

# nih record



ABOVE • Katie Couric (l) hosts NIDA director Dr. Nora Volkow. See story on p. 2.

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### Black History Month

## Rodgers Speaks on Obesity, Disparity, Progress

By Belle Waring

At the annual NIH Black History Month program on Feb. 20, keynote speaker and NIDDK director Dr. Griffin Rodgers spoke to a diverse audience about his vision to harness the power of science as a tool for justice. His address, “The Role of Biomedical Research in Addressing Obesity & Type 2 Diabetes,” honored the 150th anniversary of the Emancipation Proclamation and the 50th anniversary of the march on Washington led by Dr. Martin Luther King, Jr.

“Many common, chronic, costly and consequential diseases disproportionately affect the African-American community as well as other people of color. What we have learned from NIH research empowers us to be well enough to participate in society to the fullest extent—in a sense, emancipated from preventable disability, disease and premature death,” said Rodgers.

Obesity is epidemic in the U.S., where half of all African Americans, compared to

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NIDDK director Dr. Griffin Rodgers gives keynote talk at Black History Month observance.



Dr. Edwin “Ted” Becker has overseen renovations for FAES in Bldg. 10.

### FAES Prepares to Open Academic Center, Consolidate Offices

By Rich McManus

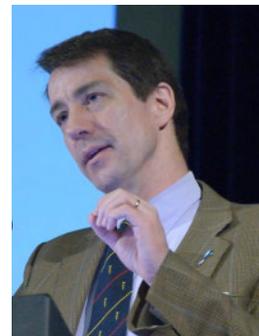
After a decade of planning, the Foundation for Advanced Education in the Sciences is getting ready this spring to cut the ribbon on the highest profile undertaking in FAES’s 54-year history at NIH: a 20,000-square-foot renovation in the heart of Bldg. 10’s first and B1 floors that will encompass a bookstore and coffee bar, abundant classroom space, a large, skylighted terrace, new administrative

SEE FAES, PAGE 6

### Rare Disease Day Emphasizes Crucial Collaborations, Awareness

By Geoff Spencer

According to the Office of Rare Diseases Research (ORDR) at the National Center for Advancing Translational Sciences, there are an estimated 7,000 rare diseases that affect about 25 million Americans. About 80 percent of rare diseases are genetic in origin, and it is estimated that half of these diseases afflict children. Yet, there are just over 400 drugs approved to treat approximately 250 rare diseases.



NCATS director Dr. Christopher Austin speaks at Rare Disease Day, Feb. 28.

To help mark the sixth annual international Rare Disease Day, NIH hosted 2 days of presentations and discussion in Natcher Auditorium

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NIH Record Office Bldg. 31, Rm. 5B41  
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.od.nih.gov>

**Editor**  
Richard McManus  
[Rich.McManus@nih.gov](mailto:Rich.McManus@nih.gov)

**Associate Editor**  
Carla Garnett  
[Carla.Garnett@nih.gov](mailto:Carla.Garnett@nih.gov)

**Staff Writers**  
Jan Ehrman  
[Jan.Ehrman@nih.gov](mailto:Jan.Ehrman@nih.gov)

Dana Steinberg  
[Dana.Steinberg@nih.gov](mailto:Dana.Steinberg@nih.gov)

Belle Waring  
[Belle.Waring@nih.gov](mailto:Belle.Waring@nih.gov)

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NIH...Turning Discovery Into Health

## briefs

### NIH Clinical Research Day 2013, Apr. 10

NIH will host Clinical Research Day on Wednesday, Apr. 10 in Lipsett Amphitheater, Bldg. 10. The event will celebrate clinical/translational research at NIH and will highlight clinical research opportunities.

Speakers will include Dr. Francis Collins, NIH director, "Exceptional Opportunities for Clinical Research at NIH"; Dr. Anthony Fauci, NIAID director, "The National Institute of Allergy and Infectious Diseases: A Unique Mandate"; Dr. Harold Varmus, NCI director, introductory remarks; Dr. Crystal Mackall, NCI senior investigator, "Chimeric Antigen Receptor Based T Cell Therapy for Cancer"; Clinical Center director Dr. John Gallin, "Opportunities for New Clinical Research Partnerships at the NIH Clinical Center"; Dr. Michael Gottesman, NIH deputy director for intramural research.

These will be followed by presentations on research opportunities in the Intramural Research Program such as the Lasker Clinical Research Scholars Program, the Stadtman Investigator tenure-track searches and the assistant clinical investigator mentored positions.

More information is available at <http://sourcebook.od.nih.gov/clinicalresearchday.htm>.

### STEP Forum on Pediatric Clinical Trials

The staff training in extramural programs (STEP) committee will present an Administrative Strategies forum on the topic "Pediatric Clinical Trials: It's Not Just Child's Play" on Tuesday, Apr. 16, from 9 a.m. to noon in Lister Hill Auditorium, Bldg. 38A.

Why do research on children? Developmentally and physiologically, children are not small adults. This forum will cover issues in enrollment, bioethical and regulatory matters as they pertain to the conduct of pediatric clinical trials. Come and join us for a behind-the-scenes glance at research on this unique and vulnerable population from a scientific, regulatory and patient perspective.

### Bike to Work Day, May 17

Celebrate National Bike Month and Bike to Work Day with the NIH Bicycle Commuter Club (NIHBCC), Friday, May 17, from 7 to 9:30 a.m. on the Paul Rogers Plaza in front of Bldg. 1. For off-campus employees, NIH will participate in two of the many local pit stops supported by the Washington Area Bicyclists Association in a national salute to bicycle commuting.

Last year, more than 11,000 area residents joined in this annual event and even more are anticipated this year. NIH has won the Metropolitan Wash-

ington Council of Governments award 6 years in a row for being the area's biggest employer of Bike to Work Day participants. Help us defend our title this year by registering online at [www.recgov.org/r&w/nihbike/](http://www.recgov.org/r&w/nihbike/). Even if you do not choose NIH as your pit stop, writing in "National Institutes of Health" as your employer will help us defend our title.

NIH will again be participating in two off-campus pit stops: Falls Grove-sponsored stop at Rockville (pit stop closest to the new NCI Shady Grove building) and the Marriott-sponsored stop at Rockledge (pit stop name "Rock Springs Business Park"). Both stops run from 6:30 to 8:30 a.m.

At the Bldg. 1 pit stop, employees and contractors who show up riding a bicycle and wearing a helmet may enjoy breakfast snacks and participate in a raffle including such prizes as cycling gear and equipment and Fitness Center memberships. All pre-registrants get a free Bike to Work Day T-shirt (you may want to bring a print confirmation of your registration as back up).

If you have never tried commuting by bike to NIH and aren't sure how to begin, explore the Commuting link at the web page above. The NIHBCC offers advice on topics ranging from purchasing a bicycle to favorite NIH commuting routes from all over the D.C. area.

Bike to Work Day is a rain or shine event. Volunteers are always appreciated to help with preparations before or on the day of the event. If you would like to help, email Jonathan Mazal ([mazaljr@mail.nih.gov](mailto:mazaljr@mail.nih.gov)).



### NIDA's Volkow Appears on 'Katie'

NIDA director Dr. Nora Volkow (r) appeared with Katie Couric on her show Katie Feb. 28 to answer questions about teen drug abuse. The episode, titled "What Your Kids Are Doing that You Don't Know About," included an expert panel discussion on the best ways for parents to talk about drugs and other dangerous behaviors with their children. To watch a video of Volkow's appearance, visit [www.katiecouric.com/on-the-show/2013/02/28/what-your-kids-are-doing-that-you-dont-know-about/](http://www.katiecouric.com/on-the-show/2013/02/28/what-your-kids-are-doing-that-you-dont-know-about/).

nih record



### Social Entrepreneur Staple-Clark To Give NEI Global Lecture

The National Eye Institute Global Health Vision Lecture will feature Jennifer Staple-Clark, founder and CEO of Unite for Sight, New Haven, Conn., on Thursday, Apr. 18, at 1 p.m. in

Lawton Chiles International House (Bldg. 16). Her presentation, *Innovation & Outcomes: How Evidence-Based Research Can Provide Real Impact in Eye Care and Health Care Delivery*, will focus on Unite for Sight's strategies for the delivery of quality eye care in resource-poor settings and the organization's research strategies for supporting local ophthalmologists in developing countries.

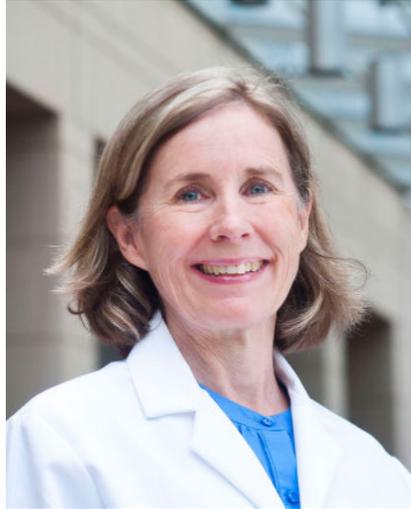
Staple-Clark founded Unite for Sight in 2000 while she was a sophomore at Yale University. Through her vision and entrepreneurial skills, she has made the organization a leader in providing cost-effective care to the world's poorest people. By investing human and financial resources in the social ventures of eye clinics in developing countries, Unite for Sight has provided eye care to more than 1.5 million people living in extreme poverty, including more than 63,000 sight-restoring surgeries.

Staple-Clark is the recipient of the 2011 John F. Kennedy New Frontier Award and the 2009 National Jefferson Award, which is regarded as the "Nobel Prize" for public service.

The Global Health Vision Lecture Series is sponsored by NEI, Fogarty International Center and the NIH global health interest group. NEI created the series in 2012 to foster global collaboration and the exchange of information among international vision researchers and eye health clinical scientists.

For information about the lecture, contact Sandra Jones at (301) 496-2234.

Individuals who need sign language interpreters or reasonable accommodation to participate in this event should contact Linda Huss at (301) 496-5248.



*Dr. M. Catherine Bushnell*

PHOTO: LISA HELFERT

### NCCAM Pain Expert Lectures on Mind-Body Therapies

What happens in your brain when you experience pain? Can mind-body approaches really help ease pain? Dr. M. Catherine Bushnell, scientific director of NCCAM's Division of Intramural Research, tackled these topics when she recently spoke on "The Neural Basis of Mind-Body Pain Therapies" in NCCAM's Integrative Medicine Research Lecture Series.

"Pain is a multidimensional, complex and individual experience," said Bushnell, who is leading a new, cross-cutting NIH research initiative on pain. Research has been yielding fascinating insights on pain's underlying biology.

For example, imaging has shown that even in conditions in which the causes of pain are not visible or known, the brains of pain patients do experience pain. And it is evident where in the brain this happens.

When someone is exposed to a pain stimulus, a series of signals ascend from the body site to the spinal cord and then the forebrain. Then, as part of pain processing, a series of signals descend in the opposite direction. In both directions, multiple pathways and cells, such as neurons and neurotransmitters, are involved.

Signaling in the downward path can be reduced or increased, altering the person's experience of pain. One way to do so is to employ the brain's natural capacity to release opiates; this can be done not only through analgesic drugs but also through employing "natural" psychological processes such as attention and the emotions.

This is where mind-body approaches, which employ interactions between the brain, mind, body and behavior, enter the picture. Bushnell explained some of her team's and others' work in this area. Studies on hypnosis, meditation and yoga have found that these approaches seem to beneficially affect people's perception of and tolerance of pain stimuli and alter pain processing.

Cognitive-behavioral therapy, too, appears to have these effects. Mind-body practices may also slow down the loss of brain gray matter that occurs naturally with age and is accelerated in people who have had longtime chronic pain.

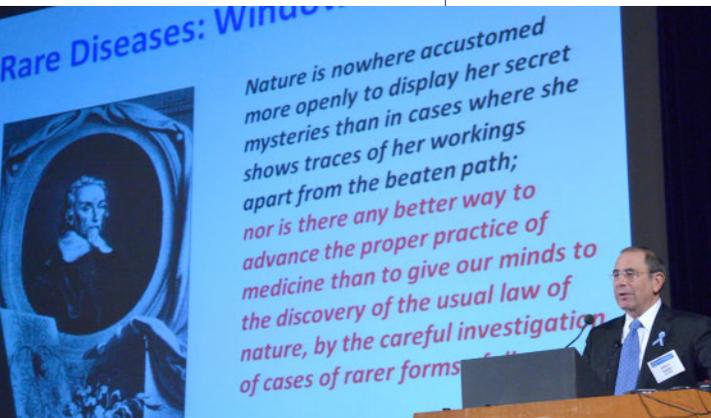
The placebo effect, too, shows promise in helping to counter the effects of chronic pain, Bushnell said. For example, research has shown that expecting relief from a placebo activates a descending pain modulatory system similar to the one activated by emotions. Another intriguing area of placebo research is the role played by dopamine, a neurotransmitter important in anticipation of rewards.

Bushnell's lecture is available online under Past Events at [videocast.nih.gov](http://videocast.nih.gov).—  
Ellen O'Donnell

## RARE DISEASE

CONTINUED FROM PAGE 1

Feb. 28 and Mar. 1. Led by ORDR and the Clinical Center, the event focused on the importance of collaborations among government agencies, academia, patient advocacy groups and industry in raising awareness and advancing rare diseases research.



*Clinical Center director Dr. John Gallin says that the study of rare diseases yields insights into common ones.*

Dr. Christopher Austin, NCATS director, gave opening remarks and discussed a renewed interest in rare diseases in the biomedical research community. He pointed specifically to the pharmaceutical industry's interest in niche markets; opportunities for repurposing of approved drugs for rare and other dis-

eases; better models for research design using small populations; and a growing public recognition that rare diseases represent a global public health issue.

Austin highlighted some of NIH's collaborative rare disease research efforts, such as the NCATS Therapeutics for Rare and Neglected Diseases (TRND) program and NIH's Undiagnosed Diseases Program. Rare disease efforts account for more than 11 percent—about \$3.5 billion—of the overall NIH budget.

Austin called for increased integration among all rare disease researchers across the country and around the globe. "At NIH and throughout the world, there is an increased focus on rare diseases," he said. "To make these efforts maximally productive for patients and science across the thousands of rare diseases, we must increasingly coordinate rare disease programs globally to allow them to leverage each other."

The first day of the event also featured talks from partners at federal agencies, including Dr. Gayatri Rao, director of the Office of Orphan Products Development at the Food and Drug Administration, and Dr. Ann Pariser from the Center for Drug Evaluation at the FDA.

The day ended with a screening of *Here.Us.Now*, the Kauffman Foundation's documentary about a family's quest to navigate the drug development pipeline and find a treatment for Nie-

mann-Pick type C, a rare progressive neurological disease.

The film features Austin explaining the need for innovation in the translational process. Since the film was made, the TRND program made it possible to successfully launch a phase 1 clinical trial at the Clinical Center to evaluate the medicine, called cyclodextrin, featured in the film. The trial began in January, based on research conducted by a TRND-led collaborative team of government and academic scientists, the pharmaceutical industry and patient support groups. The same team has identified another compound called delta-tocopherol, a form of vitamin E, as another potential treatment for this rare disease.

Dr. John Gallin, director of the Clinical Center, opened the second day of the event. He stressed that studying rare diseases is important for gaining insights into common diseases.

In addition, there were talks from patient groups including the Genetic Alliance and the National Organization of Rare Disorders. Such groups are critical in identifying opportunities for rare disease patients to participate in clinical research.

Sharon Terry, president and CEO of the Genetic Alliance, spoke about a new effort called Registries for All (Reg4All), a tool that allows patients to collect their own health information and share it with researchers depending on self-determined privacy settings. Reg4All was established through a partnership of the Genetic Alliance and a company called Private Access. The primary goal of Reg4All is to help revitalize clinical trials and speed cures for thousands of rare diseases.

"When we are talking about rare diseases and enrolling individuals in a cohort, we say we're looking for needles in a haystack, and instead we believe that the haystack is made out of needles," Terry said. "When given the right tools, people will participate in clinical research."

During his address to the crowd of more than 300, Dr. Stephen Groft, ORDR director, painted a brighter future.

"This really is a good time for rare diseases research around the world," he said. "I'm optimistic about the future of rare disease research because of increasing opportunities for meaningful interactions between public and private researchers, pharmaceutical companies and patient advocacy groups to learn about and discover treatments for rare diseases." ●



### El-Sadr To Give Hill Lecture, Apr. 11

Dr. Wafaa El-Sadr will deliver this year's James C. Hill Memorial Lecture, titled "The Global Response to the HIV Epidemic: Lessons Learned, Lasting Legacy," on Thursday, Apr. 11, at 2 p.m. in Lipsett Amphitheater, Bldg. 10. She will discuss how the

tactics successfully used to address the global HIV pandemic could be applied to non-communicable chronic diseases such as diabetes, cardiovascular disease and cancer.

El-Sadr is director and founder of the International Center for AIDS Care and Treatment Programs (ICAP) at Columbia University's Mailman School of Public Health, where she is also director of the Global Health Initiative and a professor of epidemiology and medicine.

Through ICAP, El-Sadr has worked with ministries of health, non-government organizations, academic institutions and community groups to strengthen the ability of health care systems to address HIV and related conditions by linking research, education, training and clinical practice. ICAP provides care to more than 1 million individuals in sub-Saharan Africa and lifesaving antiretroviral access to more than 800,000 people. In addition to her work with ICAP, El-Sadr is principal investigator for the NIH-funded HIV Prevention Trials Network.

El-Sadr will address how multifaceted efforts to address HIV—such as creating multidisciplinary health care teams, offering family-focused care, developing support systems to ensure patients take their medications and engaging with the larger community to reduce stigma and raise support for health services—offer a framework for successfully addressing chronic diseases.

The lecture is dedicated to former NIAID deputy director Hill, who 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.

### NCI's Misteli To Give NIH Director's Lecture, Apr. 10

NCI senior investigator Dr. Tom Misteli will deliver the final of three NIH Director's Lectures as part of the 2012-2013 Wednesday Afternoon Lecture Series. His talk, "The Cell Biology of Genomes: From Fundamentals to Disease," will be held on Apr. 10 at 3 p.m. in Masur Auditorium, Bldg. 10.



Misteli is an internationally renowned cell biologist who pioneered the use of imaging approaches to study genomes and gene expression in living cells. He is currently a senior investigator and associate director at NCI's Center for Cancer Research, where he heads the cell biology of genomes group.

He obtained his Ph.D. from the University of London and did postdoctoral training at Cold Spring Harbor Laboratory. His laboratory is interested in uncovering fundamental principles of spatial genome organization and applying this knowledge to the development of novel diagnostic and therapeutic strategies for cancer and aging.

He has received many awards including the Wilhelm Bernhard Medal, Gold Medal of the Charles University, the Flemming Award, the Gian-Töndury Prize and the NIH Director's Award. He is an advisor for numerous national and international agencies and serves on several editorial boards including *Cell*. He is editor-in-chief of the *Journal of Cell Biology* and of *Current Opinion in Cell Biology*.

For lecture information and reasonable accommodation, contact Jacqueline Roberts, (301) 594-6747.



### NIAMS Holds Forum on Career Development Awards

NIAMS recently hosted a career development forum for extramural researchers who are in the third year of a mentored clinical scientist development (K08) or patient-oriented research (K23) grant. In addition to the K awardees, the forum included physician-scientists who recently received R01 awards and established researchers who held an open discourse on the challenges junior investigators face when pursuing research independence. It also provided an opportunity for K awardees (shown above) to interact with NIAMS program officials. These included Drs. Susana Serrate-Sztejn (front, l) and Marie Mancini (front, second from l) and Drs. Joan McGowan (front, second from r) and Amanda Boyce (front, r) and NIAMS leadership—director Dr. Stephen Katz (front, c) and deputy director Dr. Robert Carter (rear, second from r).

**Right:**

View of the new FAES coffee bar and bookstore, as seen from the main hallway on the first floor of Bldg. 10.

**Below:**

Stools and tables in the café accommodate visitors to the retail area.

PHOTOS: BILL AND ERNIE BRANSON



**FAES**

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offices, a faculty club/dining room and a graduate student lounge.

The bulk of the renovation has taken place at the seam where the original Bldg. 10 meets the ACRF, or Ambulatory Care Research Facility, which was added in 1981. And much of the real estate it occupies became available when NIH added the Clinical Research Center in 2004. Thanks to the migration of both the pharmacy department and the nutrition department to the CRC, developable space became open.

The gateway to the renovation is along the first-floor corridor that links Bldg. 10's South Lobby

to the CRC atrium. Just steps outside of Masur Auditorium, the glass front of the new bookstore (promoted from obscure space on the B1 level) and coffee bar will beckon passersby, shopping mall-style, said Dr. Edwin "Ted" Becker, who has overseen the project from a virtually unassailable vantage: at NIH since 1955, he is both a former FAES president and a past director of the Office of Research Services, then the bricks-and-mortar experts on campus.

Behind the retail space lays a great open rectangle whose terrazzo floor will be illuminated by new skylights installed recently. This terrace





*Abundant classroom space fills the B1 level of the FAES renovation, including the latest A/V equipment.*

occupies what used to be open space that extended more than two stories above a granite floor on the B1 level. “It will be big enough for poster sessions and receptions,” said Becker, “and can be used in conjunction with events going on in Lipsett Amphitheater and Masur Auditorium.”

Below the terrace is the academic center—8 classrooms fitted with A/V equipment and Internet connections (both Wi-Fi and LAN) and subdivide-able by partitions into smaller segments. By evening, these rooms will host FAES academic courses, most of which are taught by NIH faculty. By day, the classrooms will be available for NIH seminars and lectures.

“Our aim in all of this is to be as flexible as possible,” said Becker.

Two other renovations complete the FAES project, which the foundation funded via its insurance program (used by some 4,000 subscribers), tuition proceeds, bookstore sales and careful management of a financial reserve that has existed for decades.

In what used to be the CC pharmacy department along the north corridor of Bldg. 10’s first floor, new FAES administrative offices are being built, along with a lounge for the sole use of NIH’s approximately 400 graduate students; FAES will vacate its old office space in Bldg. 60.

And on the second floor of the ACRE, in what used to serve as the Clinical Center’s medical board room, will be a faculty club/dining room with seating for 40 and a modest caterer’s kitchen. That facility won’t open until later this summer, Becker said.

FAES will retain its Bio-Trac class teaching laboratory in Bldg. 60, probably for a few years, said Becker. FAES hopes to build a new, larger lab in space formerly occupied by the CC nutrition department. That space, on the B1 level of Bldg. 10, is currently part of extensive planned E-wing renovations to the building.

“This whole thing has been a cooperative project with NIH, from Dan [Wheeland, director of the Office of Research Facilities] on down,” said Becker. “The facilities people have been very good. It has taken a long time for things to get done, but they’re very thorough.”

Becker also credited NHLBI’s Dr. Robert Adelstein, chair of the FAES Academic Center committee since 2002, and many members of the FAES board for their vision and continuing support.

While NIH donated space for the project, FAES paid for construction and is overseeing the renovation. The builder is Gilbane Inc. and the project manager is McKissack & McKissack. All phases of the renovation, except the new teaching laboratory, will open in 2013, Becker said. 🗨️

## Grady Speaks at National Summit on Advanced Illness Care

NINR director Dr. Patricia Grady recently participated in a panel discussion at the 2013 National Summit on Advanced Illness Care: A Roadmap for Transformation.

Held at the National Academy of Sciences in Washington, D.C., the summit was hosted by the Coalition to Transform Advanced Care (C-TAC). C-TAC defines “advanced illness” as that which occurs when one or more conditions become serious enough that general health and functioning decline and treatments begin to lose their impact. The process of advanced illness continues to the end of life—an area of science that NINR has supported as the lead NIH institute for end-of-life research.

The summit brought together more than 400 leaders including clinicians, a bipartisan team of senators, clergy, professional education experts and private sector employers. They spent 2 days addressing “one of America’s greatest challenges,” breaking through barriers so that seriously ill people receive proper care at the appropriate time and place.

One message throughout the summit was that all people involved in the care of a person with an advanced illness—individuals, family members, health care providers, educators, insurers and others—can be part of the solution to transform advanced care. This theme was encompassed in the panel discussion Grady participated in, Working Together: Innovations in Interprofessional Training. The panel featured leaders in nursing, science, medical education and chaplaincy, sharing what they have learned about supporting change and fostering an interprofessional approach to compassionate and coordinated advanced illness care. Grady provided insights into the role of research in building the evidence-base of clinical practice.

“Research serves as the underpinning for identifying ‘best’ scientific evidence to ensure quality decisions are made in the care of those facing advanced illness,” she said. “Nursing and nursing science can help create change in interprofessional approaches to advanced illness care by addressing individual and family-centered care, including new interventions and models of transitional care and developing innovative health technologies and informatics for use in advanced care.”

Asked for examples of effective federal level initiatives that have worked to build systems of interprofessional education and training, Grady noted that a core component of the training NINR supports “is to cultivate interdisciplinary research using team-based approaches that concentrate on the complex nature of contemporary health care issues, such as those found in advanced illness.”

## BLACK HISTORY

CONTINUED FROM PAGE 1



### Right:

*“We’ve blazed a trail forward,” Rodgers said, “and we ask all of you to be ambassadors for NIH, to educate your friends, your family and the general public about [NIH] resources. You will be making science a very powerful tool for justice.”*

PHOTOS: BILL BRANSON

about a third of all whites, are obese. Obesity increases the risk of developing many complications, including type 2 diabetes, the leading cause of kidney disease.

Causes of type 2 diabetes (once called adult-onset) include genetic determinants investigated and reported on by NIH director Dr. Francis Collins, said Rodgers, while our environment may turn possibility and susceptibility into reality.

“African Americans are 13 percent of the U.S. population,” he continued, “yet they account for 33 percent of patients in dialysis centers around the U.S.—almost a three-fold amplification. You can’t give an example in which there’s a more stark disparity in terms of human health.”

Rodgers described progress and resources to improve health:

- **A 3-arm trial of 3,200 overweight pre-diabetics.** 79 million Americans have pre-diabetes, where the amount of glucose in the blood is higher than normal but not high enough to be called diabetes. Pre-diabetes often leads to type 2 diabetes. The Diabetes Prevention Program (DPP) illustrated the enormous power of lifestyle change for people with pre-diabetes. In this landmark study, modest weight loss through dietary changes and increased physical activity reduced the risk of developing type 2 diabetes by 58 percent in a diverse group of individuals at risk for the disease. “The effect was impressive,” Rodgers said, “and quite durable.”

- **NIDDK partners with YMCA.** The one-on-one counseling tested in the DPP is expensive, Rodgers explained, “so we partnered with the YMCA, an accessible and affordable resource for communities, to test a DPP-based intervention in a group setting. Outcomes for people in group sessions were equivalent to those managed in the DPP, while yearly costs per participant dropped tenfold.

“We’re looking at how these projects can be scalable and brought to individuals at greatest risk,” Rodgers said.

- **Intramural study on Pima Indians.** The Pima have the highest prevalence of diabetes in the world. NIH researchers are studying the intersection of genetics and environment and using the information to help determine how to prevent and treat diabetes.

- **LIFE-Moms.** If an obese woman develops gestational diabetes or has diabetes during

pregnancy, her infant has a much higher risk of developing diabetes than a sibling born when the mother did not have diabetes. Co-funded by NIDDK, ORWH and others, LIFE-Moms is a multi-center consortium across the U.S. that is testing a variety of lifestyle interventions to reduce weight gain in expectant mothers and avoid gestational diabetes.

- **The National Diabetes Education Program.**

This joint program of NIH and the CDC offers a wide variety of materials to help with diabetes prevention and control.

- **Sisters Together: Move More, Eat Better.** Given the high rates of obesity in African-American women, NIDDK created Sisters Together: Move More, Eat Better to offer tips to help black women improve their eating and physical activity habits.

Rodgers said he hopes people will use NIH as a source of health information.

“We’ve blazed a trail forward,” he said, “and we ask all of you to be ambassadors for NIH, to educate your friends, your family and the general public about [NIH] resources. You will be making science a very powerful tool for justice.”

From the Q&A session:

**Food deserts.** “The First Lady has taken this on very ably,” said Rodgers, resulting “in a number of food wagons going into these local communities [where fresh food is scarce] to provide fruits and vegetables.” NIH’s role and responsibility is to support research to identify factors involved in obesity; results guide other groups to make societal changes, he said.

**Type 1 diabetes.** Type 1, once called juvenile-onset, diabetes accounts for about 5 percent of all diabetes cases, Rodgers said. A combination of genetic and unknown environmental triggers leads to autoimmunity, where the immune system destroys insulin-producing cells in the pancreas. NIDDK’s TEDDY study follows 8,000 children from birth to 15 to identify triggers. TEDDY “will ultimately serve as the standard for most genetic-environmental interaction studies,” Rodgers said, “because we already know so much about the genetic risk factors for type 1 diabetes.”

The videocast is available at <http://videocast.nih.gov/summary.asp?Live=12539>. 



## feedback

Have a question about some aspect of work at NIH? Post anonymous queries at [www.nih.gov/nihrecord/index.htm](http://www.nih.gov/nihrecord/index.htm) (click on the Feedback icon) and we'll try to provide answers.

**Feedback:** This concerns the northeast corner of campus (W. Cedar Lane and Rockville Pike). Construction work was done in the wilderness area and then it stopped a couple of months ago, but there are still construction items left and there has been no attempt to return the natural area to its original state—no replanting of grass, shrubs, trees, etc. that were destroyed during the construction. And what is being done about the new turn lane for the CVIF? Nothing has been done with it in at least a couple of months either.

**Response from the Office of Research Facilities:**

This is a State Highway Administration (SHA) project and is part of their overall intersection improvements at Rockville Pike and West Cedar Lane. The primary purpose of the first phase of work, still in progress, is relocation of utilities. There are no plantings or restoration of the “wilderness area” planned because once utility work is complete, the next step involves substantial intersection improvements. The area has been stabilized to prevent erosion, but eventually most of the area will be cleared and excavated for new stormwater management infrastructure.

The new lane referenced for the Commercial Vehicle Inspection Facility is not an actual turn lane for the CVIF, but rather is part of a new right-hand lane for Rockville Pike that extends from the corner of West Cedar Lane to Wilson Drive as part of the overall SHA intersection improvements.

**Feedback:** Could those of us affected by the F-wing project in Bldg. 10 get updates? It would be nice to know how things are progressing and when certain floors will be re-opened or closed. An occasional update with time-lines would be nice.

**Response from ORF:** Phase A of the F-wing project for Bldg. 10 is progressing toward occupancy in late summer 2013. At that time, floors 2, 3, 4 and 5 will be reopened. Over the next 2 years, under phase B, the project will proceed with work on the upper floors, 6-13, with a projected occupancy in spring 2015. The north corridors of these upper floors will be closed and occupants of those areas will be relocated. An executive steering committee, with IC representatives, meets regularly to review progress. For more information, contact Wayne Appenzellar at [appenzellarwa@mail.nih.gov](mailto:appenzellarwa@mail.nih.gov) or (301) 451-2004.



### Williams To Address Smoking, Comorbidities

Dr. Jill M. Williams, professor of psychiatry and director, division of addiction psychiatry, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, will speak at NIH on Tuesday, Apr. 16 from 10 a.m. to noon in Bldg. 45, balcony C. Her talk is part of the Office of Disease Prevention's Medicine: Mind the Gap seminar series.

Williams will address the fact that, although public health interventions have led to lower smoking rates in the United States over the last 40 years, smokers with mental illness or an addiction other than smoking have benefited less from these efforts. At this time, little is being done nationally at the mental health or public health systems level to promote smoking cessation in this population.

Williams also holds faculty appointments at the Cancer Institute of New Jersey and is affiliated with the UMDNJ-Tobacco Dependence Program and Rutgers Center for Alcohol Studies. She received her medical degree from UMDNJ-Robert Wood Johnson Medical School and completed her residency training at Duke University Medical Center.

Her publications have appeared in numerous journals including *Nicotine and Tobacco Research*, the *Journal of the American Medical Association* and the *Journal of Substance Abuse Treatment*.

Registration is not required; seating is on a first-come, first-served basis. Sign language interpreters will be provided. Those who require reasonable accommodation to participate should contact Paris Watson in the Office of Disease Prevention: [Paris.Watson@nih.gov](mailto:Paris.Watson@nih.gov); (301) 496-6615.



### NIAID's Metcalfe Receives AAAAI Honor

Dr. Dean D. Metcalfe, chief of NIAID's Laboratory of Allergic Diseases and its mast cell biology section, has received the 2013 Distinguished Scientist Award from the American Academy of Allergy, Asthma and Immunology (AAAAI).

Metcalfe is an expert on the mast cell, an immune cell that plays a key role in the induction of allergic inflammation. His laboratory studies the growth and differentiation of these cells, their communication during an allergic reaction and their release of compounds, such as histamine, that can lead to disease. He and his colleagues also conduct clinical studies to better understand, prevent and treat allergic conditions such as anaphylaxis (the most severe type of allergic reaction) and mastocytosis (a group of rare disorders in which the body produces too many mast cells). His efforts have helped to identify disease-causing mutations in mast cell disorders and to better understand how mast cells receive signals from the immune system.

Metcalfe is a past president of AAAAI. He also is a member of the Association of American Physicians, the Collegium Internationale Allergologicum and the American Clinical and Climatological Association. He has been chief of the Laboratory of Allergic Diseases since 1995.



*Two types of environmental conditions—cold-dry and humid-rainy—are associated with seasonal influenza epidemics, according to an epidemiological study led by FIC researchers.*

### **Role of Climate in Influenza Transmission Revealed**

Two types of environmental conditions—cold-dry and humid-rainy—are associated with seasonal influenza epidemics, according to an epidemiological study led by researchers at the Fogarty International Center. The paper, published in *PLoS Pathogens*, presents a simple climate-based model that maps influenza activity globally and accounts for the diverse range of seasonal patterns observed across temperate, subtropical and tropical regions.

The findings could be used to improve existing current influenza transmission models and could help target surveillance efforts and optimize the timing of seasonal vaccine delivery, according to FIC researcher Dr. Cecile Viboud, who headed the study. “The model could have a broader application, encouraging researchers to analyze the association between climatic patterns and infectious disease across a wide range of diseases and latitudes,” she said.

Human influenza infections exhibit a strong seasonal cycle in temperate regions; laboratory experiments suggest that low specific humidity facilitates the airborne survival and transmission of the virus in temperate regions. Specific humidity is the ratio of water vapor to dry air in a particular body of air while relative humidity—commonly used in weather forecasts—is the amount of water vapor in the air relative to its capacity to hold water vapor and is primarily a function of temperature.

Data from animal studies indicate low temperature and humidity increase the duration of the virus’s reproduction and expulsion in infected organisms and virus stability in the environment, increasing the probability of transmission through coughing, sneezing or breathing. In contrast, high temperature seems to block airborne transmission.

### **Benefits of Quitting Smoking Outpace Risk of Modest Weight Gain**

The improvement in cardiovascular health that results from quitting smoking far outweighs the limited risks to cardiovascular health from the modest amount of weight gained after quitting, reports an NIH-funded community study. The study found that former smokers without

diabetes had about half as much risk of developing cardiovascular disease as current smokers; this risk level did not change when post-cessation weight gain was accounted for in the analysis.

This study is the first epidemiological effort to directly address the health impact of the weight gain that many people experience following smoking cessation. The findings were published in the Mar. 13 *Journal of the American Medical Association*.

“Our findings suggest that a modest weight gain, around 5 to 10 pounds, has a negligible effect on the net benefit of quitting smoking,” said study co-author Dr. Caroline Fox of NHLBI. “Being able to quantify to some degree the relationship between the benefits and side effects of smoking cessation can help in counseling those who have quit or are thinking about quitting.”

### **Daily-Use HIV Prevention Approaches Prove Ineffective Among Women**

Three antiretroviral-based strategies intended to prevent HIV infection among women did not prove effective in a major clinical trial in Africa. For reasons that are unclear, a majority of study participants—particularly young, single women—were unable to use their assigned approaches daily as directed, according to findings presented Mar. 4 by one of the study’s co-leaders at the Conference on Retroviruses and Opportunistic Infections in Atlanta.

The Vaginal and Oral Interventions to Control the Epidemic (VOICE) study was designed to evaluate the safety and efficacy of three HIV prevention strategies compared to placebo. The trial tested an investigational vaginal gel containing the antiretroviral drug tenofovir, a pill form of tenofovir and a pill containing a combination of tenofovir and emtricitabine. The study was sponsored and largely funded by NIAID.

In the trial, the three strategies were tested among 5,029 sexually active women 18 to 45 years of age at 15 sites in South Africa, Uganda and Zimbabwe. Nearly half of the study participants were under age 25 and most were unmarried (79 percent).

Study results indicate that most VOICE participants did not adhere to the daily use schedule. Moreover, single women 25 years of age and younger were the least likely to use the investigational products and the most likely to become infected with HIV. —compiled by Carla Garnett

# milestones



## Pettigrew Receives Pierre Galletti Award

Dr. Roderic Pettigrew, director of the National Institute of Biomedical Imaging and Bioengineering, received the 2013 Pierre Galletti Award at the American Institute for Medical and Biological Engineering

(AIMBE) annual event in Washington, D.C., recently. It is the highest honor that AIMBE, a nonprofit organization that provides leadership and advocacy in medical and biological engineering for the benefit of society, bestows on an individual.

The award is named after Galletti, a luminary in the biomedical engineering field who filled many roles during his life: researcher, inventor, teacher, mentor, entrepreneur, academic administrator and public policy advocate. After Galletti's passing in 1997, AIMBE recognized its second president with the establishment of the award in 1999. Other honorees include Dr. Robert S. Langer and Dr. Shu Chien, both laureates of the National Medal of Science awarded by the White House.

Pettigrew, the first director of NIBIB and a class of 2003 fellow of AIMBE, was cited for contributions to public awareness of medical and biological engineering and promotion of the national interest in science, engineering and education in his role as director of NIBIB and for cutting-edge research in cardiovascular radiology diagnostic and treatment strategies.

"I am deeply honored to accept this award in recognition of work that really has been a labor of love: advancing the nation's health through scientific discovery, innovation at the interface of engineering, the physical and life sciences and educating the next generation of diverse and interdisciplinary scientists," said Pettigrew. He gave the Galletti Award Lecture at the conference, where he highlighted cutting-edge science funded by NIBIB and its innovative team-based training programs.

Pettigrew is also known for his pioneering research at Emory University involving 4-dimensional imaging of the cardiovascular system using magnetic resonance. He has been elected to the Institute of Medicine and the National Academy of Engineering.

## Haynes Named NIGMS Branch Chief

Dr. Susan Haynes is the new chief of the Developmental and Cellular Processes Branch in the NIGMS Division of Genetics and Developmental Biology (GDB). She is also serving as acting director of the division.

Haynes came to NIGMS in 2005 as a program director in GDB after 6 years as an assistant professor in the department of biochemistry and molecular biology at the Uniformed Services University of the Health Sciences. Prior to that, she was a postdoctoral researcher and then a senior staff fellow in the NICHD Laboratory of Molecular Genetics, where she studied gene regulation during embryogenesis in fruit flies. She continued this research at USUHS.

At NIGMS, Haynes manages research grants in stem cell biology and regeneration as well as postdoctoral training grants in medical genetics. Her stem cell-related activities also include developing funding initiatives, organizing workshops and serving on NIH committees.

Haynes earned a B.S. in biology from the University of Cincinnati and a Ph.D. in molecular cell biology from Rockefeller University.



## Philip, Expert on Rocky Mountain Spotted Fever, Mourned

Dr. Robert Neil Philip, a former NIAID epidemiologist, died Jan. 30 of natural causes in Missoula, Mont. He was 89 years old.

Philip served for more than 30 years in the Public Health Service, including appointments at NIH in Bethesda from 1949 to 1956 and at NIAID's Rocky Mountain Laboratories (RML) in Hamilton, Mont., from 1960 to 1982. In addition to his duties as an epidemiologist, he served as assistant RML director from 1965 to 1979. He also conducted field research on tuberculosis and other infectious diseases while stationed in Alaska from 1956 to 1960.

Philip was recognized internationally for his contributions to the diagnosis and control of Rocky Mountain spotted fever, a bacterial disease spread by ticks. His studies were reported in dozens of scientific journals and books.

Following retirement, Philip continued his passion for research. In 2000, he published *Rocky Mountain Spotted Fever in Western Montana: Anatomy of a Pestilence*. The book remains among the best accounts of the early days of infectious disease research in Montana's Bitterroot Valley and of the establishment of Rocky Mountain Laboratories, according to Dr. Marshall Bloom, RML associate director for scientific management.

"Bob was a very capable RML administrator and his studies on spotted fever and other zoonoses are still widely cited," said Bloom, who worked with Philip for nearly 10 years.

Born in Lincoln, Neb., Philip spent his childhood and school years in Hamilton (his father, Dr. Cornelius B. Philip, had been at RML from 1930-1970, including as director 1962-1964). He earned his medical degree at the University of California and received a master of public health degree from Harvard University. He is survived by his wife, Shirley, and five children. ●



Dr. Robert Philip, circa 1969

## NIBIB Contest Encourages Collegians to Start Inventing

By Jessica Meade

How can NIH encourage undergraduate students interested in science, technology, engineering and math (STEM) careers? By showing them that they can make a difference long before they finish their studies, argues Dr. Zeynep Erim, program director in the Division of Interdisciplinary Training at the National Institute of Biomedical Imaging and Bioengineering.

Last month, NIBIB launched its second Design by Undergraduate Teams (DEBUT) competition. DEBUT challenges student teams to come up with the most innovative and influential device prototypes in three categories: diagnostic, therapeutic and technology to aid underserved populations and individuals with disabilities. The winning teams in each category receive a \$10,000 prize and are honored at an award ceremony at the annual meeting of the Biomedical Engineering Society.

“You always hear that it takes so much money, and it’s so difficult to invent something that you have to be really experienced—well into your 40s to even try,” said Andy Tu, a member of last year’s QuickStitch team from Johns Hopkins University that won in the category of therapeutic devices. “So this experience really taught me that you can try even as a young professional.”

The QuickStitch team designed an inexpensive suturing tool that improves safety, efficiency and consistency in stitching the fascia—a collagenous layer underneath the skin that holds the internal organs in place. “Dr. Nguyen, our mentor, could be a little biased, but he says that this tool has the potential to revolutionize the way we perform surgery,” said Sohail Zahid, one of the QuickStitch team. The team has applied for a patent for the new device.

Another team, from Washington University in St. Louis, was awarded a prize for creating an inexpensive (around \$10) spirometer to help with diagnosis of COPD worldwide. They are currently forming a company called Sparo Labs and raising investment funding to continue product development. “We really want to see how far we can take it and how many people we can help,” said team member Abby Cohen.

The final winning team was from the University of California, Los Angeles with the diagnostic project “Q-Path.” The goal was to help automate the diagnosis of bladder cancer by developing a new computer screening technology that is able to identify cancerous cells on its own. It’s pos-



*The QuickStitch group poses with NIBIB director Dr. Roderic Pettigrew (r) and Dr. Zeynep Erim (l), director of NIBIB’s Division of Interdisciplinary Training. It includes (from l) Daniel Peng, Andy Tu, Sohail Zahid, Anvesh Annadanam, Haley Huang and Luis Herrera.*

sible that in the future this technology could be adapted to help diagnose breast cancer, lung cancer or even leukemia.

The first competition in 2012 garnered a total of 61 entries from 39 universities and involved 284 students. It was designed to be open only to undergraduate students in order to encourage them to compete without fear of being overpowered by more advanced contenders.

“It was very rewarding to read the entries and see how the undergraduates stretched their boundaries, formed collaborations—often across departments—and attacked a wide range of unmet clinical needs,” Erim said. “We hope that as the competition grows and as students see their own potential, they will be more invested in a STEM career.”

To learn more about the 2013 DEBUT Challenge, go to <http://debut2013.challenge.gov/>. 

## Information Security & Privacy Refresher Courses Offered Together

Fiscal year 2013 annual security and privacy refresher courses are being launched together. Completion of both courses is required for all NIH staff each year. Although security and privacy requirements are different, the course content is related.

The courses will provide information about your responsibilities to secure NIH resources and protect all forms of personal information, whether it belongs to you, the public, grant applicants, research study participants or patients. You will also learn what to do in the event of a computer security incident or breach of data to lessen the risk of harm.

In April, your IC information systems security officer (ISSO) and/or privacy coordinator will notify you to take the training within a specified timeframe. You will be asked to visit the NIH Information Security and Privacy Awareness Training web site, <http://irtsectraining.nih.gov/>, to complete both the FY13 Security & Privacy Refresher courses. Once you access the dashboard, you will be able to scroll down to select the courses, which you can choose to complete together in one sitting or separately. If you are identified as having significant IT security responsibilities, you may be asked to take—or certify you have taken—appropriate role-based security training.

If you have questions about the mandatory training requirement for either annual privacy or security awareness training, contact Karen Plá (privacy) (301) 402-6201, [plak@mail.nih.gov](mailto:plak@mail.nih.gov) or Cheryl Ann Seaman (information security) (301) 402-4461, [cheryl.seaman@nih.gov](mailto:cheryl.seaman@nih.gov).