Laptop Theft Spurs Renewed Focus on Computer Encryption
By Sarah Schmelling

The February theft of a laptop computer that held sensitive data on human subjects has led NIH to take several steps to prevent such a violation from happening again.

In a memo to all staff on Apr. 9, NIH director Dr. Elias Zerhouni said the theft had placed renewed focus on the necessity of encrypting portable electronic devices, and, according to chief information officer Dr. Jack Jones, NIH is redoubling efforts to encrypt laptops currently in use.

He said Zerhouni’s message to the NIH community “certainly helped raise awareness and get the word out,” and it emphasized the importance of “100 percent compliance” with privacy and information security measures and policy. Other key points of the message were that NIH conducted a review and certification of all laptops to ensure that all those that can be encrypted are in fact encrypted.
Metzler To Give Next Diversity Series Lecture, May 29

Christopher Metzler, associate dean of human resources and diversity studies at Georgetown University, will speak at the NIH Diversity Seminar Series on Thursday, May 29, from 11 a.m. to noon in Wilson Hall, Bldg. 1. Sponsored by the Office of Equal Opportunity and Diversity Management, this will be the third lecture on valuing diversity. The series provides focused training for employees and managers on linking diversity to organizational performance for optimal benefit.

All are encouraged to attend. Sign language interpreters will be provided. For more information, call (301) 451-0478. Individuals who need reasonable accommodation should call Carlton Coleman at (301) 496-2906 or the Federal Relay Service at 1-800-877-8339.

Harvard’s Shi To Speak, May 23

As part of Asian Pacific American Heritage Month, NIH has invited Dr. Yang Shi of Harvard Medical School to give a guest lecture on his research in epigenetic regulation, with a focus on his groundbreaking work on histone demethylation. The talk will be held on Friday, May 23 from 1 to 2 p.m. in Lipsett Amphitheater, Bldg. 10.

Before Shi’s work on the topic, the methylation of histones was thought to be an irreversible change that could permanently activate a gene. His group has shown that methylation is a dynamic process that entails both an ebb and a flow. In Shi’s words, “the idea of yin and yang is universal in biology; our results show that histone methylation is no different.”

First Annual Yoga Week, May 19-23

On May 19-23, NIH will hold its first annual Yoga Week. A series of free events will be held at on- and off-campus locations (Natcher, Executive Blvd., Rockledge, NRC). The kickoff will be held on Monday, May 19, from 11 a.m. to 2 p.m. at Natcher auditorium. Along with lectures by current NIH grantees conducting research on yoga and presentations by yoga instructors, there will be two charity outreach events during Yoga Week—for the NIH Safra Family Lodge and Manna Food Center in Rockville. Employees are encouraged to bring bags of nonperishable foods with them to the Wednesday and Thursday events. For more information on the week’s events, visit does.ors.od.nih.gov/fitness/yogaWeek.htm or contact Dr. Rachel Permuth-Levine at levinerac@mail.nih.gov.
NIH Celebrates Plain Language with Stories, Awards
By Belle Waring

It was a happy coincidence. On Apr. 15, when the Plain Language Bill passed the U.S. House of Representatives by a 376-1 vote, NIH celebrated its own Plain Language initiative with an annual award ceremony and reception. This marked the eighth year of the initiative at NIH.

“Part of democracy,” said NIH director Dr. Elias Zerhouni in introductory remarks, “is to have as many people as possible understand what we’re doing with their dollars. The core message is that unless you communicate your vision in a way that’s clear and complete, it’s basically a non-vision.”

It’s especially important in writing about science, he said, to make sure your patients don’t feel like strangers.

“NIH is at the top of its game in communicating complex topics,” Zerhouni said.

Keynote speaker, renowned storyteller Jon Spelman, urged writers to “make stories out of pictures to connect with the imagination. All stories are personal; it’s important to have empathy for that.”

The "simple, technical answer,” he noted, is “to use simple action words as much as you can.” He illustrated with folk tales and a few yarns of his own.

John Burklow, NIH associate director for communications and public liaison, presented a special award of appreciation to PL initiative volunteers Ann Brewer, Emily Carson, Mollie Fletcher and Susan Persons.

Burklow’s deputy Dr. Marin Allen announced the awards. Zerhouni presented certificates to staff from 16 institutes/centers and 4 program offices. Judged from 163 entries, 62 awards went out to NIH’ers, some as individuals and some as teams. The spread, borrowing from Olympic-style awards, was 12 gold, 25 silver and 25 bronze.

There was an abundant variety of products: web sites, reference tools, recipes, a bilingual fotonovela (an illustrated storybook), fact sheets, news, features, press releases, booklets, podcasts, guides for clinical therapies, toolkits, email newsletters, brochures, panel reports, posters, nurses’ care guides and a memorandum of understanding.

There was even a budget statement.

The award brochure itself, an 8-by-8-inch specimen of readability, was peppered with “quotation inspiration” such as this nugget by Dr. Paul (Wyn) Jennings, the National Science Foundation’s program director of graduate research traineeships: “The grant proposals that are well written are usually the ones that get the checks.”

And this one hit home: “Any fool can make things bigger, more complex and more violent,” wrote Albert Einstein. “It takes a touch of genius—and a lot of courage—to move in the opposite direction.”

NIH Scientist Named to NAS

Dr. Jennifer Lippincott-Schwartz was recently elected a member of the National Academy of Sciences for excellence in original scientific research. Membership in NAS is one of the highest honors given to a scientist or engineer in the United States. She will be inducted into the academy next April during its 146th annual meeting in Washington, D.C.

Lippincott-Schwartz, who is chief of the section on organelle biology in NICHD’s Cell Biology and Metabolism Branch, was elected along with 71 others, bringing the number of active NAS members to just over 2,000. Among NAS’s famed members have been Albert Einstein, Robert Oppenheimer, Thomas Edison, Orville Wright and Alexander Graham Bell. Many members have won Nobel prizes.

The National Academy of Sciences is a private, nonprofit honorific society of distinguished scholars engaged in scientific and engineering research, dedicated to the furthering of science and technology and to their use for the general welfare. Established in 1863, NAS has served to “investigate, examine, experiment and report upon any subject of science or art” whenever called upon to do so by any department of the government.
that NIH will begin random audits for compliance with existing HHS encryption policy for laptops and other portable media, and that NIH has identified laptops that cannot be encrypted at this time—primarily Macintosh laptops. Currently, Macs cannot be used to store sensitive information due to a lack of approved software, but they can be used for sensitive data analysis, provided that the data are stored on an encrypted removable device.

Zerhouni also listed specific requirements for other devices, including USB drives and BlackBerrys, and he gave examples of sensitive and non-sensitive data.

In addition to the steps described in the memo, Dr. Raynard Kington, NIH deputy director, sent a letter to institute and center directors calling for policy changes regarding laptop security, and Jones will be preparing a new policy requiring that all computer equipment is received, configured and encrypted by IC IT staff before it is delivered to IC end users. Jones also gave a presentation to NIH’s executive officers soliciting their support for new security initiatives at NIH. The IT community has now ensured the encryption of more than 12,000 laptops.

According to Jones, the stolen laptop was used by an investigator who took it home to work after hours. The investigator’s laptop hadn’t been encrypted because his lab had been experiencing difficulties with computer encryption that they were working to overcome. Then, due to an oversight, “the laptop was not encrypted even after those problems were resolved, and neither the investigator nor the relevant information technology staff followed up on the matter, as they should have,” Jones said.

The laptop held information on more than 3,000 patients in an NHLBI clinical research project and included Social Security numbers for more than 1,200 of those patients.

Dr. Michael Gottesman, NIH deputy director for intramural research, said that going forward, in addition to assuring the encryption of all computers containing sensitive data and dramatically reducing the amount of personally identifiable information and sensitive data on any laptops, “we need to educate our staff about the seriousness of breaches of private information and find new ways to work on data without the need to download them into portable computers.” He said that IT and human subjects staffs need to “work closely together to guarantee a rapid and uniform response to these kinds of breaches.”

Jones said NIH employees can learn more by talking to IT support staff, information system security officers and the NIH Help Desk. FAQs on NIH computer encryption can be found at http://kiwi.cit.nih.gov/pointsec/index.php/FAQ.

Property Risk Mitigation with nVision Property Reports

Did you know that nVision Property Reports can help mitigate your property risks? nVision provides relevant information on laptops and other property that you need to monitor and track. Specifically, the Property Search (Prop-02) report displays detailed property information that can be searched by a large variety of selection criteria.

But before you can view these reports, you must first register for access to nVision Property and it is recommended that you attend a training class.

If you would like to register for nVision Property or attend training, visit the nVision community page at https://my.nih.gov. Select nVision from the My Communities menu.

If you are already registered for nVision Property, access Property Search (Prop-02) and other property reports from the nVision community page at https://my.nih.gov. Select nVision from the My Communities menu and then click on Launch Reports.

If you have questions or need customer support, contact the NIH Help Desk at ITHelpDesk@mail.nih.gov or call (301) 496-4357.
Brazilian Scientist Carvalho To Present 2008 Gorgas Lecture

By Anne Oplinger

Research in the field, lab and clinic by Brazilian scientist Dr. Edgar M. Carvalho is yielding a better understanding of leishmaniasis, a parasitic disease spread by the bite of sandflies. Carvalho will describe his research on the interplay between leishmania parasites and their human hosts at the 2008 Gorgas Memorial Leon Jacobs Lecture, scheduled for Friday, May 30, at 2 p.m. in the first floor conference room, Bldg. 50.

Cutaneous leishmaniasis is sometimes called “year-long sore” because the condition’s characteristic skin ulcers can take that long to heal. Most of the 1.5 million annual cases occur in six countries: Iran, Afghanistan, Syria, Saudi Arabia, Peru and Brazil. Brazil is one of four countries in which the vast majority of cases of visceral leishmaniasis, the most lethal form of the illness, occur. Brazil, too, is the site of many cases of mucosal leishmaniasis, which can result in massive tissue destruction in the nose, mouth and throat.

Most people infected by any of the 20 different species of leishmania parasite mount an effective immune response and gradually rid themselves of the parasite. But about one-quarter of infected people, notes Carvalho, develop cutaneous or mucosal leishmaniasis, despite having immune responses that appear superficially similar to those seen in people who do not develop disease. Carvalho hypothesizes that the host immune response itself—in the form of exaggerated and unregulated inflammation—plays a key role in determining why some infected people develop disease and others do not.

Treating leishmaniasis, especially its mucosal form, is not easy, says Carvalho. Building on the evidence that an excessive immune response spurs the development of mucosal leishmaniasis, he and colleagues conducted a clinical trial in which some trial participants received at least one course of antimony, the standard treatment for the disease, while others received antimony along with a compound called pentoxyfilline, which inhibits an immune molecule that promotes inflammation. The participants who received the pentoxyfilline needed only one course of standard drug treatment and their infections required significantly less time to heal than those in people who received the standard treatment alone.

In addition to studying leishmaniasis, Carvalho has also collaborated with NIAID’s Dr. Franklin Neva in defining immunological and clinical features of people co-infected with human T-cell lymphotropic virus-1 (HTLV-1) and the parasitic roundworm Strongyloides stercoralis. In 2001, Carvalho helped establish an HTLV-1 clinic at the Federal University of Bahia (UFBA) University Hospital. Since then, about 700 HTLV-1-infected individuals have been examined, allowing for characterization of clinical manifestation of the viral infection as well as a better understanding of human and viral factors associated with disease development.

Carvalho is professor of medicine at UFBA and professor of clinical immunology at Bahiana Medical School in Salvador, Brazil. He has been an adjunct professor at Weill Medical College of Cornell University since 1998 and at the University of Iowa since 2007. He received his M.D. and Ph.D. from UFBA Medical School. In recognition of his contributions to the understanding of infectious diseases, Carvalho received Brazil’s Sendas Award in 1993. The author of more than 230 scientific publications in tropical medicine, he was elected to the Brazilian Academy of Science in 2002. In 2005, Brazil’s President Luiz Inacio Lula da Silva admitted Carvalho to the Brazilian Class of Scientific Merit.
munity health center movement. It also profiles
the ongoing action against HIV/AIDS.

So if global health is not a world away, but right
here in our backyard, then how do we respond?
What works and why?

The exhibit profiles some of the people who
know the answers. On opening day, four groups
of high school students attended a program at
Lister Hill Auditorium where they heard NLM
director Dr. Donald Lindberg and Fogarty Inter-
national Center director Dr. Roger Glass talk
about today’s challenges. The students watched
videos and listened to a panel of speakers who
are also featured in the exhibit: Dr. Victoria
Cargill, director of clinical studies and director
of minority research at the NIH Office of AIDS
Research; Dr. Jack Geiger, founding member
of Physicians for Human Rights; and Jeanne
White Ginder, mother of the late Ryan White,
an advocate for people living with HIV/AIDS.

Panelists talked about making a difference
and encouraged audi-
cence members to get
involved.

The panel also fea-
tured young activists
who spoke about rea-
sons they wanted to do
something in the world
of global health and the
impact they’ve made:
Gyawu Mahama, a mem-
ber of George Washing-
ton University’s chapter
of the Student Global
AIDS Campaign; Niko
and Theo Milonopoulos,
brothers and students at Stanford University,
who founded Kidz Voice-LA and Vox Populi to
prevent gun violence; Michael Tees, who co-
-founded the Tulane University chapter of Stu-
dent Physicians for Social Responsibility during
his first year of medical school; and Tanya Wan-
som, an American Medical Student Association
member who has trained future physicians to
educate students about HIV/AIDS.

The audience had questions: “How did you get
started?” “Who inspired you?”

“We were angry about something,” said Tees.
“We had passion about something.”

“We couldn’t stand by while our classmates were
being gunned down,” said Theo Milonopoulos.

“Testing people for HIV in Thailand,” said Wan-
som, gave her new insight into the epidemic.

“When I was 16,” said Mahama, “my mom gave
me the opportunity to go to Ghana, where she’s
from,” and where he witnessed “the scourges of
public health—stagnant water, malaria, the lack
of sanitation that makes cholera such a pugna-
cious issue in the developing world.”

“Don’t forget the true everyday heroes,” said
Wansom, “who speak up when people say
things that aren’t cool, things that are rac-
ist, sexist or something bad about people with
AIDS. People who spoke up for Ryan [White]
when he went to school: all of you can do
things like that...speak up for other people
when they can’t.”

The room was filled with energy by the end
of the session, when all adjourned to the rib-
on-cutting ceremony in NLM’s atrium. Free
to explore the exhibit, young people sought
out panelists, NLM senior staff, as well as NLM
director Lindberg and FIC director Glass.
The gallery in NLM’s atrium is only one exhibit component; there’s also a web version with interviews, videos, moderated comment boards, teaching modules and monthly guest columns. (April’s columnist was Dr. Paul Farmer, founding director of Partners in Health, an international aid organization.)

This is an exhibit that’s tailor-made to get young people involved.

OAR’s Cargill was in a quiet corner of the exhibit when she was approached by a group of teenage girls who paused, hesitating. Finally one of them broke in.

“Excuse me,” she said, “but you were the most amazing speaker I’ve ever heard.” Then the doctor turned to the teenager and they began to speak.

“Against the Odds: Making a Difference in Global Health” is available online at http://apps.nlm.nih.gov/againsttheodds/index.cfm. For tours, inquire at NLMExhibition@mail.nlm.nih.gov or call (301) 594-1947.

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May Is Healthy Vision Month

Each May, the National Eye Institute and the National Eye Health Education Program Partnership sponsor Healthy Vision Month (HVM), a national eye health observance. This May, HVM is dedicated to increasing the use of personal protective eyewear in recreational activities and hazardous situations around the home.

This year’s theme is “Gear Up! There’s more to lose than the game. Use protective eyewear.” The focus is to inform people about the need for children ages 7 to 14 (and all others) to prevent eye injuries by using protective eyewear when playing sports. NEI encourages parents, coaches and teachers to persuade children to use protective eyewear during sports-related activities.

Every 13 minutes, a sports-related eye injury is treated in an emergency room in the United States. The majority of these eye injuries occur in children under the age of 15. Most can be prevented with the use of protective eyewear.

Protective eyewear includes safety glasses and goggles, safety shields and eye guards especially designed to provide the correct protection for a certain activity. Ordinary prescription glasses, contact lenses and sunglasses do not provide adequate protection in eye-hazardous situations. Safety goggles should be worn over them.

NEI invites you to help raise awareness about the importance of using protective eyewear this May. Visit the HVM web site (www.healthyvision2010.org/hvm/) for more information and to download resources you can use to inform parents, coaches, teachers and children about sports-related eye injuries and protective eyewear.

NIDDK Releases New Awareness, Prevention Series

The National Institute of Diabetes and Digestive and Kidney Diseases has produced a new health information series to raise awareness about diabetes, digestive diseases and kidney and urologic diseases among people not yet diagnosed with these illnesses.

The Awareness and Prevention Series—which NIDDK developed for community health fairs and similar events—features 2-page fact sheets about a wide range of health topics including bladder control, celiac disease, foodborne illness, irritable bowel syndrome, preventing diabetes complications, urinary tract infections and many others. Each fact sheet gives readers a snapshot of an illness, highlighting risk factors, symptoms, prevention tips and where to go for more information. All fact sheets are written in English on one side and Spanish on the other.

“The series is designed to encourage readers to ask ‘Could this be me or someone I care for?’” said Kathy Kranzfelder, director of the NIDDK Information Clearinghouses. “Until now, our materials have focused on answering questions among those with diagnosed illnesses. But we have so much to do to bring people in for diagnosis as well. Raising awareness of these illnesses hopefully will help people learn to prevent them or see a doctor if they have symptoms.”

The copyright-free Awareness and Prevention Series publications are available online at www2.niddk.nih.gov/HealthEducation/Awareness+and+Prevention+Series.htm. Fact sheets and booklets with more complete information about these topics and many other related health conditions also are available at www.niddk.nih.gov.
preregistration. NIH’ers could register kids for up to three activities to attend throughout the day. OEODM, along with institute volunteers, prepared more than 2,500 information bags for the children with materials donated from the ICs as mementos of the day’s events.

The activities covered a broad range of science and administrative work being performed at NIH. Some of the most popular ones provided hands-on demonstrations and interactive participation by the children, including such long-standing events as “Fantastic Voyage Through the Department of Laboratory Medicine” sponsored by the Clinical Center; “3-D Facial Images” sponsored by the National Institute of Dental and Craniofacial Research; “Fun with DNA” sponsored by the National Human Genome Research Institute; “Your Amazing Brain” sponsored by the National Institute of Neurological Disorders and Stroke; and “What’s Inside Your PC?,” “Creating a Website” and “Computer & Telephone Systems,” all sponsored by the Center for Information Technology.

New activities for 2008 included a visit from Dr. Edward E. Stonestreet, who conducted an interactive demonstration titled “A 50-Year Medical Practice in the 1800s” on how physicians made their own medicine before there were pharmacies, sponsored by the NIH Federal Credit Union. Another noteworthy visitor was Terence Boylan, the NIH Rocket Boy, who shared his amazing story (see sidebar, p. 9). The National Library of Medicine’s Diversity Council sponsored “Healthy Lifestyles for You and Your Family Expo,” which included several activities such as “Live on Lister Hill Stage: Fun with FOODPLAY,” “Yoga for All Ages” and “Exercise is for Every Body.”

“My favorite [activity] was FOODPLAY because they were acting out plays which I like and it was funny,” said Shannon Blessing, 8, a third grader at Kensington Parkwood Elementary School whose mother, Patricia, is communication director at NIDCD. “I learned how to read a nutrition label and what you should eat.”
This year, OEODM collaborated with members of the NIH Environmental Management System on a series of NIH Earth Day 2008 activities (see sidebar below). NIH’ers and the kids they brought along were able to learn about NIH efforts to promote Earth Day as well as what the adults do at work each day. It didn’t hurt that Earth obliged by providing perfect weather for the occasion.

Take Your Child to Earth Day

Who can resist a warm spring day—especially when it’s cool being green? Thanks to an OEODM/NEMS collaboration on Take Your Child to Work Day, NIH Earth Day was tailor-made for employees to bring the kids. There were Frisbees and face-painting on the Bldg. 1 lawn; forest and stream walks plus displays of indigenous critters; a “Solar Oven Pizza Box” contest; native wildflower planting; green roof demos; giveaways of seedlings, plant seeds and mercury-free thermometers; and recycling collections for bikes, eyeglasses and cell phones.

You could slow-ride your vehicle (or accompany your parental unit) through the Bldg. 1 driveway to have your tires checked and their pressure adjusted. The lesson for kids—and grown-ups too—is that under-inflated tires reduce your miles per gallon. Then you could rub shoulders with the Mad Hatter, NIH’s own anti-mercury crusader, as well as Ben Franklin, whose energy-smart inventions are still in use.

From Mischief to Method

‘Rocket Boy’ Boylan’s Talk a Blast

Though 51 years have passed since his brief handwritten plea for funding won a $10 grant from NIH, Terence Boylan brought all of the excitement of being a rambunctious, free-spirited kid to his hour-long presentation in Masur Auditorium as part of Take Your Child to Work Day.

Like many youngsters who grew up in the 1950’s, Boylan enjoyed playing with fireworks and was delighted to find that a chemistry set that his parents had bought for him when he was 8 included ingredients that, when mixed, could make fuel for bottle rockets.

“My friend Bruce and I liked to take fireworks apart to see how they worked. We’d slit them open, empty out a pile of powder, then light it,” he recounted. Before long, they were packing their own fireworks using chemicals scrounged from their fathers’ laboratories, since both of their dads were physicians. Bruce’s interest in astronomy prompted the boys to consider using those chemicals for rocket propulsion to “explore outer space.”

Boylan’s father was an NIH grantee, and when young Terence and his friend needed more money to fund their burgeoning rocket-building enterprise, Terence innocently applied to NIH, expecting no response.

“I mailed the letter and forgot about it. Two or three weeks later, reporters from the Buffalo Evening News and Courier-Express called, asking about the NIH grant,” Boylan recalled. “My dad had no idea that I had written to NIH. But I could tell he was pleased about it.”

Up to this point, the boys had been honing what had started out as mischief into scientific method. Because of the newspaper article, “all the kids at school knew we were building a rocketship,” Boylan said, so there was peer pressure to succeed. Like alchemists, they transmuted the brief thrill of explosions into a series of some 40-50 trials that resulted in a spectacular launch.

“On the day we launched the big rocket, at first we were afraid it would just fizzle on the launch platform,” Boylan said. “Then, suddenly, it whooshed out of sight. We were flabbergasted. We waited around for it to land for about 20 minutes, but it never came back. Two hours later, we got a phone call. Someone had found our rocket miles away, out toward the town of Clarence.”

The payload had included a mouse, who survived the journey thanks to a parachute rig in the nose cone (“He was fine—he seemed quite happy, in fact.”). The boys had also included their address and phone number along with the mouse.

Though Boylan later went on to a career as a musician—he recorded several...
Perhaps the day’s brightest star was *Morinda oleifera* (also known as the horseradish tree or drumstick tree), the third annual “IT,” with 300 known medicinal uses. Two of the contest entrants who correctly identified “IT” were local high school students. It’s so cool being green.

To join the NIH Greenserve, visit https://list.nih.gov/archives/greenserve-l.html.

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**Top, l:** Lynn Mueller *(r)*, chief of NIH grounds maintenance and landscaping, gets help planting flowers from a couple of youngsters, including Donya Young *(c)*, grandson of ORF’s Valerie Nottingham. The plants—several varieties of native wild flowers along the edge of the creek off Wilson Drive—were donated by ORF’s Division of Environmental Protection.

**Top, r:** Mohamed Kamara *(r)*, laboratory technician in the Clinical Center’s department of laboratory medicine, and a youthful crew perform procedures on a simulated limb.

**Above:** Jane Spencer of NIH’s Office of Human Resources gets a world geography/map-drawing lesson from Paris Brady, son of Dr. Tom Brady of NIDA.

**Right:** Ellen Condon of NIMH and the NIH Bicycle Commuter Club gives a ride in a Bakfiet—a Dutch cargo bike—to Christina Hernandez, daughter of Carolyn Harrison, NINDS program specialist at NIH’s MRI Research Facility.

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On hand for “IT” awards were (from l) Division of Environmental Protection Director Kenny Floyd; Capt. Ed Rau; cowinner Dr. Lakshminarayanan Iyer, NLM; NIH Deputy Director for Management Colleen Barros; cowinner Dr. Vivek Anantharaman, NLM; R&W President Randy Schools; cowinner Kim Westervelt, OD Office of Human Resources. At right, NIGMS gave students the opportunity to “research” Drosophila mutants.
Boylan and his friend discovered that shipping tubes made of compressed paper made strong, lightweight rocket bodies.

**ROCKET BOY, CONTINUED FROM PAGE 9**

albums, including one with the founders of Steely Dan, and a few with the Eagles and Linda Ronstadt singing back-up—his talk to the NIH youngsters vividly illustrated the scientific approach of hypothesis, trial and error. He and Bruce learned, over the course of two summers, how to cobble rockets together using tubes of compressed paper (lightweight and strong, the tubes had been used to ship delicate glassware to Boylan’s father’s laboratory). They used whatever they could find—Erector set nuts and bolts, hardware store plumbing parts and dry clay for nozzles, stove-vent metal sheathing to line the tubes, plastic funnel nose cones and balsa wood fins.

The launch pad consisted of a metal jack stand found in the garage, and a guidance system fashioned from pea shooters mounted on the rocket’s skin, then threaded over a tall curtain rod. When Boylan’s parents forbade the use of matches as the rockets got bigger, the boys used an electric train set’s transformer to ignite, remotely, a magnesium-wire fuse.

Perhaps inadvertently, Boylan’s message was that science is a blast and that attitude leads to altitude—the boys’ inventiveness was equal to each obstacle they encountered.

“I’ll always remember those long summer days with my friend Bruce, when it seemed like we had nothing to do but build rockets to the moon,” Boylan concluded. For a more detailed account of his rocket-building exploits, read “Shining Lady in the Sky” at www.csr.nih.gov/history, or see Boylan’s Apr. 24 talk in the archive at http://video-cast.nih.gov.—Rich McManus

**NIH, Japanese Scientists Create Global Alliance for Pharmacogenomics**

The directors of three NIH institutes and the leader of a Japanese science center have joined to create a Global Alliance for Pharmacogenomics. The effort, detailed in a letter of intent, aims to identify genetic factors that contribute to individual drug responses, including rare and dangerous side effects. The results will help pave the way for personalized medicine.

U.S. scientists joining the alliance are members of the NIH Pharmacogenetics Research Network, a consortium of research groups that study how genetic factors influence the way drugs work in and are handled by the body.

Japanese scientists in the alliance represent the newly created Center for Genomic Medicine, a component of the RIKEN Yokohama Institute that conducts high-throughput analyses of human genes involved in diseases and drug responses.

Signers of the agreement include NIGMS director Dr. Jeremy Berg, NHLBI director Dr. Elizabeth Nabel, NCI director Dr. John Niederhuber and Dr. Yusuke Nakamura, director of the RIKEN Center for Genomic Medicine.

“We expect this international agreement to speed scientific discovery and the translation of results into improved treatments for cancer, heart disease and other serious conditions,” said NIH director Dr. Elias Zerhouni. “Ultimately, physicians worldwide will be able to tailor the treatment of each patient—one of the great frontiers of health care today.”

Initial projects will focus on:

- Understanding genetic factors that influence the effectiveness of breast cancer treatments (aromatase inhibitors)
- Determining the optimal length of treatment for two drugs used to treat early stage breast cancer (cyclophosphamide and either doxorubicin or paclitaxel)
- Discovering new genetic factors linked to serious side effects from certain pancreatic cancer drugs (gemcitabine and bevacizumab)
- Exploring how genes contribute to drug-induced long QT syndrome, an irregular heart rhythm that can cause sudden cardiac arrest
- Working with the International Warfarin Consortium to tailor initial doses of the anti-clotting drug warfarin based on the genetic profiles of patients
- Determining the optimal length of treatment for two drugs used to treat early stage breast cancer (cyclophosphamide and either doxorubicin or paclitaxel)
- Discovering new genetic factors linked to serious side effects from certain pancreatic cancer drugs (gemcitabine and bevacizumab)
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- Working with the International Warfarin Consortium to tailor initial doses of the anti-clotting drug warfarin based on the genetic profiles of patients

The letter of intent is available at www.nigms.nih.gov/Initiatives/PGRN/GAP/. This site also includes acknowledgements of the research centers that provided DNA samples essential to perform the work.—Alisa Zapp Machalek

**Staff Scientist/Staff Clinician Organization To Host Town Meeting**

The NIH Staff Scientist/Staff Clinician (SSSC) Organization will hold its first town hall meeting on Friday, May 30 from 9:30 to 11:30 a.m. in Lipsett Amphitheater, Bldg. 10. Conceived in 2004, SSSC provides representation for the more than 1,000 staff scientists and staff clinicians dispersed across the 22 institutes and centers that have intramural research programs. The meeting is open to all members of the NIH community. Videoconferencing will be provided to Frederick (Bldg. 549 Boardrm.), Baltimore (BRC, Rm. 03C219), Rocky Mountain Labs (RML Bldg. 11 Conf. Rm.) and Research Triangle Park (Exec. Conf. Rm.).

The meeting will begin with remarks by Dr. Michael Gottesman, NIH deputy director for intramural research. The SSSC Organization Council of Representatives, which consists of 1-2 members from each IC, will be introduced. A Q&A session follows. The goal is to identify key issues facing the group and to co-develop creative ways to address them. Questions can be submitted in advance at NIH_SSSC_REPS-l@list.nih.gov. To find out more about the organization visit www.nih.gov/sigs/sssc.
Dr. Christine A. Bachrach has been appointed acting NIH associate director for behavioral and social sciences research and acting director of the Office of Behavioral and Social Sciences Research. She began serving in these posts on Apr. 7, following Dr. David Abrams’ departure.

Bachrach has worked in the Demographic and Behavioral Sciences Branch in NICHD’s Center for Population Research since 1988, first as a statistician/demographer and since June 1992 as chief of the branch. She came to NIH from CDC’s National Center for Health Statistics. She was a long-time member of the NIH behavioral and social sciences research coordinating committee and a founder and cochair of the NICHD Consortium for Behavioral and Social Sciences Research. She also oversaw the National Longitudinal Study of Adolescent Health (Add Health) and cochaired the 2000 NIH conference “Toward Higher Levels of Analysis: Progress and Promise in Research on Social and Cultural Dimensions of Health” and the social environment working group of the National Children’s Study.

Bachrach received her Ph.D. in population dynamics from Johns Hopkins University School of Hygiene and Public Health. Her own research has examined a variety of topics related to the family, including fertility, contraceptive use, sexual behavior, cohabitation and adoption.

Porter credits this quick action with the connections she’s made during her career. “I’ve developed a lot of contacts at NIH, which has been a real boon for me,” she said. “I’ve always said, ‘I may not know the answers to everything, but I know who to ask.’” Porter, who most recently served as director of the scientific systems core in NIDCR’s intramural program, retired in February after more than 36 years of government service.

“I’m not necessarily going to miss the work, but I am going to miss the people,” she said. “I’ve been at NIDCR my entire career—I grew up here. I have a lot of fond memories and a lot of friends, not just coworkers.”

Porter was recruited to the institute in 1971 by Dr. Bruce Chassy, a scientist at the (then) NIDR who was teaching a class at American University. Porter had just received her M.S. in chemistry at AU, where she had also done her undergraduate work.

Shortly after arriving at the institute, her supervisor urged her to get a doctorate and she earned a Ph.D. in chemistry from the University of Maryland. Her early work focused on developmental biology of the cellular slime mold Dictyostelium discoidium. She and her colleagues also studied enzyme regulation of sugar metabolism in two oral microorganisms: Streptococcus mutans and Lactobacillus casei.

But by the late 1980s, Porter decided the computer world might be a better fit. She recounts that she used computers since first arriving at the institute, including a Honeywell mainframe that, she said, “took up a whole wall of the computer room.” She also remembers using a terminal to talk to a DEC 10 (a Digital Equipment Corp. mainframe computer) and running an early gene sequence analysis program.

“Anyway, I found out I liked playing with computers a whole lot more than I liked bench work,” said Porter. “I discovered if I poked around I could figure things out and solve problems.”

So she joined the computer section in 1988. Among her first assignments was maintaining and supporting the Genetic Computer Group (GCG) software on the VAX 750. She also helped scientists navigate the GCG software and kept software up to date on “the few” Macintosh-pluses then in the computer lab.
In 1990, Porter and Sheila Taylor worked with CIT to get Ethernet networking technology into Bldg. 30, which had no direct connection to the outside world. Once CIT provided a link to the NIH network, Bldg. 30's network could be connected world-wide. "When we asked staff if they wanted a connection to the Ethernet for when they had a desktop computer, many responded 'Why would I want a desktop computer?' Of course, as the years passed, everyone wanted access to the Ethernet," she said laughing, "and now, no one can figure out how we lived without it."

Over the past decade, Porter began using graphical user interface software to write web applications for labs and facilities at NIDCR. Most recently, she implemented the CIT redesign of the Bldg. 30 network and served on NIH-level committees charged with overseeing numerous IT issues.

"When people asked what I did for a living, I would tell them 'I play with computers,'" she said. "In fact, I can honestly say that for the most part, my job was fun."

Porter’s retirement plans include traveling, volunteering for the National Museum of Women in the Arts, gardening and exercise. She will also revisit oil painting, which she says deserve long stretches of uninterrupted time.

Retired NINDS Scientist FitzHugh Is Mourned
By Shannon E. Garnett

Dr. Richard FitzHugh, a retired biophysicist in the NINDS Laboratory of Biophysics, died on Nov. 21, 2007, of pneumonia. He was 85.

FitzHugh, who retired in 1985 with 29 years of service, began his NINDS career in 1956 as a research physicist.

Born in Concord, Mass., FitzHugh attended Phillips Academy in nearby Andover and graduated in 1948 from the University of Colorado in Boulder, earning his bachelor’s degree in biology. He received his doctorate in biophysics from Johns Hopkins University in 1953.

During World War II, FitzHugh worked for 3 years on the production of B-29 airplanes at Boeing Aircraft Co. in Wichita, Kan. Between 1953 and 1955, he was an instructor in physiological optics at the Wilmer Institute at Johns Hopkins Hospital. In 1956, he joined the Laboratory of Biophysics, which was created by Dr. Kenneth Cole, a pioneer of electrophysiology.

FitzHugh is well-known for his pioneering work in neuroscience. He proposed the FitzHugh-Nagumo equation/model, a simplified version of the Hodgkin-Huxley model of nerve excitation that is fundamental in neuroscience.

“Dick came up with a much simplified version which can explain essential features of experimental observations,” said Dr. Kuni Iwasa, chief of the NIDCD biophysics section and a former colleague of FitzHugh’s. “This led to the mathematical basis of how neurons respond to electrical stimuli as well as how they spontaneously fire. This understanding is essential for quantitative description of neurons’ behavior.”

FitzHugh’s mathematical model turned out to be identical to one for electrical circuits proposed by Dr. Jin-Ichi Nagumo, a professor of electrical engineering at Tokyo University. So, the model became known as the FitzHugh-Nagumo model.

Birdwatching, nature photography and hiking were just a few of FitzHugh’s many interests. He was also a potter and owned his own kiln.

“Dick was an extremely pleasant person to talk to and to work with,” said Dr. Gerald Ehrenstein, a retired scientist from the NINDS Laboratory of Biophysics and former colleague of FitzHugh’s. “He projected a sort of antisocial manner by usually working alone and by putting up a sign on his office door saying ‘No man is an island, but some of us can be peninsulas.’ In reality, he responded warmly to social and professional requests. He was generally regarded as NIH’s premier computer expert as well as a leading mathematician, and he freely offered help to other scientists.”

In his later years, FitzHugh continued to program his personal computer. He also wrote an autobiography.

He is survived by his wife Elisabeth, two sons Thomas and William, and two grandchildren Reid and Emma.
Hints to Why Social Status Affects Health

NIMH human imaging studies have for the first time identified brain circuitry associated with social status. Researchers found that different brain areas are activated when a person moves up or down in a pecking order, or if they simply view perceived social superiors or inferiors. Previous studies have shown that social status strongly predicts health, but little is known about how the human brain translates social factors into a health risk. The new study used functional magnetic resonance imaging to study participants’ brains while they played an interactive computer game, part of an artificial social hierarchy the researchers created. Among other findings, they learned that the area of the brain that signals an event’s importance responded to the rise or fall in rank as much as it did to a monetary award—confirming the high value the brain puts on social status, and that processing hierarchical information seems to be “hard-wired.” The findings were published in the Apr. 24 issue of Neuron.

Computers and Drug Abuse

According to a new study funded by NIDA, patients receiving treatment that combined use of a computer learning program with traditional counseling showed a longer period of abstinence than patients who received counseling alone. The study, whose results were published May 1 in the American Journal of Psychiatry, was the first randomized controlled trial of its kind. The findings mean drug abuse treatment could integrate the use of computers more often, which would be helpful in tailoring treatment to the specific needs of an individual and in getting treatment into community-based care settings where resources can be limited. The research team plans to conduct further studies to determine if the computer program could be used alone for treatment, instead of serving as an addition to traditional therapy.

Mapping Large-Scale Variation Across the Genome

A team of researchers funded in part by NHGRI has produced the first sequence-based map of large-scale variation across the human genome—a work that provides a starting point for examining how such DNA variation contributes to human health and disease. Unlike other recently created works, like the HapMap, that cataloged the patterns of small-scale variations in the genome, the new map, published Apr. 30 in Nature, focuses on larger scale differences that account for a great deal of the common genetic variation among individuals and between populations. Researchers said it’s valuable to gain an understanding of how changes in the human genome, both small and large, contribute to individual differences in susceptibility to diseases. The map uncovered 525 new regions of large-scale structural variation in the human genome and provides a more detailed look at the locations of nearly 1,700 previously identified structural variations.

Improving Epilepsy Treatment

Approximately 30 percent of patients with epilepsy do not respond to antiepileptic medications and now we may know why. A new NIEHS study, published in the May issue of Molecular Pharmacology, used a rodent model of epilepsy and found that one of the body’s neurotransmitters released during seizure, glutamate, turns on a signaling pathway that increases production of a protein that could reduce medication entry into the brain. Researchers said that because the findings provide insight into a mechanism that underlies drug resistance in epilepsy, the work could point to ways to create more effective treatments for it and other central nervous system disorders.

New Route to Fighting HIV

A research group supported by NHGRI and NIAID has revealed a new route for attacking the human immunodeficiency virus (HIV) that could offer a way to circumvent problems with drug resistance. In their findings, published online Apr. 29 in the Proceedings of the National Academy of Sciences, the researchers said they have blocked HIV infection in a test tube by inactivating a human protein expressed in key immune cells. Most drugs used to fight HIV target the virus’s own proteins, but because HIV has a high rate of mutation the viral targets change quickly and can lead to the emergence of drug-resistant viral strains. In the new study, researchers instead targeted a protein of human cells, which are far less prone to mutations. They said the finding is an exciting model for deriving potential new therapies for HIV—compiled by Sarah Schmelling.
NIEHS Marks International Women’s Day

NIEHS recently celebrated International Women’s Day, an event highlighting the scientific and personal achievements of foreign-born women scientists working in NIH labs in Research Triangle Park, N.C. Four scientists—Dr. Maria Kadiiska, Dr. Harriet Kinyamu, Dr. Xiaoling Li and Dr. Ivana Yang—gave 20-minute talks that conveyed their love of science and discussed the challenges they’ve overcome as they have succeeded in their fields. A panel discussion and networking reception followed the presentations.

The lead organizer of Women’s History Month events at the institute, NIEHS associate director Dr. Sharon Hrynkow, welcomed the audience and discussed the background and purpose of the celebration. “International Women’s Day has been recognized globally as a time to reflect on progress, to call for change and to celebrate acts of courage and determination of ordinary women who have made extraordinary achievements,” she said.

The panelists, like many other foreign-born scientists, had to overcome a host of roadblocks on the path to success. But their hard work, strength and optimism—traits common to many women trailblazers—carried them through. Obstacles included career change in a new country for a family with growing children; genocide, war and lack of ability to communicate with loved ones still at home; the hurdle of learning English as an adult; and visa issues that nearly led to deportation.

Each of the women had two things in common: a passion for scientific investigation that inspired them to make major sacrifices for their careers and an uncanny knack for recognizing the opportunity that lay hidden in the obstacles they faced. Today, with their greatest non-scientific challenges behind them, Kadiiska, Kinyamu and Yang are staff scientists and Li is a principal investigator and head of her research group.—Robin Arnette
Girl Scouts, Nursing Students Join NINDS Stroke Education Effort
By Shannon E. Garnett

Girl Scout Troop 750 in Jacksonville, Fla., recently partnered with nursing students from the University of North Florida to implement the “Know Stroke in the Community” program.

The program—part of NINDS’s “Know Stroke. Know the Signs. Act in Time.” campaign—was designed to educate the public about the risk factors, signs and symptoms of stroke, as well as early activation of the emergency medical system to access care. The program identifies and trains “stroke champions” in each community. The champions then present stroke information to the community via various events.

The Jacksonville Know Stroke program was developed by NINDS, the Neuroscience Institute at Shands Jacksonville Medical Center, the Centers for Disease Control and Prevention and the Duval County health department. Jacksonville was one of the first cities to launch the Know Stroke community program.

As part of their Community Nursing Course—which made up the last semester of their training program—the nursing students were tasked to find community-based groups that would be willing to become stroke champions. The students would help the groups get started using the program and then mentor them as they delivered the program to the community.

The Girl Scouts were looking for a community project to help them finish their Gold Award project. The award—equivalent to the Boy Scouts’ Eagle Scout level—is the highest award a Girl Scout age 14-18 can earn. Five girls—ranging in age from 15 to 17—were trained to become champions. Over 2 months, they presented the Know Stroke program 20 times (at separate events and dates) and were able to reach approximately 400 people.

“This outstanding effort by the Girl Scouts in Jacksonville is exactly what we had in mind when we developed the ‘Know Stroke in the Community’ program,” said Marian Emr, director of the NINDS Office of Communications and Public Liaison. “By becoming champions, and teaching people about the importance of recognizing stroke symptoms and seeking medical treatment promptly, these young women are contributing to the health of their local community.”

Top:
Girl Scout Troop 750 in Jacksonville, Fla., worked with members of the Stroke Program at the Neuroscience Institute at Shands Jacksonville Medical Center to promote NINDS’s “Know Stroke in the Community” program.

Bottom:
The Girl Scouts also worked with University of North Florida nursing students to promote the stroke campaign, which was designed to educate the public about signs and symptoms of stroke as well as early activation of the emergency medical system to access care. Here the scouts and two UNF nurses gather for a photo with members of the Shands Medical Center EMT unit.