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The Second Best Thing About Payday

nih record

ABOVE • *You would smile too if you were about to foil the flu. See story on p. 8.*

features

departments

'Sweep' Under Way for Select Agents, Toxins

By Rich McManus

Prompted by the Food and Drug Administration's July 1 discovery of vials of smallpox virus in Bldg. 29A, NIH has embarked on Operation Clean Sweep, a two-part, top-to-bottom inventory of all NIH laboratories that starts first with all institutes and centers, followed by an audit conducted by specialists in occupational safety and health.

After discovery of 12 boxes containing 327 vials of infectious agents such as smallpox, dengue, influenza, Q fever and rickettsia, NIH director Dr. Francis Collins informed employees, "We have developed a plan of action for the conduct of this search. It requires investigators to examine all freezers, refrigerators, cold rooms, storage shelves and cabinets, as well as all other areas of storage such as offices associated with laboratories."

The IC portion of the sweep has two parts, said Jeff Potts, NIH biorisk manager in the Division of Occupational Health and Safety (DOHS). "In phase 1, research staff at all NIH facilities are responsible for going through their areas to search for unregistered select agents [such as Ebola, anthrax and H5N1 bird flu]. They must also inventory all human pathogenic material that is handled at BSL [biosafety level] 2 or higher, human blood and body fluids and any toxins." This is scheduled to be done by Sept. 30.

SEE **SWEEP**, PAGE 6

Exercise was a theme for the Aug. 27 event.

A Healthier You

NIH'ers Get a Workout, Useful Advice During Safety, Health and Wellness Day

By Dana Talesnik

Life's a series of choices. We can choose to adopt healthier habits and protect ourselves from common hazards. Along the way, it never hurts to learn some tips that might steer us on a healthier, safer path.

Improving employee health and safety both on and off the job was at the heart of the 3rd

SEE **SAFETY**, PAGE 4

Dr. Eric Schadt

Schadt To Give Mahoney Lecture, Oct. 1

Dr. Eric Schadt will discuss "A Multiscale Biology Approach for Dissecting the Complex Processes Underlying Aging and Aging-Related Phenotypes" Oct. 1 at 3 p.m. in Masur Auditorium, Bldg. 10. His presentation is the annual Florence Mahoney Lecture on Aging, sponsored by NIA, and part of the NIH Director's Wednesday Afternoon Lecture Series.

Schadt is an expert on the generation and integration of very large-scale sequence variation, molecular profiling and clinical data in disease populations for constructing molecular networks that define disease states and link molecular biology to physiology. He has called for a shift in molecular biology toward a net-

SEE **SCHADT**, PAGE 8

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NIH...Turning Discovery Into Health

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briefs

Career Development Open House, Oct. 8

All NIH employees are invited to attend the "Passport to Learning" career development open house at the NIH Training Center. The event is free and will be held Wednesday, Oct. 8 from 10 a.m. to 3 p.m. at 6705 Rockledge Dr. (Rockledge 1), Suite 4000.

The day includes:

- Mini Training Sessions on Critical Thinking and Decision Making Skills, Negotiation Skills, Conflict Resolution and Retirement Planning
- An Overview of NIH Leadership Development Programs
- Professional Development Opportunities
- The Future of Learning: Technology in the Classroom

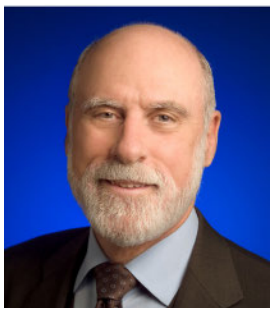
For more information and to RSVP, visit http://trainingcenter.nih.gov/news.html.

APAO Solicits Awards Nominations

The NIH Asian & Pacific Islander American Organization (APAO) will continue its tradition of honoring employees in the NIH Asian Pacific American community for their excellence. Nominations are solicited for three categories: Scientific Achievement Award—for scientists/researchers who have made significant accomplishments in biomedical research; Leadership Excellence Award—for non-scientists who exemplify leadership excellence by example, mentorship and empowerment of Asian and Pacific Americans to promote diversity and support the overall mission of NIH; Kuan-Teh Jeang Distinguished Service Award—to recognize an APAO member who has made an outstanding contribution or demonstrated continual high quality service to the community. Nominees must work or have previously worked (within the past year) at NIH. Awardees will be honored at the APAO holiday luncheon on Dec. 9 in Wilson Hall, Bldg. 1.

Submit a 1-page narrative/statement to support why you think an individual deserves recognition and include a CV of the nominee. A review committee composed of APAO members and non-members representing several ICs and former award recipients will evaluate all nominations. Submit your nominations electronically no later than COB on Oct. 27 to Dr. Shioko Kimura at kimuras@mail.nih.gov. For more details, you may ask for the 2-page award nomination manual.

NLM To Host HHS Next-Generation Internet Symposium, Oct. 15


Vint Cerf

On Oct. 15, NLM will host an all-day symposium for leaders from NIH and all of HHS to learn about the significance of the next-generation Internet (IPv6) and its impact on the programs and mission of HHS. The event, to be held in Lister Hill Auditorium, Bldg. 38A, will be videocast for those who cannot attend in person. Watch for registration information and the agenda in an upcoming global email.

Vint Cerf, the legendary father of the Internet, will serve as keynote speaker. The event will also feature experts from Internet registries/organizations, Internet service providers, cellular telecom providers, major IT product vendors and in-house government experts who will share their insight, best practices and lessons learned in the implementation of IPv6.

The event would be a great opportunity to learn:

- Why we should be moving to IPv6 now
- What is the level of maturity of IPv6 across the Internet
- How best to implement IPv6 successfully in our organization.

'After You, M'Deer'

A deer and an NIH staffer surprised each other on the staircase rising from the Bldg. 21 "pit" to Bldg. 1 recently. The deer, accustomed to eating acorns on the lawn of Bldg. 1, and an NIH commuter found themselves with a decision to make about who got to the stairs first and thus had right of way. The situation resolved amicably.

PHOTO: LYDIA POLIMENI

Microbiologist Blaser To Give NIAID Kinyoun Lecture

PHOTO: CARL GLENN

Dr. Martin J. Blaser will deliver the 2014 Joseph J. Kinyoun Memorial Lecture on Tuesday, Oct. 7 at 3 p.m. in Lipsett Amphitheater, Bldg. 10. Blaser will discuss how the human microbiome influences metabolism, immunity and disease early in life.

The gastrointestinal tract contains a dense and complex microbial environment where bacterial and human cells coexist and affect the equilibrium and health of our bodies. This environment forms early in life; the way in which the assembly occurs influences the body's metabolism and immune system development. Altering the microbiome during this important period of formation (with antibiotics, for example) may have substantial consequences on the risk of diseases and conditions such as obesity and diabetes.

Blaser is the Muriel and George Singer professor of translational medicine, professor of microbiology and director of the human microbiome program at New York University Langone Medical Center. He served as chair of the department of medicine at NYU from 2000 to 2012.

Blaser is a physician and microbiologist whose work during the past 30 years has focused on understanding the interactions of resident bacteria with their human hosts. He recently published *Missing Microbes: How the Overuse of Antibiotics Is Fueling Our Modern Plagues*. Blaser has advised and mentored numerous students and postdocs and been actively involved in many scientific and professional organizations. He has served as president of the Infectious Diseases Society of America, chair of the NCI board of scientific counselors and chair of the advisory board for clinical research at NIH. He is a member of the Institute of Medicine and the American Academy of Arts and Sciences.

The Kinyoun Lecture series, established in 1979, honors Dr. Joseph J. Kinyoun, who in 1887 founded the Laboratory of Hygiene, the forerunner of NIH, and launched a new era of scientific study of infectious diseases.

Office of Equity, Diversity and Inclusion Launches New Web Site

NIH's EEO and anti-discrimination office has changed both its name and its web presence recently. The new Office of Equity, Diversity and Inclusion (EDI) replaces what had been known as the Office of Equal Opportunity and Diversity Management. Debra Chew, who directs EDI, launched the change with a concept she calls "EDI 365."

"EDI 365 is about each and every leader at the NIH thinking about how their contributions impact the success in diversity and inclusion each and every day of the year," she said. "It is not just something we do during Black History Month or Women's History Month, but something that we have to operationalize as a part of our overall leadership strategy and our business model."

Over the past 2 years, the office gathered feedback from the NIH community to strengthen NIH's diversity and inclusion efforts. After numerous listening sessions, consultations with senior leadership and solicitations for input from employees, "we reorganized our services and rebranded our image to align with customer needs," Chew said. "We understood early on that EDI needed to reconnect with our customers and position the right services in front of them, in an accessible way, to enhance the work they do, every single day of the year."

"We're not only going to plan for the commemorative months," said Kendrick Gibbs, director of guidance, education and marketing at EDI. "We're also really focusing on what we can do every single day to change mindsets, change culture and to assist [NIH] programs."

The goal is for each employee to feel connected to the agency. EDI's new mission statement is: We cultivate a culture of inclusion where diverse talent is leveraged to advance health discovery. Its new vision statement is: Making NIH the premier place for diverse talent to work and discover.

To learn about innovations at EDI, visit http://edi.nih.gov/.

NINR director Dr. Patricia Grady speaks about resiliency and collaboration at the LSU Health Sciences Center commencement.

PHOTO: LIFETOUCH

Grady Addresses LSU Commencement

NINR director Dr. Patricia Grady recently delivered the commencement address for the Louisiana State University Health Sciences Center New Orleans. The commencement included nearly 900 students from 6 different schools: allied health professions, nursing, public health, graduate studies, dentistry and medicine.

Grady discussed how the LSU community exhibits resilience in the face of adversity, as evidenced during Hurricane Katrina and the Deepwater Horizon oil spill. She said having resiliency is a pivotal attribute to providing better health care and a quality that will serve students well in their future careers.

Grady also commended the schools for their cross-disciplinary collaboration, which she noted is the cornerstone of providing coordinated care in a health care environment that is increasingly complex. "[I urge you] to recognize that your training and future experiences will instill each of you with a unique body of knowledge that you will share with your colleagues from other disciplines so that, together, we may provide the best possible care to those seeking treatment," Grady said.

SAFETY

CONTINUED FROM PAGE 1

***Above, from l**:*
Attendees learn about posture and tips and tools for maintaining a healthy back.

Members of the NIH Judo Club offer a demonstration of their discipline.

***Below**:*
Eva Chen (l), senior consultant at the NIH Employee Assistance Program, welcomes visitors to her table.

PHOTOS: ERNIE BRANSON

annual Safety, Health and Wellness Day held Aug. 27 in Natcher Bldg. NIH staff enjoyed a range of activities organized by the institutes and centers and dozens of outside vendors and even learned a few things.

Outside, on the lawn, some stretched out for a yoga class while others learned safety tips for bicycling on busy roads. Inside, staff sweated to Zumba, kickboxing and other fitness classes; some took fitness tests and got pointers on how to maintain or improve their fitness levels. Some lucky folks got chair massages offered by a local chiropractic clinic.

"The most important thing you should take away from [today] is that the services and information provided are readily available for NIH employees," said Chris Gaines, program manager of wellness and retail services at the Office of Research Services' Division of Amenities and Transportation Services. "There is a wide range of health and wellness activities at NIH that are right at your fingertips for you to take advantage of to promote better health and wellness outcomes."

Ever consider getting CPR-certified? NIH offers training free for employees. Just gather 10 colleagues. An instructor from ORS's Division of Occupational Health and Safety will conduct CPR/AED training for the group right at your office. DOHS offers training for health care providers and lay responders. The session takes a couple of hours, after which you'll be certified for 2 years. If interested, visit www.ors.od.nih.gov/sr/dohs/HealthAndSafety/aed.

Advice on safety was not limited to the workplace. "A lot of information we have, you can use at home, such as ladder safety, electrical safety, identifying mold," said Brett Beall, a compliance assistance specialist with the Department of Labor's Occupational Safety and Health Administration. He said OSHA recently launched a smartphone app that calculates the heat index to help protect people working outside on hot days. "Occupational safety can apply to everyday life. We're trying to make a safety culture," he said.

Did you know that medicine can look and taste like candy, while household cleaners or other chemicals can look like juice or other beverages? Help prevent accidental poisoning by keeping items in original packaging, reading labels and keeping medicines out of children's reach.

NIH's Environmental Management System staff shared information about proper disposal of chemical waste. Many unused chemicals can be recycled or used for energy. Labs purchase chemicals by the case, even if the lab just needs a pint, said NIH industrial chemist Crispin Hernandez. He facilitates chemical and reagent exchange for the Free Stuff program (https://stuff.nih.gov), where you can post and exchange items, including unopened chemicals. Making environmentally friendly choices has paid off—Hernandez said his chemical surplus and solvent recovery program has saved NIH about $100,000 from last April to December, and the program is growing.

Staff also heard reminders about personal safety. "The biggest thing is to be aware of your surroundings," said Cpl. John Coe, a 10-year veteran of the NIH Police. "We live in an electronic age with headphones, texting...It's a bad combination when someone is walking and another person is driving [and either or both people are distracted]. Recognize what's around you." That goes for any suspected problem. "Some people are unwilling to call the police when they see suspicious behavior," Coe said. "If you see a suspicious person, package or an unusual situation, don't hesitate to call NIH Police."

Throughout the day, fitness activities kept staff on their toes while others watched dance

An immersive virtual environment headset was available for testing.

and martial arts demonstrations in the auditorium. An instructor with NIH's Judo Club likened judo to mental chess in that you need to know your opponent. While some train for competition, he said, most participate for the exercise and the tradition.

"Increased exercise, physical activity and a healthier diet can contribute to improved overall health," said Gaines. "The most important thing is to try and adopt these healthy activities into your daily routine."

The event was sponsored by ORS, Office of Research Facilities, NIH occupational safety and health committee, IC safety and health chairpersons committee, laboratory sustainability group and NHGRI.

Learn more about employee services—clubs and organizations, fitness and more—through the R&W: www.fedesp.com/nih/.

McGowan Honored by Women's Group

Dr. Joan McGowan (l), director of the NIAMS Division of Musculoskeletal Diseases, was recently honored by the University of Connecticut School of Medicine's Group on Women in Medicine and Science (GWIMS). The group is part of a national effort, initiated by the American Association of Medical Colleges, to facilitate the advancement of women physicians and scientists by focusing on such issues as gender equity, recruitment and retention and career advancement. McGowan was recognized for her "excellent service in academic inspiration and guidance" and for "her exemplary service and dedication in supporting biomedical research." The award was presented by GWIMS chair Dr. Marja M. Hurley (r) during the group's 2014 annual symposium.

McClain To Give Keller Lecture, Oct. 14

Dr. Craig McClain will deliver the 2014 Mark Keller Honorary Lecture on Tuesday, Oct. 14 at 1:30 p.m. in Masur Auditorium, Bldg. 10. The title of his talk is "Nutrition, Gut Barrier Function and Liver Disease." McClain is an internationally distinguished clinician and scientist in the fields of gastroenterology, alcohol abuse, nutrition, cytokine research and hepatic drug metabolism.

Dr. Craig McClain

McClain is professor of medicine and professor of pharmacology and toxicology at the University of Louisville, where he also holds several research and administrative leadership positions. He has made many contributions to the alcohol research field. In an early study, he described the deleterious interactions in the liver between alcohol and acetaminophen. In another landmark study, he described dysregulated cytokines in alcoholic hepatitis. Over time, McClain's work has increasingly focused on translational and interventional studies, including a seminal clinical study demonstrating the beneficial effects of nutritional supplementation in alcoholic hepatitis patients.

The current focus of research in McClain's laboratory is on the gut-liver axis, especially as it relates to alcoholic liver disease generally and on the role nutrition plays in alcoholic liver disease. He has received continuous federal funding, including grants from NIH and the Department of Defense, for almost 40 years.

NIAAA established this honorary lecture series as a tribute to Mark Keller, a pioneer in alcohol research. Honorees have made significant contributions to our understanding of alcohol's effects and how we can prevent and treat alcohol problems.

Five Join NICHD Council

Five new appointments have been made to the National Advisory Child Health and Human Development Council, NICHD's advisory body. With NICHD director Dr. Alan Guttmacher (c) and Dr. Catherine Spong, director, Division of Extramural Research, are new council members (from l) Dr. Gregory S. Kopf, director of research and development at Family Health International 360; Dr. George R. Saade, professor and chief of the department of obstetrics and gynecology at the University of Texas Medical Branch at Galveston; and Dr. Stephen A. Petrill, professor in Ohio State University's department of psychology.

SWEEP

CONTINUED FROM PAGE 1

Jeff Potts is NIH biorisk manager in the Division of Occupational Health and Safety. "I don't feel unsafe, I don't feel scared to do my job," he said. "But it can be a stressful job. The last few months have been stressful. Additional discoveries will be stressful."

PHOTO: RICH MCMANUS

"This is unprecedented for NIH," said Potts. He noted that biospecimens collected through clinical trials at NIH, mostly in Bldg. 10, are already subject to strict regulation. Inventory control for specimens in NIH's basic research labs has not been as rigorous.

"Our goal is to 'capture today.' What do we have, and where?" he said.

For some laboratories, the number of specimens can be in the thousands. Said one technician with such a workload, "I have to know where in each freezer a sample is, what shelf it is on, what box it is in and what row it is in within the box. We almost need a new category of employee—a specimen reference librarian."

Phase 2 of Clean Sweep starts Oct. 1, when a team of specialists from DOHS, augmented by contractors, visits 100 percent of all storage locations—freezers, cold rooms, refrigerators, etc.—to perform quality assurance (QA) checks.

"QA means we see if what the ICs reported is actually there, on campus and off, and in all leased facilities," said Potts. Investigators will check a percentage of inventoried items to see if they square with what the ICs reported. "If they pass, our sticker will go next to their sticker," indicating that surveillance is complete and accurate.

NIH management has established a deadline of 6 months to complete the survey. "We are trying to wrap our heads around the scope of this project," Potts said. "There are 8 million square feet of space on campus. Anywhere NIH owns samples has to be searched and QA'd. We have to walk each building, top to bottom."

Collins Issues Interim Report

On Sept. 5, NIH director Dr. Francis Collins sent an all-hands email to NIH employees, updating the workforce on interim findings of NIH's comprehensive search for improperly stored select agents, toxins or hazardous biological materials.

Three select agents were found at the Clinical Center's department of laboratory medicine:

• *Burkholderia pseudomallei*, a patient microbial isolate. *B. pseudomallei* causes melioidosis, which is an uncommon bacterial infection usually found in tropical or subtropical areas.

• *Francisella tularensis,* the cause of tularemia, also known as rabbit fever. This was a College of American Pathologists (CAP) proficiency testing sample.

• Two small lab vials of *Yersinia pestis*, the cause of plague. It is an acute bacterial infection transmitted to humans and some domestic animals by fleas that come from infected rodents. There have not been any human-to-human transmissions of plague in the United States since around 1925. This was also a CAP proficiency testing sample.

Two additional agents were found in other NIH laboratories:

• One bottle of ricin of unknown quantity, but labeled 5 grams. Ricin is very poisonous if inhaled, injected or ingested; it acts as a toxin by inhibiting protein synthesis. This sample was found in a historical collection dating from 1914 and is thought to be 85-100 years old. Ricin has legitimate lab uses in very small quantities.

• Botulinum neurotoxin in individual quantities below the regulatory limits, but in aggregate quantities above the allowable limit. This neurotoxin is the cause of botulism, which is a rare, but serious paralytic illness caused by a nerve toxin that is produced by the bacterium *Clostridium botulinum*.

All of the agents found were in sealed and intact containers and there were no personnel exposures associated with the storage or discovery of these vials or samples. All of the agents have been reported to the Centers for Disease Control and Prevention and destroyed in compliance with select agent regulations.

Collins said he would update the workforce again in early October, when a preliminary status report is expected.

Potts is one of 7 people in his 50-person division who manage NIH's select agent program, which assures compliance with the regulations that govern the use, handling and storage of select agents and toxins.

A very small number of NIH investigators work with select agents, he said. "The regulatory compliance is so large and onerous that few are interested."

Potts' team of safety specialists conducts quarterly checks of 100 percent of the vials possessed by these investigators. In addition, they do year-round training and accident/injury investigation.

"There are tremendous security controls in place," he explained. "Anyone working in a BSL-3 lab or higher has to have a background investigation."

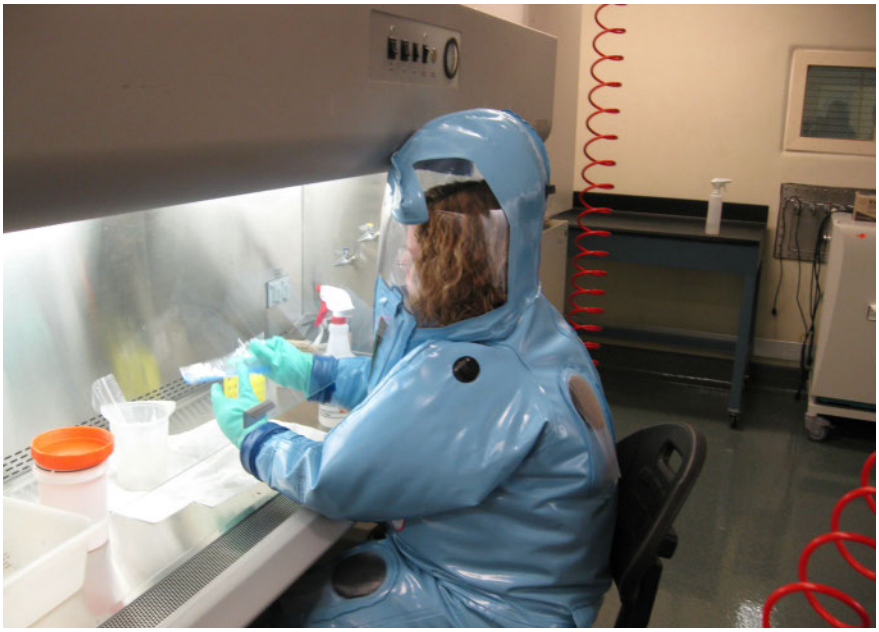
If a select agent or toxin is discovered in a place where it ought not be, research staff are not permitted to dispose of it themselves, Potts said. "We bring it back to the lab, secure it and notify the CDC [Centers for Disease Control and Prevention], which is the regulating agency. Then we can destroy the sample [usually by autoclave, a heating process] and provide proof to our regulators that this was done."

Asked whether the hunt for unsecured pathogens worries him, Potts, who came to NIH a decade ago and is a certified biosafety professional, said, "It doesn't scare me. Riding the Metro to work is more of a risk than working with these agents. We have very strict standard operating procedures.

"I don't feel unsafe, I don't feel scared to do my job," he continued. "But it can be a stressful job. The last few months have been stressful. Additional discoveries will be stressful."

He empathizes with the IC search that has been going on for the past 2 months. "They are doing this at the same time they are doing their normal research. Their heavy lifting is being done right now. Our heavy lifting begins Oct. 1."

One advantage to the inventory process has been that the ICs "are getting rid of a lot of material they don't need. I think it's been a huge benefit to them," said Potts. "We might be saving NIH a lot of money by getting rid of a couple hundred freezers. It's kind of like spring cleaning. This process has been much needed, across the board."



A worker uses a positive pressure protective suit to work with dangerous pathogens.

Suiting Up for Safety

Very little of the research that goes on at NIH requires what some call moon suits (positive pressure protective suits), says Jeff Potts of the Division of Occupational Health and Safety's select agent program.

At biosafety level 1 (BSL-1), workers must wear a lab coat and gloves.

BSL-2 requires a lab coat, gloves and protective eyewear.

BSL-3 protection depends on the agent being studied, but typically requires double gloves, shoe covers and a full Tyvek suit. Researchers might also need to use a PAPR—powered air purifying respirator, which pulls room air through a HEPA filter and offers clean air to a worker's breathing zone.

BSL-4, or what Potts calls "the big blue space suit with an air hose," is not conducted on campus, he said. Only two NIH labs are at this level: NIAID's Integrated Research Facility at Ft. Detrick in Frederick, Md., and NIAID's Rocky Mountain Laboratories in Hamilton, Mont.

Potts has worn the positive pressure protective suit and says, "It's different. If you're claustrophobic, it's not the job for you. They are deceivingly heavy. You're lugging around 9-10 pounds of suit. It's physically exhausting. You become very thirsty because you get dehydrated.

"We train staff to know their limits," he said. Three hours of continuous work is a typical timeframe for working in this type of environment, although some are capable of more. "It's like driving a car for too long," Potts explains. "The longer you're behind the wheel, the more the risks multiply."

Besides knowing your BSLs, there are other terms indicating familiarity with lab safety. Many laboratories have freezers at two standard temperatures: 20 degrees below Celsius ("sub-20s") and 80 degrees below Celsius ("sub-80s"). Toss words like that around and Potts might consider recruiting you to the 40-person team readying for Clean Sweep, phase 2.

One other thing: there are actually two Operation Clean Sweeps being conducted across NIH at the moment by the Office of Research Services and Office of Research Facilities. The first has to do with clearing hallways and corridors of accumulated junk and began well before the select agent campaign.

SCHADT

CONTINUED FROM PAGE 1

work-oriented view of living systems to complement reductionist, single-gene approaches that currently dominate biology. Such an approach, he says, would more accurately model the complexity of biological systems.

Schadt will focus on integration of the digital universe of information to better diagnose, treat and prevent human disease. His team at the Icahn Institute seeks to understand the vast network of genes, proteins, metabolites and environmental factors that drive the function of the human body.

Since 2011, Schadt has been director of the Icahn Institute for Genomics and Multiscale Biology, chair of the department of genetics and genomics sciences and Jean C. and James W. Crystal professor of genomics at Icahn School of Medicine at Mount Sinai, New York. He was previously chief scientific officer at Pacific Biosciences after serving as executive scientific director of genetics at Rosetta Inpharmatics, a subsidiary of Merck & Co. Schadt also was a senior research scientist at Roche Bioscience.

He received his B.A. in applied mathematics and computer science from California Polytechnic State University, his M.A. in pure mathematics from the University of California, Davis, and his Ph.D. in bio-mathematics from the University of California, Los Angeles. Thomson Reuters recently named Schadt among the "World's Most Influential Scientific Minds 2014," based on its analysis of the impact of his publications.

The annual Mahoney Lecture honors Florence Stephenson Mahoney (1899–2002), who devoted the last half of her life to successfully advocating for the creation of NIA and increased support for NIH.

There will be a reception and an opportunity to talk with the speaker in the NIH Library following the lecture.

letters

Dear Editor,

As a recent émigré of the NIH campus and relocatee to the FDA White Oak facility, I read with interest this entire issue that marks the end of an era ["FDA Exits Campus This Summer After 73 Years," *NIH Record*, Aug. 29, 2014], and a sad occasion for many FDA researchers. It really was a lovely reminiscence and a source of many interesting historical tidbits. I have only one bone to pick. Margaret Pittman was not the discoverer of the cause of whooping cough. Although [Pittman] was a major force in the field, and worked at NIH well into her later years, the discovery is credited to Jules Bordet, hence the genus name *Bordetella*. Dr. Bordet, in a 1906 paper co-authored by Octave Gengou published in the *Annales de l'Institut Pasteur* and titled "Le Microbe de la Coqueluche," described the isolation of the bacterium, initially called *Haemophilus pertussis*. In fact, a pertussis research symposium on whooping cough was convened at the Pasteur Institute in 2006, to mark the 100-year anniversary of this study.

Scott Stibitz, FDA/CBER

(Ed. note: We have corrected the online version of the story.)

'Foil the Flu' with Free Shot

The Office of Research Services' annual flu vaccination program is now under way in Bldg. 10. For details, visit www.foiltheflu.nih.gov. Vaccinations are given both on campus and off.

PHOTO: RICH MCMANUS

digest

Coauthors Dr. Kevin Hall (l) and Dr. Juen Guo examine PET data.

Eating Habits, Body Fat Related to Differences In Brain Chemistry

People who are obese may be more susceptible to environmental food cues than their lean counterparts due to differences in brain chemistry that make eating more habitual and less rewarding, according to an NIH study published in *Molecular Psychiatry*.

Researchers at the Clinical Center found that, when examining 43 men and women with varying amounts of body fat, obese participants tended to have greater dopamine activity in the habit-forming region of the brain than lean counterparts and less activity in the region controlling reward. Those differences could potentially make the obese people more drawn to overeat in response to food triggers while simultaneously making food less rewarding to them. A chemical messenger in the brain, dopamine influences reward, motivation and habit formation.

"While we cannot say whether obesity is a cause or an effect of these patterns of dopamine activity, eating based on unconscious habits rather than conscious choices could make it harder to achieve and maintain a healthy weight, especially when appetizing food cues are practically everywhere," said Dr. Kevin Hall, lead author and a senior investigator at NIDDK. "This means that triggers such as the smell of popcorn at a movie theater or a commercial for a favorite food may have a stronger pull for an obese person—and a stronger reaction from their brain chemistry—than for a lean person exposed to the same trigger."

Study participants followed the same eating, sleeping and activity schedule. Tendency to overeat in response to triggers in the environment was determined from a detailed questionnaire. Positron emission tomography (PET) scans evaluated the sites in the brain where dopamine was able to act.

"These findings point to the complexity of obesity and contribute to our understanding of how people with varying amounts of body fat process information about food," said NIDDK director Dr. Griffin Rodgers. "Accounting for differences in brain activity and related behaviors has the potential to inform the design of effective weight-loss programs."

Single Animal to Human Transmission Event Responsible for 2014 Ebola Outbreak

Scientists used advanced genomic sequencing technology to identify a single point of infection from an animal reservoir to a human in the current Ebola outbreak in West Africa. This research has also revealed the dynamics of how the Ebola virus has been transmitted from human to human, and traces how the genetic code of the virus is changing over time to adapt to human hosts. Dr. Pardis Sabeti, a 2009 NIH Director's New Innovator awardee and her team carried out the research.

"Dr. Sabeti's research shows the power of using genomic analysis to track emerging viral outbreaks," said NIH director Dr. Francis Collins. "This ability produces valuable information that can help inform public health decisions and actions."

The 2014 Ebola outbreak is now the largest outbreak in history, with 5,347 total cases and 2,630 total deaths [as of Sept. 14] since it began in late December 2013, according to the World Health Organization. This outbreak is also the first in West Africa and the first to affect urban areas.

Sabeti, senior associate member of the Broad Institute in Cambridge, Mass., led an extensive analysis of the genetic makeup of Ebola samples from patients living in affected regions. Joined by an international team of scientists, Sabeti used advanced technology to analyze the genetics of the Ebola samples extremely rapidly and with high levels of accuracy. Using this technology, the researchers pinpointed a single late 2013 introduction from an unspecified animal reservoir into humans. Their study showed that the strain responsible for the West African outbreak separated from a closely related strain found in Central Africa as early as 2004, indicating movement from Central to West Africa over the span of a decade. Studying RNA changes occurring over the span of the outbreak suggests that the first human infection of the outbreak was followed by exclusive human-to-human transmissions.

Schizophrenia Not a Single Disease but Multiple Genetically Distinct Disorders

New research funded by NIMH shows that schizophrenia isn't a single disease but a group of 8 genetically distinct disorders, each with its own set of symptoms. The finding could be a first step toward improved diagnosis and treatment for the debilitating psychiatric illness.

The research, conducted at Washington University School of Medicine in St. Louis, was reported online Sept. 15 in the *American Journal of Psychiatry*.

About 80 percent of the risk for schizophrenia is known to be inherited, but scientists have struggled to identify specific genes for the condition. Now, in a novel approach analyzing genetic influences on more than 4,000 people with schizophrenia, the research team has identified distinct gene clusters that contribute to 8 different classes of schizophrenia.

"Genes don't operate by themselves," said Dr. C. Robert Cloninger, one of the study's senior investigators. "They function in concert much like an orchestra, and to understand how they're working, you have to know not just who the members of the orchestra are but how they interact."

milestones

NIH Holds Annual Corps Promotion Ceremony

The recent 12th annual NIH PHS Commissioned Corps promotion ceremony coincided with the 125th anniversary of the founding of the corps, whose mission is to "protect, promote and advance the health and safety of our nation." NIH celebrated the accomplishments of 16 Commissioned Corps officers who were successfully promoted this year.

In opening remarks, Dr. Richard Wyatt (Radm., ret.), assistant director of NIH's Office of Intramural Research, spoke of Commissioned Corps history and its deep connection to NIH. He reminded recently promoted officers that they "stand on the shoulders of giants," such as NIAID director Dr. Anthony Fauci (Radm., ret.) and Clinical Center director Dr. John Gallin (Radm., ret.) who carried out the mission of the corps while simultaneously bearing the responsibility of leadership that accompanies advancement in rank.

NIH principal deputy director Dr. Lawrence Tabak spoke of the commitment NIH has towards its corps officers and the valuable roles they play at the agency. Acting Surgeon General Boris Lushniak described work that PHS members carry out on a daily basis at NIH and offered congratulations to promotees. His words came with a reminder: When a Commissioned Corps officer is promoted, it encompasses far more than an increase in pay. The advance also comes with a corresponding increase in expectations. "You have gotten more, so give more," he said. He urged promoted officers to thank those who have supported them, to give more time to colleagues through mentorship, to give more to their community through activism and to redouble their commitment to their agencies and to the Commissioned Corps.

The following officers were promoted in the following categories:

Medical Officers—promoted to captain: Paul Kruszka, promoted to commander: Paul Sato

Nurse Officers—promoted to captain: Antoinette Jones, Ann Marie Matlock; promoted to commander: Shu Cai, Paula Carter, Colleen Wahl; promoted to lieutenant commander: Amanda Ramsburg, Tat'Yana Worthy

Scientist Officers—promoted to captain: Sally Hu

Environmental Health Officers—promoted to commander: Robert Horsch; promoted to lieutenant commander: Matthew Deptola

Engineer Officers—promoted to lieutenant commander: Corey Cosgrove

Pharmacy Officers—promoted to captain: Richard Decederfelt

Health Services Officers—promoted to commander: Antoinette Percy-Laurry, Greg Gnipp—**Andrew Keel, Kristen Cole**

***Below**: Members of the Commissioned Corps were promoted at a recent ceremony.*

OER's Austin Retires After 33 Years at NIH

By Eric Bock

PHOTO: ELISE RABIN

Patty Austin has produced hundreds of programs for thousands of NIH staff about the resources available to extramural researchers. And now, she is set to retire.

Austin joined NIH in 1981 as a clerk-typist in the Office of Extramural Research's Staff Training in Extramural Programs. When she started, she intended to finish her bachelor's degree and find employment elsewhere. Like so many others, she never left.

Through her hard work and dedication, she rose through the ranks at OER. In 2001, she became a training program administrator for OER's Electronic Research Administration project. Last year, she took her current position as training program administrator in OER's Office of Research Information Systems' Division of Scientific Categorization and Analysis.

"Patty's had a unique training experience that our division didn't have previously. Most employees

know science or data. But Patty knows how to explain things," said Judy Riggie, director of the Division of Scientific Categorization and Analysis. "She's helped our division a lot. She's gone above and beyond."

Austin estimated that she helped produce more than 300 training programs for OER during her career. These programs allowed her to meet many employees and patients. She said that seeing patients who have been helped by NIH researchers was one of the best parts of her job.

She said many good people have helped her along the way—her colleagues, the staff who provided feedback on her training programs and, especially, her husband Steve Austin, a grants management specialist in NIAMS.

"Juggling my job and raising my children was sometimes frustrating and sometimes fun. I couldn't have ever done it without the support of Steve," said Austin. "He encouraged me to keep going and supported me. He was really good for the family."

In retirement, Austin hopes to volunteer her time in soup kitchens and at an elementary school. She will spend more time with her father in Upstate New York. In addition, she also plans to devote more time to drawing, her favorite hobby.

"About 10 years ago, I taught myself to draw. I'm going to take watercolor painting and pen-and-ink drawing lessons and maybe some pottery classes," said Austin.

Austin says she is proud to have been part of NIH.

"The real pleasure is working with the extramural community," she said. "I appreciated their friendship and feedback over the years."

NIDA Welcomes New Council Members

National Institute on Drug Abuse director Dr. Nora Volkow (c) recently welcomed two new members to NIDA's national advisory council—Dr. Anne C. Andorn (r) and Dr. Laura J. Bierut. Andorn is medical director for safety evaluation and risk management, Office of the Chief Medical Officer, GlaxoSmithKline in Research Triangle Park, N.C. Bierut is a professor in the department of psychology at Washington University School of Medicine in St. Louis. The new appointees will serve on the council through November 2017.

NIMHD Mourns Scientific Director Coleman

Dr. William G. Coleman Jr., distinguished member of the scientific community, died of cancer on Aug. 18 at age 72.

Originally from Birmingham, Alabama, Coleman held a B.S. from Talladega College, an M.S. in microbial physiology from Atlanta University and a Ph.D. in microbiology and molecular genetics from Purdue University.

Following a year as a lecturer and postdoc in the department of biological sciences at Purdue, he began a nearly 40-year career at NIH. In 1974, Coleman began postdoctoral training in the Laboratory of Biochemical Pharmacology at NIDDK and earned tenure as a research microbiologist in the same laboratory in 1978. His research included substantial work on the biosynthesis of lipopolysaccharide and more recently on the innate and adaptive immune response to *Helicobacter pylori* infection. *H. pylori* , a type of bacteria that causes infection in the stomach, is associated with gastritis, ulcers and gastric cancers, which affect millions of Americans and is more common among Mexican Americans and non-Hispanic blacks.

"Dr. Coleman's contributions to science are far-reaching," said NIMHD acting director Dr. Yvonne Maddox. "People who have never met Bill Coleman will benefit from his work, particularly in the field of infectious diseases, which presents great challenges to public health."

Recognized for his scientific leadership and acumen, Coleman received many honors, including the Philip J. Browning Scientific Pioneers Award and the Inventor's Award from the U.S. Department of Commerce. He was recently selected for the Purdue University department of biological sciences Outstanding Alumnus Award.

Coleman became the first permanent African-American scientific director in the history of the NIH Intramural Research Program in January 2011, when he was appointed to direct the NIMHD Intramural Research Program. He was responsible for directing NIMHD's trans-disciplinary portfolio focusing primarily on the biological and non-biological determinants of health disparities. Under his leadership, the intramural program has focused on three scientific research areas for which there are significant health disparities: cancer, cardiovascular disease and diabetes.

Coleman was known for his belief in the power of mentorship and dedicated himself to mentoring and training future scientists, from school-age through postdoc, particularly in the area of disparities research. Many of his former mentees have gone on to become successful researchers, physicians and educators.

"Dr. Coleman leaves a legacy as a well-respected scientist and teacher. Colleagues around NIH have expressed their admiration and sincerest regard for this dedicated researcher with an irrepressible sense of humor and optimism," said Maddox.

Coleman is survived by his wife of 40 years, Dr. Belinda Seto, and his three daughters Melissa, Alicia and Natasha Coleman.

***Above, from l**:*
OPM Director Katherine Archuleta gives BIG keynote talk.

This year's service project involves donations to Las Vegas's Three Square Food Bank.

***Below**:*
BIG board chair Dr. Hezekiah Braxton III and BIG National President Darlene H. Young (r) welcome Archuleta as guest speaker at the 2014 national training conference.

PHOTOS: BIG NATIONAL PHOTOGRAPHY TEAM

'Dream BIG'

Annual Training Institute Targets STEM, Personal Health

By Felicia Shingler

This year's Blacks In Government annual National Training Institute, "Dream BIG, Train Well & Emerge to Greater Heights," proved to be one of the best in BIG's 39 years of service, according to several attendees. Held in Las Vegas, more than 150 workshops focused on training offered by the Office of Personnel Management. Workshop topics included information technology, leadership management, communication skills and personal development.

Founded in 1975, BIG is a support and advocacy group whose mission is to promote, provide and enhance education opportunities for government employees. With chapters throughout the U.S., Europe and the Pacific representing more than 2.5 million federal, state and local civil servants, BIG's yearly training institute is a professional development conference.

This year, BIG launched its youth STEM robotics program, which is designed to encourage African-American students to embrace science, technology, engineering and math concepts and professions. A competition using the theme "Entertainment or Behavior Modification: Do Violent Video Games Promote Violent Actions?" challenged students across the nation in grades 9-12 to design, build and program their own mobile robot.

In addition, 2014 marked the 15th annual BIG Health Programs Day. The initiative has several goals: educate the membership on health care access, disease prevention and treatment; exchange information on healthy lifestyles that reduce risks for HIV/AIDS, diabetes, cardiovascular disease, cancer, homicide, mental disorders, lupus, obesity and infant mortality; help foster partnerships within African-American communities; and increase awareness of ways to eliminate racial and ethnic health disparities. The program started daily at 6 a.m. with a cardio workout. A morning walk began the official health day. The program included presentations by fitness expert Cheryl Avon; Dr. Beverly Lynne-Cooke, who discussed diabetes and lupus; Dr. Earl Coffman on HIV; and chef Saryanne Frazer, who gave a demonstration on raw food.

The BIG training institute, held annually at different locations throughout the U.S., likes to leave a positive footprint in the area it visits. This year, BIG visited Vegas's Three Square Food Bank, making a $2,100 donation that supplied 6,300 meals.

Ending the 2014 training session, OPM Director Katherine Archuleta gave the closing keynote address.

"The work BIG has done since its founding nearly 40 years ago has been groundbreaking," she concluded. "Your mission to make sure African-American employees at all levels of government can maximize their career opportunities is one I totally agree with. And events like this annual meeting provide just the training, networking and mentoring your members need. I will do all that I can to support you, to help you, to champion you, to make sure you have what you need to succeed. I do this because I know that together, you and I will continue to make sure that federal service is *the* model workforce for the 21st century."