

The Biology of Aging Researcher Studies How to Prolong Life, Stay Healthy

BY DANA TALESNIK

We all dream of that elusive fountain of youth. As we get older, we might stay young at heart but we aspire to be physically healthy into a ripe old age. Can we delay aging and age-related diseases?

With aging comes an increased risk for dementia, osteoporosis, cardiovascular disease, stroke, type 2 diabetes, cancer and many other diseases.

“We’re not claiming aging is the reason for the diseases,” said Dr. Nir Barzilai, director, Institute for Aging Research, Albert Einstein

College of Medicine, at an Aug. 6 geroscience interest group lecture in Masur Auditorium. “There are specific genetic and environmental influences for those diseases and those [influences] decide which disease you’re going to get first.” But there’s mounting evidence to support the idea that aging can be delayed such that we’re not just extending longevity, but also a healthier lifespan.

In a talk titled “How To Die Young at a Very Old Age,” Barzilai, an NIA grantee who is also director of NIH’s Nathan Shock Centers of Excellence in the Basic Biology of Aging, emphasized the need not only to treat disease, but also to target aging.

“In our studies, we’re not so interested in specific diseases,” said Barzilai. “We’re interested in aging. If something targets aging, we expect it to counter several diseases and not one.”

Barzilai and his research team recently

SEE **BARZILAI**, PAGE 4



Dr. Nir Barzilai studies ways to age healthily.



Dr. MarySue Heilemann looks at nurse portrayals.

Scholar-Activist Challenges Media Stereotypes of Nurses

BY DANA TALESNIK

Nurses are often unsung heroes. From providing round-the-clock assessment and bedside care to administering medicines, wound care, diagnostics and counseling, nurses are indispensable clinicians. Yet stereotypes in television, film and other media have long cultivated public misperceptions of the nursing profession. One nurse-turned-researcher/

SEE **HEILEMANN**, PAGE 6

Longtime NIH Supporter Stokes Mourned

Tributes and remembrances from every sector of the NIH community were offered for retired Rep. Louis Stokes (D-OH), who died of cancer on Aug. 19 at age 90. The congressman for whom NIH’s Bldg. 50 is named served throughout his career as a strong, reliable supporter of federal funding for medical research in general and for NIH in particular.

“I am deeply saddened by the news of the death of former Congressman Louis Stokes,” said NIH director Dr. Francis Collins, in a statement. “He leaves a legacy of compassionate and effective leadership that few can match. Throughout his 30-year career as a representative from Ohio, he was a persistent and emphatic champion of extending the benefits of biomedical research to all people, especially in the area of health disparities... My own laboratory is on the fifth floor of [the Stokes Bldg.], and I am reminded of his legacy

SEE **STOKES**, PAGE 8



Rep. Louis Stokes regards plaque in 2001.

ALSO IN THIS ISSUE

Briefs	2
New Campus Food Contract Awarded; Cosi, Starbucks Outlets in the Works	3
Kilmarx Named FIC Deputy Director	5
Digest	9
Milestones	10
Feedback	11
Seen	12

NIH InSTITUTE RELAY, SEPT. 15

The 32nd NIH Institute Challenge Relay will be held Tuesday, Sept. 15 in front of Bldg. 1, beginning at 11:30 a.m. The NIH Recreation and Welfare Association, members of the original NIH Health's Angels running club and the ORS Division of Amenities and Transportation Services will present this year's race. Can your team unseat "Run from Obesity" as the fastest team? The relay consists of teams of five runners, each whom runs a ½-mile loop around Bldg. 1. Deadline to sign up is Sept. 11. Registration is available at <https://www.fedesp.com/nih/events/the-nih-institute-relay/> and the entry fee is \$15 per team. To volunteer or for more information, contact the R&W office at (301) 496-6061 or email David Browne at browned2@mail.nih.gov.



Sept. 17

Campbell Opens NLM Program

Dr. Jacquelyn Campbell, a national leader in research and advocacy in the field of domestic violence, will speak at the opening program for "Confronting Violence, Improving Women's Lives," a special display at the National Library of Medicine. The event will take place Thursday, Sept. 17 from 1 to 3 p.m. in Lister Hill Auditorium, Bldg. 38A, and will also be videocast.

"Confronting Violence" tells the story of the nurses who changed the medical profession and dramatically improved services to victims of domestic violence in the late 20th century. Campbell, a professor and mentor at Johns Hopkins School of Nursing, as well as national program director of the Robert Wood Johnson Foundation, was an important member of that group. Exhibition curator Dr. Catherine Jacquet, assistant professor of history and women's and gender studies at Louisiana State University, will also give remarks.



ABOVE: Last year, NIH director Dr. Francis Collins blew the whistle starting the first heat of the NIH Institute Relay. Teams have already been seen circling Bldg. 1, testing out the race route.

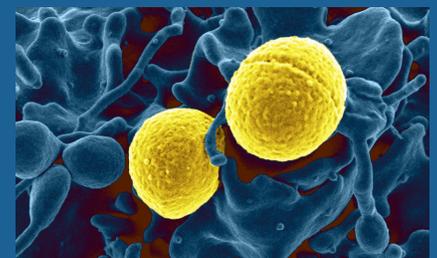
APAO Seeks Award Nominations

The NIH Asian & Pacific Islander American Organization (APAO) will continue its tradition of honoring employees in the NIH Asian Pacific American community for their excellence. Nominations are being solicited for four categories through Oct. 9.

This year features a new category, Young Investigator Award, to recognize achievements by visiting fellows, clinical fellows and research fellows who have spent less than 7 years at NIH. The other three categories are: Scientific Achievement Award for scientists/researchers who have made significant accomplishments in biomedical research; Leadership Excellence Award for non-scientists and scientists who exemplify leadership excellence by example, mentorship and empowerment of Asian and Pacific Americans to promote diversity and support the overall mission of NIH; and Kuan-Teh Jeang Distinguished Service Award to recognize an APAO member who has made an outstanding contribution or demonstrated continual high quality service to the NIH Asian Pacific American community.

Nominees must work or have worked recently (within the previous 1 year) at NIH. Awardees will be honored at the APAO awards holiday luncheon on Dec. 2 in Wilson Hall, Bldg. 1.

Submit a 1-page statement to support why you think an individual is deserving of recognition and include a CV of the nominee. A review committee composed of APAO members, non-members representing several institutes/centers and former award recipients will evaluate all entries. Nominate electronically no later than close of business Oct. 9 to Dr. Shioko Kimura, committee chair, at kimuras@mail.nih.gov. For details, ask for the 2-page award nomination manual.



ON THE COVER: Colorized transmission electron micrograph shows USA 300 strain of *Staphylococcus aureus* (in gold) outside a white blood cell (in blue).
IMAGE: NIAID

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NIH National Institutes of Health
Turning Discovery Into Health

New Campus Food Contract Awarded

A new food services contract for the Bethesda campus promises healthier food choices, eco-friendly utensils, renovated cafeterias and even a Starbucks and Cosi.

The Bethesda Campus Food Contract was awarded to Eurest Dining Services, a division of Compass Group USA. Under a no-cost performance-based contract, Eurest will continue to operate five cafeterias (in Bldgs. 10—B1 and ACRF, 31, 35 and 45) and two coffee bars (Bldg. 10 CRC and Bldg. 35). The contract is for 5 years, with two 5-year options to extend at the government's discretion, based on performance. The new contract officially began on June 14.

There will be new, healthier food options, as the contract includes the addition of a second full-time registered dietitian on the Eurest staff. Menus will include more local

produce and better reflect the international composition of the NIH community.

You may have already noticed new compostable utensils and food service supplies, demonstrating NIH's commitment to green and sustainability initiatives. These components were written into the new contract.

The newest aspects of the partnership are the renovations and rebranding that will take place over the next 5 years. Eurest will begin renovations in Bldg. 10 and Bldg. 45 around December 2015. Plans include a Starbucks in the north lobby of Bldg. 10 to replace Au Bon Pain, a rebranding of Bldg. 45 into a Cosi and a major redesign of Bldg. 10's B1 cafeteria. Future plans could include renovations to the cafés in 31, 10 ACRF and 35. These makeovers will offer innovative food concepts, competitive prices, nutritious options and an updated look.

Planning for the new contract started more than 3 years ago when the Division of Amenities and Transportation Services, Office of Research Services, assembled a food team consisting of both internal members

and representatives from the institutes and centers. The selection was made after a review process lasting 18 months.

The food team collected feedback from customers, surveyed regional food service suppliers, reviewed other recently awarded food contracts similar in scope, conducted site visits and researched relevant federal requirements and HHS policies.

Seven proposals from food service providers were received. A technical evaluation panel reviewed and scored the proposals and conducted site visits to local facilities operated by the proposers. Final panel review was held in April, when consensus was reached to award the contract to Eurest.

If you have questions about the contract process, contact John Crawford of DATS, crawfj@mail.nih.gov or (301) 402-8180. For more information and updates about NIH food/concession services, visit www.ors.od.nih.gov/pes/dats/food. 

Rep. Sarbanes Visits NIDA Intramural Program

On Aug. 24, Rep. John Sarbanes (D-MD) visited NIDA's IRP research facility in East Baltimore. He met with NIDA director Dr. Nora Volkow (at right) and IRP director Dr. Antonello Bonci (below, left, joined by Dr. Thomas Ross) to discuss the latest addiction research. Volkow and Bonci guided the congressman on a tour of the facility, which included viewing the cutting-edge clinical and basic research laboratories and tools being used to help further what is known about drug addiction. Sarbanes was led through the Archway Clinic, which conducts studies in human volunteers to better understand, treat and prevent drug abuse and dependence. To end the tour, Volkow and Bonci showcased NIDA's brain imaging capabilities, where Sarbanes was able to see the manipulation of brain cells at the neuron level.



CONGRESSIONAL VISIT



Barzilai

CONTINUED FROM PAGE 1

conducted the Longevity Genes Project, studying more than 600 healthy seniors, healthy at 95, and their children. They discovered that these centenarians lived longer, healthier lives at the end of their lifespan and their disease period was shortened. And although the first 44 centenarians in the study to have their whole genomes sequenced had pathogenic variants, including degenerative mutations, none of them had those diseases.

Interestingly, when considering the age of disease onset, centenarians who did get a particular disease contracted that disease 20–30 years later than the control population. Said Barzilai, “What the centenarians have shown us is that the longer you live, the healthier you stayed.”

An unexpected twist in one study was a finding that obesity, longtime smoking and a lack of moderate physical activity mattered for some, but for many these factors didn’t affect their longevity. Barzilai doesn’t claim that healthy lifestyle choices don’t matter. Instead, he posited that some of these people with their longtime vices just have an exceptional genome or perhaps they have protective alleles to assure their longevity.

Barzilai’s studies also revealed that the children of centenarians had less diabetes, stroke, hypertension and myocardial infarction than their parents. A recent NIDDK diabetes prevention clinical trial had a similar finding—that people whose father or mother lived to be older than 80 had a third less chance of getting diabetes. “The offspring of longer-lived parents had lower diabetes rates and it was independent of the parent’s diabetes or their treatment,” he said.

This research, and the potential to identify longevity genes, may pave the way for new drug therapies to help people live longer and prevent, or considerably delay, age-related diseases.

The drug metformin, often prescribed to treat type 2 diabetes, may interact with hormones, insulin, inflammatory and other pathways that improve health span and longevity, said Barzilai. The drug has shown age-delaying effects in mice. Metformin also delayed diabetes onset in people in a recent NIDDK study and delayed cardiovascular disease by 30 percent in a recent



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PHOTOS: ERNIE BRANSON

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“What the centenarians have shown us is that the longer you live, the healthier you stayed.”

—DR. NIR BARZILAI

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U.K. study. Early research also suggests metformin may delay cognitive decline even in non-diabetic patients.

Preliminary studies also show promising results for low growth hormone IGF-1 action in its effect on longevity, said Barzilai. This hormone may be linked to an increased risk of some forms of cancer, though it has been shown to have protective qualities against heart disease, osteoporosis and diabetes. Barzilai said current studies are testing whether keeping IGF-1 high in the brain but low in the rest of the body may reduce cancer

risk while extending human survival rates.

Despite the data, Barzilai said it’s difficult to acquire medicines that specifically target aging, in part because the Food and Drug Administration does not yet recognize aging as a disease. In the meantime, his lab continues to uncover the influences that promote resistance to the effects of aging. Genetic, environmental and medicinal interventions have proven to delay aging in many species, from mice to primates. Barzilai hopes to develop interventions with the goal of helping more humans live longer, healthier lives. **R**

NAS Holds Workshop on Environmental Stress

The National Academy of Sciences and NIEHS will hold a free workshop Sept. 30–Oct. 1 to explore the factors that affect how an individual responds to environmental stress. “Interindividual Variability: New Ways to Study and Implications for Decision-Making” will focus on recent scientific advances that could shed light on sources of variation in responses between different people. The event is part of the Emerging Science for Environmental Health Decisions series and will be held at the NAS Keck Center in Washington, D.C. Within any population, factors such as heritable characteristics, stress, body weight and genetics can influence the type and degree of response that people may have to environmental stressors. Accounting for this interindividual variability is a challenge for decision-makers tasked with setting chemical safety regulations.

Join researchers, professionals and policy experts to explore new tools and ways they may be used to advance the science behind risk-based decisions. The workshop will be webcast. Registration is required to attend, whether in person or via webcast. Visit <http://nas-sites.org/emergingscience/meetings/interindividual-variability/> for details.



NIAMS director Dr. Stephen Katz (l) meets with (from l) Sturge-Weber Syndrome advocate Kaelin Ball, Kennedy Krieger Institute researcher Dr. Jonathan Pevsner and Sturge-Weber Foundation President Karen Ball.

NIAMS Director Participates in Congressional Briefing on Sturge-Weber Syndrome

NIAMS director Dr. Stephen Katz recently participated in a congressional briefing on Sturge-Weber syndrome (SWS). Karen Ball, president and CEO of the Sturge-Weber Foundation, moderated the briefing—the first ever hosted by the foundation.

SWS is a neurological disorder indicated at birth by a port-wine stain birthmark on the forehead and upper eyelid of one side of the face. The birthmark is accompanied by abnormal blood vessels on the brain surface, often leading to seizures. Individuals with SWS also often experience glaucoma. Katz discussed NIH-supported research related to SWS and highlighted the importance of research collaborations and patient involvement.

Rep. Ryan Zinke (R-MT) attended the event and spoke about the importance of supporting research and development. Dr. Jonathan Pevsner, a research scientist with the Kennedy Krieger Institute, discussed his group's work that recently identified a single gene mutation underlying the majority of cases of SWS and port-wine stain birthmarks. Pevsner discussed how this basic research finding is opening new lines of discovery not only in SWS, but also for other conditions and diseases, such as melanoma.

In closing, Kaelin Ball, a young woman with SWS and daughter of Karen Ball, described the challenges she faces in managing her condition, including access to treatment and specialists. **R**

Kilmarx Named Deputy Director of Fogarty International Center

Dr. Peter Kilmarx, an expert in infectious disease research and HIV/AIDS prevention, has been named deputy director of the Fogarty International Center. He previously served as the CDC's country director in Zimbabwe, providing oversight for 30 staff who managed implementation of U.S. efforts to reduce HIV/AIDS, TB and malaria.

"I am delighted to welcome Dr. Kilmarx to Fogarty," said FIC director Dr. Roger Glass. "His background leading clinical trials and programs overseas—combined with his management expertise—make him the ideal candidate to help the center advance international collaborations, boost its research and training programs and prepare the next generation of global health research leaders."

A captain in the Public Health Service, Kilmarx served as CDC Ebola response team leader in Sierra Leone in September-October 2014, and as principal deputy team leader in Guinea in January-February 2015. Previously, he initiated the CDC response to the Ebola outbreak in Kasai Occidental, Democratic Republic of Congo (DRC), in 2007, and led household surveillance in the Ebola outbreak in Kikwit, DRC, in 1995.

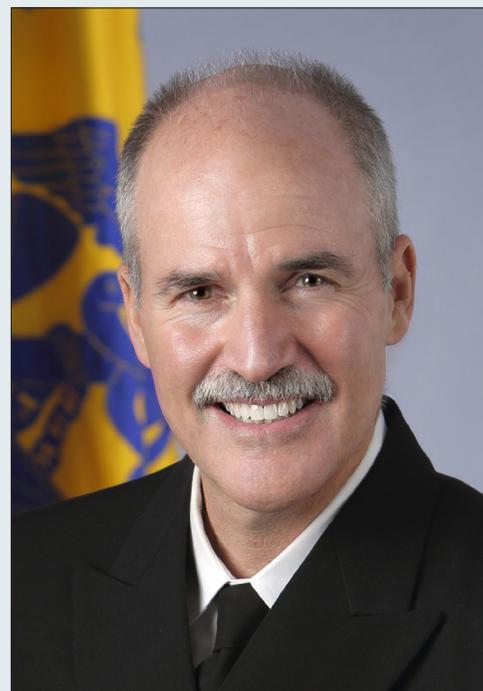
Kilmarx has held a variety of leadership positions at the CDC since 1996, including senior advisor to the director for health reform and chief of the Epidemiology Branch—both in the Division of HIV/AIDS Prevention. He also served as director of the CDC partnership with Botswana to combat HIV/AIDS, TB and related conditions, as well as chief of the CDC's sexual transmission research section in Thailand. Previously, he completed assignments in Pakistan and the DRC. An experienced clinical trials manager, he has served as principal investigator on microbicide trials in Thailand and as senior investigator in TB and HIV trials in Botswana. Until recently, he was principal investigator on HIV studies he initiated at public health facilities in Zimbabwe.

"I am excited to assume this new role, which will allow me to draw on my first-hand knowledge of the research questions facing health officials in low- and middle-income countries to strengthen Fogarty's innovative programs," said Kilmarx. "By cultivating in-country research expertise, we can empower low- and middle-income countries to investigate their nation's most pressing health issues so they can most effectively improve the health of their people."

After earning his M.D. from Dartmouth-Brown's Combined Program in Medicine, Kilmarx completed both his internal medicine residency and infectious disease clinical fellowship at Johns Hopkins Hospital. He remains board-certified in both specialties and is a fellow of the Infectious Diseases Society of America and of the American College of Physicians. He has published numerous peer-reviewed journal articles and book chapters and serves on the editorial board of *Sexually Transmitted Diseases*.

Kilmarx began his international career as a Peace Corps volunteer in the DRC (then Zaire), where he helped develop fisheries that are still productive today.

JOINS NIH
FROM CDC



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“Despite...our presence clinically with patients 24/7 in the hospital and all kinds of settings outside the hospital, the actual work nurses do remains mostly hidden and misrepresented in the media.”

-DR. MARYSUE HEILEMANN

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Heilemann

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producer, Dr. MarySue Heilemann, is working to change that.

“Nursing has been called the glue, the core or the backbone of the health care system,” said Heilemann, associate professor, UCLA School of Nursing, at a recent NINR Director’s Lecture. “But despite our significance and our presence clinically with patients 24/7 in the hospital and all kinds of settings outside the hospital, the actual work nurses do remains mostly hidden and misrepresented in the media.”

Media Stereotypes

In film and television, nurses have often been portrayed as villains, sex objects, subordinates and other demeaning roles, said Heilemann. These stereotypes get embedded in the public psyche. Research indicates that such depictions sometimes take a toll on real-life nurses, affecting work behavior, burnout, turnover and recruitment.

Nurses on film and TV often serve as romantic partners for physicians in leading roles or they’re peripheral characters, if



Heilemann stressed the importance of increased activism to help articulate the actual life-saving and life-sustaining clinical work nurses do.

PHOTOS: DANIEL SOÑÉ

given a role at all, said Heilemann. Recent TV medical dramas such as *House* focused on busy doctors, excluding nurses from the plot. Nurses also aren’t featured in *Grey’s Anatomy*. Instead, female doctors star in the lead roles, said Heilemann, and these physician characters are often shown doing work that, in reality, nurses actually do. Other shows, such as *China Beach*, based on a book by a former U.S. Army nurse, portrayed nurses more positively, but that show was short-lived.

Earlier popular television dramas such as *Dr. Kildare* and *Ben Casey* in the 1960s had compelling storylines but also focused on the handsome physician lead. When *The Nurses* debuted opposite *Dr. Kildare*, poor ratings—even after adding a couple of doctor characters and moving to a new time slot—knocked the show off the air.

Recently, a nurse-centered TV show got great ratings and lasted 7 seasons. But in this award-winning comedy, *Nurse Jackie* was a controversial, often villainous character who was addicted to painkillers and had questionable ethics. Other shows based on portrayals of dedicated but somewhat idealized nurses, such as *Hawthorne* and *Mercy*, quickly tanked.

When nurses first appeared in film, they were depicted in silent movies of the 1920s as trained professionals, with a modicum of intrigue, said Heilemann. In succeeding decades, however, movies often trivialized the work of nurses and portrayed them as evil, naughty or crazy, such as Nurse Ratched in *One Flew Over the Cuckoo’s Nest* and Annie Wilkes in *Misery*. Films also have long perpetuated the stereotype of nurses as females. In the popular 2000 movie *Meet the Parents*, for example, lead character Greg Focker is an often-mocked male nurse, which served as comedic fodder throughout the film.

Mail Nurses

For generations, nursing has been the subject of art, from paintings to postcards. More than 140 billion postcards were mailed worldwide during the golden age of the postcard from 1907 to 1918, and many

featured nurses during times of war and disease. Some portrayed nurses as courageous guardians against evil; others portrayed nurses as angels.

“The danger of these images is that if nurses are natural angels, born that way,” said Heilemann, “this undermines the reality that nurses have to go to college to gain a science-based education, gain skill through clinical practice, that they are licensed and that their expertise as a clinician is not only worthy of a salary and leadership positions, but also invaluable for making decisions in both policy and practice.”

Some postcards and early Hollywood movies portrayed nurses as sensual, glamorous and charming. Even advertisers took this sense of allure and used nurses to help boost product sales, from bread to stout to clothing. Nurses also appeared in early cigarette ads, from the 1930s to 1950s.

Heilemann stressed the importance of increased activism to help articulate the actual life-saving and life-sustaining clinical work nurses do. If more nurses shared the extent of their clinical work experiences with the media, advised screenwriters or even collaborated on scripts, she said, such efforts could vastly improve the public’s image of the nursing profession through more accurate and compelling nurse portrayals.

Advocacy & Innovation

Heilemann has been putting her own research into practice. Taking her experience working with low-income, second-generation Latinas, she is producing an interactive multimedia project. This transmedia form of storytelling uses multiple digital platforms so viewers can watch an online video, then interact with episodes or videos using a smartphone and social media.

“Transmedia requires stories that are realistic and nurses have access to [such] stories because the public trusts us, because of the privileged intimacy we share with our patients,” said Heilemann.

To succeed, transmedia storytelling needs compelling stories and relatable

VISIT GALLERY
ONLINE**Pictures of Nursing: The Zwerdling Postcard Collection**

Dozens of postcards that span more than a century of cultural perceptions of nurses around the world were recently on view at a National Library of Medicine exhibit. Acquired from the extensive collection of nurse Michael Zwerdling, the NLM exhibit was on display through mid-August. An online digital gallery with more than 600 images can still be found at <http://apps.nlm.nih.gov/exhibition/digitalgallery/index.cfm>.



characters. In *Catalina: Confronting My Emotions*, Catalina suffers from depression and talks with her nurse-therapist Veronica Sanchez, a character Heilemann created with data compiled from real-life patients. The videos include viewer exercises, resources and support to help women with depression and anxiety.

Heilemann's advocacy work, scholarly commitments and qualitative research with Latinas made this project a reality. She recently organized two national symposia that convened scholars, nurses, writers and Hollywood filmmakers to explore ways to

improve the accuracy of portrayals of nursing in media.

And this is where science meets the arts. From connections made during these symposia, she then collaborated with IT and engineers at UCLA as well as Hollywood actors to produce this transmedia project. With the many nursing, computer and theater departments at universities across the country, Heilemann said, opportunities are boundless for creating transmedia stories on a wide range of health topics based on insight about the lives of real people gained through nursing research. **R**

Register for NINR's 30th Anniversary Symposium

Register now for "Advancing Science, Improving Lives," the National Institute of Nursing Research's 30th anniversary scientific symposium and poster session. This event marks the beginning of a year-long observation of the institute's first 30 years at NIH.

The symposium will be held Tuesday, Oct. 13 in Natcher Conference Center. The symposium will consist of keynote addresses, scientific presentations, a scientific panel discussion and a research poster session. It will highlight many of the accomplishments of NINR and its scientists and showcase the positive impact that nursing science has had on the lives of millions of Americans. This event is free of charge, but registration is required. For more information and to register, visit www.ninr.nih.gov/30years.



NINR director Dr. Patricia Grady (sixth from left) and AACN faculty policy intensive participants
PHOTO: AACN

Grady Discusses Nursing Research, Health Policy

National Institute of Nursing Research director Dr. Patricia Grady recently presented at the sixth annual American Association of Colleges of Nursing (AACN) Student Policy Summit in Washington, D.C. The 3-day conference brought together an audience of nursing students and leaders in academia, research, clinical practice and policy to discuss the federal policy process.

Grady provided an overview of NINR and how nursing science can affect health care and health. She also provided examples of how nurse scientists of the future can develop the research skills necessary to become leaders in the worlds of both science and science policy.

"At NINR, we believe that research is fundamental to advancing health care practice and education," said Grady. "Of particular note is NINR's emphasis on 'team science,' which looks to the future of research in such areas as big data and pragmatic trials."

She discussed the various roles that NINR and nursing science fulfill in improving health and wellness. One example was research supported through NINR's small business technology transfer program. Dr. Samuel Sia and his colleagues developed and tested the mChip—a portable, point-of-care "lab-on-a-chip" diagnostic device—that in 15 minutes detects HIV and associated co-infections such as syphilis and herpes. Grady also described the work of Dr. Loretta Sweet Jemmott and her colleagues to reduce HIV/AIDS risk behaviors in teens; it has been implemented by the CDC.

Grady concluded, "The challenges and opportunities that lay before us are many and complex, but I am confident that, together, through our mutual support of nursing research, we will advance health care and improve health outcomes for our citizens."

In addition to the lecture, Grady met with the AACN faculty policy intensive fellows. This program provides faculty an opportunity to engage in an intensive policy experience, including meeting with leadership from federal departments and agencies. Grady talked about current health challenges and opportunities and ways NINR supports AACN's federal policy agenda through its research and training opportunities. **R**

Stokes

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every time I go over to the lab.”

Around NIH, Stokes will be remembered especially for his efforts—both while serving in the U.S. House of Representatives and after his retirement from that post—to establish and nourish research into improving the health of minority and underserved populations. Stokes was instrumental in launching NIH’s Office of Minority Programs in 1990, which became the Office of Research on Minority Health in 1993, rose to center status in 2000 and gained institute status in 2010.

In 2001, Stokes was appointed to chair the HHS secretary’s new advisory committee on minority health.

“[Stokes] was a stalwart for health equity, leading efforts to expand the federal commitment to improving public health, particularly for our most vulnerable populations,” said NIH principal deputy director Dr. Lawrence Tabak, who recently served as acting director of the National Institute on Minority Health and Health Disparities. “Rep. Stokes insisted that NIH make health disparities a research priority.”

In 2001, at a ceremony formally dedicating the Louis Stokes Laboratories, then-NCMHD director Dr. John Ruffin noted, “Lou Stokes is not a scientist, but he has spent his life assuring that the less fortunate in society have access to the fruits of science.”

“I had no idea what it would be like having a building bearing my name...on the campus of the greatest biomedical research institution in the world,” Stokes said at the time. “It is totally overwhelming. We walked around here in total amazement. My wife commented, ‘Just think, from a little boy growing



Top: In 2013, Stokes unveils his portrait, which hangs in the lobby of Louis Stokes Laboratories. Above, left, Stokes and wife Jay visit with Bob Chunko of FEI and NCI’s Dr. Martin Kessel. At right, in 2002, Dr. Sriram Subramaniam and Dr. Jacqueline Milne, both of NCI, talk science at the congressman’s request.



up in the projects in Cleveland, to having a building named after you at the National Institutes of Health.”

Hearing of Stokes’s passing, NIH scientists recalled his personal interest in their work.

“Soon after Bldg. 50 was completed...and began to be occupied in 2001, the section of biophysics, Laboratory of Cell Biology, was privileged to host Congressman Stokes and his wife, Jay, on a visit to the building that

research and asked many questions.

“At the end of 2002, [he] came back to the lab and only wanted to hear about the new research we had done in ‘his’ building. Sriram Subramaniam (NCI) obliged, and provided him with a summary of the latest work on the enzyme pyruvate dehydrogenase...It is an honor to remember someone who was clearly influential in congressional funding for biomedical research. His name above the

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“I had no idea what it would be like having a building bearing my name...on the campus of the greatest biomedical research institution in the world.”

—CONGRESSMAN LOUIS STOKES

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bears his name,” said Dr. Martin Kessel of NCI. “By the time of the visit we had already installed one of our then state of the art electron microscopes in the basement of Bldg. 50; we took [him] to see the instrument and explain what research an instrument of this type could accomplish. Rep. Stokes was extremely interested in learning about how the electron microscope is used in biomedical

entrance...will remain a living testimony.”

Office of Research Facilities architect Frank Kutlak, who managed design and construction of the Stokes Bldg. for more than 4 years, recalled, “I had the pleasure of meeting and giving ‘Lou’—as he insisted on being addressed—and his wife a tour of the construction site prior to its completion. He and Jay visited a few more times during construction and they told me that they even drove past it in the evening just to see the building lit up. They were very pleased and proud that the...lab facility was named after him...I admired and respected him and will miss him and his wonderful laugh greatly.”

Most recently, in 2013, Stokes returned to campus for the unveiling of his portrait, which hangs in the lobby of the lab building.

“I want you to be a part of everything me and my family feel about this day,” he said that day to a small gathering. “This is one of the most memorable and beautiful days of my life.” **R**

Low-Level Arsenic Exposure Before Birth Associated with Early Puberty, Obesity in Female Mice

Female mice exposed *in utero*, or in the womb, to low levels of arsenic through drinking water displayed signs of early puberty and became obese as adults, according to scientists from NIH. The finding is significant because the exposure level of 10 parts per billion used in the study is the current Environmental Protection Agency standard, or maximum allowable amount, for arsenic in drinking water. The study, which appeared online Aug. 21 in the journal *Environmental Health Perspectives*, serves as a good starting point for examining whether low-dose arsenic exposure could have similar health outcomes in humans.

“We unexpectedly found that exposure to arsenic before birth had a profound effect on onset of puberty and incidence of obesity later in life,” said NIEHS reproductive biologist and co-author Dr. Humphrey Yao. “Although these mice were exposed to arsenic only during fetal life, the impacts lingered through adulthood.”

The impacts Yao is referring to are obesity and early onset puberty, particularly in female mice. The researchers did not examine in this study whether males also experienced early onset puberty, but they did confirm that male mice exposed to arsenic *in utero* also displayed weight gain as they aged. Both low and high doses of arsenic resulted in weight gain.

NIH Study Shows No Benefit of Omega-3 or Other Nutritional Supplements for Cognitive Decline

While some research suggests that a diet high in omega-3 fatty acids can protect brain health, a large clinical trial by researchers at NIH found that omega-3 supplements did not slow cognitive decline in older persons. With 4,000 patients followed over a 5-year period, the study is



Mice exposed to low-level arsenic *in utero* become obese adults. The control mouse (l) was not exposed to arsenic during embryonic development and is a normal weight. In comparison, mice exposed to arsenic at 10 parts per billion (c) and 42 parts per million (r) are visibly heavier. The study also determined that these exposed mice entered puberty earlier than controls. PHOTO: NIEHS

one of the largest and longest of its kind. It was published Aug. 25 in the *Journal of the American Medical Association*.

“Contrary to popular belief, we didn’t see any benefit of omega-3 supplements for stopping cognitive decline,” said Dr. Emily Chew, NEI deputy clinical director.

Chew leads the Age-Related Eye Disease Study (AREDS), which was designed to investigate a combination of nutritional supplements for slowing age-related macular degeneration (AMD), a major cause of vision loss among older Americans. That study established that daily high doses of certain antioxidants and minerals—called the AREDS formulation—can help slow the progression to advanced AMD.

A later study, called AREDS2, tested the addition of omega-3 fatty acids to the AREDS formula. But the omega-3’s made no difference.

Where studies have surveyed people on their dietary habits and health, they’ve found that regular consumption of fish is associated with lower rates of AMD, cardiovascular disease and possibly dementia. “We’ve seen data that eating foods with omega-3 may have a benefit for eye, brain, and heart health,” Chew explained.

But in AREDS2, cognition scores of

subgroups taking different supplements decreased to a similar extent over time, indicating that no combination of nutritional supplements made a difference.

Teens Using E-Cigarettes May Be More Likely to Start Smoking Tobacco

Students who have used electronic cigarettes by the time they start 9th grade are more likely than others to start smoking traditional cigarettes and other combustible tobacco products within the next year, according to a new study funded by NIH. E-cigarettes deliver nicotine to the lungs by heating a liquid solution that contains nicotine and other chemicals to produce an aerosol that the user inhales, a process often called “vaping.”

The study, published Aug. 25 in the *Journal of the American Medical Association*, compared tobacco use initiation among 222 students who had used e-cigarettes, but not combustible tobacco products, and 2,308 who had neither used e-cigarettes or combustible tobacco products when initially surveyed at the start of 9th grade. During the first 6 months after being surveyed, 30.7 percent of those who had used e-cigarettes started using combustible tobacco products such as cigarettes, cigars and hookahs, compared to only 8.1 percent of those who had never used e-cigarettes. Over the following 6 months leading into the start of 10th grade, 25.2 percent of e-cigarette users had used combustible tobacco products, compared to just 9.3 percent of nonusers.

“While teen tobacco use has fallen in recent years, this study confirms that we should continue to vigilantly watch teen smoking patterns,” said NIDA director Dr. Nora Volkow. “Parents and teens should recognize that although e-cigarettes might not have the same carcinogenic effects of regular cigarettes, they do carry a risk of addiction.”



Radm. (ret.) Richard G. Wyatt (front, c), deputy director of the Office of Intramural Research, provided remarks at the recent NIH Commissioned Corps promotion ceremony.

NIH Holds Annual Commissioned Corps Promotion

Recently, 35 NIH officers in the PHS Commissioned Corps were promoted at the 13th annual NIH promotion ceremony. Radm. Deborah Wilson and Radm. (ret.) Richard G. Wyatt, deputy director of the Office of Intramural Research, provided remarks. NIH principal deputy director Dr. Lawrence Tabak was also on hand to offer congratulations. As promotions were announced, each officer had family and friends accompany them across the stage to help with the official changing of the boards. Many families attended, including some children who were able to assist in the process as their parents moved up in rank. The annual celebration highlights achievements of the promoted officers in their continued effort to protect, promote and advance the health and safety of our nation.

Promoted NIH officers (in categories) include Medical Officers—promoted to captain Rachel Bishop, Daniel Chertow; to lieutenant commander David Gianferante, Dimana Dimitrova; Nurse Officers—to captain Felicia Andrews, Michelle Braun; to commander Tracey Chinn, April Poole, LaToya Sewell; to lieutenant commander Kristen Cole, Michael Davis, Christopher Dubose, Cynda Hall, Kamah Howard, Cara Kenney, Ick-Ho Kim, Tokunbor Lawal; to lieutenant Kimberly Adao, Melissa Amaya, Frances Andrada, Tonya Jenkins, Jennifer Sisson, Anthony Valloric; Engineer Officers—to lieutenant commander Matthew Hunt; Scientist Officers—to commander Jennifer Adjemian, Gelio Alves, Charlene Maddox; to lieutenant commander John Pesce; Environmental Health Officers—to captain Mark Marshall; to commander Elisa Dubreuil; Veterinary Officers—to commander Temeri Wilder-Kofie, Jan Linkenhoker; Dietitian Officers—to commander Rachael Lopez, Jennifer Myles; Health Services Officers—to lieutenant Louis Corbin.

Eight Named to 'Council of Councils'

The Division of Program Coordination, Planning and Strategic Initiatives recently welcomed 8 new advisory members to the Council of Councils who will advise on DPCPSI policy and programs. They are:

Dr. Sharon Anderson, professor of medicine and interim chair of the department of medicine, Oregon Health & Science University. Her research interests include the progression of chronic kidney disease with an emphasis on polycystic kidney disease, diabetic nephropathy and the pathophysiology of the aging kidney.

Dr. Mary Lindsey Carnes, director, Center for Women's Health Research, co-director, Women in Science and Engineering Leadership Institute, and professor, University of Wisconsin. The goal of her research is to develop, implement and study

interventions that promote workforce diversity in academic medicine, science and engineering, particularly at leadership levels.

Hakon Heimer, founder and executive editor, Schizophrenia Research Forum, Brain and Behavior Research Foundation, program advisor for cognitive disorders, Cold Spring Harbor Laboratory, founder, Cure Alliance for Mental Illness, Providence, R.I. He also is a program advisor on cognitive disorders to the Banbury Center at Cold Spring Harbor.

Dr. Terry L. Jernigan, professor of cognitive science, psychiatry and radiology, director, Center for Human Development, University of California, San Diego. Her work has focused on brain development and aging, neurodevelopmental disorders, neuropsychiatric and substance use disorders and neurodegenerative disorders.

Dr. Vivian S. Lee, senior vice president for health sciences, dean, School of Medicine, chief executive officer, University of Utah Health Care. Her top priorities include leveraging her school's world-class human genetics program to become a leading center in personalized health care.

Dr. Kimberly K. Leslie, professor, chair and departmental executive officer, department of obstetrics and gynecology, University of Iowa Hospitals and Clinics. Her research interests center around the molecular biology of hormone action and signal transduction in pregnancy and in cancer.

Dr. Guillermina Lozano, professor and chair, department of genetics, University of Texas MD Anderson Cancer Center. She directs a research laboratory that studies the p53 tumor suppressor pathway.

Dr. Keith A. Reimann, professor, department of medicine, senior director, MassBiologics, University of Massachusetts Medical School. As a comparative immunologist, he has developed nonhuman primate models of infectious disease, which were used for testing new vaccines and biologics.



DPCPSI director Dr. James Anderson (c, front row) meets new members of the Council of Councils. They are (back row, from l) Drs. Vivian Lee, Keith Reimann, Kimberly Leslie, Sharon Anderson; and (front row, from l) Hakon Heimer and Drs. Guillermina Lozano, Terry Jernigan and Mary Carnes.



CSR's Carol Scibek

Scibek Retires as CSR Branch Chief

BY PAULA WHITACRE

Carol Scibek is known as a well-grounded person, but she loves the feeling of floating quietly above the Earth in a hot-air balloon.

That calm feeling came in handy as chief of the Committee Management Branch, from which she retired recently. The branch ensures all rules and regulations are met when outside scientists serve as CSR peer reviewers. With 3,200 chartered members, 5,500 temporary members and as many as 10,000 others who review one or a few applications at a time, the numbers to manage multiply. The branch also coordinates *Federal Register* announcements and proper storage of rosters, agendas and minutes of the thousands of meetings that occur annually.

"Carol kept a highly complex operation running so smoothly you didn't notice what a critical role it played in maintaining high-quality peer reviews at CSR," said CSR director Dr. Richard Nakamura.

Scibek's path led from Roanoke. At age 20, she traveled to Germany for a short vacation and met her husband Frank, stationed with the U.S. Army. "Two years later, I came home with a husband and a baby," she said. After leaving the military, he worked for UPS in Maryland. She settled into life as a stay-at-home mom and Girl Scout leader, receiving the St. Anne Medal, one of scouting's highest awards, for her service.

Things took a different turn when their four children went to college—she decided to earn her degree. "I wasn't going back to school, I was going to college for the first time," she clarified. She entered the University of Maryland at age 42, when her two youngest children were also on campus. She earned a B.A. in Germanic languages and literature. "I remember leaving the library after I finished my last translation, right before graduation," she said. "I just stood and cried, I was so into what I was doing."

An ad in a community paper brought her to NIH. In 1988, she began as a GS-4 clerk-typist, moving up to grants technical assistant (GTA). She worked in different positions until she became GTA coordinator for CSR in 1997.

"Carol's first love was coordinating the GTAs, but when asked to head up the committee management office [in 2000], she did so with dedication and esprit," recalled Dr. Donald Schneider, special advisor to Nakamura. "She never flinched."

She acknowledged that she initially worried she would feel isolated in her new position. Instead, she said, "I loved it! I had the chance to interact with everyone in CSR and feed on the energy of the important work everyone is doing."

She and her husband love to travel. She spent one birthday atop a 4-wheeler on a mountain in Bora Bora, Tahiti, and has cruised on the Yangtze, Amazon, Nile and Danube rivers. They plan more traveling and also more time at their vacation home at Virginia's Massanutten Mountain. No doubt Scibek will find another opportunity to float aloft in a hot-air balloon.

Gaiano Named Chief of CSR Group

Dr. Nicholas Gaiano has been named chief of the Center for Scientific Review's integrative, functional and cognitive neuroscience (IFCN) integrated review group.

"Dr. Gaiano has been an outstanding health science administrator for our neurobiology of motivated behavior study section," said CSR director Dr. Richard Nakamura. "He will bring to his new position important insights and perspectives of someone who has excelled as an extramural scientist." Nakamura noted that, before coming to CSR, Gaiano was an associate professor with publications in *Nature*, *Science*, *Neuron* and *Nature Neuroscience*.

As IFCN chief, Gaiano will oversee eight study sections and numerous special emphasis panels that review a broad range of NIH grant applications to fund neuroscience research devoted to advancing understanding of how the nervous system is organized and functions at an integrative, systems level.

Prior to joining CSR, Gaiano was an associate professor in the departments of neurology, neuroscience and oncology at Johns Hopkins University School of Medicine, where for 10 years he ran a lab that conducted studies on embryonic neural stem cell regulation, neuronal plasticity and brain tumor formation, with a particular focus on the Notch signaling pathway. His lab was funded by grants from NINDS, NIMH and numerous private foundations.

Gaiano earned his Ph.D. in developmental genetics from the Massachusetts Institute of Technology and did his postdoctoral research in developmental neurobiology at NYU School of Medicine. **R**



Dr. Nicholas Gaiano

Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: I'd like to know what is going on with the proliferation of trash on the NIH main campus this year, particularly in MLP-10 and in Bldg. 31. Food can remain in stairwells and on sidewalks for days without being cleaned up. Garbage cans overflow with trash for days, particularly the cans in the hallways and in MLP-10. There is a serious problem with accumulation of garbage in MLP-10 and the failure to clean the garage even periodically. I even saw dog feces on a sidewalk that was left there for over a week, and I saw a dead rat (the size of a cat) on the small road behind Bldg. 31 (in front of the residences) that was not picked up for several days. I know that this is a large campus and budgets are tight, but the proliferation of trash around campus is gross and not what one would expect at the "National Institutes of HEALTH."

Response from the Office of Research

Facilities: Thank you for bringing this concern to our attention. The Office of Research Facilities has increased the frequency for checking trash bins and cleaning stairwells. In addition, ORF has cleaned the MLP-9 and 10 parking garages and stairwells in recent weeks. NIH takes the cleanliness and appearance of our campus seriously and we will continue to monitor our progress and adjust schedules to meet increased needs if necessary. Cooperation by NIH staff can also assist. Often, staff have been observed removing bags of trash from their vehicles and placing them in NIH trash cans, overwhelming the trash receptacles. While ORF will do its part to contribute to a clean campus, we can achieve our full potential through a collaborative effort.

Feedback: Why is the ladies' bathroom next to Masur Auditorium always filthy and only one of the two stalls is working at any given time? It should be updated and should be kept clean at all times because of the different events they have in Masur.

Response from ORF: The men's and ladies' bathrooms near Masur Auditorium are in a high traffic area and have a high use for employees and visitors on a daily basis. In April, the Office of Research Facilities increased the cleaning schedule from once a day to twice a day (7:30 a.m. and 1 p.m.). Further monitoring of the facilities determined issues with cleanliness still remained. Starting in August, another scheduled cleaning was added. The Masur bathrooms are now cleaned three times a day (7:30 a.m., 1:30 p.m. and 6 p.m.), Monday through Friday and once on Saturdays. ORF is confident these additional cleanings should effectively address the cleanliness issue in these bathrooms.

NIH'ers Salute Return of College Football

PHOTOS: ROSALINA BRAY

NIH'ers celebrated the return of college football with a Quick-Off to College Football Season tailgate party at the NIH Community Market behind Bldg. 10 on Aug. 25. Attendees wore their favorite college colors and ordered lunch from area food trucks. A portion of proceeds benefitted Special Love, Inc., a nonprofit that supports families of children with cancer.



At left, NIH'ers line up to order from the food truck Linda's Luncheonette. Two other food trucks were on hand—Feelin' Crabby and Curley's Q BBQ. **School Spirit** (above, from I) NIDCR's Gregory Spero shows off his Gator pride. NHLBI's Karen Cuttin wears her Florida Gator sweatshirt while holding a Special Love, Inc. brochure.



Outdoor Film Festival Raises \$5K for Charity

PHOTOS: AUDRYS MALISAUSKAS

Every year for the last 19 years, a Montgomery County parking lot has spent a few summer nights transformed into a charming, old-fashioned drive-in. This year was no different. The 19th Comcast Outdoor Film Festival benefiting the NIH Charities took place Aug. 21-23 at the Montgomery County Board of Education in Rockville. Hundreds of cars lined up to watch a few blockbusters. And more than \$5,000 was raised for the charities, which include Friends of Patients at the NIH, Children's Inn, R&W Foundation and Special Love (Camp Fantastic).

Attendees enjoyed food and treats from local food trucks such as Ben & Jerry's, Crab Cab and Jammin'

Flava. Children caromed around on the moon bounce and engaged in activities provided by sponsors Washington Chevrolet, F.H. Furr, Zipcar, The Upton, BMW of Rockville and Language Stars.

As the sun set over festivities, groups of friends, couples and families made their way to the parking lot, where a 65-foot inflatable screen was erected. Some sat in the comfort of their own vehicles to watch the film while others spread out on blankets and lawn chairs.

"The R&W loves assisting with the movie festival," said Randy Schools, former R&W president. "This year, more than 1,000 people attended per evening. At the current site, we are able to recreate the feel of the open-air theaters that were popular during the '50s and '60s. It's a great event for families to enjoy a movie, help our charities and just have some fun."

