

Still The Second Best Thing About Payday

NIMH Launches 'Real Men. Real Depression.' Campaign

By Constance Burr

In April, NIMH launched "Real Men. Real Depression."—a campaign to educate the public about depression in men. Men who live with the illness, not actors, talk candidly about their symptoms, treatment and recovery in public service announcements.



Dr. Thomas Insel

A fire fighter, an Air Force sergeant, a police officer, a student, a lawyer and a diving champion are all men who voice their struggles with depression, revealing the courage it takes to get

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Addressing Global Health Needs

Varmus Invites 'Grand Challenge' Ideas, Stimulates New Thinking

Former NIH director Dr. Harold Varmus, who now leads Memorial Sloan-Kettering Cancer Center in New York, is also wearing another NIH-related hat these days: he is chairman of the scientific board of "Grand Challenges in Global Health," a \$200 million initiative of the Bill and Melinda Gates Foundation—in partnership with NIH and the Foundation for the NIH (FNIH)—to stimulate creative thoughts about solving major global health problems that receive a disproportionately small share of research attention.

The project lays down a gauntlet before the world's science community: What are the greatest scientific and technological

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Better Analgesia Ahead?

Pain, Though Ubiquitous, Still Poorly Understood, Say Panelists

By Rich McManus

It might pain people to know that most of what today's physicians have to offer in the way of pain relief has been around for thousands of years. But a panel of four leading pain research scientists told a STEP Forum on "Pain" Apr. 22 that help is on the way as modern molecular biology teases out, on a cellular level, how pain is sensed, transmitted and experienced within the central nervous system and the brain. All four expressed cautious optimism that the future, in terms of pain management, will be more tolerable than the past—mainly due to advances in basic benchwork and in clinical research that, as one scientist said, will "finally explore what it is exactly that our patients are suffering



Michael Price tells personal story of addiction pain.

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NHGRI Researchers Become Ambassadors for National DNA Day

By Geoff Spencer

April 2003 will be remembered in the annals of history as the month when the National Human Genome Research Institute, the U.S. Department of Energy and their international partners announced the successful completion of the Human Genome Project, the effort to sequence the 3 billion DNA letters in the human genetic instruction book.

NHGRI held many events during the month of April to celebrate that accomplishment, but one event in particular captured the forward-looking spirit of the genome era by reaching out to the next generation of biomedical researchers.

On Apr. 25, dozens of researchers and scientific staff from NHGRI headed back to schools in their hometowns—from Newtonville, Mass. to Newport Beach, Calif.—to speak to



NHGRI's Dr. Belen Hurlle

SEE DNA DAY, PAGE 8



NIGMS grantee Dr. Angelika Amon is this year's recipient of the Alan T. Waterman Award, an annual prize recognizing exceptional young researchers in science or engineering. Amon is an associate professor of biology and an assistant Howard Hughes Medical Institute investigator at the Center for Cancer Research at the Massachusetts Institute of Technology. Her research involves studying how cells copy and distribute genetic material during the cell cycle of growth and division. The Waterman Award was established by Congress in 1975 and is administered through the National Science Foundation. Amon received a \$500,000 grant, a citation and a bronze medal at a May 21 ceremony in Washington, D.C.

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challenges in global health? The sponsors hope to collect a focused set of critical problems that, if solved, would lead to advances against diseases of the developing world. According to the Global Forum on Health Research, only 10 percent of today's medical research is devoted to diseases that cause 90 percent of the health burden in the world.

Varmus's call for "breakthrough questions" went out via email and advertisements in scientific journals in late April, with a deadline of June 15 for submissions to www.grandchallengesgh.org. He and the board will designate as "Grand Challenges" 10 to 15 of the most promising avenues and post them next fall, followed by solicitations for research grant proposals to address the challenges. Grants of up to \$20 million will be awarded; it is expected that multi-discipline consortia will have the best chance of winning awards, although individual submissions are also welcome.

The project's provocative approach is borrowed from an intellectual competition set in motion by British mathematician David Hilbert in 1900. He articulated a set of crucial, unsolved problems—dubbed "Grand Challenges"—in mathematics, which were quickly picked up by a field revitalized by the taunt. According to the Gates Foundation, "Hilbert's Grand Challenges continue to drive progress toward major breakthroughs in [mathematics] and have even led to unexpected returns outside the discipline...There is an opportunity to achieve for global health what Hilbert attained in mathematics...Solutions to grand challenges will enable major advances in research against diseases of the poor, and the development of products that will save millions of lives."

Examples of potential challenges include finding novel approaches to preventing and treating HIV, identifying an "Achilles heel" to block reactivation of latent TB, and finding a way to make mosquitoes incapable of transmitting such diseases as malaria, dengue and West Nile. Organizers explicitly discourage restatements of already-recognized problems, calls to apply what is already known, or requests for development of innovative strategies for health care delivery or infrastructure.

In addition to Varmus, the project's scientific board, international in nature, also includes NIH director Dr. Elias Zerhouni, NIAID director Dr. Anthony Fauci and former NCI director Dr. Richard Klausner.

The initiative was first announced last January at the World Economic Forum's annual meeting in Davos, Switzerland. Observed Zerhouni at that occasion, "This groundbreaking public-private partnership...is an ideal complement to the NIH's efforts to improve global health. We will strive to create an unprecedented synergy, focused on engaging the best scientific minds of our time, maximizing

the impact of our respective resources and thus spurring creativity and innovation in this field for the ultimate benefit of all humankind."

FNIH will administer the Grand Challenges initiative and NIH will provide scientific advice, expertise and support. Established by Congress in 1996, the non-profit FNIH builds collaborations with philanthropy, industry and academia to support NIH's mission. It recently raised \$16 million from private funders to speed sequencing of the mouse genome. ■



Pastor Kevin Williams of Love and Faith World Outreach Church in Clinton, Md., addresses a gathering for the National Day of Prayer, which was commemorated behind the Natcher Bldg. on May 1. NIH'ers came out to pray for the nation and its leaders. The nondenominational event was sponsored by the Noontime Christian Fellowship, which meets every Wednesday from 11:30 a.m. to 12:30 p.m. in Bldg. 10, 14th floor assembly hall.

Healthy Volunteers Needed

Participate in an ovarian function study. Call 1-800-411-1222 (TTY 1-866-411-1010). Compensation is available. Refer to study number 00-CH-0189. ■

NIH RECORD

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Bikers Revel in Commutes to NIH

A forecast that included possible thunderstorms and hail didn't stop 30 or so bikers from dropping by the NIH Bike to Work Day event for juice, bagels and conversation on May 2. The bad weather never materialized, leaving a great day for biking, said Carl Henn, president of the NIH Bicycle Commuter Club.

A number of bikers zipped past the bagels, arrayed on the lawn of Bldg. 1, on their way to work. Biking to work is a normal commute for more than 250 NIH employees, as found by a survey conducted by the NIH bike club last year. A number of these bike routes are described on the club's web page at www.recgov.org/r&w/nihbike/bike.html.

Henn said one biker who dropped by cycled in from Falls Church, Va. This cyclist avoids Beltway traffic by biking down the Custis trail and up the Capital Crescent Trail. Those who biked in were entered into a drawing for Lance Armstrong's best



In spite of rain in the forecast, more than 30 people showed up for the NIH Bike to Work Day event on May 2. The "longest ride" winner pedaled in from Falls Church, Va.; another NIH couple occasionally bikes in from Olney, Md.

selling book, *It's Not About the Bike*. Conversation around the bagel table covered the advantages of panniers, or bike saddle bags, over backpacks (no sweaty back beneath the pack, lower center of gravity for safer biking) and whether the new bike bridges over I-495 and I-270 are open yet (yes and no).

Biking to work saves time and money by combining your commute with your exercise program, noted Henn. For tips on bicycle commuting see www.waba.org/new/help/commuting.php. ■

NIH Chamber Singers To Perform, May 29

The NIH Chamber Singers will present a concert of sacred and secular *a capella* pieces in 4-part harmony on Thursday, May 29 at 7 p.m. in the Clinical Center's 14th floor auditorium. ■

NIH Asian Cultural Program Set, May 30

Everyone is invited to continue the celebration of the 31st anniversary of the NIH Asian/Pacific Islander American Heritage Program in Masur Auditorium, Bldg. 10 between 11:30 a.m. and 1 p.m. on Friday, May 30. The program will include performances of Cambodian, Indian, Japanese and Korean music and dances performed by the Cambodian Buddhist Society, Pushpanjali School of Dance, Masayo Ishigure (Koto recital) and the Washington Korean Dance Company.

A reception in the area outside Rm. 1C174 will immediately follow the program. Everyone is invited to the reception to meet the artists and to sample Asian pastries and snacks. There is no admission charge for the performance and reception, and no reservations are necessary.

Later that afternoon, from 3 to 4 p.m., Dr. Michael M.C. Lai, distinguished professor of molecular microbiology and immunology, Keck School of Medicine, University of Southern California, will present a seminar on "SARS: What Have We Learned from 30 Years of Coronavirus Research?" The talk will be held in Bldg. 4, Conf. Rm. 433, sponsored by the NIH-FDA Chinese American Association.

For information on reasonable accommodation contact Charly Wells, 496-6301. Sign language interpretation will be provided. For more information contact Victor Fung, 435-3504 or email vf6n@nih.gov.

Workshop on SARS Research Challenges

An international group of government, academic and industry researchers will meet at NIH on Friday, May 30, to identify the scientific, technical and logistical challenges to fighting severe acute respiratory syndrome, or SARS. The workshop, titled "SARS: Developing a Research Response," will be held from 9 a.m. to 4:30 p.m. in the Natcher Conference Center.

The event is sponsored by NIAID, the lead institute for SARS research. Featuring international vaccine, antiviral and coronavirus experts, the workshop will address vaccine development, antiviral development, clinical research, epidemiological trends and diagnostics. HHS Secretary Tommy Thompson and NIAID director Dr. Anthony Fauci will provide an introduction to the event. All interested members of the scientific, regulatory and industrial communities are welcome to attend.

Space is limited, and advance registration is recommended. More information can be found at <http://www.niaid.nih.gov>. For those who cannot attend, the symposium will be webcast at <http://videocast.nih.gov>. ■



Dr. Mark Mattson, chief of NIA's Laboratory of Neurosciences, ranks number one in the neuroscience and behavior category, based on citations to his published papers in the past decade, according to Science Watch, an Institute for Scientific Information (ISI) publication. Since 1993, 254 of Mattson's papers have generated 12,916 citations. NIA grantees John Trojanowski, Fred Gage and Nobel Laureate Eric Kandel also were among the top 20 scientists cited in this category. Science Watch tracks trends and performance in basic research utilizing bibliographic and citation information that the ISI collects from its multidisciplinary database of thousands of influential, peer-reviewed journals. Science Watch (www.sciencewatch.com) plans to publish an interview with Mattson soon.

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treatment. In a time of war in Iraq, rumors of bioterrorism and the threat of SARS, the campaign may well have been released at the perfect moment.

Although it mirrors the current climate, the campaign began to take shape on Sept. 10, 2001. NIMH Communications Director Clarissa Wittenberg and staff were meeting with documentary filmmaker Leslie Wiener in Manhattan on filming men from all walks of life talking to other men about their experiences with depression. On



Surgeon General Richard Carmona (c) meets with campaign spokesmen (from l) Jimmy Brown, Shawn Colten (a national diving champion who aspires to the Olympics despite recurrent periods of depression that began in early childhood), writer Steve Lappen and former Air Force Sgt. Patrick McCathern.

the morning of Sept. 11, the NIMH staffers were stalled on the JFK Airport tarmac and ended up being forced to spend a week in New York.

In the ensuing months, the campaign would take on new urgency.

The men's stories, filmed from hundreds of hours of conversation, show depression as a pervasive, serious, but highly treatable medical condition that involves body, mood and thoughts. Personal accounts from a male perspective confirm that, without treatment, symptoms can last a long time and alter lives.

On 9/11, Jimmy Brown, a fire fighter who worked at Engine 10 across from the World Trade Center, climbed to the 24th floor of the South Tower, when it began to collapse. Hit with debris, he feared being buried, but he made his way to street level walking through dust so thick he couldn't see or hear anything. After a hospital stay, dogged by numbness and loss of interest in life, he spent days at home doing nothing, consumed by survivor's guilt and despair.

"There's a huge stigma in admitting any problem," Brown said at the National Press Club launch. "They think I'm a big, tough fireman. I'm supposed to be able to deal with anything...to be able to just pick up, carry on, like the old commissioner said, 'Just be able to suck it up. And just keep going.' It's not that easy. No, when you're in the middle of it, you just don't know if it's gonna end, where it's gonna end, how it's gonna end. There were days when I thought I'd never be myself again."

Researchers estimate that more than 6 million men in the United States have a depressive disorder in a given year. Although women are more likely to be depressed, they are more apt to get treatment. Symptoms include persistent sad or anxious feelings,

feeling hopeless, fatigue, insomnia, irritability, having less energy, appetite loss and suicidal thoughts. Men may not recognize the disorder and turn to alcohol or drug abuse. Carrying the potential for fatal consequences, depression is a strong risk factor for suicide, and men die by suicide at four times the rate of women.

"The campaign aims to empower men who have depression," said NIMH director Dr. Thomas Insel, at the launch. "Men often feel they can overcome feelings of helplessness and depression by themselves. We sometimes wonder whether the gene for asking for help is on the same chromosome as the gene for asking for directions. It's an illness that precludes its own treatment. But we have very good treatment with a high success rate—more than 80 percent—for people who seek help."

NIH deputy director Dr. Raynard Kington applauded the campaign's effort to "assure that the important scientific advances we have made are actually used to help real people live healthier lives. 'Real Men. Real Depression.' joins important public education campaigns aimed at promoting healthy behaviors, such as the National High Blood Pressure Campaign of the National Heart, Lung and Blood Institute; the National Cancer Institute's 'Eat 5 a Day for Better Health'; and the National Institute of Child Health and Human Development's 'Back to Sleep' campaign to fight sudden infant death. We also have campaigns about diabetes, eyesight and other topics."

Surgeon General Richard Carmona, recalling his former roles in Army Special Forces, as a police officer, paramedic and a trauma surgeon, said: "For generations men like me have been told that we have to 'act tough.' Today we are attacking the stigma that tough guys can't seek help. They can, and they should. When real men step up and get help for depression, you're paving the way for our sons, and their sons. You're making it easier for the next generation of boys and men to not have to suffer in silence."

Lydia Lewis, president of the Depression and Bipolar Support Alliance, praised "these very macho guys for their courage to speak out."

The men filmed gave permission to use their full names and professions and continue to be active participants as the campaign unfolds.

Patrick McCathern, a retired Air Force sergeant, describes the disorder's spiral in a public service spot: "It starts slowly and the only person you're talking to is yourself. You're lost. It's dark, and...I is 24-7...you just want it to end. I'd drink and...I tried to numb my head...but you have to deal with it. It doesn't go away."

Going public about this hidden disorder, Rene Ruballo, an urban police officer for over 20 years, speaks of a "loss of interest in basically everything

that I like doing—martial arts, comic books, toys, things like that. I just didn't really feel like doing anything any more."

A culture that equates asking for help with weakness can make guys cower at the very thought of seeking a medical diagnosis. Furthermore, "being a Latino made it harder," explains recent college graduate Rudolfo Palma-Lulion, "because there is a silence over things. There are just things you don't talk about."

The men explain how different their lives are with treatment and after emerging from the illness. Jimmy Brown is developing a peer counseling program to help police and fire fighters deal with stress and depression. Patrick McCathern is devoting most of his time to helping others. Rene Ruballo is hoping to attend culinary school and open a restaurant. Rudolfo Palma-Lulion has joined his family in Chile, his birthplace.

Campaign resources include TV and radio PSAs,



Fire fighter Jimmy Brown (r) speaks at the campaign kick-off as Dr. Raynard Kington (l) NIH deputy director, and Carmona listen to him.

publications, a web site and a toll-free information number. Materials highlight the importance of diagnostic evaluations, depression symptoms, types of medication and psychotherapy and how to get help. The web site, <http://menanddepression.nimh.nih.gov/> is also accessible from the NIMH home page at www.nimh.nih.gov. A program to notify psychiatrists, psychologists and primary care physicians is in development.

Hundreds of emails about "Real Men. Real Depression." suggest that it has struck a responsive chord. Some samples: "This issue has been shrouded in silence and neglect for far too long"; "Finally. Awareness that men also suffer from this killer disease!"; "Are there any volunteer needs around this campaign? As a sufferer myself, I know what it's like to hide the feelings"; and "It will help save many lives." ■

Take Me Out to the...Laboratory!

NIAAA Hosts Baseball Star's Student Group

By Gregory Roa

NIAAA scientists recently played host to a visiting team called "Jeter's Leaders," a group sponsored by Derek Jeter, the all-star shortstop of the New York Yankees. Instead of baseball uniforms and gloves, the 10 high-schoolers donned lab coats, masks and latex gloves for a taste of the big leagues of scientific research at NIH.

The visit was arranged by Jeter's Turn 2 Foundation, a non-profit organization whose mission is to reward young people who avoid alcohol and drugs and instead choose healthy lifestyles. Although the baseball star himself could not make this road trip, his mom pinch-hit as the head chaperone. Mrs. Jeter explained that the foundation selected the students from school programs in New York's inner-city neighborhoods to serve as "peer educators" who will report back to their classmates on their experiences at NIAAA.

Fred Donodeo of NIAAA's Office of Policy and Public Liaison coordinated the Apr. 24-25



Members of "Jeter's Leaders," a group sponsored by all-star Yankee shortstop Derek Jeter, visit NIH for 2 days.

visit and met the group as it arrived. A transplanted New Yorker himself, Donodeo remarked, "It was pretty neat to meet a bunch of kids wearing shirts and hats from all the teams I followed growing up—the Jets, Knicks and, of course, the Yankees!"

Day one of the agenda featured a discussion about alcohol's effects on the body's systems led by Dr. Dennis Twombly, director of NIAAA's neurophysiology and pharmacology program; he is the creator of the "Drunken Brain" exhibit often displayed at NIH health fairs and other venues.

The following day, the group drove to Poolesville to visit NIAAA's Laboratory of Clinical Studies. Donning suitable garb, the students received a hands-on tour of the primate unit facility with postdoctoral fellows Christina Barr, Michelle Becker and Stephen Lindell. To conclude the visit, the students sat down with the scientists for a question-and-answer discussion about careers in science and alcohol research.

"It was somewhat typical of a group of teenagers," said Twombly. "At first it was hard to get a read on how much they were absorbing, but in the end they asked a number of very insightful questions." Donodeo added, "They really liked getting the behind-the-scenes tour, looking at real tissue samples and handling life-size models of the brain. Afterwards, a couple of students asked me about internships at NIH and scholarships for people who want to become scientists."

Before departing on the visitors' bus, the future prospects expressed their appreciation for the host team. "They all said they enjoyed the trip, and we certainly enjoyed their enthusiasm," said Donodeo. "You could say it was a win-win experience all around." ■

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from.”

The forum, part of the staff training in extramural programs (STEP) series on current controversies in medicine, began with difficult personal testimony from Michael Price, a Washington, D.C., native now retired from a successful insurance career, who spent a portion of his life addicted to painkillers. Clearly reluctant to revisit the topic, Price recounted early encounters with the health care system—an appendectomy, a broken leg—that acquainted him with two perspectives: first, men should be tough guys who don't acknowledge hurt, and second, boy, does that Demerol do the trick!

Price said he self-medicated through much of his adult life, thinking he was smart enough to handle an addiction made easier to manage by the fact that he was self-employed, and immensely self-confident. But eventually he hit bottom, even though he felt so guilty that “I didn't think I deserved treatment...I didn't know how to ask for help, until I hurt bad enough.”

He concluded, “There is help out there—it might take a trip to the emergency room, or the threat of suicide to get it, though...The stigma attached to

addiction is pretty scary. I hope there will be other avenues in the future. But [treatment] is not worth a damn if you don't want it. Addicts,” he declared, “are not bad people trying to be good, but sick people who are trying to get better.”

It has only been

within the past quarter century that pain studies have risen to legitimacy in their own right, said Dr. Patrick Mantyh of the departments of preventive sciences, neuroscience and psychiatry at the University of Minnesota. “Until 20 years ago, every [medical] specialty felt like they were the pain specialists.” Not very long ago, pain was thought to be more a spiritual than medical burden, added Dr. Nathaniel Katz of the department of anesthesia at Harvard Medical School. “The concept of pain was medicalized only recently—for thousands of years before that it had essentially a spiritual component,” Katz said. “The ‘pain movement’ has only been around for 25 years or so.” Katz added that medicalization of pain has not been without cost; “I think we have also lost something critical to a full understanding of pain by viewing it solely as a medical problem.”

Pain's rising status as a medical subspecialty has paralleled science's understanding of how it actually works, which Mantyh elucidated at the level of the body's 2 million afferent, or sensory, neurons—some

as long as 2 or 3 feet—capable of reporting noxious stimulation, or nociception, back to the brain. Fully 80 percent of the body's sensory fibers are involved in nociceptive signaling, he said. That's because pain detection, or what he called “the gift of pain,” is so essential for an organism's survival, serving a critical guarding/protective function.

“You can't have pain without the brain,” he remarked, underscoring the cortex as the seat of both the sensation of pain, and of the body's response to it, in what he termed ascending and descending feedback loops.

Science has made remarkable progress in finding and characterizing the channels that convey noxious stimuli, Mantyh reported. Researchers can now image the neurochemistry of pain, and have found that the nervous system is very plastic; it's capable of both amplifying (as in chronic cancer pain), and of ignoring (as when a wounded soldier doesn't even realize he's been hit until after he's rescued a buddy on the battlefield) pain signals.

“There is enormous difference in how pain is experienced by an individual, based on gender and past experience,” said Mantyh, whose point was later echoed by Dr. Christine Miaskowski, professor and chair of the department of physiological nursing at the University of California, San Francisco; her work has shown enormous disparities in the way pain is assessed and managed in a variety of populations, depending on sex/gender, culture/ethnicity, and age, particularly the elderly and infants/children.

“The central nervous system of someone in chronic pain is different from the CNS of a normal person,” Mantyh said.

“Our knowledge of [how the current crop of analgesics work] is woeful,” Mantyh continued. From the morphine-based drugs, to NSAIDs (nonsteroidal anti-inflammatory drugs) to such new preparations as gabapentin and neurontin, “we know virtually nothing about where these drugs act.” He called for more disease-based animal models of pain, and increased education among health care professionals about the limits and promises of pain management.

Harvard's Katz noted that “pain is ubiquitous—it's all over.” It resulted in 40 million visits to doctors' offices in 1981 for new instances of acute pain, and 167 million visits in 1995 for new and standing incidences. More than 4 billion work days were lost to pain in 1985, he showed.

He said there is evidence from the year 300 B.C. of the dangers of opiate addiction in medical therapy, proving that morphine has long been familiar to the healing arts. He lamented that even today, “There is no prospective study yet of the opioid addiction rate post-treatment.” He added, “The pharmacopeia available to physicians today is virtually the same as

PHOTOS: BILL BRANSON



Speakers at the pain forum included (from l) Dr. Nathaniel Katz, Dr. James Zacny, Dr. Christine Miaskowski, Dr. Patrick Mantyh and Michael Price.

that available at the time of Weir Mitchell (a Philadelphia physician and writer who treated Civil War casualties) in 1864, which was in turn virtually identical to what was available at the time of Christ." Why, he wondered, has there been no success to date in developing a single new rationally designed analgesic? He suggested this could be an important field for NIH to seed, along with studies of how to reduce common side effects of analgesics.



Pain authority Mantyh

"We do a lot more caring than curing when it comes to chronic pain," he said, calling for "compassion, humility and pragmatism" in assessing pain in the clinic. "Under-treatment is generally a far greater problem than over-treatment."

Addressing the bedrock practicalities of getting help for pain was Dr.

James Zacny of the department of anesthesia and critical care at the University of Chicago. His research has asked, Can patients who are on opiates for their pain drive vehicles safely, remain employed and avoid the risk of turning into addicts themselves? The answers, though riddled with caveats, are largely affirmative; people taking opiates for their chronic pain generally are able to operate vehicles as safely as unmedicated peers, can continue to be productive on the job and only rarely succumb to addiction.

Almost all of the speakers, despite their penchant for hard science, shared a personal dimension of pain, testifying to its force in shaping human experience, from moderator Dr. Alan Willard, chief of the Scientific Review Branch at NINDS, who said the forum's planning committee could not avoid discussing their own problems with it (especially the "episodes not necessarily appropriately treated") to Harvard's Katz, who was bedridden with back pain in the days prior to the forum, to UCSF's Miaskowski, who said her decades of involvement in the field stem from seeing her dad die in "intractable pain," thus motivating her to spend a career improving the situation. The power to treat pain—one of the most welcome weapons in the physician's armamentarium—prompted Mantyh to conclude, "You can return life to a patient when you can relieve their pain." ■

Women's Health IG Meets, June 11

The women's health special interest group will meet on Wednesday, June 11, from 11:30 a.m. to 1 p.m. in Wilson Hall, Bldg. 1. Guest speaker will be Dr. Nancy Olsen, professor of medicine, Vanderbilt University Medical Center. Her topic will be "Autoimmune Disease—Why Female?" ■

NLM's Lipman Elected to NAS

Dr. David J. Lipman, director of the National Center for Biotechnology Information at the National Library of Medicine, has been elected to membership in the National Academy of Sciences. He is one of 72 new members voted into an organization whose total active membership numbers 1,922. The election took place on Apr. 29, at the 140th annual meeting of the academy. Membership in NAS is considered one of the highest honors that can be accorded a U.S. scientist or engineer.

The academy is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation, signed by Abraham Lincoln, which calls on NAS to act as an official adviser to the federal government, upon request, in any matter of science or technology. ■

VIC To Relocate, Offer Bus Tour

Effective in early June 2003, the NIH Visitor Information Center (VIC) will move from the B1 level of the Clinical Center to a new location on the first floor of the Natcher Conference Center, in Rm. 1AS.13.

The move benefits visitors by offering a more visible and accessible location that helps VIC's staff welcome them and orient them to the campus. The VIC is part of the Special Projects Branch of the Office of Communications and Public Liaison, OD.

The NIH General Tour will be replaced by the NIH Overview to be conducted each Monday, Wednesday and Friday at 11 a.m. from the Natcher location. Tours can be arranged by appointment, and VIC will retain the same phone number.

To commemorate the relocation and offer guests a chance to learn more about NIH, the VIC is offering a complimentary bus tour of the campus at 11 a.m. on Tuesday, June 24. Seating is limited, so call to reserve a place today. For information call 496-1776.

Strategic Planning Web Site Debuts

The Office of Strategic Management Planning recently launched its web site. Although it is still being developed, there are many resources for employees including: the NIH Transition Plan for employees affected by consolidation, restructuring or competitive sourcing; a FAQ section that has answers to questions from employees about the Transition Plan; and links to documents/information that introduced many of the current consolidation/restructuring initiatives. Employees can access the new web site at <http://osmp.od.nih.gov>. ■

Employee Needs Organ Donation

An NIDDK employee with type A blood is in need of a kidney transplant. If there is anyone interested in being tested as a possible donor match that has either type A or O blood, call Wanda at (301) 524-7432. Federal government donors can use up to 30 days of donor leave, which is not associated with your sick or vacation leave.

DNA DAY, CONTINUED FROM PAGE 1

students about the genome era and their research at NIH. These "DNA ambassadors" timed their educational outreach efforts to coincide with National DNA Day, a day designated by Congress to commemorate the 50th anniversary of the publication of James Watson and Francis Crick's landmark paper describing the double helix structure of deoxyribonucleic acid (DNA).

Mary LaMarca, a biologist who works for the Medical Genetics Branch in NHGRI's Division of Intramural Research, took time from her research on Gaucher disease to make four presentations to about 150 students at Natick High School in Natick, Mass.

"I've always enjoyed training the summer students in our lab," said LaMarca. "An important part of our jobs as government scientists is to educate the next generation of students. Getting kids excited about science is fun, and has lots of benefits."

LaMarca said teachers were very grateful for DVDs containing the human genome sequence, videos, genomic primers and other educational materials about genomics that NHGRI provided for the event. "They will be able to use a lot of it in future lesson plans and reach a lot more students than I could talk to in a single day," she said.

NHGRI director Dr. Francis Collins said educational efforts like National DNA Day will play a key role in realizing the full potential of the Human Genome Project. "We are depending on the next generation of scientists to translate the human genome sequence and use it to prevent, treat and eventually cure the common diseases that afflict families around the globe. National DNA Day was a wonderful opportunity for NHGRI researchers to make personal contact with students and get them excited about the 'era of the genome,'" he said.

While many NHGRI researchers went back to their alma maters, Dr. Belen Hurlle, a research fellow

in the Genome Technology Branch, reached out to under-represented minority students who rarely have opportunities to interact with world-class biomedical researchers. Hurlle spoke to students at Vashon High School in St. Louis, Mo.

"While I was a post-doc at Washington University at St. Louis, I mentored for the 'young scientist program,' an excellent hands-on summer internship for high school students," she explained. "The students come mostly from wealthy county schools. I wanted to take the opportunity to excite some inner-city students about modern genetics and encourage them to explore programs such as the one at Washington University."

What made National DNA Day particularly special for students was the chance to hear first-hand accounts about the day-to-day activities in the life of a scientist, according to Hurlle. "I thought that I could serve as a role model, especially for the girls, since I am a young Latina woman," she said.

Hurlle also told the students that even if they did not become genomics researchers, there were many different careers they might consider in which knowledge of genomics and genetics would be helpful or essential. Some examples she cited were medicine, bioinformatics, law, art/medical illustration, engineering, biotechnology and archaeology.

At a follow-up meeting to discuss their experiences, the DNA ambassadors agreed that National DNA Day should become an annual occurrence.

"I think that most people in the United States get a very distorted view from the popular media of what's real and what's possible in scientific and medical research," said LaMarca, explaining why it is important for researchers to spend a percentage of their time doing outreach and education. "Having regular bench researchers go out and talk about our jobs, the setbacks, the discoveries and the excitement of serendipitous links and unexpected connections that come up in research cuts through some of the fog and gives folks a better picture of what's possible and why we enjoy what we're doing."

LaMarca continued, "We won't reach every student, but if each ambassador lights a spark in just one or two kids and shows them that research can be intellectually satisfying and often just plain fun, we'll have helped both that student and the field."

For more information on the Human Genome Project and the educational resources available through NHGRI, visit www.genome.gov. ■



Students from Baltimore Polytechnic Institute listen to a DNA ambassador give a presentation.

A group shot of NHGRI's "DNA ambassadors"



State Record Set

NIH Celebrates Huge Turnout for First E-Cycling Event

NIH held its first-ever and highly successful electronics recycling (e-cycling) event at White Flint Mall in Rockville on Apr. 12 from 9 a.m. to 4 p.m. Open to government employees and the public, the event provided an opportunity to recycle all types of personally owned electronics ranging from cell phones to televisions and computers.

The event was originally going to be held at the Bldg. 31F parking lot on campus, but had to be cancelled on short notice when the Iraq War started and the security level was raised to "orange plus." The event organizers with the NIH Division of Environmental Protection and the Maryland



A truckload of dead TVs

department of the environment (MDE) then had to scramble to find a new site at a non-government facility. Fortunately, the operators of White Flint Mall generously offered use of one of their parking lots for the collection site and provided free advertising for the event on their web site and on the electronic marquee sign at the entrance to the mall.

As soon as arrangements for use of the new site were confirmed, the organizers had to "un-cancel" the event and restart the publicity. Web sites, posters and flyers had to be changed and redistributed in an attempt to get the word out to all prospective participants about the new location—a daunting task with little time left before the event. Organizers feared that with all the changes, participants would be discouraged or get lost trying to find the new collection site and the turnout would be poor. They could not have been more wrong.

The first clue to the outcome of the

event came well before it officially started—carloads of "e-junk" began arriving at the collection site before it was open. By mid-morning, there were so many cars arriving that one service line couldn't handle the traffic, so three lines were set up. And they kept coming. By mid-day, all three lines were busy and at times backed up clear to the street. And they kept coming. Finally, it was closing time and the exhausted event volunteers thought they could slow down and start packing the materials away for transport. But the cars kept coming. Later, when



Bins of e-cycled material fill lot.

there was time to gather up statistics, it was found that an estimated 670 deliveries of electronics were made that day. Most of them came in by cars and trucks—644 of them; the remainder was via bicyclists, pedestrians and even a couple of backpackers.

A total of 34 tons of equipment was delivered. According to Jim Richmond, MDE representative, this set a new statewide record for the largest amount of recyclable materials collected in a single day event.

Most of the equipment collected will be disassembled in facilities located in the U.S. and recycled. Some equipment that is in working condition and not obsolete will be refurbished and donated or sold. For example, 103 cell phones and related accessories collected at the event will be turned in to the Wireless Foundation to be reconfigured as emergency call phones and donated to abuse-prevention programs.

Few would have predicted the potential adverse environmental consequences of the Computer Age. Gazing over the small mountains of dead TVs, PCs, printers and other electronics, Ed Rau, NIH's coordinator of the event, mused that just 10 years ago most of this toxic "detritus of technology" did not even exist. In the next 10 years, several hundred million more computers will become obsolete and require disposal. Clearly the junk will keep on coming. ■

Apply for Senior Leadership Program

The Training and Development Branch is accepting nominations through July 15 for the 2003 NIH Senior Leadership Program. Now in its third year, the program has been widely praised by senior scientists and administrators for its value and quality. Enrollment is limited for the program, which is held each fall.

The program brings together small teams of senior scientists and administrators from 5 to 7 ICs for an intensive, data-driven learning experience. Participants gain practical leadership skills and knowledge through interactive discussions, case studies and experiential learning. The program includes prominent scholar-practitioners, one-on-one sessions with executive coaches and a 3-day residential retreat at the Aspen Wye River Conference Center.

For details, visit <http://learningsource.od.nih.gov/main.pdf> or contact Vickie Baldwin at 496-6211 or email baldwinv@od.nih.gov. ■



Ed Rau of NIH's Division of Environmental Protection sorts through some 34 tons of electronic detritus collected at NIH's first "e-cycling" event.

BIG To Honor Kirschstein, Maddox

The NIH chapter of Blacks in Government will hold a special award presentation honoring Dr. Ruth Kirschstein, senior advisor to the NIH director, and Dr. Yvonne Maddox, NICHD deputy director, on Tuesday, June 10 from 1 to 3 p.m. in Lister Hill Auditorium, Bldg. 38A. All employees are welcome to attend. RSVP by June 3 to Albert Parrish, parrisha@ors.od.nih.gov or call 402-3336. Light refreshments will be served.

NIDDK Glycobiology Expert Ginsburg Dies

By Joan Chamberlain

Dr. Victor Ginsburg, an NIDDK scientist who pioneered the field of glycobiology, died Mar. 12 at Suburban Hospital.

Ginsburg retired in 1991 as chief of NIDDK's Laboratory of Structural Biology. He devoted most of his career to studying the complex carbohydrates that cover the surface of many cells and dictate their interactions with other cells as well as bacteria, viruses and biological toxins. His work helped to define how carbohydrate molecules govern cell communication and contribute to the development of diseases as diverse as cancer and infection at a time when few scientists appreciated the role these substances play in the recognition of other molecules.



Dr. Victor Ginsburg

"Vic Ginsburg was a prime mover in the development of glycobiology, making key contributions to structural, enzymological and biological aspects of this field. He was both a great scientist and a terrific person with a wonderful sense of humor," recalled NIDDK's Dr. Reed Wickner.

A 1964 paper co-authored by Ginsburg and B.M. Gesner in the *Proceedings of the National Academy of Sciences* "cracked open the door and lit up the field of glycobiology," said Dr. John Magnani, who worked as a biochemist in Ginsburg's lab. Ginsburg's team found that when they used enzymes called glycosidases to clip off sugars from rat lymphocytes, the fate of those cells dramatically changed. When the treated white cells were re-injected into the animals, they migrated to the liver instead of homing, as they normally did, to the spleen and lymph nodes.

To explain these results, Ginsburg postulated two receptor systems for carbohydrates. The enzymes had destroyed the outermost carbohydrates on the lymphocytes' surface, structures that normally bind to a receptor in lymphoid tissue. "This interaction could be a critical event that controls the selective migration of lymphocytes from the blood into lymphoid tissue," he speculated. In addition, the enzymes had exposed underlying carbohydrate structures on the surface of the lymphocytes, forcing the cells to bind to a receptor in the liver. Both hypotheses later proved correct, though it would take years to confirm them.

Dr. Gilbert Ashwell of the National Institute of Arthritis and Metabolic Diseases and colleagues identified the second receptor, now known as the asialoglycoprotein receptor in the liver. "The first receptor took many years to discover," said Magnani. "Eventually, it became clear that selectin

receptors, as they are now called, play a crucial role in promoting inflammation and cancer metastasis."

With the publication of the *PNAS* paper, the study of carbohydrates as recognition molecules suddenly came into its own. As glycobiology researcher D.A. Rees put it in 1971, "the ugly ducklings have begun to look a little more like swans...carbohydrates are beginning to appear attractive...shapely molecules" instead of the drab, uninteresting structures they were once perceived to be. Scientists would eventually learn that carbohydrates are important in a variety of cell interactions, from the attachment of bacteria to tissues in the early stage of infection, to the promotion of metastasis in some types of cancer. Currently, researchers are exploiting this knowledge to develop drugs that prevent infection or metastasis by blocking or neutralizing the binding of carbohydrates to proteins or other carbohydrates.

In other work, Ginsburg and British researcher W.M. Watkins helped prove that people have specific, genetically determined sugars on the surface of their cells that specify their A, AB, B and O blood types. By isolating and studying the glycosyltransferase enzymes responsible for the attachment of specific sugars to red blood cells, they showed, for example, that only people with blood types B or AB have the transferase for the sugar galactose, the determinant of those blood types.

"Vic will be well remembered for his seminal contributions to the fast growing field of glycobiology," said Dr. Nathan Sharon of Israel's Weizmann Institute of Science, who first met Ginsburg on a visit to NIH 40 years ago. In 1978, he and Ginsburg organized the first conference on glycobiology, "Complex Carbohydrates in Biological Recognition," sponsored by the Fogarty International Center. "I was captivated by Vic's kind, warm personality, his wit and delicate sense of humor, and his incisive mind," said Sharon. "We had a close friendship. Vic was proud of his collection of antique books, his paintings and book bindings."

"As a lab chief and mentor, Victor Ginsburg had a sharply critical mind and little patience for poor research. At the same time, he was jovial, good natured, and very loyal and supportive of the researchers he mentored," remembers John Magnani, who now heads Glycotech Corp. and is planning a symposium to honor Ginsburg's work. (For more information, email JMagnani@Glycotech.com or call 301-738-1084.)

Born in Singapore on Mar. 22, 1930, Ginsburg moved to San Francisco at age 4 and obtained his Ph.D. in biochemistry from the University of California at Berkeley in 1955. He came to NIH in 1956 as a postdoctoral fellow in the PHS to work with Dr. Herman Kalckar. After pursuing a 1-year fellowship



in Belgium with the Polio Foundation under the sponsorship of Prof. G. Hers, he returned to NIAMD in 1959, joining the Laboratory of Biochemistry and Metabolism under Dr. Gordon Tomkins. In 1965, he became chief of the section on biochemistry in Dr. Herbert Tabor's Laboratory of Biochemical Pharmacology. He was chief of NIDDK's structural biology lab from 1986 until he retired.

Ginsburg is survived by his wife, Dr. Ann Ginsburg, who heads NHLBI's section on protein chemistry; two children, Mark Ginsburg and Lisa Ginsburg; a sister, Helen Benjamin in Cambridge, UK, and her three children; and three grandchildren, Ava, Daniel and Lily who reside in Providence, RI. ■

NIGMS Council Member Herskowitz Dies

Dr. Ira Herskowitz, a member of the National Advisory General Medical Sciences Council and a long-time NIGMS grantee, died of pancreatic cancer on Apr. 28. He was 56 years old.

Herskowitz was co-director of the program in human genetics in the School of Medicine at the University of California, San Francisco, where he was also a professor in the department of biochemistry and biophysics. He studied the control of gene expression in yeast, cell signaling, cell morphogenesis and growth control and pharmacogenetics. On the day he died, the *Proceedings of the National Academy of Sciences* published two articles that Herskowitz co-authored as a member of the NIH pharmacogenetics research network.

Herskowitz earned a B.S. degree in biology from the California Institute of Technology and a Ph.D. in microbiology from the Massachusetts Institute of Technology, where he also conducted postdoctoral research.

He was a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science and the American Academy of Microbiology. Herskowitz's honors include a MacArthur Foundation fellowship from 1987 to 1992 and the Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Research in 2003.

He is survived by his parents, a sister and two brothers.



Dr. Ira Herskowitz

Training Branch Class Offerings

The Training and Development Branch 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 496-6211 or visit <http://LearningSource.od.nih.gov>.

NBS Travel System	5/28-29
ADB Travel System	5/29-30
Fellowship Payment System	5/29
Price Reasonableness in Simplified Acquisitions	5/29
Intermediate MS Word 2000	6/3
Supervision: New Skills and New Challenges	6/3-5
Travel for Administrative Officers	6/3
ADB Travel System	6/4-5
Federal Budget Process	6/4-5
Plain Language in Government Writing	6/4-5
Purchase Card Training	6/9
Resolving Basic Computer Problems	6/9-10
Basic Time and Attendance Using ITAS	6/10-11
Purchase Card Training	6/10
Time Management: Organizing Yourself	6/10
Advanced Supervision: Beyond the Basics	6/11-12
Power Conversation	6/11-12
Professional Service Orders	6/11

CIT Computer Classes

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

PowerPoint Topics: Graphs, Links, and More	5/28
Statistical Analysis of Microarray Data	5/30
Looking Ahead to nVision	6/4
Security Software Tools	6/5
Partek Pro for Gene Expression Analysis	6/5
Cluster Analysis & Advanced Visualization of Gene Expression Data with Partek Pro	6/5
Advanced Statistical Analysis of Microarray Data with Partek	6/5
Building a Home Network	6/6
Introduction to Perl for Biologists	6/10-13
mAdb Intermediate Informatics	6/11-12
Bringing Data Files into SAS	6/18

Dr. Cheryl Kitt, director of the NIAMS Extramural Program, received the American Pain Society's John and Emma Bonica Public Service Award from the society's president, Dr. Richard Payne, recently. The award recognizes



outstanding contributions by an individual or organization through public education, public service or other vehicles to communicate information about pain.

Study of Dystonia

Researchers at NIH are conducting a study to determine if amlodipine can improve the effects of botulinum toxin injections for individuals with cervical or focal hand dystonia. Call 1-800-411-1222 (TTY: 1-866-411-1010).

Pedestrian Fence Project Starts, To Be Done by July 31



PHOTOS: RICH MCMANUS



Posts for the new pedestrian fence are being erected around the campus perimeter in a job due to be complete by August. Large boulders have been arranged near potential vehicular entrances to the campus, to thwart ramming attempts. At right, cables anchored in a concrete "dead man" will reinforce metal fence, offering more anti-ram defense.



New CRC Web Site Debuts

The Mark O. Hatfield Clinical Research Center draws more attention as work on the facility progresses. A new web site provides an overview and specific facts and milestones about the new hospital. There is information on design and construction, and profiles of former Sen. Mark Hatfield and the project partners. The visuals section has images of the floor plans as well as construction photos. To learn more, visit <http://www.cc.nih.gov/cc/crc>.

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. John Kuriyan on June 4, speaking on the topic, "Cancer Drugs and On/Off Switches in Protein Kinases: Structural Studies on the Specificity of the CML Drug STI-571/Gleevec." He is chancellor's professor, department of molecular and cell biology and department of chemistry and HHMI investigator at the University of California, Berkeley.

On June 11 from 1 to 3 p.m. in Masur, the General Motors Cancer Research Foundation will hold its 2003 scientific conference, featuring laureates' lectures from the winners of the Kettering, Sloan and Mott Prizes for Cancer Research.

The series then takes the summer off, resuming on Sept. 10. For more information or for reasonable accommodation, call Hilda Madine, 594-5595. **R**

Is Lupus Disrupting Your Life?

Take part in a medical research study at the National Institutes of Health. For more information, call 1-800-411-1222 (TTY 1-866-411-1010). **R**

NIH Director's Town Meeting, June 18

The NIH Director's Town Hall meeting has been rescheduled for Wednesday, June 18, from 1 to 2 p.m. in the Natcher conference center's main auditorium. Dr. Elias Zerhouni will address issues of importance to the broad NIH community, and be available to answer questions. Sign language interpretation will be provided, as will other reasonable accommodation. The meeting can be viewed from desktop computer at <http://videocast.nih.gov>.

If you have new questions or concerns that you would like to submit for the meeting, send them via the feedback tool located at <http://townhallmeeting.nih.gov>; deadline for submission is Wednesday, June 4, at noon. Note that questions submitted prior to last month's deadline will be considered, so there is no need for resubmission.

For more information about the event, contact Carol Jabir at jabirc@od.nih.gov, or 496-1776.