THE NIH RECORD

Still The Second Best Thing About Payday

Nobelist Agre To Give NIH Director's Lecture

As is often the case in science, serendipity played a role in the discovery. While studying the Rh blood group antigen in red blood cells, Dr. Peter Agre came across a highly abundant protein contaminant. "We basically discovered a new protein and didn't have a clue what it did," he said. Further study hinted that it might be the long-sought channel that regulates water movement into and out of cells. "A couple of generations of physiologists have argued about whether water crosses cell membranes by diffusion or whether it travels by special pathways," he said. "And it turns out there are special pathways, and that's what we discovered." He dubbed the protein "aquaporin" (water pore).

Agre won the 2003 Nobel Prize in Chemistry for his discovery, an honor he shared with Dr. Roderick MacKinnon, who

SEE **NOBELIST AGRE**, PAGE 2

Cardiologist Elizabeth Nabel Named NHLBI Director

Dr. Elizabeth G. Nabel has been named director of the National Heart, Lung, and Blood Institute. Previously scientific director of clinical research in the NHLBI intramural program, she began her appointment Feb. 1.

Dr. Elizabeth Nabel

Nabel will oversee an annual budget of almost $3 billion and a staff of approximately 850 employees.

"As a cardiologist and internationally

SEE **NABEL**, PAGE 4

HIGHLIGHTS

U.S. Department of Health and Human Services
National Institutes of Health

February 15, 2005
Vol. LVII, No. 4

President Makes Third NIH Visit

By Rich McManus

Visiting NIH for the third time in 2 years, President George W. Bush dropped by Jan. 26 for a 40-minute town hall-style meeting in Masur Auditorium, Bldg. 10 during which he emceed a discussion with five citizens on the topic "Strengthening Health Care." He called it "a dialogue about innovative ways to make sure that our health care system addresses the needs of our individual citizens.

President Bush visited on Jan. 26.

"My judgment is the system won't work if medical decisions are made by government," Bush asserted. "I believe the best kind of decision-making occurs when consumers make decisions and the relationship between their doctors and the patients [becomes] the

SEE **PRESIDENT VISITS**, PAGE 6

Singing, Shopping, Schmoozing Lauded

STEP Forum Outlines Successful Brain Aging

By Rich McManus

The best way to enjoy "successful brain aging"—which was the theme of a STEP forum on Jan. 11 at Lister Hill Auditorium—is to keep the cart that holds the brain, namely the body, in good working condition. Oh, and it wouldn't hurt, in your later years, to take up a creative hobby like singing or art, or to indulge what one speaker called a hallmark of the sunset years—the urge toward autobiography. Swooned former acting NIA director Dr. Gene Cohen, now at George Washington University, "Language is like chocolate to the brain."

Dr. Marilyn Albert

While it is commonly held that "aging is not for sissies," it must have been something of a relief for the standing-room-only

SEE **BRAIN AGING**, PAGE 8

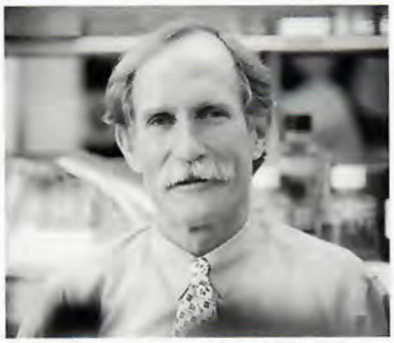
Perimenopausal Depression Study

Are you experiencing mood disturbances and has your menstrual cycle been irregular for at least 6 months? You may be an excellent participant in the NIMH study of phytoestrogens in the treatment of perimenopausal mood symptoms. This 8-week study is seeking women ages 40-60 years old in good physical health and medication free. Call Linda Simpson-St. Clair at (301) 496-9576 (TTY 1-866-411-1010).

NOBELIST AGRE, CONTINUED FROM PAGE 1

discovered how ions move through cell membranes. "So the humble truth is, this brilliant discovery began as an accidental observation," Agre said laughing.

A professor of biological chemistry and professor of medicine at Johns Hopkins University School of Medicine, Agre will deliver the NIH Director's Lecture on "Aquaporin Water Channels: From Atomic Structure to Clinical Medicine," on Wednesday, Feb. 23 at 3 p.m. The lecture will take place in Masur Auditorium, Bldg. 10.



Nobel laureate Dr. Peter Agre

More than 10 aquaporins have now been identified in humans and the clinical implications are enormous, Agre said. Several labs are using the newfound information on aquaporins to try to develop treatments for various diseases and conditions. "Any fluid transport problem will almost certainly involve aquaporins," Agre noted. "One such problem is the swelling that results after a stroke or accidental head injury. Swelling that occurs in one structure of the brain does so at the expense of compression in another," he said. "It would be fantastic if more research on aquaporins could lead to a new treatment for this condition."

There are now many other examples of clinical syndromes linked to poorly functioning water channels, he continued. In the kidney, faulty aquaporin regulation can lead to a condition in which the kidneys cannot concentrate urine and patients become dehydrated. Or, conversely, an overabundance of aquaporins may lead to fluid retention in congestive heart failure and in pregnancy. An abnormal distribution of aquaporins in salivary gland cells might contribute to salivary gland dysfunction. In a disorder called Sjogren's syndrome, for example, saliva production may be so limited that people lack enough of it to properly chew, swallow or speak.

These previously unknown water channels have been discovered in animals, plants and lower organisms. "In our lab, we're currently looking at the role of aquaporins in microorganisms, because each microorganism has at least a few of these," Agre said. "We're wondering if these are potential drug targets in the treatment of tuberculosis or malaria."

Agre's work on aquaporins began with support from NHLBI. "The NIH has made all the difference; it was the NIH funding, and scientific help from our colleagues at Hopkins, that got us started on this," he said. "In fact, it's really the taxpayers who get credit for this research, because they funded it." Agre currently has grants from NEI as well as NHLBI.

A native of Minnesota, he received a bachelor's degree in chemistry from Augsburg College in Minneapolis and earned an M.D. from Johns Hopkins. He completed a residency in internal medicine at Case Western Reserve University Hospitals then held a clinical fellowship in hematology/oncology at the University of North Carolina at Chapel Hill. He joined the faculty at Hopkins in 1984 and rose through the ranks to his current position. He also has served as director of the Johns Hopkins Graduate Program in Cellular and Molecular Medicine, the first NIH-funded program in molecular medicine in the U.S.

For more information and reasonable accommodation, contact Hilda Madine at (301) 594-5595 or hmadine@cc.nih.gov. ■

All Beethoven's Quartets in Concerts

The FAES Chamber Music Series presents the Auryn Quartet performing all of Beethoven's Quartets on the following dates: Saturday, Mar. 5 at 8 p.m.; Sunday, Mar. 6 at 4 p.m.; Saturday, Mar. 12 at 4 p.m.; Sunday, Mar. 13 at 4 p.m.; Saturday, Mar. 19 at 8 p.m.; Sunday, Mar. 20 at 4 p.m.

All performances are at the Landon School's Mondzac Performing Arts Center, 6101 Wilson Lane in Bethesda. Tickets may be purchased at the door or in advance (in Bldg. 60, Suite 230, or the FAES Bookstore in Bldg. 10, Rm. B1L101). Tickets are $25; students, postdocs, pre-IRTAS, fellows, $10. ■

NIH RECORD

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Fridays To Be Paydays

NIH To Convert to Defense-Run Pay Service

NIH will convert to the Defense Finance and Accounting Service (DFAS), which will provide payroll to the agency, starting Mar. 20. DFAS was originally created in 1991 by the Secretary of Defense to reduce the cost of the Defense Department's accounting operations. Currently, it is the world's largest finance and accounting operation.

In November 2002, the Office of Personnel Management assigned DFAS as the provider of payroll services to all agencies under the Department of Health and Human Services. By identifying DFAS, along with three other agencies, OPM consolidated the number of payroll service providers throughout government from 22 to 4.

This was the first step taken in the government's ePayroll initiative, a directive of the President's Management Agenda. The goal of ePayroll is to eventually consolidate down to one payroll system for all 1.8 million civilian employees, which is estimated to save taxpayers $1 billion over the next decade.

Under DFAS, the Defense Civilian Pay System Consolidated Payroll Office in Charleston, S.C., will service HHS employees. Changes, due to the Mar. 20 conversion, have already become apparent with the announcement that employees will now be officially paid on every other Friday, as opposed to every other Tuesday.

Other changes to come include: an increase in the number of pay allotments allowed, a different appearance for Leave and Earnings statements, and a new system to replace Employee Express called myPay. Employees may also see differences in how state and federal taxes, as well as Medicare and OASDI (Federal Old-Age and Survivor's Insurance) are deducted from their pay. Also because of the conversion, two W2 forms will be sent to NIH employees for the year 2005—one for the period when they were paid under DFAS and another for the pay they earned under the old system.

The Office of Human Resources is preparing for the Mar. 20 conversion date by establishing a DFAS conversion workgroup, made up of HR specialists and NIH management officials. The DFAS workgroup chair, Nancy Bagley, an OHR Client Services Division branch chief, says that the group is working on several ways to get the message out to employees regarding DFAS.

"There are several issues regarding this new system that will specifically affect how employees get paid," says Bagley. "We are striving to give each NIH employee an opportunity to learn about the various aspects of DFAS."

The workgroup has arranged five employee information sessions in early March:

Natcher Auditorium—Tuesday, Mar. 8, 1:30 to 3:30 p.m. (Video conference capability for NIEHS employees in 204-B, Nottingham Hall)

6001 Executive Blvd. (Neuroscience), Rm. C—Wednesday, Mar. 9, 1:30 to 3:30 p.m.

Fernwood Bldg. 2C-13—Thursday, Mar. 10, 1:30 to 3:30 p.m.

Bldg. 10, Masur Auditorium—Tuesday, Mar. 15, 1:30 to 3:30 p.m. (Video conference capability for NIEHS employees in 101-C, Rall Bldg.)

NCI Bldg. 549 Auditorium, Frederick
Thursday, Mar. 17, 1:30 to 3:30 p.m.

OHR's Bagley assured, "Information will be available for those at NIH who want it." She said NIH'ers will be notified through employee meetings, email, fliers and posters and articles for NIH publications about updates and learning opportunities regarding DFAS up to, and continuing after, Mar. 20. For more information visit http://intranet.hhs.gov/epay. ■

CRC Courtyard Honors Florence Mahoney

It may have been cold outdoors, but there was a warm feeling inside the Atrium at the Clinical Research Center as friends of Florence S. Mahoney and officials from NIH came together recently to dedicate the hospital's East Courtyard in her honor.

NIH director Dr. Elias Zerhouni welcomes guests to the dedication of the Florence S. Mahoney Courtyard. An artist's drawing of a bust of Mahoney is at left.

It was a day to remember Mahoney's lifelong interest in health and science, her dedication to NIH and her role in persuading Congress to increase federal funding for medical research. Taking part in the ceremony were NIH director Dr. Elias Zerhouni, Dr. Richard Hodes, director of the National Institute on Aging, Dan Perry, executive director of the Alliance for Aging Research, and Dr. Robert Butler, founding director of NIA and currently president of the International Longevity Center.

Along with personal memories of a charming and determined woman, Mahoney was portrayed as an effective advocate of NIH whose crowning achievement was her almost single-handed campaign to create the NIA. She continued her interest and involvement until her death in 2002 at age 103.

A commemorative plaque has been placed in the Florence S. Mahoney Courtyard and the honoree's friends and family have commissioned artist Perry Carsley to design a bust of Mahoney that will eventually be placed in the garden. ■

NABEL, CONTINUED FROM PAGE 1

renowned researcher, Dr. Nabel brings a well-rounded scientific background and strong management skills to this position," said NIH director Dr. Elias Zerhouni, who announced the appointment. "She has championed the concept from 'bench to bedside.' This effort to bring research advances into clinical practice continues to be a focus of the NHLBI and of NIH."

Nabel is a board-certified cardiologist who has taken care of many patients with cardiovascular disease. She joined NHLBI in 1999 as scientific director of clinical research. Among her accomplishments in that role, she initiated a cardiothoracic surgery branch. She also began a program to investigate genetic variation among patients with vascular diseases. Nabel has also served as chief of the vascular biology section, directing research on the molecular, cellular and genetic mechanisms that cause vascular disorders. Her lab, which has published more than 200 papers, has studied factors involved in the regulation of vascular smooth muscle cell growth and vascular inflammation. This research has opened up new avenues for therapeutic targets for vascular diseases. Nabel will maintain her lab, which will be housed at NHGRI beginning in October.

"I am honored to lead the NHLBI," she said. "The institute has a long and distinguished record in support of research on heart, lung, blood and sleep diseases. As we look to the future, there are unprecedented opportunities to advance our understanding of these diseases and to improve upon the care and treatment of the millions of people affected by them. The NHLBI will strive to address these challenges through a research agenda that builds upon innovation, creativity and the most advanced biomedical technologies."

A native of Minneapolis, Nabel received her medical education at Cornell University Medical College before moving to Brigham and Women's Hospital and Harvard University where she completed an internship and residency in internal medicine and a clinical and research fellowship in cardiovascular medicine. She joined the faculty at the University of Michigan in 1987 as an assistant professor of medicine and rose through the ranks, becoming director of the Cardiovascular Research Center in 1992, professor of internal medicine and physiology in 1994, and director of the division of cardiology in 1997. While at Michigan, she became known for her research in the field of vascular biology and molecular cardiology and for her gene transfer studies of the cardiovascular system.

Nabel has earned numerous awards including the Distinguished Achievement Award from the American Heart Association and the Amgen-Scientific Achievement Award from the American Society for Biochemistry and Molecular Biology. She is an editorial board member of the *New England Journal of Medicine* and has been a reviewing editor for *Science* and an editorial board member of the *Journal of Clinical Investigation*.

Nabel has served on the board of directors of the American Heart Association and has served as chair of the scientific publishing committee and the atherosclerosis, thrombosis, and vascular biology council. She is a past president of the North American Vascular Biology Organization and councilor of the American Society of Clinical Investigation.

Since Dr. Claude Lenfant's retirement in 2003, NHLBI has been led by acting director Dr. Barbara Alving. She will return to her position as deputy director, a job she has held since 2001.

Tongue Study Needs Vols

NIH invites you to participate in a clinical study to learn more about the tongue. Information obtained from this study may assist in improving treatment for individuals with swallowing difficulties. Call 1-800-411-1222, or TTY 1-866-411-1010, for information. Or visit www.cc.nih.gov. All study-related tests or treatment are provided at no cost. Participants will be compensated.

EAO Group Elects New Cochairs

The NIH extramural administrative officers (EAO) group met recently to elect two new cochairs for 2005. They are Linda Jacobson and Robin Prigal of NHGRI. They will serve a 1-year appointment to lead the group in its monthly meetings.

Tondalayo Royster of NIAMS will replace NEI's Darlene Lee as treasurer of the group. Outgoing cochairs are Matthew Burr, NEI, and Celena Shirley-Graham, NIAID.

Members of the EAO group include (from l) Celena Shirley, Tondalayo Royster, Darlene Lee, Robin Prigal, Linda Jacobson and Matthew Burr.

The group serves as a resource for communicating the latest administrative issues and developments at NIH. To accomplish this goal, the group meets monthly and holds additional "super sessions" and an annual retreat. Information from the executive officer meetings, as well as other projects that are in development, are major sources of discussion and agenda topics at each meeting. Additionally, various EAO subcommittees provide reports to keep members abreast of developing issues and concerns.

Outgoing cochair Burr remarked, "I view participation with the EAO group as vital to keeping well informed about administrative changes that impact NIH. This group provides a forum for AO's to come together and share ideas, form plans of action, work together as a community and serve as an administrative resource to others at NIH."

'Priests and Prophets'

Diabetes Branch Alumni Toast Mentors

By Joan Chamberlain

The teachers listened attentively in the dim light of Lipsett Amphitheater, savoring each student's funny stories, appreciative comments and earnest accounts of cracking the secrets of receptor biology and insulin resistance, told as always with the colorful slides that explain the stories of science. The students in this case were alumni of the Diabetes Branch, celebrating its 30th anniversary as part of NIDDK's Division of Intramural Research.

Some were M.D.s who had come to NIH as clinical associates in the 1960s and 1970s to pursue careers in academic medicine. Others, Ph.D.s and M.D./Ph.D.s, came as research associates eager to work with some of the world's leading diabetes investigators. These former students—now top scientists heading labs in prestigious academic centers and drug companies around the country—have gone on to pry open, at least partially, the black boxes of insulin, adrenaline and other hormone receptors as well as syndromes of hormone resistance and the genetics of type 2 diabetes. At a recent 1½-day event, they paid homage to their mentors in "Celebrating the Diabetes Branch: A Tribute to Jesse Roth and Phil Gorden."

Roth came to NIH in 1963. Intrigued by the mysteries of hormone action, he and coworkers (Pastan, Lefkowitz, and Pricer) were the first to develop an assay for the receptor for ACTH, the pituitary hormone that stimulates the adrenal gland to secrete the hormone cortisol. Their pioneering work inspired an explosion of studies that sought to clarify how hormones bind to cell surface receptors, the first step in hormonal activation of target cells. In 1971, Roth and his co-investigators developed an assay for the insulin receptor. Since then, much of their work focused on understanding disorders of cell receptors and the complexities of insulin resistance, the hallmark of type 2 diabetes.

Roth was chief of the Diabetes Branch from 1974 to 1983 and NIDDK scientific director from 1983 until 1991, when he left NIH to join Johns Hopkins University. He is now geriatrician-in-chief at the North Shore University Hospital/Long Island Jewish Health System in New York and professor of medicine at Albert Einstein School of Medicine.

Gorden was NIDDK clinical director from 1980 to 1986 and chief of the Diabetes Branch from 1983 to 1986. After serving as NIDDK director from 1986 to 1999, he returned to clinical research as chief of the section on clinical and cellular biology in the Diabetes Branch. There he continues to study extreme forms of insulin resistance, disorders involving mutations in the insulin receptor and autoantibodies to the insulin receptor. He and coworkers have shown the effectiveness of leptin therapy in reducing insulin resistance in patients with complete lipodystrophy and extreme forms of insulin resistance.

Diabetes Branch celebrants included (from l) Dr. James Gavin, branch alumnus and president, Morehouse School of Medicine; Susan Roth and husband Dr. Jesse Roth; Dr. Jacob Robbins, former director of NIDDK's Clinical Endocrinology Branch; Dr. Phillip Gorden and Dr. Ed Rall.

Stellar as their own research accomplishments are, Roth and Gorden will perhaps be remembered best for the guidance and inspiration they gave the young researchers under their tutelage. They collaborated with and trained an exceptional group of scientists in the United States and overseas, who are making seminal contributions to endocrinology research.

Diabetes Branch alumni attending the event are now directors of diabetes research centers and heads of endocrine divisions in major academic centers around the world. "We've tried to impart to our own students the approaches to scientific inquiry that we learned from these great mentors and that worked so well for us," said Dr. Derek LeRoith, current chief of the Diabetes Branch and an organizer of the event.

Dr. Jean-Louis Carpentier, dean of the University of Geneva's Medical School, remembered the sign that hung behind Roth's desk: "In God We Trust," it said, "All others must show their data."

In his toast to the spirit of intramural NIH, Roth recalled seeking the advice of his predecessor, Dr. Ed Rall, when he assumed the position of NIDDK scientific director 21 years ago. "Pick excellent people, encourage them, don't tell them what to do," Rall advised. "To live up to its creative potential, an institution needs to resist the tyranny genes," Roth warned.

He spoke of two approaches to scientific discovery: the priestly tradition, in which each step is an orderly, logical derivative of an earlier step, and the prophetic tradition, where science jumps ahead, coming from inspired, creative thought almost out of nowhere. "The giants come from the prophetic tradition," said Roth, who liked to remind his fellows that NIDDK's four Nobel Prize winners had worked within 150 feet of where he was standing on the 9th floor of Bldg. 10. ■

PRESIDENT VISITS, CONTINUED FROM PAGE 1

cornerstone of good health care policy."

He came to endorse health savings accounts (HSAs), a way to widen health care coverage for citizens by offering tax-free accounts to be used for medical care. Unlike traditional health insurance, in which deductibles are low, but premiums high (and shared by employer and employee), HSAs feature fairly high deductibles. But HSAs allow contributors to save what they put into them year after year, until the money is needed; once the deductible is exceeded by expenses, insurance kicks in for the rest of coverage. Bush's plan is intended to encourage more free-market competition among insurers, more choice among consumers, and wider coverage for the nation's huge numbers of uninsured or under-insured workers.

PHOTOS: ERNIE BRANSON

NIH director Dr. Elias Zerhouni greets the President as NCI director Dr. Andrew von Eschenbach (l) and Maryland Gov. Robert L. Ehrlich, Jr. look on.

Masur Auditorium was packed with guests invited by the White House, along with a representation of NIH, FDA and Health Resources and Services Administration employees.

The President acknowledged a handful of audience members, including Maryland Gov. Robert L. Ehrlich, Jr. (R) and NIH director Dr. Elias Zerhouni. "I appreciate the job you're doing Doc," he said to Zerhouni. "You're doing a fabulous job."

Bush gave the audience a preview of his State of the Union speech by touching briefly on a number of international topics before addressing the issue at hand. Among his highlights: the presidential election in Afghanistan ("millions of people voted for a president for the first time in 5,000 years"); elections in Palestine ("I believe a Palestinian democracy will emerge and will grow, enabling us to achieve a goal of two states, Israel and Palestine, living side by side in peace."); and recent elections in Ukraine and Iraq. On the domestic front, he mentioned his No Child Left Behind education initiative; the budget ("The budget I submit to the United States Congress will work on reducing our deficit in half over a 5-year period of time."); economic issues such as free trade, low taxes, recovery from recession; Social Security reform ("The system is broke. It's flat bust."); and legal reform, including asbestos law, class action lawsuits and medical liabilities.

Dr. Michael Gottesman (c), NIH deputy director for intramural research, points out a site to the President during Bush's Jan. 26 visit.

During the discussion on HSAs, the President gave his rationale for the system: "A health savings account enables a person to be in charge of his or her own health care decisions. Health care savings accounts will cover major catastrophic problems, and at the same time, allow a person to save, and/or a business to save tax-free for the everyday expenses of health care. And if, in fact, you have not reached your limit for your catastrophic care—in other words, if you have money left over, you can roll it over, tax-free, into a savings account that you call your own."

During the dialogue, Bush also touched on related topics such as expanded community health care centers, making generic drugs more widely available, and modernizing health care with strengthened IT (information technology).

He said, "I want to remind you all that we will continue to promote an adequate safety net for our citizens, and by that, we've got community health centers in America today. I want to continue to expand community health centers. This is the place where the poor and the indigent can get primary care. And they're great centers. And Congress has been very cooperative in the past of funding our budget requests, and I hope they do again as we continue to expand these community health centers all across the United States of America."

He thanked the FDA "for propagating rules that

Bush emceed a discussion with five citizens on "Strengthening Health Care."

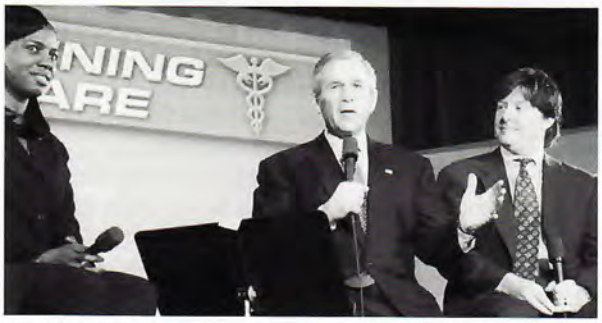
Bush shares a laugh with HRSA administrator Dr. Elizabeth Duke and FDA acting commissioner Dr. Lester Crawford at a receiving line in the CRC lobby.

prevent pharmaceuticals from delaying the advent and access to our consumers of generic drugs. These drugs do the exact same thing as brand name drugs do and, yet, cost a fraction of the cost of the brand names. And so we're doing a better job of speeding generics to the markets. And that's a positive development for our seniors, and all citizens for that matter."

With respect to IT, he noted, "We've got 21st century medical practices, but [a] 19th century paperwork system. Doctors are still writing prescriptions by hand. Most doctors can't write clearly anyway...So there's a better way to enable our health care system to wring out inefficiencies and to protect our patients. So medical electronic records is going to be one of the great innovations in medicine."

The President introduced and interviewed his guests, eliciting details about the benefit of HSAs and good-naturedly interrupting their accounts to make certain points. The forum enabled him to display the endearing political gifts of self-deprecation (he mangled the pronunciation of several of the guests' names) and spontaneous recovery from gaffes (he is not unlike the late Johnny Carson in his comic timing).

Though NIH itself was not a topic for the discussion, Bush nonetheless left the audience with no doubt about his position on how the fruits of medical research ought to be applied: "The federalization of health care would be bad medicine for the American people." ■



Bush leads a discussion about health savings accounts with panel including Tammi Fleming (l), program director at Healthcare for All in New Orleans, and William Lomel, owner of Titan Roofing in Atlanta.

CIT Computer Classes

All courses are given without charge. For more information call (301) 594-6248 or consult the training program's home page at http://training.cit.nih.gov.

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NIH Training Center Classes

The Training Center supports the development of NIH human resources through consultation and provides training, career development programs and other services designed to enhance organizational performance. For more information call (301) 496-6211 or visit http://LearningSource.od.nih.gov.

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Malaria Vaccine Study Needs Volunteers

Healthy men and women ages 18-45, without previous history of malaria or receipt of a malaria vaccine, are needed to participate in a study on the safety and effectiveness of a new investigational malaria vaccine at Walter Reed Army Institute of Research in Silver Spring. Health screening and financial compensation provided. Call 1-866-856-3259 toll free or (301) 319-9335/9320, or visit www.wrairclinicaltrials.com. ■

Volunteers Needed for Jet Lag Study

NICHD is looking for travelers going east 6-8 time zones to study the effects of replacing hormones disrupted by jet travel. Participants will take a study medication (hydrocortisone, melatonin, or placebo), fill out questionnaires and obtain salivary samples. Travel stay of 4-10 days at destination required. Healthy men and women, between ages 18-65 are encouraged to call 1-800-411-1222. Compensation provided for a completed study.

BRAIN AGING, CONTINUED FROM PAGE 1

audience (and many more peering in via videocast) to learn from Dr. Marilyn Albert, director of the division of cognitive neuroscience at Johns Hopkins University's department of neurology, that the one activity that combines exercise, mental alertness, social stimulation—and perhaps a dandy new pair of pumps—is shopping. Perhaps aging baby boomers should adopt the mantra, "Shop, So You Don't Drop!"

The four-speaker panel reinforced with data what common sense has instructed humankind for millennia with respect to getting old. One speaker, Dr. Margie Lachman, who chairs the department of psychology at Brandeis University, even resorted to a quotation from Cicero, written in 44 B.C., to sum up her findings: "It is our duty, my young friends, to resist old age; to compensate for its defects by a watchful care; to fight against it as we would fight against disease; to adopt a regimen of health; to practice moderate exercise; and to take just enough food and drink to restore our strength and not to overburden it. Nor, indeed are we to give our attention solely to the body; much greater care is due to the mind and soul; for they, too, like lamps grow dim with time, unless we keep them supplied with oil."

PHOTOS: BILL BRANSON

What kind of "oil" might Cicero have had in mind? According to Albert, a raft of large longitudinal studies that began in the mid-1980s underscore "the importance of vascular risk factors in maintenance of cognition." These include blood pressure, diabetes, cholesterol, weight and smoking. "If you have lots of risk factors," she noted, "it is likely that you will have damage to the large and small arteries in the brain."

Physical and mental activity also appear to be critical in maintaining mental ability, Albert said, though the exact mechanism by which these behaviors exert their beneficial effect is not yet known. She cautioned that many of her findings are the fruit of large observational or epidemiologic studies; the more authoritative clinical controlled studies have been few and small.

Guest speakers at the STEP forum on brain maintenance were (from l) Dr. Gene Cohen, Dr. Gary Small, Albert, and Dr. Margie Lachman.

The attitude one brings to the march of years is also crucial in determining how successfully one negotiates them, suggested Brandeis's Lachman. She and her colleagues have studied the effect of "control beliefs"—those who embrace a sense of control over how life will turn out often see their optimism rewarded, in a sort of positive feedback loop. Contrarily, those who believe they are at fate's mercy tend to trend downward in measures of health.

"Attitudes and beliefs make a difference in whether or not we follow all the recommendations and prescriptions for activity and healthy diet," she explained. "Adaptive beliefs, including whether you can do something and whether it will make a difference, play a role in health promotion and successful aging."

Even the committed pessimist—if he practices control strategies—may live long enough to call himself by a new name.

According to a Pew Center Study published last summer, Americans lead the world in "get 'er done" optimism. A survey of 38,000 people in 44 countries asked respondents to agree or disagree with the statement, "Success in life is pretty much determined by forces outside our control." More than 60 percent of Americans disagreed. By contrast, only about 10 percent of respondents in Bangladesh disagreed.

"In the United States, there are products on the market that claim control over everything from allergies to zits—there's even a margarine called 'Take Control,'" Lachman observed. Products targeted specifically against the aging process represent a $40 billion-a-year industry, she said. But a robust sense of control is a good thing, she argued, not just empty Chamber of Commerce boosterism—it promotes behaviors leading to health and well-being, and offers compensation strategies once the handwriting has begun to show up on the wall. While it is true that the older Americans get, the more pared-away their sense of control becomes, there are nonetheless strategies we can employ to counter age-associated deficits, Lachman demonstrated. Even the committed pessimist—if he practices control strategies—may live long enough to call himself by a new name, she suggested.

Perhaps the poster child for an optimistic sense of robust, possibility-filled aging is GW's Cohen, who has made the later years of his own career (he spent 20 years at NIH in posts at both NIMH and NIA) more productive and enjoyable by finding not-so-rare examples of hearty aging, interviewing them and learning the keys to their success. In both anecdote and research paper, he showed that aging is often a time of ripe blossoming, of surpassing

accomplishment, and perhaps not so incidentally, of deepening contentment.

"There's no denying the problems associated with aging," he began, "but what has been denied...is the potential."

What the seniors among us have, Cohen argued, is access to long-accumulated masses of information, and a rich trove of experiences both inner and outer. Combined in the form of a whimsical equation, C (creativity) equals M (mass of info) E (experience) squared—which inverts Einstein's famous finding. Einstein, he noted, had an unusually high volume of glial cells (the "soup" that nourishes neurons, or brain cells), upon autopsy. Modern neuroscience, Cohen said, has shown that the greatest increase in the number of dendrites in the brain occurs between the early fifties and late seventies, and that enriched, stimulating social environments contribute to brain plasticity. While the maxim "use it or lose it" is generally true with respect to human faculties, Cohen said, "It's never too late to 'use it' in order to alter [age-associated] losses."

Brandeis's Lachman makes a point.

Cohen described an especially hopeful study by Dr. Thomas A. Glass and colleagues showing that, with respect to health outcomes, couch potatoes who have lively social outlets do as well as active seniors who make fitness a priority.

He noted that "there has been very little work elaborating psychological development in the latter half of life," but has made the study of human potential in those chapters his research focus. Among his findings: seniors who actively pursue creative expression (singing, painting artworks, for example) suffer less depression, need fewer doctor visits and require less medication than age-matched controls who don't avail themselves of such outlets; and, for elders who use their twilight years to "sum up" their lives autobiographically, rarely is language more appreciated than at this stage of life. "Language is like chocolate to the brain in humans," he said.

That hankering for chocolate in an "aging" brain can begin as soon as the early twenties, said Dr. Gary Small, director of the UCLA Center on Aging; even at that tender age, there begin to be age-associated decrements in cognition. And there better be plenty of Hershey's to go around: between 40 and 50 percent of the U.S. population report some age-associated memory impairment, he said.

There really isn't any getting around it—whether you're a rodent, a monkey or a man, if you get older, you lose a few marbles, noted Johns Hopkins' Albert. "These losses aren't necessarily associated with any disease, it's just a normal decline," she said. And it's not that we in the animal kingdom lose brain cells by the boatload as we age, she explained, but that somehow there are changes in mechanisms that modulate brain function.

UCLA's Small offered some strategies for improving memory and decelerating brain aging. For those at increased genetic risk of Alzheimer's disease (as marked by the ApoE4 gene, or as suggested by PET or MRI scan, or by neuropsychological profile), he showed that early detection and early intervention are important. Cholinergic treatment with the drug galantamine can delay the deterioration seen in AD patients.

For those aging normally, some brain fitness strategies include: use of medications that have shown some protective effect such as antihypertensives, statins and anti-inflammatory drugs; avoidance of too many medications, which might interact negatively; stress reduction (proneness to stress doubles the risk of AD, Small said); physical activity (echoing both Dr. Albert and Cicero of antiquity); healthy lifestyle choices; healthful diet and mental activity. Like GW's Cohen—who recommended activities "that make your brain sweat a little"—Small noted that "leisure activity involving mental effort is associated with lower dementia risk for seniors."

Small described a "healthy brain diet" as suggested by observational studies: moderate caloric intake to avoid the ailments associated with obesity; antioxidants consumed as food (prunes, raisins, blueberries, plums, broccoli) or vitamins (E and C); omega-3 fatty acids (fish, olive oil, avoid animal fats); and low glycemic index carbohydrates such as apples, apricots, cherries, fettucine and nonfat yogurt.

He showed study results suggesting that any kind of mentally challenging activity might be protective, including doing crossword puzzles, learning languages, reading novels and completing jigsaw puzzles. Small also reviewed studies demonstrating that memory training can improve memory performance and brain efficiency, and that such benefits persist over time.

As in 44 B.C., so in 2005 A.D.—try to keep your stress level low, stay in good physical shape, eat right and keep your mind creatively engaged. As Small pointed out, all of these have potential benefit, and all have minimal risk.

To see the complete STEP presentation, visit www.videocast.nih.gov. ■

Trouble with Tune Deafness?

NIH invites you to participate in a clinical study about tune deafness and inherited factors that may cause this inability to recognize wrong notes in a popular melody. If you are between 15 and 65 years old, have trouble telling one song from another, but your hearing is normal and you were raised in the United States, call 1-800-411-1222 or TTY 1-866-411-1010 for information, or visit http://clinicalcenter.nih.gov. All study-related tests are provided at no cost. Compensation is provided. Refer to study # 00-DC-0176.

Langer To Address NCI Nanotechnology Seminar

The National Cancer Institute will host the second in a new lecture series featuring innovative perspectives on current research and development efforts in nanotechnology applied to cancer diagnosis, treatment and prevention. The lecture, to be held Thursday, Feb. 24 will feature Dr. Robert S. Langer, Kenneth J. Germeshausen professor of chemical and biomedical engineering at the Massachusetts Institute of Technology. His lecture, "Novel Drug Delivery Systems for Cancer," will be held from 2 to 3 p.m. in Lipsett Amphitheater, Bldg. 10. Sign language interpreters will be provided. For more information, visit http://nano.cancer.gov/events_nanotech_seminar_series.asp.

CIT Training Offers Spring Courses

The CIT Training Program's spring semester 2005 is now open for registration for employees, staff and other users of NIH computing facilities. A wide range of courses is designed to help NIH'ers work as efficiently and effectively as possible. All classes are free; the full schedule, as well as registration information, is available at http://training.cit.nih.gov.

There are over 130 different topics to choose from—over 30 of those new this term—and they are intended to meet the needs of all types of staff. The new courses include Windows XP tips, Presentation for Neuroscientists, Filemaker 7, Novell Linux, Perl, Listserv and a first look at the much anticipated Tiger.

For end users, "Windows XP Tips and Tricks" will help make use of configuration shortcuts, key strokes, policy settings and registry tweaks that customize and improve your XP experience.

With the introduction of "Fundamentals of Filemaker 7" and "Migrating to Filemaker 7," students can take advantage of the features of this substantially changed version of the software. Filemaker 5 and 6 courses have been offered at CIT for several years and there is a new generation. Users of Filemaker 6 may be interested to know that this semester will be the final offering in 6 classes.

Neuroscientists have four new entries in Presentation courses from Neurobehavioral Systems. Presentation is a precise and powerful stimulus delivery and experimental control program for neuroscience. It runs on any Windows PC, and delivers auditory, visual and multimodal stimuli with sub-millisecond precision. The courses include a general introduction to the Presentation software, information in programming experiments using Presentation Control Language, and a demonstration of a visual fMRI experiment from scratch to completion.

For the first time, CIT offers a full week of courses in Medical Image Processing Analysis and Visualization (MIPAV) training. The new class, "Writing MIPAV Plug-ins," has been added to four existing topics to provide students with a full range of MIPAV course options.

Two more new courses, "Introduction to Novell Linux Desktop" and "Introduction to Novell SUSE Enterprise Server," will introduce open source standards and common knowledge and skills needed in all Linux distributions. The Desktop course will help the student operate Novell Linux Desktop 9. Students in the SUSE Enterprise course will gain the essential skills required to log in to a multi-user Linux environment, to navigate the SUSE Linux file system and more.

"Beginning Perl" is offered this semester with a new instructor. This course provides a basic understanding of Perl, a flexible programming language that excels at reformatting data and manipulating long strings of text. Perl is a great first programming language for those who find spreadsheets too limiting.

Another course has been added in our Listserv category. The NIH Listserv currently hosts over 2,900 lists and was upgraded to the latest version in October 2004. "What's New in Listserv 1.8e for List Owners" is designed to explore the differences between the old and current versions, as well as additional features in the newest version.

The problems of control and space for servers are addressed in another new course. "Need Better Space for Your Servers? Consider Co-location" offers helpful information on this topic.

In addition to our regular courses in MATLAB, a new course, "MATLAB for Computational Biology" is offered this semester. This class will cover easy data import and manipulation, extensive data visualizations to aid intelligent conclusion-drawing and rapid application development.

For Mac users, Apple is sponsoring training for the upcoming version of the OS X Operating System, Tiger. The course titled "What's New with Tiger?" will provide students a preview of the much anticipated system.

In response to the increasingly critical issues in computer security, CIT is offering a new course, "Meeting the Challenges in Desktop Security Patch Management at NIH." This class joins returning favorites in security courses such as "SARA Basics," "Network Security and Firewalls," "Basic Security for Unix Workstations," and "Security Penetration Testing, A Practical Overview."

The NIH Library is offering three new courses, including "Reference Manager & Endnote Drop-in Clinic," "Drug Information" and "Complementary & Alternative Medicine."

The HHS Learning Portal now offers another venue of training opportunities for NIH'ers. Their online catalog offers more than 2,000 free e-Learning courses developed by Skillsoft, a top market leader in online learning. Topics include project management, communications skills, desktop applications and information technology. The Learning Portal, a joint initiative between HHS University and the Office of Personnel Management, just went live last month. For more information, visit www.learning.hhs.gov.

For more information on CIT classes, call (301) 594-6248, (TDD 301-496-8294).

ADHD Genetics Study

Take part in an NIH study seeking to identify the genes that contribute to attention deficit hyperactivity disorder (ADHD). For more information call 1-800-411-1222 (TTY 1-866-411-1010).

New Patient/Visitor Gateway To Open Soon

Patients and their visitors at the Clinical Center will soon be, quite literally, taken under NIH's wing as the new Patient Gateway opens at the intersection of West Cedar Lane and West Drive. Part security screening center and part CC hospitality station, the new structure—whose rooftop "wings" are designed to shield guests from the elements—is due to open soon. It's for use by patients and their visitors.

The gateway especially for patients, an idea championed by CC director Dr. John Gallin, is designed to provide a more hospitable welcome. "Our patients are important and we want their experiences here to be smooth from the start," he said. "The new entrance will simplify and ease access to NIH. Clinical Center hospitality staff stationed there will provide directions, answer questions and generally help ease the transition onto campus."

Patient Gateway mimics CRC front canopy.

The facility itself features a 780-square-foot visitor processing center, two vehicle inspection lanes and a security booth. It's for entrance to campus only, although it can be used as a campus exit in emergencies. NIH security staff will conduct security screenings and vehicle inspections. The typical user will pull up, get out of the car, be greeted and go through security screening while his or her car is being inspected.

Heavy-duty gates and barriers bar the door once the Patient Gateway is closed during off-hours.

The gateway was designed by LSY Architects, noted Karen Rhodes, a program manager in the Office of Research Facilities. The same firm has designed the entire campus perimeter security system, including the fence, the campus entrances and the soon-to-be-built Commercial Vehicle Inspection facility along Rockville Pike near Cedar Lane. Construction began in September 2004 and is expected to be completed soon. ■

Management Internship Program Recruits

If you've thought about changing your career path or developing more depth and breadth of knowledge about NIH, the Management Intern (MI) Program may hold the keys to your future. Entering its 48th year, the program—a highly competitive 2-year rotational training opportunity—has graduated dozens of interns, many of whom now hold high-level managerial positions with NIH and other federal agencies. Outstanding men and women who have a clear interest in and a commitment to a career in public service are strongly encouraged to apply for the 2005 MI Program.

Eligible candidates must be either a current career or career conditional NIH employee at the GS-5 level or above or wage-grade equivalent or on any other type of appointment that offers noncompetitive conversion during the application period. This year, the program is accepting candidates at the GS-11 level.

The application period closes on Mar. 14. Interested applicants should review the MI web site at http://internships.info.nih.gov or attend one of the information sessions: Feb. 15, Rockledge Center II, Conf. Rm. 9112, noon to 1:30 p.m. or Feb. 16, Bldg. 10, Rm. 2C116, 11:30 a.m. to 1 p.m. ■

NIH Sailing Association Open House

The NIH Sailing Association invites everyone to its open house on Thursday, Mar. 3 from 5 to 7 p.m. at the FAES House on the corner of Old Georgetown Road and Cedar Lane. Would you like to learn to sail? Does the idea of racing sailboats appeal to you? Membership includes instruction, sailboats for charter, racing, cruises, parties and fun. Admission is $5 at the door and includes pizza and sodas; $2 for beer or wine. For more information, visit www.recgov.org/sail. ■

Ever Have Postpartum Depression?

If you have a history of postpartum depression (PPD) following the birth of any of your children, consider participating in a PPD study with NIMH. The study seeks to examine if your PPD was caused by hormonal changes during or after pregnancy. The study is recruiting female participants between the ages of 20-45 years old. Call Linda Simpson-St. Clair, (301) 496-9576 (TTY 1-866-411-1010).

Secretary Thompson Bids NIH Farewell in Jan. 13 Visit

HHS Secretary Tommy G. Thompson (l) displays a souvenir T-shirt commemorating the NIH Roadmap for Medical Research Initiative given to him by NIH director Dr. Elias Zerhouni (r).

PHOTOS: BILL BRANSON

Zerhouni welcomes Thompson to campus for the Secretary's last official visit on Jan. 13.

Among those Thompson said goodbye to were (above) NIBIB deputy director Dr. Belinda Seto and (below) Dr. John Ruffin, director of the National Center on Minority Health and Health Disparities.

Thompson (r) participated in a noontime press conference in Bldg. 1 where he signed memoranda of understanding to improve cooperation with other federal agencies that play an important role in medical technology development. He was joined by Dr. Larry Kessler (l), director of the Office of Science and Engineering Laboratories at the Food and Drug Administration. Thompson presented the report, "Moving Medical Innovations Forward—New Initiatives from HHS." Other MOU signers included the National Science Foundation, the National Institute of Standards and Technology and parts of the departments of Defense and Education.

Anthony Jewell (l) and Stewart Simonson (r) of HHS accompany Thompson and Zerhouni on the secretary's farewell tour of NIH. Along the way, Thompson collects tokens from the department's successful CFC season.