

nih record



ABOVE • HHS Night at the Ballpark drew a contingent of happy NIH fans. See p. 12.

features

- 1
- Binagwaho Explains Rwanda's Health Turn-Around**
- 3
- R&W Gifts Shops Forced to Close**
- 5
- Wednesday Afternoon Lecture Series Resumes**
- 12
- NIH'ers Spend 'Night at Ballpark'**

departments

- 2
- Briefs
- 9
- Digest
- 10
- Milestones
- 12
- Seen

An African Success Story

Rwandan Health Minister Attributes Nation's Progress To Research, Resilience

By Dana Talesnik

Not long ago, Rwanda had one of the lowest life expectancy rates in the world. Today, this small, rural African country—slightly smaller than the state of Maryland but with nearly double the population—boasts an impressive health record that could be the envy of even the most developed nations. And, all of these remarkable health achievements occurred during the last 2 decades, after genocide ravaged the nation in 1994.

In the past 20 years, life expectancy in Rwanda nearly doubled, maternal mortality dropped by three-quarters

SEE RWANDA, PAGE 6



Dr. Agnes Binagwaho gives the 2015 Barmes Lecture. She has led Rwanda through remarkable health gains.

Screening, Vaccinations Can Reduce Risk Of HPV-Associated Cancers

By Eric Bock

Cancer screenings and vaccination efforts appear to have slowed the spread of human papillomavirus (HPV). NCI acting director Dr. Doug Lowy reported on current success against HPV and outlined promising research on the horizon at the 2015 annual Advances in Cancer Prevention Lecture in Masur Auditorium on July 23. Lowy is also chief



Dr. Doug Lowy

of the Laboratory of Cellular Oncology and helped develop the HPV vaccine.

HPV is the most common sexually transmitted disease. Most HPV infections go away on

SEE LOWY, PAGE 8

Protect Yourself

Know What to Do in 'Active Shooter' Situation

By Dana Talesnik

You hear helicopters hovering and sirens approaching. Hours later, the choppers are still circling campus. Rumors are circulating of an emergency and soon official work emails arrive listing temporary road and NIH exit closures while “an incident” is investigated.

This was the scene that unfolded the morning of July 6, when someone reported hearing a shot fired at Walter Reed National Military Medical Center, across the street from NIH. Although the incident turned out to be a false alarm, the recent shooting at a Navy facility in Chattanooga and the 2013 shooting at D.C.'s Navy Yard remind us that shootings do happen, even in seemingly secure places. It's important to be vigilant and prepared for a possible “active shooter” situation.

“The biggest danger is at the start of the event and while waiting for law enforcement to

SEE SHOOTER, PAGE 4



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 with the words "Subscribe NIHRECORD" in the message body.

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

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

Editor
Richard McManus
Rich.McManus@nih.gov

Associate Editor
Carla Garnett
Carla.Garnett@nih.gov

Staff Writers
Eric Bock
Eric.Bock@nih.gov

Dana Talesnik
Dana.Talesnik@nih.gov

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper and HHS.

NIH...Turning Discovery Into Health



NIH Library Open House: Tools, Tech & Tutelage

Mark your calendar now for the NIH Library open house, Thursday, Sept. 17 from 9:30 a.m. to 3:30 p.m. and Friday, Sept. 18 from 9:30 a.m. to noon. Held in conjunction with the NIH Research Festival (see story on p. 11), the library's open house will showcase why the library truly is "Your Partner in Research."

Don't miss the data visualization touch screen demonstration provided by the NIH Office of the Associate Director for Data Science. And be sure to get tips for successful publishing provided by outside experts and panelists who will discuss editing, scholarly publishing and open access issues.

Meet company representatives and NIH Library experts who will share valuable information and provide demonstrations on the tools, technology and services that can enhance your research including licensed databases, 3D printing, bibliometric and portfolio analysis, bioinformatics software, data management and custom solutions to solve research challenges. For more information, call (301) 496-1080. Check for event updates at http://nihlibrary.nih.gov/Pages/openhouse_2015.aspx.



Dr. Jacqueline Dunbar-Jacob

Dunbar-Jacob To Give NINR Director's Lecture, Sept. 22

Dr. Jacqueline Dunbar-Jacob will present the second 2015 NINR Director's Lecture on Tuesday, Sept. 22 from 10:30 to 11:30 a.m. in Lipsett Amphitheater, Bldg. 10. In her talk, "Scientific Pursuit of Effective Medication Adherence," she

will provide an overview of her work in adherence in chronic disease with particular attention to measurement and predictive factors.

Dunbar-Jacob is the Distinguished Service professor and dean of the School of Nursing at the University of Pittsburgh. As an actively funded NIH scientist of 25 years, her most recent work focuses on patient adherence and is designed to examine factors relevant to the translation of interventions to clinical settings. Recently, she was named one of the top 30 most influential nursing deans. Dunbar-Jacob has served as a behavioral scientist in key multi-center clinical trials and as an NIH data and safety monitoring board member for three multi-center trials and has participated in more than 30 NIH working groups.

The NINR Director's Lecture Series is designed to bring the nation's top nurse scientists to NIH to share their work and interests with a trans-disciplinary audience. The event is free and open to the public. No registration is required. For more information, visit www.ninr.nih.gov/directorslecture.



'Bethesda Trio' Performs at CRC

The Bethesda Trio, featuring (from l) Daisy Xu, Michael Clark and Ruth Shatkay, performed classical music in the Clinical Research Center atrium on July 23. The musicians are recent graduates of Walter Johnson High School. Xu and Clark played the flute and Shatkay played the cello.

PHOTO: ERIC BOCK

Study Seeks Healthy Older Adults

Healthy older adults ages 55-75 are invited to participate in an outpatient research study investigating the benefits of omega-3 oil and blackcurrant supplements on vascular health. The goal of the study is to determine whether the supplements improve blood flow and blood vessel function that can affect your heart. Eligible participants must be medication-free and in good general health. The study will be carried out in an outpatient clinic and includes 4 visits over 6 months. Compensation is provided. For more information, call 1-800-411-1222 (TTY 1-866-411-1010) and refer to study 14-NR-0034.

R&W Stores Close in Bldgs. 31, 10

By Rich McManus

Two long-time gift shops run by the NIH Recreation & Welfare Association closed abruptly on July 10 due to financial problems.

One store, located on the first floor of Bldg. 31, had recently replaced the main R&W store on the B1 level of 31. The other was located on the B1 level of Bldg. 10. The R&W store in the atrium of the Clinical Research Center remains open, as does the outlet at Rockledge. The fitness centers and other R&W services remain in operation.

According to David Browne—who is acting head of R&W in the wake of the retirement of long-time president Randy Schools and the recent departure of Schools' second in command, Kallie Wasserman—a combination of financial pressures and the government shutdown of October 2013 forced the closures.

"It came along quick," Browne said. "You never expect it. We couldn't stock the stores and the payroll was too tight, so we had to close the two stores." Four staff with experience ranging from 10 to 14 years were let go.

"We tried to furlough them for a few weeks," explained Browne. "It definitely hit them hard."

Schools has been trying to find new jobs for the displaced employees.

"It's just a sad situation," said Schools, who retired last January after running R&W for the past 38 years. "I am volunteering every day to right the ship."

Browne said R&W, once past its financial strain, hopes to re-open the stores and bring employees back.

"The store in 31 never really got a fair shot to succeed," he said. "There's no doubt in my mind it would have taken off had we been able to stock it. Hopefully we'll be able to come through this and be able to continue serving this community as we have for the past 70 years. We'll pull through, rebound and everyone will be happy."

Browne, who has been with R&W for nearly 11 years, said merchandise from the closed stores has been moved to the CRC atrium gift shop, which is undergoing renovation.

"We've got some fighters on our staff," he said. "We're going to do all we can to turn this thing around."

He acknowledged there have been rumors that R&W will get out of the retail side of its operation, focusing entirely on the fitness centers, clubs, services and events. But he does anticipate the gift shops' return, although possibly in different locations.

"We will be better than we were before, once this issue is behind us," Browne said.

"While it is unfortunate that the R&W Association had to shut

down the operations of the stores in Bldg. 10 and Bldg. 31, it was necessary in order to preserve the long-term future of the R&W," said NIMHD's Ken Sonnenberg, chair of the R&W board. "I want to make it clear that we are continuing to maintain full operations of the fitness centers and the programs associated with it. R&W will also continue to operate popular and much needed services to the NIH community which include the community markets, as well as other NIH-sponsored events such as the Institute Relay on Sept. 15 and the Research Festival on Sept. 17."

The R&W has a use agreement with the Office of Research Services to run the stores, fitness centers and community markets, said Timothy Tosten, associate director, Program and Employee Services, ORS. He said ORS has been hearing talk of R&W's financial difficulties for the last 8-10 months and has met with the R&W board about possible solutions.

"The stores and fitness centers are a very important aspect for NIH," he said. "We didn't think it would come to them closing the two stores."

In order to assure continued employee services, ORS has been obliged to search for other vendors to run the stores, Tosten said. It is sending out an RFI—request for interest—to potential retail operators; R&W is welcome to apply, he noted.

"Our main concern is the [CRC] atrium store, because it services patients, visitors and employees," Tosten added. "We want to assure it is run well...We are working closely with the Clinical Center to work with the right group. Clinical Center leadership would like a store that provides the right merchandise for a hospital setting."

ORS has inquired at local hospitals including Suburban and Sibley to see who provides quality gift shops at those locations. Tosten said he hopes a retail operation can be in place by mid-fall, in time for the holiday shopping season.

"NIH did nothing to make this [financial trouble] happen," he emphasized. "I feel really bad. I'm worried about all the charity stuff they do. Plus, they run all those clubs."

ORS is also coming up with contingencies if the fitness centers should close, Tosten added. "There are between 500 and 1,000 fitness center members. If [R&W] folds, we have to be ready." 📍



This sign on the door of the Bldg. 31 R&W gift shop greeted NIH'ers on the afternoon of July 10.



SHOOTER

CONTINUED FROM PAGE 1

Above:

Participating in an NIH fire and police department active shooter joint training exercise last October are (from l) Sgt. Fredric Boyle, Master Firefighter Roy Myers, Fire Tech Patrick Woodburn and Cpl. Brent Robinson.

arrive,” said NIH Police Chief Al Hinton. “People need to have the proper mindset—the willingness to survive—and accept that it’s happening. Do you stay, help or leave? Only you can decide the course of action you’d take.”

To the extent you can, plan well in advance. Look around. If you couldn’t safely evacuate, where could you seek shelter? Perhaps you could hide in your office or a storage closet or bathroom, said Hinton, who noted that the occupants of Bldg. 10 have received slightly different active shooter training. If you hide, turn off the lights and barricade yourself, blocking doors and windows. Try to distance yourself from the assailant. If confronted, try to distract the shooter to avoid becoming a target. When it’s safe to do so, call 911 for help.

When police arrive, show your hands and obey directions. Don’t be surprised if the officers seem brusque in such a scenario. Their immediate goal is to stop the threat, minimize casualties and lead everyone to safety.

Remember to stay calm and follow a practical course of action. “A trained, prepared person has a better chance of survival,” said Hinton. “In these situations, a few seconds can make all the difference.”

The same holds true for any suspicious person, package or activity. If you see someone or something out of the ordinary, report it to police. “If you witness or suspect a situation that may become dangerous, document it—if you can—and talk to someone,” said Jessica Hawkins, coordinator of the NIH Civil Program, which is dedicated to preventing violence in the workplace. “Don’t just sit on a gut feeling.”

AlertNIH: Get Notified in an Emergency

Don’t miss important updates in an emergency. AlertNIH connects NIH employees instantly across many devices—cell phone, work or home phone or email. Your work email will automatically receive messages from AlertNIH. But you can also connect your personal phones or email too.

To sign up on your personal devices, log in to the NIH Enterprise Directory (NED), <https://ned.nih.gov/search/>, and scroll to the bottom of your profile to the AlertNIH section. Then click on Edit and select which personal devices you’d like to connect to receive these updates. Make sure your NED profile is current so you have multiple ways to receive important information from AlertNIH.

A shooting or other violent incident can be perpetrated by an outsider or even by a colleague. An ounce of prevention can go a long way. Whether you witness verbal abuse, threats or other aggression, or if you or a colleague are grappling with a possible mental health problem, the Civil Program can coordinate with counselors in the Employee Assistance Program, other NIH offices and, if necessary, the police and other emergency resources.

“If there are behavioral concerns—with NIH employees, contractors, trainees, anyone in the NIH community—call us,” said Hawkins. “We’re a gateway to get people to the right place.”

Hawkins said many calls turn out to be minor, such as an office dispute. “But I’d rather take a thousand minor calls that turned out to be nothing than miss the one call that could escalate and become [an incident of] workplace violence,” she said.

During emergency situations, many ICs and outside resources come together to keep the NIH community safe, said Jordan Southers, an NIH emergency management specialist. NIH’s Division of Emergency Management helps facilitate crisis response and continuity of operations during an emergency. The office also runs AlertNIH, which sends updates, warnings and instructions to NIH employees through work email and social media.

“It’s important to know the steps to take if confronted with an emergency situation,” said Southers. “Knowing what to do ahead of time makes you less prone to panic.” 📌

Wednesday Afternoon Lecture Series Resumes Sept. 2

The 2015-2016 Wednesday Afternoon Lecture Series will begin a new season in September with lectures by Dr. Edward Boyden (Massachusetts Institute of Technology), Nobel Prize winner Dr. Peter Agre (Johns Hopkins Malaria Research Institute) and Dr. Timothy Ley (Washington University School of Medicine).

Boyden will deliver the first lecture, an NIH Director's Lecture, on Wednesday, Sept. 2, titled, "Tools for analyzing and repairing complex biological systems." He is a professor of biological engineering and brain and cognitive sciences at the MIT Media Lab and the MIT McGovern Institute.



Dr. Edward Boyden

He leads the synthetic neurobiology group, which develops tools for analyzing and repairing complex biological systems such as the brain, and applies them systematically to reveal principles of biological function as well as to repair these systems.



Dr. Peter Agre

Agre's lecture, which will be held on Sept. 9, "Aquaporin water channels—from transfusion medicine to malaria," will focus on his work discovering aquaporins, a family of water channel proteins found throughout nature and responsible for numerous physiological processes in humans—including kidney concentration, as well as secretion of spinal fluid, aqueous humor, tears, sweat and release of glycerol from fat.

On Sept. 30, Ley will deliver the annual Marshall W. Nirenberg lecture that recognizes a researcher with outstanding contributions to genetics and molecular biology. Ley's lecture, "The AML genome(s): Mutations in four



Dr. Timothy Ley

dimensions," will focus on his research on acute myeloid leukemia and his recent efforts that may lead to new tests to better establish prognosis and new approaches for the therapy of patients with this disease.

To learn more about the speakers coming to campus this year, visit the WALs web site at <https://oir.nih.gov/wals>. You can view the entire 2015-2016 Wednesday Afternoon Lecture Series schedule there as well as download the season's poster. All lectures will be held 3-4 p.m. in Masur Auditorium, Bldg. 10. For day-of-event information, follow WALs on Twitter: @NIHWALS. There are no lectures on Sept. 16 (come to the NIH Research Festival being held Sept. 16-18 instead) or Sept. 23.

For any questions, contact Jacqueline Roberts at robertsjm@od.nih.gov or (301) 594-6747. 📞

Riley Named Director of OBSSR

Dr. William T. Riley has been named NIH associate director for behavioral and social sciences research and director of the Office of Behavioral and Social Sciences Research. He had served as acting director of OBSSR since May 2014. NIH director Dr. Francis Collins announced the appointment on July 30.

Riley first came to NIH in 2005, serving as deputy director of the Division of AIDS and Health & Behavior Research at the National Institute of Mental Health. In 2009, he joined the National Heart, Lung, and Blood Institute as program director of the Clinical Applications and Prevention Branch, Division of Cardiovascular Sciences. He moved to the National Cancer Institute in 2012, where he was chief of the Science of Research and Technology Branch in the Division of Cancer Control and Population Sciences. Prior to his employment at NIH, Riley worked in the private sector as director of research at PICS, Inc., and taught at Virginia Commonwealth University and the Medical College of Georgia.

A clinical psychologist by training, Riley is interested in behavioral assessment, psychosocial health risk factors, tobacco use/cessation and the application of technology to preventive health behaviors and chronic disease management. His research has included the use of mobile phones and other mobile computer devices to assess and intervene on tobacco use, dietary intake, physical activity, sleep and medication adherence. He also is interested in the application of engineering and computer science methodologies to the behavioral sciences.

Healthy Adults Sought by NIDDK

NIDDK seeks healthy adults without diabetes to participate in a research study. Doctors want to learn how a new FDA-approved diabetes medication affects bone health in healthy volunteers. Meals are provided and you will have outpatient visits and inpatient stays. Compensation is provided. For more information, call 1-866-444-2214 (TTY 1-866-411-1010). Refer to study 14-DK-0195.





RWANDA

CONTINUED FROM PAGE 1

Above, l: NIH director Dr. Francis Collins (l) shares a light moment with the guest Barmes lecturer prior to the start of her talk.

Above, r: Binagwaho said, “If in my country we have reached [certain health milestones], it’s because we have put research at the forefront of evidence-based decisions.”

PHOTOS: BILL BRANSON

and under-5 child mortality decreased by two-thirds. The prevalence of HIV has dropped dramatically, while most who are living with HIV are receiving treatment. Today, more than 90 percent of Rwandans have health insurance coverage. Rwanda also is making great strides in screening and treatment for cancer and non-communicable diseases.

Rwanda’s minister of health, Dr. Agnes Binagwaho, credits these successes to scientific research, cost-effective reforms and a commitment to creating an inclusive health care system.

“We created a system where we don’t want anyone to be left out,” Binagwaho told a packed Masur Auditorium audience at the annual David E. Barmes Global Health Lecture on July 29.

In fact, those benefitting the most from Rwanda’s health interventions are the poorest citizens living in rural areas.

“We focus on the community and target the most vulnerable because when we have them in the loop, we have everybody,” Binagwaho said. “I say to myself, ‘If we create a system where the grandchild of the most vulnerable mammy in Rwanda is safe, my grandchild is safe.’”

One notable achievement is Rwanda’s focus on childhood vaccinations. Since 2011, more than 90 percent of all Rwandan children are vaccinated against 10 diseases including polio, measles, tuberculosis, tetanus and whooping cough. And, more than 90 percent of teenage girls receive the HPV vaccine—first developed and tested at NIH’s Clinical Center—which can help prevent cervical cancer.

“We’re very proud to be the country that has shown the world that the HPV vaccine can be used safely, rationally and [be] well implemented [even in a lower income country],” Binagwaho said.

The momentum in Rwanda’s health sector is made possible by a common national vision. The minister lauded her country’s cooperation on health policies across all sectors of government. She said Rwandan government officials recognize that inaction results in losses of medical services and lives and that a healthy workforce generates economic growth.

“We have to be vigilant on how we are interacting with the population because we cannot research there in our silo,” Binagwaho said. “We are interacting with and influencing the world. And if in my country we have reached [certain health milestones], it’s because we have put research at the forefront of evidence-based decisions.”

Binagwaho emphasized homegrown solutions that involve all stakeholders.

Several years ago, the Rwandan Ministry of Health and Harvard University teamed up on a program to educate Rwandan leaders in implementation science and service delivery, she said. This initiative inspired the creation of a new educational opportunity in Rwanda to train future leaders in clinical care, planning and program implementation: the University of Global Health Equity. It’s owned by Partners in Health, a non-profit organization that is affiliated with Harvard University and co-funded by the Gates and Cummings foundations.

“We want academics to enter into politics,” she said, noting that, since 2008, everyone working in the Ministry of Health has at least one advanced degree.

But even with all of the important information out there, many researchers in low-income countries can’t afford to pay to access it. Binagwaho said she now only publishes on open source so anyone can afford to use and share her research. She called on scientists to make sure their data is accurate, ethical and transparent and advocated for expanded access to research for all.

“We should do research in a more participatory manner,” Binagwaho said. “We have so much to tell the world and we have so much to learn from the world—we need to create that partnership.”



NIAMS director Dr. Stephen Katz (l) and NIDDK director Dr. Griffin Rodgers record segments about lupus and arthritis for NIDDK's *Healthy Moments* radio program to air in October.

PHOTO: ODY S. LEONARD

Radio Show Advances NIH Health Information

By Diane Tuncer

Every week, more than a million radio listeners hear a familiar voice on a 60-second radio show called *Healthy Moments*, a series hosted by NIDDK director Dr. Griffin Rodgers since 2008. On the show, Rodgers offers clear, concise information about a variety of health topics such as diabetes, digestive diseases, nutritional disorders, obesity, kidney and urologic diseases.

In the spirit of one NIH, Rodgers broadened the scope of the program in 2013 by inviting directors from other NIH institutes, centers and offices to be guests on the show.

“Part of NIH’s mission is to communicate our research findings to the public,” said Rodgers. “*Healthy Moments* is an example of how NIDDK, in collaboration with other NIH institutes, translates its discoveries into science-based, action-oriented health advice that people can use to make positive changes.”

The guest hosts have given listeners an opportunity to learn about other important NIH health topics, including:

High Blood Pressure—Dr. Gary Gibbons, National Heart, Lung, and Blood Institute

HIV/AIDS, Hepatitis and the Flu—Dr. Anthony Fauci, National Institute of Allergy and Infectious Diseases

Women’s Health Research—Dr. Janine Austin Clayton, Office of Research on Women’s Health

Lupus and Arthritis—Dr. Stephen Katz, National Institute of Arthritis and Musculoskeletal and Skin Diseases

Some planned segments include Diabetes and Depression, featuring Dr. Thomas Insel, Nation-

al Institute of Mental Health, and Complementary Health, featuring Dr. Josie Briggs, National Center for Complementary and Integrative Health.

Since the show’s inception, the number of radio listeners has grown to more than 30 million people annually. Many of the stations airing *Healthy Moments* target an African-American audience; the show focuses on topics tailored to that community but relevant to all.

“Many diseases within the NIAMS mission, including arthritis and lupus, affect African Americans and other minorities disproportionately,” said Katz. “*Healthy Moments* provides us with a terrific platform to generate awareness about these disabling diseases.”

Episodes are recorded on the NIH campus and air in many regions across the nation. The show is also featured on the *Tom Joyner Morning Show* and the *Yolanda Adams Morning Show*. For information on where and when to catch the show or to listen to archived episodes, visit *Healthy Moments* on the NIDDK web site.

Healthy Moments is also on Twitter @HealthyMoments and several mobile device-friendly video episodes are available on the NIDDK YouTube channel.

“In just 1 minute, *Healthy Moments* reaches an audience with important health messages of benefit to them and their families,” said Rodgers. “The show is also a powerful way to remind people about the crucial health research that NIH conducts and funds—and how the work of their government directly improves their lives.”

NIEHS Celebrates Wilson’s Mentoring Award

More than 100 colleagues and trainees turned out recently to show their appreciation to principal investigator Dr. Samuel Wilson, who is one of this year’s recipients of the Ruth L. Kirschstein Mentoring Award, the highest recognition at NIH for exemplary performance while demonstrating significant leadership, skill and ability in serving as a mentor.

Noting that the honor will be officially presented Sept. 24 at the NIH Director’s Awards, NIEHS and NTP director Dr. Linda Birnbaum said, “I think it’s great that we went ahead to say, ‘Thank you, thank you’ for your leadership, science and mentoring.”

The award is named for Dr. Ruth Kirschstein, who served as director of NIGMS and was the first woman to serve as director of an institute. She was also deputy director of NIH in the 1990s and acting director of NIH in 1993 and 2000-2002. She died in 2009.

“It’s a huge honor...for me and for the NTA [NIEHS Trainee Assembly] and the outstanding training program we have here,” Wilson said. Characteristically, he was quick to point out his debt to others, naming several of his colleagues. “It really is for all of us.”

The mentoring award is the latest in a long list of honors Wilson has received for his work at NIEHS, where he heads the DNA repair and nucleic acid enzymology group. He also served as deputy director of NIEHS in 1996-2007 and acting NIEHS and NTP director 2007-2009.

Wilson was founding director of the Sealy Center for Molecular Science and director of the Center for Environmental Toxicology at the University of Texas Medical Branch 1991-1996, following service as a principal investigator with the National Cancer Institute.—Eddy Ball



NIEHS/NTP director Dr. Linda Birnbaum and honoree Dr. Samuel Wilson

PHOTO: MICHAEL GARSKE

LOWY

CONTINUED FROM PAGE 1

their own. Of more than 150 strains, only a few cause genital warts and cancers of the cervix, vulva, vagina, penis, anus and mouth, including the base of the tongue and tonsils. Cervical cancer is the most common HPV-associated cancer in women and mouth cancer is the most common HPV-associated cancer in men. Two strains, HPV 16 and 18, are responsible for most HPV-associated cancers, Lowy said.

HPV's link to cancer was first demonstrated in the early 1980s when German virologist Dr. Harald zur Hausen found that cervical cancer cells contained HPV DNA. Since then, Lowy noted, scientists have learned a lot about the natural history of HPV infections and the genesis of cervical cancer. Zur Hausen's findings also led to the discovery of other HPV-associated cancers.

Lowy said scientists are using these insights to improve cancer screening. Right now, there are two cervical cancer screening methods: Pap tests and HPV testing. The Pap test identifies changes that might become cancer. HPV tests look for the virus.

One problem with current HPV tests is that they identify infections that do not lead to cervical cancer. Despite this problem, Lowy predicted that HPV-based tests will gradually replace Pap tests as technology advances.

Lowy was involved in developing Cervarix and Gardasil, the first two vaccines approved by the Food and Drug Administration for the prevention of diseases associated with HPV infections. Cervarix is referred to as a bivalent vaccine because it targets two strains, 16 and 18. Gardasil is referred to as a quadrivalent vaccine because it targets strains 6, 11, 16 and 18. According to Lowy, strains 6 and 11 "are responsible for 90 percent of genital warts."

All children ages 11 or 12 should receive 3 vaccine doses over 6 months. He added that it's important to vaccinate children before they become sexually active, as HPV infections are common.

Cervarix and Gardasil contain L1, a protein found on the outer shell of HPV strains. Along

with his NCI colleague Dr. John Schiller, Lowy discovered that these proteins assemble themselves into virus-like particles—structures that resemble HPV but don't cause disease. The virus-like particles trigger the immune system to produce antibodies, the immune proteins that eliminate the virus.

Since the vaccines were approved, the FDA has continued to monitor their safety and effectiveness. Lowy said the risk of vaccines causing serious harm is extremely small. He added that while long-term efficacy trials are ongoing, immunity hasn't waned in the vaccinated population so far.

In the United States, many preteens and teens aren't getting the vaccine. He attributed this to health care providers not recommending the vaccine to parents. He noted that parents don't seem concerned about increased sexual activity.

In Australia, where many preteens and teens have been vaccinated, scientists noticed that the incidence of genital warts decreased in the whole population when only girls were receiving the vaccine.

"The prevalence of HPV types that cause genital warts must have gone down and therefore people were just not exposed to it," he said.

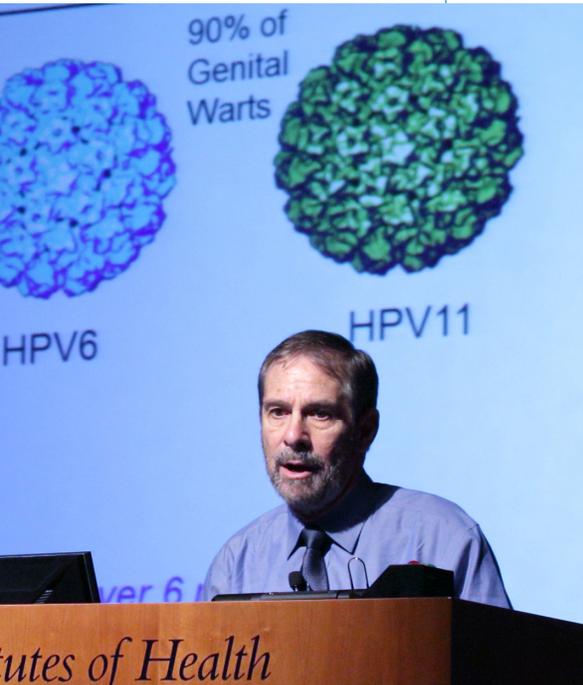
Lowy said the second generation of HPV vaccines will prevent more types of HPV infection while requiring fewer doses. The newer vaccines would be particularly beneficial in developing countries where "about 88 percent of deaths attributable to cervical cancer occur." He said that in these countries, "It would be logistically so much easier to give fewer doses."

During the initial HPV vaccine efficacy trials, scientists observed that children under 16 who had received two doses had a stronger immune response compared to older teenagers who received three doses. Lowy said the results led the European Medicines Agency to recommend that two doses be given instead of three. He said the FDA has yet to change its recommendation on dosing.

Recently, the FDA approved Gardasil 9, a vaccine that prevents nine strains of HPV. The 9-valent vaccine includes the next 5 most common HPV strains.

"You can presumably prevent 9 out of 10 potentially oncogenic infections of the cervix," he said.

Lowy also said it would be possible to safely increase the recommended age for cervical cancer screening if there were high rates of vaccination with the 9-valent vaccine, which would prevent rapidly growing infections. 



Lowy said the second generation of HPV vaccines will prevent more types of HPV infection while requiring fewer doses.

PHOTOS: BILL BRANSON

digest

PINK1 Protein Crucial for Removing Broken-Down Energy Reactors

Cells are powered by tiny energy reactors called mitochondria. When damaged, they leak destructive molecules that can cause substantial harm and eventually kill brain cells. Scientists at NINDS showed that a protein called PINK1 that is implicated in Parkinson's disease is critical for helping cells get rid of dysfunctional mitochondria.

According to the new research, published in the journal *Nature*, PINK1 does this by triggering an intricate process called mitophagy that breaks down and removes damaged mitochondria from the cell.

"PINK1 is a flag of damaged mitochondria," said Dr. Richard Youle, head of the NINDS biochemistry section and the study's senior author. "It identifies which mitochondria need to be eliminated to keep cells healthy."

Mutations in PINK1 and its partner molecule Parkin cause hereditary forms of Parkinson's disease. Moreover, the inability to remove defective mitochondria from nerve cells has been linked to numerous neurodegenerative diseases, including the more common forms of Parkinson's disease and amyotrophic lateral sclerosis (ALS).

Pelvic Pain May Be Common Among Women Of Reproductive Age

A high proportion of reproductive-age women may be experiencing pelvic pain that goes untreated, according to a study by researchers from NICHD and the University of Utah School of Medicine.

The researchers surveyed more than 400 women who were scheduled to undergo surgery or imaging for such reasons as infertility, menstrual irregularities, tubal sterilization or pelvic pain. As the researchers expected, reports of pain were highest for women diagnosed with endometriosis, a disorder in which tissue that normally lines the inside of the uterus grows outside of the uterus. However, one-third of those without any pelvic condition also reported a high degree of ongoing pain or pain recurring during the menstrual cycle.

The study, published online in *Human Reproduction*, was conducted by Dr. Karen Schliep of NICHD.

"Our study suggests that many reproductive-age women are experiencing but not reporting some form of pelvic pain," Schliep said. "If they aren't doing so already, gynecologists may want to ask their patients if they're experiencing pain, as well as the type and precise location of the pain, and offer treatment as appropriate. Similarly, women should let their doctors know if they're in pain."

Tell-Tale Biomarker Detects Early Breast Cancer

Researchers have shown that magnetic resonance imaging (MRI) can detect the earliest signs of breast cancer recurrence and fast-growing tumors. The technique detects micrometastases, breakaway tumor cells with the potential to develop into dangerous secondary breast cancer tumors elsewhere in the body. The approach may offer an improved way to detect early recurrence of breast cancer in women and men. The work was funded by NIBIB.

"MRI has a wide array of diagnostic applications and shows promise in breast cancer detection and treatment monitoring," said Dr. Richard Conroy of NIBIB. "The technique used by researchers in this study enables very early detection of metastatic spread, which would allow adaptation of treatment more quickly and hopefully lead to better outcomes in the future."

The study was published online in the Aug. 12 issue of *Nature Communications*.

Report Examines Pain Prevalence, Severity and Duration

A new analysis of data from the 2012 National Health Interview Survey has found that most American adults have experienced some level of pain, from brief to more lasting pain, and from relatively minor to more severe pain. The analysis helps to unravel the complexities of a nation in pain. It found that an estimated 25.3 million adults (11.2 percent) had pain every day for the preceding 3 months. Nearly 40 million adults (17.6 percent) experience severe levels of pain. Those with severe pain are also likely to have worse health status. The analysis was funded by NCCIH and was published in the *Journal of Pain*.

"The number of people who suffer from severe and lasting pain is striking," said NCCIH director Dr. Josephine Briggs. "This analysis adds valuable new scope to our understanding of pain and could inform the National Pain Strategy in the areas of population research and disparities. It may help shape future research, development and targeting of effective pain interventions, including complementary health approaches."

Pain is one of the leading reasons Americans turn to complementary health approaches such as yoga, massage and meditation—which may help manage pain and other symptoms that are not consistently addressed by prescription drugs and other conventional treatments. ①



MRI machine

PHOTO: ©ISTOCK.COM/SKYNESHER



Former NIH Leader Sherman Mourned

Dr. John F. Sherman, who served for 6 years as NIH deputy director (1968-1974), including 4 months as acting NIH director in early 1973, died June 28 in Washington, D.C. He was 95.

A native of Oneonta, N.Y., he served in the field artillery of the U.S. Army from 1941 to 1946 and was awarded the Bronze Star for distinguished service. With assistance from the G.I. Bill, Sherman received his B.S. from Union University College of Pharmacy in Albany, N.Y., in 1949. He earned his Ph.D. in pharmacology from Yale University in 1953.

Sherman came to NIH as an officer in the PHS Commissioned Corps in January 1953; he was a research pharmacologist in the Laboratory of Tropical Diseases, National Microbiological Institute, which became NIAID in 1955. In July 1956, he began a series of extramural leadership positions with NIAMD and NINDB that lasted until Jan. 1, 1964, when he was named NIH associate director for extramural programs. He became NIH deputy director in 1968.

Sherman was the first Ph.D. to be promoted to the rank of assistant surgeon general.

He left NIH in 1974 to become vice president of the Association of American Medical Colleges and director of its department of planning and policy development.

Sherman was the author of numerous scientific papers and articles. His awards included a PHS Meritorious Service Medal in 1965, the Distinguished Service Award from the Department of Health, Education and Welfare in 1971 and the Outstanding Service Medal, Uniformed Services University of the Health Sciences, in 1991.

He also received a Special Recognition Award from the AAMC in 1996 stating he “was widely recognized as an unfailing friend of the biomedical research community throughout his distinguished career...Generations of scientists have Dr. Sherman to thank for keeping the funding of biomedical research a critical issue on the agenda of national decision-makers.”

Sherman was active in Bethesda United Church of Christ and in community organizations in Parkwood, Wickford and Ingleside. He was a member of the Cosmos Club.

He is survived by his daughters Betsy Sherman of Washington, D.C., and Mary Ann Small of Liverpool, England; two grandsons, Michael and Edward Small; a sister, Gertrude Bishop of Tucson, Ariz., and many friends and relatives.

A memorial service will be held at 1 p.m. Saturday, Oct. 17 at Ingleside at Rock Creek, 3050 Military Rd. NW, Washington, D.C. Memorial contributions may be made in his name to the Public Health Service Commissioned Officers Foundation phscf.org/giving through the Koop Living Legacy Fund.



NIAMS director Dr. Stephen Katz (second from l) and deputy director Dr. Robert Carter (third from r) welcome new members to the institute's council. They are (from l) Richard Seiden, Dr. V. Michael Holers, Dr. Amy Paller, Dr. Joan Bechtold and Dr. Sundeep Khosla.

Five Named to NIAMS Advisory Council

NIAMS has appointed five new members to its advisory council.

Dr. Joan E. Bechtold is the Gustilo professor of orthopaedic research and graduate professor in orthopaedic surgery and mechanical and biomedical engineering at the University of Minnesota. Her research focuses on bone healing in the context of challenges such as infection, trauma, smoking and joint replacement.

Dr. V. Michael Holers is the Scoville professor of rheumatology at the University of Colorado School of Medicine, where he also is head of the division of rheumatology. His research interests include B lymphocyte activation and development, analysis of pre-clinical autoimmunity in rheumatoid arthritis (RA) and the causes and development of RA and related conditions.

Dr. Sundeep Khosla is the Dr. Francis Chucker and Nathan Landow research professor, a Mayo Foundation distinguished investigator and dean for clinical and translational science at the Mayo Clinic College of Medicine. A principal investigator on a number of NIH grants, his research projects include investigating the mechanisms of bone loss in women and in men, sex hormone action on bone and the biology of osteoprogenitor cells and stem cells.

Dr. Amy S. Paller is the Walter J. Hamlin professor and chair of the department of dermatology at Northwestern University's Feinberg School of Medicine. She is also director of skin-related clinical trials research at the Ann and Robert H. Lurie Children's Hospital of Chicago.

Richard F. Seiden is a partner with Foley and Lardner, LLP, in Los Angeles, and has been a member of the California Bar since 1973. He joins the council as a public representative. 

Get Your Flu Shot

Free Flu Vaccine Clinic Begins Sept. 21

The Office of Research Services and the Clinical Center will provide free flu shots to staff with a valid NIH identification badge from Sept. 21 through Nov. 5.

The best way to reduce the risk of getting the flu is to get the flu shot every year. By getting the flu shot, people can also reduce the risk of exposing patients to the virus. All staff who have patient contact, including both employees and contractors, are required to get the flu vaccine each year. For all other NIH staff, immunizations are available but not required.

Opening early in the morning, the Flu Clinic will be located on the east side of the 7th floor of the Clinical Research Center. Employees intending to receive a flu shot must wear clothing that does not restrict access to the upper arm. Changing areas will not be available.

Starting Oct. 5, there will also be off-campus sites providing free flu shots. Shady Grove, Bayview, Poolesville, Neuroscience Center, Fishers Ln. and Rockledge locations are included on the schedule.

Staff ages 65 and older can receive a higher-dose vaccine. NIH ordered both high-dose and the regular quadrivalent vaccines for all flu shot sites.

To learn more about the high-dose flu shot, visit <http://go.usa.gov/PAUY>. For more information about availability and to find locations, visit foiltheflu.nih.gov or call (301) 496-2209.

Foil the Flu: 2015 Immunization Schedule

MAIN CAMPUS SITE				
Date	Day	Location	Morning	Afternoon/Evening
9/21/15	Monday	10-CRC ¹	8:00 – Noon	Noon – 3:30
9/22/15	Tuesday	10-CRC	8:00 – Noon	Noon – 3:30
9/23/15	Wednesday	10-CRC	8:00 – Noon	Noon – 3:30
9/24/15	Thursday	10-CRC	6:00 – Noon	Noon – 7:00
9/25/15	Friday	10-CRC	8:00 – Noon	Noon – 3:30
9/28/15	Monday	10-CRC	8:00 – 11:30	12:30 – 3:30
9/29/15	Tuesday	10-CRC	8:00 – 11:30	12:30 – 3:30
9/30/15	Wednesday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/01/15	Thursday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/02/15	Friday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/19/15	Monday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/20/15	Tuesday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/21/15	Wednesday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/22/15	Thursday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/23/15	Friday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/26/15	Monday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/27/15	Tuesday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/28/15	Wednesday	10-CRC	6:00 – 11:30	12:30 – 7:00
10/29/15	Thursday	10-CRC	8:00 – 11:30	12:30 – 3:30
10/30/15	Friday	10-CRC	8:00 – 11:30	12:30 – 3:30
WEEKEND HOURS (10-CRC) - SATURDAY 10/24/15				
Open to All Employees • 6:30a – 8:00a and 6:30p – 8:00p				
OFF CAMPUS SITES				
Date	Day	Location	Morning	Afternoon/Evening
10/05/15	Monday	Shady Grove ²	8:30 – Noon	Noon – 3:00
10/06/15	Tuesday	Shady Grove	8:30 – 11:30	12:30 – 3:00
10/07/15	Wednesday	Shady Grove	8:30 – 11:30	12:30 – 3:00
10/08/15	Thursday	BRC ³	8:30 – Noon	Noon – 3:30
10/09/15	Friday	BRC	8:30 – 11:30	Harbor Hospital 12:30 – 2p
10/12/15	Monday	CLOSED	—	—
10/13/15	Tuesday	NSC ⁴	8:30 – Noon	Noon – 3:00
10/14/15	Wednesday	NSC	8:30 – 11:30	12:30 – 3:00
10/15/15	Thursday	Fishers Lane ⁵	8:30 – Noon	Noon – 3:00
10/16/15	Friday	Fishers Lane	8:30 – 11:30	12:30 – 3:00
10/21/15	Wednesday	Poolesville ⁶	8:30 – 11:00	11:30a – 2:30
11/04/15	Wednesday	Rockledge ⁷	8:30 – Noon	Noon – 3:00
11/05/15	Thursday	Rockledge	8:30 – Noon	Noon – 3:00
For questions, please contact OMS at 301-496-4411.				
¹ Main Campus: Building 10, CRC 7th Floor Atrium, East Side		⁴ Neuroscience Center: 6001 Executive Boulevard – 1st Floor Room C/D		
² Shady Grove: 9609 Medical Center Drive, Rockville, MD – Seminar Room 2 TE 110		⁵ Fishers Lane: 5601 Fishers Lane, Rockville, MD – Rooms LD20 A&B		
³ BRC: 251 Bayview Boulevard, Baltimore, MD – 3rd Floor Atrium Lobby		⁶ Poolesville: Building 103 (am)/ Building 110 (pm)		
		⁷ Rockledge II: 6701 Rockledge Drive, Bethesda, MD – Room 6191		

2015 NIH Research Festival, Sept. 16-18

The 2015 NIH Research Festival: A Celebration of Intramural Science will be held Sept. 16 through 18. This year's festival has been built around the idea of shared scientific opportunity, with the plenary and concurrent workshop sessions focusing on areas identified through the intramural

long-term planning process. There will be three plenary sessions, one each morning, on: technology development; global health emergency response; and chronic inflammation. The concurrent workshops,

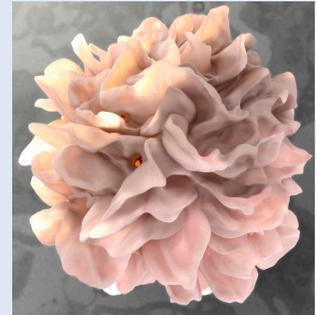


IMAGE: SRIRAM SUBRAMANIAM, NCI

which will take place in the afternoons, will focus on gene- and cell-based therapies; microbiome and drug resistance; RNA biology and therapeutics; vaccines; natural products; and neuroscience and compulsive behaviors.

This year's festival will be held entirely in Bldg. 10 and will include—in addition to the plenary sessions and concurrent workshops—poster sessions with more than 500 posters. On Thursday afternoon, Sept. 17, there will be a special session featuring posters by institute directors and scientific directors; a cooking contest; and posters from the Future Research Leaders group, sponsored by the chief officer for scientific workforce diversity. The event is being held in conjunction with the NIH Research Festival to engage exceptional early stage investigators from diverse backgrounds and increase their awareness of scientific career opportunities at NIH.

Other highlights include daily tours provided by the Office of NIH History, the Office of Research Services and the Clinical Center; NIH Green Labs Fair on Wednesday, Sept. 16; the FARE awards ceremony on Thursday, Sept. 17; and a food festival lunch for a nominal fee on Sept. 17. The Technical Sales Association Vendor Tent Show will be on Sept. 17 and 18 in parking lot 10H, and an open house at the NIH Library (see story on p. 2) will occur these days as well.

Visit the festival web site at <http://researchfestival.nih.gov> for the full schedule and schedule downloading options. Posters and yard signs with QR codes will direct your mobile devices to the schedule.



'Play Ball!'

NIH'ers Spend a 'Night at The Ballpark'

PHOTOS: ROSALINA BRAY, FORBES PORTER

Several NIH'ers were on the field during the "HHS Night at the Ballpark" game-opening ceremonies on Aug. 3 at Nationals Park in Washington, D.C.

NICHD clinical director Dr. Forbes D. Porter and his patient, 15-year old Andrew Marella, joined Department of Health and Human Services Secretary Sylvia Burwell for the festivities, which included the ceremonial first pitch and the "Play ball!" announcement. Marella is being treated at the Clinical Center for Niemann-Pick type C, a rare genetic disorder involving cholesterol.

More than 4,200 HHS staff, or family and friends of staff attended the game. The Nationals lost to the Arizona Diamondbacks.



Participating in the game-opening ceremonies are (from l) Stephen Burwell, NICHD clinical director Dr. Forbes D. Porter, Andrea Marella, HHS Secretary Sylvia Burwell, Andrew Marella and Phil Marella.



Clockwise from left above:

In the stands on HHS Night at the Ballpark are (from l) Andrew, Sherri Porter, NICHD research nurse Lee Ann Keener and Gaffar Chowdhury.

Washington Nationals mascot Screech greets Andrew before the game.

Andrea and Andrew Marella are featured on the scoreboard. Andrew officially kicked the game off with the "Play ball!" announcement.

