in the urgent search for methods "to identify individuals harboring precancerous lesions and to use a chemopreventive agent to prevent progression of these lesions to invasive carcinomas." Currently, most lung cancer patients are diagnosed too late for effective surgical removal of the tumors, they note.

Cigarette Sales See Record Drop

U.S. sales of cigarettes dropped by 4.2 percent from 2004 to 2005, the largest single decrease in cigarette sales since 1999, the National Association of Attorneys General (NAAG) announced last week. More importantly, the NAAG reported, is that the 378 billion cigarettes sold last year represent the lowest sales figure since 1951; during that same period of time, the population of the United States more than doubled. The sales figures were compiled by the U.S. Treasury Department's Tobacco Tax Bureau.

Cigarette sales have declined 21 percent since 1998, the same year state attorneys general completed negotiations with the tobacco industry on the Master Settlement Agreement (MSA). The MSA imposed restrictions on a number of promotional and other activities in which tobacco

(continued on page 5)

Funding Opportunities

Comprehensive Minority Institution/Cancer Center Partnership

Announcement Number: RFA-CA-06-011
Letter of Intent Receipt Date: March 20, 2006.
Application Receipt Date: April 19, 2006.

This is a renewal of RFA-CA-05-021 and will use the U54 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3360. Inquiries: Dr. H. Nelson Aguila—aguilah@mail.nih.gov; Dr. Peter Ogunbiyi—ogunbiyp@mail.nih.gov; Belinda Locke—lockeb@mail.nih.gov

Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership

Announcement Number: RFA-CA-06-012
Letter of Intent Receipt Date: March 20, 2006.
Application Receipt Date: April 19, 2006.

This is a renewal of RFA-CA-05-021 and will use the U56 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3361. Inquiries: Dr. H. Nelson Aguila—aguilah@mail.nih.gov; Dr. Peter Ogunbiyi—ogunbiyp@mail.nih.gov; Belinda Locke—lockeb@mail.nih.gov

Feasibility Studies for Collaborative Interaction for Minority Institution/Cancer Center Partnership

Announcement Number: RFA-CA-06-013
Letter of Intent Receipt Date: March 20, 2006.
Application Receipt Date: April 19, 2006.

This is a renewal of RFA-CA-05-021 and will use the P20 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3362. Inquiries: Dr. H. Nelson Aguila—aguilah@mail.nih.gov; Dr. Peter Ogunbiyi—ogunbiyp@mail.nih.gov; Belinda Locke—lockeb@mail.nih.gov

Exploratory Collaborations with National Centers for Biomedical Computing

Announcement Number: PAR-06-223
Letter of Intent Receipt Dates: April 19 and Dec. 19, 2006; April 19 and Dec. 19, 2007.
Application Receipt Dates: May 17, 2006; Jan. 17 and May 17, 2007; Jan. 17, 2008.

This funding opportunity will use the R21 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3365. Inquiries: Dr. Jennifer Couch—couchj@mail.nih.gov

Improving Diet and Physical Activity Assessment

Announcement Number: PAR-06-103
New Application Letter of Intent Receipt Dates: May 1, 2006; Jan. 1 and Sep. 1, 2007; May 1, 2008; Jan. 1, 2009. New Application Receipt Dates: June 1, 2006; Feb. 1 and Oct. 1, 2007; June 1, 2008; Feb. 1, 2009.

This is a renewal of PAR-03-009 and will use the R21 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3352. Inquiries: Dr. Amy Subar—subara@mail.nih.gov; Dr. Richard Troiano—troianor@mail.nih.gov

Pilot and Feasibility Program in Urology

Announcement Number: PA-06-156
New Application Receipt Dates: June 1 and Oct. 1, 2006; Feb. 1, June 1, and Oct. 1, 2007; Feb. 1, June 1, and Oct. 1, 2008; Feb. 1, 2009.

This is a renewal of PA-04-146 and will use the R21 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3348. Inquiries: Dr. Suresh Mohla—sm82e@nih.gov

Characterization, Behavior and Plasticity of Pluripotent Stem Cells

Announcement Number: PA-06-198
New Application Receipt Dates: June 1 and Oct. 1, 2006; Feb. 1 and June 1, 2007.

This is a renewal of PA-04-101 and will use the R21 award mechanism. For more information, see http://cri.nci.nih.gov/4abst.cfm?initiativeparfa_id=3351. Inquiries: Dr. Neeraja Sathyamoorthy—ns61r@nih.gov ◆

(Highlights continued from page 4)

companies could engage, including a prohibition on cigarette marketing and promotions aimed at minors.

"The continued enforcement efforts of the MSA's provisions by attorneys general, along with other health advocates, have made a marked difference in the number of smokers across the country, particularly among youth," said Iowa Attorney General Tom Miller, who co-chairs the NAAG Tobacco Committee, in a statement.

Mr. Miller also noted that states have sometimes been accused of not doing enough to slow tobacco sales because, under the MSA, part of the revenues from cigarette sales go back to the states. "Nothing could be further from the truth," he said.

Dr. Cathy Backinger, chief of NCI's Tobacco Control Research Branch, notes, "The decline in cigarette sales is good news for the American public. As cigarette sales decline, we can expect decreased tobacco-related deaths and health care costs." ◆

(Spotlight continued from page 3)

1/10th of one percent of our annual cigarette volume," and adds that, "Our one and only audience, regardless of brand or style, is legal-age adults who have made the decision to smoke."

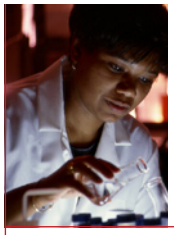
A paper published last November in *Health Affairs* argued the opposite. Researchers from the Harvard School of Public Health and the Roswell Park Cancer Institute reviewed internal tobacco industry research and patents on flavoring technology, and concluded that flavored cigarettes are, in part, intended to play the role of "starter" cigarettes—a new way to promote a shift from occasional to daily smoking.

The *Health Affairs* paper is the only one to date that has analyzed how the cigarettes impart flavor. Camel Exotics, they found, rely on a small bead or pellet in the filters that delivers flavor and reduces or masks "the natural harshness and taste of tobacco smoke." Little is known about the flavor pellets, says Dr. Gregory N. Connolly, part of the team that conducted the *Health Affairs* study. And, he adds, it would be very difficult to do studies that could fully explain how these flavor pellets work and if they are associated with any additional health risks.

Although he agrees that more research is needed, Dr. Connolly argues that flavored cigarettes are a bad idea regardless of what any future research may find.

"One basic public health principle is you don't add sugar to rancid meat," he says, referring to the FDA's ban on that practice in the 1900s. "They've tinkered with these cigarettes to make them more acceptable and more addictive, to make it easier to start and harder to quit." ◆

By Carmen Phillips



Featured Clinical Trial

Adjuvant Therapy for Stage II Colon Cancer

Name of the Trial
Phase III Randomized Study of Oxaliplatin, Leucovorin Calcium, and Fluorouracil with versus without Bevacizumab in Patients with Resected Stage II Colon Cancer and at High Risk for Recurrence Based on Molecular Markers (ECOG-E5202). See the protocol summary at http://cancer.gov/clinicaltrials/ECOG-E5202.

Dr. Al Benson

Principal Investigators
Drs. Al Benson, Peter O'Dwyer, and Stanley Hamilton, Eastern Cooperative Oncology Group

Why This Trial Is Important
Colon cancer is highly treatable and often curable if detected early. However, cancer recurrence after surgery to remove malignant colon tumors remains a concern.

In this trial, researchers are using molecular tests to help identify patients who are at high risk for recurrence after colon cancer surgery. Those deemed at high risk will receive adjuvant chemotherapy (drug therapy given after surgery to help suppress cancer recurrence). Half of the high-risk patients will also receive adjuvant treatment with bevacizumab, a monoclonal antibody that blocks the activity of a protein called vascular endothelial growth factor (VEGF). Tumors often produce large quantities of VEGF, which stimulates the growth of new blood vessels that help provide nourishment. Blocking VEGF may inhibit this new blood vessel growth and prevent continued tumor growth. Patients at low risk for recurrence will not receive adjuvant therapy but will continue to be monitored.

"Because patients with stage II colon cancer generally have good survivorship, it is hard to measure the impact of adjuvant therapy for these patients," said Dr. Benson. "This is one of the largest trials for patients with stage II colon cancer ever conducted, so we hope to determine conclusively whether or not adjuvant therapy is helpful. Additionally, this trial is the first of its kind to use molecular tests to determine how patients will be treated after surgery."

Who Can Join This Trial
Researchers seek to enroll 3,610 patients aged 18 and over with stage II colon cancer that has been surgically removed. See the list of eligibility criteria at http://cancer.gov/clinicaltrials/ECOG-E5202. This trial is eligible for special Medicare coverage.

Study Sites and Contact Information
Multiple study sites in the United States are recruiting patients for this trial. See the list of study sites at http://cancer.gov/clinicaltrials/ECOG-E5202 or call the NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237) for more information. The toll-free call is confidential. ◆

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

Notes

Hartinger, Other NCI Employees Honored

At the March 7 NCI All-Hands meeting, Director Dr. Andrew C. von Eschenbach announced the establishment of the John P. Hartinger Executive Leadership Development Award, a scholarship that will be competitively awarded each year to an NCI employee who demonstrates leadership potential, a commitment to public service, and a desire to further his or her executive development. The award honors John Hartinger, associate director for Budget and Financial Management, who has served NCI for 38 years, mostly in the areas of budget and financial management. In addition to his many technical skills, which are widely known and admired across NIH, he has served as a role model, mentor, and teacher for many NCI staff.

Six NCI employees received NCI Director Gold Star Awards in recognition of special accomplishments. The awardees are: Dr. Christine Berg, Division of Cancer Prevention; Donna Bonner, Publications Support Branch; Christina Bruce, Office of Workforce Development; Dr. Steve Libutti, Center for Cancer Research; Dr. Linda Weiss, Cancer Centers Branch; and Dr. Jonathan Wiest, Center for Cancer Research.

CCCT Staff Appointed

DCTD Director Dr. James Doroshow announced March 13 that key staff positions for the Coordinating Center for Clinical Trials (CCCT) have been filled. Dr. Sheila Prindiville will serve as CCCT director, joining program directors Drs. Deborah Jaffe, LeeAnn Jensen, and Ray Petryshyn. Dr. Doroshow noted that the staff represents a breadth of expertise in areas that will support the diverse CCCT activities.

Dr. Prindiville received her M.D. from Northwestern University and her M.P.H. from Johns Hopkins University. Following her residency training, she joined NCI as a program director in the Community Clinical Oncology Program. In 1996, she joined the faculty of the University of Colorado Health Sciences Center. She returned to NCI in 2002 and joined the CCR Genetics Branch where she directed the Clinical Cancer Genetics Program at the National Naval Medical Center Breast Care Center and served as a clinical investigator in NCI's Clinical Genetics Branch.

Prior to coming to NCI, Dr. Jaffe worked at a biotechnology firm directing a clinical evaluations lab where she was involved in getting FDA approval for a DNA-based diagnostic test for HER-2/neu. Dr. Jensen managed extramural clinical trials in bone marrow transplantation for NHLBI for 10 years before coming to NCI in 2003 to oversee the grants and contracts that support the early drug development program. Dr. Petryshyn, a biochemist and molecular biologist, previously served in NCI's Division of Extramural Activities' Resources Training and Review Branch, and was involved in the review of NCI's Cancer Centers.

CCCT will manage the implementation of all Clinical Trials Working Group initiatives. Additional information is available online at http://integratedtrials.nci.nih.gov/ict/.

Tucker Named Director of Human Genetics Program

Dr. Margaret Tucker, chief of the Genetic Epidemiology Branch (GEB), was recently appointed director of the Human Genetics Program in the Division of Cancer Epidemiology and Genetics (DCEG).

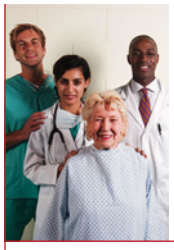
Dr. Tucker received her M.D. from Harvard Medical School and completed her training in internal medicine and medical oncology at Stanford University. Since joining the NCI staff in 1978, she has focused on family and population-based studies of melanoma and other cancers in efforts to identify susceptibility genes and gene-environment interactions. Dr. Tucker was named chief of the Family Studies Section in 1987, became chief of GEB in 1992, and will continue to serve in that capacity. In her new role, she will share responsibility with the division director in managing and strengthening DCEG's intramural and collaborative research programs in cancer genetics.

HIV/AIDS Awareness Day Observed

March 10 marked the first National Women and Girls HIV/AIDS Awareness Day, a day to raise awareness of the increasing impact of HIV/AIDS on women and girls in the United States and throughout the world. For information on NCI's research related to HIV/AIDS in women, go to http://women.cancer.gov/research/aids.shtml. ◆

Coming Soon

Watch for a Special Issue *NCI Cancer Bulletin* highlighting the 30th anniversary of NCI's Cancer Information Service (CIS) and its activities, including information dissemination, partnership programs, health communications research, international reach, milestones, and call center activities. ◆



Cancer Center Profile

Abramson Cancer Center of the University of Pennsylvania

Director: Dr. John H. Glick • 34th and Spruce Streest, Philadelphia, PA 19103 • Phone: 800-789-7366 • Web site: www.penncancer.org

Background

In 1973, the University of Pennsylvania established a cancer center to serve as the focus and stimulus for all cancer-related activities at the University of Pennsylvania. In 1975, it was designated by NCI as a Comprehensive Cancer Center and has maintained that designation ever since. In 2002, it was renamed the Abramson Cancer Center of the University of Pennsylvania in recognition of the philanthropic support of Leonard and Madlyn Abramson and their family. Today, the Abramson Cancer Center's mission is to gain new knowledge through leading-edge research and provide hope to those touched by cancer through patient care excellence.

Architectural rendering of the Center for Advanced Medicine.

Patient Care

With more than 300 faculty members, the Abramson Cancer Center provides state-of-the-art medical care that addresses virtually all types of cancer. The Center also strives to provide holistic care that addresses the social, emotional, and other physical needs of its patients. Patient service coordinators help patients find their way through the often confusing array of tests, appointments, and paperwork. Nutritional specialists provide individual dietary plans to help patients cope with the effects of their disease and its treatment. The cancer rehabilitation program provides patients with physical activity and exercise programs to help reduce the long-term effects of cancer. Psychosocial counselors address the emotional side of the cancer experience, helping patients face the many personal issues associated with cancer.

Research Activities

Basic and clinical research is a cornerstone of the Abramson Cancer Center's operations. Current areas of research focus include:

- Translational research focused on harnessing the patient's immune system to fight cancer, including post-bone marrow transplant immunization, adoptive immunotherapy, and metastatic breast cancer vaccines.
- Understanding the genetic basis of cancers through participation in NCI's national cancer genetics network, as well as using molecular genetics techniques to identify how genetic mutations intersect with environmental factors.
- Using imaging techniques such as positron emission tomography and magnetic resonance imaging not only to visualize tumors, but also to monitor the progression of specific cancer treatments for breast cancer and brain tumors.

Other Notable Programs

When it is completed in 2008, the new 540,000-square-foot Center for Advanced Medicine (pictured above) will integrate the majority of the Abramson Cancer Center's cancer care specialties—including medical, surgical, and radiation oncology—in a single building. This will further enable prompt diagnosis and coordinated delivery of cancer treatments. ◆

NCI Names New Cancer Center

The University of New Mexico Cancer Research and Treatment Center was designated as the 61st NCI Cancer Center. For more information on its research and treatment programs, go to http://cancer.unm.edu. ◆

Featured Meetings and Events

A calendar of scientific meetings and events sponsored by the National Institutes of Health (NIH) is available at http://calendar.nih.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.

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