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The Second Best Thing About Payday

nih record

ABOVE • *When the circus comes to town each March, NIH patients benefit. See back page photo story.*

features

departments

'Help NIH Be NIH'

Senators Visit, Double Down on Commitment to Biomedical Research

By Eric Bock and Carla Garnett

The two U.S. senators from Maryland may be on a mission—to prove once again that biomedical research has no better friends representing NIH in the nation's upper law-making chamber. Sen. Barbara Mikulski (D-MD), vice chair of the Senate appropriations committee, and Sen. Ben Cardin (D-MD) both visited the agency in the same week, each pledging unwavering support—backed by sponsored legislation—for increased and stable funding for NIH.

Mikulski called for a 10 percent increase in NIH's budget during a Mar. 31 visit to

SEE **SENATORS**, PAGE 6

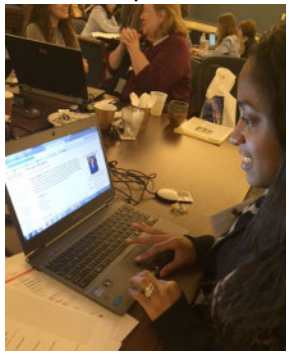
Abundant backing. *Sen. Barbara Mikulski (l) and Sen. Ben Cardin (r) pledge additional support for NIH.*

Women Scientists Added to Online Reference

NIH Marks Women's History Month with All-Day Wikipedia Edit

By Carla Garnett

NIH celebrated Women's History Month by adding women scientists to the pages of Wikipedia, the free online encyclopedia that has become the go-to reference for millions of Internet users. A real-time all-day edit-a-thon in Wilson Hall on Mar. 13 featured a corps of expert wiki editors—called "Wikipedians"—from the Washington, D.C., area and New York City who offered technical training, tips and tricks.



NIMHD's Cherie Duvall Jones participates in a wiki edit at NIH.

"Today, we are joining a feder-

SEE **WIKIPEDIA**, PAGE 4

'Least Likely' Man Well-Loved

NLM Symposium Welcomes Multiple Nirenberg Gifts

By Rich McManus

In honor of the 50th anniversary of Dr. Marshall W. Nirenberg's eventual Nobel Prize-winning work on uncovering the universal genetic code, the National Library of Medicine held "A Tribute to Marshall Nirenberg" recently.

The event included presentation of Nirenberg's Nobel medal and certificate to NLM, for permanent display in the NLM Visitor Center, and remembrances by people who knew him well: his widow, Dr. Myrna Weissman; former colleague Dr. Frank Portugal, who wrote a book about Nirenberg; and experts who have had a hand in assuring that the accomplishments of the NIH intramural program's—and the federal government's—first Nobel laureate will not be forgotten.

The afternoon was most notable for the warmth with which Nirenberg is remembered.

SEE **NIRENBERG**, PAGE 8

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NIH...Turning Discovery Into Health

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briefs

Public Service Recognition Week, May 3-9

Public Service Recognition Week honors those who serve our nation as federal, state and local government employees. Events are being held May 3-9 with the theme "Government Works." Here is how NIH employees can participate:

• Take a photo of yourself with the completed "I Heart Public Service" template at www.feea.org/storage/documents/iheartpublicservice.pdf. Be sure to take high-resolution photos.

• Upload your photo to Facebook, Twitter and/or Instagram using the following hashtags: #Proud2ServeUSA, #PSRW and #NIH. The #NIH hashtag allows NIH to find our employees. This can be done during the week of May 3-9.

• Or send your photo to Lillian Amaechi at NIHforJobs@od.nih.gov. Images will be posted on NIH social media outlets.

If you have questions or would like more information, contact Anait Freeman at anait.freeman@nih.gov. Visit http://publicservicerecognitionweek.org/events for a list of local observances.

Postbac Poster Day Scheduled, Apr. 30

Postbac Poster Day is scheduled for Thursday, Apr. 30 at Natcher Conference Center from 10 a.m. to 3:30 p.m. Dr. Audrey J. Murrell of the Joseph M. Katz Graduate School of Business at the University of Pittsburgh will present the keynote address at noon. Presentation of Postbac Distinguished Mentoring Award(s) follows. Poster session I is from 10 a.m. to noon; poster session II runs from 1:30 to 3:30 p.m. Poster Day provides an opportunity for postbacs to share research they have been conducting at NIH and at the same time develop their scientific communication and networking skills. Investigators, staff scientists and scientific administrators can make an important contribution to the event by visiting posters and engaging the authors in discussion. For details, visit https://www.training.nih.gov/postbac_poster_day.

NIH Career Symposium Set, May 15

The NIH Office of Intramural Training & Education invites all NIH graduate students and postdoctoral trainees, both basic scientists and clinicians, to participate in the 8th NIH Career Symposium on Friday, May 15 at Natcher Conference Center from 8:30 a.m. to 5 p.m. The symposium provides an opportunity for fellows and graduate students to learn about scientific career options and to explore factors that lead to career success. The all-day program includes a keynote speaker and more than 20 breakout sessions highlighting career opportunities available to biomedical scientists.

Panel sessions cover academic, government, industry and non-profit career paths. More than 80 speakers will provide insights into their careers—what their current job entails, its pluses and minuses and how they got there. For more information and registration visit www.training.nih.gov.

Children's Inn Is Charity Partner for Marine Corps Marathon, 10K Race

The Children's Inn at NIH is a charity partner this year for the Marine Corps Marathon and MCM 10K on Oct. 25. Participating in either race provides an opportunity to raise funds for the inn. Running for the inn is also an opportunity for runners who were not selected through the public lottery registration to be included in the race while giving the gift of hope to the hundreds of children and their families who visit NIH every year.

All Children's Inn marathon and MCM 10K runners will receive: personalized fund-raising page and online tools to make fund-raising easy; training tips and support from the inn; Team TCI race jersey; invitations to group fitness classes to cross-train with the rest of the team; opportunity to win fund-raising prizes; invitation to visit the inn for a pre-race pasta dinner and to see first-hand the effect your fund-raising is having.

For details, contact Dorie Hightower, (301) 451-3075, dorie.hightower@nih.gov.

'Healthy Moments' Features Clayton, Rodgers

In observance of Women's Health Month, ORWH director Dr. Janine Clayton and NIDDK director Dr. Griffin Rodgers recorded segments, to air in May, about women's health for NIDDK's Healthy Moments *radio program.* Healthy Moments *is a series of weekly radio broadcasts that airs during the* Tom Joyner Morning Show *in Chicago, Baltimore, Houston, Raleigh-Durham and Washington, D.C. For more about the broadcasts, including archived episodes, go to www.niddk.nih.gov/health-information/healthy-moments/.*

PHOTO: ODY S. LEONARD

Dr. Steven Rosenberg, NCI Surgery Branch chief, and his patient Linda Taylor appeared in the PBS series' third episode.

PHOTO: ERNIE BRANSON

NIH Scientists Featured in PBS Cancer Documentary

The contributions of prominent NIH scientists were featured in *Cancer: The Emperor of All Maladies*, a PBS series produced by award-winning documentarian Ken Burns and directed by Barak Goodman.

Based on Dr. Siddhartha Mukherjee's 2010 book *The Emperor of All Maladies: A Biography of Cancer,* the film chronicles the story of cancer, from its first description in antiquity to potential breakthroughs against the disease in the 21st century.

The 6-hour series aired over 3 nights, beginning Mar. 30. Several current and former NIH scientists were featured, including NIH director Dr. Francis Collins and former NIH director and NCI director Dr. Harold Varmus.

The first episode, "Magic Bullets," chronicled the centuries-long search for a "cure" for cancer. The episode traced the revolution in childhood leukemia treatment. NCI's Dr. Emil Frei III and Dr. Emil Freireich challenged the conventional wisdom that a single drug was sufficient for treatment. Their work demonstrated the effectiveness of combination chemotherapy, revolutionizing the way doctors treat childhood leukemia.

The second episode, "The Blind Man and the Elephant," examined attempts to identify how normal cells transform into cancer cells and efforts to translate those findings into cancer treatments. The episode told of how, in 1976, Varmus, then at the University of California, San Francisco, and colleague Dr. J. Michael Bishop discovered proto-oncogenes, or normal genes that can mutate into genes that have the potential to cause cancer. Previously, cancer investigations centered on cancer-causing viruses and environmental carcinogens. Varmus and Bishop received the 1989 Nobel Prize in physiology or medicine for their discovery.

The final episode, "Finding an Achilles Heel," reviewed progress made in understanding cancer's complexity. It featured Collins' comments about the Cancer Genome Atlas, an effort to catalog genomic changes associated with different types of tumors. Collins said recent discoveries allowed scientists to more clearly understand how cancer begins. He also thinks that, eventually, a person's individual cancer risk will be predicted on the basis of genetics, environmental exposure and lifestyle. He said that efforts to understand how cancer cells work together to influence cancer cell growth hold great promise.

Varmus was also featured in the episode. He explained that Dr. Bert Vogelstein's research showed that cancer doesn't have only one cause, but rather, results from a series of mutations. He noted that researchers have developed vaccines to prevent viral infections that cause cancer. He also said that cancer researchers are attempting to find markers that predict whether certain genetic abnormalities are indeed cancerous.

The episode also featured NCI Surgery Branch chief Dr. Steven Rosenberg's pioneering work on immunotherapy, using the body's immune system to fight cancer.

Also interviewed in the series were NIH alumni including former NCI directors Dr. Vincent DeVita and Dr. Richard Klausner, NCI clinical associate Dr. David Nathan and NCI medical officer Dr. James Holland. Several scientists from NCI-designated cancer centers also were interviewed.

For more on the PBS series, visit http://video.pbs.org/program/story-cancer-emperor-all-maladies/—**Eric Bock**

PHOTO: SHELLY HARRISON

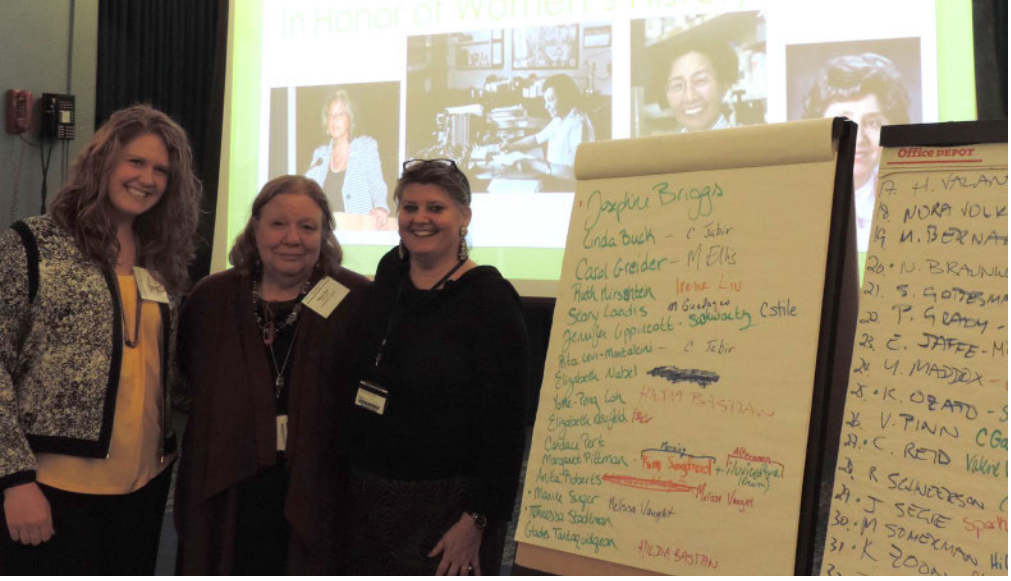
Two To Give NCCIH Straus Lecture

On May 11 at 10 a.m. in Masur Auditorium, Bldg. 10, the National Center for Complementary and Integrative Health will hold the sixth annual Stephen E. Straus Distinguished Lecture in the Science of Complementary Health Therapies. Speakers Dr. Jerome Groopman, the Dina and Raphael Recanati chair of medicine at Harvard Medical School and chief of experimental medicine at Beth Israel Deaconess Medical Center, and Dr. Pamela Hartzband, assistant professor of medicine at Harvard Medical School and attending physician in the division of endocrinology at Beth Israel, will present "When Experts Disagree: The Art of Medical Decision Making."

The husband-and-wife team will present a new way to make the best medical decisions. They reveal that each of us has a "medical mind," a highly individual approach to weighing the risks and benefits of treatment. To ascertain our unique medical minds, they will present probing questions. Are you a minimalist or a maximalist, a believer or a doubter, do you look for natural healing or the latest technology?

Groopman and Hartzband will explain how pitfalls in thinking and the way statistics are presented in pharmaceutical advertisements, the news media and even scientific reports can mislead all of us.

The lecture series was established in honor of Straus, founding director of NCCAM (now NCCIH) and an internationally recognized clinician-scientist. Under his leadership, research on complementary health grew threefold.



WIKIPEDIA

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***Above**:*
Wiki-a-thon organizers (from l) Sarah Williams of EDI, Dr. Marin Allen of OCPL and Hilda Bastian of NCBI gather during the all-day event to mark Women's History Month.

Wikipedian-in-residence at Consumer Reports *Lane Rasberry (above) visits from NYC to offer tips. Below, Wikimedia D.C. president James Hare thanks NIH for helping to enhance the online resource.*

al effort to improve knowledge about women in science through creation and enhancement of information on Wikipedia that will lead to inspiring young people, encouraging scientists and providing information for educators that there have been more female contributors to science since Marie Curie—and some of them are still active and some of those have even won the Nobel Prize," said event organizer Dr. Marin Allen, deputy director of NIH's Office of Communications and Public Liaison, in opening remarks. OCPL teamed up with the Office of Equity, Diversity and Inclusion and the National Library of Medicine's National Center for Biotechnology Information to host the event.

"What better way to celebrate and commemorate the achievements of women than by utilizing NIH's holdings of information, photos and histories to share the stories of influential women scientists and researchers?" said organizer Sarah Williams of EDI.

The English language Wikipedia contains more than 4.7 million content pages, with more than 24 million registered users. According to its web site, "since its creation in 2001, Wikipedia has grown rapidly into one of the largest reference web sites, attracting 470 million unique visitors monthly as of February 2012." Female participation (women editors, contributors, writers and, by extension, representation of women) in Wikipedia, however, is low. A 2011 survey by the organization found that men comprise as much as 84 to 91 percent of the Wikipedian population. Top leaders of the non-profit resource acknowledge that the gender gap is likely reflected in content as well and vow to help even up the demographics by whatever creative means they can.

"Increasing the visibility of women scientists' achievements is a large job," said NIH edit-a-thon organizer Hilda Bastian of NCBI. "It's exciting that the Wikimedia Foundation, the organization that publishes Wikipedia, among other projects, collaborates with public institutions like NIH to advance initiatives like this. This is our third edit-a-thon with partners from Wikimedia and Wikipedia projects. NIH held a Wikipedia Academy in 2009 to tackle health information and NCBI partnered with WikiProject Medicine for health information edit-a-thons and webinars in 2013."

The idea to improve the world's awareness and knowledge of contributions by women—and women scientists—is not new either. Private and public groups have recognized the dearth of information about certain topics and groups.

For Women's History Month 2012, the Smithsonian Institution sponsored "She Blinded Me with Science," a collaboration with archivists to add content about women from its organization to Wikipedia. NIH's effort this year followed similar events at New York's Museum of Modern Art, which hosted its second annual "Art+Feminism" Wikipedia edit session on International Women's Day to add female artist profiles; the White House held a STEM-themed edit-a-thon in February to celebrate African-American heroes in science, tech, engineering and math.

All of these efforts were endorsed by Wikimedia, which founded the GLAM-Wiki initiative in 2010 to encourage galleries, libraries, archives and museums worldwide to share their information, holdings and exhibits to help improve Wikipedia's content.

At the NIH event, Wikimedia D.C. president James Hare thanked both rookie and veteran NIH Wikipedians for their help and enthusiasm in enhancing the online encyclopedia. Wikipedian-in-residence at *Consumer Reports* Lane Rasberry, visiting from NYC, gave "Wiki 101," a 10-minute primer for newbie editors as well as a brief refresher for the vets. Hare and Rasberry, joined by several other expert Wikipedians, were on hand the whole day in Wilson Hall to answer questions and offer technical assistance.

By the end of the edit-a-thon, which organizers hope will become an annual event, the NIH group had added or improved the profiles of 36 scientists; 50 photos with captions were uploaded, as well. See the photos at http://bit.ly/1HniJMb. More content additions and improvements are already under way. In addition, a project page has been organized to manage and chart progress of ongoing enhancements. Visit http://bit.ly/18cFog7.

NIH director Dr. Francis Collins addresses recent summit on Alzheimer's disease.

Alzheimer's Summit Seeks to Transform Drug Discovery, Prevention

By Carolyn Hirschman

The Alzheimer's Disease Research Summit 2015: Path to Treatment and Prevention drew more than 500 leading researchers and advocates with a shared goal—to develop a scientific agenda that speeds the development of effective therapies to treat and prevent Alzheimer's disease (AD).

Held recently on campus and hosted by NIA, the conference focused on new research models and intensifying public-private collaborations to identify and speed the delivery of promising therapeutic targets.

"I think we've entered a new era in Alzheimer's research—there are new models of collaboration and data sharing, there are fantastic advances scientifically," said NIH director Dr. Francis Collins. He added that researchers are now "laying out pathways that must be involved in this disease that we did not previously know about that might very well turn out to be actionable."

The program was organized around six themes:

- **The complex biology of Alzheimer's**—This session addressed key questions related to understanding the complexity of AD such as the role of cerebral microvasculature and inflammation as well as approaches needed to identify and quantify disease trajectories and risk and ways to harness the power of big data to understand complexity.

- **Transforming AD therapy development**—This session featured new approaches to target biomarker discovery for AD as well as clinical trial design and highlighted examples of successful use of systems-based, data-driven approaches to drug repositioning and combination therapy development.

- **New approaches to prevention**—Reducing the risk and/or delaying disease onset will have tremendous impact on the socioeconomic burden of AD. This session reviewed our current understanding of disease progression and featured advances in genetics, epigenetics, epidemiology and cognitive/behavioral sciences that can inform prevention strategies.

- **Innovative monitoring, assessment and care**—Advances in technology offer unprecedented opportunities to improve our ability to assess/monitor the well-being of patients and are a means to optimize delivery of care. This session focused on identifying the needs and opportunities to innovate disease monitoring, research gaps in integrating care and technologies that enable in-place monitoring and help alleviate burden of care.

- **Empowering participants, engaging citizens in research**—The acceleration of AD therapy development in large part depends on participant/citizen awareness and engagement. This session addressed issues of recruitment, health disparities and citizen participation in innovating patient consent, data sharing and trial design.

- **Partnerships for open innovation**—This session highlighted a number of programs and public-private partnerships promoting the open source philosophy in biomedical research and drug development and discussed how these can be used to accelerate AD therapy development.

Research recommendations resulting from the meeting are expected to be made public this spring. They will inform research goals and milestones to be included in this year's update to the National Plan to Address Alzheimer's Disease, which outlines the nation's path to improvements in Alzheimer's and related dementias research, care and services.

Collins urged summit participants to continue the momentum begun in 2012, when the first "blueprint" for Alzheimer's research was created under the plan.

"Our common purpose remains the same—to develop effective interventions by 2025," he said.

It's become clear, Collins added, that no one government agency, university, company or nonprofit alone can beat Alzheimer's.

"We can work more effectively together than separately," he said.

He pointed to the Accelerating Medicines Partnership, a groundbreaking NIH-led venture that brings together industry, academia, advocacy groups and government agencies, as a key example, aimed at accelerating drug development in several areas, including AD.

Even as researchers pursue promising targets in translation and clinical trials, NIA director Dr. Richard Hodes said it is imperative to look for new research opportunities and collaborations. To support these efforts, NIA and the Alzheimer's Association developed the International Alzheimer's Disease Research Portfolio (IADRP), a database of global Alzheimer's research, as a powerful planning tool for public and private funders.

"At present, IADRP has over 4,000 research projects and 30 funding agencies in the U.S. and globally," he said. "It provides an opportunity to look at research categorized through a three-layer-deep ontology, to understand what is being supported and what initiatives are happening, and in doing so, to gain perspective on where there are gaps and where new initiatives are required."

Next Protocol Navigation Lecture, May 4

The IRP Protocol Navigation Training Program Seminar Series continues with a lecture to be held Monday, May 4 from 2 to 3 p.m. in Bldg. 50, Conf. Rm. 1227/1328. Dr. Barry Goldspiel, deputy chief of the Clinical Center department of pharmacy, will present "The NIH Pharmacy: Your Partner in the Protocol Life Cycle." For more information contact Marcia Vital, (301) 451-9437, vitalm@mail.nih.gov.

SENATORS

CONTINUED FROM PAGE 1

***Above, from l**: Cardin takes audience questions at an Apr. 2 town hall meeting in Masur Auditorium.*

At NIH facilities in Rockville on Mar. 31, Mikulski gets a science and technology briefing from NIH director Dr. Francis Collins (l) and NHGRI director Dr. Christopher Austin.

PHOTOS: ERNIE BRANSON

the National Center for Advancing Translational Sciences intramural research facility in Rockville.

After the 10 percent bump, NIH would receive a 6 percent increase for each subsequent year, which would take NIH's budget to "$45 billion by 2021." The proposal also includes a 3 percent pay increase for employees. She believes there is bipartisan support in both chambers of Congress for increasing biomedical research funding.

"I'm going to look to defend against threats to the American people here—what kills them, what cripples them or what impedes them in their ability to live a full life in a great country," she said.

Mikulski came to the facility to learn "what I need to do to help NIH be NIH."

She began her visit with a tour of the research facility and was accompanied by NIH director Dr. Francis Collins and NCATS director Dr. Christopher Austin. The building features a high-speed robotic screening system, which analyzes hundreds of thousands of chemical compounds—candidates for potential drug treatments—to ascertain their effects on disease targets.

During the tour, Austin said the system can analyze more compounds in a week than a person working "8 hours a day, 7 days a week for 12 years."

Before Mikulski spoke, Collins announced that researchers have found a compound originally developed as a cancer therapy that could be used to treat Alzheimer's disease. Researchers at Yale University gave the compound to mice with Alzheimer's disease. After 4 weeks, the mice showed complete reversal of Alzheimer's symptoms such as spatial learning impairments and memory loss.

Collins described the study as the "first published fruit" of the NCATS New Therapeutic Uses Program. Launched in 2012, the program matches chemical compounds already developed by pharmaceutical companies with academic investigators who have new insights into diseases.

"We don't know if this is going to be the answer we're hoping and dreaming for, but it comes out of this whole idea of repurposing compounds in which a lot of investment has already been made," he said.

The Yale scientists already have completed a phase 1 clinical trial to determine its safety. Collins said scientists are now enrolling patients in a phase 2 clinical trial to learn more about the drug's dosage, safety and effectiveness. Typically, it takes 10 years from the discovery of a promising compound to its readiness for clinical trials. The Yale scientists were able to do it in 18 months.

Mikulski said the breakthrough "could be as important as landing on the moon."

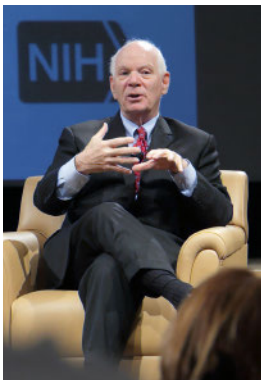
Although she's announced that she won't be seeking a sixth term, the senior senator from Maryland promises to devote her remaining time in office to reducing the time it takes to translate promising research into medical advances.

"NIH is a world-class institution, serving as the foundation for U.S. medical innovation," she concluded. "I'm fighting to ensure NIH remains a priority in the federal checkbook with the respect, resources and reform needed to support leading bioscience research jobs. I'm putting my shoulder to the wheel, my nose to the grindstone and my feet on the ground in my fight for NIH."

Two days after Mikulski's visit, her seatmate in Congress—Cardin—held his third town hall meeting with NIH'ers in Masur Auditorium.

"This is the finest institution in the world, *in the world*—you do it the best," said Cardin, opening his remarks with an enthusiastic "thank you" to Collins and all NIH'ers for their public service and for the "global progress we've made in health."

Introducing the senator, Collins said Cardin "has



Mikulski and Cardin visited different NIH facilities in the same week. Both vowed to get more federal funding for biomedical research, which drives progress in science and health and boosts the economy.

done so much to indicate his support over the years for the National Institutes of Health and is here again to convey that message to all of you." Most recently, Collins noted, Cardin signed on as cosponsor of a bill introduced by Mikulski. The Accelerating Biomedical Research Act "aims to put NIH on a stable trajectory of support after 12 years of losing ground in terms of resources."

"My mission is to try to get you the tools in order to get your job done," Cardin said, acknowledging NIH's major role not only in driving progress in science and health, but also in stimulating the economy—both local and national—as well as job creation.

Although the agency's fiscal circumstances and prognosis are much better now than when he visited 2 years ago, on the cusp of sequestration and months before the 2013 government shutdown, the senator said he reminds his colleagues in Congress that NIH still needs $6 billion just to get back to 2003 levels. That, Cardin said, is the common goal of every lawmaker representing NIH, including U.S. Rep. Chris Van Hollen (D-MD).

"You should expect from Congress that there will be no more shutdowns, no more sequestration, no more continuing resolutions," Cardin concluded. "You deserve a budget. This country deserves a budget and you shouldn't take anything less than that."

Cardin then joined Collins in chairs set conversation-style on stage, where the senator fielded audience questions and comments. Topics covered a wide range, including the possibility of a grand budgetary bargain, outsourcing federal jobs and the costs of employing contractors, anti-science sentiment in Congress, excessive restrictions on travel for scientific conferences and several concerns about proposed changes to federal employee compensation packages.

The full Cardin event is available for NIH viewing at http://videocast.nih.gov/summary.asp?Live=16084&bhcp=1.

Reid Gives NCI Lecture on Molecular Diagnostics, May 7

The 2015 Excellence in Molecular Diagnostics lecture series speaker is Dr. Brian J. Reid, member of the Fred Hutchinson Cancer Research Center and professor of medicine. The title of his talk—to be given on Thursday, May 7 from 10 to 11:30 a.m. in Lipsett Amphitheater, Bldg. 10—is "Thinking Like a Cancer: Neoplastic Evolution in Time and Space."

The lecture series, sponsored by NCI's Division of Cancer Prevention, recognizes outstanding leaders who are making groundbreaking contributions in molecular diagnostics and who have demonstrated broad and integrated approaches in the development and implementation of diagnostics commensurate with emerging technologies.

Current attempts to reduce the morbidity and mortality of cancer by early detection, prevention and therapy have been thwarted by overdiagnosis of indolent conditions, "underdiagnosis" of life-threatening early disease and evolution of resistance to therapeutic interventions. This seminar will focus on neoplastic evolution in time and space in a cohort of patients with Barrett's esophagus. They were followed for up to two decades to development of esophageal adenocarcinoma with a control population that did not progress. Strategies to decrease overdiagnosis and improve accurate identification of patients at risk for evolution to cancer as well as to evaluate possible pathways for development of resistance to therapy will be discussed.

For details contact Felicia Evans Long at Felicia.EvansLong@nih.gov.

NIH Minority Health Promotion Day, Apr. 30

In honor of National Minority Health Month, the National Institute on Minority Health and Health Disparities will host the fourth NIH Minority Health Promotion Day on Thursday, Apr. 30 from 10 a.m. to 2 p.m. in the Clinical Center atrium lobby. This year marks the 100-year anniversary of the establishment of Negro Health Week by Booker T. Washington, founding president of Tuskegee Institute, in 1915, precursor of the National Minority Health Month public health program we celebrate today.

Activities will include the NIH Health Disparities Science Café, a discussion led from 11 a.m. to noon by former U.S. Congressman Kweisi Mfume (D-MD), principal investigator of the Health Policy Research Consortium—an NIMHD Transdisciplinary Collaborative Center Program—and former president and CEO of the National Association for the Advancement of Colored People.

Representatives from NIH, the HHS Office of Minority Health and local NIMHD grantees also will be on hand from 10 a.m. to 2 p.m. to provide health promotion, education and research materials. The event is open to the public; no registration is required. Visit www.nimhd.nih.gov/2015MinorityHealthMonth.html for updates about the event.

NIRENBERG

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***Top, l**:*
Speakers at the Tribute to Dr. Marshall Nirenberg included (from l) NLM's Drs. Jeff Reznick and George Thoma, Dr. Myrna Weissman, Dr. David Serlin, NLM director Dr. Donald Lindberg and Dr. Frank Portugal.

SYMPOSIUM PHOTOS: STEPHEN GREENBERG

***Top, r**:*
Nirenberg in the 1960s with long-time laboratory technicians Norma Heaton (l) and Theresa Caryk.

PHOTO: JERRY HECHT

***Below**:*
Caryk (l) and Heaton returned for the symposium held in honor of their former colleague.

He was never a member of the prestigious "RNA Tie Club," which apparently has still not fully relinquished its claim of being first to discover the genetic code. An outsider to the club that included Nobel laureates Dr. Francis Crick, Dr. James Watson and Dr. Sydney Brenner, Nirenberg was a gentle, modest, genial man who wore his genius lightly.

Educated at state schools—the University of Florida for undergraduate work and the University of Michigan for graduate school—and a 1957 arrival at an NIH that bore virtually no prestige whatsoever, Nirenberg actually proved—doggedly and painstakingly—what his European peers only conjectured about the genetic code, and thus shared in the Nobel prize for physiology or medicine in 1968.

Because he was so unassuming, Nirenberg had been dubbed "the least likely man" to have realized his accomplishments; that slogan is now the title of a biography written by Portugal, a Catholic University professor who used to work in Nirenberg's lab. Portugal's remembrances were measured, scholarly and occasionally hilarious.

NLM director Dr. Donald Lindberg, hosting one of the last events of his distinguished 31-year career leading the library, set the tone: "[Nirenberg] really was everybody's favorite scientist. He was a really lovely person, and up and down all of the corridors and different offices and echelons at NLM, lots of people knew him. Lots of people were really pleased and happy with him."

Speaking via videotape because he was out of town, NIH director Dr. Francis Collins said Nirenberg's work "sent shock waves through the scientific community…This was our first glimpse of the biological Rosetta stone. He didn't stop with cracking the genetic code, but went on to prove that it was universal…All life must be descended from a common ancestor."

Collins added, "Marshall was a scientist's scientist, and a mentor's mentor. He was bold and innovative, yet also a great collaborator and a gentle, modest person." Collins said the gift of Nirenberg's Nobel medal and certificate—along with papers that have been donated to NLM over the years—"are truly a gift for the ages."

Weissman, now at Columbia University Medical Center, said her husband was called the least likely man in the same way that Steve Jobs, Bill Gates and Google founders Larry Page and Sergey Brin are unlikely—they simply burst on the scene with ideas better than those of others.

She said that when Nirenberg arrived on the NIH campus at 3 a.m. after driving all night from Michigan, he was impressed to find lights blazing in Bldg. 10. "It was a sign to him that Marshall had found his 'California garage,'" Weissman said.

Nirenberg earned many medals in his life, Weissman recalled, but had two favorites. One was a large, heavy medal acknowledging his service in the Vatican's Pontifical Academy of Sciences. He was supposed to be wearing it on the day he had an audience with the Pope. "But he forgot it," Weissman shared, with a chuckle.

The other beloved medal is freighted with pathos and humor. Nirenberg met with a distracted President Lyndon Johnson in the Oval Office in the 1960s and emerged not with a scientific medal but with an iron medallion commemorating the Chamizal Settlement, a U.S.-Mexico water rights agreement.

Weissman said Nirenberg "had the curiosity of a brilliant child. He had incredible imagination and he was a dreamer. He really enjoyed others who also were dreamers." She said he was compassionate, with "a complete lack of arrogance or self-aggrandizement" and was committed to issues of social justice.

Commenting on the neglect Nirenberg continues to experience, even in textbooks that barely mention him, she observed, "It really didn't bother him. In fact, he thought it was kind of funny."

Nirenberg's Nobel medal (l) and certificate are now on display in the NLM Visitor Center.

When Nirenberg's first wife, Dr. Perola Zaltzman, was ill for many years, Nirenberg eschewed travel, using his frequent flyer miles to subscribe to magazines, especially those relating to boats. In late life, he became a sailor. Meanwhile, the magazines that piled up in his Bethesda home—in addition to 40 years' worth of scientific papers—made it necessary to build pylons under his office to support the floor.

"He had no children, but he delighted in mine," said Weissman. He once brought a mouse home from the lab—"probably illegally"—to entertain a grandchild and was happy to watch the TV cartoon *Spongebob Squarepants* with grandchildren.

She concluded, "If you really knew Marshall, you would realize he was the *most* likely man to unravel the code of life."

Portugal, author of the new book *The Least Likely Man: Marshall Nirenberg and the Discovery of the Genetic Code* (MIT Press), recalled that Nirenberg was once approached, after a scientific talk in downtown D.C., by a stunningly beautiful young woman who asked if she might have lunch with him. So keen was she to know more about the "code of life" that she booked a hotel room for the two of them, post-lunch.

"Of course, she was a Russian spy, who thought that Marshall's code might have some military application," Portugal explained.

While Nirenberg gracefully turned down that opportunity to mentor, he was prolific in that role with authentic scholars, Portugal noted. "Marshall mentored 150 postdocs through his entire career," Portugal said. "Normal is about 25."

The tribute concluded with presentations by two experts who have eased access to the trove of Nirenberg donations to NLM. Dr. George Thoma, chief of NLM's Communications Engineering Branch, formally launched a new Turning the Pages interactive presentation of Nirenberg's first summary of the genetic code. Historian Dr. David Serlin of the University of California, San Diego, curator of NLM's Profiles in Science web site on the Marshall Nirenberg Papers, offered additional anecdotes about a man he described as "a devoted public scientist."

Nirenberg turned down many offers of academic and private sector employment, Serlin said, in order to enjoy the freedom of the NIH intramural program. Even at his busiest, he welcomed interested high schoolers, including Xandra Breakefield, who later became one of his postdocs and is now a professor of neurology at Harvard Medical School.

Serlin is grateful to Nirenberg for "opening the gates" of both his lab and home to him. "When I went to his basement for the first time," Serlin recalls, "it was like the final scene in *Raiders of the Lost Ark*. We went in as if going on [an archaeological] dig."

The NLM tribute—viewable online at http://videocast.nih.gov/summary.asp?Live=15563&bhcp=1—was the first of a "triplet" of collaborative NIH events in 2015 that will celebrate Nirenberg's life and legacy.

Watkins To Give 2015 Kreshover Lecture

Dr. Linda R. Watkins, a distinguished professor in the department of psychology and neuroscience at the University of Colorado at Boulder, will deliver the 2015 NIDCR Seymour J. Kreshover Lecture on Monday, May 4 at 2 p.m. in Lipsett Amphitheater, Bldg. 10. She will speak on "Targeting Glia to Treat Chronic Pain: Moving from Concept to Clinical Trials."

Watkins is a University of Colorado president's teaching scholar and director of the interdepartmental neuroscience Ph.D. program. Her research is focused on how to control chronic pain and increase the effectiveness of analgesics while minimizing their side effects. When non-neuronal cells known as glia are activated, they can create persistent, amplified neuroinflammation, thereby promoting the transition from acute to chronic pain. Watkins' work has shown that glial activation can also compromise the ability of opioids to suppress chronic pain, contributing to the development of drug tolerance and dependence.

Her findings have advanced our understanding of how therapeutics that target a specific glial activation receptor are effective stand-alone treatments for chronic pain and can also increase the efficacy of opioids while decreasing analgesic tolerance and dependence. Two such drugs, developed in the Watkins lab, are moving toward clinical trials.

Watkins earned her doctorate in physiology and received postdoctoral training at the Medical College of Virginia in Richmond. At the University of California, Davis, she pursued postdoctoral training and was an adjunct lecturer and assistant research neurophysiologist. Watkins then joined the University of Colorado at Boulder as a research associate and later became part of the faculty.

In addition to NIDCR research grants, she has been awarded grants from NIDA, NIMH and NINDS. She has coauthored numerous scientific book chapters and peer-reviewed articles. Her many awards include the Pioneer in Pain Award from the Western Pain Society in 2012, Prince of Asturias Award for Technical & Scientific Research in Spain in 2010 and the Clinical Science Award & Lectureship from the Karolinska Institute & Karolinska University Hospital in Stockholm in 2007.

The Kreshover Lecture was established by NIDCR as a tribute to the late director of the (then) National Institute of Dental Research (1966–1975). Lectures are delivered by investigators who have made significant contributions to research that affects the dental, oral and craniofacial field.

Watch the lecture online at http://videocast.nih.gov/. Sign language interpretation will be provided. Individuals who need reasonable accommodation to participate should contact Mary Daum, Mary.Daum@nih.gov or (301) 594-7559. For details, visit www.nidcr.nih.gov/NewsAndFeatures/Announcements/Kreshover-2015.htm.

milestones

Photojournalist Bartlett Ends 35-Year NIH Career

By Raymond MacDougall

If you've been around NIH for any length of time, there's a good chance you've encountered Maggie Bartlett's wide smile and ubiquitous camera.

Maggie Bartlett, with NHGRI director Dr. Eric Green, says so long after 35 years at NIH.

PHOTO: ERNESTO DEL AGUILA

In January, Bartlett retired from a long NIH career that has been full of variety and opportunity—from capturing photos of heart specimens to helicoptering over NIH's Bethesda campus to collect aerial footage. She also became adept at all aspects of videography in her last position with the National Human Genome Research Institute.

"Maggie's creative visual expertise, her cheerful and energetic temperament and her organizational skills have been fantastic resources for NHGRI," said Dr. Laura Lyman Rodriguez, director of NHGRI's Division of Policy, Communications and Education. "I am joined by many across NIH who thank her for her 35 years of service and wish her well in retirement."

Bartlett joined the National Heart, Lung, and Blood Institute in 1979. At that point, her resume boasted an associate's degree in biomedical photography from Rochester Institute of Technology along with experience as a company photographer at Litton Bionetics, now a part of Northrop Grumman. She worked as a scientific photographer at NHLBI until 1986, depicting many human heart, lung and vascular specimens in her photos. But she said that her most memorable assignment was to photograph the powerful structure of an elephant heart.

"People at the National Zoo knew about NHLBI's work on cardiac pathology so they sent the elephant heart to see if NHLBI's expert, Dr. William C. Roberts, could figure out why the elephant had died," Bartlett recalls. "It looked very similar to a human heart but much, much bigger. We could stick a whole human heart into the left ventricle of the elephant's heart. It was really cool."

She subsequently joined the National Cancer Institute, where she worked until 2001. There, she played a key role in developing Visuals Online (https://visualsonline.cancer.gov/), a resource that remains a source of quality biomedical images. She also coordinated an NCI communications internship program.

In 2001, Bartlett took a detail with NHGRI to help mark completion of the draft human genome sequence by arranging logistics for a gala celebration at the National Building Museum. "I was in the right place at the right time," she said, describing the lure of the project. "I found it amazing that everybody pitched in," she said. "I had no idea about anyone's grade or level of responsibility. It was a young institute with lots of enthusiasm and a very special place."

Among the many awards she amassed during her career was a 2002 Distinguished Service Award for her contribution to a publication titled *How DNA Can Help Identify Individuals*. The guide explained DNA's role in identifying victims of the World Trade Center and Pentagon disasters. "This was a publication they took door-to-door and one that I helped get printed on very quick turnaround," she said. "My part wasn't a big thing, but the purpose was huge."

Meeting people engaged in projects in and around NHGRI proved to be among the most satisfying parts of her photography and videography work, she said. "It's been really fun to meet so many people and to learn about what they are doing at NHGRI. I am amazed by the content of the videos we broadcast and find it fascinating." Bartlett helped develop a library of more than 1,000 videos on NHGRI's YouTube channel, https://www.youtube.com/user/GenomeTV.

Bartlett's commitment to the mission of NIH ran deep, both in and out of the office. In December 2011, she reached the milestone of 100 donations of blood to the NIH Blood Bank; she has since surpassed 115 donations.

"Donating blood is something you can do that doesn't cost anything and has great rewards for the patients," she said. "It contributes to the mission of NIH, which is all about the patients and how we can alleviate pain and prevent illness."

She witnessed the benefit of such donations when her own sister was sustained by blood transfusions as she dealt with effects of multiple myeloma. "It kept her alive for a period of time," Bartlett noted.

Bartlett served as a Combined Federal Campaign key worker for more than a dozen years. She has taken part in NIH's annual Take a Hike event and cycled 21 miles from her home in Boyds, Md., in the 2011 and 2013 NIH Bike to Work Day events.

Federal civil service runs in the family. Bartlett's husband, Jeff Bartlett, retired from a long career as a records manager with the Nuclear Regula-

tory Commission. Her son, Chad Bartlett, currently is an NCI budget analyst. They also share a passion for the outdoors, especially ski season and various summer sports.

Asked about her retirement plans, Bartlett ticked off a characteristically ambitious list. She has set a goal to finish an Ironman triathlon, a sport in which she has trained since 2009. Her 21 events to date have included participation in two national championships and the 2014 world championship in Edmonton, Alberta, Canada. In addition to some work with NHGRI, she plans to continue volunteering with the Boyds Historical Society and Boyds Civic Association, start a small-events photography business and read books for pleasure—without guilt.

Sammak Joins Biomedical Technology Staff at NIGMS

Dr. Paul Sammak recently moved from a scientific review officer position at CSR to a program director role in the NIGMS Division of Biomedical Technology, Bioinformatics and Computational Biology. His responsibilities there include managing a portfolio of Biomedical Technology Research Resources grants and grants that support the development of microscopy and cell imaging technologies. Before coming to NIH in 2012, Sammak had held positions as a research associate professor at the University of Pittsburgh, a principal scientist at Cellomics, Inc. (now Thermo Fisher Scientific) and an assistant professor at the University of Minnesota. He earned a B.A. in physics from Hampshire College and an M.S. in physics and Ph.D. in biophysics from the University of Wisconsin. Sammak conducted postdoctoral work in physiology and pharmacology at the University of California, Berkeley, and at the University of California, San Diego, in the laboratory of Dr. Roger Y. Tsien. He has 21 patents for cell-based assays.

Hunziker Elected to AIMBE's College of Fellows

Dr. Rosemarie Hunziker (c), program director of tissue engineering and regenerative medicine at the National Institute of Biomedical Imaging and Bioengineering, has been inducted to the American Institute for Medical and Biological Engineering. AIMBE's College of Fellows includes 1,500 individuals who make up the top 2 percent of the medical and biological engineering community. They are recognized for having made significant contributions to the medical and biological engineering community. Hunziker was nominated and elected in recognition of her service as a NIBIB program official who has championed applications of biomedical engineering both in and out of NIH. Joining her on stage are Jennifer West, chair of the College of Fellows, and Ravi Bellamkonda, AIMBE president.

volunteers

Hard-to-Treat Depressive Symptoms?

This inpatient research study is assessing the effectiveness of the oral medication diazoxide (an enhancer of glutamate transporter function) versus placebo to rapidly improve hard-to-treat major depressive symptoms. The study enrolls participants ages 18-65, who are diagnosed with major depressive disorder, have previously failed to respond to treatment and are free of other serious medical conditions. The study can last up to 12 weeks and is conducted at the Clinical Center. There is no cost to participate. We enroll eligible participants locally and from around the country. Travel arrangements are provided and costs are covered by NIMH (arrangements vary by distance). After completing the study, participants receive short-term follow-up care at NIH while transitioning back to a provider. For more information visit www.nimh.nih.gov/JoinAStudy, call 1-877-MIND-NIH (1-877-646-3644), TTY 1-866-411-1010 or email moodresearch@mail.nih.gov. See study 14-M-0041.

What Does a Depressed Person's Brain Look Like?

The purpose of this brain imaging study is to see if individuals, ages 18 and older, with major depressive disorder have increased inflammation in their brain. The study involves four outpatient visits or a brief inpatient stay at the Clinical Center. Procedures include blood tests, medical evaluations and two brain scans (PET and MRI). Participants do not need to stop their current medications. Those not eligible to participate include pregnant women, current smokers and individuals with serious medical conditions. There is no cost to participate. We enroll eligible participants locally and from around the country. Travel arrangements are provided and costs are covered by NIMH (arrangements vary by distance). After completing the study, participants receive short-term follow-up care at NIH while transitioning back to a provider. For more information visit www.nimh.nih.gov/JoinAStudy, call 1-877-MIND-NIH (1-877-646-3644), TTY 1-866-411-1010, or email moodresearch@mail.nih.gov. See study 13-M-0100.

Improve Depressive Symptoms Faster?

Studies are enrolling eligible participants ages 18-65 with unipolar or bipolar depression symptoms for a 2-3 month inpatient stay. The study compares ketamine, an experimental medication, to placebo and evaluates rapid reduction of depressive symptoms (within hours). For more information and eligibility criteria go to www.nimh.nih.gov/JoinAStudy, call 1-877-MIND-NIH (1-877-646-3644) TTY 1-866-411-1010 or email moodresearch@mail.nih.gov. See study 04-M-0222.

seen

Circus Entertains Guests at NIH, Verizon Center

PHOTOS: MICHAEL SPENCER

On Mar. 18, children of all ages were treated to another Premiere Night put on by Ringling Bros. and Barnum & Bailey Circus. Thanks to those who purchased tickets to the show, NIH's Recreation & Welfare Association was able to treat more than 2,500 children and families to a night of fun.

The children come from a variety of programs in the community including family shelters, Operation Second Chance, Children's National Medical Center, at-risk youth in the local YMCA, Interfaith Works, Georgetown and Howard University hospitals, Bethesda Cares, Capitol Hill Group Ministry, Community Services for Autistic Adults and Children, Inc., county school programs and more.

In addition to providing a night of entertainment for community families, R&W also sent many families from the NIH Charities—Special Love, the Children's Inn and Friends of Patients at the NIH—to the show.

As has become an annual tradition, the circus also sent clowns to the Clinical Center, to entertain children enrolled in pediatric protocols.

Above, Gabriella Cortes learns to spin a plate on her finger with the help of clowns from Ringling Bros. Below, at left, the Becraft sisters (from l, Sophia, Isabelle and Emilie) share hugs with performers at the pizza party before the circus. At right, Special Love's Dave Smith (kneeling) with youngsters (from l) Andrew, Bryson and Willie are circus-ready with their clown noses.

At left above, Ziiyad (r) hangs out with DJ Weiss when the clowns came to visit patients at NIH. At right, a guest enjoys the ultimate selfie at the pizza party.