

# nih record



**ABOVE** • National Wear Red Day brought people to the Clinical Research Center atrium to make pledges of heart health. See story on p. 12.

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### Feinberg Outlines Requirements

## Ethics Rounds Examines Need for National System Protecting Research Subjects

By Rich McManus

Ask the man on the street whether the United States has in place a national system to compensate a patient injured in the course of research-related care, and he is likely to say sure, just like 19 other countries around the globe have such a system.

But the U.S.—despite decades of debate involving presidential commissions and editorials in the *New England Journal of Medicine*—currently lacks such a system.

That dearth formed the subject of a special ethics edition of Clinical Center Grand Rounds on Feb. 4 in Lipsett Amphitheater.

Four times each year, the CC bioethics department takes over Grand Rounds to discuss important issues in research and clinical care, with audience participation.



SEE ETHICS, PAGE 6 *Lawyer Kenneth Feinberg at Grand Rounds*

### LabTV Exposes Public to Science Supported by NIH

By Eric Bock

Many people don't know about the medical discoveries that happen every day at NIH or NIH-funded labs. A new web site called LabTV hopes to change that.

LabTV features hundreds of brief documentary-style videos of researchers under 40, who tell the public about themselves and their research. Many of the profiles feature NIH researchers.

"Today's greatest voyage of discovery is happening in labs at NIH," said NIH director Dr. Francis Collins. "But the public doesn't have many chances to see what's actually going on here. LabTV will personalize medical research by giving scientists an opportunity to tell their stories."

LabTV was founded by Jay Walker, curator and chairman of TEDMED, an annual conference that focuses on health and medicine. He noticed that there was a dearth of scientist

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### Walking the Walk

## NIH Cardiologist Promotes Fitness On, Off Campus

By Dana Sampson

February features a confluence of American Heart Month, National Wear Red Day (see



*Dr. Tiffany Powell-Wiley*

back page) and Black History Month. Intra-mural physician-scientist Dr. Tiffany Powell-Wiley of NHLBI kicked off this month with a deepened commitment for cardiovascular disease (CVD) prevention by modeling behaviors promoted to study participants.

Powell-Wiley and her team of research fellows are investigating obesity in Wards 5, 7 and 8, Washington, D.C.'s most resource-limited neighborhoods with markedly high prevalence of CVD. She is

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NIH...Turning Discovery Into Health

## briefs

### Management Intern Program Recruits

The NIH Management Intern Program, a way to unlock a new career path, is recruiting Apr. 6-10. It is a highly competitive, 2-year career-development program for current NIH employees. MIs come from a variety of job backgrounds including both scientific and administrative fields. Upon completion of the program, MIs transition into an administrative-management career in one of many areas throughout NIH. Eligible employees are invited to apply. For program FAQs and details about eligibility, visit <http://trainingcenter.nih.gov/intern/mi/>.

Learn more by attending any of these information sessions, all of which are held from noon to 1 p.m.:

Mar. 20 Bldg. 31, 6C, Rm. 10

Mar. 24 Bldg. 10, FAES, Rms. 3-4

Apr. 1 Rockledge 1, Suite 4000, RT1

### WSA Scholars To Present Work, Mar. 20

Each year, the NIH women scientist advisory committee selects two or three female FARE (Fellows Award for Research Excellence) winners to be honored as WSA Scholars for their outstanding scientific research. The 2014 WSA FARE



The 2014 WSA Scholars are (clockwise, from top left) Dr. Bari Ballew, Dr. Christine Jao and Dr. Barbara Nicol.

winners will present their work at a symposium to be held Mar. 20 at 2:30 p.m. in Wilson Hall, Bldg. 1. A reception will follow the presentations. All are invited to attend.

The winners, and their topics, are:

- Dr. Bari Ballew, National Cancer Institute, Telomere dysfunction caused by a germline mutation in the TEL patch of the telomere protein TPP1
- Dr. Barbara Nicol, National Institute of Environmental Health Sciences, Exploring the genetics of sex differentiation
- Dr. Christine Jao, National Institute of Diabetes and Digestive and Kidney Diseases, Structural Analysis of a Bacterial Zinc Transporter.

### Free Editing Help for NIH Fellows

The Fellows Editorial Board (FEB) was created in spring 2002 to meet the scientific editorial demands of postdoctoral and clinical fellows in the NCI Center for Cancer Research. Now, FEB provides free, fast and confidential scientific document editing services for the entire NIH and FDA fellow community.

At any given time, FEB has up to 40 members who edit submitted manuscripts, grant proposals, abstracts and other scientific documents for grammar, structure and clarity. However, FEB does not comment on scientific merit.

FEB is an all-volunteer organization composed of postdoctoral and clinical fellows. It accepts members from all NIH components; previous editing experience is not a requirement. However, due to the popularity of FEB, it is not uncommon for applicants to be on the wait list for 6 months.

The process is as follows: a senior editor assigns a manuscript to an associate editor. The associate then builds a team of three primary editors to thoroughly edit the submission. Although all board members review each submission for the weekly meeting, which is video-conferenced to satellite NIH campuses in Baltimore, Frederick and North Carolina, the team leads the editing discussion for the manuscript. All editors' comments are compiled and returned to the author, usually within 10 business days.

All NIH fellows (postbacs, graduate students, postdoctoral fellows and clinical fellows) can submit their scientific documents to FEB. The research does not have to have been completed at NIH or FDA, but the submitting author must currently be an NIH or FDA fellow.

FEB has edited more than 820 documents to date; FEB-edited manuscripts have been published in journals including *Molecular and Cellular Biology*, *Cancer Research*, *Oncogene*, *The Journal of Biological Chemistry*, *Molecular Cell* and *Neuroscience Research*.

For more information, visit the FEB web site (<https://ccr.cancer.gov/trainee-resources-editorial-board>) for submission instructions and membership applications or send an email to FEB editors at [ncieditors@mail.nih.gov](mailto:ncieditors@mail.nih.gov).

## Doudna To Give Pittman Lecture, Mar. 11

Dr. Jennifer Doudna of the University of California, Berkeley, will give the annual NIH Director's Margaret Pittman Lecture on Wednesday, Mar. 11 at 3 p.m. in Kirschstein Auditorium, Bldg. 45. Her topic is "CRISPR-Cas Genome Surveillance: From Basic Biology to Transformative Technology." The lecture will be integrated into the 2-day NIH Symposium on RNA Biology being held Mar. 11-12 at Natcher Conference Center.



Doudna is the Li Ka Ching chancellor's chair in biomedical and health sciences, professor of molecular and cell biology, professor of chemistry and an investigator of the Howard Hughes Medical Institute. She is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the Institute of Medicine and the National Academy of Inventors. She is a recipient of many awards including the NSF Waterman Award, the FNIH Lurie Prize and most recently the 2015 Breakthrough Prize in Life Sciences (along with Emmanuelle Charpentier) for harnessing an ancient mechanism of bacterial immunity into a powerful and general technology for editing genomes, with wide-ranging implications across biology and medicine.

Doudna will discuss a brief history of CRISPR biology from its initial discovery through the elucidation of the CRISPR-Cas9 enzyme mechanism, providing the foundation for remarkable developments using this technology to modify, regulate or mark genomic loci in a wide variety of cells and organisms.

The annual lecture honors Dr. Margaret Pittman, NIH's first female lab chief, who made significant contributions to microbiology and vaccine development, particularly in the areas of pertussis and tetanus, during her long career at NIAID.

The lecture is part of the Wednesday Afternoon Lecture series. For more information and reasonable accommodation, call Jacqueline Roberts, (301) 594-6747.



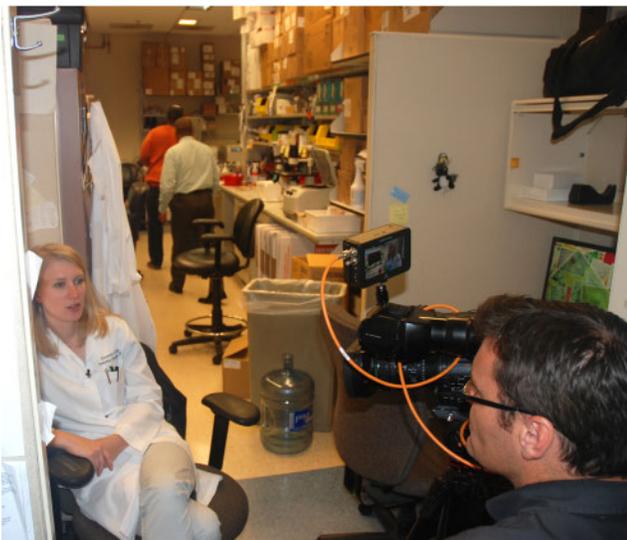
## Nobelist Moerner Gives Lecture at NIH

NIH grantee Dr. William E. Moerner (above, r), a 2014 Nobel laureate, gave a special NIH lecture, "The Story of Single Molecules, from Early Spectroscopy in Solids to Super-Resolution Nanoscopy in Cells and Beyond" on Feb. 5. Moerner shared last year's Nobel Prize in chemistry with two other scientists for their work on super-resolution microscopy. In the NIH talk, sponsored by NIGMS, Moerner gave a "brief historical overview from the early days of single-molecule spectroscopy and imaging, which formed the foundation for some of these super-resolution methods." Moerner, the Harry S. Mosher professor of chemistry and a professor of applied physics at Stanford University, received some of the first grants in NIGMS and other NIH cellular imaging initiatives that encouraged the application of physical science tools and approaches to biological studies. He was welcomed to NIH by (above, from l) NIGMS director Dr. Jon Lorsch, NIH director Dr. Francis Collins and Dr. Catherine Lewis, director of NIGMS's Division of Cell Biology and Biophysics and Moerner's grant monitor. The full talk can be viewed online at <http://videocast.nih.gov/summary.asp?Live=15559&bhcp=1>.



## Workforce Diversity Initiative Kicks Off

The Enhancing the Diversity of the NIH-Funded Workforce initiative had its program kickoff recently in Bethesda. Supported by the NIH Common Fund and all 27 institutes and centers, the awards are part of a projected 5-year program to support more than 50 awardees and partnering institutions in establishing a national consortium to develop, implement and evaluate approaches to encourage individuals to start and stay in biomedical research careers. Shown are (seated, from l) NIH'ers Dr. Joyce Hunter, Dr. Hannah Valentine, Dr. Francis Collins, Dr. Yvonne Maddox, Dr. Lawrence Tabak and Dr. Helena Mishoe; (middle row, from l) NIH'ers Dr. Pamela Thornton, Dr. Regina James, Dr. Elizabeth Wilder; Dr. Pamela Davidson, UCLA/CEC; Dr. Michelle Bennett, NIH; Dr. Rina Das, NIH; Dr. Leticia Marquez-Magana, San Francisco State University/BUILD; Dr. Lourdes Echegoyen, University of Texas El Paso/BUILD; Dr. Laura Kingsford, California State University Long Beach/BUILD; and Dr. Carlos Crespo, Portland State University/BUILD; (back row, from l) NIH's Dr. Michelle Jones-London, Dr. Allison Scott, Dr. David Banks, Dr. Robin Broughton, Dr. Nelson Aguila; Dr. Gene D'Amour, Xavier University of Louisiana/BUILD; Dr. Farin Kamangar, Morgan State University/BUILD; Dr. Gary Kulek, University of Detroit Mercy/BUILD; Dr. Crist Khachikian, California State University Northridge/BUILD; Dr. David Burgess, Boston College/NRMN; Dr. William LaCourse, University of Maryland Baltimore County/BUILD; and Dr. Barbara Taylor, University of Alaska Fairbanks/BUILD.



## LABTV

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**Above, from l:**  
For a LabTV segment, cameraman Eric Courtney films Adrienne Smith Long, a doctoral fellow in the NCI Pediatric Oncology Branch's immunology section.

At right, Courtney interviews Dr. Anna Lau of the Clinical Center.

PHOTOS: ERIC BOCK, CALVIN JACKSON

role models for the public—especially for women and minorities.

Walker put together a small team that included documentary filmmaker David Hoffman to produce video profiles of young researchers. Walker and Hoffman then approached NIH about profiling scientists under 40 for a new web site. Collins liked the idea. Filming for LabTV started soon after and has been going on in earnest across campus for the past year.

Hoffman has made more than 100 documentary television specials and series, mostly for PBS, Turner, A&E and Discovery. He worked closely with Calvin Jackson, deputy associate director of NIH's Office of Communications and Public Liaison, and John Burklow, NIH associate director for communications and public liaison. Jackson helped Hoffman identify NIH scientists to interview.

When Hoffman first visited NIH, he had no idea what happened inside labs here. He thought lab work was theoretical, process-oriented and introverted. Once he started interviewing scientists, he learned better.

"I haven't met a researcher who's not passionate about what he or she is doing. Each lab is like an extended family," said Hoffman, LabTV's executive producer.

Jackson echoed Hoffman's enthusiasm.

"It has been a privilege to meet so many young researchers from the various ICs who are dedicated to improving health and saving lives," he said. "It has also been interesting to hear each of their stories. Some knew from an early age that they wanted to pursue a career in the sciences while others have taken a more unconventional route."

Hoffman likened medical researchers to detectives. Both researchers and detectives search

for new leads and gather facts and evidence to solve real-world problems. Researchers, though, are finding cures for diseases and improving the public's quality of life.

LabTV's primary goal is to inspire students who may not think they can cure disease to become researchers, Hoffman said. He noted that almost 85 percent of students who enroll in pre-med undergraduate programs graduate with a degree in another discipline.

Hoffman explained that in each video profile, researchers describe their background, say why they became scientists, detail the challenges they overcame and share what excites them about working in a lab and what they hope to accomplish in the future. The interviews focus on the researcher's personal journey.

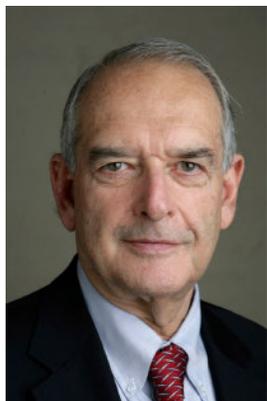
"We have a saying at LabTV: 'If you can't see it, you can't be it,'" said Hoffman. "If, for example, you're a 16-year-old public school student from New York City who's interested in environmental science, you can use LabTV's search function to find scientists with similar backgrounds."

Eventually, LabTV will feature thousands of profiles of researchers from institutions all over the country, Hoffman said. Students interested in scientific careers will be able to create a LabTV profile and interact with researchers directly.

Hoffman hopes that one day people follow research developments at NIH as closely as they did NASA's race to the moon.

"Working with NIH has been thrilling," he said. "LabTV has gotten cooperation, enthusiasm and an immediate response—just like we'd get at a startup company."

To view LabTV, visit <https://www.labtv.com/Home#/>.



*Hill Memorial  
Lecture*  
**NYT's Altman To  
Discuss His Career  
Covering HIV/AIDS**

Physician and journalist Dr. Lawrence K. Altman will deliver this year's James C. Hill Memorial Lecture, "Covering the Disease of the Century: A Journalist's

Personal Perspective on AIDS, 1981-2015." It will be presented on Tuesday, Mar. 17 at 3 p.m. in Lipsett Amphitheater, Bldg. 10. Altman will discuss his decades of reporting on HIV/AIDS, beginning with the 1981 appearance of the first U.S. cases of illness caused by the then-unknown virus.

Altman is a medical writer for the *New York Times*, where from 1969 to 2008 he was one of the few physicians employed full-time for a daily newspaper. He continues to report on a variety of medical topics for the paper. He also writes "The Doctor's World," a column that appears in the science section of the newspaper. He is a clinical professor of medicine at New York University and senior scholar at the Woodrow Wilson Center in Washington, D.C., where he is writing a book on the health of political leaders. Altman authored *Who Goes First? The Story of Self-Experimentation in Medicine*. He also has written for scholarly publications on subjects such as viral encephalitis and canine cadaver blood. He holds medical licenses in California, New York and Washington state.

Altman wrote the *Times'* first article on HIV/AIDS, "Rare cancer seen in 41 homosexuals," published on July 3, 1981. The article describes an outbreak of "...41 cases of a rare and often rapidly fatal form of cancer"—its cause unknown. After years of writing numerous articles on HIV/AIDS, he wrote, "30 Years In, We Are Still Learning from AIDS" for the *Times*. That article looks back on the earliest cases of AIDS, the medical community's reaction and response to the HIV/AIDS pandemic, its social implications and the scientific, medical and public health challenges that remain.

The annual Hill lecture is dedicated to the former NIAID deputy director. Hill helped build the institute's HIV/AIDS research program during the early years of the epidemic and was instrumental in educating the public and government officials on the emerging threat of AIDS.



**Hood Delivers Rodbell Lecture, Mar. 10**

NIEHS will welcome systems biologist and personalized medicine pioneer Dr. Leroy Hood on Mar. 10 to present the annual Dr. Martin Rodbell Lecture at 11 a.m. in Rodbell Auditorium, Bldg. 101. Hood will explore "Systems Medicine and Proactive P4 Medicine: Catalyzing a Revolution in Health Care."

Hood is founder and president of the Institute for Systems Biology, a nonprofit biomedical research organization based in Seattle. One of the central concepts at ISB is a predictive, personalized, preventive and participatory approach to medicine, or P4 medicine. ISB describes this approach as a systems or holistic approach that uses new computational and mathematical tools to analyze the enormous amounts of molecular, cellular, phenotypic and medical data that now can be generated for each individual.

By viewing medicine as an informational science, P4 medicine will draw on an understanding of the networks underlying health and disease. "It will represent a network of networks—genetic networks, molecular networks, cellular networks, tissue networks, individual networks, population networks and social networks," Hood has said.

In addition to publishing 750 papers, Hood holds 36 patents and 17 honorary degrees and has founded or co-founded 15 biotechnology companies. He is one of only 15 individuals elected to all three National Academies—the National Academy of Science, the National Academy of Engineering and the Institute of Medicine.

The lecture honors former NIEHS scientific director Dr. Martin Rodbell, who shared the 1994 Nobel Prize in physiology or medicine with Dr. Alfred Gilman for the discovery of G-proteins, signal transducers that transmit and modulate signals in cells to control fundamental life processes.



**Beck To Give NINR Director's Lecture, Mar. 5**

Dr. Cornelia Beck will deliver the first of three 2015 NINR Director's Lectures. She will present "From Alzheimer's Interventions to Translational Science" on Thursday, Mar. 5 from 10:30 to 11:30 a.m. in Lipsett Amphitheater, Bldg. 10.

Since 1984, Beck has researched strategies to improve best practices in long-term care settings and non-drug interventions to alleviate problem behavior and promote functional performance in persons with dementia. Her accomplishments include receiving national awards, participating on numerous advisory councils, writing over 200 publications and extensive lecturing throughout the world.

Beck is a professor in the geriatrics department and an adjunct professor of psychiatry and behavioral sciences and nursing at the University of Arkansas for Medical Sciences. She holds the Louise Hearne chair in dementia & long-term care. She is co-director of the UAMS Hartford Center for Geriatric Nursing Excellence and is co-principal investigator for the UAMS Center for Clinical and Translational Research.

The NINR Director's Lecture Series is designed to bring the nation's top nurse scientists to campus to share their work and interests with a trans-disciplinary audience. For details, visit [www.ninr.nih.gov/directorslecture/](http://www.ninr.nih.gov/directorslecture/).



## ETHICS

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### **Above, from l:**

Patient Jean Burns (l) is interviewed at the outset of the Grand Rounds session by Dr. Scott Kim of the CC bioethics department. Burns credits Kim with having carefully explained to her the difference between studies and trials.

At right, Dr. Dave Wendler (l), chief of the CC bioethics office, poses with Feinberg, Burns and Kim.

PHOTOS: ERNIE BRANSON

The recent session was notable for two reasons: for the first time, it included a patient, Jean Burns, who is participating in an NIH study of Parkinson's disease. And the guest discussant this time around was lawyer Kenneth Feinberg, who, as administrator of the September 11 Victim Compensation Fund of 2001 and of One Fund Boston, the compensation program following the Boston Marathon bombings, may be the world's foremost authority on victim compensation.

It was a riveting session that included not only Burns' emotionally wrought testimony about the need for some kind of safety net when patients allow experimenters to do such things as bore holes in their heads but also Feinberg's unsentimental elucidation of the hard facts when setting up any kind of compensation fund.

"The first thing you have to do is get your dictionary and tear out the words 'justice' and 'fairness,'" he warned. Compensation funds might show evidence of mercy, he allowed, but they almost never attain the other virtues.

Burns, who was diagnosed with Parkinson's in 2003, has not been injured during years of participation in more than a dozen clinical trials. But she did consult the CC ethics department prior to a procedure that involved brain surgery and its attendant risks, including stroke.

Current rules at many U.S. institutions say patients injured during research are eligible for up to 30 days of medical care, after which they are on their own dime. Burns thought it might be fairer if research organizations offered, as a matter of course, long-term/catastrophic care insurance—not necessarily a compensation program—to those who volunteer for studies. After all, many patients are so desperate to get better that they barely note the minutia of consent forms and often blow past due consideration of the risks, or remedies.

"I came to the bioethics office to spur change," she said, noting that she had received "superb care"

since coming to NIH about 4 years ago.

Feinberg urged caution before undertaking a national compensation program.

"Be prepared to break it down," he said. "Do policymakers want such a fund? Who are they? Where is the money coming from? Taxpayers? The NIH budget? Who wants it? Who's promoting it? How much money is involved is what drives everything."

A fund prepared to disburse a check for \$1.60 won't serve anyone, he quipped. "Is there enough money, even if you want to do it?"

*"The first thing you have to do is get your dictionary and tear out the words 'justice' and 'fairness.'"*

The 9/11 fund, created by Congress, was open-ended, he noted. The fund to compensate those harmed by the BP oil spill in the Gulf has \$20 billion. The One Fund raised \$61 million in only 60 days.

"Be careful when you say that [those injured in the course of research] deserve a fund," Feinberg counseled. "Bad things happen to people every day and there is no fund to protect them... You need an end-game, an objective. Why this particular area? What long-term goals would justify a compensation program?" This kind of philosophical overlay must be considered beforehand, he said.

The questions only get tougher, and more specific, if you forge ahead. Feinberg offered examples, each of which took advantage of his long experience, going back to his membership on a Clinton commission focusing on biomedical testing during the Cold War of terminally ill patients who did not give their consent to radiation therapy, and beyond that, to Feinberg's first victim's comp case 35 years ago—how to



*Feinberg made very clear that compensation programs have little to do with fairness or justice.*

settle the claims of those exposed to Agent Orange during the war in Vietnam.

❏ Who is eligible to receive compensation? What do we mean by “research-related?” What are the criteria?

❏ What is the methodology for establishing compensation? What is the basis for calculating a remedy?

❏ What are the proof requirements for the victim? “How do you prove ‘My illness is a consequence of research’ vs. pure fortuity? Was it 100 percent of the cause? Ten percent of the cause?”

❏ What are the consequences of taking the compensation? What rights, if any, are relinquished if you decide to compensate? What is the scope of the release?

Feinberg was frequently funny when he wasn’t being deadly clear. He noted that no one in his long experience ever took the cash then went and hired another lawyer to seek more compensation. “But you could,” he noted whimsically. “You could.”

❏ What are the due-process requirements for a compensation fund, the procedural details? Is there an appeals process?

“In my programs,” said Feinberg, who also is involved in the GM ignition litigation and other high-profile victim comp cases, “there is no appeal. If you don’t like it, don’t take it.”

Feinberg said infrastructure is a big issue in establishing a program. “How adversarial is it? Do you need a lawyer? Who processes claims?”

“We could spend a whole year around the table at NIH, trying to get answers to these questions. But it all starts with the money.”

Feinberg said he likes the idea of a national system of compensation for those injured during research. “But beware of being Goody Two-Shoes here—you are opening a can of worms. Fairness and justice have nothing to do with these kinds of programs.”

During the Q&A, Feinberg noted that the U.S. differs significantly from nations already hav-

ing compensation programs for research participants: “No country on Earth has a litigation system like the U.S. And no country on Earth is as generous...Never underestimate the charitable impulse of the American people. I’m glad to look at conceptual models from abroad, but here the focus is on dollars.”

He said any prospective compensation program would have to benefit the public, the victim and the researcher. “You better be careful about programs affecting only the chosen few.”

Two potential models for a new national system drew Feinberg’s reactions:

❏ The current system for addressing adverse responses to vaccinations should not be touted as a stunning success, he said. “It’s fraught with adversarial strife and, procedurally, it’s a nightmare. There’s no closure.” The hallmarks of the programs Feinberg endorses are speed, certainty and efficiency, “not long-winded dispute.”

❏ On the other hand, the audience member who proposed a program akin to the VA assuring veterans—out of gratitude for their service—long-term health care prompted Feinberg to dub the gentleman the new chair of any new national effort to protect research subjects.

But with one caveat. “Forget gratitude,” said Feinberg. “Victims won’t do that. I’ve never seen that.” He added, “Be careful when you substitute long-term medical care for a check. Medical care will be 10 times more expensive.”

A video of the session is archived at <http://videocast.nih.gov/summary.asp?Live=15593&bhcp=1>.



## Collins Hosts FY 2016 Budget Chat

NIH director Dr. Francis Collins (above, r) held a meeting Feb. 2 for NIH’s fiscal year 2016 budget rollout. In a slide presentation in Wilson Hall, he outlined the President’s newly released budget request to Congress for \$31.311 billion, an increase of more than \$1 billion over NIH’s FY 2015 budget. The amount includes \$200 million for the new Precision Medicine Initiative, \$100 million for antimicrobial resistance, \$70 million for BRAIN and \$50 million for Alzheimer’s disease. Collins also took questions from the audience, which included former U.S. Congressman John Porter (upper left, R-IL) and other representatives from patient advocacy organizations, universities and various NIH stakeholder groups. At left, Dr. Carrie Wolinetz (r), newly appointed NIH associate director for science policy, chats with attendee Amanda Arnold.



PHOTOS: ERNIE BRANSON

## FITNESS

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developing a community-based intervention for church-going African-American populations through participatory approaches and innovative mobile health technology use to assess and improve cardiovascular health.

Obesity incidence serves as a glaring example of why Washington, D.C., is considered a city of contrasts. Overall adult obesity rates in the District of Columbia dwell among America's lowest, but a closer look reveals stark disparities. D.C.'s rate of adult obesity has risen from 14.4 percent in 1990, to 22.9 percent in 2013, with a current national ranking of 49 (51 being the lowest). Similarly, physical inactivity hovers

at only 19.5 percent based on 2013 data. However, prevalent obesity skyrockets to 30-42 percent in resource-limited Wards 5, 7 and 8, contending with the top-ranked state of Mississippi. Powell-Wiley designed "a program that would improve cardiovascular health for those with limited access to clinical care or who may not have access to areas for physical activity/healthy nutrition."

Partnerships with six predominantly African-American churches in these wards have been established to leverage existing social networks to promote behavior change. "As someone who grew up in Ward 7, I feel a special connection to the population that we're working with," said Valerie Morales-Mitchell, the study's community outreach/research coordinator. "I know firsthand the need for thinking of new ways to help people become more heart-healthy in the community."

As handheld devices and web-based technology become more cost-efficient and widely available, this study aims to understand their use in promoting physical activity. "There has been a

rapid proliferation of commercial sensors and apps for monitoring physical activity, but many of them have insufficient research on whether the monitoring and feedback provided by these technologies increases or maintains physical activity," said Dr. William Riley, acting director of the Office of Behavioral and Social Sciences Research and chief of NCI's Science of Research and Technology Branch.

Powell-Wiley says, "We hope that by providing technological tools to community members, to better understand their physical activity levels, and improving the infrastructure for using these tools, community members can become engaged in more physical activity and motivate others within their social networks to engage in more physical activity."

Individuals living in each targeted ward have limited access to nutrient-dense foods, which contributes to poor diet and high CVD rates. The team holds events that include lunch to encourage healthy eating—fresh fruit, whole grain muffins, veggie chips, turkey sandwiches and water to drink. Howard University nutrition faculty members, working in collaboration with the team, are also on hand to discuss eating habits as well as address inquiries about food consumption in preparation for use of the pilot study's wristband physical activity monitors and digital food record technology.

In honor of February's commemorative events, Powell-Wiley promoted healthy lifestyles within her own research team by encouraging physical activity during the workday. On Feb. 6, the all-female team celebrated National Wear Red Day and women's heart disease awareness by convening its first walking meeting on the Clinical Center's lower level.

Postbac IRTA fellow Johnetta Saygbe said, "I strongly believe that out of the heart flow the issues of life, and science provides evidence that these issues—such as stress and physical inactivity—disproportionately affect women's overall health. I believe that we must be intentional in taking measures to address this disparity. This is why I appreciated celebrating the day by walking with extraordinary women who share a common goal of improving cardiovascular health in our communities. 'Community' begins with us."

Team members engaged in a half-hour power walk of the B-2 level perimeter, adorned in red and equipped with pedometers. While awareness of CVD as the number one killer of women has increased in recent years, considerable work is needed to improve women's cardiovascular health. Washington, D.C.'s obesity rate in 2012



*The Bldg. 10 walking group includes (from l) Leah Yingling, Powell-Wiley, Valerie Morales-Mitchell, JaWanna Henry, Johnetta Saygbe and Avanti Iyer.*

was higher among women at 25.8 percent than for men at 18 percent. As the national obesity epidemic continues, U.S. coronary heart disease death is increasing among young women 35 to 54 years of age.

Recognizing that substantial cardiovascular outcomes disparities persist for women from racial and ethnic minorities, Powell-Wiley plans to dedicate one weekly meeting each month to CVD prevention within the team.

“We covered 1.5 miles,” said Leah Yingling, the team’s second postbac IRTA fellow. “Not only did it refresh my mind and outlook for the day, but also it made me realize that small changes to a daily routine can add up significantly. Walking with our group pushed me nearly halfway to the physical activity goal of 10,000 steps a day.”

“We know more and more about the adverse health consequences of sedentary behavior, so taking time to walk during one of our team meetings has some heart health benefits for all of us,” Powell-Wiley noted. “Working at NIH, it’s very easy to get so busy with work and meetings that you don’t realize how much time you might spend sedentary. Walking during meetings is just one way to take some time to get active but also remain productive. Most of all, I feel like we’re practicing what we preach.”

#### Next Protocol Navigation Lecture, Mar. 9

The IRP Protocol Navigation Training Program Seminar Series continues with a lecture to be held Monday, Mar. 9 from 2 to 3 p.m. in Bldg. 50, Conf. Rm. 1227/1328. The program is a trans-NIH effort to develop resources and tools and to provide training for intramural staff and contractors involved in protocol development, writing, coordination and management. Dr. Jerome Pierson and Dr. Jonathan Kagan of NIAID’s Division of Clinical Research will present “International Clinical Research: Hands-On Perspectives.” For more information, contact Marcia Vital, (301) 451-9437, vitalm@mail.nih.gov.

#### Sailing Association Open House, Mar. 4

The NIH Sailing Association invites everyone to its open house on Wednesday, Mar. 4 from 5 to 8 p.m. at the FAES House at the corner of Old Georgetown Rd. and Cedar Ln. Explore your interest in learning to sail and discover opportunities for sailing with NIHSA. There will be information about 6-week basic training classes, the club’s racing program and social activities offered by NIHSA. A fee of \$5 at the door includes pizza, drinks and snacks. Cash bar for beer and wine—\$2 each. Look for NIHSA posters and flyers around campus. For more information, visit [www.nih sail.org/](http://www.nih sail.org/).

## NIBIB’s Carvajal Recognized for Outstanding Research

Nicole Carvajal, a student researcher at the National Institute of Biomedical Imaging and Bioengineering, has been named a 2014 Student Presenter Awardee by the Society for the Advancement of Hispanics/Chicanos and Native Americans in Science. Her work, titled “Examination of diverse 3-D microenvironments using atomic force microscopy” was presented at the annual SACNAS national conference held recently in Los Angeles.

Carvajal is a graduate of the bioengineering program at the University of California, Riverside, and performed the research working under the mentorship of Dr. Albert Jin, chief of the nanoinstrumentation and force spectroscopy section at NIBIB.

The award committee cited Carvajal’s thorough knowledge of a complex technology, noting that her communication skills and command of the research topic were exemplary in a field of more than 1,000 poster and oral presentations.

“We recognize the hard work, dedication and sacrifice that are necessary for a student to stand out from...fellow presenters,” wrote the committee. “We feel that NIBIB’s program is enhanced by the participation of Nicole Carvajal, as such commitment will drive fellow researchers to similar heights.”

Carvajal’s research employed the technique of atomic force microscopy to study the specific forces and molecules involved in cell migration. AFM is a sophisticated technique that can image, at the nanoscale level, the topological and mechanical properties of biological samples in a changing environment. Cell movement plays a major role in healthy processes, such as wound healing, as well as disease processes, including cancer metastasis.

The work presented at SACNAS was conducted to further the understanding of how the 3-D extracellular matrix—the environment in which cells live—can alter the mechanisms of cell migration. Because cell migration is so critical, understanding the process at the nanoscale level provides valuable information that could result in novel treatments, such as blocking cancer metastasis, in the future.

Carvajal’s mentor Jin added, “Nicole has been a truly outstanding research fellow. In addition to the award-winning work presented at SACNAS, her accomplishments at NIBIB include coauthoring a leading *American Chemical Society Nano* article and her outstanding broader effort in strengthening the biological atomic force microscopy and force spectroscopy research at NIBIB. I expect her to be among coauthors on several future journal articles.”—

Thomas Johnson



### Iron Supplement After Blood Donation Shortens Hemoglobin Recovery Time

An NIH-funded study comparing low-dose iron supplementation to no supplementation in blood donors found that supplementation significantly reduced the time to recovery of post-donation lost iron and hemoglobin—an iron-rich protein that carries oxygen in red blood cells throughout the body.

The results of the Hemoglobin and Iron Recovery Study, supported by the National Heart, Lung, and Blood Institute, appeared Feb. 10 in the *Journal of the American Medical Association*.

Blood donors are allowed to give 1 pint of blood every 8 weeks. A major concern is that about 25-35 percent of regular donors develop iron deficiency. Since iron is needed for red blood cell production, low iron can cause fatigue and anemia—a condition in which the blood has a lower than normal number of red blood cells—and can lead to temporary ineligibility for future donations. It can take months to recover the lost iron. New research indicates a possible solution.

“This research brings us another step closer to understanding how to maintain healthy iron levels in blood donors,” said Dr. Simone Glynn of NHLBI. “Maintaining healthy iron levels will allow donors to safely continue donating thereby ensuring a robust blood supply for patients in need.”

### Study Reports Shifts in Americans’ Use of Natural Products

A nationally representative survey shows that natural product use in the United States has shifted since 2007, with some products becoming more popular and some falling out of favor. Overall, natural products (dietary supplements other than vitamins and minerals) remain the most common complementary health approach.

The complementary health questionnaire was developed by the National Center for Complementary and Integrative Health and CDC’s National Center for Health Statistics. The questionnaire is administered every 5 years as part of the National Health Interview Survey (NHIS), an annual study in which tens of thousands of Americans are interviewed about their health and illness-related experiences. The 2012 NHIS survey is the most current, comprehensive and reliable source of information on the

use of complementary health approaches by U.S. adults and children.

Survey highlights:

- Fish oil was the top natural product among adults.
- Adults’ use of fish oil, probiotics or prebiotics and melatonin increased between 2007 and 2012.
- Adults’ use of glucosamine/chondroitin, echinacea and garlic decreased between 2007 and 2012.
- Fish oil was the top natural product among children. This is a change from 2007, when echinacea was first.
- Melatonin was the second most-used natural product by children in 2012. Its use increased substantially from 2007 to 2012.

“While NHIS does not assess why shifts in use occur, some of the trends are in line with published research on the efficacy of natural products,” said NCCIH director Dr. Josephine Briggs. “For example, the use of melatonin, shown in studies to have some benefits for sleep issues, has risen dramatically. Conversely, the use of echinacea has fallen, which may reflect conflicting results from studies on whether it’s helpful for colds. This reaffirms why it is important for NIH to study these products and to provide that information to the public.”

### Paramedics May Be First Line of Treatment For Stroke

There is no time to waste when it comes to stroke. The more time that passes between stroke onset and treatment, the worse the outcome is for the patient. A study designed to test the benefits of early administration of magnesium sulfate suggests that stroke patients may not have to wait until they get to the hospital for treatment—paramedics may be able to start therapy as soon as stroke is suspected. Although the drug did not improve outcome in stroke patients, the study demonstrated the feasibility of early therapy in the ambulance. The results were published Feb. 5 in the *New England Journal of Medicine* and the study was funded by the National Institute of Neurological Disorders and Stroke.

“This study shows that it is possible to get treatments to stroke patients even before they arrive at a hospital,” said NINDS acting director Dr. Walter Koroshetz. “Because a blocked blood vessel causes brain damage over minutes to hours, this pre-hospital approach to treatment is sure to be adopted and refined in future clinical research studies. Ultra-early brain salvage in stroke patients will someday surely reduce the tremendous burden of disability and death due to stroke.”—compiled by Carla Garnett



*Since iron is needed for red blood cell production, low iron can cause fatigue and anemia—a condition in which the blood has a lower than normal number of red blood cells—and can lead to temporary ineligibility for blood donations. It can take months to recover the lost iron. New research indicates a possible solution.*



## milestones

### *Dedicated Mentor*

#### **NIDCD's Sklare Retires, Receives Award of Excellence**

Dr. Daniel A. Sklare, who served as research training officer in the NIDCD Division of Scientific Programs for the past 23 years, retired in January after 31 years of federal service. During his tenure, he worked tirelessly to recruit and support a new generation of clinician-scientists working on disorders of human communication, particularly physicians who specialize in otolaryngology, or diseases of the ear, nose and throat. As a mentor to many young clinicians interested in conducting research, Sklare encouraged them to follow a path that builds a strong research foundation and increases their chances of future success.



His dedication to improving the lives of individuals with communication disorders preceded his service as research and training officer. Sklare completed his doctoral training at Wayne State University in 1984. He began his career at the audiology and speech pathology service of the Department of Veterans Affairs and came to the NIH Intramural Research Program in 1986 to serve as a clinical and research audiologist. Between 1990 and 2003, he served as director of the Balance and Vestibular Sciences Program within the newly formed NIDCD. He became research training officer of the Extramural Programs at NIDCD in 1991. From 2008 through fall 2012, he served as both NIDCD research training officer and director of the NIDCD research program in the assessment and management of hearing and balance disorders.

Sklare was recently honored with an NIDCD Award of Excellence, which recognizes staff members who have made significant and exceptional contributions to the NIDCD mission. The award cited his "longstanding commitment to the NIDCD research and training program, including dedicated, heartfelt and successful mentoring of trainees."

"Dr. Sklare has shown extraordinary leadership in NIDCD training and career development programs," said Dr. Judith A. Cooper, NIDCD dep-

uty director and director of the Division of Scientific Programs. "One of Dan's unique skills lies in his capacity to influence training and career development at many levels, whether at the level of the individual principal investigator seeking advice, developing new programs addressing unmet training needs for NIDCD or considering larger community issues such as the trans-NIH training advisory committee. Dan has been a thoughtful and influential force for research training and career development across the NIDCD mission areas. One could not have wished for a better colleague. We will miss him and yet we wish him well in his new endeavors."

Dr. Alberto Rivera-Rentas recently joined NIDCD and will serve as the institute's research training officer.

#### **NCI's Mushinski Mourned**

Dr. J. Frederic "Fred" Mushinski, 76, who retired from NCI's Laboratory of Cancer Biology and Genetics in 2009 after more than 40 years of research, died Dec. 18 in Bethesda after a bout of colon cancer.

Mushinski grew up in Beaver Falls, Pa. When he was 15, after his father's death, the family moved to Bethesda.

He earned his B.A. degree in chemistry at Yale University in 1959 and received his M.D. from Harvard Medical School in 1963. He joined NCI as a research associate in the Laboratory of Biology, run by Dr. Michael Potter, in 1965 after an internship and fellowship in the department of medicine at Duke University Medical Center.

It was in the NCI lab that Mushinski met a staff biologist named Elizabeth "Betty" Bridges; the two married in 1971 and had a combined 87 years of NIH service when they retired early in 2009.

They shared a common interest in protein expression and chromosomal translocation, as well as a love of music, especially opera. Both also had medical family backgrounds.

Mushinski had been a member of the PHS Commissioned Corps. He also spent a year at the Max Planck Institute for Experimental Medicine in Göttingen, Germany, and had been a research professor in the molecular and cell biology program at the University of Maryland.

In retirement, Mushinski was a volunteer at Wolf Trap Center for the Performing Arts in Virginia.

In addition to his wife, Mushinski is survived by two sisters, Mary M. Fetsch and Margaret M. Ochs.

A memorial service will be held at a later date in Bethesda. In lieu of flowers, donations may be made in Mushinski's name to a favorite charity. 📌





## NIH'ers Make Pledges for National Wear Red Day

On Feb. 6—National Wear Red Day—members of the NIH community gathered in the Clinical Center atrium to make pledges to protect their hearts through healthier living as part of a social media campaign called Acts of Red. NIH director Dr. Francis Collins, NHLBI director Dr. Gary Gibbons and CC director Dr. John Gallin came to “practice what they preach” by posing for photos and pledging to make heart-healthy lifestyle changes.

Dozens of NIH community members made a variety of pledges from such things as walking 10,000 steps a day, climbing more stairs, drinking less soda, eating more celery, meditating daily, never smoking, eating more vegetables, dancing more and sleeping better. Interested participants got their photo taken holding their heart-shaped pledge and were encouraged to share it via social media using the hashtag #ActsOfRed. A slide show of the pledges is posted on NHLBI's YouTube channel.

Research has shown that at 6 months, people who make New Year's resolutions—pledges to change their behaviors—are more than 10 times as likely to keep them as people who don't. It's not too late to commit to protect your heart health. Make a pledge today and share it on social media using #ActsOfRed.

NHLBI, the HHS Office on Women's Health and many other groups celebrate National Wear Red Day, which takes place each year on the first Friday of February to raise awareness that heart disease is the #1 killer of women and is largely preventable.

For more details about heart disease and National Wear Red Day, visit [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov).



*Hearts aplenty. Above, NHLBI staffers prepare pledge boards. Below, NHLBI director Dr. Gary Gibbons (l) and NIH director Dr. Francis Collins make heart health pledges, as NIH community members join the effort.*



*Above, NHLBI's Liz Freedman (r) takes a photo of CC nursing department chief Dr. Clare Hastings at the atrium event. At right, NIMHD staff gather Feb. 6 to celebrate Heart Health Month. Below, CC director Dr. John Gallin makes his pledge, one of hundreds posted on the board and online throughout the event.*

