

nih record



ABOVE • ACD member Dr. Karen Holbrook (l) makes a point as fellow member, and former NIH'er, Dr. Maria Freire looks on. See story at right.

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NIH's Summer Workload High, ACD Learns

By Rich McManus

Because great gifts create high expectations, NIH's workforce can anticipate a vacation-free summer as the agency deals with a one-time \$10.4 billion American Recovery and Reinvestment Act (ARRA) appropriation that must be disbursed within 2 years.

"The NIH staff has been unbelievable in responding to the challenge of ARRA funds," NIH acting director Dr. Raynard Kington told the 98th gathering of the advisory committee to the NIH director (ACD) on June 4. "It takes work to do it responsibly, and I salute the incredible creativity, hard work and commitment of our people. We will look back in pride one day at this great test," he predicted, then quipped, "No one will be taking summer vacations this year at NIH."



NIH acting director Dr. Raynard Kington (l) presides over ACD meeting on June 4.

SEE ACD MEETING, PAGE 6

NIAID Labs Meet the H1N1 Challenge

By Catherine Bullis and Maggie Hartley

Researchers around the country, including those supported by NIH, have mobilized to work on the emergent strain of H1N1 influenza A that has infected thousands of people around the world. Some of this groundbreaking research is taking place right here on campus.

The 2009 outbreak of a new strain of H1N1 influenza A demonstrates that continuing vigilance, planning and strong public health research capability are essential defenses against emerging health threats. Research on H5N1 (bird flu) and other influenza viruses with pandemic potential has prepared NIAID scientists in Bethesda and Hamilton, Mont., to respond to this newest influenza threat. They have expanded and refocused projects to include studies of the course the virus takes in the human immune system, the origin of the virus, H1N1-infected patients and a preventive vaccine. Many of these studies involve collaborations with researchers in other federal agencies, academia and the private sector.

"The outbreak of 2009 H1N1 influenza serves

SEE H1N1 FLU, PAGE 4

Incredible Shrinking Workforce

Employees Lose Weight, Find Support At NIH

By Carla Garnett

Lori Krasner had struggled with extra weight before. A couple of decades ago she'd buckled down and lost some 20 pounds. Last summer, though, she noticed she had been feeling tired and that her energy level seemed low all the time. Other physical problems had cropped up. Her lower back seemed to ache constantly, for instance. Sure, she realized she'd gained a lot of weight over the last 10 years or so. After all, she rode the commuter bus about 90 minutes to and from her office. She sat behind a desk all day at work. Her lifestyle was basically sedentary. Still, it wasn't until she was strolling through the mall one day that she actually caught a glimpse of herself—full length—in a mirror. Her reflection stopped her cold. First there was weeping, she admits. Then she turned to Weight Watchers...at work.

NIH's Biggest Losers

Krasner, who handles contracts and budget

SEE WEIGHT LOSS, PAGE 8



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briefs

Workshop on NIH-Funded Core Facilities

The National Center for Research Resources, in collaboration with the Office of Extramural Research, is sponsoring a workshop titled "The Efficient Management and Utilization of Core Facilities," July 14-15, in the main auditorium, Natcher Conference Center. A core facility is a centralized, shared resource that provides scientific investigators with access to instruments, technologies, services, study support and expert consultation. NIH-funded core facilities exist at hundreds of institutions throughout the United States.

NIH-funded investigators with expertise in managing cores at biomedical research institutions across the country will discuss common challenges, as well as solutions, to maximize their use and efficiency. Specifically, workshop participants will discuss ways to improve access, minimize redundancy, control costs, develop sound administrative management and provide quality assurance at these facilities.

The event is free and open to the public. Early registration is encouraged. For more information and to register, visit www.ncrr.nih.gov/Core_Facilities/. For questions about the workshop content, contact Sylvia Parsons at (301) 435-0860 or email parsonss@mail.nih.gov.

Individuals who need sign language interpreters and/or reasonable accommodation to participate should contact Monica Barnette at (301) 650-8660 and/or the Federal Relay Service at 1-800-877-8339 at least 5 days prior to the event.

NIH Sailing Association Open House

The NIH Sailing Association will hold an open house on Saturday, Aug. 1 from 10 a.m. to 3 p.m. at the Selby Bay Sailing Center in Mayo, Md. Explore your interest in learning to sail and discover opportunities for sailing with NIHSA. We will be giving demonstration sails for adults in the club's 19-ft. Flying Scot sailboats. Fall sailing classes begin Aug. 26; this is a good chance to preview the boats and meet the members. At the open house you can: join NIHSA; sign up for the 6-week adult sailing class; find out about club sailboat racing; check out the social schedule of NIHSA; and meet members. Directions can be found at www.recgov.org/sail. Come check it out—sailing, food, drinks and beer for \$5 per person. Look for posters and flyers around campus for more information.

Volunteers Needed for Web Site Evaluation

The Lister Hill National Center for Biomedical Communications at the National Library of Medicine is seeking people interested in evaluating a web site developed by NLM. The feedback received from evaluators will help NLM develop effective and easy-to-use web interfaces. Participants will be asked to spend one hour using a web site on the Bethesda campus. Federal employees, contractors and members of the public who can travel to NIH are encouraged to respond. Although no monetary compensation can be offered, evaluators will receive a small gift for their time. Forward this message to anyone who might be interested in participating. Contact Sarah Ward at saward@mail.nih.gov or (301) 496-9301 for more information.

Bldg. 10 Garage Parking Reminder

Recently, Bldg. 10's P1 level patient parking area has seen a surge in use, prompting complaints to ORS about the adequacy of patient parking. ORS has also noticed an increase in unauthorized parking in this area. As a courtesy to patients, it is important to comply with posted parking rules.

As a reminder, parking procedures for the garage are as follows:

P1 level: Access to the P1 level is located off Convent Drive. This level is designated for patients, patient visitors, individuals with handicapped parking permits and staff with both a P1 patient care placard and an NIH parking permit. Also the CC can grant minor exceptions for P1 permit holders (e.g., P1 medical consultant, volunteer) and delivery folks staying less than 20 minutes. This level is the only paid parking area inside the CC garage. In an effort to maintain adequate, close parking for patients and patient visitors, employee parking is prohibited on the P1 level, Monday through Friday from 6 a.m. to 7 p.m.

P2 level: The P2 level can be accessed either through Memorial Dr. or Convent Dr. Access from Convent Dr. is open until 10 a.m., Monday through Friday. At 10 a.m., a gate is closed at the top of the ramp leading from the P1 level to the P2 level. This ramp is reopened at 7 p.m. The P2 level is for red permit holders or staff with both a P2 patient care placard and a general parking permit. Overflow parking for this facility is MLP-9, MLP-8 or MLP-6.

P3 level: The main entrance to this level is on Memorial Dr. Parking on the P3 level is designated for employees with a general parking permit. The P3 level is often full by 7:30 a.m. (or earlier), Monday through Friday. Overflow parking for this facility is MLP-9, MLP-8 or MLP-6.

Contact Debbie Byram at (301) 496-1231 about P1 and P2 parking placards and Louise Davis at (301) 496-9621 with any other questions.

AIDS Study Marks 25 Years of Discovery

By Laura Sivitz

The 25th anniversary of one of the longest U.S. studies of people with HIV/AIDS was marked on May 12 at the Carnegie Institution for Science in Washington, D.C. The NIH Multicenter AIDS Cohort Study (MACS) has contributed significantly to the scientific understanding of HIV, AIDS and the effects of antiretroviral therapy through more than 1,100 publications, many of which have guided public health policy and the clinical care of people with HIV.

MACS investigators prospectively study the natural history of HIV infection, treated and untreated, in thousands of homosexual and bisexual men at sites in Baltimore, Chicago, Pittsburgh and Los Angeles. The National Institute of Allergy and Infectious Diseases and the National Cancer Institute developed MACS and have been its principal sponsors.

“When we were preparing to start this study in early 1984, we didn’t even know what the cause of AIDS was,” recalls Dr. John Phair, the study chair and principal investigator of the Chicago site at Northwestern University. But soon after, in May 1984, the laboratory of Dr. Robert Gallo of NCI published four papers in *Science* confirming that the retrovirus then known as LAV or HTLV-III caused the terrifying new disease called AIDS.

When the first diagnostic test for HIV became available in 1985, MACS investigators learned that 40 percent of their participants were infected with the virus. “That gave us an enormous advantage,” Phair explains, “because we had the ability to study men who became infected with HIV during the investigation, and also to study the natural history of established HIV infection.”

The MACS has cumulatively enrolled nearly 7,000 men who have sex with men. Participants visit their study sites every 6 months to donate biological specimens and answer lengthy questionnaires on medical history and behaviors, every man adding 8,500 new pieces of information to the investigation during each visit. Today, 2,525 men participate in the study; the others have dropped out or died, usually from AIDS.

“The participants’ loyalty to the study and the scientific knowledge we have gained from them have greatly benefited the health of HIV-infected people worldwide,” notes Dr. Lisa Jacobson, principal investigator of the MACS data coordinating center at Johns Hopkins University.



Attending the 25th anniversary commemoration of the NIH Multicenter AIDS Cohort Study are (from l) Dr. Alvaro Muñoz, former principal investigator of the MACS data coordinating center; Dr. Charles R. Rinaldo, PI of the MACS Pittsburgh site; Dr. Carl Dieffenbach, director of the NIAID Division of AIDS; Dr. Lisa P. Jacobson, PI of the data coordinating center; Dr. John Phair, PI of the MACS Chicago site; Dr. Joseph Margolick, PI of the MACS Baltimore site; and Dr. Roger Detels, PI of the MACS Los Angeles site.

The longstanding record of fruitful research by MACS at relatively low cost to NIH has led NIAID director Dr. Anthony Fauci to describe the study as a gift that keeps on giving. 📌

Minnick Wins GSA Fleet Management Honor

Mark Minnick, chief of the fleet management section within the Transportation Management Branch, OD, has been awarded the GSA National Fleet Manager of the Year Award in the category Civilian Agency, Small Fleet (50-500 vehicles).

GSA and the Federal Fleet Policy Council (FedFleet) selected Minnick to receive the 2009 Bob Baker Fleet Manager of the Year Award. This award, named in honor of a founding member of FedFleet, is designed to recognize individuals who have demonstrated exceptional skills and abilities in federal motor vehicle fleet management.

Minnick, who has been with NIH for more than 20 years, serving as supervisor of the NIH automotive repair facility from April 1994 until December 1999 and as section chief since January 2000, will be honored at a ceremony during the National Federal Fleet Manager Workshop and Information Fair in Chicago, July 28-30.

Minnick has played an instrumental role in NIH being the leader within HHS in meeting or exceeding all requirements related to fleet management. He has personally been committed to the “greening” of services offered by NIH, including the reduction of gasoline usage and the increase of alternative fuel use; the right-sizing of the NIH fleet to include procuring alternative fuel vehicles; the use of bio-diesel fuel; and meeting the requirements of the Energy Policy Act of 1992 and 2005.



Richard Trott (l), chief, Transportation Management Branch, OD, congratulates Mark Minnick, chief of the fleet management section, on being selected by GSA as the 2009 National Fleet Manager of the Year.

H1N1 FLU

CONTINUED FROM PAGE 1



emerged and to try to identify factors that allow it to spread and cause disease in humans.”

Taubenberger also is amending an established influenza research protocol at the Clinical Center to allow enrollment of patients found to have the newly emerging H1N1 strain. Patients will receive the best available care while scientists conduct a study of their clinical history, measure the amount of virus in respiratory secretions and evaluate various aspects of the body’s immune response to infection.

Developing Vaccines

Dr. Kanta Subbarao, also in the Laboratory of Infectious Diseases, is collaborating with MedImmune, Inc., the manufacturer of the FluMist nasal spray influenza vaccine, to develop a vaccine against the newly emerging H1N1 virus. This collaboration is an expansion of ongoing work to make live, attenuated vaccines against other influenza strains such as H5N1, H7N3 and H2N2. Live, attenuated vaccines contain a version of the microbe that has been weakened in the lab so it cannot cause disease. Because a live, attenuated vaccine is the closest thing to a natural infection, it can elicit strong cellular and antibody responses.

For a potential vaccine against the newly emerging H1N1, MedImmune will generate a “seed virus” that will be used to grow virus for vaccine studies. NIAID scientists will perform studies in mice and ferrets to determine whether the vaccine candidate made from the virus is weak enough to not cause disease, strong enough to stimulate the immune system and efficient enough to protect against the H1N1 virus. Subbarao plans to conduct clinical trials to determine age-specific immune responses and whether certain age groups have pre-existing antibodies that might interact with the vaccine virus.

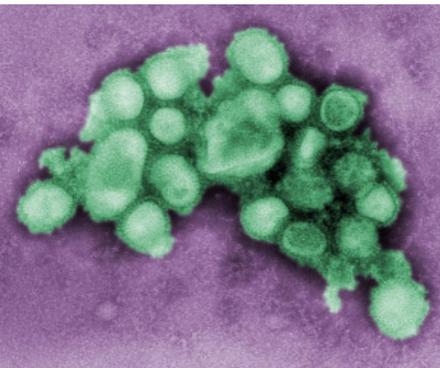
NIAID scientists have been able to react quickly to the newly emerging strain of H1N1 influenza virus, thanks to the institute’s ongoing program of public health research and support. With a strong foundation studying emerging infectious diseases, NIAID intramural scientists and their colleagues are well prepared to address health challenges as they arise. 🗨️

Right:

Dr. Jeffery Taubenberger leads a team in the NIAID Laboratory of Infectious Diseases focused on uncovering the origins of the 2009 H1N1 influenza virus.

Below:

A transmission electron micrograph of the 2009 H1N1 influenza virus



as a clear reminder that microbes in the environment are constantly evolving and emerging with new capabilities,” says NIAID director Dr. Anthony Fauci. “Our labs and others in the scientific community have quickly come together to improve our understanding of this new virus and to bring us closer to a safe and effective vaccine.”

Characterizing the 2009 H1N1 Virus

To better understand how potential pandemic influenza viruses such as the avian H5N1 virus cause severe disease in humans, scientists in NIAID labs had previously developed several animal models to study the course of the disease. CDC recently shared samples of the new H1N1 strain with NIAID scientists, who are now using these animal models to study H1N1.

Studies being conducted in mice, ferrets and nonhuman primates allow NIAID labs to compare the new 2009 H1N1, classical swine H1N1 and European swine H1N1 viruses with other influenza strains such as avian viruses and seasonal influenza strains. Scientists are studying how the 2009 H1N1 virus replicates, what kind of pathologic changes the infection produces and how easily the virus is transmitted. For example, in the Laboratory of Virology in Hamilton, researchers led by Dr. Heinz Feldmann will use a recently established X-ray imaging system to determine whether the new H1N1 virus affects the lower respiratory tract; influenza infections that do are typically more severe than those in the upper respiratory system.

Determining Where the Virus Came From

In the Laboratory of Infectious Diseases, Dr. Jeffery Taubenberger and his team recently published a study of swine influenza virus evolution, comparing classical swine H1N1 viruses with European avian-like H1N1 viruses. Because the newly emerging H1N1 virus descended from both of these lineages, Taubenberger and his colleagues will expand their work and conduct similar analyses of the gene sequences of the novel H1N1 virus. Such detailed studies of the virus’s evolution will provide scientists with clues about the path and timing of host adaptation, as well as clues about which viral genes are associated with virulence.

“The current situation in 2009 with a large outbreak in people of a novel swine virus is unprecedented,” says Taubenberger. “We are studying the virus to understand how this strain

Grady Speaks at the Pacific Institute of Nursing

NINR director Dr. Patricia Grady travelled recently to Hawaii to give a talk at the Pacific Institute of Nursing conference and to meet with nursing faculty and students from across the University of Hawaii system.

Hawaii has a rich heritage of trans-cultural traditions and perspectives and often serves as an international gateway for the flow of knowledge and expertise around the world. The university's motto is *Maluna a'e o nā lāhui a pau ke ola ke kanaka*—Above all nations is humanity. As Grady stated in her talk, "In the 21st century, we are in every sense a global community."

Citing several examples of NINR-sponsored trans-cultural and interdisciplinary studies, Grady discussed the relevance of nursing research in addressing the needs of Hawaiians as well as others living in remote locations or with limited access to health care. In 2007, NINR funded the Center for 'Ohana Self-Management of Chronic Illness at the University of Hawaii at Manoa, located just outside of Honolulu. This research center is examining family- and community-based practices intended to encourage healthier lifestyles and reduce chronic illnesses among Asian and Pacific Islanders. Said Grady, "Such centers play a critical role in research training, scientific advancement and the development of evidence-based practice—the three cornerstones of NINR's efforts to advance nursing science."

She closed her talk with the Hawaiian proverb *Ku-lia i ka nu'u*—Strive to reach the highest. As she reflected, "I found this proverb compelling because it captures the essence of the efforts of our international community of nurses and other clinicians, research scientists, students, educators and scholars. To promote the health of individuals and nations around the world, let us always strive together to reach the highest."—Ray Bingham

NIH Scientists Win Mentoring Awards

The Bethesda chapter of the Association for Women in Science (AWIS) recently honored two members of the NIH community with its annual Award for Excellence in Mentoring. The awards were presented to Dr. Orna Cohen-Fix and Dr. Sharon Hrynkow during the AWIS mentoring workshop, an annual event that allows participants to network and explore careers with scientists working in a wide variety of fields.

Cohen-Fix, a principal investigator at NIDDK, was honored for her enthusiastic mentoring of the trainees in her laboratory. She balances research, editorial work and intramural NIH activities with a full family life. Cohen-Fix is co-director of the Johns Hopkins University/NIH Graduate Partnership Program and was a member of the HHMI-NIH Research Scholars Program committee. She also served on the status of the NIH intramural women scientists task force, which carried out a study using a web-based survey to determine why female NIH postdoctoral fellows leave academic science. She is the recipient of several awards including the Presidential Early Career Award for Scientists and Engineers.

Hrynkow, NIEHS associate director, was presented the mentoring award for her record of success in mentoring and supporting scientific leaders, particularly women in the international arena. A neuroscientist by training, she left the bench over 15 years ago to pursue policy and leadership opportunities in global health and science. It is this blend of expertise that draws so many junior scientists to her.

In her previous leadership positions, including deputy director at the Fogarty International Center, Hrynkow launched a range of activities and initiatives to bolster early career scientists. She has created new programs to support and mentor scientists in resource-limited nations and crafted novel approaches to supporting U.S. undergraduates and graduate students in global health. Hrynkow initiated the annual NIH celebration of International Women's Day to mark achievements and challenges facing foreign women in science working in the U.S. She gave this year's keynote address on the role of women in taking the lead to save the planet at NIH's celebration of Women's History Month.



Dr. Orna Cohen-Fix (top) and Dr. Sharon Hrynkow

ACD MEETING

CONTINUED FROM PAGE 1

In a normal summer, the Center for Scientific Review receives around 16,000 grant applications. The June 2009 cycle [one of three that occur each year] will attract some 35,000 applications, said CSR director Dr. Toni Scarpa. NIH will nearly quadruple the number of reviewers it employs this summer, going from 8,000 to 30,000, which includes scientists all over the world.

NIH will nearly quadruple the number of reviewers it employs this summer, going from 8,000 to 30,000...More than 21,000 applications have arrived for Challenge grants alone.

Kington noted that more than 21,000 applications had arrived for Challenge grants alone. "That number reflects the pent-up demand of good scientific ideas," he said. "It's an

extraordinary sign of how much opportunity is out there." He predicted that the \$200 million Challenge grant program would likely double in size. He also said that NIH's recent efforts to streamline and improve the peer review process have left the agency "well-suited to scaling up [to receive more applications]. We have a strong infrastructure in place."

In addition to the ARRA challenge, NIH must also, by July 7, digest some 49,015 comments on its draft stem cell guidelines and issue a new set that reflects the input, noted Dr. Lana Skirboll, acting director of the Division of Program Coordination, Planning and Strategic Initiatives.

July 7 is also the deadline for comments on a new set of proposed guidelines dealing with conflict of interest in the extramural community. The current guidelines were created by HHS in 1995 and NIH is "assessing whether changes are needed," Kington said, in light of recent news stories about, and congressional inquiry into, unreported income earned by grantees from drug and medical device companies.

The ACD also got an update from the blue ribbon panel advising NIH on the risk assessment of the Boston University National Emerging Infectious Diseases Laboratory (NEIDL). Two court cases, one federal and one state, are both examining the adequacy of NIH's risk assessment. The outcome of the cases will determine whether the facility will ever host work at biosafety levels 3 or 4 [for the most dangerous pathogens].

Meanwhile, the structure is already built, said

Dr. Amy Patterson, acting director of NIH's Office of Science Policy, and is awaiting local permits to conduct the planned work.

"Right now [NEIDL] is being used as a training facility for public health response," she said, "just basic city responses to emergencies. No infectious agents are being studied there."

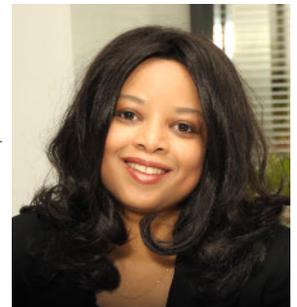
At the suggestion of the blue ribbon panel, NIH, assisted by the National Research Council, is conducting a supplementary risk assessment. A draft of that assessment is expected to be released for public comment early next year. The panel also drafted a set of "best practices for community engagement" for any future high- and maximum-containment infectious disease research, which were unanimously adopted by the ACD.

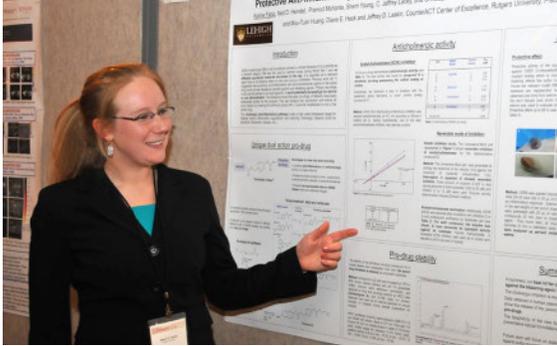
As the meeting ended, Kington lightheartedly noted, "I am cautiously optimistic that a permanent NIH director will lead the December [ACD] meeting." 🗨️

Myrick Featured in 'Science Careers'

Dr. Dorkina Myrick, a medical officer and scientific administrator at the Center for Cancer Training, NCI, was recently featured on the Science Careers web site in the "Life & Career" and "Diversity Issues" sections of the Career Magazine at <http://sciencecareers.sciencemag.org>. The Science Careers web site is sponsored by the journal Science. Myrick is responsible for managing individual and institutional career development and training grants for pre-doctoral, postdoctoral and senior investigators in basic, translational and cancer prevention research. She earned an M.D. and Ph.D. in pathobiology from Brown University School of Medicine in 2001 and completed a residency in anatomic pathology at the Laboratory of Pathology, NCI, in 2005.

PHOTO: MICHAEL SPENCER





Above, a CounterACT investigator presents her research during the poster session. At right, Dr. David Jett, NIH program director for CounterACT, speaks at the group's symposium.



agents such as chlorine gas and metabolic/cellular poisons such as cyanide.

Being prepared for potential exposure to these highly toxic chemicals requires new and improved therapies that can be used safely and quickly during a situation that could involve thousands of victims. The therapies must take effect quickly since many toxic chemicals can kill within minutes.

Launched in 2006, CounterACT was created to conduct basic, translational and clinical research aimed at discovering and identifying safer and more effective drugs and diagnostic technologies to be used after a chemical attack or other mass-casualty chemical events.

The group recently held its third annual research symposium to share information, encourage collaboration among investigators and evaluate the group's progress, which thus far has been remarkable by all measures.

The 3-day meeting held at the Omni Shoreham Hotel in Washington, D.C., included several breakout and poster sessions on such themes as nerve agents, seizure detection technology, cyanide and mustard. The symposium also featured noted scientists presenting on numerous topics including "Prevention of Inflammatory Lung Injury after Chlorine Exposure," "Novel Therapies for Chlorine-induced Lung Injury," "Acute Cyanide Toxicity, Complex IV, NO, and Nitrite," "Novel Antioxidant Therapeutics for Sulfur Mustard Toxicity," "Age and Sex Effects on Nerve Agent Damage to the Brain and Antidotal Therapies" and "Automated Seizure Detection Following Nerve Agent Exposure."

According to Dr. David Jett, NIH program director for CounterACT, "We've made a lot of progress in a short period of time given the time-sensitive and daunting challenge of improving our nation's emergency medical preparedness in this area."

CounterACT is a network of academic, private and federal laboratories funded through Research Centers of Excellence, individual research projects, small business innovation research grants, targeted contracts and other programs. Research areas supported within the network include identification of targets for therapeutic or diagnostic development, development and validation of *in vitro* and animal models for efficacy screening of therapeutics and diagnostic tools, advanced efficacy and preclinical studies with appropriate animal models, and clinical studies—including trials—of new drugs.

Network investigators have identified several molecular entities that show great promise as novel targets for therapeutic discovery and development. *In vitro* and *in vivo* models for screening are being developed and validated in human and animal studies. These models have produced several novel compounds that are now being tested in animal models.

"By the end of this year, investigators will have published more than 150 articles," said Jett, who also serves as a program director in the NINDS Office of Translational Research. "Already more than a half dozen compounds have been identified as potential new drugs. Two clinical trials have begun with support of the network and one drug that is poised for approval by 2010 is already being considered for possible inclusion in the Strategic National Stockpile—the national repository of antibiotics, chemical antidotes and antitoxins."

For more information about CounterACT, contact Jett at jettdd@ninds.nih.gov or (301) 496-6035. 📞

NIH CounterACT Holds Annual Meeting to Discuss Progress

By Shannon E. Garnett

What would happen if hundreds or thousands of people were suddenly exposed to a dangerous chemical—either by act of terrorism, industrial accident or natural disaster? Do we have the best available medical technology to prevent or mitigate the often lethal effects of these chemicals?

These questions are being addressed by the NIH Countermeasures Against Chemical Threats (CounterACT) Research Program—a trans-NIH effort designed to enhance the nation's diagnostic and treatment response capabilities during a chemical emergency.

The increased risk of a U.S.-based terrorist attack involving chemicals has created new challenges for many federal departments and agencies. Within HHS, NIH is taking the lead in developing new and improved ways to prevent, diagnose and treat the conditions caused by existing and potential hazardous chemicals. NIH scientists are pooling resources and sharing experiences with other federal agencies. They are also using lessons learned from previous incidents such as the one a decade ago in Tokyo, when sarin nerve gas was released by terrorists in the subway system. That event caused 12 deaths and forced 5,000 people to seek medical attention.

"The CounterACT effort—which is implemented by NINDS with the cooperation and support of other institutes including NIEHS, NIAMS, NEI, NICHD, NIGMS and NIAID—is a part of the biodefense research triad that includes the development and/or improvement of biological, chemical and radiation/nuclear medical countermeasures for the nation," said Dr. Ernie Takafuji, assistant director for biodefense research, NIAID. "NIAID director Dr. Anthony Fauci spearheads this overall effort that capitalizes on the scientific and medical expertise across the NIH."

Possible threats include warfare chemicals, toxic industrial chemicals and toxins. High-priority threats include neurotoxic agents such as organophosphorus nerve "gases," blister-causing agents such as sulfur mustard, pulmonary



WEIGHT LOSS

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Above:
*Lori Krasner, before and after
Weight Watchers at NIH*

Right:
*Connie Seminerio, in her office
about midway to goal weight*

matters in OD's Division of Program Coordination, Planning and Strategic Initiatives, joined WW in July 2008 and is currently just 10 pounds short of her goal weight. And she's still dropping inches. An HHS employee for more than 23 years—20-plus at NIH—she could also be the poster child for incorporating weight management into the workday.

"NIH promotes health and fitness," she pointed out. "People who work here need to take advantage of the things we have for health and wellness. We need to focus on work, but also on feeling better, living better and healthier lives."

In addition to learning to eat the WW way—making good food choices, controlling meal sizes—Krasner added physical activity to her schedule.

"I now try to do some sort of exercise for an hour every day," she said. "I'm planning on running my first 10K with a coworker and I plan to try a triathlon in the fall." Her workout routine consists of going to the NIH Fitness Center at lunch, running, biking and swimming. She has also become somewhat of a WW pied piper. She recruited 30 NIH'ers to join the at-work program in January. Her enthusiasm is catching.

"Losing weight made me feel better," Krasner said. "It helped my self-esteem. I feel like I have so much energy. I'm 46 and I feel better now than I did at 36. And my back doesn't hurt anymore. NIH offers Weight Watchers at work sessions in Bldgs. 31, 10 and Natcher on a regular basis. People need to take advantage of this."

She's not alone—in becoming a "Watcher" nor in making weight management work at work, according to Laura Lavrin, NIH Fitness Center director. Dozens of NIH'ers have joined Weight Watchers here since its inception in 2005. NIH's WW at work web site says the "total weight loss for 3½ years at NIH is over an unbelievable 3,687.2 lbs."

"It works," Lavrin confirmed. "I have spoken to fitness center members enrolled in Weight Watchers and they have lost pounds and inches because they are using the information they learn in their sessions. The Weight Watchers leaders are very knowledgeable and actually care about members being healthy and losing weight."

OD budget analyst Connie Seminerio is more than halfway to her goal weight, after dropping 35-plus pounds with WW. She attends the traditional sessions after work and uses her daily lunch periods for working out in the NIH Fitness Center.

"If you follow it, it will work," she said, after nearly a year on Weight Watchers. "I eat almost anything I want. I have a sweet tooth too. [WW] is good for weight loss and good for mental health. I feel a lot more...perky the whole day."

No Substitute for Support

WW was founded more than 40 years ago by an overweight Queens, N.Y., housewife who invited a few friends over to chat about ways they could ditch extra pounds. The now-worldwide brand these days hosts an estimated 46,000 meetings (and weigh-ins) every week in 30 countries. The



at-work version features 12-week and 17-week sessions that turn coworkers into comrades-at-arms in the Battle of the Bulge. Making the commitment together—starting a session with the same group of folks at the same time—seems to make losing easier for some.

The typical workweek for most employees is still 40 hours. Do the math. What it boils down to is, you share mind, body and spirit space with your coworkers for a huge chunk of valuable time. Some would argue it's the most valuable portion of time, the wakeful hours when you're most alert and engaged. So who better to help you reach and maintain your weight goals?

David Kirchhoff, president of Weight Watchers International, says WW has taken note. At-work program membership has increased by 14 percent annually since 2005, he said, making it one of the fastest growing parts of WW business.

“Businesses are increasingly recognizing that weight management is a serious health issue,” he explained. “We know that it has implications for heart disease, type 2 diabetes and various types of cancers. From an employer's point of view, that's expensive.”

According to some estimates, Kirchhoff said, overweight workers cost about 35 percent more to employ than their healthy weight counterparts. The figure jumps to 70 percent if the employees are on medications.

“It just makes sense to provide preventive health care that can stop illnesses and problems before they become chronic...Offering Weight Watchers at work is a nice return on a very small investment in a happier, healthier, more productive workforce.”

A Weight Watcher himself since 2000 and newly minted lifetime member, Kirchhoff speaks not only from a professional perspective but also with personal experience: “I'm at the point now where I can maintain a healthy weight lifestyle. The things the program taught me are now part of my daily life. I could not have done it by myself...Weight Watchers is your partner. It empowers you as you get stronger and stronger. My advice is this: ‘It's not hard, but it's not easy. Don't beat yourself up and stick with it.’”

For more information about WW at work, visit www.recgov.org/fitness/weightwatchers.htm. 



Pausing for a photo outside Lipsett Amphitheater are Commissioned Corps members (from l) Radm. David Rutstein, Radm. Robert C. Williams, Radm. Steven K. Galson, Radm. Carol Romano, Radm. Helena O. Mishoe, Capt. Gregory Stevens and Capt. Doris Ravenell-Brown.

NIH Corps Hosts All-Hands Meeting

NIH recently honored acting assistant secretary for health and acting surgeon general Radm. Steven K. Galson and Office of Surgeon General staff at an NIH Commissioned Corps all-hands meeting. The gathering was a unique opportunity to hear about public health priorities for the country,

new initiatives for Corps recruitment and retention, transformation, the Corps expectation of officers, deployment and other related topics. The meeting was followed by a Q&A session and light refreshments.



Acting assistant secretary for health Galson (l), who also serves as acting surgeon general, offers remarks at an all-hands meeting at NIH.



Also addressing the meeting were (from l) Williams, acting deputy surgeon general; Ravenell-Brown, NIH Commissioned Corps liaison; and Stevens, acting director, Office of Commissioned Corps Operations.

PHOTOS: ERNIE BRANSON

NIH Researchers Discover How Prion Protein Damages Brain Cells

Scientists at NIH have gained a major insight into how the rogue protein responsible for mad cow disease and related neurological illnesses destroys healthy brain tissue.

“This advance sets the stage for future efforts to develop potential treatments for prion diseases or perhaps to prevent them from occurring,” said Dr. Duane Alexander, director of the National Institute of Child Health and Human Development, where the study was conducted.

The researchers discovered that the protein responsible for these disorders, known as prion protein (PrP), can sometimes wind up in the wrong part of a cell. When this happens, PrP binds to mahogunin, a protein believed to be essential to the survival of some brain cells. This binding deprives cells in parts of the brain of functional mahogunin, causing them to die eventually. The scientists believe this sequence of events is an important contributor to the characteristic neurodegeneration of these diseases.

The findings were published in the June 12 issue of the journal *Cell*. The study was conducted by Drs. Oishee Chakrabarti and Ramanujan S. Hegde of the Cell Biology and Metabolism Program.

NIAID Outlines Research Agenda for Universal, Voluntary HIV Testing, Treatment

Could a global program of universal, voluntary, annual HIV testing and immediate treatment for those who test positive effectively extinguish the HIV pandemic? Is such a program feasible? In the June 10 issue of the *Journal of the American Medical Association*, HIV/AIDS research leaders at the National Institute of Allergy and Infectious Diseases set forth a research agenda to answer these and other questions that may help shape the future of HIV prevention.

The inspiration for the research agenda is a mathematical modeling study published by scientists from the World Health Organization in *The Lancet* in January 2009. The model by Granich et al. predicts that within 10 years of implementation, a program of universal,

voluntary, annual HIV testing and immediate treatment for those who test positive could reduce HIV incidence from 20 new cases per 1,000 people per year—the current rate in places like South Africa—to less than 1 case per 1,000 per year. Further, the model predicts that this strategy, colloquially called “test and treat,” could end the pandemic within 50 years. Some 33 million people globally are infected with HIV today.

“Given these conclusions, test and treat potentially could represent an important public health strategy for fighting HIV/AIDS,” said NIAID director Dr. Anthony Fauci. “However, the WHO model is based on numerous assumptions that need to be tested and also raises concerns about individual rights, cost effectiveness and other critical issues that require broad public debate.”

Test and treat is one component of a three-part strategy that NIAID is examining to control the HIV/AIDS pandemic. The other parts are pre-exposure prophylaxis and developing ways to control and eliminate the cells carrying latent virus, potentially curing people of HIV.

Genetic Variant Associated with Resistance to Chemo Drug in Women with Breast Cancer

Researchers have found links between individuals’ genetics and their response to treatment with chemotherapy. The findings, by researchers at the National Cancer Institute and colleagues, show how a genetic variant, located in the SOD2 gene, may affect how a person responds to the chemotherapy drug cyclophosphamide. Cyclophosphamide is used in the treatment of breast and other cancers.

The SOD2 gene produces a key protein that protects cells from damage by molecules known as reactive oxygen species, or free radicals. Reactive oxygen species are produced by normal cellular processes and the action of some chemotherapy drugs. The findings represent the first preliminary evidence pointing toward a mechanism and a potential biomarker for cyclophosphamide resistance in breast cancer patients. The study appeared online June 9 in *Clinical Cancer Research*.

“This study shows how, with the progress of individualized medicine, a diagnostic test may be developed that determines whether a patient has certain genetic variations that may modify the effect of certain chemotherapies,” said study author Dr. Sharon Glynn of NCI’s Center for Cancer Research.



NIH scientists have gained a major insight into how the rogue protein responsible for mad cow disease and related neurological illnesses destroys healthy brain tissue.



New members of the advisory committee on research on women's health were introduced at a recent meeting by Dr. Vivian Pinn (third from l), director, Office of Research on Women's Health. They include (from l) Dr. Margery Gass, Dr. Farida Sohrabji, Dr. Jeanne Sinkford and Dr. Paula Johnson. .

Five New ORWH Advisors Welcomed

Five new members recently joined the advisory committee on research on women's health.

Dr. Margery L.S. Gass is a principal investigator for the Women's Health Initiative and has served on the WHI executive committee, publications and presentations committee and has been lead investigator of the initiative's Midwest section. Her research focuses on menopause, osteoporosis and female sexual function.

Dr. Paula A. Johnson is executive director of the Connors Center for Women's Health and Gender Biology and chief of the division of women's health at Brigham and Women's Hospital and associate professor of medicine at Harvard Medical School. She is an internationally recognized cardiologist.

Dr. Gary Striker is a professor of medicine and surgery at the University of Miami School of Medicine and a professor of medicine in the division of nephrology at Mt. Sinai School of Medicine. He is former director of NIDDK's Kidney, Urology, and Hematology Division.

Dr. Farida Sohrabji is an associate professor and associate department head of neuroscience and experimental therapeutics at Texas A&M Health Science Center College of Medicine. She is also a member of the faculty for neuroscience, the reproduction forum and the Center for Environmental and Reproductive Health.

Dr. Jeanne Craig Sinkford is the first woman to be appointed dean of a dental school in the United States. She is professor and dean emeritus, Howard University College of Dentistry, and director, Center for Equity and Diversity, American Dental Education Association.



The phone numbers for more information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

Januvia Study

Volunteers are needed for a study examining the immune function in healthy volunteers given short-term treatment of sitagliptin. Investigators wish to determine if and how sitagliptin alters immune function. If you are 18 years or older and healthy, consider participating in this study. All study-related tests are provided at no cost. Compensation is provided. Refer to study 09-DK-0055.

Adrenal Function in Critical Illness

The adrenal gland function study is currently seeking healthy volunteers age 55 or older to learn more about adrenal gland function in healthy people. This study will measure hormones in the blood, which may allow for a better way to evaluate whether gland functions are normal. This study requires one 3-hour visit for testing and blood work. You will be compensated if eligible to participate. Refer to study 05-CH-0013.

Liver Disease

Individuals with liver disease are needed for NIH study. NIDDK is conducting studies on liver diseases including hepatitis B, C, and D, primary biliary cirrhosis, nonalcoholic steatohepatitis (NASH), fatty liver disease, autoimmune hepatitis, portal hypertension not due to cirrhosis, acute hepatitis from any cause and rare or unexplained liver disorders. Studies are conducted at the Clinical Center. No cost for study-related medications, tests or treatments. Must be 18 years of age or older. Refer to study 91-DK-0214.

Skin Study Seeks Pediatric Participants

We are seeking children between the ages of 3 and 12 diagnosed with atopic dermatitis (eczema) to join a research study at NIH. We wish to determine how microbes such as bacteria and fungi contribute to eczema. The results may help researchers develop more effective treatments for eczema. If your child is eligible for the study, a medical history and a physical examination of skin will be performed, skin will be sampled and there is a nose swab. A one time blood draw is also required. Compensation is provided. For more information, email guevaral@mail.nih.gov or call (301) 402-7043. *Se habla español.* Refer to study 08-HG-0059.



Pulitzer prize winner Jonathan Capehart headlines NIH's recent Plain Language Awards ceremony.

PHOTO: MICHAEL SPENCER

NIH Celebrates Plain Language with Awards, Reception

NIH's Plain Language initiative, which is devoted to clear communication in all government documents, recently celebrated its ninth year with an award ceremony and reception.

"I enjoy the process of selecting words," said keynote speaker and Pulitzer prize winner Jonathan Capehart, an editorial writer for the *Washington Post*. "It's like a thousand-piece jigsaw puzzle of a forest. When it's completed, it's exhilarating. But it's nothing compared to the feedback you get from professionals who appreciate what you do."

That appreciation dovetailed with the 200th birthday of two "very accomplished communicators," said John Burklow, NIH associate director for communications and public liaison. "Charles Darwin and Abraham Lincoln...Both were born on the same day. Both men understood how difficult it was to write clearly."

Dr. Marin Allen, Burklow's deputy, announced the awards. Selected from 160 entries, 67 awards representing 19 institutes and centers went out to NIH'ers, some as individuals and some as teams. The tally was 25 gold, 18 silver and 24 bronze.

The range of products included articles, brochures, booklets, bookmarks, commentary, curricula, draft testimony and statements to the appropriations committees, among others.

Plain Language itself is getting a promotion. Acting NIH director Dr. Raynard Kington announced that the PL award will, for the first time and from now on, appear as a category in the annual NIH Director's Awards.

And just to be clear and to the point: You don't have to be a communications specialist to apply for the award. The 2010 submission process opens in the fall.—*Belle Waring*



NIGMS welcomes new program directors Dr. Michael Bender (l), Dr. Paul Brazhnik (c) and Dr. Vernon Anderson.

Three Join NIGMS Scientific Staff

Three scientists recently joined NIGMS as program directors.

Dr. Michael Bender is managing grants in the areas of RNA processing and protein synthesis. He came to the Division of Genetics and Developmental Biology from the University of Georgia, where he served as associate professor and associate head in the department of genetics. Bender earned a Ph.D. in molecular, cellular and developmental biology from Indiana University.

Dr. Paul Brazhnik is overseeing grants in bioinformatics, computational biology, systems biology, biostatistics and biological networks modeling in the Center for Bioinformatics and Computational Biology. Previously, he served as a research associate professor in the department of biological sciences at Virginia Tech. Brazhnik also was a consulting scientist for Rosa Pharmaceuticals and, prior to that, a scientist for Entelos, Inc. He earned a Ph.D. in theoretical and mathematical physics from Moscow State University in Russia.

Dr. Vernon Anderson is managing grants in the Division of Pharmacology, Physiology and Biological Chemistry related to bioinorganic chemistry, redox enzymology, mitochondrial electron transport and other aspects of bioenergetics. Before joining NIGMS, he served as professor of biochemistry and chemistry at Case Western Reserve University. He earned a Ph.D. in biochemistry from the University of Wisconsin.

Credit Union Names Perkins as New CTO

The NIH Federal Credit Union has named David E. Perkins as its new chief technology officer. He joins NIHFCU's newly appointed CEO, Juli Anne Callis, to lead the credit union's renewed focus on technologic innovation and delivery.

"This is a new day and the role of the CTO will emerge as the spearhead for all delivery channel and product development in the days to come," said Callis. "NIHFCU serves a highly distinguished membership such as medical researchers and fellows from across the globe. The products and services that will meet their needs are emerging rapidly. NIHFCU intends to expand service delivery models based on emerging technologies that will require both vision and stability. David is perfectly suited to lead a team to deliver exceptional results."

Perkins joins NIHFCU from State Employees Credit Union, the largest state-chartered credit union in Maryland, with approximately \$1.75 billion in assets. Over a 13-year career at SECU, with the last 5 as CIO, Perkins' many accomplishments include completion of two core conversions; implementation of new loan origination, online banking and collection systems; and the migration of new software. An expert in data mining and application programming interfaces, he also brings leadership in the areas of application development; host, client and LAN/WAN support; information and network security; and web development.

