

nih record



ABOVE • Campus coyotes are back in storage after scaring off Canada geese. See story on p. 3.

features

1
NIH Commits to LGBT Science and Inclusion

3
Where Did Those Coyotes Go?

5
NIH Pilots Electric Car Charging Stations

9
'Feds Feed Families' Is Off to Great Start

departments

2
Briefs

10
Digest

'Out of the Closet, Into the Lab'

LGBT Pride Month Panel Speaks To Workplace Issues

By Carla Garnett

Dr. Matthew Hoffman was a postdoc when he came to NIH in 1994 as a visiting fellow. He had already earned a dental degree and had just completed a Ph.D. in microbiology and immunology. He was also openly gay. Throughout his academic and professional career, he actively sought out mentors who were both supportive about his scientific aspirations and his personal life. So when he applied for postdoc positions at NIH he looked for a boss who fostered and nurtured a diverse lab environment. He thought that being open about being gay made it less of an issue in the workplace and he could focus on science.

In 2004, he became principal investigator and chief of his own lab at NIDCR. He continues to cultivate diversity in his own lab.



Dr. Mark Schuster of Harvard and Dr. Susan Newcomer of NICHD

SEE **LGBT PRIDE**, PAGE 6



'Hidden Treasure' Celebrates Richness of NLM's Collection

By Shana Potash

The papers of pioneering NIH scientist Dr. Marshall Nirenberg (1927-2010); dolls that help tell the story of nurse-midwives (shown above); and a mimeographed medical report of the bombing of Hiroshima are among the items featured in a new book, *Hidden Treasure: The National Library of Medicine*.

SEE **HIDDEN TREASURE**, PAGE 4

NIBIB Celebrates 10 Years of Biomedical Imaging, Bioengineering Innovation

By Marilyn Daly and Jessica Meade

"What you guys have done has changed my life," Rob Summers told a crowd of more than 200 at the 10th anniversary celebration of the National Institute of Biomedical Imaging and Bioengineering.

Summers, one of many distinguished speakers at the recent day-long scientific symposium, shared his personal story of the research that has allowed him to stand up and move his legs after 5 years of paralysis.

He was the first human ever to receive epidural spinal stimulation, leading to recovery of his bowel, bladder and sexual function. Summers credits NIBIB. "I'd like to thank you for your generous funding of Dr. Reggie Edgerton at UCLA and Dr. Susan Harkema at the University of Louisville...[that] allowed me to be independent again, but more than anything, it's given me my confidence back in who I am."

The "technological innovation and scientific-

SEE **NIBIB ANNIVERSARY**, PAGE 8



The NIH Record is published biweekly at Bethesda, MD by the Editorial Operations Branch, Office of Communications and Public Liaison, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available upon request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 2012.

To receive alerts to our latest issue, send an email to listserv@list.nih.gov with the words "Subscribe NIHRECORD" in the message body.

NIH Record Office Bldg. 31, Rm. 5B41
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.od.nih.gov>

Editor

Richard McManus
Rich.McManus@nih.gov

Associate Editor

Carla Garnett
Carla.Garnett@nih.gov

Staff Writer

Jan Ehrman
Jan.Ehrman@nih.gov

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper and HHS.

NIH...Turning Discovery Into Health

briefs

16th Annual Free Outdoor Film Festival

Get ready for 3 nights of free movies, popular local bands and great food Aug. 23-25. Returning to North Bethesda, the 2012 Comcast Outdoor Festival is newly located at Mid-Pike Plaza on Rte. 355. The festival features a 4-story-high, 52-foot-wide inflatable movie screen.

The festivities begin each evening at 5:30 with live music along with food and wine sales from area food trucks and local restaurants. Films begin each evening at dusk. Admission is free and a portion of food and beverage proceeds will benefit three NIH charities: Children's Inn, Camp Fantastic/Special Love and Friends of the Clinical Center.

The lineup includes:

Thursday, Aug. 23 *All the President's Men*

Friday, Aug. 24 *Midnight in Paris*

Saturday, Aug. 25 *Cars*

Offering digital HD projection and state-of-the-art line-array audio, the festival is located near the White Flint Metro on the Red Line. On-site free parking is also available. Attendees should bring beach or lawn chairs. For more information, visit www.filmfest.nih.gov.

NIH Releases Video on Science of Yoga

Millions of people in the U.S. roll out yoga mats in studios, gyms or in the privacy of their homes to practice the poses, breathing exercises and meditation techniques associated with yoga. But what do we really know about how yoga works? Even though this mind and body practice has become increasingly popular, there remains a lot to be learned about the science of yoga and its effect on our overall health and well-being.

This month, the National Center for Complementary and Alternative Medicine released a video that sheds some light on the research and science behind the practice of yoga. The video features information on what changes occur in the body during yoga, the safety of the practice of yoga and whether it can help treat certain health problems.

Highlighted in the video is the work of two respected investigators in the field. Dr. George Salem is at the University of Southern California and uses innovative technology to examine how older adults use their muscles and joints in certain yoga postures. Dr. Karen Sherman is at Group Health Research Institute in Seattle and focuses on how yoga may be a beneficial

complementary health practice for people with chronic low-back pain, a common and difficult-to-treat problem.

In addition, the video provides valuable "dos and don'ts" for consumers who are thinking about practicing yoga. For example: Yoga is generally considered to be safe in healthy people when practiced appropriately under the guidance of a well-trained instructor. However, people with high blood pressure, glaucoma or sciatica and women who are pregnant should modify or avoid some yoga poses.

Everyone's body is different and yoga postures should be modified based on individual abilities. Inform your instructor about any medical issues you have and ask about the physical demands of yoga.

If you're thinking about practicing yoga, be sure to talk to your health care providers. Give them a full picture of what you do to manage your health.

This combination of science and health information provides an educational tool that can be used by a broad range of viewers—from researchers to yoga instructors to the public.

To watch the video *Scientific Results of Yoga for Health and Well-Being* visit <http://nccam.nih.gov/video/yoga>. This is the second installment in NCCAM's The Science of Mind and Body Therapies video series. The first video, *Tai Chi and Qi Gong for Health and Well-Being*, was released in September 2010.



Field Day Attracts Campus Athletes

A spirited game of volleyball was one of the attractions at NIH Field Day, held July 19 behind Bldg. 31A. Sponsored by the Office of Research Services' Division of Amenities and Transportation Services in partnership with the R&W Fitness and Wellness Program, the midday event featured a variety of individual and team activities including tug of war, an obstacle course and more. In this photo, Jonathan Bryan (l) and Jonathan Rudd (second from l) of NCI's Office of Acquisitions get ready to handle an opponent's spike. Visit www.facebook.com/NihRw-Fitness for the latest information on intramural sports leagues, the NIH Games in August and all other NIH R&W fitness and wellness programs.

nih record



Their Job Done, Coyotes Stand Down

Early this spring, NIH'ers began noticing coyote decoys popping up on campus lawns, usually in close proximity to gaggles of Canada geese. The decoys, some frozen in postures of menace, were imported to campus to discourage the birds from fouling campus walkways and roads.

This summer, however, the decoys have been stowed away. Surveys conducted during the month of June showed nary a goose on campus. "There's nothing here to scare, so we put them in storage," said Trevor Lubbert, senior staff entomologist with the Community Health Branch, Division of Occupational Health and Safety, Office of Research Services.

ORS acquired nine coyote decoys and deployed them during the goose nesting and egg-laying season early this year. "The nesting season starts in the early spring and lasts until the end of June," Lubbert said. At the height of the season, his team conducted three surveys each week to determine the best placement for the decoys.

While it is not certain that the decoys frightened the geese—some passersby reported seeing geese munching happily in the vicinity of the faux predators—they certainly brought out the wag in some campus denizens, who would plant dog biscuits in some of the decoys' mouths or festoon them with Mardi Gras beads.

"We had a lot of problems with jokesters," Lubbert conceded. So much so that signs were posted next to some of the decoys, indicating that they were government property and not to be interfered with. "I get that, but it defeats the purpose of the program."

Lubbert says his team is still conducting campus surveys and collecting data, although at a greatly reduced frequency. "There's no need for that level of intensity," he said. Should the Canadas reappear next spring, the decoys can be redeployed "at the drop of a hat."

Lubbert observed that "there is almost a direct correlation between the start of construction at

the Walter Reed National Military Medical Center and the emergence of a goose problem on this campus...We may not see the geese again, since construction over there is done now."

The WRNMMC has undertaken its own Canada goose management program, Lubbert noted. "There was quite a large population across the street at one time," he said.

If the decoys did their job for good, they will be missed. "Everybody got a kick out of 'em," Lubbert said.—**Rich McManus** 📍

NIH Volunteer Sarah Colon Walks the Walk

(Second story in an occasional series on NIH'ers who embrace alternative commuting modes)

Think for a moment—how far would you trudge to get your hair cut? For Sarah Colon, a research study volunteer at the Clinical Center for the past decade, 8 miles each way isn't too far. In fact, it's "a walk in the park."

When Colon wants to get a trim, she is obliged to walk or ride her bike. The Chevy Chase resident, in her late 40s, doesn't own a car. Never has. Probably never will. And she doesn't miss it.

"I was in driver's education class in high school when I asked myself, 'Why do we have to have a car?' So I took the challenge then [at age 16] to see if I could get through life without an automobile. So far I've made good of this. If I'm not walking somewhere, I'm riding my bicycle," she said. "It's just so energizing. And I don't really see the need for a car."

She added that the Washington, D.C., area makes it easy to get by without a vehicle. If Colon needs to get deep into the District, chances are she'll cycle in via the Capital Crescent Trail. Or she might walk, as she does to Potomac and back, when she visits the hairdresser.

Colon explains, "We've been walking for thousands of years, but only driving in relatively recent times. We really don't have to drive everywhere. Walking or biking is a great activity and it really lifts my mood. It's energizing and my brain seems to work better when I walk, though I don't know why."

Unlike many folks, the NIH volunteer doesn't listen to music when she hits the pavement. But she's used her ambling time wisely. While living in Japan years ago, flashcards became her walking partner, helping her master the language. During additional foot ventures, she has learned or memorized the UN Declaration of Human Rights, Buddhist precepts and all of her speeches for the Toastmasters Club.

Look out your office window and you may see Colon walking or riding her bike to and from the Clinical Center, as she frequently participates in clinical studies. She freely admits, however, that walking, as much as she relishes it, can cause the occasional, perhaps even painful, setback. "You have to keep an eye out for those telephone poles—I've bumped into a few of them over the years."

Still, the advantages of traveling by foot for Colon are numerous. "I never thought about the freedom I have as a result of walking, but it's definitely a benefit in terms of a more efficient brain, as well as cost savings. Plus, you don't contribute to air pollution. I can't imagine ever owning a car," she concluded.—**Jan Ehrman**



HIDDEN TREASURE

CONTINUED FROM PAGE 1

Dr. Michael Sappol, a curator-historian in NLM's History of Medicine Division, edited the book, which was created to celebrate the library's 175th anniversary (1836-2011). Two years in the making, *Hidden Treasure* showcases the world's largest medical library and its unique collection.

"It was a wonderful, collaborative project," Sappol says, giving credit to more than 100 people inside and outside NLM whose time and expertise went into the volume.

Rather than developing an anniversary book of milestones, Sappol wanted to show off the richness of the library's collection, and the curiosities it contains, in order to distinguish NLM from other libraries. A list of more than 400 possible entries for the book was eventually narrowed down to 83 objects chosen for their significance and visual interest. Each object is accompanied by artful photography and a mini-essay by a contributing scholar explaining the significance of the work.

While NLM is a medical collection, Sappol notes it is a historical collection that can be used by scholars studying not just the history of medicine, but also art, anatomy, culture, women's studies, African-American studies and the military, for example. "In showing off these many different kinds of objects, we are reaching out to people who might use our historical collections and saying 'Here's stuff you might not know about.'" It's also an invitation to the public to peruse the collection.

"Through this book, readers will learn about the remarkable depth and breadth of NLM's historical collections, as well as the rich history of the library itself," says Dr. Jeffrey S. Reznick, head of the History of Medicine Division. A social and cultural historian of medicine and war, he contributed an essay on the in-house magazines produced by U.S. military hospitals in World War I to distract soldiers from their war wounds.

Sappol, a historian of medical illustration and anatomy, contributed three mini-essays. One describes White's Physiological Manikin (1886), which is one of three life-size manikins in the library's collection. Selling for \$35 back in the day, the cardboard manikin filled with fold-and-flaps was used for classroom instruction.

Photographing the manikin was a special, yet fun, challenge for NLM conservator Holly Herro. She and colleague Kristi Wright-Davenport assist-



Cover of *Hidden Treasure*

ed photographer Arne Svenson on the photo shoots. Their job was to help Svenson execute his vision for the photograph by setting up the objects without damaging them.

"We were crawling all over the floor on hands and knees, up and down on ladders, all over the library looking for places to shoot," says Herro. Svenson photographed the 19th century manikin sitting on the floor of the library lobby, next to a modern chair. Herro says in order to keep the manikin's flaps open for the photograph, she and Wright-Davenport used polyester film to devise support structures to stuff inside the flaps to keep them in place.

"The project became an opportunity for me to poke around in odd corners of the library and say 'What's that?'" says Sappol. In doing so, he uncovered "a great find," the St. Elizabeths Magic Lantern Slide Collection (1855-1890s), uncatalogued because of a backlog. The slide projections were used in the 19th century as part of treatment for patients with mental illnesses at St. Elizabeths Hospital in Washington, D.C.

"Some things are charming and entertaining. Others are disturbing to look at or document terrible things," Sappol says. "There's a lot in the book. In some cases it's a document of human suffering, showing the diseases and afflictions people have. In other cases, it's a document of ingenuity and coming up with treatments."

Hidden Treasure is a hardback book with nearly 240 pages and 450 full-color illustrations.

"This book was really a labor of love," Sappol says. "People went above and beyond the call of duty."

Hidden Treasure is available as a free download from NLM's Digital Collections at <http://resource.nlm.nih.gov/101569502>. The book is also available from its publisher, Blast Books, and major online booksellers. 📖



White's Physiological Manikin (1886)—The manikin's flaps correspond to lecture topics such as the circulatory system, the brain and nervous system, the skeleton and muscles, venereal disease and the physiology of reproduction (male and female), first aid and the dangers of corseting.

PHOTOS: ARNE SVENSON



Dr. Donna Dean (l) receives the Award for Excellence in Mentoring from AWIS representative Romina Heymann.

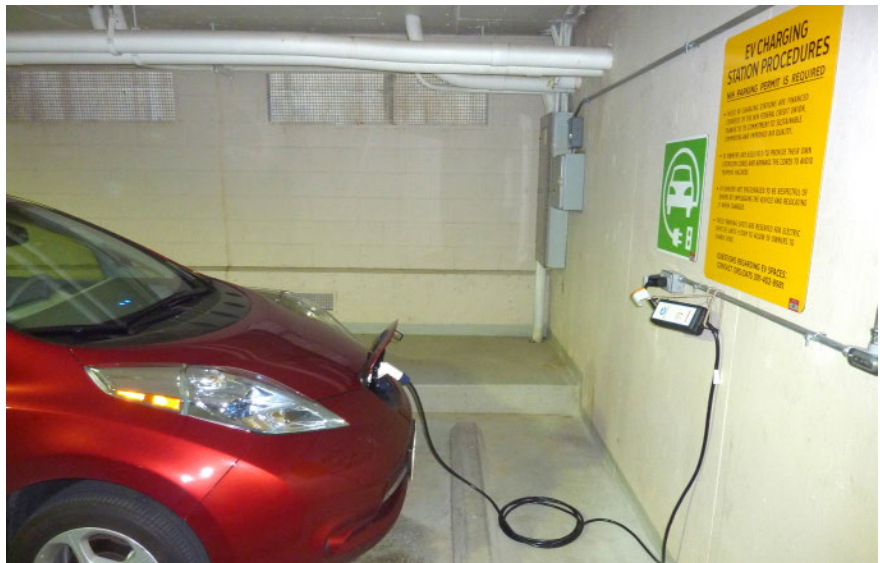
Dean Honored for Excellence in Mentoring

Dr. Donna Dean recently won the 2012 AWIS-Bethesda Award for Excellence in Mentoring. The award was presented during a career development seminar sponsored by the Association for Women in Science, Bethesda chapter.

Dean is not only a past Bethesda chapter and national AWIS president, but also someone whose name is synonymous with mentoring. Her motto “Move Forward, Reach Back” has been exemplified in her dedication to mentoring other women in STEM fields and advocating inclusion in the science workforce.

Dean has had a distinguished career, with 27 years in the federal government at NIH and FDA, followed by 5 years as a senior science advisor at Lewis-Burke Associates, a D.C.-based government public relations consulting firm. While her own career has included many highly respected positions in government laboratories and service with the National Academies, she always remembered to “reach back” to others.

In addition to the many women Dean has mentored, she has also been a leader in the development of the nation’s STEM human resources as a result of her advocacy for the inclusion of women and underrepresented minorities in the scientific workforce. She recently compiled her experiences in a guide titled *Getting the Most Out of Your Mentoring Relationships: A Handbook for Women in STEM*.



A Nissan Leaf gets a charge out of the MLP-7 parking garage.

Pilot Program Allows Commuters to ‘Plug In, Power Up’

The infamous psychologist, writer and counterculture icon Timothy Leary was famous for the line, “Turn on, tune in, drop out.” Although we don’t want employees to drop out, a new pilot program is encouraging owners of electric vehicles to turn on a charging station while they work.

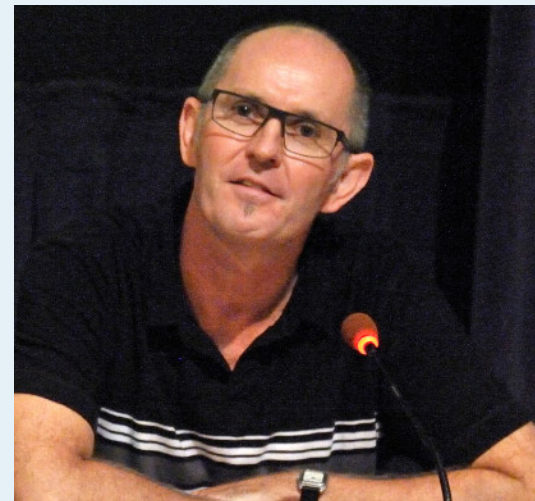
With the help of the NIH Federal Credit Union (NIHFCU), the parking staff has reserved 8 spaces on the Bethesda campus as electric vehicle charging stations. The program starts out with 4 spaces in the Clinical Center garage (P-2 and P-3) and 2 spaces each in MLP-6 and MLP-7. Spaces are painted an “eco” green and marked EV for electric vehicle. Outlets have a kilowatt meter recording total power usage as the vehicles charge up.

Without much fanfare, a few Chevy Volts and Nissan Leafs have been seen—dashboards blinking—powering up in the designated spaces. At this time, the pilot runs until NIHFCU’s \$2,000 donation of energy use is exhausted. However, if interest remains steady and a method to allow employees to pay for their own energy consumption is resolved, the parking staff envisions opening up additional charging stations at other locations on campus.

Peter Yuen, a staff scientist with NIDDK, is already on board. “The charging stations are terrific. I use them all the time,” he said. “They are in a great location, especially since it is a protected environment. Charging up during the day allows me to go further for off-campus meetings and do more after work too. I congratulate NIH for being forward-thinking.”

Laura Novik, the HIV vaccine studies coordinator with the Vaccine Research Center, enjoys the flexibility they offer. The chargers allow her “to run errands after work when I need to without having to go home and charge my vehicle first.”

Even Leary himself might have found this program, aimed at reducing fossil fuel consumption and pollution, progressive—or at least “far out.”



LGBT PRIDE

CONTINUED FROM PAGE 1

Above, from l:

Among panelists are former chair of the U.S. Equal Employment Opportunity Commission Ida Castro, vice president of social justice and diversity at Commonwealth Medical School in Pennsylvania; Harvard Medical School's Schuster; and NIDCR's Dr. Matthew Hoffman.

Below:

Gathered for a photo with event poster are program participants (from l) OEODM Director Debra Chew, Castro, NIH principal deputy director Dr. Lawrence Tabak, Dr. Judith Bradford of the Fenway Institute, Dr. Scout of the Network for LGBT Health Equity, Schuster and Hoffman.

PHOTOS: MICHAEL SPENCER

After 18 years and counting at NIH, he couldn't be happier with his career here.

But not everyone has as smooth a professional coming-out process as Hoffman, according to Dr. Mark Schuster, Dr. Judith Bradford and Dr. Scout. All four are members of the lesbian, gay, bisexual and transgender community who, along with employment equity expert Ida Castro, formed a panel to discuss LGBT issues in the workplace at "Out of the Closet and Into the Lab," NIH's program recognizing LGBT Pride Month.

'Welcoming and Inclusive'

Sponsored by NIH's LGBT employee committee Salutaris in partnership with the Office of Equal Opportunity and Diversity Management, the event's goal was simple: Start a conversation. With everyone's creativity and cooperation, an open dialogue will help NIH in its mission to enhance health for all people by providing an environment where diverse people work together productively.

"These are the core values of my office—the pursuit of civil rights and equity for all," said newly appointed OEODM Director Debra Chew, introducing the program commemorating the Stonewall

Uprising of 1969, celebrated as the start of the modern gay rights movement in the U.S.

In opening remarks, NIH principal deputy director Dr. Lawrence Tabak talked briefly about the recent work the agency has done to advance LGBT health research and about efforts to make NIH's workplace more inclusive.

"We want to ensure that every person who wants to participate in biomedical research is able to participate," he said. "We need to ensure that our researchers and our fellows and our administrators—both on and off campus—are able to come to NIH and be confident that they will find a welcoming and inclusive environment."

'Straightforward...but Careful'

Schuster, William Berenberg professor of pediatrics at Harvard Medical School and chief of general pediatrics at Boston Children's Hospital, recently published a journal article about his own career trajectory as a gay man in the field of medicine and biomedical research. As a panelist, he shared feedback he received from others in the LGBT community after his article was picked up by major media outlets.





Bradford (l), who directs the NICHD-funded Center for Population Research in Lesbian, Gay, Bisexual and Transgender Health, and Scout discuss the need to find supportive mentors. Bradford has served in that capacity over the years for Scout.

"I got an outpouring of email...a lot from people I don't know," he said. "What I was struck by was people sharing their lives, telling lots of details about their coming out, things that echoed my own experience, people asking for advice, people still experiencing discrimination, remaining closeted. I was struck by the need to share, the search for empathy."

Bradford, cochair of the Fenway Institute and director of the NICHD-funded Center for Population Research in Lesbian, Gay, Bisexual and Transgender Health, said the climate for LGBT people to safely disclose their sexual orientation and gender identity has improved gradually over the course of the last 30 years or so. She began grappling with these issues as a doctoral student and university faculty member. She said having a strong, supportive mentor to discuss her concerns and provide advice increased her confidence that disclosure could be done without retribution. Still, Bradford urged thoughtful consideration.

"Be straightforward, but be careful," she advised, offering her own personal strategies. "Don't put yourself in a position where you could be hurt or lose your job...Strategies that people use need to be adapted to the environment. We need to be honest about who we are and we need to find people who can support us in that."

'Being a Pioneer'

Castro, a former chair of the U.S. Equal Employment Opportunity Commission, offered a big-picture view of recent and steady progress in medical education and LGBT programs.

Looking at leadership, resources, curriculum, work environment and inclusion, she mentioned three "best-practices" models at large universities that have addressed LGBT concerns specifically: University of North Carolina-Chapel Hill School of Medicine's Opening Doors retreat, New York University's certification program and Boston University's longitudinal approach.

Scout, who goes by that single name, is a research scientist and director of the Network for LGBT Health Equity at the Fenway Institute. He talked about the recent past when scientifically justified LGBT research was under intense scrutiny by Con-

gress. Scout recalled that some investigator colleagues were asked to take LGBT language out of their research titles "because unfortunately the political climate was intruding in the research climate...I realize how much that throttled the field."

About his burgeoning scientific career, Scout said he experienced both outright and subtle discrimination, particularly when trying to get into graduate school. "There's very much this sense of being a pioneer," he said, "and in being a pioneer you are vulnerable."

In contrast, Hoffman, senior investigator and chief of NIDCR's matrix and morphogenesis section, described only positive experiences both in grad school in upstate New York and here at NIH.

"For me it was really important to go to a lab where—apart from the good science and the good mentoring—I saw diversity expressed in that lab," he said of his search for a job. As head of his own lab now, Hoffman said the scientist in him deliberately seeks out potential employees with differences.

"We need a range of opinions," he explained, "and we get that range of opinions, we get that range of outlook on science by having a diverse group of people working with us."

Over the course of the program, panelists tackled a variety of questions from openness on resumes and mentorship to gay teens and isolation. You can watch the whole videocast at <http://videocast.nih.gov/summary.asp?Live=11409>. 📺



Castro offers a big-picture view of recent and steady progress in medical education and LGBT programs.

Toolbox for Clinical Research to be Unveiled

Registration is now open for "Unveiling the NIH Toolbox," a 2-day scientific conference taking place Sept. 10-11 in Bethesda on the new NIH Toolbox for Assessment of Neurological and Behavioral Function—a set of brief but comprehensive neurological and behavioral health measurements designed for use particularly in large-scale research studies such as epidemiological studies or clinical trials.

- Sept. 10, 8 a.m. to 4:30 p.m., Masur Auditorium—Join experts in the field for an overview of the development, testing and use of the NIH Toolbox via lectures and panel discussions.
- Sept. 11, 8:30 a.m. to 4:30 p.m., Bethesda Hyatt Regency—Attend in-depth presentations on the properties of the NIH Toolbox measurements and interactive demonstrations of their administration.

Developed by a team of more than 250 scientists from nearly 100 academic institutions, the NIH Toolbox provides a battery of online and royalty-free measures of motor, cognitive, emotional and sensory function for study participants ages 3 to 85 years. The toolbox promotes economies of scale and enhanced efficiency in measurement. It was developed under the auspices of the NIH Blueprint for Neuroscience Research, a coalition that creates new tools and resources to advance neuroscience research.

To register for the conference and/or a 3-day training workshop taking place Sept. 12-14, or to learn more about the NIH Toolbox, go to www.nihtoolbox.org.



NIBIB ANNIVERSARY

CONTINUED FROM PAGE 1

Above, l:

From left, Dr. Reggie Edgerton, Rob Summers and Dr. Susan Harkema join NIBIB's 10th anniversary celebration.

Above, r:

Demonstration of the microsurgery assistant workstation. This new technology uses imaging and "smart" surgical tools to perform complex eye surgeries. The workstation itself is seen below, with the skull on the table under the microscope.

ic discovery" helping Summers "energizes us for the future," said Dr. Roderic Pettigrew, director of NIBIB, who opened the symposium by focusing on how biomedical imaging and bioengineering have changed in the last decade. He described examples of point-of-care technologies that permit diagnostics at the bedside to detect cancer and imaging advances revealing that human brain circuitry is organized in a grid, like city streets on a map.

NIH director Dr. Francis Collins offered his congratulations and described the challenges facing health care today and how technology, translation, talent and investment will have a huge impact on health care in the 21st century. He highlighted NIBIB-funded research, including the neurally controlled robotic arm for individuals who are paralyzed. Using the device, a woman who has been a quadriplegic for 15 years was able to use her thoughts to direct a robotic arm to reach for and sip from a glass.

Collins also cited the collaborative efforts of several federal agencies to develop bio-chips of organs used to identify toxicity and gene expression, in order to speed up and reduce the cost of drug testing and development. He described how NIH must encourage young scientific talent, citing NIBIB's Design by Biomedical Undergraduate Teams (DEBUT) Challenge as an example of spurring students on in their desire to pursue careers in science.



MIT professor and Nobel laureate Dr. Phillip Sharp described our current scientific landscape as part of the "third revolution" in biomedical science. The first revolution was the discovery by Watson and Crick of the structure of DNA; the second pertains to innovations in genomics; and the third revolution is convergence science—the merging of the physical and engineering sciences with the life sciences—which will have a profound impact on research and health care.

NIBIB grantee Dr. Roger Tsien's presentation addressed the value of molecular fluorescence for enhancing image-guided surgery. The Nobel laureate from the University of California, San Diego, commended NIBIB for its support and described how using fluorescence could significantly improve standard surgery, enabling earlier detection of cancer before it spreads to other areas of the body.

"I would point out that if you can catch the tumor early enough to completely cut it out, the result is an immediate cure, and relatively low-cost compared to the lifetime of medication on the wonderful designer drugs that don't kill the cancer and merely give it time to become resistant," he said. "And one thing a tumor can never become resistant to is being literally chopped out and dropped in formaldehyde."

Tsien illustrated the importance of being able to identify nerves when surgically removing tumors and how the inability to do so often results in permanent damage. The new fluorescence technology can allow doctors to avoid damaging vital nerves while removing cancerous lesions.

The anniversary celebration also featured a technology showcase with live demonstrations and exhibits. Featured were nine NIBIB-funded projects, including:

✔ A hand-held ultrasound scanner for high-quality images of internal organs and blood flow;

✔ The magnetic resonance elastography device that noninvasively visualizes liver tissue damage;

✔ Micro needle patches that can deliver influenza vaccine, do not need to be refrigerated and could be administered at home;

✔ The micro-fluidic chip that detects rare cancer cells in blood samples;

✔ A microsurgery workstation of novel sensors, surgical instruments and robotic devices for improved retinal surgery;

✔ A breast model with pressure sensors used to train health practitioners in conducting clinical exams to detect tissue abnormalities;

✔ A suite of software for deep brain stimulation therapy that helps surgeons centralize data and visualize activity at all stages and maximizes efficiency;

✔ Noninvasive imaging of dynamic brain activity for epilepsy;

✔ Image analysis tools that process magnetic resonance images of the human brain to better understand brain health and disease.

The wide variety of speakers coupled with hands-on demonstrations and patient testimonials provided attendees with an overview of NIBIB and the progress it has achieved during its first decade. More information, photos and videos from the event can be found at www.nibib.nih.gov/NewsEvents/TenthAnniversary-Highlights. 📺

Open House for Lab Managers Interest Group, Aug. 9

The NIH lab managers interest group will hold an open house on Thursday, Aug. 9 from noon to 1 p.m. in the Bldg. 40 conference room (1203).

The group was formed in June 2003 to serve as an advisory group for NIH entities. The group evaluates issues affecting research laboratory operations, shares best practices for managing lab operations and resolving problems and serves as a forum for professional development by hosting seminars and workshops on integral laboratory and administrative processes at NIH.

This diverse group includes biologists, chemists, facility managers and safety specialists from across the institutes and centers; many have post-baccalaureate degrees.

Come meet lab managers from different ICs to learn more about the interest group, as well as the lab manager position at NIH.



Participating in the July "Fill the Truck" event behind Bldg. 10 were (rear, from l) Joe Cox, Thomas Hayden, Valerie Harrington, Phyllis Easter, Eric Munger, Karen Stakes, Tanya Burkholder and Corey Welcher. In front are Monika Kloda and Woodrow "Spike" Harrison.

'Feds Feed Families' Off to a Great Start

This is the 4th year NIH has participated in the Feds Feed Families government-wide summer food drive. The drive benefits the Capital Area Food Bank, which serves more than 700 food pantries, soup kitchens and other service organizations in the District of Columbia, Maryland and Virginia. It also offers programs on healthy cooking on a budget and gardening workshops in addition to providing food to our neighbors.

The federal campaign theme is "Beat Your Best." Last year, NIH was the HHS first place site winner. NIH Feds Feed Families campaign is being coordinated by Corey Welcher of ORS. She says, "The first Fill the Truck event this week [July 17-19] was very successful—so far we've collected a little over 3,000 pounds of food. The goal this year is to surpass last year's total of 17,495 pounds of goods. We have a long way to go, but I know we can do it!"

In addition to the donation sites in the metropolitan area, NIH facilities in Poolesville, Frederick, Baltimore, Research Triangle Park and the Rocky Mountain Labs in Montana are also participating in the campaign. "This is a tremendous undertaking that only works because of the generous support of everyone behind the scenes, in addition to the generous donations from the staff at NIH. I'm very excited to be a part of this effort," Welcher said.

The next Fill the Truck event will be on Aug. 22-23 at Bldg. 1. Non-perishable donations will be collected at sites both on and off-campus until Aug. 25. Donation items include canned goods, boxed food, baby food, grains as well as hygiene products (i.e. toothpaste, soap, tissue, diapers, etc.) For a complete list of donation sites and "most wanted items" from the food bank, visit www.ors.od.nih.gov.



Harrington (l) and Munger hold signs appealing to commuters arriving at Bldg. 10's south entry to participate in the food drive.

Oral Immunotherapy Shows Promise as Treatment for Egg Allergy

Giving children and adolescents with egg allergy small but increasing daily doses of egg white powder holds the possibility of developing into a way to enable some of them to eat egg-containing foods without having allergic reactions,

according to a study supported by NIH. The study results appeared online in the July 19 issue of the *New England Journal of Medicine*.

"Children with egg allergy are at risk for severe reactions if they are accidentally exposed to egg-containing foods," said NIAID director Dr. Anthony Fauci. "Currently, the only way to prevent these reactions from occurring is for these children to avoid foods that contain

eggs. While this relatively small study provides encouraging new information, it is important for the public to understand that this experimental therapy can safely be done only by properly trained physicians."

The study is one of several federally funded trials of oral immunotherapy (OIT), an approach in which a person with food allergy consumes gradually increasing amounts of the allergenic food as a way to treat the allergy. Because OIT carries significant risk for allergic reactions, these studies are all conducted under the guidance of trained clinicians. Symptoms of allergic reactions can range from mild (hives, redness and itchiness of the skin) to severe (swelling of the back of the throat, trouble breathing, drop in blood pressure and faintness or dizziness).

The trial was conducted by the NIAID-supported Consortium of Food Allergy Research at clinical sites in five U.S. cities.

Study Shows Colon, Rectal Tumors Constitute Single Type of Cancer

The pattern of genomic alterations in colon and rectal tissues is the same regardless of anatomic location or origin within the colon or the rectum, leading researchers to conclude that these two cancer types can be grouped as one, according to The Cancer Genome Atlas (TCGA) proj-

ect's large-scale study of colon and rectal cancer tissue specimens.

In multiple types of genomic analyses, colon and rectal cancer results were nearly indistinguishable. Initially, the TCGA Research Network studied colon tumors as distinct from rectal tumors.

"This finding of the true genetic nature of colon and rectal cancers is an important achievement in our quest to understand the foundations of this disease," said NIH director Dr. Francis Collins. "The data and knowledge gained here have the potential to change the way we diagnose and treat certain cancers."

The study also found several of the recurrent genetic errors that contribute to colorectal cancer. The study, funded by NCI and NHGRI, was published online in the July 19 issue of *Nature*.

NIH Tools Facilitate Matching Cancer Drugs With Gene Targets

A new study details how a suite of web-based tools provides the research community with greatly improved capacity to compare data derived from large collections of genomic information against thousands of drugs. By comparing drugs and genetic targets, researchers can more easily identify pharmaceuticals that could be effective against different forms of cancer.

The newly updated software, called CellMiner, was built for use with the NCI-60, one of the most widely utilized collections of cancer cell samples employed in the testing of potential anti-cancer drugs. The tools, available free, provide rapid access to data from 22,379 genes catalogued in the NCI-60 and from 20,503 previously analyzed chemical compounds, including 102 Food and Drug Administration-approved drugs.

The study, written by scientists who developed the tools at NCI, appeared in the July 16 issue of *Cancer Research*.

"Previously, you would have to hire a bioinformatics team to sort through all of the data, but these tools put the entire database at the fingertips of any researcher," said Dr. Yves Pommier of NCI's Center for Cancer Research. "These tools allow researchers to analyze drug responses as well as make comparisons from drug to drug and gene to gene."



Study shows that giving children and adolescents with egg allergy small but increasing daily doses of egg white powder holds the possibility of developing into a way to enable some of them to eat egg-containing foods without having allergic reactions.

NIAID Fellows Target Global Health Research

"It's an exciting time to be involved in global health research," said Ambassador Mark R. Dybul, addressing NIAID's fellows during a retreat on global health research held recently. Organized by a committee of institute fellows and the Office of Training and Diversity, the retreat featured panel discussions about the various facets of implementing and running global health research programs.



Some fellows were astounded to learn of the many and wide-ranging NIAID research projects under way across the globe to better understand such diseases as malaria, TB and HIV. Said one during the morning session, "How can I learn more about these programs and get involved?"

A key theme emerged early in the day. Contrary to much of what we know about biomedical research training, global health research involves a broad and interdisciplinary approach, a notion that surprised many postdocs whose research is generally more narrowly focused. More than biological in nature, global health problems are influenced by cultural, economic and political forces.

No one articulated that theme better than Dybul. As former U.S. global AIDS coordinator under the George W. Bush administration and co-director of Georgetown University's O'Neill Institute for National and Global Health Law, Dybul has seen the evolution of global health research first hand. Offering a frank historical perspective, he noted the lack of interest early on among policymakers and others to put resources into improving global health.

The paradigm shift toward multidisciplinary solutions eventually led to some of the greatest public health successes in global health in the last decade, largely driven by science. As a result of NIAID and other institute research advances, "we can see the end of HIV, malaria, maternal death and preventable child death," Dybul said.

Panelists also emphasized the importance of looking broadly and working cooperatively. Dr. Clifton E. Barry III, who works on drug development for TB in the Laboratory of Infectious Diseases, emphasized that it is more than just scientific issues that inform research. Global health researchers, he says, must understand the politics of disease at every level and ask, "What do we focus on in the lab that can make a scalable difference?" The work has to be done cooperative-

ly not just to shed light on public health problems, but also to build research capacity in host countries.

The day ended with a review of NIAID's international research and an introduction to NIAID's Office of Global Research by its senior international scientific advisor, Dr. Karl Western. He explained the office's role in establishing diplomatic relationships with several countries and supporting and expanding the institute's international activities.—**Marci Karth Better**

Prakash Leads NEI International Program

Dr. Gyan "John" Prakash has joined the National Eye Institute as associate director for international program activities. He brings to NEI a wealth of knowledge and leadership gained during more than 25 years of work in global health research and development.



Originally from India, Prakash holds a Ph.D. in medical microbiology from the University of Illinois at Urbana-Champaign and an M.B.A. in pharmaceutical managing/marketing, which he obtained through programs at UCLA School of Management and St. Joseph's University. For much of the 1990s, Prakash managed international clinical programs for antifungal and anticancer therapeutics, including therapies for eye diseases, for Pfizer International, Inc.

During the past decade, Prakash worked as a senior drug development expert for NIAID and a director at the Department of Defense, providing guidance for the development of drugs and biologics. He most recently comes from AMAR International, Inc., a consulting firm specializing in life science programs and clinical research support, where he served as chief operating officer and principal scientist for industry, academic and government clients including NIH.

"Dr. Prakash's unique expertise and perspective will help the NEI better engage the global health community and leverage our international research efforts," said NEI director Dr. Paul Sieving.

NCI Workforce Management Office Awarded

The NCI Office of Workforce Management and Development (OWMD) recently received the Leadership Development Award from the federal government's Training Officers Consortium. Created in 1938, the consortium is a non-profit organization of federal trainers and other professionals from industry and academia interested in contributing to the knowledge and practice of human resources and training. TOC is the primary organization for federal training professionals.

OWMD's award-winning team designs and delivers professional and leadership development workshops and programs to all NCI staff and provides resources for ongoing training and development. Examples of opportunities offered include the Senior Executive Enrichment and Development Program, the Empowered Supervisor Program, Supervisor Seminar Series, the Leadership Education and Action Program, Leadership Forum, Knowledge Management: A Mentoring Program, Building Your Professional Toolkit Series, Executive Coaching and a variety of individual assessments such as 360-degree feedback and a work style assessment.



Members of NCI's training and development team include (from l) Yasmin Nasser, Nicole Vennell, Shannon Connolly, Carrie Crum and Teresa Estrada. Not shown are Safiya Stewart-Sagoua and Agustina Boswell.



Masters of DISaster include (from l) Coach Jim Linn, Co-Manager Monika Kloda, Frannie Snediker, Co-Manager Katie McLaughlin, Katie Franklin, Weldon Payne, Maryland Hatch and Annette Cruz.

'Masters of DISaster' Debut in Co-Rec Softball League

As softball tournament games wind down, the teams left in the league are battling to the finish. The tournament started July 16 and ends Aug. 13. Some teams feature seasoned players while others have members who have never swung a bat. But all are excited for a chance to win the series. Based on the regular season, the standings favor the Isotopes, Co-Wrecks, Hit Squad and SWAT Squad, with other teams following behind: Regulators Rookies, Secret Reagents, Base Pathogens, Regulators Veterans and Masters of DISaster.

This season, the Co-Rec Softball League, sponsored by the NIH Recreation & Welfare Association, welcomed a new team with players who were especially excited for their first tournament games. Reminiscent of the baseball movie *The Bad News Bears*, the Office of Research Services' Masters of DISaster began its first season with minimal runs and low prospects. A division within ORS, the Division of International Services (DIS) provides immigration-related services to NIH for visiting foreign scientists and the NIH research community.

According to Co-Manager Monika Kloda, starting a softball team has already united the office. Most had never played softball before, but they rallied together to learn and enjoy the game. Fortunately, the league focuses on equal time for all players so that everyone has a chance to learn different positions. As for the Masters, they quickly learned to stitch up their gloves so that balls didn't fly right through them. Pinch runners were used often for players who were either unable to run fast or recuperating from an injury. Unfortunately, the Masters had quite a few injuries in the first couple of games. As one player, Tim Price, said, "Man, it hurts when you get hit by one of those softballs!"

The Masters acquired one of their foreign scientists, who knew nothing about softball (or baseball) but took on the position of pitcher and has been doing great so far. They also acquired a coach who gave the team guidance during week-day games and Sunday practices.

League rules try to make the games fair, but new players found them both confusing and frustrating. It took a few games for Masters to realize that when any player goes up to bat, the count is already one ball and one strike. Also, in this league there are normally 7 innings, but games can be shortened to 5. If a team is ahead by 12 or more runs by the 5th inning, the league applies the "slaughter (or mercy) rule" and ends the game.

The Masters' first game was against the league champion Co-Wrecks. Although the Co-Wrecks were helpful and gracious, they still beat the Masters 25-0 in 5 innings. The slaughter rule became a recurring theme for their games, with only a couple being close. Nevertheless, the Masters never lost hope and still had fun.

While there is always room for improvement, the Masters have come a long way. Whether winning or losing, they maintain a positive attitude and push each other to improve. Although Masters of DISaster may not win a single game this season, their spirit would resonate with the *Bad News Bears*: "Wait 'til next year!"—

Catherine Franklin

Upcoming Changes at Campus Intersections, Sidewalks

Changes are about to appear at several intersections and roadways on campus. These include removal of unnecessary crosswalks, increased lighting and signage, additional railings and intersection modifications. The improvements are intended to guide pedestrians to fewer, more visible crosswalks, making it easier for drivers to see both pedestrians and other drivers prior to advancing through an intersection.

Starting in August and finishing in September, the following intersections and roadways will see safety and traffic improvements—South Dr. and Center Dr., South Dr. and Service Rd. West, and Center Dr. in front of Bldgs. 1, 2 and 3.

❑ At South Dr. and Center Dr.—Pedestrian access to the island with the large anchor will be removed. Railings will be added along the sidewalks at key points to deter jaywalking and crossing intersections where no crosswalk exists.

❑ At South Dr. and Service Rd. West, the intersection between Bldg. 13 and the south side of Bldg. 10—The island will be removed altogether. The right-turn-only lane will be removed and crosswalks on the north and east side will be removed. Pedestrians using sidewalks along South Dr. to access the Clinical Center or points west should use the sidewalk located on the south side of South Dr. as the sidewalk along the north side of South Dr. in front of Bldg. 9 will be removed.

❑ At Center Dr. in front of Bldgs. 1, 2 and 3, unnecessary crosswalks will be removed and additional lighting will be installed.

These locations were selected based on their history of past accidents, high pedestrian traffic, overall congestion and a need for enhanced visibility. A long-term study is under way analyzing the entire campus and should be completed this fall. The study will look at additional physical changes to solve traffic flow situations while also improving pedestrian safety.