

nih record



ABOVE • From salamanders to mystery flowers, everybody's a winner on Earth Day. See more photos, p. 6.

features

	1
NIH Mixes Kid Visits, Earth Day	
	3
Studies Examine Alcohol, Mood Disorder Link	
	5
Reporter Rubin Urges Plain Writing	
	12
Nice Weather Brings Fire Drills	

departments

Briefs	2
Digest	10
Volunteers	11

You Never Outgrow Your Need for Earth Take Your Child to Work Day Grows Greener

By Belle Waring

On Apr. 26, under a moody spring sky, NIH dovetailed Take Your Child to Work Day with Earth Day, widening its biomedical focus to include environmental education for children and featuring NIH director Dr. Elias Zerhouni's close encounters with Ben Franklin, the Mad Hatter and "IT," the mystery flower.

"I came to a science place when I was a kid," Zerhouni told the children thronging the Bldg. 1 lawn, "and I knew about Mr. Franklin. I wanted to be like you; I wanted to contribute something. One of you said you want to be NIH director of the future, and that's a great dream to have."

SEE EARTH DAY, PAGE 6

Complying with HSPD-12 High-Tech ID Cards Coming to NIH

By Belle Waring

For the thousands of NIH'ers whose ID badges will expire between now and October, their upcoming renewal process may be different this time: both more comprehensive and more sensitive. To comply with Homeland Security Presidential Directive (HSPD) 12, signed in 2004, all federal executive departments and agencies must put in place a standard for "secure and reliable" identification for employees, contractors and affiliates.

According to OMB guidelines, by October 2008, every federal employee and contractor is to have completed the HSPD-12 process known as personal identity verification (PIV).

NIH's current effort is focusing on badges set to expire between now and October, which will affect approximately 5,500 employees, contractors and volunteers. In security-speak, NIH is now in the first phase, PIV-1, when personal information is collected, verified and



At NIH's combined observances of Earth Day and Take Your Child to Work Day, NCI-Frederick's Dr. David Newman, chief of the Natural Products Branch, explains how protecting endangered species helps us find new plant compounds and new drugs.

Cohen Inducted into NICHD Hall of Honor

Long-term NICHD grantee Dr. Stanley Cohen was inducted into the institute's Hall of Honor recently. Cohen, who won the Nobel Prize in physiology or medicine in 1986 for his part in the discovery of growth factors, was the 16th Hall of Honor inductee. At the most recent NICHD council, he reminisced about his long research career.

The Hall of Honor, located on the second floor of Bldg. 31, features commemorative plaques describing the contributions of scientists that NICHD has supported during its more than 40-year history. The award recognizes intramural scientists and extramural grantees who made outstanding contributions to both science and human health.

"Like the other members of the NICHD Hall of Honor, Stanley Cohen advanced human health through scientific discoveries," said NICHD director Dr. Duane Alexander.

Growth factors are naturally occurring proteins that stimulate cells to divide or to form

SEE NEW BADGES, PAGE 8

SEE COHEN, PAGE 4



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briefs

Role for Retired Scientists, Engineers

If you are interested in learning how retired scientists and engineers are contributing to the science literacy of our K-8 students, you are invited to a May 31 luncheon briefing on the American Association for the Advancement of Science/Senior Scientists and Engineers volunteer project with the Montgomery County Public Schools. Several volunteers will describe their experiences in the project, now in its second year. The volunteers' contributions, as evaluated by teachers, will be presented by Anita O'Neill, MCPS science supervisor.

The briefing starts at 10:30 a.m. in the Abelson/Haskins Room at AAAS headquarters, 1200 New York Ave., NW. All retired scientists and engineers in the Washington area are invited. RSVP to singraff@aaas.org. If you are interested in the program, but cannot attend, send an inquiry to the same address.

NLM Seeking Web Site Evaluators

The Lister Hill National Center for Biomedical Communications (LHNCBC) at the National Library of Medicine is seeking people interested in evaluating a web site developed by LHNCBC. Feedback received from evaluators will help LHNCBC develop easy-to-use web interfaces. Participants will be asked to spend 1 hour using a web site on the Bethesda campus at NIH. Federal employees, contractors, students and senior citizens who can travel to NIH are encouraged to respond. Participants who do not use NLM's public databases on a regular basis are particularly needed. Although no monetary compensation can be offered, evaluators will receive a small gift for their time. Contact dbennett@mail.nih.gov for more information.

Adhere to Travel Card Rules, Regs

NIH employees who use the government contractor-issued travel charge card are reminded of the need to follow all rules and regulations. Failure to do so could result in disciplinary action, including loss of card privileges.

For example, the card should never be used for personal, non-official services outside the realm of travel. In addition, some staff continue to purchase their travel services directly from a vendor, e.g. an airline, instead of going through the NIH Travel Management Center (Omega)—another example of misuse of the card, according to Joel Papier, assistant to the director for policy, Office of Financial Management.

Another frequently cited error is cardholders failing to pay account balances within a 60-day period. This could cause one's account to be suspended.

More information regarding the "do's and don'ts" of using the travel card is contained in OFM Transmittal Number 280 and at http://ofm.od.nih.gov/travel/transmittals/ofm_transmittals.htm. For further assistance, contact your IC travel card coordinator.

Cartoon Medicine Show Back at NLM by Popular Demand

At the beginning of the 20th century, four seemingly unrelated concepts transformed our once dreary, unsanitary, disease-ridden world: proper hygiene, regular medical checkups, public relations and animated cartoons. Medical officials (along with hawkers of toothpaste and soap) were eager to persuade the public to heed their professional recommendations by deploying cartoons featuring balloon-headed characters. And so it was that in the 1920s a young Walt Disney would animate a dancing toothbrush and cavity-producing "acid demons."



Now, by popular demand, Disney's dental cartoons, along with other rare health cartoons, will once again be presented in *The Cartoon Medicine Show: Rare Animated Cartoons from the Collection of the National Library of Medicine* (see NIH Record, Apr. 6, 2007). The program (previously screened in a longer version at both the National Academy of Sciences and NLM) will be shown in two installments: cartoons from 1922 to 1945 on Wednesday, June 13 and cartoons from 1946 to 1965 on Thursday, June 14. Both screenings will be held from noon to 1 p.m. at the Lister Hill Center, Bldg. 38A. Admission is free and open to the public, but seating is limited. To RSVP (and get more info), contact Melanie Modlin, modlinm@mail.nih.gov or (301) 496-5389.

NIH Director's Awards Ceremony, June 13

All employees are invited to the 2007 NIH Director's Awards ceremony on Wednesday, June 13 at noon in the Natcher Bldg. main auditorium. Awards will be presented in five categories: Director's Award, Mentoring Award, Director's Award for the NIH Roadmap for Medical Research, Commissioned Corps awards and EEO awards. Seating is on a first-come, first-served basis. Sign language interpreters will be provided. A reception will be held after the ceremony in the Natcher cafeteria. Individuals with disabilities who need reasonable accommodation to participate in the event should contact (301) 435-1619 or wlc@od.nih.gov.



Drs. Bridget Grant and Markus Heilig of NIAAA

Studies Examine Link Between Alcohol, Affective Disorders

Are the associations observed between alcohol abuse and dependence and mood and anxiety disorders the result of substance intoxication or withdrawal? That was the question before a well-attended Grand Rounds session recently in Lipsett Amphitheater.

A large and sophisticated national epidemiologic survey conducted by NIAAA suggests that very few people have substance-induced disorders.

Analyses also suggest that the associations between alcohol dependence and bipolar disorder, specific phobia and panic disorder without agoraphobia are due to both common and unique factors, said Dr. Bridget Grant, chief of NIAAA's Laboratory of Epidemiology and Biometry.

Grant's macro findings appear to agree with recent studies at the micro level, reported by her co-presenter Dr. Markus Heilig, NIAAA clinical director and chief of the Laboratory of Clinical and Translational Studies. To the conundrum of cause—does affective disorder lead to alcohol abuse or does heavy drinking prompt affective disorder?—he answered, “There is no universal truth that applies to all patients.”

He posited instead that “multiple trajectories lead to end-stage disease” and that an “overlapping genetic susceptibility” to both affective disorder and alcoholism is likely.

Citing new work by his team that has been published in 2006 and 2007, as well as work in press, Heilig described changes in the brain in response to a prolonged history of exposing it to cycles of intoxication and withdrawal, which he termed “a neuroadaptation story.” Put simply, either alcohol exposure or stress that an organism is exposed to during life interacts with its genetic endowment to determine the risk of depression or alcoholism. While in some individuals, a long exposure history is required to push the brain into a neuroadapted state, the gene set you are born with can also leave you “pre-kindled” for affective disorder or for alcoholism.

In an echo of the old Oliver Wendell Holmes axiom that the enlarged mind never again narrows, Heilig noted that the brain, once its

stress thermostat has been elevated by events—or by alcohol use—remains at heightened sensitivity even in the post-dependent state, meaning relapse is always a threat.

How does medicine address a seemingly permanent “upregulated” sensitivity to stress? Heilig said it has been known since the mid-1980's that the origin of anxiety symptoms within the brain is CRH—corticotropin-releasing hormone—but that attempts over the intervening decades to devise a chemical to block CRH receptors has proven devilishly difficult. One promising candidate blocked CRH receptors, but was toxic to the liver, he noted, and could therefore not be developed for clinical use.

Two new compounds—MTIP, developed by Lilly, and antalarmin, developed at NIH by Dr. Kenner Rice of NIDDK—show clinical promise in blocking CRH. “We should have one or two new compounds ready for testing in humans within the next 1½ years,” Heilig said.—**Rich McManus** 📧

Fire Department Responds to Smoke Emergency at Bldg. 37

Just before 7 p.m. on Apr. 23, the NIH Fire Department responded to a report of smoke coming from the roof of Bldg. 37. The units found the building operating under emergency power and saw smoke at the roof line. Capt. Ed Gotthardt coordinated the NIH response and assistance was requested from Bethesda-Chevy Chase Rescue Squad and the Montgomery County Fire & Rescue Service. The smoke (investigated at right by Kipp Rule, fire technician) turned out to be exhaust from an emergency diesel generator that started automatically due to the power failure.

The power outage temporarily left several people stuck in elevators. Responders, including Master Fire Fighter Allen James (donning gear below), freed them and building maintenance personnel worked to restore power. The power failure was caused by an electrical short in a high-voltage panel, causing minimal damage to the building. The incident was over by 9:15 p.m. and power was restored the next afternoon.





COHEN

CONTINUED FROM PAGE 1

Above:

Nobel laureate and recent NICHD Hall of Honor inductee Dr. Stanley Cohen is flanked by NICHD director Dr. Duane Alexander (r) and Cohen's most recent project officer Dr. Gilman Grave.

tissues and organs. Cohen discovered epidermal growth factor and its cellular receptor, which play key roles in development and offer new targets for drug treatment. Each growth factor fits into its receptor—a special site on the cell's surface—in much the same way a key fits a lock. Once in place, the growth factor triggers the cell to undertake a new activity, such as dividing to form still more cells, perhaps forming such tissues as skin, bone or blood vessels.

The discovery sparked a new field of science. Today, research in growth factors has led to advances in understanding cancer, AIDS, wound-healing and various developmental disorders.

Born in Brooklyn in 1922, Cohen received his bachelor's degree in biology and chemistry from Brooklyn College, an institution he was able to attend only because of its free tuition. He went on to earn his master's degree in zoology from Oberlin College and his doctorate in biochemistry at the University of Michigan.

For his doctoral research, Cohen studied nitrogen metabolism in earthworms. He couldn't afford to buy worms from a biological supply company, so he spent his nights flooding campus lawns with a garden hose. Wearing a lighted miner's hat, Cohen would stoop to collect the emerging worms. When fellow students asked what he was doing, he said he was gathering worms for his doctoral dissertation. When they didn't believe him, he grew tired of trying to explain himself. Exasperated, he finally said he was pledging a fraternity and gathering worms for his initiation. From then on, the Michigan students were satisfied with his explanation.

After graduating, he worked at the University of Colorado, then went to Washington University in St. Louis, where he took a position in the lab of Dr. Viktor Hamburger. Hamburger and Dr. Rita Levi-Montalcini enlisted Cohen's help because they needed a biochemist. They sought to determine the properties of a substance that caused nerve growth in chick embryos.

"I joined their laboratory, and for the next 5

or 6 years we got along fine because we never argued—I knew no neuroembryology and they knew no biochemistry!" Cohen noted. Eventually, Cohen and Levi-Montalcini isolated nerve growth factor (NGF), a substance that came from mouse tumors. Later, he and Levi-Montalcini shared the Nobel Prize for the discovery.

While at Washington University, Cohen made an interesting observation. When he took an extract from the salivary gland of a male mouse and injected it into baby mice, their eyes opened up to 5 days earlier than normal. After his postdoctoral appointment, he took a position with Vanderbilt University.

Cohen applied for his first research grant in 1963, explained Dr. Gilman Grave, chief of NICHD's Endocrinology, Nutrition, and Growth Branch, and Cohen's most recent project officer. Through the years, the grant was refunded six times until Cohen retired in 1999.

"I was not interested particularly in mouse eyes," he continued, "but I thought the substance was important because it sped up a normal developmental process and I thought that anything that can speed up a normal developmental process must have some significance."

Over the next 30 years, Cohen discovered, isolated, purified and sequenced epidermal growth factor (EGF), a protein that stimulates the growth of epidermal cells, which form a lining in blood cells, skin and other tissues. Grave noted that Cohen sequenced the protein "the hard way, before there were automated sequencers." Sequencing EGF led Cohen to isolate the protein's target receptor on the cell membrane. Next, he deciphered the elaborate sequence of chemical reactions that takes place in the cell after EGF binds to the receptor.

Grave pointed out that Cohen's work has led to drugs used to treat breast cancer and leukemia. Additionally, he noted that EGF itself is used to treat corneal abrasions and to help the healing of wounds and burns, among other medical uses.

"When I heard about that, I thought, well, that's pretty good—going from eye opening to curing cancer," Cohen said.

EGF also binds to cells of the nervous system. Study of the protein may yield new insights into the development of Alzheimer's disease, as EGF binds to the type of brain cell most affected by the degenerative disorder.

In presenting Cohen with his citation, Alexander said, "We salute you as a person whose pursuit of knowledge followed a difficult path, but whose persistence and brilliant success produced discoveries of some of the basic secrets of life that are leading to better health for all people." 🗨️

Solowey Awardee Miller To Lecture, May 31



How do we focus our attention and control our actions, often in complex situations? Cognitive control is the ability to organize thought and goal-directed behavior; it emanates from the prefrontal cortex, the region of the brain most elaborated in intelligent animals such as humans and other primates. Dr. Earl Miller and his team at the Massachusetts Institute of Technology use experimental and theoretical approaches to study the neural basis of high-level cognitive functions. On Thursday, May 31, at noon in Lipsett Amphitheater, Bldg. 10, Miller will be honored for his work by receiving the 2007 Mathilde Solowey Award in the Neurosciences and delivering a lecture titled, "Rules, Concepts, and Executive Brain Functions."

He will present work from his laboratory demonstrating that neurons in the prefrontal cortex and related brain areas have properties commensurate with a role in executive brain function. These brain cells are involved in directing attention, recalling stored memories, predicting reward value and integrating information relevant to a particular goal. Perhaps most importantly, they transmit acquired knowledge. Their activity reflects learned contingencies, concepts and rules. In short, they underlie our internal representations of the "rules of the game."

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Miller is Picower professor of neuroscience at MIT and associate director of MIT's Picower Institute for Learning and Memory. He received his B.A. in psychology from Kent State University in 1985 and his Ph.D. in psychology and neuroscience in 1990 from Princeton University. From 1990-1995, he was a postdoctoral fellow in the Laboratory of Neuropsychology, NIMH. Miller joined the faculty at MIT in 1995, was tenured in 1999 and was named full professor and associate director of the Picower Center in 2002.

He has received numerous awards and honors for his scientific work, including the National Academy of Sciences Troland Research Award (2000), the Society for Neuroscience Young Investigator Award (2000), the John Merck Scholar Award (1998), the McKnight Scholar Award (1996) and an Alfred P. Sloan Research Fellowship (1996). He has published papers in *Nature*, *Neuron*, *Nature Neuroscience* and *Science*, including its Mar. 30, 2007 issue. ①



Rita Rubin, USA Today medical reporter, addresses NIH's seventh annual Celebrating Plain Language award ceremony.

How Would Seuss Say It?

Plain Language Keynoter Celebrates Art of Communicating Simply

By Jenny Haliski

The writings of German philosopher Georg Wilhelm Friedrich Hegel might be the antithesis of plain language: He sometimes wrote sentences that were 3 pages long. In her address at the seventh annual Celebrating Plain Language at the NIH award ceremony, Rita Rubin, medical reporter for *USA Today*, suggested that we would do well to emulate children's author Dr. Seuss, rather than Hegel. Seuss's *The Cat in the Hat* appeals to generations of new readers despite using a simple vocabulary of only 220 words. Hegel's works, while valuable, remain among the most difficult to read.

Using plain language does not necessarily mean "dumbing down" writing, just as using complicated terminology does not necessarily make the ideas expressed more intelligent, said Rubin. At her own newspaper, where layout space is precious, Rubin said she spends more time cutting text from her stories than she spends writing them. If the subject is particularly technical, she reflects more on the point of the story before starting to write.

If the story loses or confuses readers with convoluted language, why bother? According to Rubin, formal science training can rob authors of the ability to approach a story from the perspective of a reader exposed to the topic for the first time. Science writing for a lay audience must be clear and concise so that the average reader can understand it.

Rubin has been reporting, often about medicine, for 30 years. She holds a bachelor of science degree in journalism from Northwestern University's Medill School of Journalism and attended Harvard School of Public Health on a journalism fellowship (1987-1988). She has been a senior editor at *U.S. News & World Report*, was a reporter for the *Dallas Morning News* and has written for *Health*, *Ladies Home Journal*, *Reader's Digest* and other magazines. She is the author of *What If I Have a C-Section?* (Rodale Books, 2004) and in 2002, she spent 3 weeks at NIH as a medical science fellow sponsored by the University of Maryland's Knight Center for Specialized Journalism.

Rubin cited former NIH scientists and Nobel laureates Drs. Michael Brown and Joseph Goldstein as examples of physicians who made their research on the metabolism of LDL cholesterol come alive to non-scientists. She recalled how a newspaper colleague attended a presentation the researchers gave to a group of eighth-grade students and how excited her colleague had been by her clear understanding of their work. It takes someone very smart to be able to explain a complicated topic simply, Rubin observed.

More information about NIH's Plain Language Initiative is available at <http://execsec.od.nih.gov/plainlang/>. ①

Right:
NIH director Dr. Elias Zerhouni points to a greener future for one of Earth Day's quiz winners, 9-year-old Sierra Cheri, as Randy Schools (r), president of the R&W Association, looks on.

Below:
Although the spotted salamander is primarily subterranean, this fellow was found beneath surface debris on a cool, damp day in the forest behind NIHAC, NIH's Poolesville facility. He has been returned to the wild.

Bottom:
To help kids see how pollutants contaminate the watershed, DEP Engineer Brian Kim sprinkled grit on the "ground," then invited children to deploy spray bottles. As the grit turned the stream red, they got the picture.



EARTH DAY

CONTINUED FROM PAGE 1



PHOTOS: ERNIE BRANSON, MIKE SPENCER

It was a day made for kids to dream green—a day free from school, bright with balloons, Frisbee tosses and cool giveaways. After the nature walks, green roofs and red-eared turtles; after the composting demos and spotted salamanders, Sunshine the Clown and Rocco the Recycling Dog; after browsing displays on watershed protection, forest restoration, radiation safety, waste management and the NIH Bicycle Commuter Club; after scoping out energy conservation, alternative-fuel vehicles, the Mercury-Free NIH campaign and "Pharmacy Island"; after sampling lunch and completing "green" quizzes, it was time—at last—for prizes.

Zerhouni awarded stuffed toy monkeys wearing NIH T-shirts to children whose names were drawn at random from all quiz entries. Lucky winners were Noah Luckenbaugh, Jordyn Parker, Megan McClure, Sierra Cheri and Rachit Agarwal.

"I'm coming to work for NIH when I get out of college. This is where I want to work," said 9-year-old Sierra Cheri. Her mother, ORF's Sheila Cheri, who has worked at NIH for 22 years, was not arguing: "I told her, I'm glad you feel that way," she said, "and I hope you feel that way 10 years from now."

The grownups' turn followed as Zerhouni presented awards to those who had identified the mysterious flower "IT" and what "IT" says about protecting our environment (see *NIH Record*, Apr. 20, 2007). Winners had correctly identified the *Sceletium tortuosum*, a succulent plant belonging to the ice plant family, or Aizoaceae,

native to South Africa and used by Khoisan people as a sedative, mood enhancer and analgesic. *Sceletium* is becoming increasingly scarce.

"You will find it growing wild out in the Karoo," NCI-Frederick's Dr. David Newman told the crowd. "Protecting endangered species is closely related to our mission of finding new plant compounds and new drugs. We look at how it relates to biodiversity." For example, he said, certain plants produce a fungus that in turn produces taxol, a chemotherapy drug. "The lessons for young people? Make certain you stop clear-cutting forests."

Grand prize winners Dr. Rajaram Shantadurga, NINDS, and Keith Ball, ORS, received T-shirts and gift certificates. In addition, the Bean Bag, a local eatery, will come to campus and cater lunch for them and their coworkers. The eight runners-up received T-shirts. All prizes were donated by the NIH-NOAA Recreation and Welfare Association.

And about that post-event cleanup? Even our trash is going greener. This Earth Day marked NIH's first "zero-waste event," when food scraps, biodegradable plates and utensils were collected and transferred to FDA where, instead of being sorted, they got ground up together and *voila!*—a new kind of compost is born. Gareth Buckland, the Division of Environmental Protection's recycling guru, explained: "The idea is to convert all events into zero-waste events" and when the utensils are made of potato starch, not plastic, even these can go into the mix.

Buckland was keen to share the good news: NIH



Ben Franklin (r), portrayed by actor Barry Stevens, electrifies the audience on the Bldg. 1 lawn.

is a winner in the 2007 Federal Electronics Reuse and Recycling Campaign. Accepting the award at the Apr. 17 White House Presidential Hall ceremony was the Division of Personal Property Services, which collects and reuses/recycles computers. NIH took the prize in "Large Facilities-Civilian" for the eastern region.

"So it's nice to have the kids here today," said Buckland. "[Being green] can be ingrained in their lives."



Above: Zerhouni awards "IT" contest prize—a "Reduce/Reuse/Recycle" T-shirt—to Dr. Rajaram Shantadurga (l) of NINDS and Keith Ball of ORS. As grand prizewinners, they correctly identified the *Sceletium tortuosum*.

Right: The Mad Hatter, a.k.a. Capt. Ed Rau, passes out stickers for NIH's mercury-elimination campaign.



Top: Capt. Ed Pfister (r) introduces the Red-Eared Slider to Per-Niklas Barth as Green Roofs guru and mom Katrin Scholz-Barth looks on.

Middle: Nicole Huntington of the Transportation Management Branch shows kids energy-saving travel options.

Bottom: Dr. Mike Iadarola (l) of NIDCR assists with sap extraction of the candelabra tree, a.k.a. Naboom. The milky white latex-like sap, which can be collected without hurting the plant, is being tested for potentially useful compounds.

NEW BADGES

CONTINUED FROM PAGE 1

adjudicated. Adjudication, according to OMB guidelines, “determines whether the applicant is suitable to receive a credential, based on results obtained from the OPM background investigation.”

“Our mission...is to protect our people and to secure the science. We want to be able to say that our workplace is safe.”

PIV-1 entails fingerprinting, photographing and checking current I-9 documents (photo ID). Fingerprints are run through the Office of Personnel Management to identify any criminal history. Following this initial identity verification and fingerprint check, applicants receive their new ID badge.

But the process does not end there. PIV then

requires filling out a personnel investigation form with information including Social Security number; date and place of birth; citizenship; employment, education and references over the past 5 years; and law enforcement records for the last 3 years.

The information itself is kept in a restricted area, where all staff members have a clearance level of at least secret and as high as top secret. A “Background Investigation Tracking System NIH Database” will be maintained by NIH’s Info Tech Branch and transmitted to OMB via the OPM portal’s Personnel Information Processing System.

Up to 90 percent of staff are in non-sensitive positions and will have the basic background check, covering their last 5 years of personal history. However, some individuals, such as those conducting sensitive research or major procurement, may require a higher level investigation that could include a credit history check.

A position-sensitivity worksheet is being developed by the personnel security working group to help ICs determine “the level of classification

Summary of Homeland Security Presidential Directives

On Oct. 8, 2001, President Bush established the Office of Homeland Security to assist federal efforts to combat terrorism and maintain the domestic security of the United States. On Oct. 29, 2001, he issued the first of a new series of Homeland Security Presidential Directives (HSPDs) governing the full spectrum of national security, domestic preparedness and nationwide response plans. So far, they include:

HSPD-1 Organization & Operation of the Homeland Security Council, Oct. 29, 2001

HSPD-2: Combating Terrorism through Immigration Policies, Oct. 29, 2001

HSPD-3: Homeland Security Advisory System, Mar. 11, 2002

HSPD-4: National Strategy to Combat Weapons of Mass Destruction, Sept. 17, 2002

HSPD-5: Management of Domestic Incidents, Feb. 28, 2003

HSPD-6: Integration and Use of Screening Information, Sept. 16, 2003

HSPD-7: Critical Infrastructure Identification, Prioritization and Protection, Dec. 17, 2003

HSPD-8: National Preparedness, Dec. 17, 2003

HSPD-9: Defense of United States Agriculture and Food, Jan. 30, 2004

HSPD-10: BioDefense for the 21st Century, Apr. 28, 2004

HSPD-11: Comprehensive Terrorist-Related Screening Procedures, Aug. 11, 2004

HSPD-12: Policy for a Common Identification Standard for Federal Employees and Contractors, Aug. 27, 2004

HSPD-13: Maritime Security Policy, Dec. 21, 2004

HSPD-14: Domestic Nuclear Detention, Apr. 20, 2005

HSPD-15: [Classified; intended to clarify roles and responsibilities on the war on terror and to improve government coordination], Mar. 8, 2006

HSPD-16: Aviation Strategy and Security, June 22, 2006

HSPD-17: [Classified]

HSPD-18: Medical Countermeasures Against Weapons of Mass Destruction, Jan. 31, 2007

HSPD-19: Combating Terrorist Use of Explosives in the United States, Feb. 12, 2007



Coordinating the new ID card program are (from l) Paul Perez, DPSAC chief, Alex Salah, Access Control Branch chief, and Nikole Smith, HSPD-12 program manager.

sensitivity based on the duties and responsibilities of an employee in his or her position,” says Paul Perez, director of the Division of Personnel Security and Access Control, ORS. Perez and his three branch leaders—Alex Salah, Nikole Smith and Barbara Hardy—have been tasked with implementing HSPD-12 for NIH.

For those working in NIH’s off-campus locations, there is a mobile PIV-1 processing unit that can travel to your site so you don’t have to visit the main campus. Mobile-unit visits should be coordinated via the ICs; supervisors should help organize staff into groups of at least 25. Whether on or off-campus, the ICs cover the processing costs, using their CAN numbers.

For those on the main campus, the Personnel Security Branch is located in Bldg. 31, Rm. 1B03.

“By following the government-wide identity standards of HSPD-12, we will, at a minimum, be able to quickly identify who is trying to gain authorized access to our facilities,” says Perez, who moved from the Department of Homeland Security to NIH last November. “NIH is accountable during major events. We must be able to answer the questions ‘Who’s on your property? Where are they?’ We’re trying to create a safe working environment for all employees.”

HSPD-12 evolved out of 9/11, he explains, as well as Hurricanes Katrina, Rita and Wilma, when chaos hampered conclusive and swift identification among colleagues in the field.

As for the new badges—variously called “smart cards,” or “PIV-2 cards”—the production contract has been awarded to Oberthur Card Systems, where the product is currently being tested. When HHS approves the new

technology, NIH will enter HSPD-12’s next phase: Personal Identity Verification phase 2, or PIV-2.

Meanwhile, the existing ID cards will be used. Once approved, PIV cards will contain imprinted personal information and could operate across federal agencies.

But let’s say you got into trouble a long time ago, and were nonetheless hired. Must you, a loyal employee, reveal your background history?

“You have a right to say no,” says Perez. “How that affects your employment is something else.” Per Executive Order 10450 and HSPD-12, background investigations are a requirement for federal employment.

So—about that DWI incurred while driving home from your sister’s wedding when you were 19...?

“Everybody gets in trouble when they’re young,” says Perez. “We look at the whole person. We review the criminal history, any charges, pending or resolved; how old those charges are; the age of the person at the time; the severity and the conditions.” The Division of Personnel Security and Access Control adjudicators are taught to use best judgment and refer questionable cases to management. Perez himself is a seasoned, certified protection professional. The staff handling NIH’ers’ personal information are “professional and credible themselves; they take all safeguards and follow all regulations and directives.

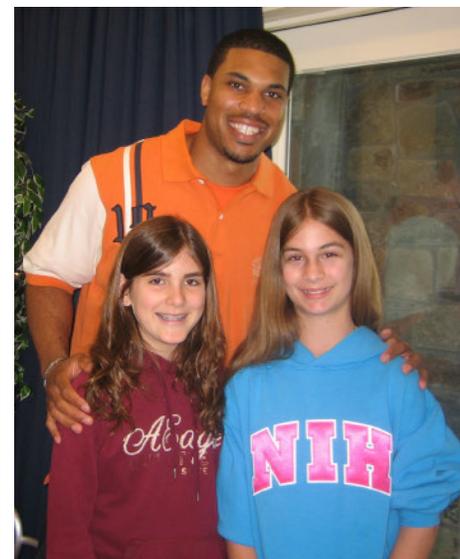
“We want employees to know our mission,” says Perez. “It is to protect our people and to secure the science. We want to be able to say that our workplace is safe.”

Procedural steps are outlined for expiring badge holders, new employees and new contractors at <http://ser.ors.od.nih.gov/documents/PIVprocedure.pdf>. If your badge is expiring, work with your executive officer or other IC representative to schedule a badge-renewal appointment.

For more information on the PIV-1 process, call the HSPD-12 help desk at (301) 402-9755, or email orspersonnelsecurity@mail.nih.gov. 📧

Redskins QB Visits Children’s Inn

Washington Redskins quarterback Jason Campbell visited youngsters at the Children’s Inn recently as part of a year-long partnership with Comcast SportsNet. He challenged kids to video-game competitions, signed autographs and posed for photographs. At right, Campbell meets with admirers Jessica Dahlgren (in the NIH sweatshirt), 11, and MaKenzie Muehler, 13. Below, 2-year-old Isaac Barchus sits on Campbell’s lap.



Whippets, Whippets Good (or at Least Fast)

Last month, NHGRI identified a genetic variant that contributes to dog size; now, they've moved on to speed. In a study published online in *PLoS Genetics* on May 1, researchers reported that a mutation in a gene that codes for a muscle protein called myostatin can increase muscle mass and enhance racing performance in whippets, the sprinting dogs that resemble small greyhounds. This finding can help explain why some whippets—known to clock speeds of close to 40 miles per hour—run even faster than others: the fastest dogs inherited a mutated



Whippets are able to sprint to speeds approaching 40 miles per hour.

PHOTO: TYRONE SPADY, NHGRI

copy of the myostatin gene from one parent and a normal copy from the other. However, some mutation is better than a lot. Whippets with two mutated copies have a gross excess of muscle and are prone to shoulder and thigh cramping, making it hard for them to join a race.

Diabetes Milestones

More genetic news: a landmark study led in part by NHGRI director Dr. Francis Collins and supported by NIDDK and NHGRI's Division of Intramural Research reported the identification of at least four new genetic variants associated with increased risk of type 2 diabetes; they also confirmed the existence of another six variants. The findings were published simultaneously by three groups (a U.S.-Finnish team, the international Diabetes Genetics Initiative and a British team) in the Apr. 26 online edition of *Science*, and could point researchers in the direction of new drug targets for the prevention and treatment of the disease, which affects close to 21 million people in the United States.

DNA Repair and Huntington's Disease

Meanwhile, a study funded by NIGMS, NINDS and NIEHS linked faulty DNA repair to the onset of Huntington's disease. In an advanced online publication of *Nature*, the study points to a potential way to stop or slow the onset of this inherited, incurable and fatal neurodegenerative disorder that affects around 30,000 Americans. The disease's symptoms don't usually appear until middle age, so scientists have

long wondered what triggers it and how it can be stopped or slowed down. They do know that people with Huntington's have a version of a gene named huntingtin that carries an extra segment. If that segment is too large, the gene produces a faulty protein that can harm the brain. And though it's still a mystery why exactly Huntington's progresses, the researchers say their findings—conducted on mice—support the idea that the disease advances when the extra segment expands over time in non-dividing cells, such as nerve cells. These insights on how the disease arises could point to the development of new treatments and prevention methods for Huntington's in the future.

The Brain and Alzheimer's

According to an imaging study by NIMH researchers, a part of the brain first affected by Alzheimer's disease is thinner in youth with a risk gene for the disorder. The research, published in the June issue of *Lancet Neurology*, shows that having a thinner entorhinal cortex, a structure in the lower middle part of the brain's outer mantle, could make these children and teens more susceptible to degenerative changes and mental decline later in life. The study reports that a variation in apolipoprotein, a gene that plays a critical role in the repair of brain cells, affects the development of the entorhinal cortex. However, only long-term brain-imaging studies of healthy aging adults will be able to confirm whether this early thinning predisposes someone for Alzheimer's, researchers said.

Hold the Salt, Keep the Nuts

New clinical data from NHLBI shows that reducing sodium intake prevents not only high blood pressure, but also heart disease. The study, published online Apr. 20 by the *British Medical Journal*, reported that men and women with prehypertension who reduced their sodium intake by 25 to 35 percent had a 25 percent lower risk of total cardiovascular disease over the 10 to 15 years following their sodium intake reduction. Participants were able to lower sodium intake through dietary and behavioral intervention; data from follow-up questionnaires found that many of the dietary changes were long-lasting. On a side note, while you're reducing sodium, you may not want to cut out macadamia nuts: a study from Penn State supported in part by NIH found that a daily diet containing 1.5 ounces—a small handful—of the Hawaiian treat reduced total cholesterol, low-density lipoprotein cholesterol and triglyceride levels compared with a standard American diet.—compiled by Sarah Schmelling



For all of the recruitment notices below, the numbers for more information are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

ADHD Genetics Study

Take part in an NIH study seeking to identify the genes that contribute to ADHD (attention deficit hyperactivity disorder).

Do You Have Pulmonary Sarcoidosis?

Consider participating in an NIH study.

Muscular Leg Pain?

If it is caused by blocked arteries and it occurs with activity but improves with rest, call NIH for more information on a new study.

Have Trouble Swallowing?

Are you 20-90 years old and have problems swallowing? Swallowing studies are being conducted at NIH. Transportation is available.

Anthrax Vaccine Study

NICHD is seeking healthy volunteers, ages 18-45, to participate in an investigational anthrax vaccine study (04-CH-0283) conducted at NIH. Medical tests will determine eligibility. Compensation is provided.

Healthy Women Needed

Healthy women ages 18 through 25 are needed for an ovarian function study. Compensation is provided. Refer to study 00-CH-0189.

Group Therapy Study

Parents and teenage girls ages 12-17—consider a group therapy study (06-CH-0039) for healthy girls who are at risk of gaining excess weight. Compensation is provided.

Volunteers Needed for USUHS Study at Navy

Are you between 18 and 25 years of age? In good health? You may be eligible to participate in a study of attention. It requires one 3-hour visit and you will be paid for your time. Visit takes place on the campus of the Naval Medical Center. Parking is available. Call (301) 295-4009 or (301) 319-8204.

Neck Pain Study Needs Volunteers

Are you a healthy individual with or without neck pain? If you are between the ages of 18 and 65, you may be eligible to participate in an NIH neck pain study and receive a comprehensive cervical musculoskeletal examination without compensation. This is a 3-month natural history study, not a treatment study. For more information, email: neckpainstudy@gmail.com or call (301) 496-4733. Refer to study 02-CC-0245.

NCI Launches Cancer.gov en Español

On Apr. 2, the National Cancer Institute launched its new Spanish-language web site, Cancer.gov en español. The site is tailored to meet the online cancer information needs of Latinos in the U.S. from both cultural and linguistic perspectives. The site also addresses common myths and beliefs, such as the view that cancer, in general, cannot be treated successfully. This myth is a barrier to screening and treatment in the Latino community. NCI hopes the information on the site will help overcome this and other barriers.

The web site's pages are organized around the issues of greatest interest and concern to Latinos in the U.S., based on results of surveys and focus groups. The site also features information about accessing support and resources in the community and testimonials from Latinos about the entire cancer continuum, encompassing screening, prevention, detection and diagnosis, treatment and survivorship. There are peer-reviewed information summaries for both health professionals and patients on more than 100 different cancer-related topics and a dictionary that includes nearly 5,000 terms and definitions in both Spanish and English. NCI will continue to test and enhance the site to ensure it meets the information needs of Latinos in the U.S.

The Spanish web site is one more NCI resource designed to help reach and provide information to minority communities. It complements existing NCI resources such as the Cancer Information Service (1-800-4-CANCER), which provides information about cancer in Spanish and English to telephone callers. Visit Cancer.gov en español at www.cancer.gov/espanol and share this resource with your colleagues, friends and family.

Nice Weather Brings Flowers, Sunshine, Evacuation Drills

Springtime at NIH brings warm breezes, birds chirping, flowers blooming and—building evacuation drills. While a beautiful spring day may be beneficial to your psyche, the ability to safely evacuate your building in the event of an emergency is essential.

Twice-yearly evacuation drills are mandated by HHS. All employees should be familiar with building evacuation procedures and cooperate with evacuation staff during both drills and in emergency situations. The occupant emergency coordinator (OEC) for your building will be happy to discuss evacuation protocols if you have questions.

The ORS Division of Emergency Preparedness and Coordination (DEPC) manages the Occupant Evacuation Plan for NIH, which includes all on- and off-campus buildings. While emergencies can occur at any time, evacuation drills are scheduled only in spring and fall to take advantage of nice weather.

Although threats of terrorism are in the news these days, emergencies such as fires, odors of burning and accidental releases of hazardous materials occur daily in NIH buildings. Last year, the NIH Fire Department responded to some 2,841 emergency incidents on the Bethesda campus. Most were minor, but the potential always exists for serious events to occur. In order to ensure that all people can safely evacuate, the drills are important. The NIH Occupant Evacuation Plan contains provisions for people with temporary or permanent disabilities who may need assistance in evacuating, and for deaf or hard of hearing employees who may not easily detect audible alarms.

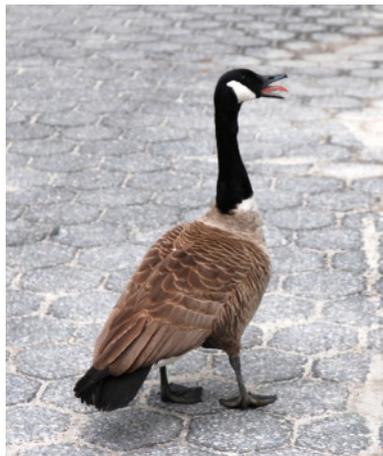
Mary Ann Bell, an emergency management specialist, manages the Occupant Evacuation Program. She credits the hundreds of IC volunteers who serve as evacuation program staff for the long-term success of the program. “These people unselfishly volunteer their time and effort to protect the NIH community, deriving nothing in return except the satisfaction of knowing that they are instrumental in ensuring that all building occupants can safely vacate their facilities during emergency conditions.”

While the NIH evacuation program has been around for decades, a relatively new initiative is the concept of sheltering-in-place. Bell explains, “Sheltering-in-place is intended to provide protection for building occupants when conditions outside are hazardous and when remaining inside the building is safer than exiting.”

A hazardous-materials release outdoors or the approach of severe weather could trigger a decision to shelter-in-place. Sheltering-in-place is designed as a short-term solution, lasting from 15 minutes to several hours, depending on the precipitating condition. In cases where the outside air may be contaminated, staff will shut down air intakes to prevent or minimize contaminated air from entering the structure. Shelter-in-place staff have been trained to assist other occupants during this situation; many buildings have supplies stored (radios, flashlights, etc.) to facilitate this activity.

Michael Spillane, director of DEPC, knows that evacuating a building is not the highlight of any employee’s day. He notes, “As fire alarm technology has improved at the NIH, there are far fewer unnecessary alarms in our buildings, as compared to a few years ago. Being interrupted for approximately 10-20 minutes, twice a year, to participate in evacuation drills is a small price to pay for exercising this critical program.”

For more information on building evacuation procedures and sheltering-in-place, including available training, or to find out who the occupant emergency coordinator is for your building, visit http://ser.ors.od.nih.gov/emergency_prep.htm. Also, Manual Chapter 1430, “NIH Occupant Evacuation Plan,” is available at <http://oacu.od.nih.gov/safety/1430.pdf>. Call DEPC at (301) 496-1985 for more information. 



Geese Make Home at NIH

*The Bldg. 31 loading dock is home to this nesting pair of Canada geese (*Branta canadensis*). The male (l) hisses a warning to anyone who crowds the nest, which, at press time, held 6 eggs. Below, he stands sentry (r) as his mate stretches her legs. With her black head and neck and white “chin-strap,” she is almost identical to the gander. Most couples remain together for life and both parents protect the nest during incubation, which lasts around 4 weeks. From the balcony of the Bldg. 31 cafeteria, you can see the nest, but don’t get too close: the male can be very aggressive defending his turf. Expect goslings by June.*

PHOTOS: BELLE WARING

