THE CANCER LETTER INTERACTIVE

Vol. 28 No. 15
April 12, 2002

PO Box 9905 Washington DC 20016 Telephone 202-362-1809

Scientists, Industry Identify Barriers To Development Of Molecular Therapies

SAN FRANCISCO—The cancer drug development system that has evolved over the past 50 years will have to change dramatically for scientists, clinicians, and the pharmaceutical industry to test the therapies of the future, scientists said here at the annual meeting of the American Association for Cancer Research.

As more becomes known about cancer at the molecular level, drugs can be made to home in on one or more targets in cancer cells. In the past, drug developers looked for agents that would provide at least an incremental improvement for a large number of patients. Now, scientists are beginning

(Continued to page 2)

In Brief:

Susan Horwitz Succeeds Waun Ki Hong As AACR President; Antman Presdient-Elect

SAN FRANCISCO—**SUSAN BAND HORWITZ** became president of the American Association for Cancer Research for 2002-2003 during the 93rd AACR annual meeting here this week. **Karen Antman** became president-elect, and **Waun Ki Hong** became past president. Horwitz is the Falkenstein Professor of Cancer Research and co-chairman, Department of Molecular Pharmacology, Albert Einstein College of Medicine, and associate director for drug development, Albert Einstein Comprehensive Cancer Center. Horwitz has been a member of the AACR Board of Directors and has served on numerous AACR committees, including the Pezcoller Foundation–AACR International Award for Cancer Research Committee, the Clowes Award Selection Committee, the Rhoads Memorial Award Committee, the Gertrude Elion Cancer Research Award Committee, and the Nominating Committee. A former recipient of the AACR–Cain Memorial Award, she is an expert in molecular therapeutics; mechanisms of microtubule stabilization by Taxol and functionally related molecules such as the epothilones and discodermolide; drug development with special emphasis on natural products; the role of mutations in tubulin as they relate to drug resistance and microtubule function; post-translational modifications of tubulin; and molecular correlates during phase I clinical trials. Horwitz earned her Ph.D. in 1963 from Brandeis University. Antman is director of the Herbert Irving Comprehensive Cancer Center, Wu Professor of Medicine and Pharmacology, Columbia College of Physicians

(Continued to page 8)

Cancer Drug Development System In Flux, Scientists Say

(Continued from page 1)

to design highly specific drugs that may be used to treat smaller numbers of patients with cancers that are defined by molecular type rather than where they happen to occur in the body.

The implications of this historical shift are both exciting and daunting, scientists said.

"This is the best of times," said Anna Barker, chairman of the AACR Science Policy and Legislative Affairs Committee. "We have never, ever, had this many opportunities in cancer research."

However, problems that frustrate the process of taking new drug candidates through clinical testing will only get worse as the numbers of molecular targets increase, said participants in a session April 7 on the partnership between academia and industry.

Some of these problems include:

—The need to test many more therapies in smaller groups of patients.

—A decline in the number of physician-scientists to serve as clinical trial investigators.

—Increasing requirements for "patient resources." These include patients willing and able to enroll in clinical trials, as well as tumor tissue, blood, and data.

—The lack of universal standards for tissue storage, informed consent, and tissue and data sharing.

—The uncertainty about the definition of endpoints for clinical benefit that will be appropriate—and accepted by FDA—for drug approval.

—Regulatory burdens that include restrictions on technology transfer, limitations related to intellectual property rights, and uncertain value of market exclusivity for new drugs.

"In some diseases we've seen significant advances in therapy, including improved survival, but for most solid tumors, particularly those that present in advanced stage, we're still looking for a truly effective treatment," said Philip Schein, former chairman and CEO of U.S. Bioscience, and chairman of the panel discussion.

"We are fortunate that the investment in cancer research since 1971 has resulted in an explosion of scientific discovery," Schein said. "However, for discovery to be translated into a practical therapy that can be delivered to the public, it must be developed, it must receive FDA approval, and then brought to cancer patients in the form of a marketed product. This is an extraordinarily complex process."

There are an estimated 400 new cancer medicines in development at this time, but only 2 to 3 percent of cancer patients enter clinical trials, Schein said. "It is essential that the complementary assets in academia and industry be employed with an efficient and cooperative system," he said. "This requires that past and perhaps current stereotypes and misconceptions about each of the partners are understood and dealt with so that do not serve as barriers to cooperation.

"Academia is an important source of innovative therapies, but most cancer centers lack the complete know-how or the coordinated laboratory services required for FDA-mandated procedures," Schein said.

Academic investigators have generally viewed their motives as "pure" when compared to industry, Schein said. This also is reflected in the measures of success, with academics using publications, grants, and promotions, compared to revenues and profits by the industry. "Today, these stereotypes are subject to revision," Schein said. "In fact, they don't really work given the degree of overlap in interests.

"Increased attention in academic centers is being directed toward financial return from the research programs with the establishment of business development offices and incubator operations that spin out companies," Schein said. "The goal is to assure that discoveries with medical and commercial value provide a future income stream in the form of royalties

THE CANCER LETTER

Member, Newsletter and Electronic Publishers Association

World Wide Web: http://www.cancerletter.com

Editor & Publisher: Kirsten Boyd Goldberg
Editor: Paul Goldberg
Editorial Assistant: Shelley Whitmore Wolfe

Editorial: 202-362-1809 Fax: 202-318-4030
PO Box 9905, Washington DC 20016
E-mail: news@cancerletter.com

Customer Service: 800-513-7042
PO Box 40724, Nashville TN 37204-0724
E-mail: info@cancerletter.com

Subscription $305 per year worldwide. ISSN 0096-3917. Published 46 times a year by The Cancer Letter Inc.

or increased value of equity."

Industry remains the "machine for bringing new therapies through development to the patient," Schein said. "This process works best when there is an efficient transfer of technology from a laboratory based in an academic center to the pharmaceutical industry that makes a serious commitment to its development. This requires cooperation, avoidance of conflicts in the mission of the medical center, and acknowledgment by all parties that the risk of failure is very high.

"The truth is that most projects fail," Schein said.

According to data from the Tufts Center for the Study of Drug Development, only one in five agents reaching clinical development reaches marketing authorization, at an average cost of $800 million, Schein said.

"As new drugs are rationally designed from a process of molecular targeting and therefore more selective, the patient population that has the potential of benefiting may become diminishingly small," Schein said. "Given these considerations, will the pharmaceutical industry remain an enthusiastic participant?"

Large Pharma Not "Beating Down The Door"

Barker, CEO of Bio-Nova Inc., said cancer drug development is looking less lucrative that it might have been in the past. "Biotech startups are not generally viable financial entities," she said. "We talk about 'burn rate.' We talk very little about profits. The story of biotechnology is to have a good technology, develop it long enough and far enough that you can value exchange what you have through a license, sell it or partner it.

"It means that cancer is absolutely perfect in starting biotechnology companies," Barker said. "That's very good news, because most of the good technology is coming out of academic laboratories and going to start biotechnology companies."

However, biotechnology companies must partner with large pharmaceutical companies to move products to the market, she said. This can be a difficult step where a lot of good technology gets lost.

"Large pharmaceutical companies are not beating down the door," she said. "It's a fragmented market. It's a difficult market. It's an unpredictable market in terms of regulatory approval. Endpoints change. As you look at more and more of these targets, you are going to further fragment the market. Say in breast cancer there are four or five drugs that are producing decent revenues, but now we go to the molecular signature approach, and breast cancer becomes 40 different diseases."

On Barker's list of problems that hinder technology transfer from academia to biotechnology companies: timely technology transfer, intellectual property issues, and effective management. "Scientists don't always make the best CEOs," she said.

Barker called for a "national strategy" to accelerate the translation of lab discovery to the clinic, including discussion between FDA and NCI about acceptable endpoints for clinical trials of targeted therapies.

"At the end of the day, capital follows endpoints," she said. "The whole of biotechnology is financed solely by the venture capitalists. Venture capitalists don't like to put their money into endpoints that aren't certain. If you have a choice of putting money into cancer versus obesity or sexual dysfunction or diabetes or cardiovascular disease, it gets to be very easy what to select. In terms of cancer, we are almost facing an endpoint crisis in that we are not going to get the kind of capital we need into cancer until we get the endpoint issue figured out."

A Future For Clinical Trialists?

Larry Norton, head of the Division of Solid Tumor Oncology at Memorial Sloan-Kettering Cancer Center, said he is concerned about the declining number of M.D.-Ph.D.'s. Young physicians tend to go into the more lucrative private practice, rather than academia. Ph.D.s in the fields associated with cancer research tend to stick to basic science, said Norton, president of the American Society of Clinical Oncology.

The role of clinical trialist is essential, not only because of the medial skill and judgment of the investigator, but also because of the credibility and lack of conflict of interest of the investigator.

"When I first started out, the good drugs and good ideas all came from the academic side," he said. "That has shifted over time [to industry], but the rules are still based on the old concept. We need to sort out what is essential and what is a historical artifact that is hindering us."

There may not be a viable future for clinical trialists, Norton said. "I am not sure that we are going to be successful in providing for the viability of the species of the academic clinical trialist of the future," he said. "Academic security is a very nebulous thing

that depends on a certain zeitgeist. I don't think we're going to see too many professors or leaders of departments who are clinical trialists as their primary definition. Somebody who works in the laboratory, with all the excitement of laboratory science, is way ahead in the rungs of the ladder in terms of achieving academic success the way we currently define it in academic medical centers and universities."

Clinical trials take time. "A great clinical investigator may have five great clinical trials in their entire career," Norton said. "My laboratory colleagues can turn out five experiments in a month."

The system of rewards in research always seem to favor the basic scientists, said Norton, "Even a committee of all clinicians will pick the lab researcher for awards," he said. "It's easier to evaluate basic science."

Grants and contracts also tend to be more available for basic science than clinical research, Norton said. "We have a problem here, and the problem is not being solved by the system that was set up years ago," he said. Also, regulatory burdens are "extraordinary, huge and crushing and getting worse."

BMS: "Freedom From Market Constraints"

Donald Hayden, executive vice president of Bristol-Myers Squibb Co., said his firm's early success in cancer research and development came about largely because of its partnerships with academia and the federal government.

"Cisplatin was originally discovered by Michigan State University, and recognized for its activity in testicular cancer at a time when the pharmaceutical industry as a whole did not view cancer therapeutics as an attractive target," Hayden said.

BMS invested with MSU and NCI to develop the drug for the treatment of several types of cancer. "Through the combined efforts of those three parties over nearly two decades, Cisplatin became a cornerstone of chemotherapy."

The investment "required a belief that the company would realize a return on its investment," he said. "Marketing exclusivity is what allowed Bristol-Myers Squibb the opportunity to realize that benefit, and many cancer patients are alive today who arguably would not have been in the absence of our involvement in a larger partnership with academia and the government."

The story of Taxol is "perhaps even a more inspiring story of how government, academia, and industry can work together for the benefit of patients with cancer," Hayden said. The drug had languished for years due to issues of toxicity and administration, but when new academic research emerged, BMS "was once again ready to invest" as a partner with NCI.

"Issues of intellectual property, raw materials supply, and control of relevant data all were successfully negotiated between Bristol-Myers and the NIH pursuant to a Cooperative Research and Development Agreement," he said.

At the outset of the CRADA, the success of Taxol in treatment of breast and ovarian cancer was "far from predictable," Hayden said. The company "took risks, made investments, and did everything necessary to make Taxol available to patients."

The commercial success of Taxol spurred other companies to invest in cancer, Hayden said. "But the success of Taxol prompted a chilling response in some sectors. Members of Congress called for hearings into the pricing of Taxol, while others proposed substantial revisions to the CRADA process. These events in turn substantially reduced the impetus for collaboration, and one saw that in the pattern of CRADAs in the mid-1990s.

"The issue of freedom from price constraints and the opportunity to reliably pursue return on investment must be solved to achieve and broadly advance collaboration between federally funded academic researchers and their large pharmaceutical industry counterparts," Hayden said.

"I'm convinced we seem to be entering a period of antipathy toward large pharmaceutical industry, and by extension, collaboration between large pharma and academia," he said.

"How does one find that point at which research and collaborations will be encouraged, and medicines will be accessible?" Hayden said. "We believe the current law actually strikes that balance quite appropriately."

Hayden had three suggestions for improving the environment for cancer drug research and development:

—"I would encourage those of you who are developing regulatory, legislative, or policy agendas to include in those agendas freedom from market constraints that discourage investment. Whether the [National] Dialogue on Cancer or some other forum is the most appropriate vehicle, I'll leave to you. But it seems there is little benefit to developing new research paradigms without sufficient support for investment to fund them."

—"Looking at the success of the pediatric exclusivity provisions of the 1997 Food and Drug Administration Modernization Act, we should consider applying that same model to other special areas of need. It has driven clinical research in the pediatric area."

—"We should all explore ways in which both cancer research and the drug approval process can be improved. One hears many interesting ideas, including the creation of an oncology center at the FDA, with the director reporting directly to the FDA Commissioner. A related issue is harmonization of clinical trial standards across FDA and NCI."

National Academies:

Minorities More Likely To Get Lower-Quality Care

Racial and ethnic minorities tend to receive lower-quality health care than whites do, even when insurance status, income, age, and severity of conditions are comparable, according to a report from the National Academies' Institute of Medicine.

The committee that wrote the report also emphasized that differences in treating heart disease, cancer, and HIV infection partly contribute to higher death rates for minorities.

"Disparities in the health care delivered to racial and ethnic minorities are real and are associated with worse outcomes in many cases, which is unacceptable," said committee chairman Alan Nelson, a retired physician, former president of the American Medical Association, and current special adviser to the chief executive officer of the American College of Physicians-American Society of Internal Medicine.

"The real challenge lies not in debating whether disparities exist, because the evidence is overwhelming, but in developing and implementing strategies to reduce and eliminate them," Nelson said.

The congressionally mandated report says a large body of research underscores the existence of disparities. Several studies show significant racial differences in who receives appropriate cancer diagnostic tests and treatments.

The committee's first recommendation for reducing racial and ethnic disparities in health care is to increase awareness about them among the general public, health care providers, insurance companies, and policy-makers. Consistency and equity of care also should be promoted through the use of "evidence-based" guidelines to help providers and health plans make decisions about which procedures to order or pay for based on the best available science. Other specific steps to reduce and eliminate disparities are presented in the report.

There are many possible reasons for racial and ethnic disparities in health care, the committee said. Unequal treatment occurs in the context of persistent discrimination in many sectors of American life. Some evidence suggests that bias, prejudice, and stereotyping on the part of health care providers may contribute to differences in care.

Health care plans should not be fragmented along socioeconomic lines, the report says. Public programs such as Medicaid should strive to help beneficiaries access the same level of care as privately insured patients.

The committee also called for more research to identify sources of racial and ethnic disparities as well as promising intervention strategies. Future research should include a strong effort to better understand the prevalence and influence of bias, prejudice, stereotyping, and clinical uncertainty on the part of health care providers. And to ensure that the nation can track its progress in reducing disparities, hospitals should — without violating patients' privacy — collect and report data on health care access and utilization by patients' race, ethnicity, socioeconomic status, and primary language.

Copies of "Unequal Treatment: Confronting Racial and Ethnic Disparities In Health Care" are available from the National Academy Press; tel. (202) 334-3313 or 1-800-624-6242, or at http://www.nap.edu.

Professional Societies:

NCCN Practice Guidelines On Anemia Are Published

The National Comprehensive Cancer Network has released practice guidelines for the treatment of anemia.

The guidelines review the data on the use of erythropoietin in patients with anemia associated with the disease and the side effects of treatment.

"In particular, these guidelines focus on the type of anemia associated with chronic disease, and review the available data guiding the use of erythropoietin in these patients, " said Paul Sabbatini, chairman of the NCCN anemia guidelines panel and assistant attending physician in the Developmental Chemotherapy Service at Memorial Sloan-Kettering Cancer Center.

Before the development of erythropoietin, cancer patients were treated with transfusion. The availability of erythropoietin provides a treatment alternative in certain settings.

The NCCN guidelines recommend that patients with hemoglobin levels of less than 11 g/dl enter the screening portion of the algorithm. If immediate correction with transfusion is not necessary, the pathways guide the clinician through an assessment of the potential risk of requiring transfusion, as well as an assessment of symptoms which may be related to anemia.

The guideline reviews the data addressing the impact of erythropoietin in reduction of transfusions, and its potential for improvement of symptoms.

NCCN and the American Cancer Society have also released a patient information document, titled *The NCCN/ACS Cancer-Related Fatigue Treatment Guidelines for Patients.*

"These guidelines also address treatment options for other causes of cancer-related fatigue including pain, emotional distress, sleep problems and decreased thyroid function," said William McGivney, NCCN chief executive.

The patient guidelines cover supportive care topics, including nausea and vomiting and cancer pain, and provides information on cancer of the prostate, breast, colon and rectum, and lung.

These materials are available at http://www.nccn.org.

* * *

NCCN received a grant of $3.15 million from Pharmacia Corp. for the development and review of clinical oncology research protocols and trials in breast, gynecological and other forms of cancer, the network said.

NCCN will conduct the studies through the NCCN Clinical Trials Network.

Funding Opportunities:

NCI Offers Cancer Prevention Training Opportunities

Application Deadline: Sept. 1, 2002

Appointment Start Date: July 1, 2003

NCI offers postdoctoral training opportunities in cancer prevention and control, including molecular prevention, molecular epidemiology, community intervention and the ethics of prevention. Fellows may obtain Master of Public Health training at an accredited university during the first year of their fellowship, which is followed by independent research assignments in cancer prevention and control at the NCI Bethesda, Rockville, and Frederick, Maryland facilities. Applicants must have a doctoral degree, be a citizen of the U.S. or a resident alien eligible for citizenship within 4 years at the time of application (Sept.1). Fellows are accepted for up to 5 years. For information visit the Web site at: http://cancer.gov/prevention/pob and http://resresources.nci.nih.gov/links.cfm.

For a catalog, contact Douglas Weed, director, Cancer Prevention Fellowship Program, NCI, 6130 Executive Blvd, Suite 3109, Bethesda, MD, 20892-7361.

Inquiries: Barbara Redding, phone 301-496-8640; fax 301-402-4863; e-mail br24v@nih.gov.

RFAs Available

RFA ES-02-009: Centers for Population and Health Disparities

Letter of Intent Receipt Date: July 29, 2002

Application Receipt Date: Aug. 29, 2002

Applicants are invited to propose multi-level, integrated research projects that will elucidate the complex interactions of the social and physical environment, mediating behavioral factors, and biologic pathways, which determine health and disease. CPHHD are expected to create an environment conducive to interdisciplinary and reciprocally beneficial collaborations among biomedical scientists, social scientists and affected communities with the common goal of improving population health and reducing health disparities.

This is a trans-NIH RFA sponsored jointly by the National Institute of Environmental Health Sciences, NCI and the National Institute on Aging. Applicants are encouraged to propose research across disease outcomes or health-related issues relevant for these Institutes. Support of this program will be through the P50 Specialized Centers Grant.

Inquiries: For NCI—Suzanne Heurtin-Roberts, NCI Division of Cancer Control and Population Sciences, 6130 Executive Blvd., EPN 4054, Bethesda, MD 20892, phone 301-594-6655; fax 301-435-7547; email sheurtin@mail.nih.gov.

RFA CA-03-006: Chemoprevention of Tobacco-Related Cancer in former Smokers: Clinical Studies

Letter of Intent Receipt Date: June 21, 2002

Application Receipt Date: July 26, 2002

The initiative funds clinical research pilot clinical trials (phase I/II or phase II) evaluating the efficacy of chemopreventive agents in specified cohorts of former smokers with or without a prior history of a tobacco-related malignancy and translational studies performed on specimens (such as tissue, blood, urine, etc.) derived from these clinical trials. NCI intends to commit

approximately $4,000,000 in FY 2003 to fund 3 to 5 new and/or competitive supplement grants to existing cooperative agreements in response to the RFA. An applicant may request a project period of up to 5 years and a budget for direct costs of up to $1,000,000 per year. Because the nature and scope of the research proposed may vary, it is anticipated that the size of each award will also vary. Although the financial plans of the NCI provides support for this program, awards pursuant to the RFA are contingent upon the availability of funds and the receipt of a sufficient number of meritorious applications. The RFA is available at http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-03-006.html.

Inquiries: Eva Szabo, Division of Cancer Prevention, NCI, 6130 Executive Blvd., Rm 2132, MSC 7341, Bethesda, MD 20892, phone 301-435-1595; fax 301-480-3924; e-mail szaboe@mail.nih.gov.

RFA CA-03-008: Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership

Letter of Intent Receipt Date: July 17, 2002

Application Receipt Date: Aug. 14, 2002

NCI invites cooperative agreement applications for the planning and development of Comprehensive Minority Institution/Cancer Center Partnerships between MSIs and NCI-designated Cancer Centers (or groups of Centers) to develop a stronger national cancer program aimed at understanding the reasons behind the significant cancer disparities and impact on minority populations.

The initiative offers two cooperative agreement assistance mechanisms, a U56 and a U54. The Cooperative Planning Grant for Comprehensive Minority Institution/Cancer Center Partnership U56 is for institutions in the initial stages of planning for a comprehensive partnership.

The Comprehensive Minority Institution/Cancer Center Partnership U54 is for institutions who have had considerable prior planning and evaluation and are ready to begin implementing a more broadly focused partnership having inter-institutional cancer research projects and/or cancer training and career development, education or outreach programs. The sole purpose of the MI/CCP program is to provide support for a various collaborative activities that will lead to the submission of specific competitive grant applications traditionally supported by the NCI and other funding organizations. The RFA will use NIH U56 award mechanism.

The RFA is available at http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-03-008.html.

Inquiries: Sanya Springfield, chief, CMBB, OCTR, ODDES, NCI, 6116 Executive Blvd., Suite 7013, Bethesda, MD 20892-8347, Rockville, MD 20852 (express courier), phone 301-496-7344; fax 301-402-4551; e-mail springfs@mail.nih.gov

RFA CA-03-009: Planning Grant for Minority Institution/Cancer Center Collaboration

Letter of Intent Receipt Date: July 17, 2002

Application Receipt Date: Aug. 14, 2002

The sole intent of the planning grant is to provide support for cancer projects and programs for a limited duration of time to perform feasibility studies and obtain preliminary data that will lead to the submission of specific competitive grant applications traditionally supported by the NCI and others. Depending on prior experience, interactions and progress in planning, applicants may apply for two-year or three-year P20 MI/CCP awards. The RFA will use NIH planning grant P20 award mechanism. The RFA is available at http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-03-009.html.

Inquiries: See preceding RFA.

RFA CA-03-010: Comprehensive Minority Institution/Cancer Center Partnership

Letter of Intent Receipt Date: July 17, 2002

Application Receipt Date: Aug. 14, 2002

The RFA will use the NIH cooperative specialized center U54 award mechanism, which may support any part of a full range of research development from very basic to clinical. The RFA is available at http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-03-010.html.

Inquiries: See preceding RFAs.

RFA HG-02-005: Large-Scale Genotyping for the Haplotype Map of the Human Genome

Letter of Intent Receipt Date: April 25, 2002

Application Receipt Date: May 29, 2002

This is a joint initiative among several Institutes and Centers at NIH to develop a haplotype map of the human genome. This RFA solicits cooperative agreement applications for the large-scale genotyping across the genome of samples from three populations.

The data will be used to develop a map of the haplotype patterns and of the genetic variants that are most informative for detecting these patterns. The haplotype map is expected to be a key resource for finding genes affecting health, disease, and response to drugs and environmental factors, and for beginning to understand the pattern of human genetic variation. It is anticipated that this initiative will become part of an international collaboration to produce a human haplotype map.

The RFA will use the NIH U54 Specialized Center Cooperative Agreement and the U01 Research Project Cooperative Agreement award mechanisms.

The RFA is available at http://grants1.nih.gov/grants/guide/rfa-files/RFA-HG-02-005.html.

Inquiries: For NCI—Wendy Wang, NCI, 6130 Executive Blvd., EPN 3138, Bethesda, MD 20852-7362, phone 301-594-7607; E-mail wangw@mail.nih.gov.

In Brief:

Five Elected To AACR Board; 13 Scientists Win Grants

(Continued from page 1)

and Surgeons, associate director for clinical research, Columbia Presbyterian Cancer Center, and chief, Division of Medical Oncology, Department of Medicine, Columbia University. Antman has been a member of the Board of Directors, has been a member of the Science Policy and Legislative Affairs Committee, Public Relations and Communications Committee, Annual Meeting Program Committee, Nominating Committee, and Membership Development Committee. Antman is an expert in the treatment of sarcomas and mesotheliomas; regimens for high-risk breast cancer; support for high dose chemotherapy including pharmacology and use of growth factors and mobilization of peripheral blood derived stem cells for transplant; and medical policy. She received her M.D. in 1974 from Columbia University. AACR Past President Hong is the head of the Division of Cancer Medicine, University of Texas M. D. Anderson Cancer Center. . . . **NEW AACR BOARD MEMBERS** were elected: **Nancy Davidson**, of Johns Hopkins University School of Medicine; **Brian Druker**, of Oregon Health & Science University; **Frank McCormick**, director, University of California San Francisco Comprehensive Cancer Center and Cancer Research Institute; **Olufunmilayo Olopade**, of University of Chicago; and **Jeffrey Trent**, chief, Cancer Genetics Branch, National Human Genome Research Institute. They will each serve three-year terms. . . . **AACR RESEARCH GRANTS** were awarded to 13 scientists. **Piotr Sicinski**, Dana-Farber Cancer Institute, received the AACR-Gertrude B. Elion Cancer Research Award. The one-year award comes with a grant of $50,000. The AACR-National Foundation for Cancer Research Professorship in Basic Cancer Research was presented to **Victoria Lundblad**, Baylor College of Medicine. The professorship comes with a two-year grant of $50,000 per year in salary support. The AACR-California Department of Health Services Career Development Awards in Gender-Related Cancer Research was awarded to **Manuel Penichet**, UCLA, and **June Chan**, UCSF. The AACR-Susan G. Komen Breast Cancer Foundation Career Development Award was presented to **Haihua Gu**, Beth Israel Deaconness Medical Center. The AACR-Cancer Research Foundation of America Career Development Award in Translational Lung Cancer Research was awarded to **Anjali Gupta**, University of Pennsylvania. The AACR Career Development Awards provide two-year grants of $50,000 per year to support research by junior, tenure-track scientists in the first or second year of an assistant professorship. The AACR-Amgen Inc. Fellowships in Clinical or Translational Research were presented to **Hayley McDaid**, Albert Einstein College of Medicine and **Hans Guido Wendel**, Cold Spring Harbor Laboratory. The AACR-Bristol-Myers Squibb Oncology Research Fellowship in Clinical Research was awarded to **Archie Tse**, Memorial Sloan-Kettering Cancer Center. The AACR-Sidney Kimmel Foundation for Cancer Research Fellowship in Basic Research was presented to **Jiri Zavadil**, Albert Einstein College of Medicine. The AACR-Anna D. Barker Fellowship in Basic Cancer Research was awarded to **Mark Frattini**, Johns Hopkins University School of Medicine. The AACR-Cancer Research Foundation of America Fellowship in Prevention Research was awarded to **Nigel Mongan**, Weill Medical College, Cornell University. The AACR-AstraZeneca-Cancer Research Foundation of America Fellowship in Translational Lung Cancer Research was presented to **Balazs Halmos**, Beth Israel Deaconess Medical Center. The fellowships are one-, two-, or three-year grants providing salary support of $30,000 per year. . . . **NEXT YEAR'S** AACR annual meeting is scheduled for April 5-9, in Toronto, Canada. The deadline for submitting abstracts is Nov. 14. . . **AMERICAN ASSOCIATION FOR BLOOD and Marrow Transplantation** honored two researchers its annual meeting in Orlando. **Bo Dupont**, member of the Memorial Sloan-Kettering Cancer Center and professor of immunology at Cornell University, Weill Graduate School of Medical Sciences, and **John Hansen**, professor of medicine at the University of Washington and member of the Fred Hutchinson Cancer Research Center, received the ASBMT Lifetime Achievement Award. For the past 30 years, they have collaborated on genetic stem cell transplantation and patient donor matching methods. . . . **FREDERICK STARE**, nutritionist, co-founder and director of the American Council on Science and Health, died April 4. He was 91. Stare was founder and former chairman of the Department of Nutrition at Harvard School of Public Health. As a member of the Food and Nutrition Board of the National Research Council, he established the first Recommended Dietary Allowances, as well as the Four Food Groups dietary guidelines.

Copying Policy for The Cancer Letter Interactive

The software that comes with your issue allows you to make a printout, intended for your own personal use. Because we cannot control what you do with the printout, we would like to remind you that routine cover-to-cover photocopying of The Cancer Letter Interactive is theft of intellectual property and is a crime under U.S. and international law.

Here are guidelines we advise our subscribers to follow regarding photocopying or distribution of the copyrighted material in The Cancer Letter Inc. publications in compliance with the U.S. Copyright Act:

What you can do:

--Route the printout of the newsletter to anyone in your office.

--Copy, on an occasional basis, a single story or article and send it to colleagues.

--Consider purchasing multiple subscriptions. Contact us for information on multiple subscription discounts.

What you can't do without prior permission:

--Make copies of an entire issue of the newsletter. The law forbids cover-to-cover photocopying.

--Routinely copy and distribute portions of the newsletter.

--Republish or repackage the contents of the newsletter.

We can provide reprints for nominal fees. If you have any questions or comments regarding photocopying, please contact Publisher Kirsten Boyd Goldberg, phone: 202-362-1809, email: kirsten@cancerletter.com

We welcome the opportunity to speak to you regarding your information needs.

Click Here for
Photocopying Guidelines