NIAMS To Mark 25 Years of Improving Lives Through Discovery

On Monday, June 13, the National Institute of Arthritis and Musculoskeletal and Skin Diseases will commemorate its 25th anniversary with a day-long scientific symposium, Improving Lives Through Discovery, and a special evening event.

Since 1986, NIAMS has conducted and supported medical research on bone, joint, muscle and skin diseases—ailments that affect almost every household in America. “We are proud of the scientific advances that our extramural and intramural researchers have made toward helping people who have diseases of the bones, joints, muscles and skin, and are excitedly looking forward to the discoveries they will make in the future,” said Dr. Stephen I. Katz, who became NIAMS director in August 1995.

The symposium will feature scientific advances made possible with NIAMS support, highlight how these advances have improved patients’ lives and address the future directions for.

features

‘Sharing the Sandbox Equally’
Screen Star Davis Urges Gender Balance in Media

By Carla Garnett

T
helma and Louise character aside, screen star Geena Davis never set out to be a crusader. She didn’t dream as a youngster of starting her own non-profit research foundation. She simply sat down one day to watch videos with her toddler daughter. What she saw was eye-opening for her as a mother, woman and entertainer.

“Because of my awareness of female representation, I was absolutely stunned to see—and noticed immediately—that there seemed to be far fewer female characters in what the kids were seeing,” Davis said. “Show after show and movie after movie, it really seemed very striking to me. I thought, in the 21st century, surely by now—for kids at least—we should be showing boys and girls sharing the sandbox equally. Doesn’t seem like there would be much point in showing children.

Somerman Named NIDCR Director

Dr. Martha J. Somerman has been appointed director of the National Institute of Dental and Craniofacial Research. She is currently dean of the University of Washington School of Dentistry, a position she has held since 2002. She is expected to begin her duties as NIDCR director late this summer.

“I am delighted that Dr. Somerman will be bringing her exceptional research expertise and administrative skills to this leadership position at the NIDCR,” said NIH director Dr. Francis Collins, who announced the appointment on May 2. “I would also like to thank Dr. Isabel Garcia for her outstanding service as acting director of NIDCR since August 2010.”

Somerman will oversee a budget of $410 million and lead a staff of more than 400 researchers and administrators on campus as well as hundreds of grantees at universities, medical schools, dental schools and other research institutions.

“As you can imagine, the opportunity to lead

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Lecture on Bringing Scientific Evidence into Clinical Practice

The NLM’s Extramural Programs Informatics Lecture Series for the 175th Anniversary will feature Dr. Eneida Mendonça, who will present “Bringing Scientific Evidence into Clinical Practice: Challenges, Successes and Failures,” on Wednesday, June 8 at 2 p.m. in Bldg. 45, balcony A.

Mendonça is a visiting associate professor in biostatistics and medical informatics and an associate director for the informatics core of the Institute for Clinical and Translational Research at the University of Wisconsin. She received her medical degree from the Federal University of Pelotas in Brazil and her Ph.D. in biomedical informatics from Columbia University. Her research has focused on the use of natural language processing in both biomedical literature and in electronic medical record narratives in order to identify knowledge relevant to medical decision-making in the context of patient care. She currently serves as director of the American Medical Informatics Association (AMIA) board, chair of AMIA’s publications committee and is a member of the partnership for policy implementation committee at the American Academy of Pediatrics.

The lecture will also be available through NIH videocast. Refreshments will be provided following the lecture. For more information, or to request reasonable accommodation to participate, call (301) 496-8640.

NCI’s Neuro-Oncology Branch Celebrates 10-Year Anniversary

For more than a decade, the Neuro-Oncology Branch Brain Tumor Clinic has been giving patients the ability to hope for a cure. Patients receive individualized attention from experts and access to new therapies and procedures that are often unavailable elsewhere, free of charge.

The clinic is one of only a few places in the country where advances in science and clinical medicine come together and where bioinformaticians, statisticians, molecular biologists, oncologists, radiologists and nurses all work as a team toward one goal. This integrated approach helps speed the discovery of clues to better understand and treat brain tumors.

To learn more about the branch and clinic, watch a video (www.youtube.com/watch?v=WyKnoLhduY&feature=relmfu) or visit http://home.ccr.cancer.gov/ob/default.asp.

Physicians who would like to refer a patient should call (301) 594-6767. The clinical staff will work with you to form an expert care team for your patient. Patients who wish to have a second opinion, have abnormalities on MRI scans or may be appropriate for clinical trials should call (866) 251-9686 to make an appointment.

Hogan To Give Rodbell Lecture at NIEHS

Developmental biologist Dr. Brigid Hogan will give the 2011 Martin Rodbell Lecture on Tuesday, June 14 at NIEHS. She will explore the topic “New Perspectives on Stem Cells and Lung Disorders,” in a talk that begins at 11 a.m. in Rodbell Auditorium.

Hogan is a professor and chair of the department of cell biology at Duke University. Educated at Cambridge University in her native England, she was head of the Laboratory of Molecular Embryology at the National Institute for Medical Research in London before joining the faculty at Vanderbilt University Medical Center, where she was a Howard Hughes Medical Institute investigator. Among her many honors, she has been selected as a member of the National Academy of Sciences and the Institute of Medicine, as well as a fellow of the American Academy of Arts and Sciences and the Royal Society of London.

In her work with the human lung, Hogan and her lab have focused on the biology of embryonic stem cells and primordial germ cells and the process of organogenesis, the development of a complex and specialized organ from a small population of undifferentiated stem cells. According to Hogan, potential applications of her research could include accelerating lung development in premature babies, better understanding the lung’s response to environmental toxins, irradiation and disorders such as asthma and discovering how to generate endodermal cells from undifferentiated embryonic stem cells.

The Rodbell Lecture, now in its 13th year, honors former NIEHS scientific director Dr. Martin Rodbell, who shared the 1994 Nobel prize in physiology or medicine for the discovery of G-proteins.
Genetic Clues Help Explain Mysterious Leprosy Infections

A recent genetic study by NIAID-funded scientists at the National Hansen’s Disease Program (NHDP) found that wild armadillos in the southern U.S. can and do transmit leprosy to humans. “Leprosy is thought of as an ancient disease from biblical times, but it’s still a problem in many parts of the world,” said NIAID project officer Dr. Tina Parker.

Each year, about 250,000 new cases of leprosy are reported worldwide, including 150 or so in the United States. Most U.S. cases are traced to origins overseas, but about one-third of new infections seem to arise within the states. The source of those new infections, mostly appearing in Texas and Louisiana, remained a mystery until recently.

A chronic infectious disease caused by *Mycobacterium leprae*, leprosy (also called Hansen’s disease) is found mostly in tropical and semi-tropical areas of the world. People with mild cases experience skin discoloration. More severe cases can result in skin lesions and peripheral nerve damage.

From earlier epidemiological studies, NHDP scientists knew that *M. leprae* had been found among wild armadillos in Texas and Louisiana, suggesting that human contact with infected armadillos might lead to human infection. Led by Dr. Richard W. Truman, the researchers used genetic analysis to test this hypothesis and discovered they were right.

Other than humans, armadillos are the only animal known to be susceptible to leprosy. Because of this, colonies of armadillos have been important in research to model the disease since the 1970s. In the new study, NHDP researchers compared the gene sequences of *M. leprae* samples taken from humans and from infected wild armadillos and found that 64 percent of human samples had a particular genotype that had never been seen before. What’s more, 85 percent of armadillo samples shared that genotype.

These results showed that the two strains were related and that wild armadillos are a likely source of some human infections. But more importantly, it established leprosy as a zoonosis: a disease that can be transmitted back and forth between animals and humans. “There is transmission of disease at the human-animal interface,” explained Dr. Christine Sizemore, chief of NIAID’s tuberculosis and other mycobacterial diseases section. “In fact, 65 to 70 percent of emerging infectious diseases in humans are zoonotic.”

Experts caution that the chance of catching leprosy from an armadillo remains very low; armadillo transmission accounts for only about 30-40 known leprosy cases among people.

Now that genetics and genomics have become important strategies for studying how diseases behave in natural populations, these methods can be used as an example in other areas of the world. Future research steps include replicating the study in other countries and in areas where armadillos are common.—Nalini Padmanabhan

Three NIH’ers Elected to American Academy of Arts and Sciences

Three NIH scientists are among the 212 leaders in the sciences, the humanities and the arts, business, public affairs and nonprofit sector who have been elected members of the American Academy of Arts and Sciences.

They are Dr. Gisela Storz, chief of the unit on environmental gene regulation, NICHD; Dr. Joseph Fraumeni, Jr., director, Division of Cancer Epidemiology and Genetics, NCI; and Dr. Okihide Hikosaka, senior researcher and chief of the section of neuronal networks in the Laboratory of Sensorimotor Research, NEI.

Other inductees into the 2011 class of fellows include documentary film maker Ken Burns, singer-songwriter Paul Simon and Roberta Ramo, the first woman to serve as president of the American Bar Association.

Since its founding in 1780 by John Adams, James Bowdoin, John Hancock and other scholar-patriots, the academy has elected leading “thinkers and doers” from each generation, including George Washington and Benjamin Franklin in the 18th century, Daniel Webster and Ralph Waldo Emerson in the 19th and Albert Einstein and Winston Churchill in the 20th. The current membership includes more than 250 Nobel laureates and more than 60 Pulitzer Prize winners.

The new class will be inducted at a ceremony on Oct. 1 at academy headquarters in Cambridge, Mass.
Dr. Martha Somerman will become director of NIDCR late this summer; she is currently dean of the University of Washington School of Dentistry.

SOMERMAN
CONTINUED FROM PAGE 1

an entire field of scientific research is tremendously exciting,” Somerman said.

An internationally known researcher and educator, her research has focused on defining the key regulators controlling development, maintenance and regeneration of oral-dental-craniofacial tissues. Her work has been recognized with numerous honors and awards.

Before joining the University of Washington, Somerman was on the faculty of the University of Michigan School of Dentistry from 1991 to 2002. There, she served as a professor and chair of periodontics/prevention and geriatrics and also held an appointment as professor of pharmacology at the School of Medicine. From 1984 to 1991, she was on the faculty of the Baltimore College of Dental Surgery.

Somerman has been a long-standing member of the NIH and NIDCR communities, having received her first NIH grant in 1987. In the early 1980s, she was a staff fellow in the dental institute’s intramural research program. She served on the National Advisory Dental and Craniofacial Research Council from 1999 to 2002.

A native of Brooklyn, she holds a bachelor’s degree in biology and a D.D.S. from New York University, a master’s degree in environmental health from Hunter College and a Ph.D. in pharmacology from the University of Rochester. She completed her periodontal residency at Eastman Dental Center in Rochester.

Camp Fantastic BBQ Set for June 14

The Recreation & Welfare Association will host the annual Camp Fantastic BBQ on Tuesday, June 14, on the Bldg. 31A patio from 11:30 a.m. to 1:30 p.m. R&W has been spearheading this event since the camp was established in 1983. Camp Fantastic provides quality programs for children living with cancer. Come out for an afternoon of good food, live music, dancing, games and more. Lunch will be served in two shifts and includes choice of two sandwiches, chips, coleslaw, a drink and funnel cake. Tickets are $10 per person. To order tickets stop by any R&W store or call (301) 496-4600.

On hand for the “Secretary’s Pick” Award to NLM were (from l) Joseph Potvin, Joyce Backus, Naomi Miller, HHS Secretary Kathleen Sebelius, Stephanie Dennis, Dr. Maxine Rockoff of Columbia University and Sarena Burgess. Not shown are awardees Loren Frant, Martha Fishel and Wei Ma.

NLM, NEI Recognized for Innovation

Two NIH components were among the six winners of round two of the HHSinnovates program, which was launched last year to recognize exceptional innovation efforts throughout all the agencies of HHS.

HHS Secretary Kathleen Sebelius named NLM’s MedlinePlus Connect a “Secretary’s Pick” for the HHSinnovates award. MedlinePlus Connect is a free service that allows any electronic health record system to easily link users to MedlinePlus, an authoritative, up-to-date information resource for patients, families and health care providers.

Winning honorable mention was “From Outer Space to the Eye Clinic,” a collaboration between the National Aeronautics and Space Administration and the National Eye Institute that has led to development of a clinical device for much earlier detection of cataracts. NEI scientists Dr. Manuel Datiles and Dr. Frederick Ferris brought about the collaboration and development of the device, which measures changes in alpha crystalline proteins in the lens of the eye and is adapted from a device created for use in outer space. The device holds promise for improved understanding and treatment of cataracts, the leading cause of blindness in the world.

NEI’s Dr. Manuel Datiles
PHOTOS: CHRIS SMITH/HHS
NIAID-Developed Technology Key in First FDA-Approved Norovirus Test

Noroviruses are perhaps best known for ruining cruise ship vacations, but they also wreak havoc in other closed settings such as daycare centers, dormitories and nursing homes. Worldwide, they are the most common cause of acute gastroenteritis, an illness that can lead to abdominal cramps, diarrhea and vomiting in all age groups. While there is no vaccine to prevent norovirus infection, early detection of an outbreak could help curb its spread through a community and enable medical workers to provide the appropriate treatment to those affected.

Researchers have worked for years to develop diagnostic tools for norovirus. These efforts reached an important milestone recently when the FDA approved the first screening test for the preliminary identification of norovirus. The test, called the Ridascreen Norovirus 3rd Generation EIA, is based in part on technology developed by NIAID scientists.

Human noroviruses cannot yet be grown in the laboratory, making it difficult for researchers to study their interaction with immune cells. Scientists in NIAID’s Laboratory of Infectious Diseases used genetic engineering to sidestep this challenge. They modified the DNA of another family of viruses, called baculoviruses, to carry the gene that encodes the protein shell, or capsid, of several norovirus strains. When grown in insect cells, the modified baculoviruses express virus-like particles (VLPs) that mimic the norovirus capsid. The capsid contains antigens that stimulate the immune system to produce antibodies that attack the virus.

Diagnostics manufacturer R-Biopharm licensed the recombinant baculoviruses from NIAID in 2004 and used the virus-derived VLPs to create monoclonal antibodies against norovirus. In R-Biopharm’s Ridascreen test, these antibodies serve to capture norovirus antigen from a stool sample. If the antigen is present, the antibodies bind to it so it can be detected in later steps of the test.

The FDA approved the Ridascreen Norovirus test for use in situations where a number of people have simultaneously contracted gastroenteritis and there is a clear potential avenue for virus transmission such as a shared location or food. The ability of the test to detect a norovirus outbreak becomes greater as the number of patient samples increases, so while the test is not recommended for diagnosing norovirus infection in sporadic cases of gastroenteritis, it is useful for the preliminary screening of multiple stool samples.

According to R-Biopharm, the test yields results in less than 2 hours, enabling faster implementation of outbreak control procedures. In March, the CDC updated its norovirus outbreak management and disease prevention guidelines to reflect Ridascreen’s approval.

NIAID’s contribution to the Ridascreen test is its latest accomplishment in a decades-long commitment to better understand noroviruses and develop new strategies to prevent, detect and treat infections caused by them. In 1972, NIAID scientist Dr. Albert Z. Kapikian and his colleagues first identified norovirus, initially called Norwalk virus, as a cause of acute epidemic gastroenteritis. Kapikian and his team made this seminal observation while examining virus-containing stool samples originating from a 1968 outbreak of gastroenteritis in Norwalk, Ohio. Institute scientists continue to pursue the development of vaccines and antiviral compounds against norovirus, including research on possible experimental systems to facilitate study of the immune response to norovirus infection in cells and in animals.

NIH, Contractors Sign Porter II Safety Agreement

NIH, in partnership with the Occupational Safety and Health Administration, Whiting-Turner Contracting Co. and Jacobs Project Management Co. recently agreed to adopt safe work practices that go above federal regulations during construction of the second phase of the Porter Neuroscience Research Center (PNRC II).

As part of OSHA’s Strategic Partnership Program, these agreements are designed to recognize efforts to eliminate serious hazards and achieve model workplace safety and health practices. The partnership offers a transparent review of the contractor’s safety program with periodic inspections by OSHA. Goals include reducing work-related injuries below the national average, zero incidents related to crane operations and reducing the number of at-risk conditions and behaviors.

Only a few federal agencies have pursued this safety initiative. The partnership evolved from the Office of Research Facilities’ existing Contractor Safety Program, which establishes minimum contract employee training requirements and accident prevention plans.

Phase II of the PNRC consists of: an expansion to the vivarium facility; behavioral, tissue culture and electrophysiology laboratories; an imaging suite; laboratory support space such as break rooms, offices, lockers, conference rooms and a café. Research will be conducted by NINDS, NIMH, NIDCD, NICHD, NEI, NIDCR and NIBIB in the new facility.
such an imbalanced world.”

Six years later on Apr. 25, Davis sat down again—this time at NIH—to talk with research experts about media and its possible health effects. In the years in between, the film and TV star—who added twin sons to her family and whose daughter is 9 now—has been far from idle. At first, she’d simply taken note of problems she found in children’s entertainment. “Male characters largely outnumbered female characters,” she recalled. “Female characters hardly ever had powerful roles, and worse, they were almost always portrayed in skimpy or overly sexualized clothes.”

She discovered it wasn’t just a fluke, occurring in only a few shows. It seemed pervasive. That’s when the crusader within the Academy Award winner took action.

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“I realized that if I really wanted to make an impression I would need data, not just my own observations,” Davis said. She gathered several Hollywood friends, who helped her raise money for what would eventually become the Geena Davis Institute on Gender in the Media.

An Oscar winner for The Accidental Tourist and a Golden Globe awardee for Commander In Chief, Davis also employed her Hollywood clout. She and her institute colleagues began meeting with writers, directors, producers and other entertainment industry decision-makers to discuss gender portrayals in media.

By 2008, the Davis Institute had sponsored the largest study ever done on G-rated movies and on television shows made for kids ages 11 and under. Dr. Stacy Smith of the University of Southern California’s Annenberg School for Communication and Journalism conducted the study. The research examined 101 of the top G-rated movies produced during the 15-year period from 1990 to 2005.

Results confirmed what Davis had observed. Male characters outnumbered females 3 to 1. In scenes featuring groups, the ratio increased to 5 to 1. And numbers weren’t the only problem.

“Aspirations and occupations of female characters were very limited,” Davis recounted. “[The media in the study contained] narrow, narrow stereotypes for the female characters. Almost the only aspiration for female characters was to find romance. No male characters had that as their life’s goal. The number one occupation for females in G-rated films was royalty. There was a great deal of hypersexualization. The female characters in G-rated films wear the same amount of sexually revealing clothing as the female characters in R-rated movies...What message are we sending to our youngest kids when the female characters are so one-dimensional and sidelined, hypersexualized or simply not there at all? I think it’s clear the message is that girls and women are less important than boys and men to our society.”

After meeting NIH associate director for research on women’s health Dr. Vivian Pinn at a recent gathering of the United Nations Commission on the Status of Women, Davis decided to bring her research findings to NIH. Were there further empirical data connecting entertainment to self-esteem and other aspects of mental and physical health? How could her institute bolster its case and thereby amplify its call for change in the media industry?

In the Clinical Research Center’s medical board room, Davis and her institute’s executive director Madeline Di Nonno brainstormed for about an hour with Pinn and other NIH science policy strategists including NIH deputy director for intramural research Dr. Michael Gottesman, NIAID director Dr. Anthony Fauci, CC director Dr. John Gallin, NIH associate director for behavioral and social sciences research Dr. Rob-
Tae Kwon Do Beginner’s Class Starts June 6

The NIH Tae Kwon Do School is offering a beginner’s class for adults and mature teens starting Monday, June 6. The curriculum combines traditional striking arts, forms, sparring and basic aikido techniques with emphasis on self-defense. No experience is necessary. Classes meet in the Malone Center (Bldg. 31C, B4 level, next to the NIH Fitness Center) from 6 to 8 p.m. on Mondays and 6 to 7 p.m. on Wednesdays (6-7 p.m. Fridays, optional). Registration fee is $50 and includes 10 weeks of beginner’s class and a uniform costs $40. Interested persons are welcome to watch regular training sessions. For information call Lewis Sloter, (301) 213-5841 or visit www.rec.gov/r&w/nihtaekwondo.html.

NIGMS Grantees Win Presidential Mentoring Awards

The NIGMS Bridges to the Baccalaureate program at the State University of New York, Purchase College, was recently honored with a Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. The award recognizes institutions and individuals who have led efforts encouraging minorities, women and people with disabilities to pursue careers in science, technology, engineering and mathematics. Purchase College’s Bridges program seeks to increase the number of community college students who earn associate’s degrees and go on to earn bachelor’s degrees in science and math.

Also recognized with awards were two individuals who direct NIGMS conference grants. They are Dr. Marigold L. Linton of the University of Kansas and Dr. Jo Handelsman of Yale University. Linton, a former coordinator of NIGMS’s Institutional Research and Academic Career Development Award at the university, now manages a grant supporting the annual meeting of the Society for Advancement of Chicanos and Native Americans in Science. Handelsman’s grant funds a genomic workshop for minority students at Yale.

A total of 11 individuals and 4 institutions received the awards during a recent ceremony at the White House. The awards, established by the White House Office of Science and Technology Policy and administered through the National Science Foundation, consist of a Presidential certificate and a $10,000 grant to continue the recipient’s mentoring activities.

Since the awards program began in 1996, 20 individuals and 5 organizations supported by NIGMS’s Division of Minority Opportunities in Research (MOR) have been recognized with the honor.

For a full list of MORE winners of the Presidential mentoring award, see www.nigms.nih.gov/Minority/PresidentialAwards.htm.

Kissling To Receive American Statistical Association Honor

NIEHS/NTP staff scientist Dr. Grace Kissling will be inducted as a fellow of the American Statistical Association on Aug. 2 at an awards ceremony in Miami Beach. She will receive the highest honor in her field for what the ASA described as “outstanding contributions to the statistical profession.” A member of the Biostatistics Branch, Kissling provides statistical advice and assistance for the toxicology and carcinogenicity studies carried out by the NTP and experimental studies carried out by NIEHS researchers. She collaborates on research at all stages—study design, statistical analysis and interpretation—and has co-authored more than 125 peer-reviewed studies.

PHOTO: STEVE MCCAW

Hesse To Lecture on Communicating Genetics, June 6 at Natcher

The trans-NIH working group on genetics for the public announces the first lecture in its “Communicating Genomics” series. Dr. Brad Hesse, chief, NCI Health Communication and Informatics Research Branch, will speak on “Communicating Genetics/Genomics to the Public: What You Need to Know.” The lecture will take place Monday, June 6 at 11 a.m. in Natcher Conference Center, Rm. D. All are invited.
NIH Celebrates Earth Day/Take Your Child To Work Day in Record Numbers
By Trisha Comsti

Stormy weather could not dampen the spirits of the packs of children seen roaming the halls of NIH on Apr. 28 for the combined NIH Earth Day and Take Your Child to Work Day festivities. Despite the threat of rain, a record 3,450 children were registered for this year's celebration. There were over 100 activities for children to learn more about what their parents do every day at work and for people of all ages to discover new ways to “go green.”

Yelps of equal parts fright and glee could be heard as kids entered Bldg. 10, the rain site for Earth Day activities, and encountered the U.S. Army Medical Research Institute of Infectious Diseases’s bug display. There, children got the chance to pick up and interact with a live praying mantis, hissing cockroach and other insects. The nearby “Scales and Tales” event, presented by the Maryland Department of Natural Resources, captured the attention of children and adults alike with its wildlife and natural resources display that included owls, a falcon, a turtle and a snake.

The Office of Research Facilities presented more than 30 Earth Day activities and events designed to encourage environmentally conscious living and teach everyone more about nature and the world around them. Participants came across a recycling pledge tree, temporary tattoos, numerous games, a book swap and a huge display on greening accomplishments in the NIH cafeterias. The annual Nature Walk, however, was canceled due to the forecast of severe weather.

The Recreation & Welfare Association recycling program was again a success, collecting 350 pairs of tennis shoes, 125 sets of eyeglasses, 125 cell phones and over 1,500 batteries. NIH employees cleared their offices of “techno trash” and collectively dropped off five large boxes full of CDs, floppy disks, power cords, keyboards, speakers and mice. Earth Day was a zero-waste event, meaning all waste from the day’s activities was either recycled or composted.

ORF held its annual tree seedling giveaway program that distributed 2,000 seedlings including maples, white dogwoods, river birches and white pines. ORF also divulged the answer to its annual “What Is IT?” contest: the purple sea whip (Pseudopterogorgia elizabethae), a soft coral also known as a sea plume. It grows in warm, shallow areas of the Caribbean and hosts algae that contain bacteria that may produce useful drug compounds.

Near Masur Auditorium, children plunged their hands into soil as they learned how to plant seeds and participated in a composting demonstration, complete with worms. This chance to get their hands dirty was set up by the NICHD’s Green Team, one of several IC “Green Teams” devoted to greening daily business practices around NIH. Pepco was also present with a booth that highlighted the benefits of the NIH campus’s cogeneration system and energy conserva-

Above, from l:
Gowned youngsters learn from Tor Moore (l) of the Clinical Center. Others enjoy an exercise in robotic surgery. At right, a participant gets cozy with a hissing cockroach.

Below, counterclockwise:
The chance to gown up figured in several Clinical Center-sponsored activities, including “Robotic Surgery,” and “Fantastic Voyage Through the Department of Laboratory Medicine.

PHOTOS: BILL AND ERNIE BRANSON
Elsewhere in Bldg. 10 and around the rest of NIH, children learned about the wide variety of careers that make up the NIH community as part of Take Your Child to Work Day. This marked the fifth year in a row the event was combined with Earth Day. Thousands of goody bags were filled and distributed, bursting with science education information and materials donated by several ICs as mementos of the day’s events.

Over 70 activities were planned by the ICs and the Office of Equal Opportunity and Diversity Management to teach children about a slew of skills and topics that are part of NIH’s work. Children learned about the parts and functions of the brain, the science behind popular television crime shows and the duties of a police officer, to name just a few. Children and their parents were also encouraged to get up and move with hip hop and line dancing classes and an “NIH Idol” video shoot.

Youngsters jumped into hands-on activities around NIH. They got behind the lens in a professional photography studio, teamed up for the “Who Wants to be a Bioengineer?” quiz show and built take-home models of DNA. The Clinical Center offered several interactive workshops including “Robotic Surgery” and “Fantastic Voyage through the Department of Laboratory Medicine.”

Earth Day and Take Your Child to Work Day created an exciting time for all at NIH. Between learning about protecting the environment and finding out what a day in the life of a scientist is like, there was never a dull moment.

Some 3,450 children—a record number—accompanied their parents and guardians on Take Your Child to Work Day/Earth Day. The youngsters’ faces demonstrated curiosity, pride, attentiveness and, most importantly, enjoyment of the annual affair.
NIAMS research. The agenda will include several scientific panels with a broad array of senior and early-stage investigators from the many disciplines that NIAMS supports. Their presentations will be complemented by patients who will share their experiences with diseases of the bones, joints, muscles and skin and how research has changed their lives.

In addition to these speakers, NIH director Dr. Francis Collins will provide the welcoming address followed by the Hon. John Edward Porter, chairman of Research!America. This event will be held in Lipsett Amphitheater, Bldg. 10 from 8:30 a.m. to 4:45 p.m. A reception and poster session will follow. Registration is encouraged but the event is free and open to the public.

The celebration will continue with a special dinner, Bringing Medicine and Science to the Public: A Conversation with Diane Rehm, featuring National Public Radio talk show host Diane Rehm. She has mastered the ability to capture the attention of the American public by effectively communicating complex and often controversial topics. Every week, the Diane Rehm Show highlights a variety of issues relevant to the biomedical research community and frequently includes interviews with NIH representatives, grantees, patients and health care providers. The dinner, hosted by the Foundation for the NIH, will be held at the Bethesda North Marriott Hotel and Conference Center. Advance registration is required.

A diverse audience of researchers, health care providers, patients and professional and volunteer representatives from across the United States is expected at both events. For more information, call (301) 496-8190 or visit www.niams.nih.gov.

Key Events in NIAMS’s History

1986
On Apr. 8, 1986, NIAMS—formerly the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases—was established. Dr. Lawrence E. Shulman was appointed the first director and served from 1986 to 1994. The institute’s mission is to support research into the causes, treatment and prevention of arthritis and musculoskeletal and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases.

1990
The NIAMS-funded Study of Osteoporotic Fractures helps doctors identify people at high risk for osteoporosis.

1994
A team of intramural researchers discovers an immune system enzyme, Jak3, which leads to the development of a new immunosuppressive drug and the discovery of a genetic mutation that causes severe combined immunodeficiency.

1995
Dr. Stephen I. Katz, who began his NIH career at the National Cancer Institute in 1974, becomes the second director of NIAMS.

1999
Research funded by NIAMS and others on the disease processes of rheumatoid arthritis results in an entirely new class of rheumatic disease treatments, named biologic response modifiers.

2004
In a discovery with implications for wound healing and regenerative medicine, researchers define the characteristics of hair follicle stem cells that are responsible for their self-renewal and the factors in the hair follicle microenvironment that contribute to stem cell pluripotency.

2008
Two-year results from NIAMS’s Multicenter Spine Patient Outcomes Research Trial reveal the effectiveness of surgical versus nonsurgical treatment approaches for three common back conditions.

Many more accomplishments can be seen on the NIAMS web site. In addition, a special milestone banner will be unveiled at the symposium on June 13.
Avastin, Lucentis Found Equally Effective in Treating AMD

Researchers are reporting results from the first year of a 2-year clinical trial that Avastin, a drug approved to treat some cancers and that is commonly used off-label to treat age-related macular degeneration (AMD), is as effective as the Food and Drug Administration-approved drug Lucentis for the treatment of AMD.

The report, from the Comparison of AMD Treatments Trials (CATT), was published online in the New England Journal of Medicine on May 1. CATT is funded by the National Eye Institute. “Over 250,000 patients are treated each year for AMD, and a substantial number of them receive Avastin. Given the lack of efficacy data regarding Avastin for AMD treatment, the NEI had an obligation to patients and clinicians to conduct this study,” said Dr. Paul Sieving, director of NEI.

AMD is the leading cause of vision loss and blindness in older Americans. Many patients are unable to drive, read, recognize faces or perform tasks that require hand-eye coordination.

Genentech, the maker of both drugs, originally developed Avastin to prevent blood vessel growth that enables cancerous tumors to develop and spread. In 2004, the FDA approved Avastin for the systemic treatment of metastatic colon cancer. Genentech later developed Lucentis, derived from a protein similar to Avastin, specifically for injection in the eye to block blood vessel growth in AMD.

Moderate Levels of Secondhand Smoke Deliver Nicotine to the Brain

Exposure to secondhand smoke, such as a person can get by riding in an enclosed car while someone else smokes, has a direct, measurable impact on the brain—and the effect is similar to what happens in the brain of the person doing the smoking. In fact, exposure to this secondhand smoke evokes cravings among smokers, according to a study funded by the National Institute on Drug Abuse.

The study, published May 2 in Archives of General Psychiatry, used positron emission tomography to demonstrate that 1 hour of secondhand smoke in an enclosed space results in enough nicotine reaching the brain to bind receptors that are normally targeted by direct exposure to tobacco smoke. This happens in the brain of both smokers and non-smokers.

Previous research has shown that exposure to secondhand smoke increases the likelihood that children will become teenage smokers and makes it more difficult for adult smokers to quit. Such associations suggest that secondhand smoke acts on the brain to promote smoking behavior.

“These results show that even limited secondhand smoke exposure delivers enough nicotine to the brain to alter its function,” said NIDA director Dr. Nora Volkow. “Chronic or severe exposure could result in even higher brain nicotine levels, which may explain why secondhand smoke exposure increases vulnerability to nicotine addiction.”

“This study gives concrete evidence to support policies that ban smoking in public places, particularly enclosed spaces and around children,” said Dr. Arthur Brody of the UCLA department of psychiatry & biobehavioral sciences; he was a corresponding author for the article.

Brief Screening Identifies Signs of Autism in 1-Year-Olds

A 5-minute checklist that parents can fill out in pediatrician waiting rooms may someday help in the early diagnosis of autism spectrum disorder (ASD), according to a study funded by NIH. Published Apr. 28 in the Journal of Pediatrics, the study’s design also provides a model for developing a network of pediatricians to adopt such a change to their practice.

“Beyond this exciting proof of concept, such a screening program would answer parents’ concerns about their child’s possible ASD symptoms earlier and with more confidence than has ever been done before,” said Dr. Thomas Insel, director of the National Institute of Mental Health.

Identifying autism at an early age allows children to start treatment sooner, which can greatly improve their later development and learning. However, many studies show a significant delay between the time parents first report concerns about their child’s behavior and the eventual ASD diagnosis, with some children not receiving a diagnosis until well after they’ve started school.

The questionnaire asks caregivers about a child’s use of eye gaze, sounds, words, gestures, objects and other forms of age-appropriate communication.
Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we’ll try to provide answers.

Feedback: Who updates and/or manages all the NIH/HHS forms? Is there any way to suggest changes or turn in an updated form? I have learned how to work with Adobe Acrobat Professional and I really like the form features and I’ve noticed some of the forms I’ve found that are NIH-only are a bit outdated.

Response from the Office of Management Assessment: The OMA Division of Management Support is happy to work with you on any updates or revisions to our forms. Feel free to contact Pam Cery, NIH organization officer, or Leslie Cooke to answer your questions and upload any approved changes you are requesting. Phone (301) 496-2462 or fax (301) 402-0169.

Feedback: In Bldg. 10, the lights are on all the time, in all the corridors. Also in the open garage buildings. Why are these not on power saver or motion detectors, especially in the mostly empty old Bldg. 10? There are no switches anywhere to turn them off at night/weekends at least. There is a huge amount of energy and money being wasted. No wonder NIH has a multimillion dollar electric bill every quarter.

Response from Office of Research Facilities: Regarding the parking garage lighting, the Office of Research Facilities has recently retrofit all of our parking garage lighting with energy efficient lighting technologies so they are now using photocells, timers and computer control systems to minimize the amount of time the lights are on. The lights should essentially be on emergency lighting until 5:30 a.m. when staff begin to arrive and return to an off-hours state at approximately 9:30 p.m.

Lighting during normal working hours is controlled by photocells in many areas. Some of the lighting that appears excessive late at night is in fact stairwell lighting. Due to safety and security concerns as well as Life Safety Code requirements, some degree of illumination is required at all times such as lighting for exit stairways.

Regarding Bldg. 10 corridor lighting, there are several issues. First, direction had been given long ago for all lighting in unoccupied areas to be turned off or reduced to emergency lighting only. If there is a specific area that is unoccupied and is still fully lit, contact the ORF Maintenance Request Line at (301) 435-8000 or http://58000.nih.gov/ and the matter can be addressed.

Along these lines, if there are areas that are minimally or lightly occupied, as mentioned, there are minimum lighting levels that must be maintained for emergency egress as required by the Life Safety Code.

Regarding the control with motion detectors, ideally that would be an excellent application. Unfortunately, as you mention, there are no switches and that is a complicating factor. Due to the age and design of the building, the lights in those areas are controlled only by a circuit breaker in an electrical room. Motion sensors are normally installed in place of switches, but that option is not available. Sensors could still be installed, but the cost to rewire a building is prohibitive in most situations.

Feedback: I’m concerned about spending in the government. For example, when a government official travels, he/she is supposed to take a “government contract” flight. Well, what if you find a non-contract flight that is hundreds of dollars cheaper? Wouldn’t we want to take the lower-cost flight? Are we not trying to save money?

Response from ORS: The General Services Administration mandates that government travelers must use contract air service with participating airlines whenever possible. The airlines have entered into a contractual agreement with the government to provide “reduced fare, coach class” tickets between designated cities.

However, there are exceptions, including for cost. Under HHS policy, if the non-contract carrier offers a lower fare available to the general public and the use will result in at least a 40 percent cost savings from the lowest contract carrier fee, a non-contract carrier fare can be used. This determination should be based on a cost comparison to include the combined cost of transportation, lodging, meals and related expenses.
NINDS’s DeVroom Retires with 30 Years of NIH Service
By Shannon E. Garnett

After 30 years of caring for patients at NIH, Hetty DeVroom, a research nurse specialist in the NINDS Surgical Neurology Branch, retired on Apr. 1.

“Hetty has been an integral and invaluable member of the SNB,” said Dr. Russell Lonser, branch chief. “She has made indelible contributions to the research and care of our patients over the last three decades. The Clinical Center and its patients have been enriched by having her as part of the NIH.”

DeVroom’s first NIH experience occurred when she was a nursing student at Marymount University. As part of the school’s leadership day, she visited the campus, toured the Clinical Center and attended meetings in the nursing department.

Upon graduation from Marymount, DeVroom joined the staff at Sibley Memorial Hospital as a registered nurse in the surgical intensive care unit. There she found her calling to take care of neurosurgery patients.

DeVroom left Sibley in 1981 to join the CC nursing department as a staff nurse on 5 West, where she frequently looked after the patients of Dr. Edward Oldfield. At the time, Oldfield served as chief of SNB’s clinical neurosurgery section. He later became SNB chief.

“I chose 5W because that unit took care of neurosurgical patients,” said DeVroom.

After several years of tending to patients on 5W, DeVroom was invited by Oldfield to join his research team and, soon after, to work in the SNB as a research nurse. In fact, she was one of the first staff nurses to become an associate investigator on complex research protocols.

“My colleagues and I were so very lucky to have Hetty in our branch, and we never forgot what good fortune that was,” said Oldfield, who is now the Crutchfield chair in neurosurgery at the Universi-

Herman Powell, a longtime employee in the Property Management Branch who retired Feb. 28 after 27 years at NIH, died suddenly Apr. 7 following a massive heart attack at his home in Baltimore. He was 70.

Herman began his career at NIH in March 1984 as a property supply tech in the property accountability section. Shortly thereafter, he became an inventory management specialist and was a part of the Office of Logistics and Acquisition Operations for 27 years.

Powell’s PMB friend and coworker David A. Hubbard, II, recalled, “I was fortunate, along with other coworkers, to celebrate Herman’s retirement with him less than a month ago. He was his usual upbeat, appreciative self…About a week later, I called him and asked, ‘Herman, you busy?’ He joked, ‘Yeah, I’m busy lying in bed!’ It was 11:30 a.m. Herman had looked forward to retirement for just that reason. He’d often commented on his long commute from Baltimore to Bethesda, and then later to Rockville, but he never complained.”

Jerry “JD” Davis is the colleague who worked with Powell the longest, noted Hubbard. “They shared a good friendship, inside and outside of the office. JD is one of the few who would remind Herman—who talked loud—to ‘bring it down, I’m standing right here.’”

Richard Fields, Powell’s supervisor for 9 years, also shared a camaraderie with him, based on their Army careers. They often exchanged stories and global travel experiences.

“Herman retired this past February never receiving his first retirement check,” Hubbard noted. “We look forward to so many things in life, but life has a way of not always rewarding our optimism. This is one of those times.”
Former NIGMS Genetics Chief Bergmann Dies at 83

Dr. Fred H. Bergmann, a microbiologist who directed the NIGMS Genetics Program from its inception in 1972 until his retirement in 1988, died on May 2 in Washington, D.C. He was 83.

“During the time that Dr. Bergmann was director of the Genetics Program, the field underwent a transformation to the modern molecular era. He fostered the science and nurtured the early careers of many of today’s leading geneticists,” said NIGMS Division of Genetics and Developmental Biology director Dr. Judith Greenberg, who was Bergmann’s deputy and successor.

In addition to supporting groundbreaking research, the Genetics Program established two key scientific resources under Bergmann’s leadership: the Human Genetic Cell Repository and the GenBank genetic sequence database, which became the depository for the data generated by the Human Genome Project.

Bergmann began working at NIH in 1961 as a biochemist in what is now NIDCR, where he studied the mechanisms of protein synthesis. In 1963, he transferred to what is now NHLBI to work in the laboratory of Dr. Marshall Nirenberg, who won a Nobel prize 5 years later for deciphering the genetic code and its function in protein synthesis. Bergmann joined NIGMS in 1966 to pursue an interest in “administration and broad aspects of biomedical science,” he said when he retired. Initially, he managed programs in molecular biology and bioenergetics.

Born in Feuchtwangen, Germany, into the family of a cattle dealer, Bergmann came to the United States in 1939. He received B.S. and M.S. degrees from MIT and a Ph.D. from the University of Wisconsin. He then did postdoctoral fellowships at Washington University in St. Louis, where he worked in the laboratory of another future Nobel laureate, Dr. Paul Berg, and at Brandeis University.

After leaving NIH, Bergmann pursued an interest in social work by earning an M.S.W. from Catholic University and volunteering at the Whitman-Walker Clinic and as a court-appointed special advocate.

He is survived by his wife, Dr. Barbara Bergmann; two children, Sarah and David; and two grandchildren.

Former Heart Institute Scientist Harmison Mourned

Dr. Lowell T. Harmison, 74, died Mar. 30 at a hospital in Fredericksburg, Va. He spent more than 45 years at the forefront of medical research and public health.

In 1967, Harmison came to NIH as chief of the engineering section of the National Heart Institute’s Artificial Heart-Myocardial Infarction Program. He developed the first completely implantable artificial assist heart to augment function of the diseased heart and the first totally implantable artificial heart in the world. He held the first U.S. and foreign patent for the completely implantable artificial heart.

After leaving NIH, Harmison spent a decade as the PHS science advisor and principal deputy assistant secretary for health under President Reagan.

A native of West Virginia, Harmison was a graduate of Berkeley Springs High School, earning B.S. and master’s degrees at West Virginia University and a Ph.D. at the University of Maryland and completing postdoctoral training at the University of Michigan.

Harmison had nearly five decades of experience and leadership in biomedicine as a researcher, inventor, author and senior executive in government, foundation and corporate organizations.

He authored more than 100 publications, edited 2 books and most recently wrote a new book on heart disease and co-authored the book Zeroing in on the Cancer Cell: Cancer Vaccines.

Survivors include Harmison’s wife, Sally; three sons, Christopher, Brian and Craig; seven grandchildren; and a brother, Philip.
The phone numbers for more information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

**Study of ‘SmartPill’**

If you have been diagnosed with acid reflux, peptic ulcer or gastric hypersecretion disease, you may be eligible to participate in a study that will measure stomach acid secretions using the SmartPill to compare to other measurement methods. All participants will come to the Clinical Center as outpatients. The study will last approximately 4 days. All study-related tests and medications will be provided at no cost. Participants must be 18 years of age or older and have been diagnosed with gastroesophageal reflux, peptic ulcer or gastric hypersecretion disease. Refer to study 08-DK-0138. Se habla español.

**Pediatric Cancer Survivors Study**

This is for children and adults ages 2-24. You may be eligible to participate in a study that will evaluate, screen and provide long-term follow up for any prevalence of childhood cancer-related treatment side effects for cancer survivors. This study will be on an outpatient basis and may require other tests such as MRI and blood draws. If you have had a childhood cancer, you may be eligible to participate. Refer to study 07-CH-0192.

**Severe Asthma Study for Adults 18 to 75**

You may be eligible to participate in a clinical research study with the medication Actos. The goal is to determine if Actos is effective for treating severe asthma. The study will last 48 weeks and there are a total of 15 visits required. In order to participate, you must have a diagnosis of severe asthma for at least 1 year, have not smoked cigarettes within the past year and not have a history of emphysema or sarcoidosis. Travel assistance may be provided consistent with NIH guidelines. Refer to study 09-H-0244.

**African Study**

Were you born in Africa? Healthy African volunteers 18-65 are needed for study of diabetes and heart disease risk. Compensation is available. Refer to study 99-DK-0002.

**Vascular Study**

Healthy African American and Caucasian women 18-65 are needed for a study of the effect of the American diet on heart disease risk. Compensation is provided. Refer to study 07-DK-0163.

**Women’s Health Studies Seek Healthy Volunteers**

Healthy women ages 18-65 are invited to participate in outpatient research studies. Compensation is provided. Call (301) 496-9576 and refer to protocols 81-M-0126, 88-M-0131 and 03-M-0138.

**Premenstrual Syndrome Research Studies**

Women ages 18-50 who struggle with irritability, anxiety or sadness prior to menstruation are invited to participate in outpatient research studies. There is no cost for participation. Compensation may be provided. Phone (301) 496-9576 and refer to study 81-M-0126.

**Conference on Toxicogenomics, Environmental Sciences , Sept. 15-16 in Chapel Hill, NC**

The third Toxicogenomics Integrated with Environmental Sciences Conference will take place Sept. 15-16 at the University of North Carolina. The international meeting will focus on how bioinformatics and emerging technologies help researchers better understand the environmental influences behind the development and progression of human disease. The event is sponsored by the National Institute of Environmental Health Sciences, the Food and Drug Administration’s National Center for Toxicological Research (NCTR), the SAS Institute and UNC.

The conference theme is “The Biology and Bioinformatics Behind Environmental and Toxicologic Influences” and will feature oral presentations and a poster session. Keynote speakers include Dr. John Quackenbush, professor of computational biology and bioinformatics at Dana-Farber Cancer Institute, Dr. William Slikker, Jr., director of NCTR, Dr. Rebecca Fry, assistant professor of environmental sciences and engineering at UNC, and Dr. Xihong Li, professor of biostatistics at Harvard School of Public Health.

To register and for more information, visit http://eseconf.sph.unc.edu/TIES2011. Registration for NIH and NCTR staff is free.
Weather Cooperates with High-Spirited Hike Day

"Take a hike!" is an admonition that can either mean get lost or get in shape. But it was the latter interpretation that inspired nearly 2,000 registered participants to walk or run the nearly 3-mile NIH perimeter at the fourth annual Take a Hike Day on May 11.

Whistle blasts from Office of Research Services director Dr. Alfred Johnson sent the high-spirited participants off on their ramble on a spectacular spring day. A small percentage of attendees elected to do the fun run around the course, while most walked. At least one participant used a motorized wheelchair, while another walker felt her way along using a cane.

Many walkers also toted NIH-logo plastic bottles, which could be refilled at any of four water stations along the route. These oases were manned by volunteers from the National Library of Medicine, the National Cancer Institute, the National Institute of Allergy and Infectious Diseases and OD’s Division of Extramural Activities and Support.

Before the physical exertion got under way, Johnson presented a number of awards and gave brief remarks on the portico of Bldg. 1.

Trophies went to winners of:

- 2010 HealthierFeds—The President’s Challenge (most points earned during the Challenge): National Center for Research Resources.
- 2010 HealthierFeds—NIH Rising to the Challenge (most registered employees during the Challenge) Large IC: National Cancer Institute. Small IC: National Institute of Deafness and Other Communication Disorders.
- 2011 NIH Take a Hike Day—(most registered employees) Large ICs: 1st place, Center for Information Technology; 2nd place, Office of the Director; 3rd place, National Institute of Diabetes and Digestive and Kidney Diseases. Small ICs: 1st place, National Institute on Minority Health and Health Disparities; 2nd place, National Center for Complementary and Alternative Medicine; 3rd place, Fogarty International Center.

Assisting at the starting line in front of Bldg. 2 were Diane Baker, wife of NIH director Dr. Francis Collins, and Randy Schools, R&W president.

The event also depended on support from the Division of Police, Division of Fire and Rescue Services, Office of Research Facilities Development and Operations, and Clinical Center Hospitality Services Program.