

nih record



ABOVE • The Rivera family enjoyed the 5th annual Infant Mortality 5K. See story on p. 12.

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Week of Drama

NIH's First Ebola Patient Recovers, Visits White House

By Rich McManus

In the 8 days between the arrival of NIH's first confirmed Ebola patient—nurse Nina Pham—and her subsequent release, virus-free, from the Clinical Center on Oct. 24, the campus became a magnet for national media attention and a fevered crucible of self-evaluation: could NIH deal successfully with both a challenging medical case and a workforce worried about exposure to a deadly virus?

Between two mid-autumn Fridays, the campus went from apprehension to jubilation as Pham, 26, stepped to the microphone at a press conference in front of Bldg. 10 to announce, "I feel fortunate and blessed to be standing here today. I would first

SEE EBOLA, PAGE 6



Recovered Ebola patient Nina Pham is led out of the Clinical Center by NIH director Dr. Francis Collins (l) and NIAID director Dr. Anthony Fauci.

Online Candor Yields Health Clues

Moreno Uses Social Media to Explore Adolescent Health

By Belle Waring

Adolescents take outlandish risks.

"O brave new world," says Shakespeare's Miranda, "that has such people in it!"

"'Tis new to thee," her father quips.

And the old gent was not even on Facebook.

Teens need years—until age 25 or so—for the brain's executive function to mature. Until then, how do we keep them safe and healthy in the borderless terrain of the Internet?



Dr. Megan Moreno

And what do they have to teach us?

SEE SOCIAL MEDIA, PAGE 4

NCCAM, Tabak Launch Annual CFC Effort At NIH

By Eric Bock

"NIH is an organization devoted to public service. The Combined Federal Campaign allows us to highlight that commitment to public service," National Center for Complementary and Alternative Medicine director



Dr. Lawrence Tabak

Dr. Josephine Briggs told the crowd gathered at the 2014 CFC kickoff event on Oct. 8 in tents in front of Bldg. 1.

The CFC is the annual workplace fundraising drive among federal employees that serves more than 20,000 charities. NCCAM is the lead institute for this year's campaign.

Briggs said that it's a pleasure to co-chair this

SEE CFC KICKOFF, PAGE 10



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NIH...Turning Discovery Into Health

nih record

briefs

'AlertNIH' Offers Emergency Communication

NIH public safety, human resources, public affairs and facilities representatives, with support from senior leadership, have developed an emergency communication service called AlertNIH.

During a major crisis, emergency or severe weather event, NIH public safety officials will use AlertNIH to send event updates, warnings and instructions directly to employees' government-

ALERTNIH

The official emergency communication service for the National Institutes of Health - <http://alert.nih.gov>

www.facebook.com/alertnih www.twitter.com/alertnih

owned communication devices. Employees have the ability to opt-in to receive these updates on their personal devices too. In order to enroll your personal device, log in to the NIH Enterprise Directory (NED) and scroll to the bottom of your profile to the section titled "AlertNIH." Click the "Edit" button and select the personal devices you wish to receive updates on. NIH employees are also strongly encouraged to update their NED profiles.

AlertNIH has established a presence on several social media platforms and can be found on Twitter at www.twitter.com/alertnih and Facebook at www.facebook.com/alertnih.

For questions on the AlertNIH service, contact the Office of Research Services, Division of Emergency Preparedness and Coordination at (301) 496-1985 or visit <http://alert.nih.gov>.

Annual Leave: Use It or Donate It

Annual leave in excess of the maximum carryover balance (in most cases 240 hours) is normally forfeited if not used or donated by the end of the current leave year. If you have not already planned to take those excess hours of annual leave, you should discuss your leave with your supervisor now while there is still time to schedule it. Your bi-weekly Leave and Earnings Statement tells you how much annual leave you must use or donate so that you will not lose it when the leave year ends on Saturday, Jan. 10, 2015.

In spite of planning, circumstances sometimes arise that prevent you from taking leave that has been scheduled and approved earlier during the leave year. In such cases, you and your supervi-

sor are jointly responsible for ensuring that any use or donate leave is officially rescheduled in ITAS. This year, your use or donate leave must be scheduled in ITAS no later than Saturday, Nov. 29.

Excess leave can also be donated—more than 95,000 hours of leave were lost last year by employees who didn't donate their excess leave or seek restoration. Don't let this happen to your leave—help a colleague in need of paid leave due to a medical emergency. Consider making a donation to the NIH Voluntary Leave Transfer Program and/or the NIH Leave Bank, both of which can be done in ITAS, the Integrated Time and Attendance System.

If you or your supervisor have questions about "use or donate" leave, contact your administrative officer.

Workshop on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome, Dec. 9-10

The Office of Disease Prevention and the Office of Research on Women's Health are sponsoring the NIH Pathways to Prevention Workshop: Advancing the Research on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). It will be held Dec. 9-10 in Kirschstein Auditorium, Bldg. 45.

ME/CFS is a complex, multifaceted disorder characterized by extreme fatigue and a host of other symptoms that can worsen after physical or mental activity, but do not improve with rest. The economic burden of ME/CFS, including annual health care costs, is estimated to be between \$1.9 billion and \$7.2 billion.

To better understand the complexity of ME/CFS, NIH has engaged in a rigorous assessment of the available scientific evidence. This process will culminate in a Pathways to Prevention Workshop that will focus on a set of key questions in the ME/CFS field. Attendees will have an opportunity to ask questions and provide comments during open discussion periods. After weighing the evidence, an independent panel will prepare a draft report addressing these questions.

The workshop is free and open to the public. Sign language interpreters will be provided. Those who require reasonable accommodation to participate should contact Deborah Langer via email at lang-erhd@od.nih.gov.

For more information about the conference, which will also be available through live videocast, visit <https://prevention.nih.gov/programs-events/pathways-to-prevention/upcoming-workshops/me-cfs>.

NIH To Mark Native American Heritage Month

In honor of Native American Heritage Month, Dr. Gabrielle Tayac, a member of the Piscataway Indian Nation and a historian at the Smithsonian's National Museum of the American Indian, will present "IndiVisible: African-Native American Lives." The event is on Wednesday, Nov. 12 at 10 a.m. in Bldg. 50, Rm. 1227/1223. For more information, contact Ashley Wells, Ashley.wells@nih.gov or (301) 827-9359.

Females and Males: Same and Different? NIH Workshop Explores Question

By Alison Davis

How do you incorporate sex as a variable in research with animals and cells?

This question was the focus of an Oct. 20 workshop hosted by NIH's Office of Research on Women's Health. Elucidating this topic is a critical first step toward helping NIH-funded scientists consider sex in preclinical research as a result of a new policy announced this past May by NIH director Dr. Francis Collins and NIH associate director for research on women's health Dr. Janine Clayton. The policy is currently under development at NIH.

The workshop was designed to help scientists understand why sex in preclinical research is important, as well as to provide practical guidance on experimental approaches.

Considering sex as a fundamental biological variable resonates with NIH's current focus on reproducibility, said NIH principal deputy director Dr. Lawrence Tabak.

He explained that NIH-funded research must be held to the highest standards of rigor and reproducibility and be "free of bias," adding that while incorporating sex as a basic variable in experimental design is good science, it's not always simple for scientists to know how to address this issue in their everyday work.

Tabak acknowledged that many in the research community need some pointers on research methods that address sex. "How am I supposed to do *this* in addition to everything else I am doing?" he quoted researchers as saying. Tabak added that the workshop was intended for this very purpose—to provide a how-to guide for researchers new to thinking about the role of sex and gender in science.

Workshop speakers represented a range of scientific fields, including neuroscience, toxicology, endocrinology and nephrology. All have applied a sex/gender lens to their research for many years and in many different animal models.

One approach introduced was factorial design, which enables a scientist to consider sex in addition to another independent variable without substantial increase in the overall number of animals. This has been a key concern of many scientists not familiar with considering sex in preclinical research.

Keynote speaker Dr. Larry Cahill—a neuroscientist studying memory at the University of California, Irvine—has long recognized

the importance of significant differences in female and male biology within the brain. He questioned the historical assumption that fundamental biology is that which is the same in males and females. Rather, he explained, "[what's] fundamental is same *and* different."

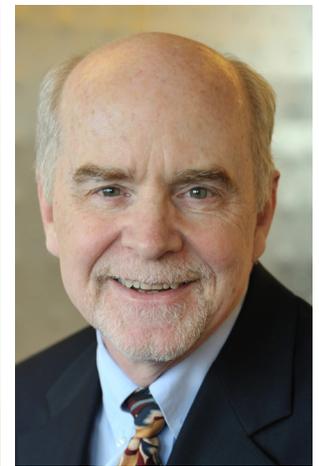
Other speakers, including the University of Maryland's Dr. Margaret McCarthy, described how she was not initially interested in sex differences, but that a separate focus on female and male biology at the outset of her experiments "led to new biological truths," such as a previously unknown role of microglia in synapse formation in the brain.

Thinking about sex as a variable in research in animals and humans is "not just a women's health issue," emphasized Clayton, adding "this is about good science—for women and for men."

For more information on how to incorporate sex as a biological variable, visit www.nih.gov/sexinscience. 

Two NIH'ers Elected To Institute of Medicine

Two NIH physicians are among the 70 new members and 10 foreign associates recently elected to the Institute of Medicine during its 44th annual meeting. Election to the IOM is considered one of the highest honors in the fields of health and medicine and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service.



Two NIH physicians, CC/NLM's Dr. James Cimino (l) and NIAMS's Dr. John O'Shea Jr., are among 70 new members elected to the Institute of Medicine.

"It is with great enthusiasm that we welcome our esteemed colleagues to the Institute of Medicine," said IOM president Dr. Victor Dzau. "These leaders' tremendous achievements have contributed significantly to advancing health and medicine. The expertise and knowledge they bring to the IOM will encourage and enhance its success."

The new NIH members are Dr. James J. Cimino, chief, Laboratory for Informatics Development, Clinical Center and National Library of Medicine; and Dr. John Joseph O'Shea Jr., scientific director, National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Established in 1970 by the National Academy of Sciences, IOM has become recognized as a national resource for independent, scientifically informed analysis and recommendations on health issues. The newly elected members raise IOM's total active membership to 1,798 and the number of foreign associates to 128. With an additional 86 members holding emeritus status, IOM's total membership is 2,012.

SOCIAL MEDIA

CONTINUED FROM PAGE 1

Right:

Moreno said, "I want to emphasize I'm not talking about diagnosis. I'm talking about red flags that might prompt someone to seek appropriate clinical care, intervention or resources."

PHOTOS: BILL BRANSON

Now, Dr. Megan Moreno of Seattle Children's Research Institute is leading the way in "Using social media to investigate adolescent health," which was the title of her talk for a recent Wednesday Afternoon Lecture Series in Masur Auditorium. She reviewed key adolescent health issues, the social media (SM) landscape and research opportunities SM provides.

"Our vision is to provide education to adolescents and their families toward safe Internet use," she said. "We also focus on developing tools to assess and define problematic Internet use."

Motor vehicle accidents, homicide and suicide are the three leading causes of death and injury in the adolescent population ages 12-19, according to the Centers for Disease Control and Prevention. These events carry red flags, or precursors, said Moreno.

Because SM is interactive, it opens a window into the world of teens. Over 90 percent of adolescents use SM, where they may display risky behaviors and describe their health attitudes, intentions and behaviors in ways that can be measured—individually, in groups and across time.

Moreno uses observational studies, with emergency protocols in place, aimed at populations ages 10 to 26.

That cohort is "a moving target, but a lot of our studies focus on the transition out of high school into college," she said. "What I'm really interested in is the independence that adolescents are developing.

"There's a couple challenges when it comes to adolescents," she said. "One of them is that they don't go to the doctor. If they are worried about confidentiality they won't always seek care for a problem."

And she shared this surprising finding: "When adolescents show up at the doctor, many are not screened about these risks. So in some studies, less than half of teens are screened for substance use and depression when seeing a pediatrician.

"These are the fundamentals that really drove me to be interested in social media," she continued, "and to ask whether social media could offer new opportunities for early identification of risky health behaviors, for prevention or intervention."

Her Social Media and Adolescent Health



Research Team (SMAHRT) is conducting a NIDA-sponsored longitudinal multisite study of college students' SM use as a mechanism of behavior change for substance use.

A few early study results:

1. A sample of 500 users of MySpace showed that when adolescents display references to one risk behavior, they are more likely to display others, which mirrors previous studies of self-report that show these same patterns when adolescents report about risk behaviors on surveys.

2. 300 profiles of 18-year-olds on Facebook revealed:

- 76 percent displayed references to substances (among this cohort, 73 percent displayed alcohol).
- 24 percent displayed references to risky sexual behavior.

3. In individual patterns over a 2-week period, 2.5 percent chose to display depressive symptoms on SM.

"This doesn't mean that Facebook is diagnostic, but it gives a sense of adolescent experience and what they're willing to reveal," said Moreno.

"We also examined peer responses to these disclosures," she continued.

Some supported their depressed friends in compassionate ways. Yet, Moreno said, in the case of anorexia nervosa, some anorexics encouraged the disease by making flattering remarks.

An example of a pro-eating-disorder Twitter account would be this handle: SexyAnorexy.

The reality is harsher: According to NIMH, anorexia nervosa has the highest mortality rate of any psychiatric disorder, around 10 percent.

4. In an analysis of 50 YouTube videos, including 892 comments, Moreno's team also followed SM displays at the population level.

"Because SM provided open access," said Moreno, "it's important to realize the infor-

mation that our adolescents might be seeking about major social movements of health issues may be biased.”

5. Her team compared two groups on SM to detect the first time they chose to display about alcohol:

- 20 percent displayed before coming to college the first year
- Another 40 percent chose to display a first reference to alcohol around Halloween, which coincided with a campus party for over-21s. Data suggests the age restriction was not necessarily adhered to.

“I want to emphasize I’m not talking about diagnosis,” Moreno stressed. “I’m talking about red flags that might prompt someone to seek appropriate clinical care, intervention or resources.”

Young people seeking advice and care are using many of the same SM platforms as adults. “Parents are one of the fastest growing populations on Facebook,” Moreno stressed, as are “dormitory resident advisors, peer leaders, trusted adults...and the ‘cool aunt phenomenon.’”

When we recall that, according to some studies, less than half of teens being seen by a pediatrician are being screened for substance use and depression, SM seems like a brave new world indeed.

“Adolescent health issues need to be prevented and addressed outside of the clinical setting,” said Moreno. “Adolescents are present and engaged on social media, so can we meet them where they are?”

On Oct. 17, NIH announced that more than \$11 million over 3 years will be used to support research exploring the use of social media to advance the scientific understanding, prevention and treatment of substance use and addiction.

“Social media has the potential to fill important gaps in our current understanding of tobacco, alcohol and drug use and to improve the efficacy of substance abuse interventions,” said Dr. Wen-ying (Sylvia) Chou, program director in NCI’s Health Communications and Informatics Research Branch. “For example, user-generated social media interactions can reveal important insights into substance use patterns and various social factors.”

Moreno’s talk is archived at <http://videocast.nih.gov/summary.asp?Live=14673&bhcp=1>.

NIH Funds National Diversity Consortium

NIH recently announced the award of nearly \$31 million in fiscal year 2014 funds to develop new approaches that engage researchers, including those from backgrounds underrepresented in biomedical sciences and prepare them to thrive in the NIH-funded workforce.

The awards are part of a projected 5-year program to support more than 50 awardees and partner institutions in establishing a national consortium to develop approaches to encourage individuals to start and stay in biomedical research careers. Supported by the NIH Common Fund and all 27 NIH institutes and centers, 12 awards will be issued as part of 3 initiatives of the Enhancing the Diversity of the NIH-Funded Workforce program.

“The biomedical research enterprise must engage all sectors of the population in order to solve the most complex biological problems and discover innovative new ways to improve human health,” said NIH director Dr. Francis Collins. “While past efforts to diversify our workforce have had significant impact on individuals, we have not made substantial progress in expanding diversity on a larger scale. This program will test new models of training and mentoring so that we can ultimately attract the best minds from all groups to biomedical research.”

The awards have been made to a geographically diverse group of institutions serving multiple underrepresented populations in biomedical research. Awardees will draw upon research to develop approaches to training and mentoring. The consortium will determine hallmarks of success at each phase of the biomedical career path, including competencies and skills required for a successful research career that extend beyond content knowledge in the sciences, such as leadership, grant writing, innovation and networking. The consortium will disseminate lessons learned, so effective approaches can be adopted by institutions across the nation.

“These awards represent a significant step toward ensuring that NIH’s future biomedical research workforce will reflect the unique perspectives found within the diverse composition of our society,” said Dr. Hannah Valantine, NIH chief officer for scientific workforce diversity.

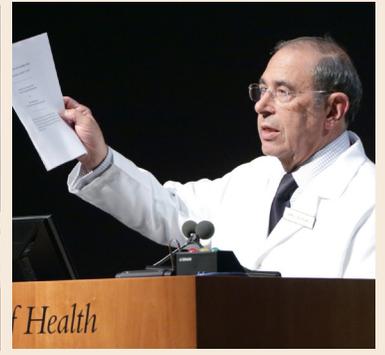
Three initiatives form the diversity consortium:

- ▼ Building Infrastructure Leading to Diversity (BUILD) is a set of experimental training awards designed to learn how to attract students from diverse backgrounds into the biomedical research workforce and encourage them to become future contributors to the NIH-funded research enterprise.
- ▼ The National Research Mentoring Network (NRMN) will be a nationwide network of mentors and mentees spanning all disciplines relevant to the NIH mission and will develop best practices for mentoring, provide training opportunities for mentors and provide professional opportunities for mentees.
- ▼ The Coordination and Evaluation Center (CEC) will coordinate consortium-wide activities and assess efficacy of the approaches developed by the BUILD and NRMN awardees.

For details on BUILD, NRMN and CEC, visit <http://commonfund.nih.gov/diversity/fundedresearch>.



Dr. Hannah Valantine, NIH chief officer for scientific workforce diversity



EBOLA

CONTINUED FROM PAGE 1

Above, from l:

Pham, flanked by her sister Cathy (l) and mother Diana (r) accepts a round of applause from CC director Dr. John Gallin (l) and NIAID clinical director Dr. H. Clifford Lane (r).

Fauci leads a Special Grand Rounds session on the “perfect storm” of Ebola in West Africa.

Gallin holds up an Ebola fact sheet at an employee all-hands session on Oct. 17 in Masur Auditorium.

Below:

Lane (l) and Fauci (c) are joined by NIAID’s Dr. Richard Davey (r), who runs the hospital’s special clinical studies unit.

PHOTOS: BILL BRANSON, ERNIE BRANSON



and foremost like to thank God, my family and my friends...Throughout this ordeal, I put my trust in God and my medical team.”

Before Pham—who was joined by her caregivers, her mother Diana and her sister Cathy—spoke, NIAID director Dr. Anthony Fauci declared her virus-free on the strength of 5 negative PCR (polymerase chain reaction) tests. “What a great pleasure and privilege it is for me and the staff here, to have the opportunity to treat and care for—and to get to know—such an extraordinarily courageous and lovely person,” said Fauci.

In honor of Pham’s nursing alma mater, Texas Christian University, Fauci wore on his lab coat ribbons with the TCU colors. He predicted for her “a normal, healthy, happy life,” once the fatigue of dealing with Ebola infection subsides.

“I am now on my way back to recovery,” said Pham, “even as I reflect on many others who have not been so fortunate.” She especially thanked recovered Ebola victim Dr. Kent Brantly, from whom she had received a transfusion of plasma. It is believed, but not proven, that antibodies circulating in those who have recovered from Ebola offer protection to patients with a current infection.

“I believe in the power of prayer,” Pham continued, “because so many people all over the world have been praying for me.”

NIH director Dr. Francis Collins opened the impromptu press conference, calling it “a special moment in the life of this remarkable institution.

We like to call ourselves ‘the National Institutes of Hope.’ Hope just went up a notch today.”

Answering media questions, Fauci reiterated, “She is cured of Ebola, that’s for sure. She will get full strength back—she’s such an incredible lady—and she’ll do it quickly.”

Asked how Pham communicated with family and

caregivers during her ordeal in isolation, Fauci enumerated ways including the iPhone FaceTime video application: “She taught me how to use it,” he quipped.

As the 20-minute press conference wrapped up on a blustery noontime, someone asked if Fauci would miss Pham. Returning to the mic he had just left, Fauci declared, “I’m gonna miss her a lot. I gave her my cell phone number, just in case I get lonely.”

Someone in the crowd shouted, “We love you Nina!” and the conference ended in applause as Pham headed to the White House for a meeting with the President before going home to Texas.

But that’s not how the week had begun.

Helicopters Herald Drama

The news helicopters that hovered over campus on the afternoon of Oct. 16, when word of Pham’s impending arrival became public, offered a hint of things to come. The following morning, a convoy of satellite trucks queued up along Center Dr. in front of the Clinical Center, where the first of the week’s two outdoor news conferences was hastily arranged.

Having been up all night caring for Pham, who became the first resident of the CC’s special clinical studies unit (SCSU), Fauci spent a half hour answering questions from TV news reporters before going inside to the medical board room to brief print media on how NIH would handle its first Ebola patient. That same day, NIH staff packed Masur Auditorium, Lipsett Amphitheater and overflow rooms for two all-hands information sessions. The crowds returned to the same locales on Oct. 22 for a Special Grand Rounds session on Ebola.

Accompanying Fauci at the press events, and at the all-hands sessions for CC employees, were Dr. Richard Davey of NIAID, who runs the SCSU, NIAID clinical director Dr. H. Clifford Lane and CC director Dr. John Gallin, who explained to the media the special nature of “the world’s largest hospital dedicated to biomedical research.” Also on hand for the employee sessions was Dr. Tara Palmore of the CC’s hospital epidemiology



Above, NCI's Dr. Wyndham Wilson asks a question at the all-hands session Oct. 17. At right, Dr. Tara Palmore and Gallin handle questions from the audience. At far right is a portion of the media presence at the CC.



service, who explained the rigors involved in safely caring for an Ebola patient.

At the All-Hands Session

"The Clinical Center has always been a place that has responded to public health emergencies," said Gallin, at the second of two all-hands sessions to share facts and dispel rumors among Bldg. 10 employees. He remembered when the hospital accepted its first AIDS patients more than 30 years ago, adding, "Now we have another challenge with Ebola... Hopefully, when we're done, you'll feel as comfortable [about safety precautions] as I feel."

"I can't tell you how very, very proud I am of this institution, which once again has risen to the occasion," said Fauci. He reminded the audience that, 33 years ago, when the CC first hosted AIDS patients, people crossed the hall to avoid him and wouldn't ride the elevator with patients infected with HIV.

Davey explained that the SCSU, located on the fifth floor of the Clinical Research Center, opened in 2011 as part of a biodefense initiative, in order to respond to the possibility of a worker at Ft. Detrick becoming infected at its BSL-4 laboratory. The unit got its first test in September, when a physician suspected of having Ebola was admitted to the SCSU. The patient did not have Ebola, but the unit passed with flying colors.

"We were thoroughly convinced that the policies at the highest levels of safe containment were effective," said Davey, who said a cast of dozens "all pulled together in an amazing way. I can't compliment them enough. The esprit was overwhelming. Our infection control measures exceed the guidelines and have been thoroughly tested."

NIAID's Lane emphasized that patient care comes first with CC patients, but a research component is also essential—what did we learn scientifically to improve future care?

"This is our first opportunity to study a patient with Ebola," he said. "There's an enormous amount we think we'll be able to learn with one patient... Even though this is a tiny percent of what's going on in West Africa, it could extend the benefits of our research there."

Lane said NIH is "fairly optimistic we can develop a vaccine" against Ebola, and mentioned two candidates, both in phase 1 trials. "Our hope is that we can rapidly extend phase 2 and 3 trials to Liberia... This patient [Pham] is part of a substantial research program."

Palmore reviewed extensive SCSU safety protocols, insisting repeatedly that the disease can only be acquired through direct contact with the body fluids of an infected person, or a deceased Ebola victim.

"There is no airborne transmission," she emphasized. Palmore is the coauthor, along with CC deputy director for clinical care Dr. David Henderson, of a 12-page white paper—Ebola Virus Disease Information for NIH Clinical Center Staff—that was made available to everyone in the hospital, and online. Gallin noted that all CC inpatients had received a letter, in both Spanish and English, the night before Pham arrived, assuring that patient safety is paramount.

"Our redundancies and strict procedures help protect staff from exposures, and everyone else, too," Palmore said.

During an extensive Q&A session moderated by Gallin, at least one attendee was not sure that NIH is doing enough to protect health care workers and other patients. Dr. Wyndham Wilson, head of NCI's lymphoma therapeutics section, argued that NIH's Ebola precautions should exactly match those of Médecins Sans Frontières (MSF, Doctors Without Borders), a group that has been successfully dealing with Ebola in Africa for more than 30 years.

Palmore explained that the extra step MSF takes in Africa—involving hosing down health care workers as they doff personal protective equipment—is practical only in outdoor facilities and would not work indoors. She is confident that NIH's protective measures, which match those at Emory University, Rocky Mountain Laboratories (St. Patrick's Hospital, Missoula, Mont.) and the University of Nebraska, are more than adequate.

Asked why Pham had been transported from Texas to the CC, Fauci offered several reasons: NIH has a special unit built for this kind of crisis and trained staff. Plus, "We are a biomedical research institution. Very little research has been done on these patients due to the cataclysmal nature of treating them. We have

CONTINUED ON PAGE 8

Reporters and camera crews crowd the front of Bldg. 10 on Oct. 24, the day Pham was released, virus-free, from the hospital.





Above, from l:
Pham reads from a prepared statement on the day of her release. She took no questions from the media at the session.

Fauci prepares to hug Pham as she heads to the lectern to speak to the media.

Below:
Dr. Daniel Chertow of the CC's critical care medicine department volunteered to care for Ebola patients in Liberia.



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almost a moral responsibility to step to the plate on this." He also said the Texas hospital needed room in case any other people fell ill after contact with Thomas Eric Duncan, the patient who infected Pham.

At Special Grand Rounds

The crowds that had attended the two all-hands sessions on Oct. 17 were back on Oct. 22, filling not only Masur and Lipsett but also the FAES classrooms in Bldg. 10, for Fauci's description of "a perfect storm" of Ebola in West Africa, which is by far the largest of 24 Ebola outbreaks since 1976. Indeed, it is many times larger than all previous outbreaks combined, he said.

Fauci also lamented a perfect storm of media miscommunication on the disease, pausing often to disentangle multiple public misperceptions.

NIH director Dr. Francis Collins opened Special Grand Rounds by saying, "I have never been prouder of this institution than during this international crisis."

Ebola is a filovirus, meaning it has filaments. "It's a scary looking virus," Fauci noted. It is the Zaire strain of Ebola, historically the most virulent, that is causing havoc in West Africa, he said.

Ebola infection is virtually indistinguishable from flu at the outset, but within days can proceed to vomiting and diarrhea on the order of 5 liters per day, causing massive dehydration.

The current outbreak, traceable to last December, but more fulminant in March 2014, is complicated by a number of factors, said Fauci. These include extensive family relations in that part of the world, general poverty, porous borders between nations and poor health care.

The power of NIH sequencing technology has been brought to bear on 99 Ebola virus sequences taken from 78 patients, Fauci said. While the virus does appear to be undergoing many mutations, none have yet occurred in its functional domain; it is still transmissible only by direct contact, not by any airborne route.

More than 3,000 U.S. troops have been commit-

ted to Ebola response, Fauci said. There are 17 100-bed hospitals under construction, "but that may not be enough." There is also a 25-bed unit set aside for health care workers.

About 50 people arrive daily in the U.S. from countries affected by Ebola, but all are screened both on exit from Africa and entry to the U.S. Fauci said a study of some 36,000 travelers from Africa to the U.S. during August and September turned up 77 individuals with fever, but all had malaria, not Ebola.

He emphasized that when a health care worker such as Pham—"an extraordinarily charming lady, brave and courageous"—becomes infected, that is not an outbreak, but a misfortune.

The audience was riveted by Dr. Daniel Chertow's account of a volunteer stint at an MSF field hospital in Monrovia, Liberia. The assistant clinical investigator in the CC's critical care medicine department began with a brief video made by National Geographic on-site at the hospital; though mired in a difficult setting, Chertow exhibited exhilarating satisfaction of a kind that travel ads for places like Jamaica and Hawaii could only dream of evoking.

He took care of more than 200 patients during his stay, about 40 percent of whom survived. "We need to reduce the stigma associated with this disease," he emphasized. Even when patients go home disease-free, they are still often shunned in their families and communities, Chertow reported.

The session ended with a discussion of ethical issues raised by the Ebola crisis, led by CC bioethicist Dr. David Wendler, who urged that the global public health community take lessons from West Africa for consideration during non-crisis times. He also pointed out that more than 2 million people in sub-Saharan Africa die of diarrheal diseases unrelated to Ebola each year. "Ebola is not the only culprit," he said.

During a Q&A session, Fauci was asked about news reports of a dog in Spain that had been euthanized after contact with a suspected case of Ebola. "Dogs can become antibody-positive for Ebola, but don't get sick and die," he said. "It's theoretically possible that a dog could transmit Ebola to a person, but there is no evidence of that so far."

He added, "Nina's dog is Bentley, and no one's gonna kill Bentley."

At the end of her prepared remarks on Oct. 24, Pham asked for privacy as she goes home to her career in Texas, where "I am going to reunite with my dog Bentley." 🐕

letters

Dear Editor,

Viruses, disconnections and deformation conjure adverse states. Virus-free, well-wired and beauty suggest positive states. Change your filters, however, and viruses become vectors to target therapy delivery, wireless/untethered becomes a preferred mobile environment and deformity can be a means to evolution. Many of our filters are reflexive and unconscious. We sometimes forget that our filters are active and can be double-edged swords that allow us to see differences, but can also keep us from seeing inherent potentials, alternative directions and new possibilities.

Persons with disabilities are often challenged by the filters through which they are viewed. Even the word “disabilities” engages the good versus bad, better versus lesser filters. Change filters and persons with disabilities are seen as persons with ability differences, capable via an additional or alternative path. Like their colleagues, they are persons with a range of skills, who both fail and excel in many domains. They are not universally underachievers, nor universally overachievers. Ability differences can prompt people to employ different filters and strategies to address the world, sometimes to innovative effect and desirable outcomes.

Ready to see how another view might benefit your goals? Include persons with ability differences in, not just invite them to, discussions. Value alternative perspectives for the new possibilities they may reveal. Engage and encourage persons with ability differences to contribute to the search for solutions to important questions. You might be surprised how much you've been missing!

Kathy Mann Koepke, NICHD

Community College Day Set, Nov. 25

The NIH Office of Intramural Training & Education will host Community College Day 2014 on Tuesday, Nov. 25 from 8 a.m. to 4 p.m. at the Natcher Conference Center. Community college students and faculty will visit the NIH campus to learn about careers and training opportunities in biomedical and health care fields. For registration and more information visit www.training.nih.gov.

'Foil the Flu' Campaign Progresses

Every year, the flu affects between 5 percent and 20 percent of all U.S. residents. The flu is a contagious respiratory illness caused by a number of different viruses. Seasonal influenza usually starts in the fall and peaks in January or February.

“Foil the Flu,” the annual seasonal influenza immunization program for NIH employees and contractors, was designed to help prevent seasonal influenza and is strongly encouraged.

So far, the Occupational Medical Service has administered 12,800 doses of the vaccine since Sept. 15, the first day of the campaign. Fifty-three percent of the vaccine recipients have completed the electronic survey and program efficiency has improved significantly with room for further improvement. The survey revealed the following:

- 76 percent of recipients received their shot within 5 minutes of arrival.
- 17 percent of recipients had to wait between 6-10 minutes after arrival.
- 6 percent of recipients had to wait between 11-20 minutes after arrival; and
- 1 percent (120 cases or so) had to wait more than 20 minutes.

The majority of cases waiting more than 20 minutes occurred during the first week of the campaign at off-campus locations. With experience and feedback, those minor issues and delays will be resolved for next year.

The biggest and most frequent complaint from the survey was the inadequate supply of the high-dose flu vaccine intended for recipients 65 and older. There is only one licensed manufacturer and it experienced unforeseen difficulties manufacturing and distributing that product this year. Other concerns included increasing administrative and clinical staff for the first day at each off-campus location and improving communications (status of vaccine supplies and signage).

For more information about Foil the Flu, visit www.foiltheflu.nih.gov/ or call OMS at (301) 496-4411.



Golf Tournament Benefits Children's Inn

Kent Island Mechanical, a contractor that does a lot of work on the NIH campus, recently held its 4th annual Charity Golf Tournament benefitting the Children's Inn at NIH. On hand at the presentation of a check for \$10,000 raised at the event are (from l) Kyle Benjamin and Tommy Murray of KIM, inn CEO Kathy Russell, Bobby Linton of KIM and Laura King, director of volunteers at the inn.

CFC KICKOFF

CONTINUED FROM PAGE 1

year's campaign along with NIH director Dr. Francis Collins.

"The array of charities creates a wonderful opportunity to give back to the world," Briggs said.

Next, NIH principal deputy director Dr. Lawrence Tabak thanked last year's lead institute, the National Institute on Alcohol Abuse and Alcoholism, keyworkers and other volunteers for their efforts. He noted that NIH staff donated \$2.4 million to CFC charities in 2013, despite enormous obstacles.

"You can't shut down NIH's generosity," Tabak emphasized, recalling the 16-day government shutdown that postponed last year's CFC kickoff. "NIH is second to none in meeting challenges, overcoming obstacles and seemingly doing the impossible."

Tabak said NIH is the largest CFC donor within the Department of Health and Human Services and in Montgomery County.

"Let's work together to exceed our goal and remind our colleagues that we're in this together," he said.

Kirk Bauer, executive director of Disabled Sports USA, delivered the kickoff's keynote speech.

"What charity you give to and the programs that you support make life-changing differences," he said.

Bauer said CFC is unique because the Office of Personnel Management vets every charity to ensure that all are legitimate and deliver the services they say they offer.

"This means that when you pick a charity through the CFC, you

know it's going to be effective and help change lives," he added.

Forty-five years ago, Bauer lost his left leg as a result of wounds suffered during a firefight in Vietnam. Back then, he said, there was little support for veterans with disabilities.

"In 1969, Disabled Sports USA offered one sport, skiing, to single-leg amputees," said Bauer.

"Because of support from the public—including the private sector and the CFC—we're now able to offer over 40 sports for any type of disability you can imagine."

As examples of how charities change lives, he told the stories of two Marines whose lives were affected by Disabled Sports USA.



Bauer said a 19-year-old Marine stationed in Arizona donates \$1,500 a year to Disabled Sports USA and War Fighter Sports, a rehabilitation program that serves injured military members, including veterans and those on active duty.

Whenever someone donates that much, Bauer sends a personal thank-you note. Then, the Marine called Bauer and asked if he could speak to Disabled Sports USA staff. Bauer gathered his staff in his office and put the soldier on speaker phone.

The Marine said he donates to Disabled Sports USA because the charity changed his family's life. In 2005, his father lost his leg as a result of a wound suffered in Iraq. As part of his rehab, the father became involved in the charity. The Marine said he was able to ski, snowboard and scuba dive with his father because of Disabled Sports USA.

Bauer also said he received an email from a veteran who wrote that Disabled Sports USA had also changed his life. In Iraq, the vet suffered multiple serious injuries. Afterwards, he said he was lost in life. One day, Disabled Sports USA taught him to ski. Being able to ski has given the veteran a new passion that has extended to other areas of his life. Bauer said the veteran even proposed to his now-wife at a Disabled Sports USA ski event.

The veteran also hopes to help other vets with severe disabilities realize that life isn't over after combat injuries.

"These are the kinds of difference that you are making and can make," Bauer said.

After the keynote address, musician Ted Garber performed his song, "Giving Tree." Garber is a former artist-in-residence at Strathmore Performing Arts Center. Before he sang, he said his wife was enrolled in a clinical trial at NIH.

"I know that NIH is a fantastic organization first-hand," he said.

NCCAM Executive Officer Wendy Liffers closed the ceremony by thanking NIH staff for supporting the CFC.

Disabled Sports USA is one of more than 40 charities that set up information tables at the kickoff. Representatives from those charities were on hand to answer questions.

The CFC seeks to raise \$2.2 million and will run through the end of the year. 🎸

Above:

Helping launch the 2014 CFC effort at NIH are (from l) musician Ted Garber, NCCAM Executive Officer Wendy Liffers, NCCAM director Dr. Josephine Briggs, and keynote speaker Kirk Bauer, executive director of Disabled Sports USA.

Below:

Under a large tent in front of Bldg. 1, some 40 CFC charities were on hand to display their services.

PHOTOS: ERNIE BRANSON



digest

Rapid Agent Restores Pleasure-Seeking Ahead Of Other Antidepressant Action

A drug being studied as a fast-acting mood-lifter restored pleasure-seeking behavior independent of—and ahead of—its other antidepressant effects, in an NIH trial. Within 40 minutes after a single infusion of ketamine, treatment-resistant depressed bipolar disorder patients experienced a reversal of a key symptom—loss of interest in pleasurable activities—which lasted up to 14 days. Brain scans traced the agent's action to boosted activity in areas at the front and deep in the right hemisphere of the brain.

“Our findings help to deconstruct what has traditionally been lumped together as depression,” explained Dr. Carlos Zarate of NIMH. “We break out a component that responds uniquely to a treatment that works through different brain systems than conventional antidepressants—and link that response to different circuitry than other depression symptoms.”

This approach is consistent with NIMH's Research Domain Criteria project, which calls for the study of functions—such as the ability to seek out and experience rewards—and their related brain systems that may identify subgroups of patients in one or multiple disorder categories. Zarate and colleagues reported on their findings Oct. 14 in the journal *Translational Psychiatry*.

Doubt Cast on Plans to Scale Up Preterm Birth Treatment in Low-Resource Settings

A study by an NIH research network calls into question plans to increase access to steroid treatment for pregnant women in low-resource settings at high risk for preterm birth. The study, published online in *The Lancet*, concluded that the treatment—a standard, life-saving practice in high-income countries such as the United States—could potentially cause harm in low-resource settings where many births take place outside the advanced-care hospitals that are standard in high-income countries.

The researchers are uncertain as to why the therapy did not offer the clear benefit in the low-income countries that it provides to preterm infants in high-income countries. Potential reasons range from some unknown aspects of the intervention itself—the methods the

researchers devised to teach local birth attendants how to administer the drug outside hospital settings—to the possibility that, despite enhanced lung function, preterm infants may simply be in greater need of the advanced hospital care common in high-income countries.

The steroid therapy works by triggering the lungs of a preterm infant to mature so that he or she can absorb oxygen. The treatment has been proven to increase the survival rate of preterm infants in high- and middle-income countries. Steroid treatment is routinely prescribed to women at risk of giving birth before the 34th week of pregnancy in the U.S. and in other high-income countries. Because of its proven effectiveness in the high-income countries, health care workers have begun efforts to increase access to women in low-resource settings in low- and middle-income countries. The study—undertaken as a test to determine the feasibility of providing the treatment in low-resource settings—enrolled women considered at risk for preterm birth in several countries in Africa, Asia and Central and South America.

“Many public health experts had believed steroid therapy before birth would save as many lives in low-resource settings as it does in high-income countries,” said study author Dr. Marion Koso-Thomas of NICHD. “These results are extremely disheartening, but they underscore the critical importance of studying even an established treatment before introducing it to a new setting.”

Scientists Sniff Out Unexpected Role for Stem Cells in the Brain

For decades, scientists thought that neurons in the brain were born only during the early development period and could not be replenished. More recently, however, they discovered cells with the ability to divide and turn into new neurons in specific brain regions. The function of these neuroprogenitor cells remains an intense area of research. NIH scientists report that newly formed brain cells in the mouse olfactory system—the area that processes smells—play a critical role in maintaining proper connections. The results were published in the Oct. 8 issue of the *Journal of Neuroscience*.

“This is a surprising new role for brain stem cells and changes the way we view them,” said study lead author Dr. Leonardo Belluscio of NINDS. He teamed up with Dr. Heather Cameron of NIMH to better understand how the continuous addition of new neurons influences the circuit organization of the olfactory bulb.

The olfactory bulb is located in the front of the brain and receives information directly from the nose about odors in the environment. Neurons in the olfactory bulb sort that information and relay the signals to the rest of the brain, at which point we become aware of the smells we are experiencing. Olfactory loss is often an early symptom in a variety of neurological disorders, including Alzheimer's and Parkinson's diseases.

In a process known as neurogenesis, adult-born neuroprogenitor cells are generated in the subventricular zone deep in the brain and migrate to the olfactory bulb where they assume their final positions. Once in place, they form connections with existing cells and are incorporated into the circuitry.—**compiled by Carla Garnett** 🍷



A study by an NIH research network calls into question plans to increase access to steroid treatment for pregnant women in low-resource settings at high risk for preterm birth.

NICHD 5K Event Seeks to Raise Awareness About Infant Mortality

Once again, Rodney Rivera of NICHD brought his kids to “roll” in the 5th annual Infant Mortality 5K Run/Walk/Roll event, held Oct. 16. After the runners and walkers set out on the campus-wide course, young Matthew, age 4, headed off on his bicycle. His younger sister, Emily, 2, sat in a wagon pulled by dad, who also carried 10-week old Kara in a baby pouch.

“It’s a family tradition,” said Rivera, chief of the Administrative Services Branch at NICHD, which sponsored the event. At the first one, held in 2010, Rivera carried Matthew, then 4 months old. “We love to get out.”

The purpose of the event is to raise awareness about infant mortality, which is central to the mission of NICHD and a key indicator of the overall health of the nation, said Dr. Catherine Spong, NICHD deputy director.

Clad in sneakers and running gear, 175 people gathered in front of Bldg. 1 to listen to the speakers. In addition to Spong, they included Dr. Regina Smith James, director of the Office of Health Equity; Dr. Constantine Stratakis, institute scientific director; Dr. Tonse Raju, chief of the Pregnancy and Perinatology Branch; Dr. Shavon Artis, who oversees NICHD’s Safe to Sleep campaign; and Dr. Joyce Hunter, deputy director, NIMHD.

In October, the campaign marked its 20th anniversary. Artis told the crowd that the Safe to Sleep campaign, formerly Back to Sleep, has reduced the SIDS rate by 50 percent in the past two decades. Still, 3,400 babies die each year in the U.S. before the age of 1.

“We have made a difference,” she said. “But we want to make sure every baby thrives.” She urged the crowd to help spread the campaign’s most important messages:

- ▲ Always place baby on his or her back to sleep, for naps and at night.
- ▲ Use a firm sleep surface, such as a mattress in a safety-approved crib, bassinet or play yard, covered by a fitted sheet.
- ▲ Room share—keep baby’s sleep area in the same room where parents sleep, next to their bed.
- ▲ Keep soft objects, toys, crib bumpers and loose bedding out of the baby’s sleep area.
- ▲ If you breastfeed your baby, remember to place your baby back in his or her own sleep area next to where you sleep.

Although about 100 more people registered than participated, “we were quite pleased with the turnout,” said James. “It’s an opportunity to exercise and get important information about infant mortality.”

Lynnita Jacobs of the Office of Human Resources and Fatou Hughes of NCI both came out to get some exercise. “I like to walk when I have an opportunity during the day,” Hughes said.

“It’s a good cause,” said Jacobs.



Spirits were high at the 5th annual Infant Mortality 5K Run/Walk/Roll event, which got under way in front of Bldg. 1. Not all who registered showed up, but those who did were enthusiastic.



Above, NICHD’s Rodney Rivera and his children (from l) Matthew, Emily and Kara

At right, an exuberant participant in the 5K takes a leap in front of Bldg. 1.

PHOTOS: BILL BRANSON

