

# nih record



ABOVE • Clinical research panelists share smiles, experiences at ORWH event. See story below.

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### 'Intense Phase'

## Comings, Goings, Upgrades Mark ACD Meeting

By Rich McManus

Enhanced visions for both the National Library of Medicine and the intramural research program (IRP) marked the 110th meeting of the advisory committee to the NIH director (ACD) June 11-12, along with a welcome to new NINDS director Dr. Walter Koroshetz and a fond farewell to NIH deputy director for extramural research Dr. Sally Rockey, who is leaving in September.



NLM working group cochairs Dr. Eric Green (l) and Dr. Harlan Krumholz of Yale

A congressionally mandated strategic plan for NIH, due by December, elicited lively discussion by the ACD and will continue to evolve as a working group decides on the proper taxonomy. And a game plan for the Precision Medicine Initiative announced by President Obama in January continues at a sprint to meet its September deadline; the last two of four national meetings on PMI are being held this month.

"If the history of the ACD is ever written,

SEE ACD, PAGE 6

### 'Faces of Clinical Research' Speak at Women's Health Week Event

By Carla Garnett



Dr. Janine Clayton applauds ORWH's 25th anniversary.

Juliana was tired of spending so much time in the hospital. Sickle cell anemia was increasingly taking over her life. Two different sources suggested the same NIH research study in the same week. It must be a sign, she thought.

Jamie and her family were keeping a very big secret. Every so often, the 10-year-old disappeared from her small town life and went away for medical treatments. What she told people was partly true: she had a heart condition. She didn't tell them the whole of it: She had contracted HIV through a blood transfusion during surgery and was in a research study at NIH.

SEE FACES, PAGE 4

### Taking Strides NIH'ers Take a Hike for Fun, Fitness

By Dana Talesnik



Walkers' spirits are high and bumbershoots handy.

Cloudy skies and drizzle did not dampen the spirits of hundreds of NIH'ers who participated in the 8th annual Take a Hike Day on June 4. Many welcomed the cooler temperatures as they jogged or walked the 3.25-mile perimeter of the NIH campus; others took a hike from Rockledge, Executive Blvd. and other NIH locations.

Take a Hike Day is a fun way to get moving, promote workplace wellness and reduce stress, said Ebony Andrews of the President's Council on Fitness, Sports & Nutrition, just before the hike. She encouraged everyone to make exercise a regular routine. "Keep that momen-

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The NIH Record is published biweekly at Bethesda, MD by the Editorial Operations Branch, Office of Communications and Public Liaison, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available upon request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 2015.

To receive alerts to our latest issue, send an email to [listserv@list.nih.gov](mailto:listserv@list.nih.gov) with the words "Subscribe NIHRECORD" in the message body.

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NIH...Turning Discovery Into Health

## briefs

### Help Feed Hungry Families

NIH'ers can make a difference in the lives of area families by donating non-perishable food items to the 2015 Feds Feed Families (FFF) Campaign. Many people in our community experience hunger. Your donations will help individuals served by three local organizations: the Children's Inn at NIH, the Safra Family Lodge and the Capital Area Food Bank.

Between July 6 and Aug. 26, drop off unexpired, non-perishable, unopened food items in any FFF box at 42 on- and off-campus locations. Forgot to bring in your donations? You can donate online. For a list of locations and most-wanted items, as well as directions for donating online, see [www.ors.od.nih.gov/FedsFeedFamilies](http://www.ors.od.nih.gov/FedsFeedFamilies).

Also, be on the lookout for multiple "Fill the Truck" events at which staff can walk, bike, or drive to set locations to help fill a donation truck. The events will take place 8-11 a.m. on July 14, 15, 21, 22 and Aug. 11, 12, 18 and 19 at various locations.

If you have questions, contact [FedsFeedFamiliesNIH@mail.nih.gov](mailto:FedsFeedFamiliesNIH@mail.nih.gov).

### Grad, Professional School Fair Set, July 15

The NIH Graduate & Professional School Fair will be held on Wednesday, July 15 from 9 a.m. to 3:30 p.m. at Natcher Conference Center. The fair provides an opportunity for NIH summer interns and postbacs, as well as other college students in the D.C. area, to prepare for the next step in their careers by exploring educational programs leading to the Ph.D., M.D., D.D.S., M.D./Ph.D. and other graduate and professional degrees. In addition to more than 150 representatives visiting from various schools and career-planning workshops, there will be exhibits open from 10 a.m. to 2:15 p.m. Visit [https://www.training.nih.gov/gp\\_fair](https://www.training.nih.gov/gp_fair) for a list of participating institutions and registration information.

### Children's Inn Seeks Facilities Volunteers

Volunteers are needed to assist the facilities management team at the Children's Inn at NIH with light maintenance-related projects. These include hanging pictures, installing hair dryers, small painting projects, rearranging furniture, etc. Hours are flexible during weekdays.

If interested, contact Laura King, senior director of volunteers and community outreach, at [lking@mail.nih.gov](mailto:lking@mail.nih.gov).

### Flag Status Answers Now Available

Employees and visitors to the NIH campus sometimes notice that the flags in front of Bldg. 1, Bldg. 10 and other locations are occasionally at half-staff. Curious about the flag status, they often call the NIH switchboard for answers. Now, there is an instant way to find out. Simply send an email to [Flag\\_Notification@sos.state.md.us](mailto:Flag_Notification@sos.state.md.us). Your email will generate an automatic response, including an option to join a flag status listserv. Responses typically cover the display status of both the United States flag and the Maryland state flag.



### Food Service Returns to Bldg. 1

*The Bldg. 1 Café debuted on June 15 on the third floor and is open 6:30 a.m. until 4 p.m., Monday-Friday. The café, adjacent to the site of the old Bldg. 1 cafeteria, is available to all NIH staff and visitors and offers a range of espresso drinks, assorted flavors of coffee and smoothies. In the morning, the Bldg. 1 Café offers breakfast pastries to accompany your coffee. At lunch, there is an assortment of salads, grab-and-go sandwiches and soup, as well as toasted sandwiches and paninis. The café is a service of the Office of Research Services, Division of Amenities and Transportation Services.*

PHOTOS: ERIC BOCK





NIMH director Dr. Thomas Insel (l) and Dr. Joseph T. Coyle, 2013 SfN Julius Axelrod Prize recipient

### Axelrod Symposium Honors Coyle

“With millions of Twitter accounts, computers and cell phones, we are now very good at the horizontal distribution of information. But the vertical transmission of knowledge has suffered—except in science. Everyone in this symposium is part of the legacy started by Julie Axelrod. In so many ways, the National Institute of Mental Health is really his offspring,” said NIMH director Dr. Thomas Insel, opening the symposium in honor of the NIH intramural biochemist and Nobel laureate whose well-known work on brain chemistry led to current treatments for depression and anxiety disorders and played a key role in the discovery of the pain-relieving properties of acetaminophen. Fittingly, the 7th Julius Axelrod Symposium was held in the John E. Porter Neuroscience Research Center, in the same area where Axelrod’s NIMH office once stood.

Following a brief remembrance by Dr. Solomon Snyder, professor of neuroscience at Johns Hopkins University, who was a postdoctoral fellow with Axelrod in his early days at NIH, attendees heard a number of talks on groundbreaking intramural neuroscience research.

Speakers included Dr. Zayd Kaliq of NINDS, NIMH’s Dr. Zheng Li, Dr. Brandon Harvey of NIDA’s optogenetics and transgenic technology core and 2014 NIMH IRP Fellow Axelrod Award recipient Dr. Andrew Emery.

This year’s symposium was held to honor the recipient of the 2013 Society for Neuroscience (SfN) Julius Axelrod Prize, Dr. Joseph T. Coyle of Harvard Medical School. Also a former postdoctoral fellow with Axelrod, Coyle spoke on “Cortical disconnection and the pathophysiology of schizophrenia.”

The symposium, typically held at the annual SfN



On hand at the Axelrod symposium are (from l) Dr. Zheng Li, unit on synapse development plasticity, NIMH; Dr. Zayd Khaliq, cellular neurophysiology unit, NINDS; Dr. Brandon Harvey, optogenetics and transgenic technology core, NIDA; Dr. Solomon Snyder, Johns Hopkins University; Coyle; Dr. Andrew Emery, 2014 NIMH IRP Postdoctoral Axelrod Award recipient; Dr. Susan G. Amara, 2014 SfN Julius Axelrod Prize recipient and NIMH scientific director.

meeting, was delayed due to the federal government shutdown in fall 2013. The prize is awarded by SfN to recognize “exceptional achievements in neuropharmacology or a related field and exemplary efforts in mentoring young scientists.”

SfN president Dr. Larry Swanson praised Coyle as “an outstanding neuroscientist and psychiatrist who has devoted his career to probing the underlying causes of psychiatric disorders and proposing innovative therapeutic interventions...He has demonstrated a life-long commitment to training researchers and clinicians alike.”

The recipient of the 2014 SfN Julius Axelrod Prize was Dr. Susan Amara, scientific director of NIMH’s Intramural Research Program. The 8th Axelrod Symposium will be held at NIH in spring 2016 to honor Amara.—Elizabeth Sherman, Janet Clark

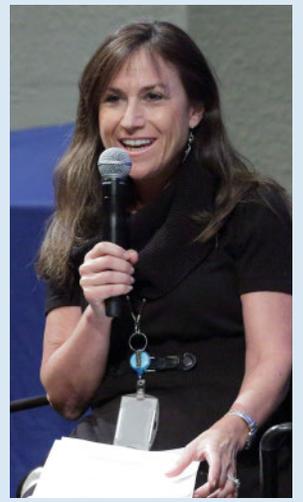
### NINDS’s Sibley Elected ASPET President

Dr. David Sibley, chief of the NINDS molecular neuropharmacology section, was recently elected president of the American Society of Pharmacology and Experimental Therapeutics (ASPET). He began as president-elect on July 1.

ASPET is an international scientific society of 5,000 members who conduct basic and clinical pharmacology research to help develop new medicines and therapies to fight existing and emerging diseases. The society—founded in 1908 and located in Bethesda—was created to help promote pharmacological research. Its members work in a variety of different fields including academia, government, pharmaceutical and biotechnology companies and nonprofit organizations.

Sibley, an ASPET member since 1985, joined the NINDS Division of Intramural Research in 1987 and was appointed molecular neuropharmacology section chief in 1992. His laboratory’s long-term goal is to develop novel pharmacological therapies for treating neurological and psychiatric disorders associated with aberrant dopaminergic signaling.





## FACES

CONTINUED FROM PAGE 1

### Above, from 1:

ORWH's "Meet the Faces of Clinical Research" event featured panelists Dr. Adrienne Farrar of the Clinical Center social work department; Dr. Amina White from CC bioethics; Juliana Ejedoghaobi, a CPA-turned-nurse; Jamie Gentille, former pediatric trial participant; and Dr. Lori Wiener, who provides psychosocial support for patients and conducts research in clinical science.

### Below:

Thirty-year veteran NIH nurse Laura Lee (l) moderates the panel. FDA Assistant Commissioner for Women's Health Marsha Henderson closes the discussion with her personal experiences as a clinical research participant.

PHOTOS: ERNIE BRANSON

Lauren came to NIH on a fellowship in allergy and immunology. Trained in both pediatrics and internal medicine, she decided to pursue a stint in clinical research training. It was supposed to last only a few years. Assigned to a lab studying HIV, she also treated children and teens with AIDS and cancer, investigating ways to stimulate the patients' own immune system to fight their diseases. More than 27 years later, she's head of the NCI Vaccine Branch's clinical trials team, still pursuing vaccines and immune-based therapies for both diseases.

No matter how you look at it, participating in clinical research will change your life. So said panelists representing several different vantage points—patient, physician-researcher, nurse, social worker and others—at a discussion jointly sponsored May 14 by NIH's Office of Research on Women's Health and FDA's Office on Women's Health. The event, "Meet the Faces of Clinical Research: Beyond Inclusion," marked National Women's Health Week.

"Diversity of perspectives is so important," said NCI's Dr. Lauren Wood, who served as keynote speaker. "We keep understanding more and more as science becomes a multidisciplinary enterprise that we can't all stay in our silos of 'I'm a chemist,' 'I'm a biologist,' 'I'm a physician,' 'I'm a bioinformatics person,' 'I'm a molecular immunologist,' 'I'm a communication specialist.' Diversities of perspective allow you to ask incredible questions, identify answers and go down roads of investigation that you never even thought of." Whether it be culture, gender, ethnicity, professional or scientific discipline—everybody can supply a perspective, she stressed.

An enthusiastic ambassador for the conversation, Wood offered the Ps and Cs of a career in clinical translational research: passion, people, perspective, providence, purpose, challenges, choices, collaboration, colleagues and conquest.

"People and relationships are the single most important focus of your life," said Wood, who's spent the last nearly three decades forging bonds—with both her patients and her colleagues—at NIH. "People need to be the priority... True passion has to be outward-focused rather than inward-focused."

*"I look at my experience [with clinical research] as a miracle that came exactly when I needed it."—Jamie Gentille*

In addition to Juliana Ejedoghaobi, a CPA-turned-nurse who received a bone marrow transplant as part of a study on sickle cell, and Jamie Gentille, former pediatric trial participant who's now a senior manager at a children's hospital and author who published her HIV secret in a 2013 memoir, panelists included Dr. Adrienne Farrar, who presented a social worker's perspective; Dr. Amina White of the Clinical Center's bioethics department, representing the bioethicist's standpoint; and Dr. Lori Wiener, who gave her viewpoint as one who provides psychosocial support for patients—par-





*“Diversity of perspectives is so important,” said NCI’s Dr. Lauren Wood, who served as keynote speaker for the ORWH clinical research event held recently in observance of National Women’s Health Week.*

ticularly children—and conducts research in the clinical science environment. Thirty-year veteran NIH nurse Laura Lee, who leads patient safety and improvement programs at the Clinical Center, moderated the panel.

The main emphasis of the discussion was to highlight the importance of inclusion in medical research, especially women and particularly in clinical studies. The event also served as a precursor to ORWH’s upcoming 25th birthday celebration.

“At 25, you still think you can do anything and change the world and we still think we can do anything and change the world,” joked ORWH director Dr. Janine Clayton, acknowledging the office’s silver anniversary.

“This [event] is a conversation,” she emphasized. “I challenge you to share your thoughts, ask your questions and don’t hold back from interesting ideas or comments. We really want to hear from you.”

Closing the event, but urging everyone to keep talking about clinical research, FDA Assistant Commissioner for Women’s Health Marsha Henderson spoke briefly about her experience as a participant in a study on glaucoma.

“We have a story,” she said of clinical research patients. “We have to commit to telling our stories and continuing the conversation.”

Gentile concluded, “I look at my experience [with clinical research] as a miracle that came exactly when I needed it.”

“NIH changed my life,” agreed Ejedoghaobi.

See the full event online at [https://www.youtube.com/watch?v=F1\\_7BmKLbnI](https://www.youtube.com/watch?v=F1_7BmKLbnI). 



*NCI’s Dr. Norman Coleman speaks at the opening of the new proton center.*

## NCI Staff Help Open Shanghai Proton Heavy Ion Center

Two NCI scientists were on hand recently for the opening of the Shanghai Proton Heavy Ion Center, supported by the city of Shanghai, China, and Fudan University.

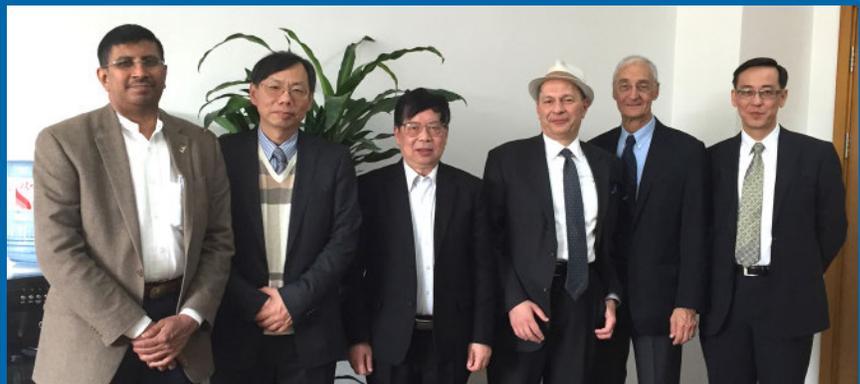
Dr. Norman Coleman, associate director of NCI’s Radiation Research Program, gave an address during a ceremony that included transfer of particle therapy equipment from Siemens to Chinese authorities. He emphasized the need for research and collaboration.

Also attending was Dr. Mansoor Ahmed, acting chief of NCI’s Molecular Radiation Therapeutics Branch and program director for the Radiotherapy Development Branch. He was invited to advise on setting up bench research laboratories in molecular radiation biology to better understand the underlying biological mechanistic differences between photons, protons and heavy ions.

Worldwide, the majority of cancers are treated with X-rays that are photons. The use of particle therapy with protons takes advantage of the physical dose distribution that enables the beam to stop at the target. Using heavier ions such as carbon ions has shown promise, based on 20 years of experience in Japan. The heavier particles, often referred to as hadrons, have both a physical advantage similar to protons but also a biological advantage. The specific properties depend on the particular ion; hadron centers have the potential to exploit these advantages for increasing cures and decreasing side effects. Heavy ion therapy centers in Germany, Italy and Japan are currently treating patients. The Shanghai program (known as SPHIC) is now opening a major cancer center for particle therapy under medical director Dr. Jiade Lu.

The project, which includes a hospital, radiation treatment center and research facilities, was initiated in 2007. Siemens began installation of the system in 2011. Therapy was initiated in 2014 and, with demonstrated capability of treatment in 30 patients, the Chinese FDA approved the facility in 2015.

The Shanghai Center is remarkable in scope and size. The NCI team helped launch its programs and participated with experts in hadron therapy from Italy, Japan and Germany to choose initial treatment regimens. Clinical trials may be initiated in collaboration with NCI and grantees in the near future.



*Also on hand at the opening are (from l) Dr. Mansoor Ahmed, NCI; Dr. Xiaodong Wu, senior medical physicist, SPHIC; Dr. Linxiang Zhou, Fudan University; Dr. Marco Durante, director, biophysics department, GSI, Germany; Coleman and Dr. Jiade Lu, executive vice-president, SPHIC.*

## ACD

CONTINUED FROM PAGE 1



*Dr. Eric Goosby (above) of UCSF and Dr. Helen Haskell Hobbs (at right) of UT Southwestern Medical Center are among the ACD members who spoke in favor of the new vision for NLM.*

*New NINDS director Dr. Walter Koroshetz (below)*

ACD PHOTOS: ERNIE BRANSON



this will be remembered as a particularly intense phase,” said NIH director Dr. Francis Collins. The committee, which meets twice a year, has in recent years faced “a wide variety of really critical topics,” he said.

NLM was hailed as the potential epicenter of open science and a Mecca for the era of Big Data, said Dr. Harlan Krumholz of Yale University, who cochaired the NLM working group. “NLM is the world’s resource, not just the nation’s,” he noted. “We were amazed” at the amount of goodwill generated globally toward NLM—“It’s a form of soft diplomacy.”

Former U.S. global AIDS coordinator Dr. Eric Goosby, now at the University of California, San Francisco, said a revitalized NLM “would be an international equalizer...that pushes everyone to the mean more rapidly.” It is a “wonderful motor” for translating science to underserved parts of the globe and “a wonderful example of soft power.” He suggested formal ties with the State Department “to look for opportunities, country by country.”

Dr. Helen Haskell Hobbs of the University of Texas Southwestern Medical Center called NLM an exemplar of the “democratization of science. It’s



an incredible advertisement for NIH and what it does.”

Although built “piecemeal over time,” the library, which dates back to

1836 but joined NIH in 1968, “has the opportunity to modernize the conceptualization of a library,” Krumholz said. “It’s time to seize the future.” His working group’s 6 recommendations for implementing a new vision for NLM were unanimously embraced by the ACD and can be found at <http://acd.od.nih.gov/meetings.htm>.

“I don’t want to be coy about my enthusiasm for this report,” said Collins, who accepted the recommendations on the spot. “There’s no need for delay.”

“We are very excited by the expanded vision for NLM,” said Betsy Humphries, acting NLM director. “We’re all delighted about this.”

Also winning endorsement was NIH’s response to a series of recommendations made by an ACD working group on long-term planning for the IRP. Dr. Michael Gottesman, NIH deputy director for intramural research, reviewed measures that will

### Koroshetz Named NINDS Director

Dr. Walter Koroshetz was named director of the National Institute of Neurological Disorders and Stroke on June 11 by NIH director Dr. Francis Collins at the ACD meeting. Koroshetz came to NIH in 2007 as NINDS deputy director and has served as acting director since Dr. Story Landis retired in October 2014.

“I am very pleased that Dr. Koroshetz has accepted the enormous responsibility of being the NINDS director,” said Collins. “His deep grounding in clinical neurology and basic neuroscience research makes him the ideal candidate to lead NINDS into the future and to fulfill the institute’s mission to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease.”

Collins recognized Koroshetz’ role in the creation of StrokeNet, a national clinical trial network for research in stroke treatment, prevention and recovery, as well as his role as point person for traumatic brain injury research at NIH and co-founder of the NIH-Uniformed Services Center for Neuroscience and Regenerative Medicine (TBI research center).

Koroshetz serves as co-chair of the NIH BRAIN Initiative. He was instrumental in establishing the NIH Office of Emergency Care Research. He is the NINDS representative to the federal interagency autism coordinating committee, chair of the interagency pain research coordinating committee and the NIH Pain Consortium and co-chair of the Common Fund Undiagnosed Diseases program.

Before coming to NIH, Koroshetz was a Harvard professor of neurology, vice chair of neurology at Massachusetts General Hospital, director of stroke and neurointensive care and a member of the Huntington’s disease unit. He also led neurology resident training at MGH from 1990 until 2007.

A native of Brooklyn, he graduated from Georgetown University and received his M.D. from the University of Chicago. He trained in internal medicine at the University of Chicago, and in both internal medicine and neurology at MGH, after which he pursued postdoctoral studies in cellular neurophysiology at MGH and Harvard’s neurobiology department.

strengthen the CC and clinical research, promote diversity, help NIH recruit scientific talent and optimize use of shared resources.

Among its initiatives, the IRP plans to start a new high school enrichment program, since “many more [students] apply each summer than NIH can take,” said Gottesman. And to augment the PMI, the CC plans to genotype all CC patients and “conduct comprehensive phenotyping of this valuable cohort of subjects who are seen repeatedly at the CC.”

Collins’ review of the issues engaging NIH included a summary of problems in the Clinical Center’s pharmaceutical development section (PDS), whose sterile manufacturing component was suspended by the FDA in mid-May after contamination was found in vials used for patient injections. Six patients were found to have received a tainted product, but with no ill effects to their health so far. Collins pledged to oversee corrective actions personally and will name an external group to review procedures at the PDS.

Also, NIAID director Dr. Anthony Fauci visited the meeting briefly to review progress on two candidate Ebola vaccines and a therapeutic known as ZMapp, which is a cocktail of three monoclonal antibodies. Fauci said safety data look good so far for the vaccines after completion of the 1,500-subject phase 2 trial, being tested in West Africa. Immunogenicity data that have been collected should prove extremely helpful if the vaccine receives accelerated approval in the future, he said. The randomized, controlled ZMapp clinical trial in Sierra Leone has already enrolled over 30 patients and extension of the trial to Guinea, where there is a surge of cases, hopefully will provide enough data to achieve an interpretable result, he added.

Fauci also summarized the outbreak of MERS in South Korea, which he called “a fascinating epidemiological story.” The 122 cases, including 9 deaths [as of June 11], are traceable to a 68-year-old man who was infected in the Arabian Peninsula, returned to South Korea and went from doctor to doctor, and hospital to hospital, May 11-20, inadvertently infecting hospital workers and family members via direct contact. There is no evidence, Fauci said, of community spread of the infection beyond contact within a health care setting.

He also commented briefly on the condition of a patient admitted to the CC with extensively drug-resistant tuberculosis: “The patient is stable and doing fine.” ●

## Hallett Heads Legislative Policy Office

Adrienne A. Hallett joined NIH on May 4 as NIH associate director for legislative policy and analysis and director of the Office of Legislative Policy and Analysis (OLPA).

She comes to NIH with 14 years of experience on the staff of the U.S. Senate committee on appropriations, where she served most recently as senior policy advisor. During her tenure, she worked with Sen. Tom Harkin to conceptualize, draft and promote the Accelerating Biomedical Research Act. She was charged with conducting government-wide oversight of the Ebola and other infectious diseases initiative enacted in 2014, and advised Sen. Barbara Mikulski on biomedical research and health care across the government. Additionally, as staff director of the subcommittee on Labor, Health & Human Services, Hallett managed the staff responsible for negotiating the budgets of three cabinet agencies and 14 related agencies, boards and commissions. She helped prioritize funding for NIH in a flat budget and crafted and successfully negotiated an Ebola supplemental for HHS. In addition, she has worked closely with NIH senior leadership on a number of high-impact science policy issues.

“Adrienne brings a wealth of resources to the position, including broad contacts across all branches of government and in the private sector, skill in strategic management and negotiation and complex policy development experience,” said NIH director Dr. Francis Collins, who made the appointment. “I am confident that she has the perfect combination of talents needed to successfully lead this critical NIH function.”

He thanked Lauren Higgins, OLPA acting director, for her outstanding leadership of OLPA since July 2014. She will continue as OLPA deputy director.



## King Named Federal Librarian of the Year

James King has been named 2014 Federal Librarian of the Year by the Federal Library and Information Network. The award recognizes federal libraries, librarians and library technicians throughout the United States and abroad for their innovative ways in delivery of information within the federal government.

King is an NIH Library branch chief and information architect. He was recognized for his unique ability to blend technology with librarianship to lead and implement information solutions at NIH.

King heads the library’s custom information solutions team. The informationist service provides the library with deeper insight into the changing needs of its customers than can be obtained by normal survey instruments or focus groups.

King was also recently selected for Catholic University’s Von Dran Memorial Award, which recognizes collaboration, innovation and leadership.





## HIKE

CONTINUED FROM PAGE 1

### *Above, from 1:*

*At the starting line, an NHGRI cheerleader prompts enthusiasm.*

*Happy walkers take to the 3.25-mile campus loop, enjoying the exercise and time spent with their colleagues.*

*Dr. Alfred Johnson, director, Office of Research Services, and Ebony Andrews from the President's Council on Fitness, Sports and Nutrition, sprightly walk the campus perimeter.*



*Above, NIAID's Valerie Lawrence leads an energetic warmup session (below, 1).*

tum going and take that energy to family and friends. Walk, run or [grab] a ball—just move!”

After NIAID's Valerie Lawrence pumped up the crowd by leading an energetic warm-up session on the Bldg. 1 lawn, employees took to the trail all smiles. At water stations set up along the route, staff cheered on walkers and runners and made sure they stayed hydrated.

Many NIH'ers say the hike is a great opportunity to get up from their office chairs and just move around.

“I'm always excited for this hike,” said Liz Quartey, a project assistant with NINDS who works at the Neuroscience Bldg. on Executive Blvd. In recent years, she has come to campus for the hike. “Plus my doctor said I need to move more. This is an opportunity to exercise and remind myself to move more on a regular basis.”

Celena Stoner, a feisty grandma of 3 who has worked in IT at NLM for 26 years, loves to walk regularly. She said she often walks the campus perimeter weeknights after work, when it's cooler and the traffic is lighter. Then she gets home and walks her dog.

Keddy Liu, a contractor with NCBI, ran the

loop around campus. Still new to NIH, he said the hike is a great way to socialize and meet new colleagues. “It's a chance to get physical activity, enjoy nature and mix and mingle with the NIH community,” he said. “I enjoyed meeting people from different ethnicities and age groups. It's great that the NIH community came together to participate in this.”

Since its inception, Take a Hike Day has been NIH's largest wellness outreach event, with many hundreds of participants annually.

“Not only is Take a Hike Day a chance for NIH to take its own best advice in support of the benefits of physical activity, but this event also fosters overall employee well-being by bringing us together for a great day of exercise and camaraderie,” said Chris Gaines, program manager for wellness and retail services, Division of Amenities and Transportation Services (DATS). “It's so popular because it appeals to all of us at NIH, whether you walk or run or just come out to support your colleagues.”

Take a Hike Day was co-sponsored by NIH's Office of Management, Office of Research Services and DATS.



*Colleagues from the Foundation for the National Institutes of Health get ready to walk the campus trail, all of them first-time participants in this event. Up front are (from l) Noemi Rodriguez, Susan Wiener, Eva Coyne, Melissa Cather, Anisa Sanghrajka, and FNIH president & executive director Dr. Maria Freire. At rear are (from l) Liz Johns, Julie Tune, Cathy Martin, Rob Drucker, Andrea Baruchin, Jessica Jones, Jamie Cooper, Cheryl Melencio and Kathy Guire Peterson. At right, runners leave the starting line first, before the hikers. PHOTOS: ERNIE BRANSON, BILL BRANSON*

### Researchers Design Placenta-on-a-Chip to Better Understand Pregnancy

NIH researchers and their colleagues have developed a “placenta-on-a-chip” to study the inner workings of the human placenta and its role in pregnancy. The device was designed to imitate, on a micro-level, the structure and function of the placenta and model the transfer of nutrients from mother to fetus. This prototype is one of the latest in a series of organ-on-a-chip technologies developed to accelerate biomedical advances.

The study, published online in the *Journal of Maternal-Fetal & Neonatal Medicine*, was conducted by an interdisciplinary team of researchers from NICHD, the University of Pennsylvania, Wayne State University/Detroit Medical Center, Seoul National University and Asan Medical Center in South Korea.

“We believe that this technology may be used to address questions that are difficult to answer with current placenta model systems and help enable research on pregnancy and its complications,” said Dr. Roberto Romero, chief of NICHD’s Perinatology Research Branch and one of the study authors.

The placenta is a temporary organ that develops in pregnancy and is the major interface between mother and fetus. Among its many functions is to serve as a “crossing guard” for substances traveling between mother and fetus. The placenta helps nutrients and oxygen move to the fetus and helps waste products move away. At the same time, the placenta tries to stop harmful environmental exposures, such as bacteria, viruses and certain medications, from reaching the fetus. When the placenta doesn’t function correctly, the health of both mom and baby suffers.

### New Role for Zebrafish: Larger Scale Gene Function Studies

A relatively new method of targeting specific DNA sequences in zebrafish could dramatically accelerate the discovery of gene function and the identification of disease genes in humans, according to scientists at NHGRI.

In a study posted online on June 5 and to be published in the July 2015 issue of *Genome*

*Research*, the researchers reported that the gene-editing technology known as CRISPR/Cas9 is 6 times more effective than other techniques at homing in on target genes and inserting or deleting specific sequences. The study also demonstrated that the CRISPR/Cas9 method can be used in a “multiplexed” fashion—that is, targeting and mutating multiple genes at the same time to determine their functions.

“It was shown about a year ago that CRISPR can knock out a gene quickly,” said Dr. Shawn Burgess, a senior investigator with NHGRI’s Translational and Functional Genomics Branch and head of the developmental genomics section. “What we have done is to establish an entire pipeline for knocking out many genes and testing their function quickly in a vertebrate model.” Researchers often try to determine the role of a gene by knocking it out—turning it off or removing it—and watching the potential effects on an organism lacking it.

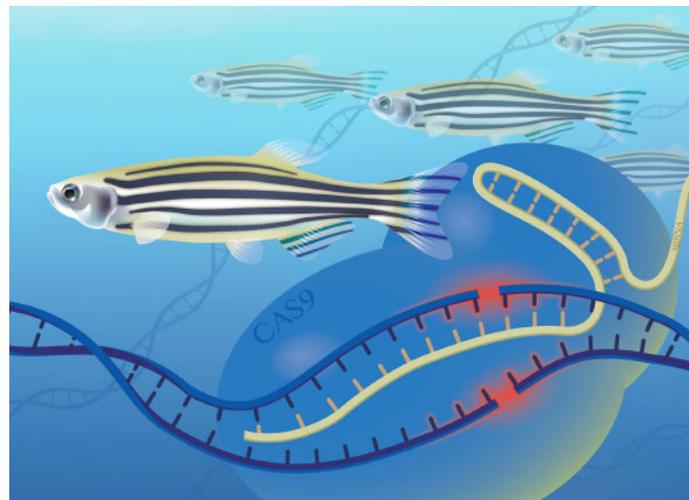
Such larger scale—termed high-throughput—gene targeting in an animal model could be particularly useful for human genomic research. “This is a way to do that on a more cost-efficient and large scale,” Burgess said.

### Health Disparities in U.S. Persist

According to a special issue of the *American Journal of Public Health* released June 5, significant disparities in the burden of disease and illness experienced by different groups persist. The articles highlight the need for greater understanding of the relationship between social, cultural, biological, behavioral, economic and neighborhood (place) factors when addressing health disparities.

In the three decades since the landmark *Report of the Secretary’s Task Force on Black and Minority Health* (known as the *Heckler Report*) was released, advances in the country’s state of knowledge of the major factors underlying health disparities have led to a wealth of data about racial and ethnic minority health and health inequities. This groundbreaking report provided an assessment of the major factors contributing to the health status of blacks, Hispanics, Asian Americans, Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives and elevated minority health to the national stage.

An editorial reports that NIMHD will embark on a bold vision that will challenge researchers to employ newer, innovative strategies and ideas to address and solve health disparities. Planning for this strategic visioning will include an iterative process to deliberate on fundamental issues that are critical to understanding health, such as the role of chronic stress, resilience and health outcomes.



NHGRI scientists are homing in on specific genes in zebrafish to help them better understand the function of genes in people.

IMAGE: DARRYL LEJA, NHGRI



*Dr. Chi-Chao Chan retired from NEI at the end of May after 33 years with the institute. She will continue as scientist emeritus.*

## NEI's Chan Retires After 33 Years of Eye-Opening Research

An internationally renowned expert on eye disease pathology and diagnosis, Dr. Chi-Chao Chan retired from NEI at the end of May after 33 years with the institute. She had served as chief of the institute's immunopathology section since 1992 and as chief of the NEI histopathology core since 1999.

Over the course of her career, Chan contributed to our understanding of several eye diseases. Her research led to novel ways of diagnosing primary vitreoretinal lymphoma (PVRL), a rare and often fatal malignancy of the eye.

Diagnosing PVRL is tricky. Misdiagnosis is common because PVRL mimics other eye diseases such as chronic uveitis, an inflammatory eye disease that requires entirely different treatment. Historically, the diagnosis of PVRL was made primarily based on cellular changes seen in tissue specimens. Chan's team discovered that certain changes at the protein and molecular level could be used to help diagnose PVRL earlier, enabling patients to start chemotherapy sooner.

In addition to PVRL, Chan's work has led to new insights about the pathology of uveitis and von Hippel-Lindau disease and advanced our understanding of the genetics and pathogenesis of age-related macular degeneration, a blinding disease prevalent among older individuals.

Chan's histopathology lab bustles with activity, fielding hundreds of requests each year from physicians around the world seeking help to diagnose mysterious eye diseases. A coauthor on more than 600 publications, Chan credits that hefty number of papers to her lab's natural ability to collaborate with numerous researchers across NIH and the world.

The trust Chan built with surgical teams at the Clinical Center formed a "marriage made in heaven," says Dr. Liliana Guedez, an NCI scientist who works in Chan's immunopathology section. Often, the lab knows about surgeries at the Clinical Center well in advance and is ready to receive tissue specimens delivered personally by the surgeon, Guedez noted. "That degree of immediacy of getting a specimen to pathology doesn't happen elsewhere."

Chan completed her medical degree at what is now Sun Yat-sen University in China just as the country was falling under the influence of the Cultural Revolution. She came to the United States via Hong Kong and re-started her life and career from scratch. First learning English at Boston University and taking undergraduate courses at Kent State University in Ohio and Johns Hopkins University, she then earned a second medical degree from Hopkins.

"When I came to the U.S. in 1968," she said, "China had no diplomatic relations with the U.S. and was not a member of [the World Health Organization]. Therefore, my medical education in China was not recognized here. Today, a person who holds a medical degree from China can take an exam to qualify to practice in the U.S."

After a residency in ophthalmology at Stanford and a postdoctoral fellowship at Hopkins' Wilmer Ophthalmological Institute, she joined NEI in 1982 for a second postdoctoral fellowship in clinical ocular immunology/uveitis in the laboratory of Dr. Robert Nussenblatt.

Throughout her career at NEI, Chan has maintained strong ties to the vision research community in China where her parents, the late Drs. Winifred Mao and Eugene Chan, were pioneers of modern ophthalmology in China.

"Dr. Chan's storied medical career from China to the NEI has been remarkable," said NEI director Dr. Paul Sieving. "Her experienced hands in eye disease pathology have been essential in the diagnosis of many challenging cases of ocular tumors and inflammatory diseases. At the same time, her deep commitment to mentoring young trainees has inspired and empowered several generations of budding ophthalmologists and physician-scientists."

Her numerous recognitions include the American Academy of Ophthalmology's Senior Achievement Award in 2013, a Gold Fellow appointment from the Association for Research in Vision and Ophthalmology in 2011 and the Chinese Ophthalmology Society's Outstanding Achievement Award in Ophthalmology and Visual Science for Overseas Chinese in 2010.

Chan said she is most proud of the dozens of fellows and postbaccalaureate trainees that she has mentored. Her face lights up as she ticks off all the names of her postbacs and where they've earned medical degrees and doctorates since leaving her lab.

She plans to relocate to San Francisco, where her son and first grandchild live, and to write a book on animal models for a variety of eye diseases.



*Dr. Michael Rogers (l) once served a 6-month detail on a committee chaired by Sen. Ted Kennedy.*

## **NIGMS Division Director Rogers Retires**

*By Alisa Zapp Machalek*

“You can always appreciate working for an organization with such a noble purpose—you can always feel good about working at NIH,” says Dr. Michael Rogers, who retired on May 1 after nearly 38 years at NIH.

For the past 22 years, Rogers has led the NIGMS Division of Pharmacology, Physiology and Biological Chemistry. With an annual budget of over \$400 million, this wide-ranging division supports more than 1,000 research grants in areas as diverse as basic enzymology and anesthesiology.

Under Rogers’ direction, the division launched the NIH Pharmacogenomics Research Network, supported NIGMS’s first large-scale clinical trial and developed a Chemical Methodologies and Library Development initiative.

“Mike is a true scholar—smart, curious and thoughtful,” said NIGMS director Dr. Jon Lorsch. “With his leadership, NIGMS was able to open new fields of inquiry and break through many scientific barriers. We will truly miss him.”

Rogers spearheaded creation of the NIGMS chemistry-biology interface predoctoral training program, which has grown steadily in size over the past 10 years. He also coordinated the NIGMS “glue grant” program, an initiative designed to encourage formation of large, multi-disciplinary collaborations to help answer major biomedical questions such as how cells communicate, how the body responds to traumatic injury and the roles of carbohydrates (glycans) in health and disease.

More recently, Rogers helped cultivate the emerging discipline of quantitative and systems pharmacology (QSP), which combines computational and experimental approaches to developing and finding new uses for medications. Like

pharmacogenomics, QSP is a component of precision medicine that aims to tailor treatments for individual patients.

Over the past year and a half, he has also played instrumental roles in NIGMS activities related to enhancing data reproducibility, including a program to develop training modules.

Rogers says that when he first came to NIGMS, he expected to stay only a few years. Instead, “I never felt the need to leave because there was always something new and interesting coming along.”

A medicinal chemist by training, Rogers says he felt especially comfortable at NIGMS because, “even back then, NIGMS supported more chemistry than any other part of NIH.”

Rogers spent most of the 1980s in what is now CSR, where the first drafts of his summary statements included text from a typewriter pieced together with scissors, tape and handwriting. Before that, he was an assistant professor in the department of pharmaceutical chemistry at Virginia Commonwealth University.

He hasn’t yet decided how he’ll stay involved in science once he retires, but he knows he’ll miss having immediate online access to newly published journal articles and reading grantee progress reports. “It’s like reading the next chapter in a story in an ongoing saga,” he says. “I love the science.”

Rogers also has a new passion—opera.

“I grew up in the South, so naturally I was a country music fan,” he says. He enjoyed pop music, too, until he got bored of it 4 or 5 years ago. That’s when he started listening to opera. To his surprise, he got hooked.

“Since that time, 80 percent of my listening is opera,” he says. “It’s so much more interesting than anything else out there.”

Among the things Rogers says he’s looking forward to are spending more time with his family, having unscheduled days and waking up without an alarm clock.

## **NIDA’s O’Brien Wins 2015 Lifetime Science Award**

NIDA’s 2015 Lifetime Science Award was presented May 5 to longtime grantee Dr. Charles O’Brien in recognition of his outstanding contributions to the field of drug abuse and addiction research. He was recognized for his pioneering research on the biological basis of addiction and new medications that have improved addiction treatment.

He began his work in the 1970s in the U.S. Navy, when he noticed that Vietnam War veterans were coming home addicted to heroin. He wanted to address the problem. O’Brien helped establish one of the first U.S. methadone clinics and co-founded the Addiction Severity Index. He also led the team that first tested use of the opioid antagonist naltrexone in the treatment of alcohol addiction.

Today, O’Brien is vice chair of psychiatry at the University of Pennsylvania and director of the Center for Studies in Addiction. His research focuses on opiate drugs and alcohol, as well as cannabis, cocaine, nicotine and treatment for populations who confront particular obstacles to recovery—including inmates, recent parolees and veterans who experience addiction and post-traumatic stress disorder. 📧



*Dr. Charles O’Brien receives the 2015 Lifetime Science Award from NIDA director Dr. Nora Volkow.*

## R&W Hosts Camp Fantastic BBQ

By Eric Bock

Despite sizzling heat, more than 400 hungry NIH'ers turned out for the 33<sup>rd</sup> annual Camp Fantastic BBQ fundraiser on the Bldg. 31A patio June 16. The barbecue was sponsored by the NIH Recreation & Welfare Association.

Proceeds from the lunch were donated to Camp Fantastic, a weeklong summer camp near Front Royal, Va., for children with cancer. The camp provides round-the-clock medical care for youngsters so they can continue their treatment. It's sponsored by Special Love, Inc., a nonprofit that supports families of children with cancer.

The event featured a silent auction, live music from the classic rock cover band Street Life, a vendor fair and lawn games such as bean bag toss, cornhole and laboratory beaker pong. NIH Dining Services provided the food.

"[Camp Fantastic] is an opportunity [for kids] to leave the hospital and medical environment and be with new and old friends who understand their experience," said Dr. Lori Wiener, who coordinates the pediatric oncology psychosocial support and research program at NCI. "It also allows them to spend time with some of their medical providers in a very different setting. They return from camp energized and socially enriched. Camp Fantastic just seems to nourish their souls."

Camp volunteer Dr. Paul Jarosinski, a pediatric pharmacist at the CC, said many of the counselors are cancer survivors themselves. "Campers often see these counselors as a reminder that they too can beat cancer," he said.



*The Camp Fantastic barbecue featured (clockwise from top) Frisbee, the band Street Life, beaker pong, cornhole and R&W acting president Kallie Wasserman happily manning the chow line. It costs \$650 to send a child to camp for 1 week. If you want to make a donation, contact the R&W.*

PHOTOS: DAVID BROWNE, ERIC BOCK, ROBIN COUCH CARDILLO